

**DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL
CLASS V SOLID WASTE LANDFILL PERMIT**

Franklin Hill Regional 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:

Moulding Investments LLC,
as owner and operator, (Permittee),

to own, construct, and operate the Franklin Hill Class I Regional Landfill located in Sections 30 and 31, Township 14 North, Range 6 West, Salt Lake Base and Meridian, Box Elder County, Utah as shown in the permit application that was determined complete on April 14, 2017 (DSHW-2014-006718, 2016-011655, 2017-002489).

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 _____.

This Permit shall expire at midnight _____.

Closure Cost Revision Date: _____.

Signed this _____ day of _____, 2017.

Scott T. Anderson, Director
Utah Division of Waste Management and Radiation Control

FACILITY OWNER/OPERATOR INFORMATION

LANDFILL NAME: Franklin Hill Regional Landfill

OWNER NAME: Moulding Investments LLC

OWNER ADDRESS: 10485 West 900 South
Ogden, Utah 84404

OWNER PHONE NO.: (801) 725-2722

OPERATOR NAME: same as owner

TYPE OF PERMIT: Class I Landfill

PERMIT NUMBER: 1402

LOCATION: Landfill site is located in Township 14 North, Range 6 West, Sections 30 and 31, SLMB; Box Elder County, Lat. 41° 54' 21''N, Long. 112° 35' 04''W

PERMIT HISTORY Permit issued **insert date signed**

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

Attachments to this permit are hereby incorporated into this Solid Waste Permit. All representation made in the attachments are part of this Permit and 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.

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 approvals required for the facility operation.

The issuance of this Permit does not convey any property rights, other than the rights inherent in this Permit, in either real or personal property, or any exclusive privileges other than those inherent in this Permit. Nor does this Permit authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations, including zoning ordinances.

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

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

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PERMIT REQUIREMENTS

I. GENERAL COMPLIANCE RESPONSIBILITIES

I.A. General Operation

- I.A.1. The Permittee shall operate the landfill in accordance with all applicable requirements of R315-301 through 320 of the Utah Administrative Code, for a Class I landfill, that are in effect as of the date of this Permit unless otherwise noted in this Permit. Any permit noncompliance or noncompliance with any applicable portions of Utah Code Ann. § 19-6-101 through 125 and applicable portions of R315-301 through 320 of the Utah Administrative Code constitutes a violation of the Permit or applicable statute or rule and is grounds for appropriate enforcement action, permit revocation, modification, or denial of a permit renewal application.

I.B. Acceptable Waste

- I.B.1. This Permit is for the disposal of non-hazardous solid waste that may include:
- I.B.1.a Municipal solid waste as defined by R315-301-2(47) of the Utah Administrative Code;
 - I.B.1.b Commercial waste as defined by R315-302-2(14) of the Utah Administrative Code;
 - I.B.1.c Industrial waste as defined by R315-302-2(35) of the Utah Administrative Code;
 - I.B.1.d Construction/demolition waste as defined by 19-6-102(4), Utah Code Annotated;
 - I.B.1.e Special waste as allowed by R315-315 of the Utah Administrative Code and authorized in section III-I of this Permit and limited by this section;
 - I.B.1.f Conditionally exempt small quantity generator hazardous waste as specified in R315-303-4(7)(a)(i)(B) of the Utah Administrative Code; and
 - I.B.1.g PCB's as specified by R315-315-7(2) of the Utah Administrative Code.

I.C. Prohibited Waste

- I.C.1. Disposal of the following wastes is prohibited:
- I.C.1.a 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.1.b Containers larger than household size (five gallons) holding any liquid; non-containerized material containing free liquids; or any waste containing free liquids in containers larger than five gallons;
 - I.C.1.c 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; and
 - I.C.1.d Regulated asbestos-containing material.

- I.C.2. 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 123 and of R315-301 through 320 of the Utah Administrative Code.
- I.D. Inspections and Inspection Access
- I.D.1. The Permittee shall allow the Director or an authorized representative, or representatives from the Bear River Health Department, to enter at reasonable times and:
- I.D.1.a Inspect the landfill or other premises, practices or operations regulated or required under the terms and conditions of this Permit or R315-301 through 320 of the Utah Administrative Code;
- I.D.1.b Have access to and copy any records required to be kept under the terms and conditions of this Permit or R315-301 through 320 of the Utah Administrative Code;
- I.D.1.c Inspect any loads of waste, treatment facilities or processes, pollution management facilities or processes, or control facilities or processes required under this Permit or regulated under R315-301 through 320 of the Utah Administrative Code; and
- I.D.1.d Create a record of any inspection by photographic, video, electronic, or any other reasonable means.
- I.E. Noncompliance
- I.E.1. If monitoring, inspection, or testing indicates that any permit condition or any applicable rule under R315-301 through 320 of the Utah Administrative Code may be or is being violated, the Permittee shall promptly make corrections to the operation or other activities to bring the facility into compliance with all permit conditions and 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 Provide written notice of the noncompliance or violation and a description of measures taken to protect human health and the environment within seven days after notification of the Director.

I.E.4. Within 30 days after documenting the event, the Permittee shall submit to the Director a written report describing the nature and extent of the noncompliance or violation and a complete description of all 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 additional appropriate remedial measures including development of a site remediation plan for approval by the Director.

I.E.5. In an enforcement action, the Permittee may not claim as a defense that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with R315-301 through 320 of the Utah Administrative Code and this Permit.

I.F. Revocation

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

I.G. Attachment Incorporation

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

II. DESIGN AND CONSTRUCTION

II.A. Design and Construction

II.A.1. The 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 design submitted in accordance with R315-301 thru 320 of the Utah Administrative Code and Attachment 1.

II.A.2. If ground water is encountered during excavation of the landfill, the Director shall be notified immediately, and the Permittee shall develop and submit an alternative construction design for approval.

II.A.3. The Permittee shall notify the Director upon completion of construction of any landfill cell, sub-cell, engineered control system, or any feature where Director approval is required. No landfill cell or engineered control system may be used until as-built documents are submitted and construction is approved by the Director.

- II.A.4. 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 shall be received from the Director and this permit modified prior to construction. The design shall be accompanied by a Construction Quality Control and Construction Quality Assurance (CQC/CQA) Plan, for each construction season where incremental or final closure is performed.
- II.A.5. A qualified party, independent of the owner and the construction contractor, shall perform the quality assurance function on cover components and other testing as required by the approved CQC/CQA Plan. The results shall be submitted as part of the as-built drawings to the Director.
- II.A.6. All engineering drawings submitted to the Director shall be stamped and approved by a professional engineer with a current registration in Utah.
- II.B. Run-On Control
- II.B.1. The Permittee shall construct drainage channels and diversions as specified in the Permit Application and shall maintain them at all times to effectively prevent runoff from the surrounding area from entering the landfill.

III. LANDFILL OPERATION

III.A. Operations Plan

- III.A.1. The Permittee shall keep the Operations Plan included in Attachment 2 on site at the landfill or at the location designated in section III.K of this Permit. The Permittee shall operate the landfill in accordance with the operations plan. If necessary, the Permittee may modify the Plan of Operations in accordance with R315-301 through 320 of the Utah Administrative Code. The modification shall be approved by the Director in accordance with R315-311-2(1) of the Utah Administrative Code. The Permittee shall note any modification to the Operations Plan in the daily operating record.

III.B. Security

- III.B.1. The Permittee shall operate the Landfill so that unauthorized entry to the facility is restricted. The Permittee shall:
- III.B.1.a Lock all facility gates and other access routes during the time the landfill is closed.
- III.B.1.b Have at least one person employed by the Permittee at the landfill during all hours that the landfill is open.
- III.B.2. Construct all fencing and any other access controls as shown in Attachment 1 to prevent access by persons or livestock by other routes.

III.C. Training

- III.C.1. The Permittee shall provide training for on-site personnel in landfill operation, including waste load inspection, hazardous waste identification, and personal safety and protection.
- III.D. Burning of Waste
- III.D.1. Intentional burning of solid waste is prohibited and is a violation of R315-303-4(2)(b) of the Utah Administrative Code.
- III.D.2. The Permittee shall extinguish all accidental fires as soon as reasonably possible.
- III.E. Daily Cover
- III.E.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.
- III.E.2. 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.
- III.F. Ground Water Monitoring
- III.F.1. The Permittee shall install and monitor the ground water underlying the landfill as described in Attachment 2 and in accordance with R315-308. The Permittee shall submit a groundwater monitoring plan for review and approval by the Director prior to acceptance of waste. If necessary, the Permittee may modify the Groundwater Monitoring Plan in accordance with R315-301 through 320 of the Utah Administrative Code. The modification shall be approved by the Director in accordance with R315-311-2(1) of the Utah Administrative Code. The Permittee shall note in the daily operating record any modification to the Ground Water Monitoring Plan and the Ground Water Monitoring Quality Assurance/Quality Control Plan.
- III.G. Gas Monitoring
- III.G.1. The Permittee shall monitor explosive gases at the landfill in accordance with the Gas Monitoring Plan contained in Attachment 2 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 Attachment 2, 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.
- III.G.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:
- III.G.2.a Immediately take all necessary steps to ensure protection of human health and notify the Director;

- III.G.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;
- III.G.2.c Implement a remediation plan that meets the requirements of R315-303-3(5)(b) of the Utah Administrative Code; and
- III.G.2.d Submit the plan to, and receive approval from, the Director prior to implementation.

III.H. Waste Inspections

- III.H.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. The Permittee shall select the loads to be inspected on a random basis.
- III.H.2. The Permittee shall inspect all loads suspected or known to have one or more containers capable of holding more than five gallons of liquid to ensure that each container is empty.
- III.H.3. The Permittee shall inspect all loads that the Permittee suspects may contain a waste not allowed for disposal at the landfill.
- III.H.4. The Permittee shall conduct complete random inspections as follows:
 - III.H.4.a The Permittee shall conduct the random waste inspection at the working face or an area designated by the Permittee.
 - III.H.4.b The Permittee shall direct that loads subjected to complete inspection be unloaded at the designated area;
 - III.H.4.c Loads shall be spread by equipment or by hand tools;
 - III.H.4.d Personnel trained in hazardous waste recognition and recognition of other unacceptable waste shall conduct a visual inspection of the waste; and
 - III.H.4.e The personnel conducting the inspection shall record the results of the inspection on a waste inspection form as found in Attachment 2. The Permittee shall place the form in the daily operating record at the end of the operating day.
 - III.H.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.

III.I. Disposal of Special Wastes

- III.I.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.

III.I.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.

III.J. Self Inspections

III.J.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.

III.K. Recordkeeping

III.K.1. The Permittee shall maintain and keep on file, at the Landfill gatehouse, 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 be signed and dated by the appropriate operator or personnel. The Daily operating record shall consist of the following two types of documents:

III.K.1.a Records related to the daily landfill operation or periodic events including:

III.K.1.a.(1) The number of loads of waste and the weights or estimates of weights or volume of waste received each day of operation and recorded at the end of each operating day;

III.K.1.a.(2) Major deviations from the approved plan of operation, recorded at the end of the operating day the deviation occurred;

III.K.1.a.(3) Results of monitoring required by this Permit, recorded in the daily operating record on the day of the event or the day the information is received;

III.K.1.a.(4) 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.

III.K.1.b Records of a general nature including:

III.K.1.b.(1) A copy of this Permit, including all Attachments;

III.K.1.b.(2) Results of inspections conducted by representatives of the Director, and of representatives of the local Health Department, when forwarded to the Permittee;

III.K.1.b.(3) Closure and Post-closure care plans; and

III.K.1.b.(4) Records of employee training.

III.L. Reporting

III.L.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, the results of gas monitoring, and all training programs completed.

III.M. Roads

III.M.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.

III.N. Litter Control

III.N.1. Litter resulting from operations of the landfill shall be minimized. In addition to the litter control plans found in Attachment 2, the Permittee shall implement the following procedures when high wind conditions are present:

III.N.1.a Reduce the size of the tipping face;

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

III.N.1.c Orient vehicles to reduce wind effects on unloading and waste compaction;

III.N.1.d Reconfigure tipping face to reduce wind effect;

III.N.1.e Use portable and permanent wind fencing as needed; and

III.N.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.O. CLOSURE REQUIREMENTS

III.O.1. Closure

III.O.2. The Permittee shall install final cover of the landfill as shown in Attachment 3. 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 recompacted clay placed as part of the final cover.

III.P. Title Recording

III.P.1. The Permittee shall meet the requirements of R315-302-2(6) of the Utah Administrative Code by recording a notice with the Box Elder 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.Q. Post-Closure Care

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

III.R. Financial Assurance

III.R.1. The Permittee shall submit to the Director, for review and approval, a financial assurance mechanism that meets the requirements of R315-309 of the Utah Administrative Code, covering closure and post-closure care costs. The Permittee shall not receive waste until after the Director approves the proposed financial assurance mechanism.

III.R.2. The Permittee, prior to receipt of waste, shall establish the approved mechanism and fund it as required. 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, and the Permittee shall fully fund the trust fund within ten years of the date waste is first received at the landfill if a trust fund is chosen. The Permittee shall keep the approved financial assurance mechanism in effect and active until closure and post-closure care activities are completed and the Director has released the facility from all post-closure care requirements.

III.R.3. If a trust fund is chosen as the financial assurance method the first payment to the fund shall be at least 10% of the estimated closure and post-closure care costs. If a trust fund is used, annual payments shall be determined by the following formula:

$$NP=[CE-CV]/Y$$

where NP is the next payment, CE is the current cost estimate for closure and post-closure care (updated for inflation or other changes), CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

The Permittee shall notify the Director of the establishment of the approved financial assurance mechanism and shall receive acknowledgment from the Director that the established mechanism complies with the approved method.

III.S. Financial Assurance Annual Update

III.S.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. The Permittee shall submit the information as required in R315-309-8 of the Utah Administrative Code and shall meet the qualifications for the "Local Government Financial Test" each year.

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

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

IV. ADMINISTRATIVE REQUIREMENTS

IV.A. Permit Modification

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

IV.B. Permit Transfer

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

IV.C. Expansion

IV.C.1. Any expansion of the current footprint designated in the description contained in Attachment 1, but within the property boundaries designated in Attachment 1, shall require submittal of plans and specifications to the Director. The plans and specifications shall be approved by the Director prior to construction.

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

IV.C.3. 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. 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.D. Expiration

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

Attachments

Attachment 1 – Landfill Design and Construction Plans

Attachment 2 – Plan of Operation

Attachment 3 – Closure and Post-Closure Plans

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Attachment 1

Landfill Design and Construction Plans

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3.3 LANDFILL DEVELOPMENT AND OPERATION

The current plans call for development of the landfill in three Phases; these are shown on Drawing 4, Appendix A. The first phase of development will include development of site access roads and run-on controls beginning from the frontage road and proceeding northward around the eastern portion of the proposed landfill. Presently, with the exception of some dirt roadways there is not established vehicle access around the landfill site. The first phase of road development will terminate near the northwest corner of Phase I. Fill needed for the initial road construction will be generated from the Phase I cut and the excavation for the storm water detention pond. Any excess soil from the Phase I excavation will be stockpiled for use as daily cover. The floor of the landfill cells is designed with a cross slope to help direct the leachate towards a leachate sump. All water will be diverted in a southeasterly direction away from active working areas and toward the eastern limits of the proposed landfill footprint.

3.3.1 Liner

Liner installation will begin in Phase I, Cell 1 in preparation for waste acceptance. We estimate that approximately 3,192,200 sq-ft of landfill area will be lined in this cell.

Preparation for liner placement will include removal of cobbles or other material that could damage the liner. The landfill floor and side slopes will be lined using a primary HDPE liner and secondary GCL. A geocomposite drain net will be installed over the HDPE liner (Cell bottom only) to provide protection for the liner as well as to facilitate the movement of leachate. A layer of protective soil will be placed over liner materials in order to protect the liner from distress due to equipment and waste placement. The geocomposite drain net will also be used in all subsequent Cell and Phase development to maintain a continuous leachate management system. Details of liner installation are included in Appendix A.

3.3.2 Fill Method

Wastes will be dumped at the toe of work face and spread up the slope in one to two foot layers, keeping the working slope at a maximum of three horizontal to one vertical.

Work face dimensions will be kept narrow enough to minimize blowing litter and reduce the amount of daily cover. Wastes will typically be compacted by making three to five passes up and down the slope. Compaction reduces litter, differential settlement and the quantities of cover soil needed. Compaction also extends the life of the site, reduces unit costs and leaves fewer voids to help reduce vector problems. Care will be taken that no holes are left in the compacted waste. Voids are filled with additional waste as they develop.

3.3.3 Daily, Intermediate and Final Cover

3.3.3.1 Daily and Intermediate Soil Cover

Daily and intermediate cover soils will meet the 6-inch and 12-inch minimum requirements, respectively, as governed by R315-303-4. Borrow soils will be generated by excavation of landfill Cells with soils being stockpiled for use as daily and intermediate soil cover. Efforts will be made to stockpile soils in an area adjacent to the working face. Based upon the nature of soils available at the landfill; crushing and screening will not be required to produce suitable cover soils.

3.3.3.2 Final Cover

The FHRL will initiate its final cover system installation within 30 days after disposal reaches final elevation in any particular landfill closure Stage. Drawing 10 in Appendix A show the closure Stages. Installation of the cover will be complete within 180 days after initiation. It is

anticipated that final cover will be placed over the landfill areas in several separate events as sufficient area is brought to final elevation. The typical areas planned for placement of final cover will be approximately 10 acres each. Closure Stages may be adjusted to better accommodate landfill operation and waste placement.

The engineered final cover system will minimize surface water infiltration (thereby minimizing leachate generation), control gas migration, maintain slope stability, control surface water and erosion, and be capable of supporting vegetative cover. The vegetative cover will be selected with shallow root systems to reduce cover soil penetration. The cover will be constructed to the elevations indicated on the drawings in Appendix A. Beginning at the surface, the planned cover will consist of a minimum of 6-inches of topsoil (mulch/compost), 18-inches low permeability site soils, geocomposite (drain-net), HDPE and GCL over 12-inches of intermediate cover soils. Prior to construction of the final cover in each of the Stages, an engineering design package consisting of Drawings, Specifications and a QA/QC plan will be submitted to the DSHW for approval.

Final cover side slopes will be constructed and maintained at a maximum of 4H:1V. The final cover surface will also contain roads that provide access for final cover maintenance and break up long drainage paths to minimize erosion. The roadway benches will slope up to 5% to ensure adequate drainage (while minimizing erosion) and will incorporate a drainage channel on the inside of the bench at the toe of the slope.

3.3.4 Elevation of Final Cover

As illustrated on Drawing 5 in Appendix A, the natural ground surface at the site of the landfill is relatively flat. Within the proposed landfill footprint the natural elevation of the surface is generally between 5,190 and 5,195 feet (with some higher areas around the perimeter) and the final cover has a maximum elevation of 5,455 above mean sea level (msl).

3.3.5 Equipment Requirements and Availability

Section 1.5 and 1.6 of Part II – General Report, contains a listing of equipment and personnel located at the landfill and states that additional equipment will be utilized at the site as needed.

3.4 MONITORING SYSTEM DESIGN

3.4.1 Ground Water Monitoring System

The FHRL will comply with all aspects of the required ground water monitoring requirements as referenced in R315-308. Prior to the installation of any monitor wells at the FHRL site, a ground water monitoring plan will be developed and submitted to the DSHW for review and approval. The ground water monitoring plan will include at a minimum details of the following items:

- Well construction and completion
- Decontamination of drilling and sampling equipment
- Sample collection
- Sample preservation
- Analytical procedures and quality assurance
- Chain of custody control
- Health and Safety procedures
- Sampling forms
- Statistical method for analysis

Prior to construction of the first lined Cell at the FHRL, a minimum of one upgradient and two downgradient monitor wells will be installed. Appendix F contains a typical ground water monitoring plan for use at solid waste facilities.

3.4.2 Surface Water

In general, surface water will be prevented from running into the active landfill area by ditches and berms created during perimeter road construction. Run-off from the final cover will also be managed by using access roads equipped with berms and ditches. The perimeter road will divert surface flows initiated off-site around active areas of the landfill to existing nearby drainages. Culverts will be installed to enable flows to bypass proposed road fill. Landfill staff will inspect the constructed drainage system quarterly. Temporary repairs will be made to any observed deficiencies until permanent repairs can be scheduled. Landfill personnel or a licensed contractor will repair drainage facilities as required.

3.4.3 Leachate Collection and Treatment

Among the possible problems created by waste storage in any landfill is the possible contamination of soil and surface or ground water from water contacting or passing through the waste. Due to low precipitation and high evapotranspiration rates associated with the semi-arid climate in the Box Elder County, the quantity of water infiltrating the landfill is predicted to be small and subsequent leachate generation low. The landfill cover is designed to minimize infiltration and promote runoff. Furthermore, liquid wastes will not be allowed in the landfill.

What leachate is generated will be collected by the leachate collection and recovery system (LCRS). The LCRS will consist of a geocomposite drainage material to provide lateral drainage of leachate directly above the liner system. The geocomposite will be placed over the entire bottom of the lined landfill cells. The grades and materials of the LCRS will be designed to maintain functions during landfilling operations. The geocomposite is designed to limit leachate depths on the liner to less than one foot, even when clogged by sediments and biofouling that has been observed at other facilities. Cell construction at FHRL will incorporate leachate collection/transmission pipes to enhance the removal of leachate from the liner. Each leachate collection and header pipe will be oversized to allow for periodic maintenance cleaning.

The landfill floor itself is to be constructed with a minimum slope of 2% in order to direct leachate flows to a storage pond designated for leachate management. Leachate from the leachate sump will eventually be pumped from the sump to a separate leachate pond located outside the landfill footprint. The separate leachate pond will be sized to collect leachate (and contact run-off) generated from the largest proposed landfill cell when subjected to the design storm (100-yr, 24-hour storm; 3.22 inches). The 100-yr design storm is a conservative parameter since only the 24-hour, 25-yr storm is required by regulation.

Leachate sumps will be constructed in each landfill cell. These collection sumps will be located at the lowest elevation in each cell and connected via transmission piping to the separate lined leachate pond. Evaporation will typically be the means of liquid removal; however in the event that water level in the pond nears capacity, leachate will be pumped out and removed from the site to an appropriate treatment/disposal facility or recirculated over the lined landfill as a dust control practice.

3.4.4 Landfill Gas

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

The cover soils for the FHRL site will be predominantly fine-grained silts and clays that are native to the site. Methane that may be produced may not be able to easily exit through the cover. Gas transmission pipes will be utilized to direct the MSW generated gases to collector pipes for delivery to end users or a methane flare.

3.5 DESIGN AND LOCATION OF RUN-ON/RUN-OFF CONTROL SYSTEM (S)

Exact precipitation records for the site are not available. The nearest weather station to the site is in Snowville. The Snowville station shows the average annual rainfall to be 12.09 inches. The Snowville station is located at a similar elevation and is located approximately 8 miles northwest of the landfill site. A statewide map available from the United States Department of Agriculture (USDA) indicated that the site should expect to receive 12-16 inches of precipitation annually.

3.5.1 Run-On from a 25-Year, 24-Hour Storm

The landfill site is located in a broad basin that is the topographic low spot for the surrounding area. The landfill location is such that the storm water run-off from the surrounding approximately 5,500 acres will report to the landfill property. In order to develop vehicle access around the perimeter of the proposed cells there will be cuts and fills of varying heights constructed as part of the access road construction. Surface flows from the areas around the landfill will be diverted around any active portion of the landfill and stored on the landfill property until evaporated.

Fill areas associated with the excavation of Phase I and construction of the access road will create a barrier to storm water flows and a continuous channel will be constructed on the outside edge of the perimeter access road that is capable of transmitting flows from a 25-year, 24-hour storm (2.36 inches - NOAA Atlas 14). Preliminary calculations of the peak flow rates from the predicted run-on areas used for initial design of the storm water collection ditches are provided in Appendix I.

3.5.2 Run-Off from a 25-Year, 24-Hour Storm

The design for the landfill will incorporate a run-off control system that will divert the surface flows resulting from a 25-year, 24-hour storm (2.36 inches – NOAA Atlas 14) that falls on the landfill cover. Run-off from the final cover will be managed by a combination of ditches and berms associated with access roads on the final cover. Flows off the landfill cover will be directed into run-off detention ponds located proximate to the landfill. Run-off will be held in the ponds until the water evaporates. Preliminary calculations of the flow rates from the predicted runoff to be used for design of the storm water collection ditches are provided in Appendix I.

Berms and ditches will be incorporated into the active landfill areas to direct the precipitation away from the working faces. FHRL personnel will be responsible for the maintenance of the slopes and drainage systems to ensure the efficient operation of the run-off system.

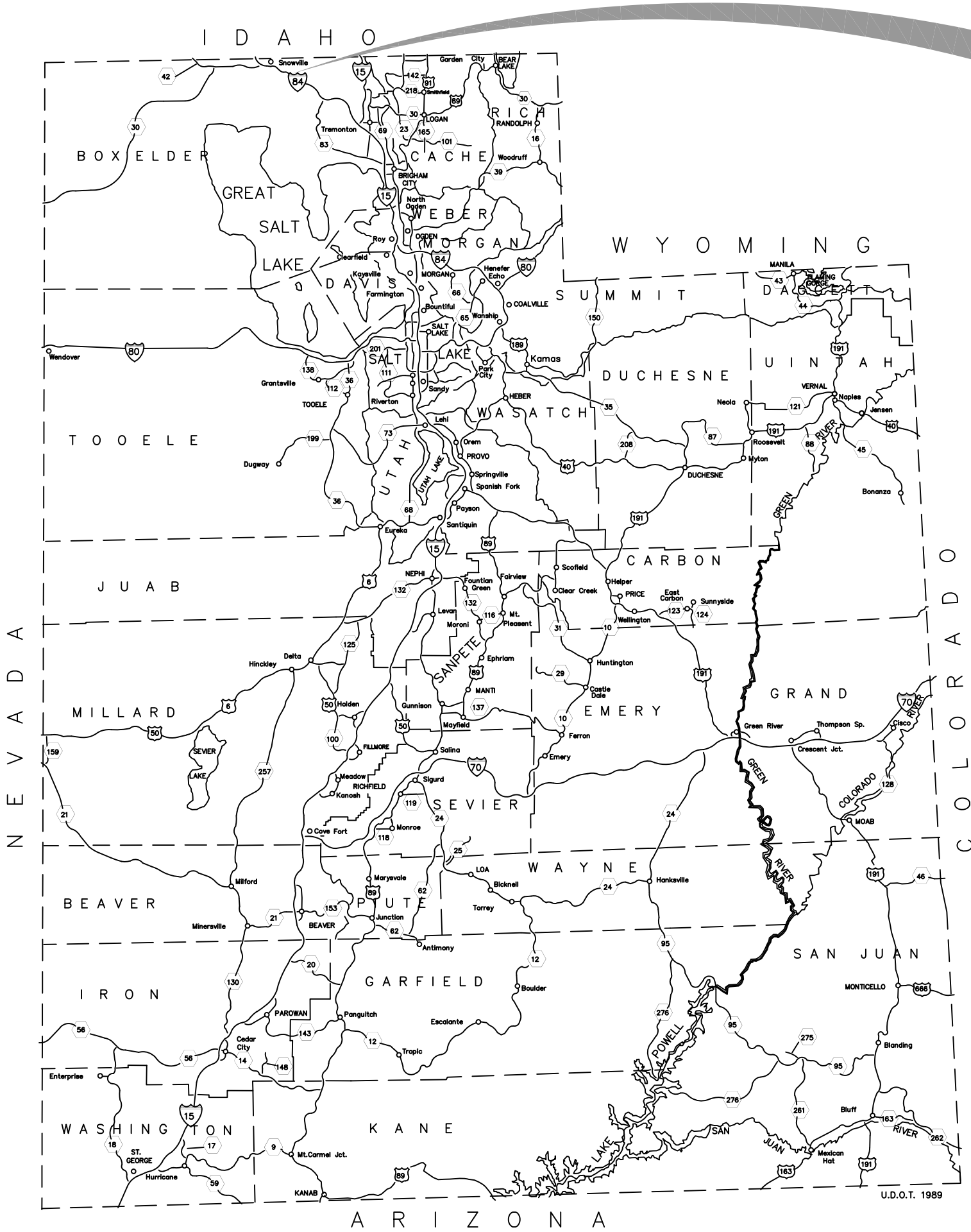
The FHRL is designed and will be constructed so as not to cause point or non-point source discharges to surface waters, including wetlands, in violation of the CWA or in violation of State of Utah water quality management plans approved under Section 208 or 319 of the

CWA. Prior to initiation of work at the site a Utah Pollutant Discharge Elimination System (UPDES) permit will be obtained.

FRANKLIN HILL REGIONAL LANDFILL

BOX ELDER COUNTY, UTAH

PERMIT DRAWINGS



SITE LOCATION MAP



SITE VICINITY MAP
(1" = 1500')

DRAWING INDEX

| SHEET | NAME |
|-------|---------------------------|
| 1 | TITLE SHEET |
| 2 | SITE PLAN |
| 3 | LANDFILL EXCAVATION |
| 4 | LANDFILL COVER |
| 5 | PHASE & CELL DEVELOPMENT |
| 6 | ELEVATION VIEW |
| 7 | ELEVATION VIEW (2) |
| 8 | RUN-ON AREAS |
| 9 | LEACHATE/RUN-OFF CONTROLS |
| 10 | CLOSURE SEQUENCE |
| 11 | DETAILS |

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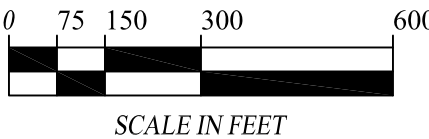
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(APPROXIMATE)

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SHEET TITLE
FRANKLIN HILL REGIONAL LANDFILL
TITLE SHEET



REFERENCE:
BACKGROUND IMAGE FROM UTAH AGRC: NAIP 2011
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BACKGROUND TOPO FROM UTAH AGRC: 2006 AUTO-CORRECTED DEM (5m)



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- SURFACE CONTOUR
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- OPERATIONAL BOUNDARY
(APPROXIMATE)
- ✂ EXPLORATORY BORING

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SITE
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TOTAL EXCAVATION:
6.87 MCYD

CUT HEIGHT: 20' AVG (55' MAX)

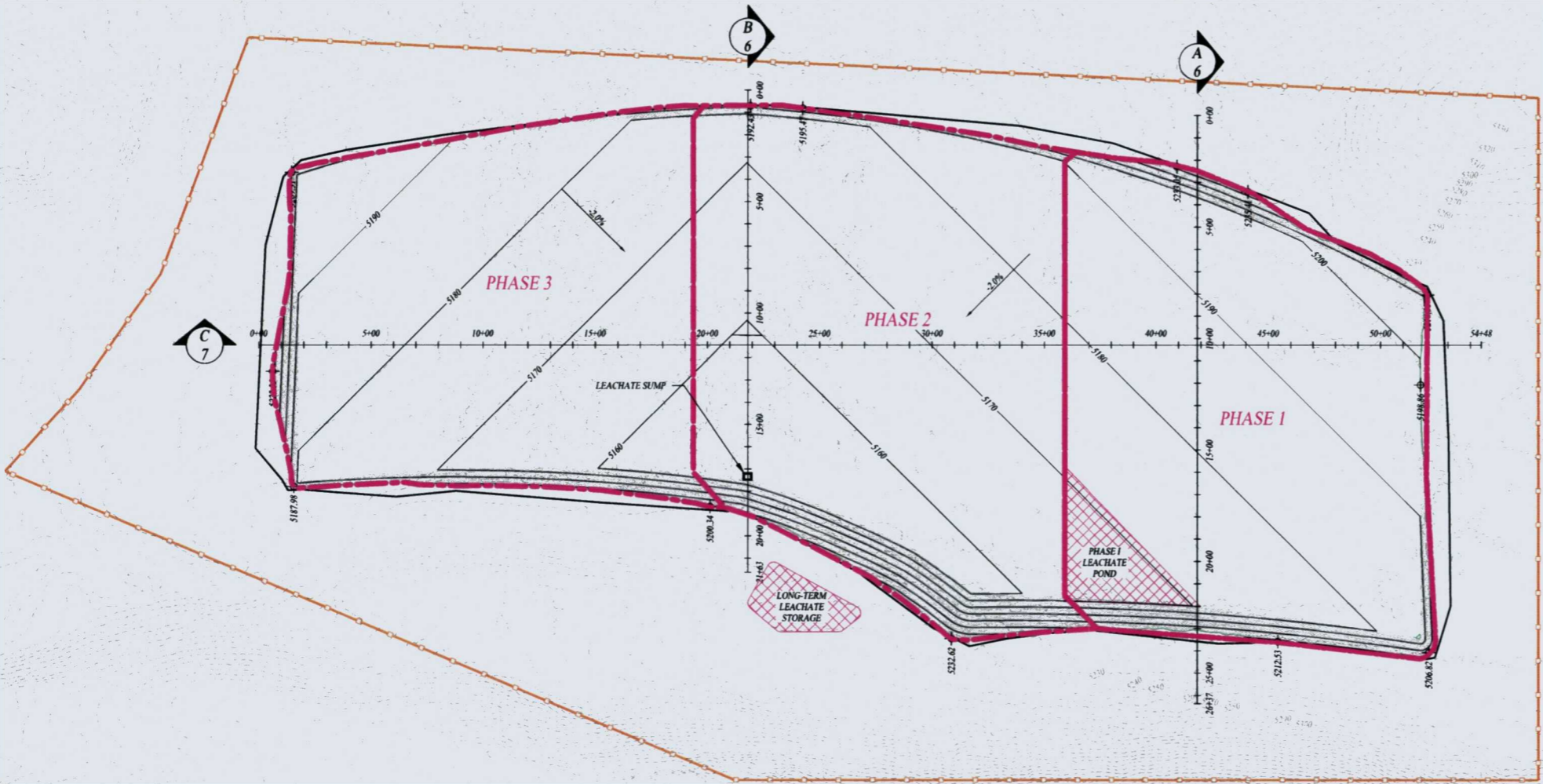
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PROPOSED CONTOUR
(10' INTERVAL SHOWN)

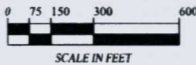
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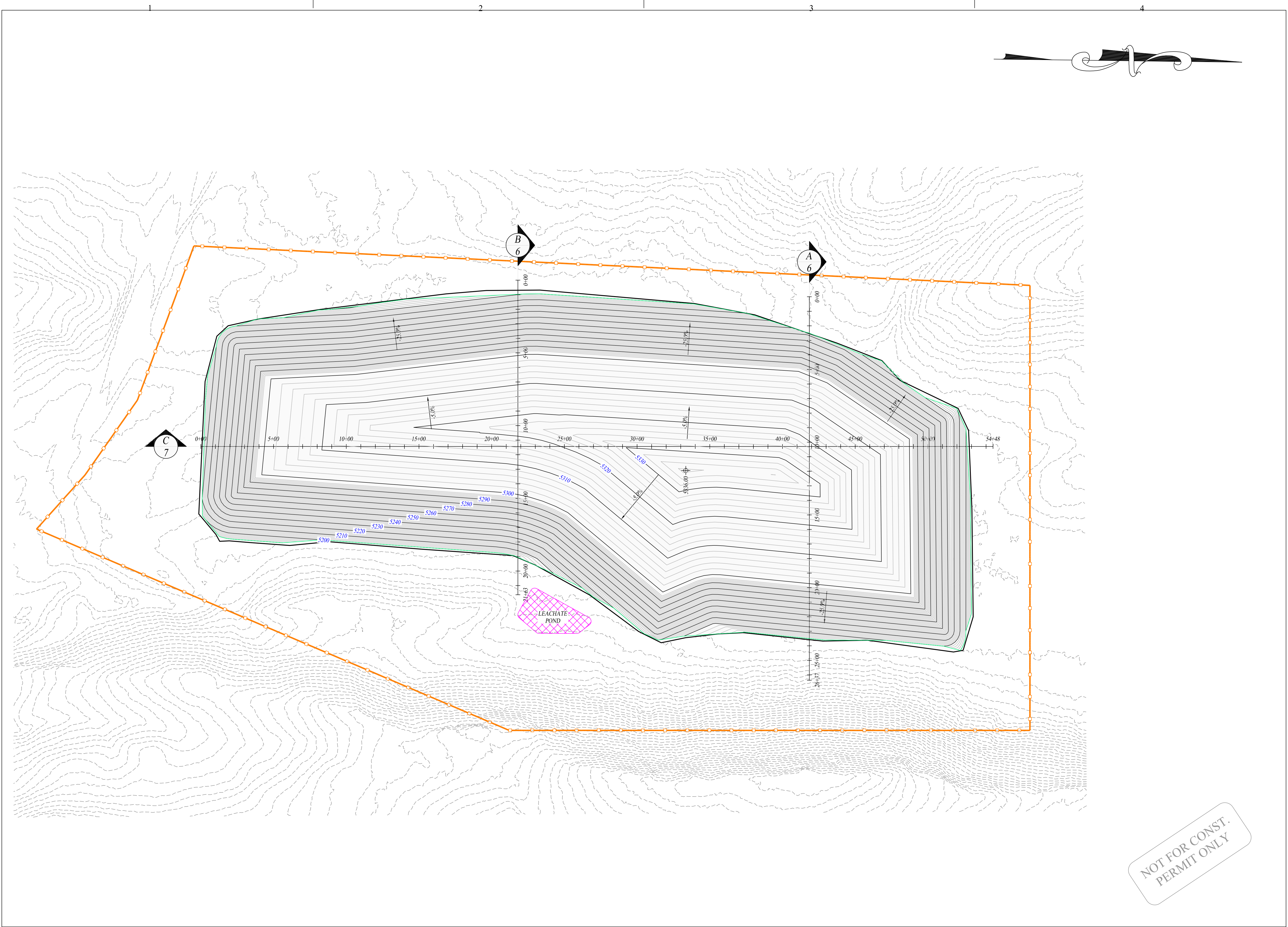
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| FRANKLIN HILL REGIONAL LANDFILL | | |
| LANDFILL EXCAVATION | | |



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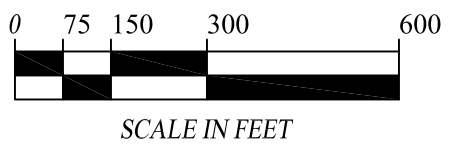


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TOTAL AIRSPACE:
37.8 MCYD
SOIL USAGE 18.2% (6.87 MCYD)
MSW: 30.9 MCYD

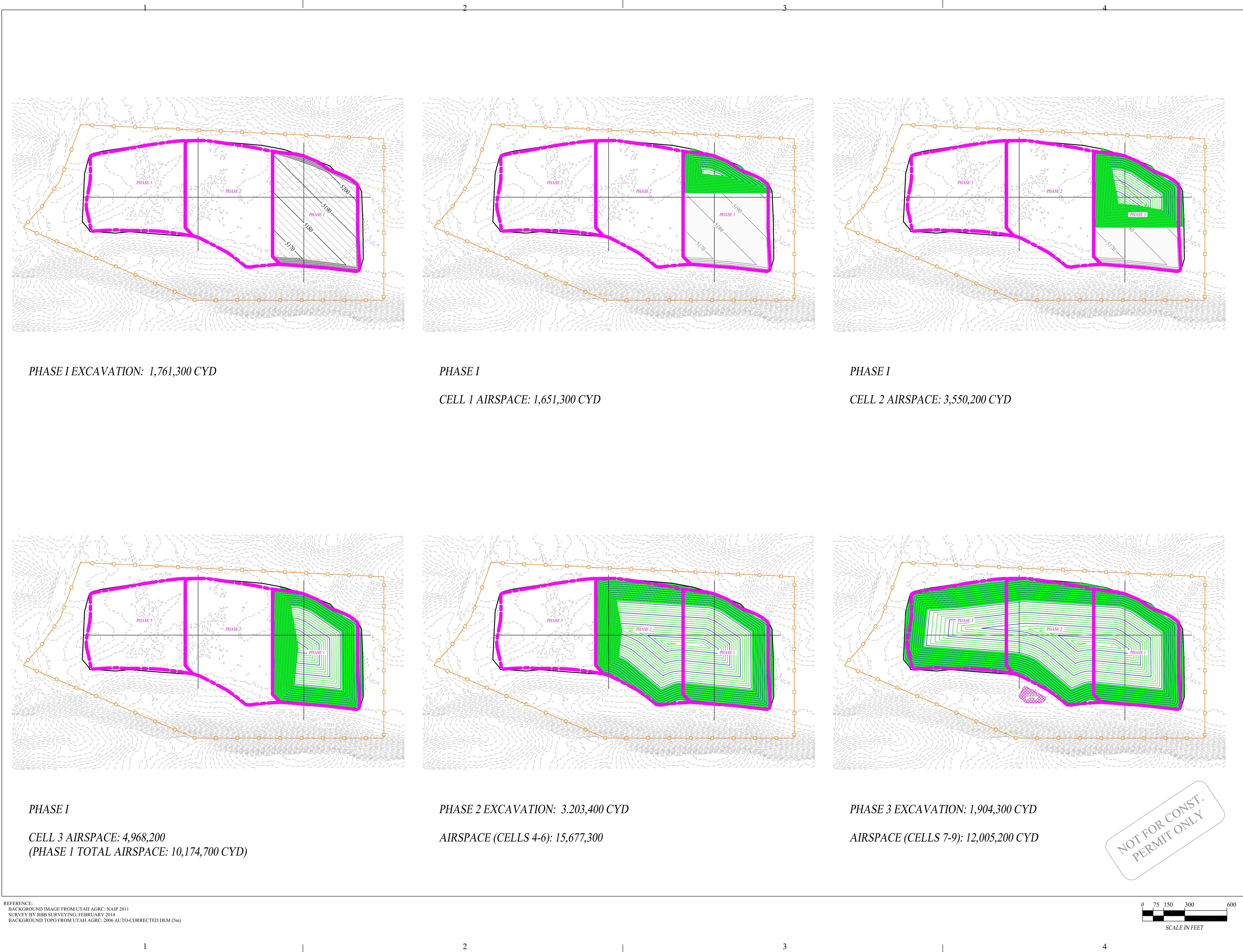
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- PROPOSED CONTOUR
(10' INTERVAL SHOWN)
- PROPOSED CONTOUR
(2' INTERVAL SHOWN)
- SITE BOUNDARY
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SHEET TITLE
FRANKLIN HILL REGIONAL LANDFILL
**LANDFILL
COVER**



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EXISTING CONTOUR
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PROPOSED CONTOUR
(10' INTERVAL SHOWN)

PROPOSED CONTOUR
(2' INTERVAL SHOWN)

OPERATIONAL BOUNDARY
(APPROXIMATE)

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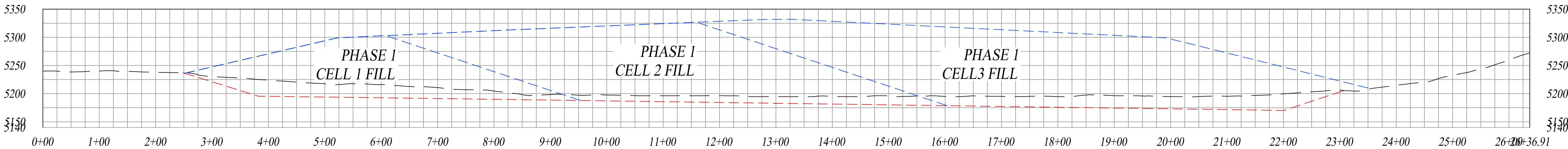
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FRANKLIN HILL REGIONAL LANDFILL
**PHASE & CELL
DEVELOPMENT**

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CAP (FILL)
--- PROPOSED LANDFILL
FLOOR (CUT)
--- EXISTING GROUND

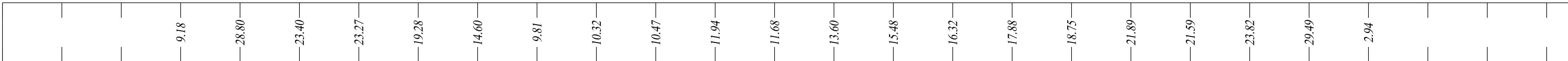
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SHEET TITLE
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ELEVATION
VIEW

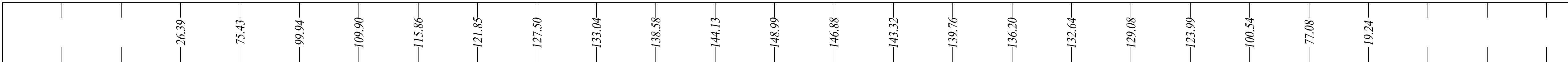
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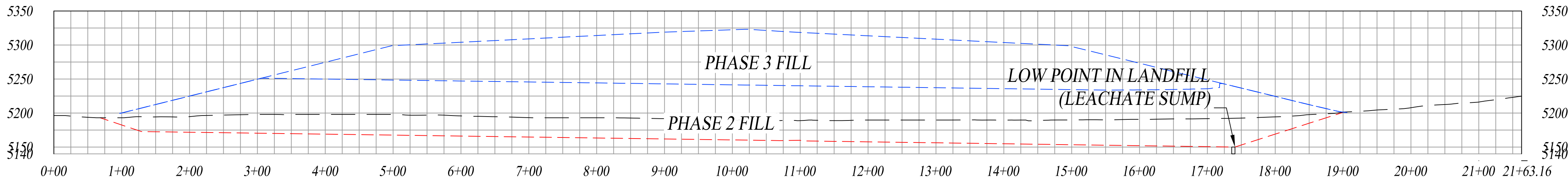
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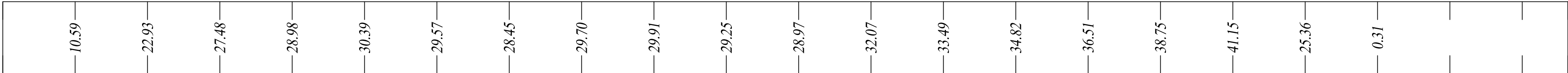
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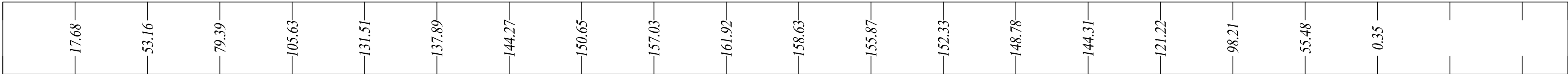
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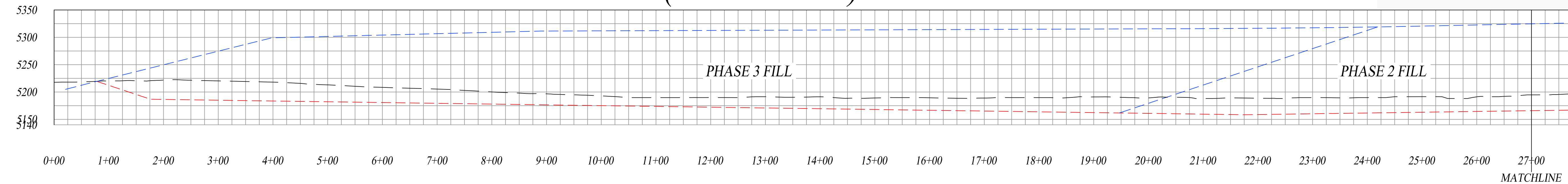


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Section C (SHEET 3 & 4) Sta: 0+00-27+00



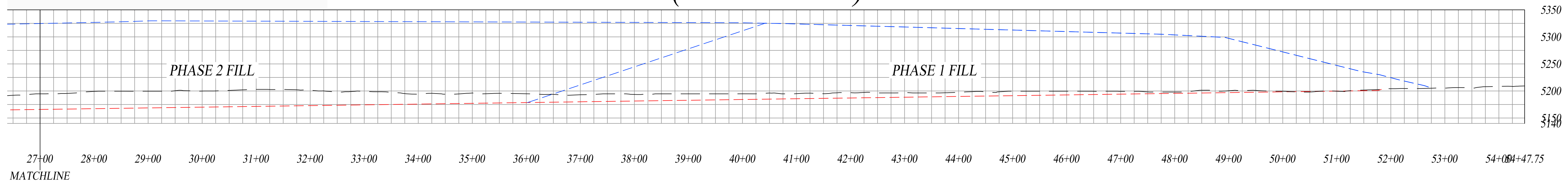
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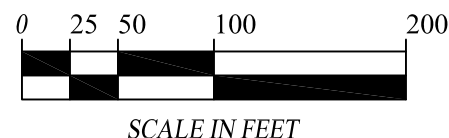


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- PROPOSED LANDFILL CAP (FILL)
- PROPOSED LANDFILL FLOOR (CUT)
- EXISTING GROUND

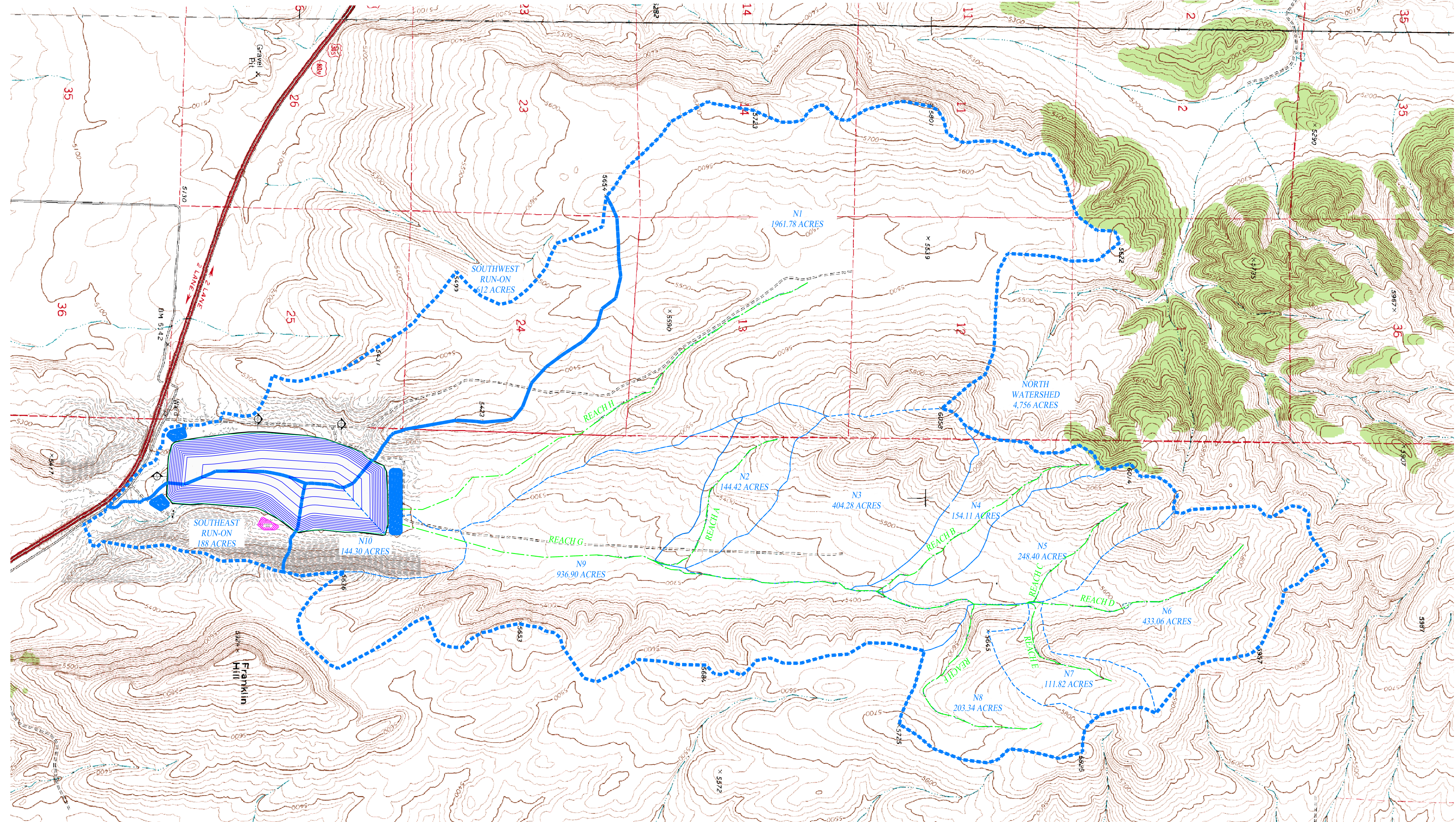
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| ISSUE: | | |
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| CAD DWG FILE: | 01877/001/Moulding Base.dwg | |
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| DESIGNED BY: | BDM | |
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SHEET TITLE
FRANKLIN HILL REGIONAL LANDFILL
ELEVATION
VIEW (2)

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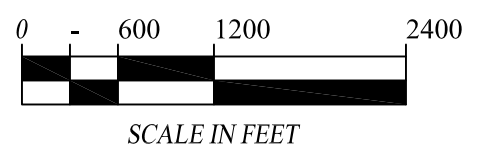
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| PROJECT NO.: | 01877-001 |
| PLANT DWG FILE: | 01877/001/Moulding Base.dwg |
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RUN-ON AREAS



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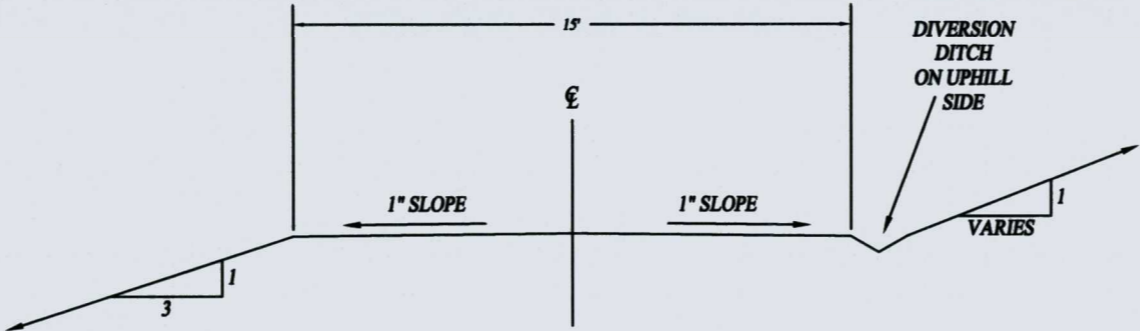
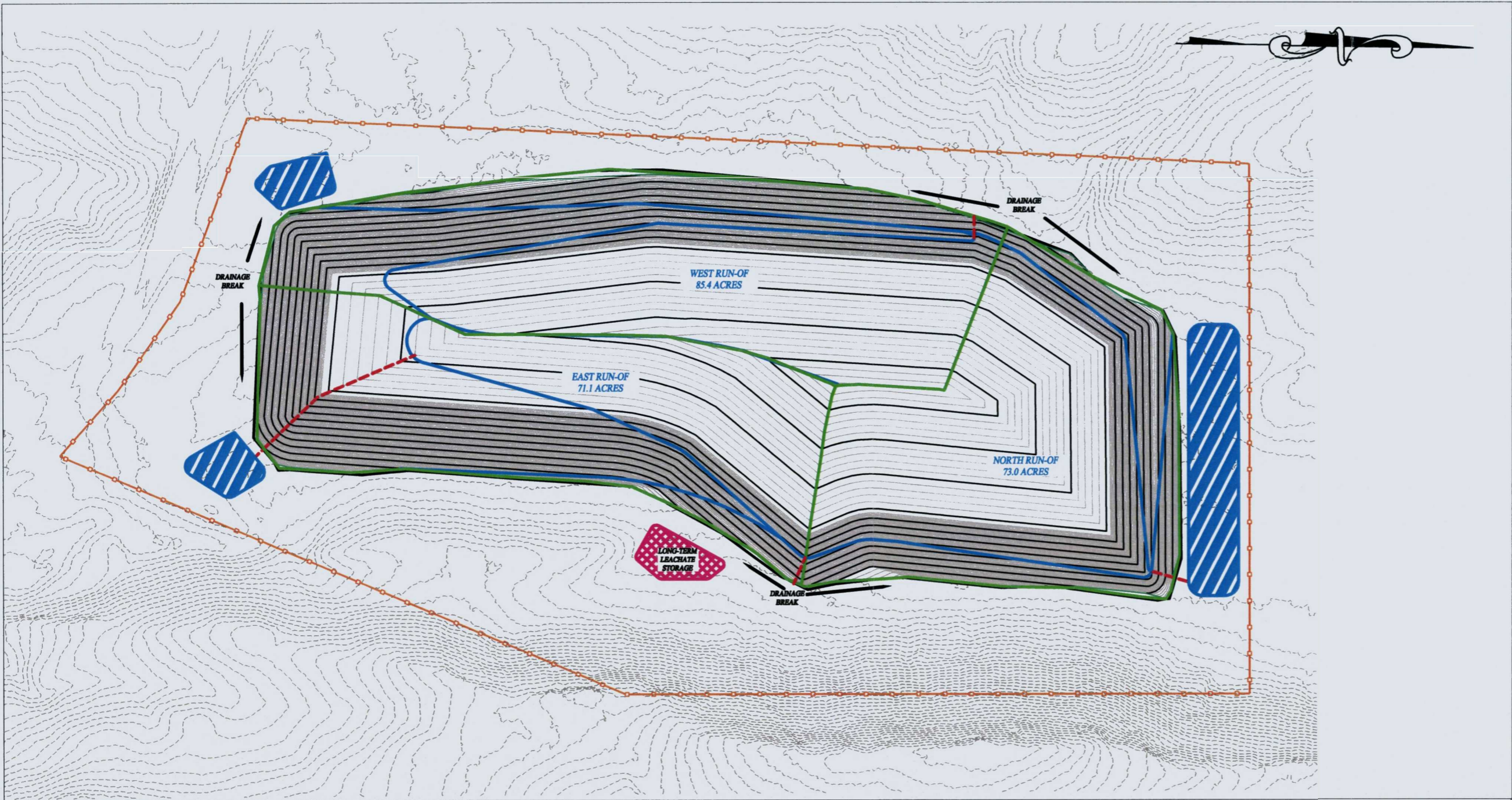
4153 South Commerce Drive
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- EXISTING CONTOUR (10' INTERVAL SHOWN)
- PROPOSED CONTOUR (10' INTERVAL SHOWN)
- PROPOSED CONTOUR (2' INTERVAL SHOWN)
- SITE BOUNDARY (APPROXIMATE)
- LANDFILL CAP RUN-OFF DRAINAGE AREAS
- ACCESS ROAD WITH RON-ON/RUN-OFF CONTROL BERM/DITCH
- DROP STRUCTURE CHANNEL/PIPE TO POND
- SURFACE WATER DETENTION AREAS
- LONG TERM LEACHATE STORAGE

| MARK | DATE | DESCRIPTION |
|---|------|-------------|
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SURFACE
RUN-OFF CONTROLS

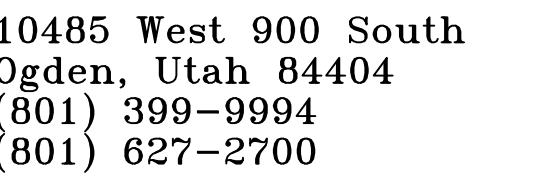


15' ACCESS ROAD SECTION (TYPICAL)

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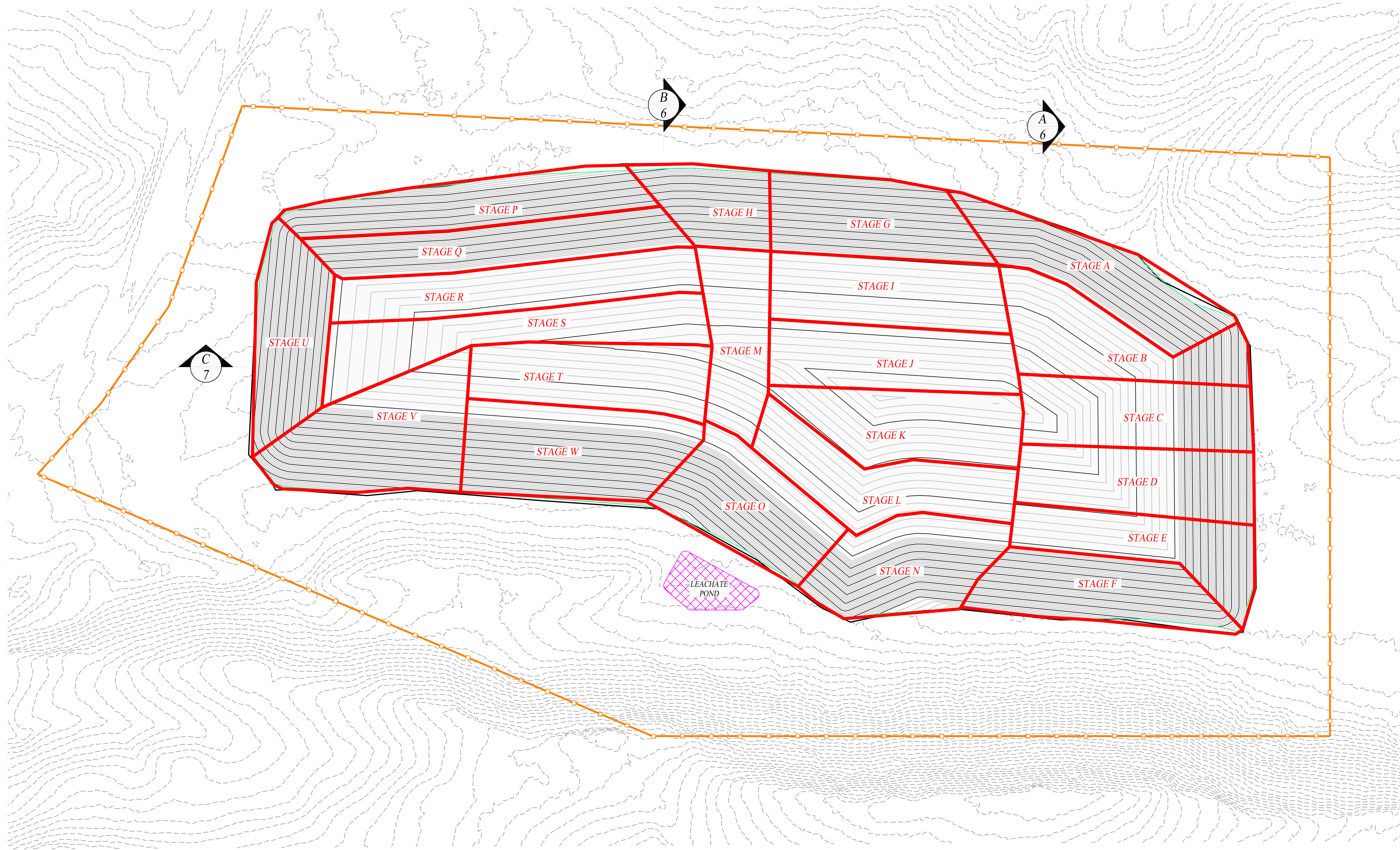
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BACKGROUND IMAGE FROM UTAH AGRC: NADP 2011
SURVEY BY RBB SURVEYING, FEBRUARY 2014
BACKGROUND TOPO FROM UTAH AGRC: 2006 AUTO-CORRECTED DEM (5m)



CONSULTANTS



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Salt Lake City, Utah 84107
(801)270-9400 Fax: (801)270-9401



EXISTING CONTOUR
(10' INTERVAL SHOWN)

PROPOSED CONTOUR
(10' INTERVAL SHOWN)

PROPOSED CONTOUR
(2' INTERVAL SHOWN)

*SITE BOUNDARY
(APPROXIMATE)*

CLOSURE STAGE
(APPROXIMATE)

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ISSUE:

PROJECT NO.: 01877-001

CAD DWG FILE: 01877/001/Moulding Base.dwg

DRAWN BY: JAH

DESIGNED BY: *BDM*

CHECKED BY: *BDM*

SHEET TITLE

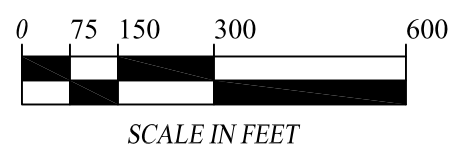
FRANKLIN HILL REGIONAL LANDFILL

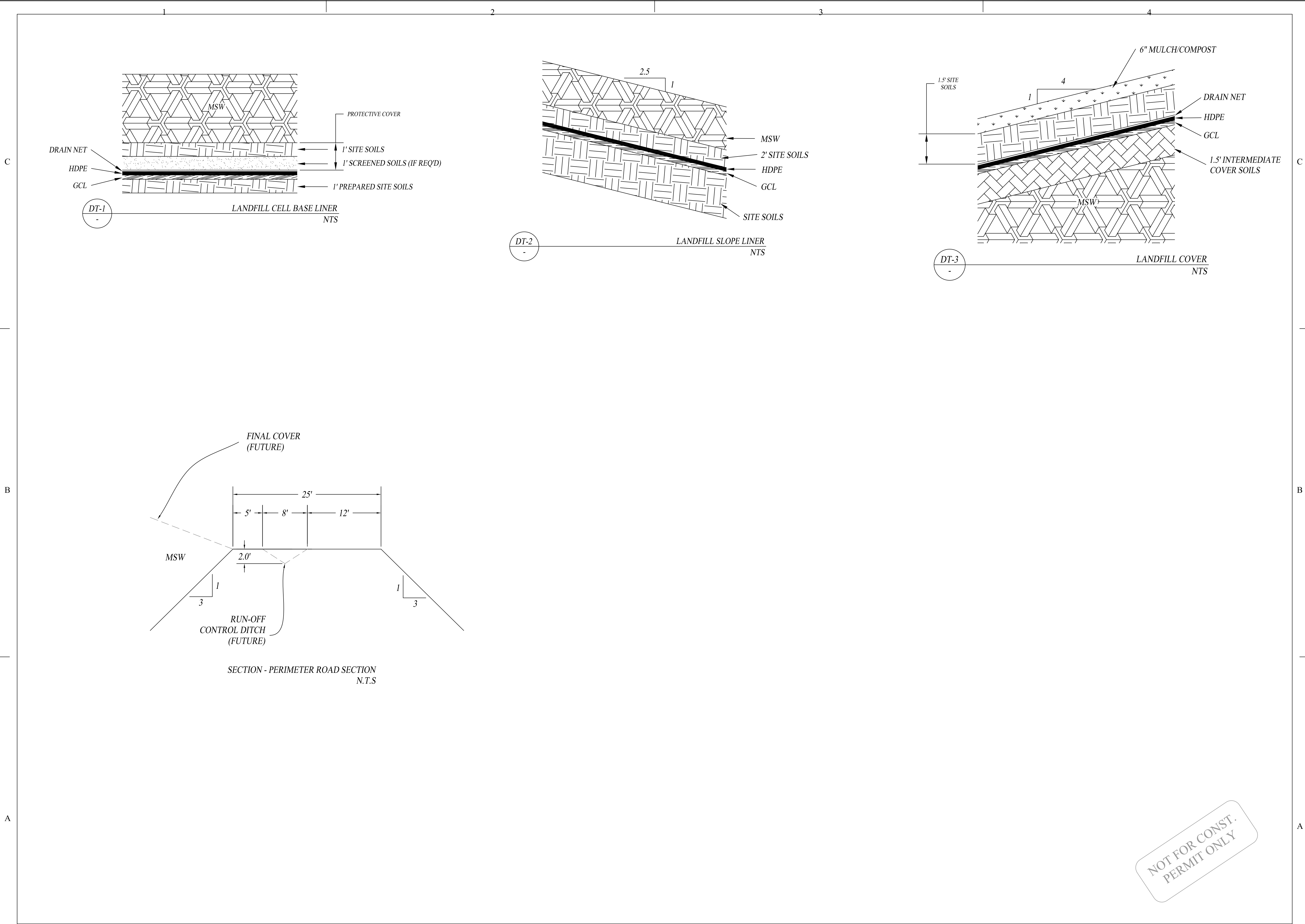
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REFERENCE:
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SURVEY BY RBB SURVEYING, FEBRUARY 2014
BACKGROUND TOPO FROM UTAH AGRC: 2006 AUTO-CORRECTED DEM (5m)

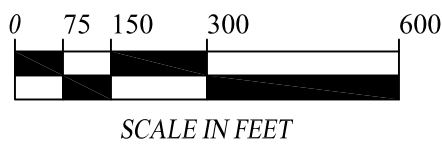
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REFERENCE:
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Moulding

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| PROJECT NO.: | 01877-001 | |
| CAD DWG FILE: | 01877/001/Moulding Base.dwg | |
| DRAWN BY: | JAH | |
| DESIGNED BY: | BDM | |
| CHECKED BY: | BDM | |
| COPYRIGHT: | IGES 2014 | |

SHEET TITLE

FRANKLIN HILL REGIONAL LANDFILL

DETAILS

Attachment 2

Plan of Operation

DRAFT

SECTION 3 – PLAN OF OPERATION

This Plan of Operation has been written to address the requirements of UAC R315-302-2 and briefly describes the anticipated operations of the FHRL facility.

The purpose of the Plan of Operation is to provide the Manager, Operators and Attendants with standard procedures for day-to-day operation of the landfill. A copy of the final permit application (including the Plan of Operation) and Landfill Permit (to be issued by the DSHW) will be kept at the landfill for reference.

As previously stated the function of the FHRL is to provide for the responsible disposal of MSW generated in northern Utah. The landfill is subject to and will be operated in accordance with applicable sections of the Utah Solid and Hazardous Wastes Control Board, Utah Solid Waste Permitting and Management Committee Rules, Utah Administrative Code (R315-301 through 320).

All FHRL personnel will be equipped with radios and cell phones. Radios will be the primary communication method between site personnel with the cell phones being utilized for secondary communication and emergencies.

3.1 SCHEDULE OF CONSTRUCTION

Contingent upon the DSHW landfill permit and Box Elder County Conditional Use Permit, site infrastructure development would likely begin during early 2015 with the facility becoming operational in late 2015 or early 2016.

The development sequence envisioned for the FHRL will be as follows:

- Installation and sampling of groundwater monitoring wells.

- Development of the water management system. The system would include measures for run-on control along a perimeter road, the development of a run-on detention pond, and the installation of culverts.
- Development of site access roads.
- Stockpiling of topsoil.
- Excavation of the first Cell in Phase I.
- Development of a leachate pond.
- Site power, water, sanitation, etc. as appropriate.

Site soils will be utilized as the primary cover material for construction activities on site as well as cover for MSW working faces. FHRL is designed such that no import soil will be required for site development or landfill operations, all required soils will be available on the property associated with the FHRL operations.

3.2 WASTE STREAM MANAGEMENT - DESCRIPTION OF HANDLING PROCEDURES

3.2.1 General

An effective waste control program is designed to detect and deter attempts to dispose of hazardous and other unacceptable wastes and will be implemented at the FHRL. The program is designed to protect the health and safety of employees and customers as well as to protect against the contamination of the environment.

The landfill will not be open for public disposal (the FHRL will be utilized solely by local governmental waste management entities) and will be accessed via locked gate by landfill employees and transfer truck drivers only. Signs will be posted at the landfill entrance clearly indicating that the facility is not for public use, will include owner contact information, and hours of operation.

Most (if not all) of the waste being delivered to the FHRL will be initially processed through transfer stations located in northern Utah. Initial processing at the transfer station will include the initial waste screening and weighing of the MSW. Although not anticipated, it may be necessary for an entity to haul waste directly to the FHRL facility and not process the waste through a transfer station. If that is the case, waste will be delivered directly to the FHRL facility where it will be screened for improper waste at the site by a landfill Operator or Attendant. Any loads delivered to the FHRL directly will be charged by the load since no scale is anticipated to be utilized by the facility.

Any transfer truck suspected of carrying unacceptable materials (liquid waste, sludges, or hazardous waste) will be prevented from entering the disposal site unless the driver can provide evidence that the waste is acceptable for disposal at a MSW facility. FHRL reserves the right to refuse service to any suspect load. Any truck carrying unacceptable materials will be required to exit the site without discharging their load. If a load is suspected of containing unacceptable materials (but not rejected at the gate), the following information will be recorded: date, time, name of the hauler, driver, telephone number of hauler, vehicle license plate, and source of the waste. The Attendant will then notify an Operator that a load is suspect and that load will be further inspected as the hauler deposits the load near the landfill operational face. Appendix E contains typical forms to be utilized to document waste inspections.

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

3.2.2 Waste Acceptance

Waste delivered to the FHRL will be primarily through a transfer station where the bulk of the waste acceptance activity will take place. Landfill personnel will process incoming loads to the landfill as follows:

- A waste transfer truck will stop prior to reaching the working face; a landfill Attendant will identify the source of the load, since the FHRL will be a regional facility the MSW delivered will have been weighed and screened through a transfer station. The load information will be collected from each transfer truck delivering waste to the facility. The information from each load will include truck identification, weight and origin of load.

For waste that may be delivered directly to the FHRL (waste not hauled directly from transfer stations) waste screening will be done as needed or scheduled according to the procedures outlined in Section 3.3 Waste Inspection. No open burning will be allowed in association with the FHRL nor will smoking be allowed anywhere on the landfill.

3.2.3 Waste Disposal

Once waste is delivered to the site, the waste will be dumped at the toe of the work face when possible and spread up the slope in one to two foot lifts, keeping the slope at a maximum of three to one (horizontal to vertical) configuration.

Work face dimensions will be kept narrow enough to minimize blowing litter and reduce the amount of material needed for daily cover. Typically, the width of the working face will be two to four times the width of the compactor blade (30 - 60 feet). The narrow working face will help to facilitate complete compaction of the waste and keeps the width narrow enough to minimize the amount of daily cover required.

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

- Minimizes blowing litter problems
- Increases equipment compactive effectiveness
- Increased visibility for waste placement and compaction, and

- More uniform waste distribution.

Grade stakes or other grade control measures will be used if necessary to control cell height and top surface grade. The top of the interim surfaces will typically range from 2 to 5 percent to promote runoff within the cell which will be directed to the leachate pond. The working heights of each cell will range from 10 to 15 feet depending upon operational access considerations.

Wastes will be compacted by making three to five passes up and down the slope. Compaction reduces litter, differential settlement, and the quantities of cover soil needed. Compaction also extends the life of the landfill, reduces unit costs, and leaves fewer voids to help reduce vector problems. Care will be taken that no holes are left in the compacted waste. All voids will be filled with additional waste as necessary.

Intermediate cover will be applied to all areas of the active cell that will not receive additional waste within 30 days. Intermediate cover will consist of an additional 12 inches of soil being placed over the 6 inches of daily cover soil.

3.2.4 Special Wastes

3.2.4.1 *Used Oil and Batteries*

No used oil or batteries will be accepted at the FHRL.

3.2.4.2 *Bulky Wastes*

Bulky waste will accepted at the FHRL as processed through transfer stations.

3.2.4.3 *Tires*

No tires will be accepted at the FHRL.

3.2.4.4 *Dead Animals*

No dead animals will be accepted at the FHRL.

3.2.4.5 *Grease Pit and Animal Waste By-Products*

No grease pit or animal waste by-products will be accepted at the FHRL.

3.2.4.6 *Other Excluded Wastes*

FHRL will not accept sludge, asbestos, ash, wastes containing PCB's or petroleum contaminated soils.

3.3 WASTE INSPECTION

3.3.1 Landfill Spotting

Learning to identify and exclude prohibited and hazardous waste is necessary for the safe operation of all landfills. The Operators (or Attendants) assigned to the FHRL will be required to receive initial and periodic hazardous waste inspection training. Certificates of initial and annual training will be kept in the personnel files of the FHRL staff.

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. Hazardous wastes will not be accepted at the FHRL.

Small quantity generators (<100 kg/month) and household quantities are exempt from hazardous waste regulations. However, hazardous wastes are most likely to enter the landfill mixed in with common household waste being processed through the transfer station. Public education and periodic waste screening are the tools to be utilized to minimize the amount of inadvertent hazardous waste entering the landfill.

3.3.2 Random Waste Screening

Although most of the waste to be disposed of at the FHRL will be processed through a transfer station (including initial waste screening), random inspections of incoming loads will be conducted according to the schedule established by the landfill management. More than one percent of the vehicles delivering waste to the landfill will be selected randomly for inspection

according to the schedule. If frequent violations are detected, additional random checks will be scheduled at the discretion of the landfill Manager with waste screening results shared with the transfer station management.

If a suspicious or unknown waste is encountered, the Operator will proceed with the waste screening as follows:

- The driver of the truck containing the suspect material will be directed to the waste screening area within the lined cell.
- The waste screening form will be completed by the Operator (or Attendant if utilized at the FHRL) and placed on file.
- Protective gear will be worn (leather gloves, steel-toed boots, goggles, coveralls, and hard hat) while waste is screened.
- The suspect material will be spread out with the compactor or hand tools and visually examined.
- Suspicious marking or materials, like the ones listed below, will be investigated further:
 - Containers labeled hazardous
 - Material with unusual amounts of moisture
 - Biomedical (red bag) waste
 - Unidentified powders, smoke, or vapors
 - Liquids, sludges, pastes, or slurries
 - Asbestos or asbestos contaminated materials
 - Batteries
 - Oils, fuel, or greases
 - Other wastes not accepted by the landfill

Waste screening will be the primary method to minimize liquid wastes by constant observation and aggressive enforcement of the no liquid waste policy. The landfill management will be called if unstable wastes that cannot be handled safely or radioactive wastes are discovered or suspected. The results of the waste screening will be shared with the transfer station where the

waste originated. The forms utilized by landfill personnel to record waste screening activities are included in Appendix E.

3.3.3 Removal of Hazardous or Prohibited Waste

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

The waste will be loaded back on the hauler's vehicle if possible. The landfill management will assist the truck driver in efforts to have the waste transported to the proper disposal site. Transfer station personnel where the waste originated will be notified of the waste and arrangements made for proper waste disposal.

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

3.3.4 Hazardous or Prohibited Waste Discovered After the Fact

If hazardous or prohibited wastes are discovered in the landfill and cannot be traced to a particular hauler (transfer station), the following procedure will be used to remove them:

- Access to the area will be restricted.
- The landfill management will be immediately notified.
- The Operator will remove the waste from the working face if it is safe to do so.
- The waste will be isolated in a secure area of the lined landfill and the area cordoned off.
- Box Elder County emergency personnel will be notified as appropriate.

The DSHW, the hauler or transfer station of origin (if known), and the generator (if known) will be notified within 24 hours of the discovery. The generator (if known) of the hazardous will be responsible for the proper cleanup, transportation, and disposal of the waste.

3.3.5 Notification Procedures

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

Landfill Manager.....TBD

Box Elder Communications Center(435) 734-3820

A record of conversation will be completed as each of the entities is contacted. The record of conversation will be kept in the site operational records. The form to document any conversations is included in Appendix E.

3.4 FACILITY MONITORING AND INSPECTION

3.4.1 Ground Water

The FHRL will comply with all aspects of the required ground water monitoring requirements as referenced in R315-308. Prior to the installation of any monitor wells at the FHRL site, a site specific ground water monitoring plan will be developed and submitted to the DSHW for review and approval. The ground water monitoring plan will include at a minimum details of the following items:

- Well construction and completion
- Decontamination of drilling and sampling equipment
- Sample collection
- Sample preservation
- Analytical procedures and quality assurance
- Chain of custody control
- Health and Safety procedures
- Sampling forms
- Statistical method for analysis

Prior to construction of the first lined Cell at the FHRL, a minimum of one upgradient and two downgradient monitor wells will be installed (near Cell 1) to monitor any changes to

ground water quality. Appendix F contains a typical ground water monitoring plan for use at solid waste facilities.

3.4.2 Surface Water

The FHRL is located in a broad basin that is the topographic low point and as such has only run-on water. The FHRL permit drawings (Appendix A) illustrate the locations and details of the surface water drainage control systems for both run-on and the limited of run-off associated with the final cover. With regards to this permit, run-on water is defined as the water that originates off site that will be diverted around the landfill area and stored proximate to the landfill. Run-off is the water that falls on the landfill footprint that does not contact waste. Run-off will be primarily associated with storm water associated with the final landfill cover. Run-off will be directed from the landfill cover to run-off ponds located proximate to the landfill. Storm water that falls within the footprint of the landfill, that comes in contact with waste is defined as leachate and will be directed to a lined leachate pond located in or just downhill from each operational cell.

In general, run-on is prevented from running into the active landfill area by ditches and berms associated with a perimeter access road. The permit drawings (Appendix A) indicate the location of the storm water basins. Since the landfill is located in a regional low point, storm water run-on and run-off ponds will contain both waters. Run-off from the final cover will be managed by a combination of berms and ditches. The berms will be placed to divert the water around the active landfill area through culverts to the run-off pond.

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

Prior to site development activities at the FHRL, site personnel will prepare and submit for approval a Utah Pollutant Discharge Elimination System (UPDES) Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (Group 5).

3.4.3 Leachate Collection

The FHRL will have a composite landfill liner system installed in all of the landfill cells which will serve as the primary element in a leachate collection system. The leachate collection and recovery system (LCRS), installed in each of the lined landfill cells, will be maintained so that it operates from initial construction throughout the post-closure maintenance period. The LCRS will consist of lined landfill cells, a drainage media to transport leachate along the cell bottoms, leachate collection sumps (as required), a leachate collection pipe, and a lined leachate pond. The locations of the LCRS components are as illustrated in the permit drawings (Appendix A).

The LCRS system will be inspected no less than quarterly by landfill staff for signs of deterioration. Landfill personnel or a licensed contractor will make required repairs to the system as required. Cleanouts will be located to aid in system operation and maintenance and will be detailed as part of individual cell designs.

3.4.4 Landfill Gas

An active landfill gas management system will be constructed at the FHRL associated with the construction of the final cover. Details of the landfill gas collection system will be developed and submitted to the DSHW for approval prior to the construction of the first final cover Stage.

This facility will be monitored for methane gas on a quarterly basis. Concentrations of methane gas will be measured with a hand-held gas monitor. Gas readings will be recorded at any site structures developed on landfill property, all ground water monitoring well locations, and at all property boundaries. Readings will be recorded on the "Gas Log" sheet and kept on file in the office.

If methane releases are detected in excess of 25 percent of the LEL, in any landfill structure or more than 100 percent of LEL at the property boundary, the procedure outlined in the "Explosive Gases" section will be followed. The forms utilized by landfill personnel to record gas monitoring activities are included in Appendix E.

Prior to the start of operations, the FHRL will develop a Title V Operating Permit application to be submitted for approval from the Division of Air Quality.

3.4.5 General Inspections and Quarterly Inspection

Routine inspections are necessary to prevent structure malfunctions and deterioration, operator errors, and discharges that may cause or lead to release of wastes to the environment or a threat to human health. Operators will be responsible for conducting and recording routine inspections of the landfill facilities according to the following schedule:

Operators will perform pre-operational inspections of all equipment daily. A post-operational inspection will be performed at the end of each shift while equipment is cooling down.

All equipment will be on a regular maintenance schedule. A logbook will be maintained on each piece of mobile equipment that will include a record of any repairs and operational related comments concerning the equipment. Oil samples will be pulled when each machine is serviced and results will be recorded in the machine log.

Periodic inspections will be completed at the facility as part of the general operation. Any needed corrective action items will be recorded and the Operators (Attendants) will complete needed repairs. If a problem is of an urgent nature, the problem will be corrected immediately.

Landfill personnel will also conduct scheduled quarterly inspections. Quarterly inspection will be performed by a team of qualified landfill employees and is intended to assess the condition of various areas of the landfill. Quarterly inspections will include dust control activities, cover conditions, waste control, perimeter fence, run-off / run-on system, roads, buildings (if any in the future), ground water monitoring wells, tipping face, disease vector control activities, and general facility appearance. The forms to be utilized by landfill personnel to record general and quarterly inspection activities are included in Appendix E.

3.5 CONTINGENCY AND CORRECTIVE ACTION PLANS

The following sections outline procedures that will be followed in case of fire, explosion, ground water contamination, release of explosive gases, or failure of the storm water management system.

County HazMat personnel will be contacted in all cases where hazardous materials or materials contaminated with PCB's are suspected to be involved.

3.5.1 Fire

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

The Box Elder Communications Center will be called if it appears that landfill personnel and equipment cannot contain any fire at the landfill. The Box Elder Communications Center will also be called if a fire is burning below the landfill surface or is difficult to reach or isolate.

In case of fire, the Manager 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.

3.5.2 Release of Explosive Gases

Methane gas generation and concentration is not anticipated to be a problem at the FHRL. However, due to the production of methane in all landfills, landfill gas levels will be monitored quarterly. If a concentration of methane is detected in excess of 25 percent of the lower explosive limit (LEL) in a landfill building, 100 percent LEL at the property boundary, or over 100 parts per million 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 Box Elder Communications Center will be called, the property evacuated, and the surrounding property owners notified.
- The Manager will be notified as soon as possible. The release will be monitored and a temporary corrective action implemented as soon as possible. A permanent corrective action will be completed as soon as practicable with details acceptable to the DSHW.

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.

3.5.3 Explosion

If an explosion occurs or seems eminent, all personnel and site visitors (if persons other than FHRL personnel are on site) will be accounted for and the landfill evacuated. A corrective action plan will be immediately formulated and implemented as soon as practicable.

The Manager will be notified immediately and the Box Elder Communication Center will be called. The Executive Secretary will be notified immediately.

If the explosion is the result of methane gas, 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.

3.5.4 Failure of Run-On/Run-Off Containment

The purpose of the run-on/run-off control systems is to manage the storm water falling in or near the landfill. Run-on water is water running toward the landfill that will be diverted away from landfill operations using a series of ditches, berms, a perimeter road and run-on detention ponds. These structures will be inspected on a regular basis and repaired as needed. All storm waters falling or flowing near the active landfill cell will be prevented from flowing into the active area by diversion berms and ditches.

If the run-on system fails, temporary measures such as temporary berms, ditches, sumps and pumps or other methods will be used to divert water from the active landfill cell.

Run-off waters are waters falling within the landfill footprint that has not fallen on waste. Run-off waters will be collected via diversion ditches and berms and directed to run-off ponds located near the landfill. If a run-off ditch or berm fails, temporary berms or ditches will be constructed until a permanent run-off structure can be constructed.

Any temporary berms or other structures will be checked twice a day until permanent repairs can be made. Permanent improvements or repairs will be made as soon as possible.

The Manager will be notified immediately if a failure of either of the run-on or run-off systems is discovered. The event will be fully documented in the operating record, including corrective action within 14 days.

3.5.5 Ground water Contamination

The FHRL will utilize a series of upgradient and downgradient monitor wells to establish and monitor background water quality for the site. If, during routine ground water sampling, any chemical constituent is detected above established background water quality levels FHRL personnel (or consultant) will utilize a statistical data analysis method to determine if the change in water quality is statistically significant.

If the change in ground water quality is statistically significant and the source of the contamination cannot be demonstrated to be something other than the waste in the landfill, the FHRL will initiate assessment monitoring. All ground water monitoring will be conducted in accordance with R315-308. The ground water monitoring program may be updated and corrective action taken as deemed necessary, with the approval of the Executive Secretary.

3.6 CONTINGENCY PLAN FOR ALTERNATIVE WASTE HANDLING

The most probable reason for a disruption in the waste handling procedures at the FHRL will be weather related. The landfill may close during periods of inclement weather such as high winds, heavy rain, snow, flooding, or any other weather-related condition that would make travel or operations dangerous. The FHRL may also close for other reasons like fire, natural disaster, etc. In general, the landfill staff will minimize the possibility of disruption of waste disposal services from an operational standpoint by minimizing the possibility of fire, maintaining run-off and run-on control structures and by conducting daily site inspections.

In case of equipment failure FHRL personnel will lease the necessary equipment to continue operations while repairs are being made to the FHRL equipment. If the landfill is not operational for any reasons, the Manager (and affected transfer stations) will be notified.

Since the initial waste stream for the FHRL facility will likely be from Wasatch Integrated Waste Management District, airspace in the existing Davis Landfill (Owned by Wasatch Integrated Waste Management District) would be utilized as an alternate waste handling facility. As additional waste is transferred to the FHRL site from other sources, additional alternative waste handling arrangements will be made.

3.7 MAINTENANCE PLAN

3.7.1 Groundwater Monitoring Wells and Leachate System

The FHRL personnel or qualified consultant will conduct quarterly inspection of all ground water monitoring wells and LCRS components.

3.7.2 Gas Monitoring System

The FHRL will be equipped with a landfill gas recovery and management system. This system will be installed in conjunction with the final cover construction. Quarterly gas monitoring will be conducted using a hand held meter.

3.8 DISEASE AND VECTOR CONTROL

The vectors anticipated to be encountered at the landfill are flies, birds, mosquitoes, rodents, skunks, and snakes. The program for controlling these vectors is as follows:

3.8.1 Insects

Eliminating breeding areas is essential in the control of insects. Landfill staff will minimize the breeding areas by covering the waste daily and maintaining landfill surfaces to reduce ponded water.

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

3.8.2 Rodents

Reducing potential food sources minimizes rodent populations at landfills. The landfill staff will reduce the potential food sources by properly applying daily cover over all waste.

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

3.8.3 Birds

Due to the presence of birds at many landfills, it is possible that the FHRL may have birds (seagulls) periodically at the landfill. Good landfiling practices of waste compaction, daily covering of active working face, and the minimization of ponded water will alleviate most of

the bird problems. In the event that daily covering of waste and minimizing ponded water is not sufficient, additional efforts will be utilized to minimize bird congestion. Methods will include using cracker and whistler shells, propane cannons, bird netting, or air treatment systems.

3.8.4 Fugitive Dust

The roads leading to the FHRL site are paved with site access being provided via a maintained gravel access road. Some construction activities and daily truck traffic will produce a certain amount of dust. Dust associated with landfill operations will be compounded by the occasional high wind to present a periodic fugitive dust problem. If the dust problem elevates above the “minimum avoidable dust level”, the landfill personnel will apply water to problem areas.

The landfill will have a water truck on site or have access to a water truck to be utilized in dust suppression efforts. Water will be applied to the gravel roads leading to all landfill facilities and to the tipping face. The water will be applied as often as needed to control the dust.

3.8.5 Litter Control

Due to the nature of landfiling operations, litter control will be an ongoing endeavor. Landfill personnel will perform routine litter cleanup to keep the landfill and surrounding properties clear of windblown debris.

Whenever possible, the working face will be placed downwind so that blowing litter is worked into the landfill face. The prevailing wind direction (based on conversations with local residents) at the FHRL site will be from the southwest. The landfill will use litter fencing to catch any litter blown during landfill operation. During windy conditions, landfill personnel will minimize the spreading of the waste to reduce the amount of windblown debris. Application of daily cover over the waste will also help to minimize windblown debris. The location and operation of the landfill working face will be modified to account for variations in the wind direction and velocity.

3.9 RECYCLING

No recycling programs are planned for the FHRL operations since most of the recycling opportunities will have been performed at the various transfer stations.

3.10 TRAINING PROGRAM

As part of the initial training of new employees, the FHRL employees will be required to read the DSHW permit. The Manager will conduct annual training with all landfill personnel that will include a review of the landfill permit, specifically the provisions of the Plan of Operation.

All personnel associated with the operation of the landfill will receive annual training in the operational aspects of landfills. The "Landfill Operations Basics Course" offered by the Solid Waste Association of North America (SWANA) will be required by all employees within 1 year of hire date. Certificates of Completion will be kept in personnel files. Regular safety and equipment maintenance training sessions will be held to ensure that employees are aware of the latest technologies and that good safety practices are used at all times.

The FHRL Manager will maintain a current SWANA "Manager of Landfill Operations" (MOLO) certification.

3.11 RECORDKEEPING

A daily operating record will be maintained as part of a permanent record on the following items:

- Number of loads entering the landfill and types of wastes received
- Deviations from the approved Plan of Operation
- Number of waste inspections conducted
- Percentage of loads inspected
- Amount and type of cover material used

3.12 SUBMITTAL OF ANNUAL REPORT

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

- Name and address of facility
- Calendar or fiscal year covered by the annual report
- Facility type and status
- Annual quantity, in tons or volume, in cubic yards of solid waste handled for each disposal facility
- Annual update of required financial assurances mechanism pursuant to Utah Administrative Code R315-309
- Ground water monitoring results
- Explosive gas monitoring results
- Annual training documentation

3.13 INSPECTIONS

The Manager, or his/her designee, will inspect the facility to minimize the likelihood of malfunctions, operator errors, and discharges that may cause or lead to the release of wastes to the environment or to a threat to human health. These inspections will be conducted on a quarterly basis, at a minimum. An inspection log will be kept as part of the operating record. This log will include at least the date and time of inspection, the printed name and handwritten signature of the inspector, a notation of observations made, and the date and nature of any repairs or corrective actions. Inspection records will be available to the Executive Secretary or an authorized representative upon request.

3.14 RECORDING WITH COUNTY RECORDER

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

3.15 STATE AND LOCAL REQUIREMENTS

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

3.16 SAFETY

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

The FHRL personnel may be trained in First Aid, CPR, blood born pathogen, hazard communication, spill prevention control, and hazardous waste detection as operational circumstances require. Some personnel may also be trained in storm water management, leachate monitoring, ground water sampling, and landfill gas monitoring.

3.17 EMERGENCY PROCEDURES

In the event of an accident or any other emergency situation, the Operator (Attendant) will notify the Manager and proceed as directed. If the Manager is not available, the Operator (Attendant) will call the appropriate emergency number posted by the telephone. The emergency telephone numbers are:

Box Elder Communications Center (Emergency Dispatch) 911
Landfill Manager.....TBD
Box Elder Communications Center (General).....(435) 734-3820

FHRL – Daily Operations Checklist

Date:

Inspector:

√ = Adequate

X = Action Necessary (detail action proposed and taken on weekly log)

Entrance

- ☐ Signs Posted?
- ☐ Acceptable Appearance/Cleanliness?
- ☐ Entrance Secured When Facility Closed?

Personnel

- ☐ Attendant Present When Facility Open?
- ☐ Safety Equipment Available and In Use?

Disposal Area

- ☐ Unloading Area Clearly Marked
- ☐ Public and Commercial Operation Separated (Phase I only)
- ☐ Working Face As Small As Possible
- ☐ Litter Fences in Use
- ☐ Odor Problems
- ☐ Dust or Litter Blowing
- ☐ Daily Cover Applied

Fire Protection / Site Safety

- ☐ No Smoking Rules in Force
- ☐ Water Available at Working Face
- ☐ Stockpile Soil Available
- ☐ Fire Extinguishers on All Equipment
- ☐ Radio or Telephone On-Site
- ☐ Are First Aid Kits Available?

Equipment

- ☐ Engine Oil Level OK?
- ☐ Transmission Oil Level OK?
- ☐ Hydraulic Oil Level OK?
- ☐ Are There Any Oil Leaks?
- ☐ Are There Any Fuel Leaks?
- ☐ Are There Any Air Leaks?
- ☐ Are Windows Clean?
- ☐ Is Backup Alarm Working?
- ☐ Are Brakes Operational?
- ☐ Are the Heater / Air Conditioner Operational?
- ☐ Are All Grease Fittings Lubricated?
- ☐ Are Cutting Edges / Teeth in Good Condition?
- ☐ Is Air Filter Clean?

Miscellaneous

- ☐ Any Site Visitors?
- ☐ Any Unusual Vehicle Traffic?
- ☐ Any Unusual Weather?
- ☐ Any Unusual Equipment Problems?
- ☐ Other (Describe):
- ☐ Other (Describe):
- ☐ Other (Describe):

(OVER)

Franklin Hill Regional Landfill

Daily Inspection Form

Performed By: _____ Date: _____

1. Staff / Visitors:

Manager: _____

Operators: _____

Attendants: _____

Visitors: _____

Comments:

2. Operations

Number of Loads: _____

Number of Inspections: _____

Amount of Cover Soil Used: _____

Dust Control Required: _____

Direct Haul Loads: _____

Comments:

Signature: _____

Franklin Hill Regional Landfill

Monthly / Quarterly Inspection Form

(Please Check the Appropriate Column and record the needed repairs below)

Performed By: _____

Date: _____

| 1. Structures and Roads | Condition | |
|--------------------------------|--------------|----------------|
| | Satisfactory | Unsatisfactory |
| <u>Buildings</u> | _____ | _____ |
| <u>Fences</u> | _____ | _____ |
| <u>Gates</u> | _____ | _____ |
| <u>Roads</u> | _____ | _____ |
| <u>Run-Off Control Systems</u> | _____ | _____ |

Recommended Repairs, Notes, and Comments:

2. Operations

| | | |
|-------------------------|-------|-------|
| <u>Litter and Weeds</u> | _____ | _____ |
| <u>Daily Cover</u> | _____ | _____ |
| <u>Final Cover</u> | _____ | _____ |
| <u>Mobile Equipment</u> | _____ | _____ |
| <u>Excavation</u> | _____ | _____ |

Recommended Repairs, Notes, and Comments:

Franklin Hill Regional Landfill

Waste Screening Form

Scheduled/Random

Performed By: _____ **Date:** _____

1. Load Information:

Truck Driver: _____

Truck I.D.: _____

Origin of Load: _____

Waste Observations:

Signature: _____

Explosive Gas Monitoring

Franklin Hill Regional Landfill
Quarterly / Periodic Sampling

Gas Sampling Procedure

Record the time and date of gas sampling, weather conditions, wind direction and equipment calibration data. Sample gas inside all facility structures and conduct sampling at the property boundary down wind from the landfill.

Gas Monitoring Event

Day/Month/Year :

Time : AM PM

Conducted by :

Weather Conditions

Wind Direction :

Soil Moisture Conditions :

Equipment Calibration

Day/Month/Year :

Time : AM PM

Conducted by :

| Sampling Location | Sample Result (% of LEL)* | Comments |
|-------------------|---------------------------|----------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

* Compliance Limits

25% of the lower explosive limit (gasses in facility structures)

100% of the lower explosive limit (at the property boundary)

Recorded By: _____ **Date:** _____ **Time:** _____

Incoming/Outgoing Call?

Who was on the Call?

Was anyone notified of the Call? _____

If so – Who was contacted? _____

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be a standard notebook page.

Signature: _____

Attachment 3

Closure and Post-Closure Plans

DRAFT

SECTION 4 – CLOSURE PLAN

4.1 GENERAL

Closure of the FHRL will occur in Stages that proceed from the north side of the landfill and progress to the south. Closure will occur in a similar manner as the landfill Cells. Drawing 10 (Appendix A) show the closure Stages for the landfill.

The landfill is intended to be closed sequentially beginning with Stage A and proceeding in alphabetical order to Stage W. Each closure Stage is planned to be approximately 10 acres. The following Sections discuss the closure of the landfill under intermediate conditions (any point in time before total design capacity) and for the designed closure at full capacity.

4.2 IMMEDIATE CLOSURE

Although unlikely, it may become necessary or advantageous to close the FHRL short of the final design capacity. Reasons for premature closure range from residential pressures, political pressures, alternate waste disposal options, to regulatory pressures.

Immediate closure would be closure of the landfill at any point short of ultimate design capacity. During that period of time, waste would need to be deposited and sloped in a manner to create a positively sloped final cover. Design, regulatory approval, and construction of a final cover system would need to be completed over the entire MSW landfill footprint.

4.3 STAGED CLOSURE

The most probable scenario for the FHRL is one of Staged Closure. Staged Closure would consist of closing the landfill under the following plan, in accordance with Rules R315-302-2 and 3. Drawing 4 (Appendix A) shows the planned contours of the final cover.

4.3.1 Closure Sequencing

The closure of the FHRL will be completed in at approximately 23 Stages. The life of each Stage will vary, and closures may be performed as individual cells (or combined portions of cells) reach final grade in order to manage the associated costs. Each of the closure Stages is anticipated to be approximately 10 acres in size.

4.3.1.1 Total Capacity of the Site.

The approximate quantity of airspace available at the FHRL is approximately 38,000,000 cubic yards (CY) including daily and intermediate cover. Removing daily, intermediate and final cover soils volume leaves approximately 31,400,000 cubic yards for waste. A projection of landfill life is provided in Appendix D. This analysis assumes a steady 1% population growth and indicates that the landfill will reach its design capacity in over 65 years from the time waste is first accepted if the initial tonnage of waste were approximately 900 tons per day.

4.3.2 Closure Procedures

Closure activities for each closure Stage of the landfill will take place in accordance with the following procedures:

4.3.2.1 Submittal of Plans, Specifications, and QA/QC Plan

Four months before the intended closure of each of the aforementioned Stages, a design package consisting of drawings, construction specifications, and a QA/QC plan will be submitted to the DSHW. The DSHW will have approximately 60 days to review and comment on the adequacy of the drawings, specifications and quality assurance/quality control measure envisioned for the construction. Comments from DSHW will be incorporated into a final “bid” package for the cover installation.

4.3.2.2 Formal Notification

The Executive Secretary of the DSHW will be notified of the intent to implement the closure plan in whole or part, 60 days prior to the date projected for final receipt of waste.

4.3.2.3 Additional Closure Activities

Additional closure activities that may be required to close either the entire landfill or only one stage are as follows:

- Regrading of all side slopes where slopes are steeper than 4 horizontal to 1 vertical.
- Regrading of all the top of the landfill to slopes between 4 horizontal to 1 vertical, but not flatter than 5 percent.
- Finalization (including DSHW comments) of the final cover design package. Final cover design package will include, at a minimum, plans, construction specifications, and QA/QC protocols to guide the construction of the final cover.
- Bidding and construction of final cover.
- Construction of a maintenance road over the cover.
- Construction of run-off control structures.
- Vegetation of the final cover soils.
- Preparation of As-Built drawings.
- Inspection of final cover construction by Owner and Engineer (engineer of record) and DSHW personnel.
- Preparation of Certificate of Closure by a Utah registered Professional Engineer.
- Submittal of required documents to the State DSHW and to the Box Elder County Recorder's office.

4.4 CLOSURE COSTS

4.4.1 Planned Closure Stages

The closure of the landfill may occur before the final design capacity is reached. If this plan is followed the largest area that is planned for final closure at one time will be approximately 10 acres. The costs associated with the closure of any of the Stages will entail the final grading of that area, engineering of final cover, and preparation of plans, specifications, and QA/QC plan as well as the final cover installation. Based on the final cover design and current cover component costs, the estimated cost of closure for 10 acres of landfill is approximately \$926,000.

4.4.2 Immediate Closure

If the landfiling operations continue as proposed by this permit application, the landfill will be closed in 23 Stages described in Section 4.3.1, following this plan will spread out the total costs

of closure over the life of the landfill and reduce the amount of landfill requiring final closure at any one time. It is possible that unforeseen circumstances dictate closure of larger areas. In an attempt to prepare for the costs associated with immediate closure of a partially completed Phase we have attempted to identify a "worst-case" scenario for the life of the landfill. The largest area that would need to be covered would be associated with waste being ready to be covered in one Stage and the area associated with one operational Cell. In addition to the activities and costs associated with the planned cover stages, immediate closure activities will involve additional flattening of 3:1 intermediate slopes to 4:1 (or flatter) as required for perimeter slopes and placement of final cover over all areas that have only been treated with daily or intermediate cover. The approximate size and cost (present value) for the largest area that could need to be covered would be approximately 20-acres at a projected cost of \$ 1,800,000.

As described previously the closure areas will be divided up into Stages of approximately the same size in order to quickly cover areas that have reached final grade and spread out the closure costs over a period of time. Details of the closure cost estimates are provided in Appendix M.

4.4.3 Final Inspection

The DSHW will be invited to inspect the final grading of the landfill. After approval of the final grading, a schedule will be established for vegetation. Agency personnel will then be invited to return to inspect the success of the erosion control system after one year.

SECTION 5 – POST-CLOSURE PLAN

5.1 GENERAL

Post-closure financial assurance will provide for continued monitoring of ground water, surface water, leachate, gas, and maintenance of the cover as described in the post-closure plan below. The total cost of post-closure care is estimated at \$1.15M. A detailed analysis of post-closure costs is provided in Appendix M.

5.2 POST-CLOSURE PLAN

In accordance with rules R315-302-2 and R315-303 post-closure activities at the landfill will continue for 30 years, or as long as the Executive Secretary of the Utah Solid and Hazardous Waste Control Board deems necessary for the FHRL to be stabilized and to protect human health and the environment. The post-closure activities will include the following work:

5.2.1 Changes to Record of Title

A Plat Map and Statement of Fact concerning the location of the landfill shall be recorded with the Box Elder County Recorder not later than 60 days after certification of closure. The recorded document will restrict future land use. Compatible land uses will be identified in the Box Elder County planning documents.

5.2.2 Monitoring Plan

Post-closure activities will commence immediately upon closure of the total facility.

The monitoring frequencies for the different media are shown in the following table. Post-closure monitoring will be conducted as follows:

Post-Closure Monitoring Schedule

| Type | Frequency | Apparatus |
|---------------------|------------------|---------------------------------------|
| Ground Water | Semi-Annual | Refer to Ground Water Monitoring Plan |
| Surface Water | Semi-Annual | Refer to Operations Plan |
| Leachate | Quarterly | Sump at southwest corner of Landfill |
| Gas and Ambient Air | Quarterly | Refer to Operations Plan |
| Settlement | Annual | Bench mark survey |

5.2.2.1 Ground Water

Wells will have been installed at the site in order to collect samples and background water quality information from locations up and down-gradient of the landfill. Additional wells may be installed in the future adequate to provide necessary ground water information.

5.2.2.2 Surface Water

Surface water will be monitored in accordance with procedures provided in the UPDES Permit. This permit has not yet been applied for, but will be obtained prior to the initiation of any work at the FHRL.

5.2.2.3 Leachate

The presence of leachate will be monitored in the leachate collection pond located east of the proposed landfill (Appendix A, Drawing 9). Accumulations of leachate in excess of 3 feet will be removed and transported to a publicly owned treatment facility.

5.2.2.4 Gas Monitoring

All structures (if any) associated with periodic site monitoring or landfill gas collection system will be monitored quarterly.

5.2.2.5 Settlement

At final closure, the boundary markers used to designate closed areas of the landfill will be used to measure settlement of refuse materials. Additional survey markers will be placed as

necessary to monitor areas of suspected movement. Ground elevation will be measured at the base of each boundary marker.

5.2.3 Inspection and Maintenance

Monitoring facilities, fences, roads, buildings, cover, and run-on and run-off systems will be inspected in accordance with the schedule presented in the post-closure cost estimate (Appendix M).

Facilities will be inspected for damage, deterioration, and impaired function with regard to the listed standards and original design. Deficiencies will be corrected promptly. Deficiencies, repairs, and restoration of function will be documented in the landfill record.

SECTION 6 – POST-CLOSURE LAND USE

FHRL personnel will design a post-closure land use plan to be implemented at the landfill within 5 years prior to the end of the landfill's life. Landfill personnel will select an end use for the landfill consistent with good landfilling practices. The final land use selected for the landfill will be based upon maintaining a functional landfill cover. Land use activities will be approved by the DSHW prior to implementation.