

DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL
SOLID WASTE LANDFILL PERMIT

**BEAVER COUNTY
CLASS I LANDFILL**

Pursuant to the provision 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, R315-301 through 320 of the Utah Administrative Code adopted thereunder, a Permit is issued to:

Beaver County as owner and operator,

to own and operate the Beaver County Class I landfill located Beaver County, Utah as shown in the Permit Renewal Application.

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 L. Howard, Director
Division of Waste Management and Radiation Control

FACILITY OWNER/OPERATOR INFORMATION

LANDFILL NAME: Beaver County Class I Landfill

OWNER NAME: Beaver County

OWNER ADDRESS: P.O. Box 278
7300 South 800 East
Milford, Utah 84751

OWNER PHONE NO.: 435-386-2530 or
435-438-5744

TYPE OF PERMIT: Class I Landfill

PERMIT NUMBER: 9430R2

LOCATION Landfill site is located in NE $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$,
NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 8, Township 29 South, Range 7
West, Salt Lake Baseline and Meridian (SLB&M).
Beaver County, Utah

PERMIT HISTORY Permit renewal 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.

The Permit renewal application for Beaver County was deemed complete on the date shown on the signature page of this Permit. All representations made in the attachments of this permit are enforceable under R315-301-5(2) of the Utah Administrative Code. Where differences in wording exist between this Permit and the attachments, the wording of this Permit supersedes that of the attachments.

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 I unlined disposal cell, a scale house , equipment maintenance shop, green waste compost area and a disposal trench for dead animals. 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 facility operation.

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. Nor does this Permit authorize any injury to private property or any invasion of personal rights, nor 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.

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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 R315-301 through 320 of the Utah Administrative Code, for a Class I landfill, 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. This Permit is for the disposal of non-hazardous solid waste that may include:

I.B.1.a Municipal solid waste as defined by UAC R315-301-2(47) of the Utah Administrative Code;

I.B.1.b Commercial solid waste as defined by UAC R315-302-2(14) of the Utah Administrative Code;

I.B.1.c Industrial solid waste as defined by UAC R315-302-2(35) of the Utah Administrative Code;

I.B.1.d Construction/demolition waste as defined by 19-6-102(4), Utah Code Annotated;

I.B.1.e Special waste as allowed by R315-315 of the Utah Administrative Code and authorized in section III-I of this Permit and limited by this section;

I.B.1.f Conditionally exempt small quantity generator hazardous waste as specified in R315-303-4(7)(a)(i)(B) of the Utah Administrative Code; and

I.B.1.g The Permittee is authorized to receive for disposal regulated asbestos-containing material in compliance with R315-315-2 of the Utah Administrative Code.

I.B.2. Acceptable wastes are restricted to wastes that are received under sole contracts with local governments, within Utah, for waste generated within the boundaries of the local government. Each contract shall be approved by the Director prior to acceptance of the waste at the landfill.

I.C. Prohibited Waste

I.C.1. Hazardous waste as defined by R315-1 and R315-2 of the Utah Administrative Code except as allowed in permit condition I-B (Acceptable Waste) above;

- I.C.2. 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; or
- I.C.3. PCB's as defined by R315-301-2 of the Utah Administrative Code
- I.C.4. Regulated asbestos-containing material.
- I.C.5. Any prohibited waste received and accepted for treatment, storage, or disposal at the facility shall constitute a violation of this Permit, of Utah Code Ann. § 19-6-101 through 126 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 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 on the day the event occurred or the day it was discovered;
- I.E.3.b Notify the Director 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.4. 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. Upon receipt and 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.5. 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 is subject to revocation 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 action 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.a Attachments to the Permit Application 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.
- I.H. II. DESIGN AND CONSTRUCTION
- I.H.1. Design and Construction
- I.H.1.a The Permittee shall construct any landfill cell, sub-cell, run-on diversion system, runoff containment system, waste treatment facility, leachate handling system, or final cover in accordance with the alternative/equivalent design submitted and approved by the Director on July 6, 2018 as part of Attachment #1 and in accordance with the R315-301 thru 320 of the Utah Administrative Code.

- I.H.1.b Prior to construction of any landfill cell, sub-cell, engineered control system, waste treatment facility, leachate handling system, or final cover, the Permittee shall submit construction design drawings and Construction Quality Control and Construction Quality Assurance (CQC/CQA) Plans to the Director for approval. Approved design drawings and CQA/CQC plans will be incorporated into this permit through modification. Buildings do not require approval. The Permittee shall construct any landfill cell, sub-cell, cell liner, engineered control system, waste treatment facility, leachate handling system, and final cover in accordance with the design drawings and CQC/CQA Plans submitted to and approved by the Director.
- I.H.1.c Subsequent to construction, the Permittee shall notify the Director of completion of construction of any landfill cell, sub-cell, engineered control system, waste treatment facility, or final cover. Landfill cells may not be used for treatment or disposal of waste until all CQC/CQA documents and construction-related documents, including as-built drawings, are approved by the Director and this permit has been modified to reflect these changes. The Permittee shall submit as-built drawings for each construction event that are stamped and approved by an engineer registered in the State of Utah.
- I.H.1.d The Permittee shall notify the Director of any proposed incremental closure, placement of any part of the final cover, or placement of the full final cover. Design approval must be received from the Director and this permit modified prior to construction. The design shall be accompanied by a CQC/CQA Plan for each construction season where incremental or final closure is performed.
- I.H.1.e All engineering drawings submitted to the Director shall be stamped and approved by a professional engineer with a current registration in Utah.
- I.H.1.f 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.
- I.H.2. Run-On Control
- I.H.2.a The Permittee shall construct drainage channels and diversions as specified in the Attachment#1 and shall maintain them at all times to effectively prevent runoff from the surrounding area from entering the landfill.
- I.H.3. Alternative Design
- This facility has demonstrated through geologic, hydrogeologic, climatic, waste stream, and other factors that the landfill will not contaminate ground water and is approved for the alternative design as outlined in the Attachment#1. Any contamination of ground water resulting from operation of the landfill may result in the revocation of this alternative design approval.

II. LANDFILL OPERATION

II.A. Operations Plan

II.A.1. The Permittee shall keep the Operations Plan included in Attachment #2 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, and is approved by the Director as a minor modification under R315-311-2(1)(a)(xiii) of the Utah Administrative Code. The Permittee shall note any modification to the Operations Plan in the daily operating record.

II.A.1.a Security

II.A.1.a.(i) The Permittee shall operate the Landfill so that unauthorized entry to the facility is restricted. The Permittee shall:

II.A.1.a.i.A Lock all facility gates and other access routes during the time the landfill is closed.

II.A.1.a.i.B Have at least one person employed by the Permittee at the landfill during all hours that the landfill is open.

II.A.1.a.i.C Construct all fencing and any other access controls to prevent access by persons or livestock by other routes.

II.B. Training

II.B.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.

II.C. Burning of Waste

II.C.1. Except as provided in this paragraph, intentional burning of solid waste is prohibited and is a violation of R315-303-4(2)(b) of the Utah Administrative Code. The Permittee is allowed to burn material by complying with the requirements of R307-202-5 of the Utah Administrative Code. The Permittee shall perform such burning in a segregated area within the landfill site. The Permittee shall extinguish all accidental fires as soon as reasonably possible. The Permittee's non-compliance with R307-202-5 of the Utah Administrative Code, as determined by the Director of the Division of Waste Management and Radiation Control, also constitutes non-compliance with this Permit.

II.D. Daily Cover

- II.D.1. The Permittee shall completely cover the solid waste received at the landfill at the end of each working day with a minimum of six inches of earthen material. The Permittee may use an alternative daily cover material when the material and the application of the alternative daily cover meets the requirements of R315-303-4(4)(b) through (e) of the Utah Administrative Code.
- II.E. Ground Water Monitoring
- II.E.1. This facility is not required to monitor ground water (R315-303-3(3)(e)(iv) of the Utah Administrative Code) as outlined in the “Application for a Waiver from Ground Water Monitoring Requirements at the Beaver County Landfill, Beaver County, Utah” by Vector Engineering, Inc. November 1994.
- II.F. Gas Monitoring
- II.F.1. The Permittee shall monitor explosive gases at the landfill in accordance with the Gas Monitoring Plan contained in the Permit Application and shall otherwise meet the requirements of R315-303-3(5) of the Utah Administrative Code. If necessary, the Permittee may modify the Gas Monitoring Plan, provided that the modification meets all of the requirements of R315-301 through 320 of the Utah Administrative Code and is as protective of human health and the environment as that approved in the Permit Application, and is approved by the Director as a minor modification under R315-311-2(1) of the Utah Administrative Code. The Permittee shall note any modification to the Gas Monitoring Plan in the daily operating record. Plan changes that the Director finds to be less protective of human health or the environment than the approved plan are a major modification and are subject to the requirements of R315-311 of the Utah Administrative Code.
- II.F.2. If the concentrations of explosive gases at any of the facility structures, at the property boundary, or beyond the property boundary ever exceed the standards set in R315-303-2(2)(a) of the Utah Administrative Code, the Permittee shall:
- II.F.2.a Immediately take all necessary steps to ensure protection of human health and notify the Director;
- II.F.2.b Within seven days of detection, place in the daily operating record the explosive gas levels detected and a description of the immediate steps taken to protect human health;
- II.F.2.c Implement a remediation plan that meets the requirements of R315-303-3(5)(b) of the Utah Administrative Code; and
- II.F.2.d Submit the plan to, and receive approval from, the Director prior to implementation.
- II.G. Waste Inspections

- II.G.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.
- II.G.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.
- II.G.3. The Permittee shall inspect all loads that the Permittee suspect may contain a waste not allowed for disposal at the landfill.
- II.G.4. The Permittee shall conduct complete random inspections as follows:
- II.G.4.a The Permittee shall conduct the random waste inspection at the working face or an area designated by the Permittee.
- II.G.4.b The Permittee shall direct that loads subjected to complete inspection be unloaded at the designated area;
- II.G.4.c Loads shall be spread by equipment or by hand tools;
- II.G.4.d Personnel trained in hazardous waste recognition and recognition of other unacceptable waste shall conduct a visual inspection of the waste; and
- II.G.4.e The personnel conducting the inspection shall record the results of the inspection on a waste inspection form as found in Attachment #3. The Permittee shall place the form in the daily operating record at the end of the operating day.
- II.G.4.f The Permittee or the waste transporter shall properly dispose of any waste found that is not acceptable at the facility at an approved disposal site for the waste type and handle the waste according to the rules covering the waste type.
- II.H. Disposal of Special Wastes
- II.H.1. If a load of incinerator ash is accepted for disposal, the Permittee shall transport it to the place of disposal in such a manner as to prevent leakage or the release of fugitive dust. The Permittee shall completely cover the ash with a minimum of six inches of material, or the Permittee shall use other methods or material, if necessary, to control fugitive dust. The Permittee may use ash for daily cover when its use does not create a human health or environmental hazard.
- II.H.2. The Permittee may dispose of animal carcasses in the landfill working face and shall cover them with other solid waste or earth by the end of the operating day in which the carcasses are received. Alternatively, the Permittee may dispose of animal carcasses in a special trench or pit prepared for the acceptance of dead animals. If a special trench is used, the Permittee shall cover animals placed in the trench with six inches of earth by the end of each operating day.

II.H.3. The Permittee shall handle and dispose of asbestos waste in accordance with R315-315-2 of the Utah Administrative Code.

II.I. Self Inspections

II.I.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, cover; fences and access controls; roads; run-on/run-off controls; final and intermediate cover; litter controls; and records. The Permittee shall place a record of 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.

II.J. Recordkeeping

II.J.1. The Permittee shall maintain and keep on file at the landfill scale house office, 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. Each record to be kept shall contain the signature of the appropriate operator or personnel and the date signed. The Daily operating record shall consist of the following two types of documents:

II.J.1.a Records related to the daily landfill operation or periodic events including:

II.J.1.a.(i) 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;

II.J.1.a.(ii) Major deviations from the approved plan of operation, recorded at the end of the operating day the deviation occurred;

II.J.1.a.(iii) 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;

II.J.1.a.(iv) Records of all inspections conducted by the Permittee, results of the inspections, and corrective actions taken, recorded in the record on the day of the event.

II.J.1.b Records of a general nature including:

II.J.1.b.(i) A copy of this Permit, including the Permit Application;

II.J.1.b.(ii) Results of inspections conducted by representatives of the Director, and of representatives of the local Health Department, when forwarded to the Permittee;

II.J.1.b.(iii) Closure and Post-closure care plans; and

II.J.1.b.(iv) Records of employee training.

II.K. Reporting

II.K.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, the results of gas monitoring, and all training programs completed.

II.L. Roads

II.L.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 shall be improved and maintained as necessary to assure safe and reliable all-weather access to the disposal area.

II.M. Litter Control

II.M.1. Litter resulting from operations of the landfill shall be minimized. In addition to the litter control plans found in Attachment #3, the Permittee shall implement the following procedures when high wind conditions are present:

II.M.1.a Reduce the size of the tipping face;

II.M.1.b Reduce the number of vehicles allowed to discharge at the tipping face at one time;

II.M.1.c Orient vehicles to reduce wind effects on unloading and waste compaction;

II.M.1.d Reconfigure tipping face to reduce wind effect;

II.M.1.e Use portable and permanent wind fencing as needed; and

II.M.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.

III. CLOSURE REQUIREMENTS

III.A. Closure

III.A.1. The Permittee has demonstrated through geologic, hydrogeologic, climatic, waste stream, cover material properties, infiltration factors, and other factors that the landfill will not contaminate ground water and is approved for the alternative cover design as outlined in Attachment #1. Upon a finding by the Director of any contamination of ground water resulting from the landfill, the Director may revoke this alternative cover design approval and the Director may require placement of a cover meeting the requirements of R315-303-3(4)(a) of the Utah Administrative Code or other remedial action as required by the Director.

III.A.2. Title Recording

III.A.2.a The Permittee shall meet the requirements of R315-302-2(6) of the Utah Administrative Code by recording a notice with the Beaver 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 as recorded.

III.B. Post-Closure Care

III.B.1. The Permittee shall perform post-closure care at the closed landfill in accordance with the Post-Closure Care Plan contained in Attachment #4. 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.

III.C. Financial Assurance

III.C.1. The Permittee shall keep in effect and active the currently approved financial assurance mechanism or another approved mechanism that meets the requirements of R315-309 of the Utah Administrative Code and is approved by the Director to cover the costs of closure and post-closure care at the landfill. The Permittee shall adequately fund and maintain the financial assurance mechanism(s) to provide for the cost of closure at any stage or phase or anytime during the life of the landfill or the permit life, whichever is shorter (include the following for a trust fund), and the Permittee shall fully fund the trust fund within ten years of the date waste is first received at the landfill.

III.D. Financial Assurance Annual Update

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

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

III.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.

IV. ADMINISTRATIVE REQUIREMENTS

IV.A. Permit Modification

IV.A.1. Modifications to this Permit may be made upon application by the Permittee or by the Director. The Permittee shall be given written notice of any permit modification initiated by the Director.

IV.B. Permit Transfer

IV.B.1. This Permit may be transferred to a new permittee or new permittees by complying with the permit transfer provisions specified in R315-310-11 of the Utah Administrative Code.

IV.C. Expansion

IV.C.1. This Permit is for a Class I landfill. The permitted landfill shall operate according to the design and Operation Plan described and explained in this Permit. Any expansion of the current footprint designated in the description contained in Attachment #1. The plans and specifications shall be approved by the Director prior to construction.

IV.C.2. Any expansion of the landfill facility beyond the property boundaries defined on the Permit page above shall require submittal of a new permit application in accordance with the requirements of R315-310 of the Utah Administrative Code.

IV.D. Expiration

IV.D.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 timely submits a 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.

IV.E. Contract Approval

IV.E.1. The Permittee shall receive waste only from local governments that have contracts with the facility owner. All new contracts and changes in existing contracts shall be reviewed and receive approval from the Director prior to receipt of waste pursuant to those contracts.

Attachment #1

Engineering Report
Landfill Design and Construction

SECTION 2 - ENGINEERING REPORT

2.1 LOCATION STANDARDS

The following sections present the Solid Waste Facility Locations Standards and discuss the status of the BCL compliance with those requirements. Since the BCL is not a new facility or a facility seeking expansion, the locations standards are not applicable but are included for informational purposes.

2.1.1 Land Use Compatibility

The UDEQ Division of Waste Management and Radiation Control Rules state that no Class I, Class II or a Class V landfill will be located within:

- One thousand feet of a national, state or county park, monument, or recreation area; designated wilderness or wilderness study area; or wild and scenic river area.
- Ecologically and scientifically significant natural areas, including wildlife management areas and habitat for listed or proposed endangered species, as designated pursuant to the Endangered Species Act of 1982.
- Farmland classified or evaluated as prime, unique, or of statewide importance by the U.S. Department of Agriculture, Soil Conservation Service, under the Prime Farmland Protection Act.
- One-quarter mile of existing permanent dwellings, residential areas, and other incompatible structures, such as, schools, churches, and historic structures or properties listed or eligible to be listed in the State or National Register of Historic Places.
- Proximity to an airport.
- Areas with respect to archeological sites.

2.1.1.1 Beaver County Landfill (BCL) Status

- The BCL is not located within 1,000 feet of a national, state, or county park, monument, or recreation area; designated wilderness or wilderness study area; or wild and scenic river area.
- Ecologically or scientifically significant natural areas have not been observed within or adjacent to the current site. This site is an active landfill and has been used as such since 1994.
- There are not soils within the landfill property boundaries that are classified prime soil types for farmland use according to the Soil Conservation Service (SCS) maps of Beaver County.
- There are no schools, churches, historic structures, or properties eligible to be listed in the State or National Register of Historic Places currently located within one-

quarter mile of the property line that encloses the area currently being operated as a Landfill.

- The Landfill is not located within 10,000 feet of a public-use airport runway used by turbojet aircraft. The closest airport is located more than five miles south of the landfill.
- No archaeologically significant discoveries have been made at the site, nor are any known to exist.

2.1.2 Geologic Hazards and Geotechnical Engineering

The Utah State Regulations indicate “No new facility or lateral expansion of an existing facility shall be located in a subsidence area, a dam failure flood area, above an underground mine, above a salt dome, above a salt bed, or on or adjacent to geologic features which could compromise the structural integrity of the facility”.

2.1.2.1 Debris Flows and Alluvial Fan Flooding

The site is located on the Last Chance Bench. The elevated nature of the bench is such that the potential for alluvial fan flooding or debris flows occurrence is considered to be extremely unlikely.

2.1.2.2 Liquefaction

Certain areas within the intermountain region also possess a potential for liquefaction during seismic events. Liquefaction is a phenomenon whereby loose, saturated, granular soil deposits lose a significant portion of their shear strength due to excess pore water pressure buildup resulting from dynamic loading, such as that caused by an earthquake. Among other effects, liquefaction can result in densification of such deposits causing settlements of overlying layers after an earthquake as excess pore water pressures are dissipated. The primary factors affecting liquefaction potential of a soil deposit are: (1) level and duration of seismic ground motions; (2) soil type and consistency; and (3) depth to groundwater.

Because the facility is founded largely on dry sands, gravels and silts the site has a very low potential for liquefaction and it should not be considered a concern for this site.

2.1.2.3 Seismicity and Faulting

Section 3 of the Waiver Application (Appendix E), details the general geologic setting including faulting.

2.1.2.4 Seismic Impact Zone

The EPA and the UDWRC define a seismic impact zone as any location with a 10% or greater probability that the maximum horizontal acceleration (MHA) in lithified earth

material, expressed as a percentage of the earth's gravitational pull, will exceed 0.10g in 250 years.

The MHA in lithified earth material is defined in 40 CFR part 258.14 (EPA 1995) as the "maximum expected horizontal acceleration depicted on a seismic hazard map with a 90% or greater probability that the acceleration will not be exceeded in 250 years, or the maximum expected horizontal acceleration based on site specific seismic risk assessment." Seismic hazard maps depicting probabilistic ground motions and spectral response have been developed for the United States as part of NEHRP/NSHMP (Frankel et al, 1996; FEMA, 1997). These maps serve as the basis for the International Building Code (IBC). Using NEHRP-based interactive software developed by Leyendecker et al. (2000), probabilistic spectral accelerations corresponding to the MCE (maximum considered earthquake) seismic hazard levels were identified for the site, assuming rock-like conditions.

The MCE is often associated with a 2PE50 hazard level (equivalent to the 90% or greater probability that the acceleration will not be exceeded in 250 years). These spectral accelerations are consistent with 5% damping. To account for site effects, site coefficients which vary with the magnitude of spectral acceleration should be used to modify the bedrock-based spectral acceleration values.

2.1.2.5 Seismic Impact Zone Analysis

UDWMRC rules require that any new landfill or lateral expansion to an existing facility located in a seismic impact zone to have all containment structures, including liners, and surface water control systems designed to resist the maximum horizontal acceleration in lithified earth material for the site. The final configuration of the BCL has been analyzed under static and pseudo-static conditions to determine whether the facility will be adversely impacted from an earthquake event. The findings of the analysis, presented in Appendix H (Slope Stability), indicates that the minimum factor of safety (F.S.) under static conditions is 2.4 and the minimum F.S. under pseudo-static conditions is 1.4, both well above the critical F.S. of 1.0. Based on this analysis, the landfill disposal cells, as well as the ancillary facilities such as the drainage and water control structures, can maintain their integrity during the expected maximum probable earthquake event.

2.1.2.6 Unstable Areas

An unstable area means "a location that is susceptible to natural or human induced events or forces capable of impairing the integrity of some or all of the landfill structural components

responsible for preventing releases from a facility”. Unstable areas include poor foundation conditions or karst terrain resulting in excessive differential settlement, or areas susceptible to mass movement liquefaction.

A field investigation was undertaken in the development of the Waiver Application (Appendix E) and included a subsurface drilling and sampling program. Information obtained during the investigation indicates that the soils beneath the landfill property are characterized by sandy gravel, sandy silt, and silty clay. No expansive soils are known to exist anywhere on the property. Subsidence has not been observed in old fill areas, either by soil settlement due to the overlying waste load, or due to settlement within the waste mass itself.

A study by Mulvey (1992), entitled *Engineering Geologic Problems Caused by Soil and Rock in Southwestern Utah*, presented a generalized map of the distribution of problem soil and rock in southwestern Utah which defines six types of problem soil or rock including expansive soil or rock; collapsible soil; gypsiferous soil or rock; limestone (karst); soils susceptible to piping; and, areas which contain active dunes. The study did not indicate the presence of any of these problem soil and rock types near the BCL. In addition, there are no excessively steep slopes or bedrock outcrops near the landfill. The nearest lithologic unit which has been characterized as an unstable slope having the potential for mass-wasting lies approximately five miles west of the site in Beaver Canyon (Harty, 1992). In addition, a map of landslides in southwestern Utah by Harty (1992) shows the nearest landslide to be in Beaver Canyon. Based on this information and the topographic location of the landfill on top of the Last Chance Bench, the operation of the BCL is not likely to be affected by problems of settlement or unstable slopes or foundation material.

2.1.3 Surface Water Requirements

UDEQ has adopted Subtitle D location restrictions for floodplains, wetlands and watersheds. The landfill site does not currently fall within a delineated 100-year flood zone. There are no known or designated wetlands within the limits of the landfill boundary. The landfill is not located in a watershed for a public water system or a location that could cause contamination of a lake, reservoir, or pond. There are no known endangered or threatened species within the landfill area.

2.1.3.1 Floodplain

There has been very little, if any, floodplain mapping performed outside of incorporated city boundaries in southern Utah. Floodplain mapping for the Beaver area does not extend to the area surrounding the landfill and as a result the site is not mapped in a potential

floodplain. Based upon the location of the landfill on the Last Chance Bench; the likelihood of being in a floodplain is extremely unlikely.

2.1.3.2 Watershed Management Areas

UDWMRC rules prohibits solid waste facilities from being located on any public land that is being used by a public water system for watershed control for municipal drinking water. The Department of Environmental Quality Division of Drinking Water has verbally indicated that Beaver County does not utilize any surface watersheds for use as a drinking water source and that all utilities in the County use groundwater extraction wells as the source of drinking water.

2.1.4 Groundwater Requirements

UDEQ location restrictions with respect to groundwater protection include the following:

- No new facility shall be located at a site where the bottom of the lowest liner is less than 5 feet above historical high levels of groundwater in the uppermost aquifer.
- No new facility shall be located over a sole source aquifer.
- No new facility shall be located over groundwater classified as IB (an irreplaceable aquifer).
- A new facility located above any aquifer containing groundwater which has total dissolved solids (TDSs) content below 1,000 milligrams per liter (mg/l) and does not exceed applicable groundwater quality standards for any contaminant is permitted only where the depth to groundwater is greater than 100 feet. For a TDS content between 1,000 and 3,000 mg/l, the separation must be 50 feet or greater. These separation distance requirements are waived if the landfill is constructed with a composite liner.
- No new facility shall be located in designated drinking water source protection areas or, if no such protection area is designated, within a distance to existing drinking water wells or springs for public water supplies of 250-day groundwater travel time.

2.1.4.1 Beaver County Landfill Status

The lowest point of the bottom of the landfill is at least 100 feet above the highest anticipated groundwater elevation as detailed in Section 4 (Appendix E). Groundwater beneath the Landfill area is not classified as a sole source or Class IB (irreplaceable aquifer). A groundwater transport study was conducted as part of a previous permit application, see Sections 7 and 8 (Appendix E). Based on this information the landfill does meet the requirements of the groundwater protection location restrictions.

2.2 PHASED DESIGN - PROPOSED LANDFILL DEVELOPEMENT

As described in Section 3.1 of Part II; the landfill has been developed in Phases. The following sections discuss the development of the last Phase of the BCL.

2.2.1 Design and Operation

The BCL is operated as a mass fill landfill. For the sake of volume analysis and construction staging; the development of the landfill has been broken into Phases. The drawing (Appendix I) detail the approximate extent of each of the Phases and the contours of the final cover.

2.2.2 Liner Requirements

The BCL is designed without a synthetic liner. Previous studies and site investigations by Vector Engineering have demonstrated that a synthetic liner was not required. Appendix E and F contain the initial liner exemption data.

2.2.3 Estimated Life

The projected waste stream for the Landfill will come from Beaver County. Estimated daily waste tons being delivered to the BCL operations is approximately 30 tons per day based on recent records. Only limited distinction is made in the records between residential and commercial waste disposal. The anticipated future air space consumption has been evaluated based upon a 4.4% waste stream increase rather than the originally anticipated escalation of 2.38%. Actual data suggests that the landfill growth is near 0% with 9,952 tons disposed of in 2007 and 9,392 tons in 2016.

The Landfill life projections are only estimates; the actual life of the Landfill will depend on several variables including the actual rate of waste being delivered, densities, settlement and the potential use of alternate daily cover materials. Appendix J – Landfill Life contains the detailed evaluation of the consumption of airspace.

2.2.3.1 Phase 1

Beaver County has been accepting municipal solid waste at the current site since 1996. Consumption of airspace between 1996 and the preparation of this application have been reflected in the Landfill life analysis with the initial Phase 1 lasting until approximately 2012.

2.2.3.2 Phase 2

Phase 2 began operation as Phase 1 was completed. The airspace available in Phase 2 will provide landfilling capacity for approximately 8 years with capacity being reached in approximately 2020.

2.2.3.3 Phase 3

Phase 3 will be the final Phase for the BCL and will have capacity for approximately 19 years with capacity being reached in approximately 2039.

2.3 DAILY, INTERMEDIATE AND FINAL COVER

2.3.1 Daily and Intermediate Soil Cover

Daily cover soils must meet the 6-inch State requirements for protection against odors, litter and vectors at the working face. The daily 6-inch thick cover will typically be obtained from the excavation of the surrounding slopes and from previously excavated materials.

Intermediate cover soil requirements are governed by R315-303-4. The outside face of the daily modules and waste areas that are expected to remain inactive for more than 30 days will be protected with an additional 12-inch intermediate cover. The borrow area for intermediate cover soils is the same as for daily cover soils.

Before the start of waste placement each day, cover soils on top of the previous lift will be stripped back and stockpiled for reuse as soil cover at the end of the day or as needed or as practical. These recycled cover soils will be used first; the remainder of daily cover soils will be provided from cell excavation or stockpiled soils.

C&D waste will be processed in a common operational face with the MSW and be covered daily.

2.3.2 Alternate Daily Cover

BCL may utilize a 1.5 mil plastic membrane as an alternate daily cover. Soil is used as daily cover no less frequently than weekly to provide both trafficable surfaces and to isolate potential fires should they develop.

2.3.3 Final Cover

The final cover at the BCL will be constructed as described in Section 3.2.

2.4 MONITORING SYSTEM

2.4.1 Ground Water Monitoring System

The BCL was not required to install ground water monitoring wells.

2.4.2 Leachate Monitoring

The BCL was not required to install a synthetic liner system nor install a leachate collection system.

2.4.3 Landfill Gas

The decomposition of solid waste produces methane, a potentially flammable gas. The accumulation of methane in site structures can result in fire and explosions that can injure employees and property, users of the Landfill, and occupants of nearby structures. In accordance with Subtitle D and Utah rules, BCL will conduct surface and facility structure gas monitoring at least quarterly for methane detection. The concentration of methane gas generated by the Landfill must not exceed 25% of the lower explosive limit (LEL) in the facility structures (excluding gas control or recovery system components). The concentration of methane gas generated by the Landfill must not exceed the LEL at the facility boundary. As outlined in EPA Subtitle D, Subpart C and the State of Utah Regulations, BCL will take all necessary steps to protect human health and will immediately notify UDEQ of methane levels detected above required limits and actions taken, if any. Within 10 days of an incident, BCL will place documentation of the methane gas levels detected and a description of the interim steps taken to protect human health in the operating record. Within 60 days of detection, BCL personnel will implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify UDEQ that the plan has been implemented. The remediation plan will describe the nature and extent of the problem and describe the proposed remedy.

2.5 DESIGN AND LOCATION OF RUN-ON/RUN-OFF CONTROL SYSTEMS

The main objectives of surface water management for the landfill operation are to provide adequate landfill drainage, to prevent off site run-on, preventing unnecessary surface water infiltration and subsequent leachate production, to contain surface run-off from open areas on-site; and to prevent erosion. Federal regulations require: 1) A run-on control system to prevent flow onto the active portion of the landfill during the peak discharge from a 24-hour, 25-year storm; and 2) Run-off control system from the active portion of the landfill to collect and to control at least the water volume resulting from a 24-hour, 25-year storm. Appendix K – Drainage System Design contains the details and assumptions utilized to calculate run-on and run-off volumes.

Attachment #2
Operations Plan

DRAFT

3.0 – OPERATIONS PLAN

The Operation Plan for the BCL has been written to address the requirements of Utah State Solid Waste Regulations R315-302 and R315-310 and describes the proposed operations of the BCL. This updated Operations Plan reflects current landfill operations; data contained in the September 2005 Permit Application, and anticipated changes in landfill operations.

The following section details the operational specifics of the BCL. Forms used in the documentation of the operation are included in Appendix C.

3.1 SCHEDULE OF CONSTRUCTION



The development of the BCL has been incremental in nature. As Phase 1 was filled; Phase 2 was being developed with Phase 3 being utilized as the final Phase of the existing landfill footprint. The initial concept of discrete Phases with distinct boundaries has been transitioned to a landfill development plan that is defined as one remaining Phase that encompasses the entire permitted landfill footprint. The schedule of construction is incremental and will continue on the existing permitted footprint until the existing landfill is at capacity in approximately 22 years.

3.2 DESCRIPTION OF WASTE HANDLING PROCEDURES

3.2.1 General

Since the commencement of operations of the BCL; several small operational modifications have been made and continue to be made at the facility. Historical modifications to the waste handling procedures were necessary to ensure proper separation of the C&D waste from the MSW waste when the facility handled C&D separately from the MSW. The C&D wastes are currently processed alongside the MSW in a common working face eliminating the need for a separate C&D working area. The separate C&D landfill area was closed in 2010 – 2011.

The waste control program is designed to efficiently manage the disposal of both MSW and C&D wastes while minimizing the potential of hazardous or unacceptable wastes being delivered to the BCL. The program is designed to protect the health and safety of

employees, customers, and the general public, as well as to protect against the contamination of the environment.

The landfill site is open for public and private disposal. Signs have been posted along the access road to clearly indicate (1) the types of wastes that are accepted at each facility; (2) the types of wastes not accepted at the site; and (3) the penalty for illegal disposal.

All vehicles delivering wastes to the site are stopped at the equipment maintenance building and gatehouse (EMBG) or near the working face by a Landfill Attendant. The Landfill Attendant will inquire as to the contents of each incoming load to direct the driver to the MSW disposal area, metal recycling area, green waste area or to reject the load due to unacceptable materials. Any vehicle suspected of carrying unacceptable materials (liquid wastes, or hazardous wastes) will be prevented from entering the disposal areas unless the driver can provide evidence that the waste is acceptable for disposal at the site. BCL reserves the right to refuse service to any suspect load. Vehicles carrying unacceptable materials will be required to exit the site without discharging their loads.

If the Landfill Attendant suspects that any load contains unacceptable materials, the Landfill Attendant will further inspect the load at the tipping area before final disposal is allowed.

Loads will be regularly surveyed at each of the tipping areas. If a discharged load contains inappropriate or unacceptable material, the discharger will be required to reload the material and remove it from the landfill site. If the discharger is not immediately identified, the area where the unacceptable material was discharged will be cordoned off. Unacceptable material will be moved to a designated area for identification and preparation for proper disposal.

3.2.2 C&D Wastes

Due to changes in the site operations; C&D wastes are disposed of with the MSW at a common working face. Since the C&D waste is processed with the MSW, cover soils will be applied daily.

3.2.3 Household and Commercial Wastes

Household waste consists of any solid waste derived from households, including garbage, trash, and sanitary wastes. Household sources may include single and multi-family residences, hotels, motels, bunkhouses, ranger stations, campgrounds, picnic grounds, and recreation areas. Commercial wastes are those wastes which are non-industrial in nature and include solid waste generated by stores, offices, restaurants, warehouses, and other non-manufacturing activities, excluding residential and industrial wastes.

Residential collection is mandatory throughout Beaver County. Collection services are provided by a commercial hauler. In the outlying unincorporated areas of the county, dumpsters are provided at central locations. The majority of the solid waste stream consists of household and commercial wastes.

Currently, waste delivered to the working face is dumped at the toe of the working face when possible and spread up the slope in one to two foot lifts, keeping the slope at a typical four to one (horizontal to vertical) configuration.

Work face dimensions is kept narrow enough to minimize blowing litter and reduce the amount of soil needed for cover.

Typically, the compactor is operated with the blade facing uphill. Equipment operations across the slope are avoided to minimize the potential of equipment tipping over. In addition to safety concerns, a toe of slope to crest of slope working orientation provides the following benefits:

- Increases effective compaction.
- Increased visibility for waste placement and compaction.
- More uniform waste distribution.

The wastes are compacted by making three to five passes up and down the slope. Compaction reduces litter, differential settlement, and the quantities of cover soil needed. Compaction also extends the life of the site, reduces unit costs, and leaves fewer voids to help reduce vector problems. Care is taken that no holes are left in the compacted waste. Voids are filled with additional waste as they develop.

Cover soils are applied to all areas of the active cell daily. Intermediate cover is placed in active areas of the landfill that will not receive waste within 30 days. BCL occasionally utilizes alternate daily cover as part of the landfill cover management. The alternate daily cover may be a 1.5 mil plastic, ash from green waste burning, or other materials that will protect the waste from blowing.

3.2.4 Industrial Wastes

The BCL receives minor amounts of industrial waste from local companies including a dairy, a packaging company, and a cement company. These wastes constitute a very small percentage of the total waste received and are managed as part of the municipal waste stream.

3.2.5 Green Wastes

Green wastes include trees and brush trimmings, grass clippings, straw and hay, and green wastes from seasonal or special events. These wastes are segregated from the waste stream and are stockpiled on-site. The district burns the stockpile once per year after obtaining a permit from the State of Utah.

A burn permit for Utah's southwest fire district, which includes Beaver County, is required during the summer months of June 1 through October 31. During this period, the burn permit is obtained by request from the Beaver County fire warden. The warden inspects the landfill site and evaluates the conditions for the controlled burn. Restrictions pertaining to the burn are mandated in the permit and may include provisions for having the necessary fire control equipment at the site during the burn, weather and wind condition stipulations, clearing index, the available fire break, available landfill personnel, and any other pertinent issues.

In the event Beaver County needs to perform the yard waste burn during the months of November through May, a burn permit is not formally required by the State. BCL personnel, however; will inform the district fire warden and the local fire agencies of their intentions. All safety mandates will be adhered to, including fire protection equipment, fire-break, adequate personnel, and other restriction deemed necessary by the fire warden and/or the local fire department.

The burn will be conducted by landfill personnel with oversight by the local fire department. Fire control will be performed by use of the landfill dozer or County water truck. No fire will remain burning after dark and any smoldering embers will be extinguished by nightfall.

Once the burning process is complete and the ashes have cooled, the ash is incorporated into the BCL as an alternate daily cover.

3.2.6 Special Wastes

3.2.6.1 Used Oil and Batteries

BCL does not accept used oil. BCL does accept batteries, which are stored on a pallet. Batteries which are discovered at the landfill are pulled from the waste stream and move to the storage pallet. When the pallet is full; the batteries are taken to local retailers for recycling.

3.2.6.2 Bulky Wastes

White goods are accepted at the BCL and are separated for recycling. All appliances potentially containing refrigerants are required to have the compressors removed before being accepted at the landfill. Used cars and other miscellaneous metal by-products are accepted and stored in the metal recycling area. The metal stockpile is removed once a year by a metal recycling service.

3.2.6.3 Tires

BCL accepts small quantities of tires from the general public. Commercial haulers are prohibited from disposing of tires. A total of four passenger tires are accepted from the public with each load. Tires accepted from the general public are incorporated into the working face as they are delivered to the landfill.

3.2.6.4 Dead Animals

Dead animals are accepted at the BCL. The dead animals are disposed of in a separate Monofill on the landfill property. All dead animals received are covered at the end of the working day with a minimum of six inches of soil.

3.2.6.5 Medical and Asbestos Waste

Medical and infectious wastes are accepted from medical facilities provided they are packaged in red plastic bags. If medical waste is received at the landfill, the Landfill Attendant will place the waste containers at the bottom of the active MSW face and immediately cover them with

12 inches of soil or waste material which does not contain infectious waste. The waste containers will not be compacted until they are covered.

Asbestos wastes are accepted at the BCL provided the following conditions are satisfied:

- Asbestos waste must be adequately wetted to prevent fiber release
- Asbestos must be adequately containerized in double plastic bags of 6-mil or thicker and sealed in such a way to be leak-proof and air-tight with minimal air or voids space in the bags. If the asbestos is bound in a slurry, the slurry must be packaged in leak-proof and air tight rigid containers
- Waste containers must be labeled with the name of the waste generator, the location where the waste was generated, and tagged with a warning label that conforms to the requirements of 40 CFR Part 61.149(2)

If asbestos wastes are received at the landfill, the Landfill Attendant shall:

- Verify the quantities of waste received, sign off on the waste shipment record, and send a copy of the waste shipment record to the generator within 30 days
- Require vehicles that have transported asbestos waste to be marked with warning signs as specified in 40 CFR Part 61.149
- Inspect the load to verify that the asbestos waste is properly contained in leak-proof containers and labeled properly
- Place asbestos containers at the bottom of the active face with sufficient care to avoid breaking the containers
- Cover the waste within 12 hours with a minimum of six inches of material that does not contain asbestos, or if the waste is not properly containerized, cover immediately with six inches of material that does not contain asbestos; and
- Limit access to the asbestos disposal area until the waste has been covered with six inches of material which does not contain asbestos

If the Landfill Attendant believes the asbestos waste is in a condition that may cause significant fiber release during disposal, the Landfill Attendant will notify the Landfill Manager who will evaluate the waste. If the Landfill Manager suspects that disposal will result in significant fiber release during disposal; the Landfill Manager will notify the local health department and the Executive Secretary. If the wastes are not properly containerized, and the Landfill Attendant accepts the load, the Landfill Attendant shall thoroughly soak the asbestos material with a water spray prior to unloading, dispose of the waste near the bottom of the active face, and immediately cover the waste with six inches of non-asbestos material which prevents fiber release prior to compaction in the landfill. The Landfill Attendant will then thoroughly rinse out the haul truck.

The Landfill Attendants shall also provide adequate barriers near any asbestos disposal to control public access.

3.2.6.6 Grease Trap Waste and Car Wash Sediment

BCL accepts grease trap waste and sediment from car washes. The grease trap wastes are randomly tested for the following constituents:

▪ Benzene	less than	0.005 ppm
▪ Toluene	less than	1.0 ppm
▪ Ethylbenzene	less than	0.07 ppm
▪ Xylene	less than	10.0 ppm

Car wash sediments are randomly tested for the following TCLP metals:

▪ Arsenic	less than	5.0 ppm
▪ Barium	less than	100.0 ppm
▪ Cadmium	less than	1.0 ppm
▪ Chromium	less than	5.0 ppm
▪ Lead	less than	5.0 ppm
▪ Mercury	less than	0.2 ppm
▪ Selenium	less than	1.0 ppm
▪ Silver	less than	5.0 ppm

The grease trap and car wash sediments will be land applied within a level area to eliminate free liquid. The level area will be confined within a 6" berm to prevent any liquid from running off. The grease trap and car wash sediments will be periodically removed to the working face once free liquid is completely removed. If the Landfill Attendant or the Landfill Manager has a reason to believe that a load of either grease trap or car wash sediment is unusual; then the load is tested for the above-mentioned constituents.

3.2.6.7 Household Hazardous Wastes (Not Accepted)

BCL does not currently have a household hazardous waste collection program. Most household hazardous wastes are managed as part of the municipal waste stream.

3.3 WASTE INSPECTION

3.3.1 Landfill Spotting

Learning to identify and exclude prohibited and hazardous waste from the BCL is necessary for the environmentally safe operation of the facility. The Landfill Attendants are required to receive initial and periodic hazardous waste screening inspection training. Waste screening certificates of the training received are kept in the personnel files.

3.3.2 Random Waste Screening

Random inspections of incoming loads are conducted according to the schedule established by the Landfill Manager but no less frequently than one inspection for every one hundred incoming loads. If frequent violations are detected, additional random checks are scheduled at the discretion of the Landfill Manager.

The random waste screening process is as follows:

- The driver of the vehicle containing the suspect material is directed to the waste screening area.
- The Random Load Inspection Record (Appendix C) is completed.
- Protective gear is worn (leather gloves, steel-toed boots, and hard hat).
- The suspect material is spread out with landfill equipment or hand tools and visually examined. Suspicious marking or materials, like the ones listed below, are investigated further:
 - Containers labeled hazardous
 - Material with unusual amounts of moisture
 - Biomedical (red bag) waste
 - Unidentified powders, smoke, or vapors
 - Liquids, sludges, pastes, or slurries
 - Asbestos or asbestos contaminated materials
 - Batteries
 - Other wastes not accepted by the Landfill
- The Landfill Manager is called if unstable wastes that cannot be handled safely or radioactive wastes are discovered or suspected.

3.3.3 Removal of Hazardous or Prohibited Waste

Should hazardous or prohibited wastes be discovered during random waste screening or during tipping, the waste is removed from the landfill as follows:

- The waste is loaded back on the hauler’s vehicle. The hauler is then informed of the proper disposal options
- If the hauler or generator is no longer on the premises and is known, they are asked to retrieve the waste and informed of the proper disposal options
- The Landfill Manager arranges to have the waste transported to the proper disposal site and then bill the original hauler or generator

A record of the removal of all hazardous or prohibited wastes will be kept in the site operational records.

3.3.4 Hazardous or Prohibited Waste Discovered After the Fact

If hazardous or prohibited wastes are discovered after the fact, the following procedure will be used to remove them:

- Access to the area is restricted
- The Landfill Manager is immediately notified
- The Landfill Attendant removes the waste from the working face if it is safe to do so.
- The waste is isolated in a secure area of the landfill and the area cordoned off
- Local authorities are notified as appropriate

The UDWMRC, the hauler (if known), and the generator (if known) will be notified within 24 hours of the discovery. The generator (if known) is responsible for the proper cleanup, transportation, and disposal of the waste.

3.3.5 Notification Procedures

The following agencies and people are contacted if any hazardous materials are discovered at the Landfill:

- Mike Neilsen, Landfill Manager (435) 438-5744
- Southwest Utah Public Health Department..... (435) 438.2482

- Executive Secretary, UDWMRC..... (801) 536-0200
- Beaver Co. Fire Department..... (435) 438.6161

A record of conversation is completed as each of the entities is contacted. The record of conversation is kept in the site operational records.

3.4 FACILITY MONITORING AND INSPECTION

3.4.1 Groundwater

The BCL is not required to monitor groundwater, therefore; no groundwater monitoring or inspection activities are performed.

3.4.2 Surface Water

Surface water is managed as outlined in the Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is included as Appendix D.

Run-off from the final cover will be managed by a combination of berms and ditches. The berms will be placed to divert the water around the active area to ditches.

BCL staff will inspect the drainage system monthly. Temporary repairs will be made as required to any observed deficiencies until permanent repairs can be scheduled. BCL staff or a licensed general contractor will repair drainage facilities as required.

3.4.3 Leachate Collection

The BCL is not required to collect or monitor leachate, therefore; no leachate monitoring or inspection activities are performed.

3.4.4 Landfill Gas

Landfill gases are measured quarterly at the BCL with a hand-held meter. The results are recorded on the Methane Observation Form included in Appendix C.

3.4.5 General Inspections

Routine inspections are necessary to prevent malfunctions and deterioration, operator errors, and discharges that may cause or lead to release of wastes to the environment or a

threat to human health. Landfill Attendants are responsible for conducting and recording routine inspections of the landfill facilities according to the following schedule:

- Landfill Attendants (when operating equipment) perform pre-operational inspections of all equipment daily. A post-operational inspection is performed at the end of each shift while equipment is cooling down.
- All equipment is on a regular maintenance schedule. The on-site personnel perform all oil changes; an overall inspection of each piece of equipment is performed during oil changes. A logbook is maintained on each piece of equipment and any repairs and comments concerning the inspection are contained in the log. Oil samples are pulled when each machine is serviced and results are recorded in the machine log.
- Facility inspections are completed daily. Any needed corrective action items are recorded and the Landfill Attendants complete needed repairs. If a problem is of an urgent nature, the problem is corrected immediately.
- Scale maintenance will be performed as required, with calibration performed annually at a minimum. The scale is certified on an annual basis.

3.5 CONTINGENCY AND CORRECTIVE ACTION PLANS

The following sections outline procedures to be followed in case of fire, explosion, run-on/run-off contamination, or suspected groundwater contamination:

The Beaver County Fire Department is contacted in all cases where hazardous materials are suspected to be involved.

3.5.1 Fire

The potential for fire is a concern in any landfill. The BCL follows a waste handling procedure to minimize the potential for a landfill fire. If any load comes to the landfill on fire, the driver of the vehicle is directed to a pre-designated area away from the working face. The burning waste is unloaded, spread out, and immediately covered with sufficient amounts of soil to smother the fire. Once the burning waste cools and is deemed safe, the material will then be incorporated into the working face. Some loads coming to the landfill may be on fire but not detected until after being unloaded at the working face. If a load of waste that is on fire is unloaded at the working face, the load of waste is immediately removed from the working face, spread out, and covered with soil.

The Beaver County Fire department is called if it appears that landfill personnel and equipment cannot contain any fire at the landfill. The Beaver County Fire department is also called if a fire is burning below the landfill surface or is difficult to reach or isolate.

In case of fire, the Landfill Manager is notified immediately. A written report detailing the event is placed in the operating record within seven days, including any corrective action taken.

3.5.2 Explosion

If an explosion occurs or seems possible, all personnel and customers are accounted for and the Landfill is evacuated. Corrective action is immediately evaluated and implemented as soon as practicable.

The Landfill Manager is notified immediately and the Beaver County Fire department is called. The Executive Secretary is notified immediately.

3.5.3 Failure of Run-On/Run-Off Containment

The purpose of the run-on/run-off control systems is to manage the stormwater falling in or near the Landfill. Where possible, water is diverted away from the Landfill by utilizing ditches and berms. These ditches are inspected on a regular basis and repaired as needed. The working face will be sloped to direct the run-on away from the access road.

Any temporary berms or other structures are checked at least every 2 hours during the storm event until storm water flow has stopped. Permanent improvements or repairs are made as soon as practicable.

The Landfill Manager is notified immediately if a failure of the run-off system is discovered. The event is fully documented in the operating record, including corrective action within 14 days.

3.5.4 Groundwater Contamination

If ground water contamination is ever suspected, studies to evaluate the potential contamination will be conducted and the existence and/or extent of contamination will be documented. This program may include the installation of ground water monitoring wells.

A ground water monitoring program would be developed and corrective action taken as deemed necessary, with the approval of the Executive Secretary.

3.6 CONTINGENCY PLAN FOR ALTERNATIVE WASTE HANDLING

The most probable reason for a disruption in the waste handling procedures at the BCL will be weather related. The Landfill may close during periods of inclement weather such as high winds, heavy rain, snow, flooding, or any other weather-related condition that would make travel or operations dangerous. The BCL may also close for other reasons like fire, natural disaster, etc. In general, the BCL staff minimizes the possibility of disruption of waste disposal services from an operational standpoint.

In case of equipment failure, replacement equipment will be rented or leased to continue operations while repairs are being made.

3.7 DISEASE AND VECTOR CONTROL

The vectors encountered at the BCL are flies, birds, mosquitoes, rodents, skunks, and snakes. Due to the rural location of the landfill, stray house pets are occasionally encountered at the landfill. The program for controlling these vectors is as follows:

3.7.1 Insects

Eliminating breeding areas is essential in the control of insects. BCL staff will minimize the potential breeding areas by daily covering the MSW and C&D waste with 6" of soil (or alternate daily cover). The landfill topography is sloped to reduce ponded water.

3.7.2 Rodents

Reducing potential food sources minimizes rodent populations at the landfill. The application of daily cover at the working area will minimize the potential food sources and the potential for rodents.

In the unlikely event of a significant increase in the number of rodents at the BCL, a professional exterminator will be contacted. The exterminator would then establish an appropriate protocol for pest control in accordance with all county, state and federal regulations.

3.7.3 Birds

It is anticipated that the BCL will have minimal problems with birds. Good landfilling practices of waste compaction, daily covering of working faces, and the minimization of ponded water will alleviate most of the bird problems. If the occasional need arises, the birds will be encouraged to leave by using cracker and whistler shells.

3.7.4 Household Pets

Because of the Landfill's location, some stray cats and dogs have wandered onto the property. When stray animals are encountered (and can be caught), they are turned over to the animal shelter. If the Landfill Attendants are unable to apprehend the animals, they are chased off the property.

3.7.5 Wildlife

The BCL has a variety of wildlife located on or near the landfill property. Wildlife includes deer, snakes, foxes, skunks, and coyotes. If problem skunks or snakes are encountered, they will be exterminated. If other site wildlife becomes a problem, the Landfill Manager will coordinate with the Division of Wildlife Resources to provide methods and means to eliminate the problem.

If any of these vectors become an unmanageable problem, the services of a professional exterminator will be employed.

3.7.6 Fugitive Dust

The road leading to the BCL is paved, however; the access road to the disposal areas is an improved dirt/gravel road and will need occasional dust control measures. General landfill activities, site access by vehicles compounded by the occasional high wind may present a fugitive dust problem. If the dust problem elevates above the "minimum avoidable dust level", the landfill applies water to problem areas.

3.7.7 Litter Control

The relatively small volume of waste managed by the BCL facility helps to keep the amount of litter small. However; due to the nature of landfilling operations, blowing litter will still be an occasional problem. Landfill personnel perform routine litter cleanup to keep the landfill and surrounding properties clear of windblown debris.

Whenever possible, the working face is placed down wind so that blowing litter is worked into the landfill face. During windy conditions, landfill personnel minimize the spreading of the waste to reduce the amount of windblown debris. The prevailing wind on the site is from the southwest to the northeast.

3.8 RECYCLING

Currently, recycling activities are conducted in conjunction with the ongoing landfill disposal operations. The clear majority of materials recycled are metals and green waste.

3.9 TRAINING PROGRAM

As part of the initial training of new employees, all new employees receive a site orientation. The site orientation details the locations of key facilities and the operations associated with each. Additionally, new employees are made aware of the contents of the Landfill's permit requirements.

All personnel associated with the operation of the landfill receive site specific training annually. The "Sanitary Landfill Operator Training Course" offered by the Solid Waste Association of North America (SWANA) is required by all employees. SWANA waste screening is also required of all Landfill Attendants. Certificates of completion are kept in personnel files.

Regular safety and equipment maintenance training sessions are held to ensure that employees are aware of the latest technologies and that good safety practices are used always.

3.10 RECORDKEEPING

An operating record is maintained as part of a permanent record on the following items:

- Vehicle weights, number of vehicles entering the landfill and types of wastes received monthly. Daily logs are stored on the computer.
- Deviations from the approved Operations Plan.
- Personnel training and notification procedures.
- Random load inspection log.

3.11 SUBMITTAL OF ANNUAL REPORT

BCL staff will submit a copy of its annual report to the Executive Secretary by March 1 of each year for the most recent calendar or fiscal year of facility operation. The annual report will include facility activities during the previous year and will include, at a minimum, the following:

- Name and address of facility.
- Calendar or fiscal year covered by the annual report.
- Annual quantity, in tons or volume, in cubic yards, and estimated in-place density in pounds per cubic yard of solid waste.
- Annual update of required financial assurances mechanism pursuant to Utah Administrative Code R315-309.
- Training programs completed.

3.12 INSPECTIONS

The Landfill Manager will inspect the facility to minimize malfunctions and deterioration, operator errors, and discharges that may cause or lead to the release of wastes to the environment or to a threat to human health. These inspections are conducted on a quarterly basis, at a minimum. The BCL Manager typically inspects the facility daily. A Landfill Inspection Form (Appendix C) is kept as part of the operating record. This log includes at least the date and time of inspection, the printed name and handwritten signature of the inspector, a notation of observations made, and the date and nature of any repairs or corrective actions. Inspection records are available to the Executive Secretary or an authorized representative upon request.

3.13 RECORDING WITH COUNTY RECORDER

Plats and other data, as required by the County Recorder, will be recorded with the Beaver County Recorder as part of the record of title no later than 60 days after certification of closure.

3.14 STATE AND LOCAL REQUIREMENTS

The BCL will maintain compliance with all applicable state and local requirements including zoning, fire protection, water pollution prevention, air pollution prevention, and nuisance control.

3.15 SAFETY

Landfill personnel are required to participate in an ongoing safety program. This program complies with the Occupational Safety and Health Administration (OSHA), and the National Institute of Occupational Safety and Health (NIOSH) regulations as applicable. This program is designed to make the site and equipment as secure as possible and to educate landfill personnel about safe work practices.

3.16 EMERGENCY PROCEDURES

In the event of an accident or any other emergency, the Landfill Attendant immediately contacts the Landfill Manager and proceeds as directed. If the Landfill Manager is not available, the Landfill Attendant calls the appropriate emergency number posted by the telephone. The emergency telephone numbers are:

- Beaver County Central Dispatch..... 911
- Beaver County Fire Department.....(435) 438.6161
- Beaver County Sheriff's Office(435) 438.2466
- Beaver Valley Hospital(435) 438.7100
- Mike Neilsen, Landfill Manager (435) 438-5744

Attachment #3
Inspection Forms

DRAFT

Class I Landfill Landfill Inspection Form

Performed by: _____

Date _____

Structures And Roads		Overall Condition	
		Satisfactory	Needs Work
1. Buildings			
2. Fences			
3. Gates			
4. Road Leading To Facility			
5. Inside Perimeter Road			
*Specify Recommended Repairs And Or List Action Taken			
Operations		Overall Condition	
		Satisfactory	Needs Work
Litter And Weed Control			
Excavations			
Daily Cover			
Final Cover			
Waste Piles			
Appliances			
Construction/Demolition			
Tires			
Inert Waste			
Car Bodies			
Yard Waste			
Recyclables/Furniture Storage Area			
Specify Recommended Repairs And/Or List Actions Taken			

**Class I Landfill
Random Load Inspection Record**

INSPECTION INFORMATION	
Inspector's Name:	
Date of Inspection:	
Time of Inspection:	
Facility Name:	
TRANSPORTER INFORMATION	
Company Name:	
Address:	
Phone Number:	
VEHICLE INFORMATION	
Driver's Name:	
Vehicle Type:	
Vehicle License Number:	
Description of Waste:	
OBSERVATIONS AND ACTIONS TAKEN	
Photo Documentation: <input type="checkbox"/> Yes <input type="checkbox"/> No	

Driver's Signature*: _____ Date: _____

Inspector's Signature: _____ Date: _____

*Driver's signature hereon denotes: His presence during the inspection and does not admit, confirm or identify liability.

Class / Landfill

Date: / / 199

LICENCE No.	NAME	SIGNATURE	RECEIPT	FEE		HOUSEHOLD		CONSTRUCTION		TIRES		METAL	YARD	DEAD ANIMALS	TOTAL TONNAGE
				com	res	com	res	c	t	i					
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
														TOTAL of all columns	

Com = commercial Res = Residential C = Car T = Truck I = implement S = Small M = Medium L = Large
 1/4 = .25 1/3 = .33 1/2 = .50 2/3 = .66 Operator: _____

Explosive Gas Monitoring

Beaver County SSD #5 Class I Landfill Quarterly Sampling

Gas Sampling Procedures- *Write Procedures here that are to followed during each sampling event.*

Gas Monitoring Event- Day/Month/Year _____ Time _____ am pm
Conducted by _____

Weather Conditions- Wind Direction _____ Wind Speed _____
Soil Moisture Conditions _____

Equipment Calibration- Day/Month/Year _____ Time _____ am pm
Conducted by _____

Sampling Location	Sample Result (% of LEL)*	Comments

*Compliance Limits: 25% of the lower explosive limit gases in facility structures
100% of the lower explosive limit at the property boundary

Attachment #4
Closure Plan
and
Post-Closure Plan

DRAFT

SECTION 3 – CLOSURE PLAN

3.1 CLOSURE STRATEGY/SCHEDULE



This section describes the final cover construction, site capacity, schedule of closure implementation, estimated costs for closure, and final inspection procedures for the closure Stages at the BCL.

The Executive Secretary will be notified in writing at least 60 days prior to the anticipated last receipt of waste in accordance with R315-302-3(4)(a). Implementation of the final closure Phase will begin within 30 days after last receipt of waste. Final closure of the entire Landfill will be completed within 180 days of implementation of closure activities, unless an extension has been granted by the Executive Secretary.

Closure will occur incrementally in several stages. As a substantial portion of each landfill Phase has been filled to design capacity, that area will be closed. It is anticipated that each of the landfill Phases will be closed in several distinct closures stages. The following table summarizes by landfill Phases the approximate Landfill Phase capacity and projected dates of service:

Landfill Phase	Phase Capacity (cubic yards)	Projected Date of Completion
Phase 1	190,194	2012
Phase 2	110,642	2020
Phase 3	276,924	2039
MSW TOTALS	577,760	

To estimate the landfill life and project the timing of constructed projects; engineering assumptions about the extent of each Phase were made to be able to calculate volumes. The length of time that each Phase will be in service will depend upon the day to day operation of the landfill and will vary from the specific dates of closure presented above. It may be necessary, due to site access requirements, to partially fill future Phases to allow for final waste placement within a particular Phase.

The closure of the BCL will be completed in accordance with this plan. Closure activities will be performed in such a manner as to accomplish the following goals:

- minimize the need for further maintenance;
- minimize or eliminate threats to human health and the environment from post-closure escape of solid waste constituents, leachate, landfill gases, contaminated run-off or waste decomposition products to the ground, ground water, surface water, or the atmosphere; and,
- adequately prepare the facility for the post-closure period.

All closure stages will be in accordance with a State of Utah DEQ approved QA/QC Plan.

3.2 FINAL COVER DESIGN AND INSTALLATION

3.2.1 Final Cover – General

The final cover at the BCL will be completed in multiple stages. Final cover construction will be completed as the landfill approaches the final cover elevation presented in Appendix I.

All equipment which will not be used on-site during the post-closure period will be removed. Structures at the site which remain after the final receipt of waste, and which will not be an integral part of post-closure site maintenance, will be dismantled and removed from the site. Any soil contamination remaining after the final receipt of waste will be removed, treated, or disposed of according to applicable regulations. Following the final receipt of waste, any remaining stockpiles of recyclable or other stored materials will be removed from the site.

Rough contouring will be performed throughout the life of the site during daily operations. Following the general site cleanup described above, final contouring will be performed using native soils to establish a suitable foundation layer for final cover construction. The site will be surveyed to establish base elevations for closure cap construction. After final grading of the foundation layer (6 – 12 inches in depth), the installation of the final cover will begin.

A QA/QC and closure documentation program will be submitted to the UDWMRC for review and approval prior to any construction activities. Final cover testing will be performed as part of a construction Quality Assurance / Quality Control (QA/QC) Plan.

3.2.2 C&D Landfill Cover

The former C&D landfill area has been closed in 2010. Appendix L – C&D Landfill Cover contains the details of the State approved QA/QC Plan and documentation of the final cover construction.

3.2.3 Final Cover – Design

The original cover design has been replaced with an alternate final cover. Appendix M – Alternate Final Cover describes the methodology utilized to determine that the alternate cover design is as protective to the environment as the original permitted cover. The final cover is 24” of select soil placed over a base of 6”-12” site soils. The final cover will be graded to prevent ponding and minimize infiltration of run-off waters.

The top slopes will be graded at a minimum of three percent into a perimeter drainage channel. Storm flows will be routed over the sideslopes and into the perimeter drainage channel. All sideslopes are graded to a maximum slope of three to one, horizontal to vertical (3:1), and are configured to minimize drainage lengths while promoting surface run-off to perimeter drainage channels. Each phase of closure construction will be certified by a professional engineer registered in the State of Utah.

Drainage channels were sized to accommodate the flow from a 25-year, 24-hour storm event. A detailed discussion of site hydrology and hydraulics is included in the drainage report presented in Appendix K. A drainage channel will be constructed around the interior perimeter of the closed area, inside the perimeter access road. Four culverts will be installed in strategic locations to direct run-off from the closed surface of the landfill under site access roads and away from the site as illustrated in Drawing 5 (Appendix A). All culverts and sideslope downdrains are sized as 18-inch corrugated metal pipe. Exterior perimeter drainage channels will not be required because of the location of the landfill atop the Last Chance Bench. Off-site run-on is not anticipated.

3.2.4 Final Cover Closure – MSW Closure Area 1 and Area 2

The first MSW areas of the BCL are currently being closed utilizing the alternate final cover design. Appendix N – MSW Closure 1 includes the State approved QA/QC Plan for the final cover of the MSW areas. A drawing showing all areas of the BCL scheduled to receive final cover by the end of 2018 is included in Appendix N as well.

3.3 SEED, FERTILIZER AND MULCH

The top 6-inches of the final cover will be utilized for vegetation. The vegetative layer of the cap will be seeded with a mixture of grasses suitable for fast growth in the region, then fertilized and mulched.

Early establishment of vegetation on the landfill's final slope surface will impede soil

erosion and promote evapotranspiration. BCL staff will periodically evaluate vegetative growth, vigor, and color so that the integrity of the final cover system is maintained. If stress signs on vegetation caused by landfill gas and leachate seeps are noted, the problem will be corrected. Corrective procedures will be conducted based on current design recommendations and will be built consistent with construction specifications. BCL staff or a licensed landscape contractor will make repairs, as necessary.

3.4 LANDSCAPING

The landfill facility, including all surrounding grounds, will be maintained in conjunction with any scheduled maintenance activities (i.e., road improvements, etc.). The landscape of the Landfill will be designed to be both functional and low maintenance. Due to the location of the Landfill; the required landscaping will be minimal in nature and be comprised of drought tolerant native grasses.

3.5 FINAL COVER CONTOURS

The Landfill's final grades will be inspected and maintained to ensure its integrity and conformity with the conceptual final cover plans.

Any areas where water has collected (ponded) will be regraded. Erosion damage resulting from extremely heavy rainfall will be repaired. BCL staff will inspect the final grading no less than quarterly.

3.6 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

For construction of all final landfill cover, drawings, specifications and QA/QC procedures will be developed by a Utah licensed Professional Engineer and submitted to the State of Utah DWMRC for review and approval prior to construction of each closure Phase.

3.7 CLOSURE COST ESTIMATES

The current cost estimates for the closure of the BCL operation is provided in Appendix O – Closure/Post Closure Costs.

3.8 CERTIFICATION OF CLOSURE AND RECORD KEEPING

A Utah licensed Professional Engineer will be retained to observe the closure of each of the final cover Phases. The registered engineer will be employed by BCL, or will be a BCL-hired consultant and will certify the Landfill was closed according to the closure plan. Any amendment or deviation to the closure plan will be approved by the Executive Secretary and any associated permit modifications will be made. Final closure work and documentation will be observed and reviewed by UDWMRC personnel as necessary.

As part of the certification process, the engineer shall also provide closure as-built drawings to the Executive Secretary within 90 days following completion of closure activities.

Additionally, the final plats and the amount and location of waste will be recorded on the site title. The owner will file the notarized plat with the County Recorder within 60 days following certification of closure.

SECTION 4 – POST-CLOSURE CARE PLAN

4.1 MONITORING PROGRAM

Post closure activities will begin when final cover closure is approved by the Executive Secretary. The following presents the post-closure plan for the BCL facility. The following subsections offer a description of the monitoring programs applicable to the BCL facility.

4.1.1 Groundwater

No groundwater monitoring is required or performed at the BCL.

4.1.2 Surface Water

Although no surface water sampling activities are scheduled for the landfill, BCL staff will inspect the drainage system no less than quarterly. Temporary repairs to any observed damage will be made until permanent repairs can be scheduled. BCL or a licensed general contractor will replace drainage facilities, if necessary. BCL has a Storm Water Pollution Prevention Plan (SWPPP) on file on site; a copy of the SWPPP is presented in Appendix D.

4.1.3 Leachate Collection and Treatment

A leachate collection system was neither required nor installed during utilization of the unlined BCL; therefore, no monitoring is required.

4.1.4 Landfill Gas

Landfill gas monitoring wells have not been installed at the BCL site. Landfill gas is monitored at operator level around the site perimeter to monitor explosive landfill gas emissions. The perimeter of the disposal area, as well as all structures at the site, will be monitored quarterly to ensure compliance with State regulations regarding explosive landfill gas.

During post-closure; BCL landfill personnel or a contracted company will be responsible for the gas observations at the facility perimeter and facility structures. Monitoring will occur no less often than quarterly and will be conducted more often if the need arises. In the event that a sample exceeds the regulatory level, BCL (or contracted) personnel will notify the UDWMRC immediately and undertake appropriate corrective actions.

As outlined in R315-303 BCL will take all the necessary steps to protect human health and will immediately notify UDEQ of explosive gas levels detected above allowable levels and actions to be taken. Also, within 7 days of incident, BCL will place in the operating record documentation of the explosive gas levels detected and a description of the interim steps taken to protect human health. Within 60 days of detection, BCL personnel will implement a remediation plan for the explosive gas releases, place a copy of the plan in the operating record, and notify UDEQ that the plan has been implemented. The remediation plan will describe the nature and extent of the problem and the proposed remedy.

4.2 MAINTENANCE PROGRAM

The following subsections offer a description of the routine maintenance to be performed in association with any ground water monitoring, storm water, leachate collection, gas collection or final cover systems.

4.2.1 Monitoring Systems

4.2.1.1 Ground water

No ground water monitoring is required or performed at the BCL; therefore, no maintenance is required.

4.2.1.2 Surface Water

Drainage control problems can result in accelerated erosion of a particular area within the landfill. Differential settlement of drainage control structures can limit their usefulness and may result in a failure to properly direct storm water off-site.

Implementation of a post-closure maintenance program will maintain the integrity of the final drainage system throughout the post-closure maintenance period. The final surface water drainage system will be evaluated and inspected, no less than quarterly, for ponded water and blockage of, or damage to, drainage structures and swales. Where erosion problems are noted or drainage control structures need repair, proper maintenance procedures will be implemented as soon as site conditions permit so that further damage is prevented.

BCL staff will inspect the drainage system no less than quarterly. Temporary repairs will be made until permanent repairs can be scheduled. BCL or a licensed general contractor will replace drainage facilities.

4.2.1.3 Leachate Collection and Treatment

No systems are installed; therefore, no maintenance is required.

4.2.1.4 Landfill Gas

No systems are installed; therefore, no maintenance is required

4.2.1.5 Final Grading

The landfill cover final grade will be inspected no less than quarterly and maintained to preserve its integrity. Evaluation and inspection of the cover final grades will include evaluations of vegetation and overall system performance. At the completion of closure activities, the surface of the cover will be surveyed to provide a reference point for monitoring settlement.

Areas where water has collected (ponded) will be regraded. Erosion damage resulting from extremely heavy rainfall will be repaired.

4.2.2 Cover and Run-On/Run-Off Systems

The final cover system will incorporate features to manage storm water, minimize erosion, and provide for efficient removal of storm water. The constructed cover will convey collected water via earthen dikes, swales, drainage channels, and culverts away from the Landfill.

Placement of all permanent drainage facilities will be completed during, or immediately following, installation of the final soil cover.

4.3 SCHEDULE OF POST-CLOSURE ACTIVITIES

Post-closure activities, consisting of monitoring and maintaining the final cover and permanent drainage facilities, will be implemented periodically as areas of the Landfill are filled to final grade.

4.4 POST CLOSURE COST ESTIMATES

Updated cost estimates for post-closure care for the BCL facilities are presented in Appendix P – Closure/Post Closure Costs.

4.5 CHANGES TO RECORD OF TITLE, LAND USE, AND ZONING

BCL will notify the County Recorder's Office at any such time when there is a change to the Record of Title, land use plan, or zoning restrictions. In addition, BCL will notify the Recorder at that time when the post-closure care period has expired.

4.6 POST CLOSURE FACILITY CONTACTS

For all post-closure care information; all contact will be through the Beaver County Commission or a designee. Contact with Beaver County officials will be at the following number:

Beaver County Administrator (435) 438 - 6466

4.7 POST CLOSURE LAND USE

Beaver County will select an end use that will be limited to those that do not threaten the integrity of the existing control systems. All activities will be approved by the appropriate cities/agencies prior to implementation. Typical end uses range from recycling operations (which complement existing operations) to recreational activities. Since the closure of the first Landfill site may be over 20 years away, it is not currently possible to develop those land use plans to be consistent with surrounding land uses and the needs of the area that may be relevant at that future time.