

State of Utah

GARY R. HERBERT Governor

SPENCER J. COX Lieutenant Governor

Department of Environmental Quality

L. Scott Baird Interim Executive Director

DIVISION OF WASTE MANAGEMENT AND RADIATION CONTROL Ty L. Howard Director

October 30, 2019

Gary Bringhurst, Chairman Sanpete Sanitary Landfill Cooperative P.O. Box 650087 Sterling, UT 84665

RE: Finding of Completeness and Draft Permit Renewal White Hills Class I Landfill SW249

Dear Mr. Bringhurst:

The Division of Waste Management and Radiation Control has completed its review of the permit renewal request for the White Hills Class I Landfill. The permit renewal has been determined complete.

The required public comment period will begin on November 1, 2019 and will end on December 2, 2019. Notice of the public comment period will be published in the Sanpete Messenger on October 31, 2019. Following the public comment period and resolution of any comments, final action will be taken on the draft permit.

Enclosed is a draft permit and associated attachments for your review.

If you have any questions, please call me at (801) 536-0211.

Sincerely,

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

(Over)

DSHW-2019-009164

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TAM/RDP/kl

- Enclosures: Draft Permit (DSHW-2019-009162) Attachment #1 (DSHW-2019-010930) Attachment #2 (DSHW-2019-010932) Attachment #3 (DSHW-2019-010936) Attachment #4 (DSHW-2019-010938) Attachment #5 (DSHW-2019-010940)
- c: Sue Hilderbrand, MSN, Health Officer, Central Utah Public Health Dept. Nathan Selin, Environmental Health Director, Central Utah Public Health Dept. John Chartier, P.E., DEQ District Engineer

DIVISION OF WASTE MANAGEMENT AND RADIATION CONTROL SOLID WASTE LANDFILL PERMIT

SANPETE COUNTY WHITE HILLS 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:

Sanpete County as owner and operator,

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:	White Hills Class I Landfill
OWNER NAME:	Sanpete Sanitary Landfill Cooperative
OWNER ADDRESS:	PO Box 650087 50 South Main Street, Sterling, Utah 84665
OWNER PHONE NO.:	435-851-1417
TYPE OF PERMIT:	Class I Landfill
PERMIT NUMBER:	Permit number: 9817R2
Location	Southern ¹ / ₂ of the Southeast 1/4 and northwest 1/4 of the Southeast 1/4 of Section 25, Township 19 South, Range East, as well as South 1/2 of the Northwest 1/4 of the Southeast 1/4 of Section 24, Township 19 South, Range I East, Salt Lake Base and Meridian, Sanpete County, Utah
PERMIT HISTORY	Permit 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 Sanpete County White Hills Class I landfill 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 scale house, equipment storage building, Class I unlined disposal cells, dead animal trenches, used tire pile area, metal recycle area and a green waste storage area. 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.

PERMIT REQUIREMENTS

I. GENERAL COMPLIANCE RESPONSIBILITIES

I.A. <u>General Operation</u>

- 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. <u>Acceptable Waste</u>
- 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 waste as defined by UAC R315-302-2(14) of the Utah Administrative Code;
- I.B.1.c Industrial 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.2. Non friable asbestos-containing material in compliance with R315-315-2 of the Utah Administrative Code.
- I.B.2.a 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. <u>Prohibited Waste</u>
- 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-B6 (Acceptable Waste) above;

- I.C.2. Containers larger than household size (five gallons) holding any liquid; noncontainerized 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, except as allowed in Section I-B (Acceptable Waste) of this Permit. (do not use this for facilities that have TSCA approval for PCBs unless the facility has PCB and non-PCB cells) If the facility has a TSCA permit put any restrictions on the PCB waste also any wastes that may be excluded from the PCB cell
- 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 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 Central 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. <u>Noncompliance</u>
- 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. <u>Revocation</u>
- 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. <u>Attachment Incorporation</u>

I.G.1. 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. <u>DESIGN AND CONSTRUCTION</u>

- 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 in Attachment #1 and in accordance with the R315-301 thru 320 of the Utah Administrative Code.

- I.H.1.b This Permit does not authorize construction of new waste disposal cells or sub-cells at the landfill site. Waste disposal is limited to the area within the waste boundaries that existed as of January 31, 2008. The Permittee shall construct any future municipal solid waste cells at the current landfill site with liners and leachate collections systems as required in R315-303-3 of the Utah Administrative Code. Prior to construction of any new disposal cell or area, the Permittee shall submit a request for modification of this Permit. The Permittee shall include in the request design plans, drawings and a construction quality assurance/quality control plan. Modification of this Permit is subject to the requirements of R315-311-2 of the Utah Administrative Code.
- I.H.1.c 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 a 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.d 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.e 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.f A qualified party, independent of the owner and the construction contractor, shall perform the quality assurance function on liner components, cover components, and other testing as required by the approved CQC/CQA Plan. The results shall be submitted to the Director as part of the as-built drawings.
- I.H.1.g 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.h 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 Attachment #2 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 Permit Application. 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. <u>Operations Plan</u>

- II.A.1. The Permittee shall keep the Operations Plan included in Attachment #3 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.2. The Permittee shall submit any modification to the Operations Plan to the Director for approval.
- II.A.3. Security
- II.A.3.a The Permittee shall operate the Landfill so that unauthorized entry to the facility is restricted. The Permittee shall:
- II.A.3.b Lock all facility gates and other access routes during the time the landfill is closed.
- II.A.3.c Have at least one person employed by the Permittee at the landfill during all hours that the landfill is open.
- II.A.3.d Construct all fencing and any other access controls as shown in the Permit Application to prevent access by persons or livestock by other routes.

II.B. <u>Training</u>

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. <u>Burning of Waste</u>

- 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 Permitee'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.C.2. The Permittee shall extinguish all accidental fires as soon as reasonably possible.
- II.D. <u>Daily Cover</u>

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. <u>Ground Water Monitoring</u>

II.E.1. The ground water monitoring requirement for the White Hills Class I landfill has been waived in accordance with R315-308-1(3) of the Utah Administrative Code. Any contamination of ground water resulting from operation of the landfill shall result in the revocation of this waiver. Results of these studies are explained in detail in a report by Tahoma Companies, Inc., entitled, "Request for Exemption from Liner, Leachate Control and Ground Water Monitoring, for the Sanpete County Class I Landfill, White Hills Site," dated May 10, 1998, and Revised July 31, 1998. The Request for Exemption is referenced in Attachment 1 and copies of the request are on file with the Division of Waste Management and Radiation Control.

II.F. <u>Gas Monitoring</u>

- 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. <u>Waste Inspections</u>

- 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 #4. 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.I. <u>Self-Inspections</u>

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. <u>Recordkeeping</u>

- II.J.1. The Permittee shall maintain and keep on file at the scale house on site, a daily operating record and other general records of landfill operation as required by R315-302-2(3) of the Utah Administrative Code. The landfill operator, or other designated personnel, shall date and sign the daily operating record at the end of each operating day. 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 Central Utah 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. <u>Reporting</u>

- 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, a re-application for approval of the financial assurance mechanism, any leachate analysis results, all ground water monitoring results, the statistical analysis of ground water monitoring results, the results of gas monitoring, the quantity of leachate pumped, and all training programs completed.
- II.L. <u>Roads</u>
- 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. <u>Litter Control</u>
- II.M.1. Litter resulting from operations of the landfill shall be minimized. 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. <u>Closure</u>
- III.A.1. The Permittee shall install final cover of the landfill as shown in Attachment #5. The final cover shall meet, at a minimum, the standard design for closure as specified in the R315-303-3(4) of the Utah Administrative Code plus sufficient cover soil or equivalent material to protect the low permeability layer from the effects of frost, desiccation, and root penetration. The Permittee shall submit to the Director a quality assurance plan for construction of the final landfill cover, and approval of the plan shall be received from the Director prior to construction of any part of the final cover at the landfill. A qualified person not affiliated with the Permittee or the construction contractor shall perform permeability testing on the recompacted clay placed as part of the final cover.

III.A.2. This 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 the Permit Application. Upon 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.B. <u>Title Recording</u>

III.B.1. The Permittee shall meet the requirements of R315-302-2(6) of the Utah Administrative Code by recording a notice with the Sanpete 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.C. <u>Post-Closure Care</u>

III.C.1. The Permittee shall perform post-closure care at the closed landfill in accordance with the Post-Closure Care Plan contained in Attachment #5. 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.D. <u>Financial Assurance</u>

- III.D.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.E. <u>Financial Assurance Annual Update</u>
- III.E.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.F. Closure Cost and Post-Closure Cost Revision
- III.F.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. <u>Permit Modification</u>
- 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. <u>Permit Transfer</u>
- 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. <u>Expansion</u>
- 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 #3, but within the property boundaries designated in Attachment #3, shall require submittal of plans and specifications to the Director. 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 designated in the description contained in the Permit Application shall require submittal of a new permit application in accordance with the requirements of R315-310 of the Utah Administrative Code.
- IV.D. Any addition to the acceptable wastes described in Section I-B shall require submittal of all necessary information to the Director and the approval of the Director. use the following for all landfill unless a PCB bulk product approval has been given Acceptance for PCB bulk product waste under R315-315-7(3)(b) of the Utah Administrative Code can only be done after submittal of the required information to the Director and modification of Section I-C of this Permit.
- IV.E. <u>Expiration</u>
- IV.E.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.

Permit Attachments

Attachment #1- Design and Construction Attachment #2- Run-On Control Attachment #3- Operations Plan Attachment #4- Inspection Forms Attachment #5- Closure and Post-Closure Care <u>Attachment #1</u> Design and Construction n an a' fhanna salaan ajar sala a firanta ku manaan sala a shi an tarafi a fira tarihin da arabiya Yu adaga tara ya da a shi pata Kari a shi ya sala sala shi kata sala ku tara ku mata ku sala ku mata ku sala sa Yu a filika manga da Antarika Kari a sala sala sala sala sala sala ku sala ku tara ku tara ku sala sala sala sa

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2.3.2 Landfill Unit Design

2.3.2.1 Relationship to Geological Materials

Initial units at the Landfill were constructed by excavating trenches through superficial slightly silty, gravelly sands into the underlying weathered Arapien bedrock clays.

Average thickness of the sandy soils, as determined from backhoe-excavated test pits, is 12 to 15 feet. The weathered zone at the top of the Arapien bedrock is about 10 feet thick.

2.3.2.2 Summary of Design Features

The Landfill has been designed to best utilize existing Site soils, topography, and drainage. The Site slopes gently (less than 5 percent) to the west.

Fourteen or more trenches were constructed during the initial phase of Landfill operation. Long dimensions of the trenches are oriented east to west, with the floor of each trench sloping to the west—parallel to the existing topography. Each trench will be 14 to 30 feet deep, with lengths ranging from approximately 660 feet to 900 feet, and 66 feet wide at the top of the trench.

Sheet flow from surrounding hillsides is collected behind perimeter berms and conducted away from the Landfill.

Precipitation falling within undeveloped portions of the Landfill is collected behind berms up gradient from active trenches and conducted to the western and southern landfill boundaries.

Precipitation falling directly into active trenches infiltrates the waste and soils and eventually evaporates.

Compacted waste is covered daily with six inches of natural soils or an approved alternative cover system. Areas of compacted waste and daily cover to be left inactive for more than 30 days are protected with an additional 12 inches of compacted intermediate cover soils.

2.3.2.3 Schedule of Excavation, Filling and Cover

The first trench was constructed in the southern half of the southwest quarter of the southeast quarter of Section 25, T. 19S., R. 1 E. Soils excavated from the trench were stored in berms along the northern, southern, and eastern boundaries of the Landfill for run-on control.

Uncompacted municipal waste is placed in thin layers (no thicker than two feet) and compacted to an average density of 900 pounds per cubic yard. Additional thin layers of waste are then placed and compacted until a layer of compacted waste is no greater than 48 inches thick is constructed, after which six inches of daily cover are applied to enclose the cell.

Daily and intermediate cover materials are excavated from the adjacent trench or soil storage piles.

Trenches used through March of 2005 are shown on the "White Hills Landfill As-Built Map," Attachment 11.

A conceptual map showing a proposed sequencing of area method fill units is included in Attachment 20.

The following list describes the completed and proposed sequence of land filling operations:

- 1. Excavated Trench One. Placed excavated soils in berms to the north, south and east of Trench One.
- 2. Constructed Landfill cells in Trench One, beginning at the east end.

Constructed one lift of cells, containing four (4) feet of compacted waste and six (6) inches of daily cover soil, across the full width of the trench and approximately one hundred feet long from east to west.

Began excavation of Trench Two and used excavated soils for daily and intermediate cover materials in trench one. Placed surplus soils from Trench Two on the berms to the east of Trenches One and Two.

- 3. Completed the construction of three vertical lifts of cells of compacted waste and daily cover in the first one hundred linear feet of Trench One.
- 4. After three lifts of cells in the first one hundred lineal feet of Trench One were completed, placed an additional, twelve inch thick, layer of soil over the daily cover soils to create an intermediate cover layer at least eighteen inches thick. The intermediate cover layer is crowned along the center of the trench so that precipitation falling onto the intermediate cover will drain to the north and south, away from the waste.
- 5. Constructed additional cells in Trench One to the west of the first one hundred lineal feet of compacted waste and cover materials.

Placed intermediate cover over three completed lifts of cells every thirty days.

6. After land filling the Trench One was completed, began land filling at area A, west of the equipment storage building.

Continued excavation of Trench Two and stored excavated soils for daily and intermediate cover materials south of Trench Two.

7. After completion of land filling in Trench One, began construction of an area method fill over the top of Trench One. Started at the north east end of Trench One and worked to the west and south.

The area method fill (including daily cover soils, but not including the final cover) will be constructed to a maximum thickness of 21 feet above the tops of the filled Landfill trenches. That thickness will allow a vertical sequence of six cells, each consisting of three (3) feet of compacted waste and six (6) inches of daily cover soils.

The area method of disposal is used almost exclusively in larger landfills, because compaction can be so efficient. The White Hills Landfill will use both methods, because cover materials are excavated from the trenches, and the filled trenches will provide the base for further disposal.

Construct the area method fill as follows:

Each day pile waste into three (3) lifts, each lift with a compacted thickness of about one foot, then place six (6) inches of daily cover. Restrict the size of the area where you place waste if necessary to achieve this thickness.

Dump wastes at the toe of the work face and spread them up the slope in loose layers one (1) to two (2) feet thick. Keep the slope at 3:1 (horizontal to vertical).

Keep work face dimensions narrow enough to minimize blowing litter and reduce the amount of cover soil needed. However, dimensions should be wide enough to accommodate vehicles bringing garbage into the Landfill safely. SWANA recommends that the width of the work face be no less than three times the width of your dozer blade.

Operate the dozer with the blade facing uphill as you spread and compact wastes. Avoid sidehill compaction due to a chance of roll over. In addition, an uphill orientation provides the following benefits:

- Litter blows unto the face—reducing litter problems.
- You will have better visibility for waste placement and compaction
- Loaded equipment moves up the face more easily.

Compact wastes by making three (3) to five (5) 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 where vermin can breed. Take care that no holes are lift in the compacted waste; fill these with additional waste as they develop.

In the area method fill, use grade stakes when necessary to control cell height and top surface grade. The top of the surface grade should be three to five percent (3-5) to the west, while your daily cell height is three (3) feet.

- 8. Construct side slopes along all the boundaries of the area method fill at 3:1 (horizontal:vertical), in accordance with the Landfill drawings.
- 9. Place three feet of final cover materials over the existing eighteen inches of intermediate cover on the top, northern, and eastern 3:1 side slopes of the area method fill constructed over Trench One. Use select soils excavated from Trench two for final cover.

Cover the 3:1 side slopes along the edges of the area method fill over Trenches One and Area A with intermediate cover, only.

- 10. Continue land fillings in Trenches Two and Three, as described above for Trench One.
- 11. After completion of land filling in Trench Two, resume construction of the area method fill over the top of the trenches. Start at the north east end of Trench Two and work to the west and south.

Fill in the 3:1 side slope along the western edge of the area method over Trenches One and Two and Area A with cells of compacted waste and daily cover.

12. Place final cover on the northern and western 3:1 side slopes of the area method fill constructed over Trenches One and Two and Area A.

Cover the 3:1 side slope along the southern edge of the area method over Trench Two with intermediate cover, only.

- 13. Continue land fillings in Trenches Three, Four, Five and Six, followed by construction of the area fill as described above.
- 14. Place final cover on the eastern 3:1 side slopes of he area method fill constructed over Trenches Three, Four, Five and Six.

Place final cover on the top of the area method fill constructed over Trenches Three, Four, Five and Six. The top should slope about four (4) percent to the west, roughly parallel to the natural topography.

Cover the 3:1 side slope along the western and southern edges of the area method fill over Trenches Five and Six with intermediate cover, only.

- 15. Continue land filling the Trenches Seven and Eight, followed by construction of the area fill as described above.
- 16. Place final cover on the western 3:1 side slopes of the area method fill constructed over Trenches Seven and Eight.

Place final cover on the top of the area method fill constructed over Trenches Seven and Eight. The top should slope about four (4) percent to the west, roughly parallel to the natural topography.

- 17. Continue land filling in Trenches Nine through Fourteen, along with sequential construction of the area fill as described above.
- 18. Place final cover on the southern 3:1 side slope of the area fill over Trenches Thirteen and Fourteen.

Scheduling of Landfill unit excavations and fill sequencing are based on the requirement to leave intermediate cover materials exposed for no more than four years.

Specifications for intermediate cover are discussed in Section 2.3.3.2 Intermediate Cover. Specifications for final cover are discussed in Section 2.3.3.3 Final Cover.

2.3.2.4 Class I Landfill Capacity

Trenches One through Fourteen will hold at least 123,000 tons of municipal waste compacted to 900 pounds per cubic yard. The first fourteen trenches alone have enough capacity to accommodate Sanpete County disposal requirements for about 8 years, allowing for a three (3) percent annual increase in waste generation.

The area fill to be placed incrementally over the 15 acres of trenches will have sufficient volume for an additional 155,000 tons of municipal waste compacted to 900 pounds per cubic yard.

The total capacity of the fourteen initial trenches and the area fill are approximately 278,000 tons of compacted waste, allowing the initial portion of the Landfill to be utilized for approximately 15 years. This number assumes a three (3) percent annual increase in waste generation. Use of Area A will add at least six months to the Landfill life.

2.3.3 Cover Requirements and Sources

2.3.3.1 Daily Cover

At least six (6) inches of soil are placed over the work face by the end of each day. Grade stakes are used when necessary to control cell height and top surface grade for proper drainage.

Daily cover material is obtained from soils stockpiled during the excavation of each trench, or salvaged from intermediate cover placed over filled trenches during construction of the area method fill.

These on Site soils are loose to slightly cohesive, slightly silty sands with minor admixtures of fine gravel. Daily and intermediate cover material will make up about `15 percent of the total Landfill volume.

2.3.3.2 Intermediate Cover

Intermediate cover is applied over daily cover whenever an area of the Landfill is inactive for longer than 30 days.

Intermediate cover will consist of an additional 12 inches of soil over the 6 inches of daily cover, for a total thickness of 18 inches. The intermediate cover is compacted with rubber tired vehicles or roller compactors.

Compacted intermediate cover will remain exposed to atmospheric conditions for no more than four years before being covered with additional waste or final cover soils. Areas with intermediate cover are inspected for erosion or settlement each month. Damaged areas of the intermediate cover are regarded and recompacted when necessary to restore the intermediate cover.

Sufficient surplus excavated soil is available on the Site to serve as a source for intermediate cover.

2.3.3.3 Final Cover

Recent research on final cover materials for municipal solid waste landfills in arid areas has shown that some alternatives to Subtitle D final cover designs perform satisfactorily. Two promising designs are "evapotranspiration covers" and evapotranspiration covers underlain by a "capillary break."

Evapotranspiration covers are merely thick layers of loosely compacted, porous, dry soils with sufficient thickness and porosity to store anticipated precipitation without transmitting much water to the underlying waste. Capillary breaks are layers of gravel or geomembranes designed to intercept and redirect the downward percolation of water from overlying cover materials.

The Coop proposes to construct and evapotranspiration final cover consisting of 36 inches of loosely compacted, porous, dry soils with an average moisture holding capacity of fourteen percent. This thickness shall be attained by placing at least three feet (36") of final cover soils over existing intermediate cover soils.

The final cover materials will come from surplus soils excavated from Area A and Trenches One through Fourteen. These soils will have been stored above ground in runon control berms or soil storage piles for the life of the Landfill operation. Therefore, they will be will drained and dry.

Sufficient soil will be left in the perimeter berms to deflect potential run-on from upgradient storms. However, if all of the stored soil is depleted by construction of the final cover or other uses, appropriately sized ditches may be constructed to deflect and transport potential run-on.

Mass balance studies show that more than enough soil is present in the fourteen trenches for all projected Landfill uses (see Attachment 25). However, if more soil is needed for final cover than is available from the berms and soil storage piles, it will be obtained from equivalent sources on adjacent Sanpete County property as future Landfill units are excavated.

See Attachment 22 for a North to South cross sectional view of the partially closed Landfill.

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2.3.5 Run-On and Run-Off Control

The following discussion of run-on and run-off control is based on the Drainage Study for the Sanpete Sanitary Landfill Cooperative, which has been provided as Attachment 23. The Drainage Study shows that the flooding potential for the Site is low.

2.3.5.1 Run-On Control

Berms have been constructed around the up-gradient perimeter of the Landfill Site. Water draining toward the Site from the surrounding ridges and slopes is routed into natural drainages outside the Landfill.

The locations and a typical cross section of the perimeter berms are shown on Attachment 24.

2.3.5.2 Run-Off Control

The Landfill trenches will be excavated to an average depth of 20 feet BGL. Berms uphill from the developed portion of the Landfill stop up-gradient rain water or snow melt from flowing down slope into the active Landfill.

Since run-on is minimized by the perimeter berm system, run-off control from active Landfill trenches is not necessary. Precipitation falling directly onto the active trenches will evaporate or percolate into the waste and daily cover materials.

Run-off from the active trenches could occur only if an unanticipated record storm (greater than 42 inches in 24 hours) dropped enough rainfall directly into a cell to saturate the waste and cover material, filling any remaining unused space.

In contrast, the record 24-hour storm recorded at the nearest weather station (Gunnison, Utah) is only 1.33 inches. Record monthly precipitation at the same station is 3.72 inches. The period of record for Gunnison is from 1956 to 1990.

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1.7 PLAN OF OPERATION

This plan of Operation was written to conform with the requirements of UAC R315-302-2(2) and briefly describes the operations of the Sanpete Sanitary Landfill Cooperative Class I Landfill.

1.7.1 Schedule of Construction

The White Hills Landfill has been open since July 5, 2001.

1.7.2 Operating Hours

The Landfill operates during the summer, Monday through Saturday, from 10 a.m. to 6 p.m. During winter months, the Landfill opens at 10:00 a.m. and closes at 5:30 p.m. or dusk.

The Landfill is closed on Sundays and the following holidays:

- New Year's Day
- Memorial Day
- Fourth of July
- Twenty-fourth of July
- Labor Day
- Thanksgiving Day
- Christmas Day

The Following information is posted at the gate:

WHITE HILLS LANDFILL Property of Sanpete Sanitary Landfill Cooperative

Hours of Operation: Monday through Friday 10:00 a.m. to 6:00 p.m. Saturday 10:00 a.m. to 6:00 p.m. During Winter Months, 10:00 a.m. to 5:30 p.m. or dusk Closed on Sundays and Holidays

- PLEASE OBEY ALL SIGNS
- DUMP ONLY IN DESIGNATED AREAS
- SCAVENGING IS STRICTLY FORBIDDEN
- LIQUIDS AND HAZARDOUS MATERIALS ARE PROHIBITED

IN CASE OF EMERGENCY, CONTACT: Larry Hansen, Solid Waste Management Supervisor

Office: (435)427-5351 Cell (435)469-1105 OR Sanpete County Health Department (435)462-2449

1.7.3 Personnel Requirements

1.7.3.1.1 Job Description

The following persons are responsible for on-site operations:

- Solid Waste Management Supervisor. The SWM Supervisor manages overall operation of the SWM system. Through regular inspections and monitoring, the Supervisor also ensures the facility's compliance with the requirements of the permit issued by the DSHW. The Supervisor oversees the production of annual environmental and financial reports. All Equipment Operators and visitors report to the Supervisor. To fulfill these responsibilities adequately, the SWM Supervisor should have 10+ years experience operating heavy equipment, with two (2) years' supervisory experience. Each year of college training or special training can equal two or more years of experience—at the discretion of the Coop.
- Equipment Operators. The Equipment Operators are responsible for all day-to-day activities of the Landfill. These responsibilities include waste acceptance and placement, traffic control, safe operation and maintenance of equipment, visual inspection of each incoming load, random waste screening operation, application of litter control. The supervisor may designate an Equipment Operator to act on his or her behalf during absences.

To complete these tasks adequately, Equipment Operators should have at least two years experience operating heavy equipment.

A minimum of two employees staffs the Landfill at all times. Minimum on-site personnel required during operating hours include one person at the gate to inspect/supervise incoming loads and one person to operate equipment.

The Landfill contractor, Hansen Lumber Company employs three full time and four part time people. Normal waste disposal operations consist of at least two people: one person at the gate to inspect/supervise incoming loads and/or act as a spotter at the face, and one person to operate equipment.

1.7.3.2 Personnel Training

All Landfill personnel must read the approved permit and Plan of Operation before beginning work at the facility. Each employee will sign the Signature Log included in Attachment 5 after reading the approved Permit and Plan of Operation.

All personnel associated with the operation of the Landfill are required to complete the Solid Waste Association of North America (SWANA) training course titled "Sanitary Landfill Operator Training" or comparable training within one year of his or her date of hire. They must also attend annual refresher course. Certificates of completion are kept on file with the personnel records.

Opportunities for personnel to attend training classes within the state are provided by the Cooperative when classes are available. Possible resources for local training include the Utah Division of Solid and Hazardous Waste, the Arid Region Committee of SWANA, and consultants within Utah.

1.7.4 Waste Acceptance Procedures

1.7.4.1 General Procedure A Daily Log Records:

- The license numbers of vehicles entering the Landfill,
- A description of the wastes,
- The packer truck or commercial hauler company name,
- Weighed amount of waste received, the time of entry, and
- The initials of the Equipment Operator filling out the form

An example of this form can be found in Attachment 6

Commercial haulers off-load at the work face. When necessary for safety reasons, private haulers are sent to an area separate from where commercial haulers are working. A spotter provides traffic control and watches for hazards at the work face. He and she ensures the save operation of heavy equipment.

Each load is visually inspected. Waste screening is conducted according to the procedures outlined in "Section 1.7.11, Spotting and Waste Screening."

Open burning is prohibited. Smoking is not allowed on Landfill property, except in designated areas. Scavenging is prohibited.

1.7.4.2 Special Wastes

1.7.4.2.1 Used Oil and Batteries

Used oil is not accepted. A list of retailers who take used oil or antifreeze is provided to anyone bringing these prohibited wastes to the Landfill.

Used batteries are accepted and stockpiled on a wood pallet. A recycler is contacted to pick-up batteries at appropriate intervals.

1.7.4.2.2 Bulky Wastes

Bulky items such as construction and demolition debris, tree trunks, or stumps and large timbers, may be pushed onto the working face near the bottom of a cell, or be placed in a separate disposal area.

White goods are accepted. White goods found to contain Freon are grained of Freon by a trained individual. White goods may be buried at the face or set aside for metals recyclers. Used cars are not accepted.

1.7.4.2.3 Tires

The Landfill accepts tires and places them in storage in small piles in a designated area of the Landfill until a tire recycler can pick them up.

Tires are removed from the Site at least once each year

1.7.4.2.4 Dead Animals

Because the County is primarily agricultural, large numbers of dead animals are received. A separate dead animal pit may be designated adjacent to the trenches. This pit is limed after each delivery and covered with a minimum of six inches of soil on a daily basis.

1.7.4.2.5 Asbestos Wastes

Asbestos waste must be handled, transported, and disposed of in a manner that will not permit the release of asbestos fibers into the air and will comply with the requirements of UAC R315-51-2.

The Landfill does not accept asbestos or asbestos containing materials, except those designated by UDEQ as inert. Shingles, house siding, and etc. will be stored in a construction materials pile in an area designated for construction and demolition wastes. 1.7.4.2.6 Yard Waste

Wood, tree limbs, stumps, leaves, and branches are placed inside the fenced area, but are segregated from the active portion of the Class I facility. Yard waste may be burned once a year. A burn permit is obtained from the Sanpete County Fire Marshall before ignition of yard waste.

1.7.5 Waste Disposal Procedures

Wastes are dumped at the top of the work face and spreading down the slope in one or two foot thick layers. The slope is kept no steeper than three to one (horizontal to vertical).

Work face dimensions are kept narrow enough to minimize blowing litter and reduce the amount of soil needed for daily cover. Dimensions are wide enough to safely accommodate vehicles bringing garbage into the Landfill. SWANA recommends that the width of the work face be no less than three times the width of the dozer blade.

Grade stakes may be used when necessary to control cell height and top surface grace. The top of the surface grade will range from two to 5 percent, and the cell height will range from three to 5 feet.

Wastes are compacted by making three (3) to five (5) 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 where vermin can breed. Care is taken that no homes are left in the compacted waste. Voids are filled with additional waste as they develop.

Six inches of daily cover soils are placed over the waste by the end of each day. The soils consist of slightly gravelly, silty sands and weathered clays excavated from the Landfill Site. Grade stakes are used when necessary to control cell height and top surface grade for proper drainage.

Intermediate cover is required to be placed when portions of a Class I unit are idle for more than 30 days to prevent water from contacting waste materials. Intermediate cover consists of an additional 12 inches of daily cover soil.

Daily cover and intermediate cover soils and placement procedures are described in more detail in section 2.3.3.

1.7.6 Equipment

The following pieces of equipment are on Site for routine operation of the Landfill:

- 816 Compactor (1)
- Rubber Tired Front-end Loader (1)
- 973 Caterpillar Front End Loader (1)

The management and on-site personnel at the facility are each equipped with cell phones which can be used in the case of emergencies.

The County Road Department will lend water trucks and graders as needed in the event of excess dust problems.

1.7.7 Inspections, Monitoring, Record keeping, and Reporting

1.7.7.1 Inspections

All equipment used in the Landfill owned and operated by Landfill Operator in accordance with the contract it has with the Coop.

1.7.7.2 Methane Gas Monitoring

The facility is monitored quarterly for methane gas releases by means of a hand-held photo ionization detector (PID) or other equipment capable of detecting methane gas.

PID readings are recorded at each corner of the fence line and inside all building, or any place a detectable methane level has ever been registered. The readings are recorded on the form provided in Attachment 6.

No methane has been discovered since the Landfill began operation in 2001.

If methane releases are detected in excess of 25 percent of the lower explosive limit (LEL) in a Landfill building or more than 100 percent LEL at the property boundary, the procedure outlined in "Section 1.7.8.4 Release of Explosive Gases" is followed.

1.7.7.3 Recording keeping

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

- 1. Number of vehicles entering, amount of waste received, and the types of wastes received each day.
- 2. Deviations from the approved Plan of Operation.
- 3. Training and notification procedures.
- 4. Gas monitoring results
- 5. Inspection log or summary.
- 6. Documentation of any exception to a location standard.

1.7.7.4 Reporting

An annual report is submitted to the Executive Secretary by March 1 of each year for the most recent calendar year of facility operation.

The Annual Reports include:

- 1. Facility's name and address
- 2. Calendar year covered.
- 3. Quantity in tons or volume in cubic yards and estimated in-place density in pounds per cubic yard of solid waste handled for the facility.
- 4. Annual update of the financial assurance mechanism.
- 5. Gas monitoring results.
- 6. Training programs or procedures completed

A copy of the annual reporting form found in Appendix F of UAC, *Solid Waste Permitting and Management Rules*, is provided as Attachment 7, and may be used to submit the required information.

1.7.8 Contingency and Corrective Action Plans

The following sections outline procedures which are followed in case of fire, explosion, ground water contamination, release of explosive gases, or failure of the run-off containment system. The County's Hazardous Materials Response Team, supervised by Sgt. Jason Albee, County Hazardous Materials Officer, will be contacted in all cases where hazardous materials or materials contaminated with PCBs are suspected to be involved. Sgt. Albee telephone numbers is (435) 835-2345.

1.7.8.1 Fire

If a fire is detected onboard an incoming truck, the driver will be directed to a specified area where the load can be dumped and covered with soil. The load will be allowed to cool completely before being taken to the work face.

Unfortunately, many "hot" loads are not detected until after the load has been dumped at the face. If such a situation arises, all nonessential personnel will be evacuated from the area. Whenever possible, the burning material will be moved, isolated, and smothered with soil. The burned material will be allowed to cool completely before it is returned to the work face. If the fire still cannot be controlled, the Gunnison City Fire Department will be called at **911**. The County Fire Marshall Tom Peterson may also be called at **(435) 668-2068 or (435) 835-2117**.

The fire department will also be called any time a fire burns below the soil cover and/or is difficult to reach or isolate. Since the use of large quantities of water to extinguish a fire could result in increased leachate generation, the fire department will be instructed to consider the use of fire fighting techniques that do not include large quantities of water.

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

1.7.8.2 Explosive Gases

If an explosion occurs or seems imminent, all personnel and customers will be accounted for and the Landfill will be evacuated. Corrective action will be evaluated and implemented as soon as practicable.

The Supervisor will be notified immediately and the fire department will be called. The Executive Secretary will also be notified immediately.

If the explosive gas results from a methane release, the following steps will be taken:

- 1. Detected gas levels will be described.
- 2. Mitigation procedures will be implemented.

The specific steps taken to protect human health will be placed in the operating record within seven days of the incident.

A remediation plan which has been approved by the Executive Secretary for the methane gas release will be implemented within 60 days of the incident, and the Executive Secretary will be notified that the plan has been implemented.

1.7.8.3 Failure of Run-Off/Run-On System

The purpose of the run-on/run-off control system is to prevent water from entering or leaving the Landfill. The run-on/run-off control system is inspected according to the schedule shown in Section 1.7.7.1 and repairs made as soon as practicable when needed.

If the run-on system fails, temporary measures such as berms, ditches, sandbags, or other methods will be used to divert water away from Landfill property. These same methods will be used to prevent water from leaving the Landfill if the fun-off system is breached. The impact of any release will be assessed as soon as possible after the event.

Any temporary berms or other structures will be checked at least every two hours. Permanent improvements or repairs will be made as soon as practicable.

The Supervisor will be notified immediately if a breach of the run-on/run-off system is discovered. The event will be fully documented in the Operating Record, including corrective action, within 14 days.

1.7.8.4 Release of Explosive Gases

Methane gas is not expected to be produced in significant quantities at the White Hills Site. However, landfill gas production will be monitored quarterly. If a methane release is detected in excess of 25 percent of the LEL in a Landfill building, 100 percent LEL at the property boundary, or 100 parts per billion in an off-site building, the following procedure will be followed:

- Landfill operations will cease immediately. The Landfill will be evacuated if personnel or buildings may be threatened.
- If gas is detected in a building, the doors and windows will be opened to allow the gas to escape.
- If off-site buildings or structures appear to be threatened, the fire department will be called, the property evacuated, and the property owners notified.
- The Supervisor will be called. The release will be monitored and a temporary corrective action will be implemented as soon as possible. Permanent corrective action will be complete as soon as practicable.

The DSHW will be notified immediately and a written report submitted within 14 days of detecting the release.

The gas levels detected and a description of the steps taken to protect human health will be placed in the operating record within seven days of detection. A remediation plan for the methane gas release will be placed in the operating record within 60 days of detection and the Executive Secretary will be notified that the plan has been implemented.

1.7.8.5 Ground Water Contamination

Ground water at the Site is more than 300 feet below ground level (BGL) and very little leachate is expected. Leachate will probably never contaminate ground water.

However, if ground water contamination is ever suspected, studies to confirm contamination will be conducted, and the extent of contamination will be documented. This program may include installation of vadose zone or 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.

1.7.8.6 Alternative Waste Handling/Disposal System

Closing the Landfill may be necessary during inclement weather, such as winds greater than 60 mph, heavy rain or snow, flooding, or any other conditions that would make travel dangerous. The Landfill will reopen when conditions improve.

If the Landfill must close temporarily, waste will be directed to the Sevier County Landfill near Sigurd, Utah. A reciprocal agreement with Sevier County is included as Attachment 26.

In the case of equipment failure, the County Road Department will lend equipment until repairs are made. If the Landfill is not operational for any other unforeseen reasons, the commercial waste haulers serving Sanpete County will be notified as follows:

COMMERCIAL WASTE HAULERS AVAILABLE

Haulers	Phone Numbers
North Sanpete Disposal Service	(435) 462-3173
White's Sanitation	(435) 896-9212

1.7.9 System Maintenance

1.7.9.1 Leachate Collection System

A leachate collection system has not been installed because the amount of leachate produced should be small, assuming operating procedures are followed. Also, the threat of ground water contamination from leachate is very slight because the ground water is at least 300 feet BGL.

1.7.9.2 Gas Collection System

The White Hills Landfill is not expected to produce significant amounts of landfill gas and no gas collection system has been designed. Quarterly gas monitoring will be conducted using a hand-held photo ionization detector (PID).

Gas monitoring locations will be maintained on at least a quarterly basis and kept from debris.

Should the Landfill have a demonstrated need for a gas collection system, one will be designed.

1.7.10 Procedures for Nuisance Control

1.7.10.1 Vector Control

The disease vectors most likely to be encountered at the Landfill are flies, mosquitos, rodents, and birds. A program for controlling these vectors is carried out as described in the following sections

1.7.10.1.1 Insects

Eliminating food, shelter, and breeding areas by applying daily cover is the most effective way to control insects. If flies become a problem around buildings, fly bait may be used. Mosquitos are controlled by eliminating ponding and standing water.

1.7.10.1.2 Rodents

Rodent populations are discouraged by eliminating food sources and breeding sites. Daily cover and proper compaction are the primary methods of control. Equipment Operators will look for tooth mars or other signs of knowing and holes, dropping, burrows, or nests.

The Supervisor will be notified of any rodent sightings or problems.

Should the need arise, a professional exterminator will be called who will establish a protocol for pest control in accordance with all county, state, or federal regulations that may apply.

1.7.10.1.3 Birds

Seagulls or other bird populations that may pose health or safety problems can be discouraged by minimizing the size of the work face and through daily cover. If birds become a problem, a control program will be set up using loud noises or monofilament lines strung over places birds congregate.

If more drastic measures need to be taken to control bird populations, such as poisoning, trapping, or chemical irritants, a professional exterminator will be called who will establish a protocol for pest control in accordance with all county, state, or federal regulations that may apply.

1.7.10.1 Fugitive Dust Emissions

Dust is caused by construction activities and by traffic on unpaved roads, heavy equipment operation, and wind. If fugitive dusts become a problem, a water truck will spray all unpaved or problem areas. A Dust Control Plan has been drafted to control fugitive dust emissions during contruction and operation in accordance with Utah Department of Air Quality requirements.

1.7.10.2 Litter Control

Litter is unsightly, can clog machinery, and causes public relation problems. Landfill personnel will perform routine maintenance to keep litter under control and cleaned up.

Trenches are oriented perpendicular to prevailing winds.

The area method work face will be placed downwind where possible so that the wind will blow loose litter back on the work face. Prompt compaction also reduces litter.

If necessary, litter fences are used to keep blowing litter under control at the fork face or to prevent litter from leaving the Landfill Site. Fences are placed downwind, as close as possible to the work face.

1.7.11 Spotting and Waste Screening

1.7.11.1 General Description

Identification and exclusion of prohibited and hazardous waste are necessary for the safe operation of the Landfill.

The Equipment Operators are required to receive periodic training in waste screening. This training consists of initial training and annual refresher courses. Certificates of completion are kept on file with personnel records. Hazardous wastes have either physical or chemical characteristics that could harm human health or the environment. A waste is considered hazardous if it falls into either of two categories: 1) a listed waste, or 2) a characteristic waste. These wastes are banned from the White Hills Landfill.

Small quantity generators (less than 100 kg/mo.) and household quantities are exempt from hazardous waste regulations. However, hazardous materials are most likely to enter the Landfill mixed in with common household waste. Public education and periodic waste screening are the tools used to remove these health threats from the waste stream.

Random inspections of incoming loads are conducted according to the schedule determined by the Supervisor. The volume of waste entering the Landfill may vary with time. For that reason, the random inspection program will, based on inspecting one percent of the volume of waste entering the Landfill rather than a set frequency.

All haulers are targeted for random waste screening. If frequent violations are detected, additional random checks are scheduled at the discretion of the Supervisor.

If a suspicious waste or container is found, the Equipment Operator will proceed cautiously as described below for refuse to accept the load. Wherever possible, positive identification of the material and its sources are obtained from the driver or manifest.

1.7.11.2 Procedure for Routine Waste Screening

Every vehicle that brings waste to the Landfill must be logged at the gate house. The identities of all commercial and private haulers are entered into the Daily Log.

The Equipment Operator must:

- 1. Record the hauler's company name and license number, a description of the waste, an estimate of the weight, and the time of entry.
- 2. Remove tarpaulins and visually inspect each load.
- 3. Direct the commercial haulers to the work face for offloading.
- 4. Send private haulers to the work face or a designated area of the Landfill.
- 5. Keep a record, including the hauler's name and vehicle license number, of all rejected loads.

For additional details on routine spotting and waste screening procedures, the Equipment Operator shall refer to the Operator's Manual. A copy of that Manual shall be kept at the gate house at all times.

1.7.11.3 Procedures for Random Waste Screening

When conducting waste screening, the Equipment Operators will proceed as follows:

- 1. The driver will be directed to the waste screening area. Unauthorized personnel will not be allowed to enter the area.
- 2. The waste screening form will be completed (see Attachment 6 for Random Load Inspection Record).
- 3. Protective gear will be worn (leather gloves, steel-toed boots, goggles, coveralls, hard hat, and etc.).

4. The material will be spread with the dozer or hand tools and examined visually. Suspicious markings or materials, like the ones listed below, will be investigated further:

- Containers labeled hazardous
- Excessive or unusual moisture
- Biomedical (red bag) waste
- Unidentified powders, dusts, smoke, or vapor
- Liquids, sludges, pastes, or slurries
- Asbestos or asbestos contaminated materials, unless clearly marked and bagged for disposal in a segregated area
- Batteries
- Wastes that may be contaminated with PCBs
- Other wastes not accepted by the Landfill
- 5. If the materials pass the inspection, the load will be incorporated into the work face. If not, the load will be refused.
- 6. The Supervisor will be called if unstable or radioactive wastes are discovered or suspected. Proper notifications as outlined in "Section 1.7.11.5 Notification Procedures" will be made if any hazardous wastes are discovered

1.7.11.4 Hazardous Wastes Discovered After the Fact

If hazardous wastes or wastes containing PCBs are discovered to have been inadvertently accepted (i.e., during the application of daily cover), the procedure to remove them is as follows:

- 1. Access to the area will be restricted
- 2. The situation will be carefully assessed.
- 3. If the waste can be safely removed from the working face, the Equipment Operator will transport it to a secure zone.
- 4. If the wastes appear unstable or pose an immediate danger, the County's Hazardous Materials Response Team will be called.
- 5. The Supervisor will be contacted for further disposition of the waste.

The Utah DSHW, the hauler, and the generator (if known) will be notified within 24 hours of the discovery.

The generator will be responsible for proper cleanup, transport, and disposal of the waste.

1.7.11.5 Removal of Prohibited Wastes

Should nonhazardous prohibited wastes be discovered either during random waste screening or during the placement in a cell, the following options will be used to remove these wastes:

- 1. Wastes can be loaded back on the hauler's vehicle. The hauler will be informed of proper disposal options;
- 2. If the hauler or generator is no longer on the premises and is known, he or she will be asked to retrieve the waste and will be given information on proper disposal; or
- 3. The Supervisor will arrange to have the waste transported to an appropriate site. The original hauler/generator will be billed for the costs incurred.

The final disposition of all prohibited wastes will be noted in the log book.

1.7.11.6 Notification Procedures

The following agencies and people must be notified within 24 hours if any type of hazardous material is discovered during a random waste screening procedure:

AGENCY NUMBERS

Contact		Number
Larry Hansen, SWM Supervisor	Home	(435) 427-3812
	Cell	(435) 469-1105
Landfill	Office	(435) 427-5351
	Cell	(435) 469-2125
Executive Secretary of Waste	Office	(801) 536-0200
Management and Radiation Control	Fax	(801) 536-0222
Sgt. Jason Albee, Sanpete County		
Hazardous Materials Officer	Office	(435) 835-2191
Tom Peterson, County Fire Marshall	Office	(435) 835-2117
	Cell	(435) 668-2068

The persons or agencies contacted with the dates will be noted on the Random Load Inspection Record.

1.7.12 Safety

1.7.12.1 Safety Equipment

Each building and each piece of heavy equipment is provided with a fire extinguisher. All personnel must know where safety equipment is located and how to use it properly. 0

The following protective gear is kept on the Site:

- Earplugs
- Safety Glasses
- Leather work gloves
- Hard hats
- Two-way radios
- Safety shoes
- Coveralls or long-sleeved shirt and full length pants
- Respirators and dust masks
- Fluorescent vests or jackets

1.7.12.2 Safety Program

Landfill personnel are required to participate in an ongoing safety program. This program will comply with Occupational Safety and Health Administration (OSHA), National Institute of Occupational Safety and Health (NIOSH), and Mi ne Safety and Health Administration (MSHA) regulations, as applicable.

This program is designed to make the Site and equipment as secure as possible and to educate personnel about safe practices.

At least one Landfill employee will have a first aid certificate from the U.S. Bureau of Mines or the Red Cross. The name of each person holding a first aid certificate is posted beside the telephone numbers. At least one person with this certification is at the Site during normal operating hours.

1.7.12.3 Emergency Procedures

If an accident occurs, the Equipment Operators will immediately contact the Supervisor and then proceed as directed. The following emergency numbers are posted by the telephone:

EMERGENCY NUMBERS

Number
911
(435) 528-7070
(435) 835-2191
(435) 668-2068
(435) 528-7246 (800) 324-1801
(435) 462-2441 (800) 870-0346
(435) 427-3812

<u>Attachment #4</u> Inspection Forms

LANDFILL OPERATION FORMS:

Random Load Inspection Record Daily Log Landfill Operations Checklist Equipment Checklist Quarterly Methane Monitoring Report Inspection Form

SANPETE SANITARY LANDFILL COOPERATIVE

WHITE HILLS LANDFILL

6

Random Load Inspection Record

INSPECTION INFORMATION		
Inspector's Name:		
Date of Inspection:		
Time of Inspection:		
Facility Name:		
TRANSPORTATION COM		
Company Name:		
Address:		
Phone Number:		
VEHICLE INFORMATION	1	
Driver's Name:		
Vehicle Type:		
Vehicle License Number:		
Vehicle Contents:	O Household Waste O Commercial Waste O Other	
OBSERVATIONS AND ACTIONS TAKEN		
Photo Documentation: o Yes o 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.

SANPETE SANITARY LANDFILL COOPERATIVE WHITE HILLS, CLASS I LANDFILL DAILY LOG

Date	Company/Hauler Name	Vehicle License #	Time	Estimated Weight	Load Description	Initials
						Mindati Manazara da yang da Minda da kara manan
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LANDFILL OPERATIONS CHECKLIST, page one of two

Ins	pector	Date:	Time:
	10		

A Party of

ITEM OR AREA	ок	DESCRIBE ANY PROBLEMS	DESCRIBE REPAIRS	DATE OF
INSPECTED			COMPLETED	REPAIRS
ENTRANCE				
Signs posted?				
Appearance				
Cleanliness				
Gate locked when site not operating?				
PERSONNEL				
Attendant present?			ne staan in de Lande en Lande en verste Malden bleer oor were verste verste staan van de meerste verste verste I	
Safety equipment in use and available?				
DISPOSAL AREA			nen en	
Unloading area clearly marked?				
Public and commercial areas separated?				
Working face as small as possible?				
Litter fences in use?				
Is refuse burning?				
Are odors a problem?				
Dust or litter blowing?				
Daily cover applied?				
Compaction sufficient?				
Final cover and vegetation intact?				
SALVAGE				
Scavenging prohibited?				
Separate salvage area established?		an Marson (a de real de la financia en antes en en en la financia en		

(COVACUMANTING AND ADDRESS ADDRE	and the second s		n and a second second second and a second	and the second
ITEM OR AREA INSPECTED	ок	DESCRIBE ANY PROBLEMS	DESCRIBE REPAIRS COMPLETED	DATE OF REPAIRS
Salvage materials regularly removed?				
WATER QUALITY				
Area graded to prevent standing water?				
Run/on-Run/off system in good repair and working?				
Any leachate visible?				
VERMIN CONTROL				
Rodents a problem?				
Birds a problem?				
Insects a problem?				
FIRE PROTECTION				
No Smoking enforced?				
Cover soils available?				
Fire extinguishers on all equipment?				
Radio or phone on site?				
HOUSEKEEPING				
Site pleasing to see?		negatalanın in dala galadı. Azərba Azərba Azərba in təri nəzəri etdilərdə iştin əsəri nəzərə ənə oraşan səyəzə		
Litter picked up?				
DOCUMENTS				
Permit on display?				
Development plan available to read?				
Operating cost records on file in office?				
Daily records (haulers vehicles, waste volumes and types) on file?				

1...

1000

2

LANDFILL OPERATIONS CHECKLIST, page two of two. Date:_____

EQUIPMENT CHECKLIST

Walk around the rig and look for signs of wear, damage, or leaks before start up. Remember, even if everything looked fine last night, something could have happened in the mean time.

Use your intuition as you run through your check list and evaluate the machine's general condition. Operating an improperly running vehicle invites serious property damage and loss of time or well-being.

ITEM	REMARKS	DATE	INITIALS
Fluid Levels Indicate which Hydraulic Crankcase Oil Radiator Coolant Transmission Oil			
Tracks/Tread/Tires (wear or damage)			
Screens and Filters (check for clogging)			
Undercarriage			
Fuel Pressure Gauge			
Track Roller Collar, Bolts, Track Shoe Bolts			
Turbocharger, Manifold, and Air Cleaner Connections			
Joints in Drive Case	1912/1111/1121/1121/1121/1121/1121/1121		
Sprocket Hub Seals			

Operator Name _____ Signature _____

WHITE HILLS CLASS I LANDFILL QUARTERLY METHANE MONITORING REPORT

Name:_____

Date:

Was the photoionization detector (PID) calibrated before use?
Yes No

LOCATION	PID READING	UNITS
Inside Operator's Shack		
Front Gate		and the same of the product of the same of the sam
NW Corner of Fence		
NE Corner of Fence		
SE Corner of Fence		
SW Corner of Fence		

Comments/Observations/Actions Taken:

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SANPETE SANITARY LANDFILL COOPERATIVE WHITE HILLS, CLASS I LANDFILL INSPECTION FORM

1-

chonned by.	Date:Overall Condition	
	Satisfactory	Needs Work
I. Structures and Roads		
1. Buildings	ally of the Mandales and a second	and a construction of the const
2. Fences		Alle francessing in spectra and all the first state of a support of the first state of the support of the
3. Gates		
4. Roads		
*Specify recommended repairs and/or list actions taken:		
		an constant of the first and constant of the first of the
		n an
II. Operations		
1. Litter and Weed Control	Matter Anna Santa San	Managements of the state of the
2. Excavations		
3. Daily Cover		
4. Final Cover	energy constraints where you can be reacted and the second states of the	
5. Segregated Waste Piles		
a. Scrap Metal	www.commune.commune.commune.commune.commune.commune.commune.commune.commune.commune.commune.commune.commune.com	
b. Appliances	425025 ⁰⁷⁷⁵⁶ 6367000010000000000000000000000000000000	Machael Machael and Annual States and States and Annual States
c. Dead Animal Pit		
d. Yard Waste		
e. Construction Debris		
f. Waste Oil/Anti-Freeze Tanks		
g. Used Battery Skid	Constant Const	4814999447444499338999999999999999999999999
h. Recyclables/Reuse Storage Area	40-4-780282029-0-2-667-4-97629920202020202020202046499204	479,999,987,999,984,999,949,999,947,999,948,314,349,349,349,349,349,349,349,349,349,34
*Specify recommended repairs and/or list actions taken:	en nam lige för mäld den ven var sen ander var för för dytalligetet en verden soften e	46-min-pro-2019/2019/2019/2019/2016/0-1-1-0-0-2012/2016/93
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<u>Attachment #5</u> Closer and Post-Closure Care

In contrast, the record 24-hour storm recorded at the nearest weather station (Gunnison, Utah) is only 1.33 inches. Record monthly precipitation at the same station is 3.72 inches. The period of record for Gunnison is from 1956 to 1990.

2.3.6 Closure and Post-Closure Design

The Coop will close its Landfill in a way that reduces the need for further maintenance and minimizes or eliminates threats to human health and the environment. The Closure Plan will also provide guidance to prepare the Landfill for the post-closure period.

Installation of the final cover, seeding, landscaping, and contouring will proceed as follows:

- 1. Once the Landfill is full, or after a decision is made to close it, the operator will sell all recyclable materials to independent contractors, and bury all remaining waste.
- 2. Any excess burrow material from previously excavated Landfill units will then be graded to a level or convex upward surface.

Side slopes will be graded at 3:1 (horizontal:vertical). In no case shall slopes be less than two percent (convex upward).

- 3. Final cover over wastes will be an "evapotranspiration cover" at least 36 inches thick.
- 4. The 36 inches of final cover material will be constructed of naturally occurring sandy clay soils or mixtures of soil and weathered Arapien clays with a moisture holding capacity of at least 14 percent.
- 5. The final cover will be seeded with a mix of native grasses, brush, and shrubbery. The seed mix and planting schedule will be chosen by the Coop after reference to publications of the United States Department of Agriculture and other appropriate agencies or vendors. The DSHW shall approve the seed mix before it is applied to the final cover.

The results of current alternative landfill cover research will be utilized before final cover is applied. The Utah DSHW reserves the right to specify the thickness and properties of final cover soils. The final design will reflect their requirements. **2.3.7 Closure Plan**

2.3.7.1 Capacity

As shown in "Section 2.3.2 Landfill Unit Design", the fourteen initial Landfill trenches and area method fill sequences to be constructed have sufficient volume for approximately 278,000 tons of waste compacted to 900 pounds per cubic yard.

Waste of all types accepted during 2004 at White Hills was 16,744.4 tons, for an annualized average of about 46 tons per day (annualized usage at 365 days per year). Since the Landfill is open 305 days per year, actual average usage per day of operation is 54.9 tons per day.

YEAR	TOTAL WASTE RECEIVED (TONS)	ANNUALIZED DAILY RATE	CUMULATIVE WASTE RECEIVED (TONS)
2 <mark>00</mark> 1	5,005	28 (180 days)	5,005
2002	14,218	39	19,223
2003	3 15,880	43.5	35,103
2004	16,744.4	45.875	51,847
2005	16,849	48.70	68,696
2006	17,472	50.50	86,169
2007	19,525	56.43	105,693
2008	21,404	61.86	127,097
2009	18,317	52.94	145,414
2010	21,639	62.54	167.052
2011	18,480	53.41	185,532
2012	16,787	48.52	202,319
<mark>2</mark> 013	17,468	50.48	219,787
2014	18,314	52.93	238,101
2015	22,453	64.89	260,553
2016	5 23,639	68.32	284,192

The total amount of waste accepted at White Hills since it opened in 2001 is shown in the following Table:

0

Permitted Landfill space is sufficient to hold 278,000 tons of waste compacted to 900 pounds per cubic yard. The amount of space remaining as of January 1, 2005, could hold approximately (278,000 less 52,000) tons, or 226,000 tons of waste.

A spreadsheet showing estimated waste utilization at the White Hills Landfill was included at Attachment 4, Projected waste Volumes, in the final Permit Application submitted on August 22, 2000. The spread sheet assumed that the Landfill would be open for 100 days in 2000, with initial waste acceptance of 45 tons per day, or 45,000 tons the first year.

The total waste use projected for the first three and one-half years of operation was 48,482 tons. This number can be adjusted to more accurately project initial

usage since 2001 by adding 80 more days of waste acceptance to the first year, for an additional (80)(45), or 3.600 tons. This increase would have made the initial projection equal to (48,482 + 3,600) = 52,082 tons. The amount is slightly more than the actual usage from 2001 through 2004 of 51,847.

A revised Projected Waste Use spreadsheet is included with this Permit Renewal Application as Attachment Number 4. The initial phase of the Landfill will be filled sometime in the year 2016.

2.3.7.2 Closure Schedule

The active surface area of the Landfill (that portion that has not received final cover) will never be larger than three and one third acres (145,000 square feet, or 16,133 square yards). This restriction will limit the area that would require closure by a third party if the Coop were to relinquish operation of the Landfill.

Because of this restriction, some areas will receive final cover before final closure of the entire Landfill. These areas will include the top and 3:1 side slopes around the exterior edges of the area fill waste mound, and limited areas of the Landfill where intermediate cover would be exposed to atmospheric conditions for more than four years if not covered with additional sequences of waste and daily cover materials.

The size of the area potentially requiring final cover before closure of the entire Landfill is reported quarterly to the SWM Supervisor, that areas of land filling can be adjusted to place waste over "aging" intermediate cover.

The following requirements will be met when closure or sequential partial closure of the Landfill is planned:

- 1. The Coop will notify the Executive Secretary of the intent to stare closure of a Landfill unit 60 days before the projected final receipt of waste.
- 2. The Coop will begin closure of the Landfill unit within 30 days after receipt of the final volume of waste. Closure activities will be completed within 180 days from their starting time, unless an extension is granted by the Executive Secretary.
- 3. When closure of the facility has been completed, The Coop will submit the following to the Executive Secretary:
 - a. As-built unit closure plan sheet(s) signed by a professional engineer registered in the state of Utah.
 - b. Certification by the Coop and a professional engineer registered in the state of Utah that the Site has been closed in accordance with the approved closure plan.

2.3.7.3 Final Inspection

The DSHW will be invited to inspect the final grading of the Landfill before revegitation. After approval of the final grading, a schedule will be established for revegistation.

Agency personnel will then be invited to return to inspect the successful establishment of vegetation after one year.

2.3.7.4 Record of Title, Land Use, and Zoning Restrictions

The closed Landfill will be rezoned, if necessary, to conform to current Sanpete County regulations after final closure.

A description of the Landfill history and filled areas will be permanently appended to the record of title not later than 60 days after certification of closure. Land use restrictions will be assigned that conform to existing regulations for closed landfills at the time of closure.

2.3.8 Post-Closure Plan

2.3.8.1 Post-Closure Performance Standard

The Coop will provide post-closure activities for continued facility maintenance and monitoring of land and gasses for 30 years, or as long as the Executive Secretary requires for the facility to be stabilized and to protect human health and the environment.

2.3.8.2 Post-Closure Plan

Only minor quantities of landfill gases are expected to be generated at the Landfill after closure. Initial post-closure monitoring is designed to test this hypothesis. Landfill settlement should also be minor.

2.3.8.2.1 Gas Monitoring

Landfill gases generally consist of methane and carbon dioxide in approximately equal quantities, with minor amounts of other gases. The presence of gas is easily tested by monitoring for methane, and combustible gas.

Gas production would be detected by the monitoring procedure established in the Plan of Operation with a hand-held detector. The closed Landfill will be monitored for methane quarterly until the Executive Secretary determines that the frequency of monitoring can be changed. Post-closure monitoring cost estimates are based on initial quarterly inspections for five years, followed by semi-annual inspections for an additional twenty five years.

2.3.8.2.2 Land Monitoring

Landfill topography will be visually checked for depressions that could result in ponding or rapid erosion. Irregularities in the surface of the final cover will be graded and revegetated as required to eliminate ponding or rapid erosion.

Side slopes will be maintained or reestablished with a maximum gradient of 3:1 (horizontal:vertical). The top of each closed Landfill unit will be maintained or

reestablished with grades no less than two percent (convex upward surfaces) to eliminate ponding.

The closed Landfill surface and the run-on/run-off control system will be monitored quarterly until the Executive Secretary determines that the frequency of monitoring can be changed. Post closure monitoring cost estimates are based on initial quarterly inspections for five years, followed by semi-annual inspections for an additional twenty five years.

Unscheduled monitoring of the Landfill surfaces will be conducted after any 25-year storm at Gunnison or Mayfield, Utah, or within five miles of the Landfill Site.

2.3.8.3 Post-Closure Maintenance

Post-closure maintenance activities will be designed and implemented under the direction of a registered professional engineer in response to results of gas and land monitoring. Design decisions will be made after the first post-closure quarterly inspection and implemented within 30 days after identification of maintenance requirements.

Results of post-closure maintenance will be reported to the Executive Secretary by a professional engineer registered in the state of Utah.

Due to the semiarid climate in Sanpete County, maintenance of closure cover and run-on and run-off systems should be minimal. Final cover and run-on/run-off control structures will be inspected periodically under the schedule provided for in the closure plan.

Run-on/run-off control structures and final cover could be damaged by an unusual intense storm. Therefore, an unscheduled inspection will be required after any occurrence of a 25-year storm event at Gunnison or Mayfield, Utah or within a five mile radius.

If the post-storm inspection shows damage to either the final cover or run-on/run-off control structures, the damage will be appraised by an engineer registered in the state of Utah. The engineer will prepare a cost estimate to repair damaged materials and supervise repairs by the Coop, Road Department, or a licensed contractor.

Funds for payment for repairs will be disbursed from the Financial Assurance Mechanism after approval by the Executive Secretary.

When post-closure activities are complete, as determined by the Executive Secretary, the owner or operator will submit a certification to the Executive Secretary, signed by the owner or operator and a professional engineer registered in the state of Utah. This certification will state why post-closure activities are no longer necessary (i.e., little or not settlement, gas production, or leachate generation).

2.3.8.4 Post-Closure Land Use

A description of the Landfill history and filled areas will be permanently appended to the record of title at closure. Land use restrictions will be assigned that conform to regulations for closed landfills at the time of closure.

If the Executive Secretary concurs that post-closure monitoring has demonstrated that the facility has stabilized, land use restrictions may be reduced. If revegitation of the closure cap has been successful, stock and wildlife grazing could be productive uses of the Landfill property.

2.3.8.5 Post-Closure Contact

The Coop may be contacted concerning the Landfill during the post-closure period at:

Mr. Garry T. Bringhurst Landfill Administrator Sanpete Sanitary Landfill Cooperative 50 South Main Sterling, Utah 84665