



State of Utah

GARY R. HERBERT
Governor

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Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF WASTE MANAGEMENT
AND RADIATION CONTROL
Scott T. Anderson
Director

August 18, 2016

Darin Olson
Republic Services
P.O. Box 69
East Carbon, UT 84520

Kevin Carter
State of Utah School and Institutional Trust Lands Administration
675 East 500 South, Suite 500
Salt Lake City, Utah 84102-2818

RE: Approval of Permit Modification

Dear Mr. Olson and Mr. Carter:

The 30-day public comment period for the Wasatch Regional Class V landfill draft permit modification began on June 30, 2016 and ended on July 30, 2016 with no comments. The announcement of the public comment period appeared in *The Salt Lake Tribune*, *Deseret News* and the *Tooele Transcript-Bulletin*.

Enclosed is Permit #0501R2 which reflects the approved modification. Representatives of the Division of Waste Management and Radiation Control and representatives of the Tooele County Health Department will conduct periodic inspections to assess compliance with the conditions of the Permit and the Solid Waste Permitting and Management Rules.

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

Sincerely,

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

STA/RDP/kl

DSHW-2016-011907

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(Over)

Enclosure: Class V Modified Permit (DSHW-2016-011906), Attachment 1 (DSHW-2016-010832)

c: Jeff Coombs, EHS, Health Officer, Tooele County Health Department
Bryan Slade, Environmental Health Director, Tooele County Health Department
Lester Lemmon, Landfill Manager

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

Pursuant to the provisions of the *Utah Solid and Hazardous Waste Act*, Title 19, Chapter 6, Part 1, Utah Code Annotated (UCA) 1953, as amended (the Act) and the *Utah Solid Waste Permitting and Management Rules*, Utah Administrative Code (UAC) R315-301 through 320 adopted there under, a Permit is issued to

Wasatch Regional Landfill Inc. as Owner/Operator
and
State of Utah School and Institutional Trust Lands Administration as Property Owner
(Permittees)

to own, construct, and operate the Wasatch Regional Class V Landfill located in Tooele County, Utah on the acreage as shown in the Permit Application - Permit renewal for Wasatch Regional Landfill, Prepared by Vector Engineering, Inc., October 20, 2009, (tracking # 09.03277) and Wasatch Regional Landfill Liquid Waste Pond Design Report, Prepared by Vector Engineering, Inc, June 15, 2010, (tracking # 10.02029) as deemed complete on July 28, 2010.

The Permittees are subject to the requirements of UAC R315-301 through 320 and the requirements set forth herein.

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

This Permit shall become effective November 1, 2010.

This Permit shall expire at midnight October 31, 2020.

Closure Cost Revision Date: November 1, 2015.

Signed this 20th day of October, 2010.



Scott T. Anderson, Director

Division of Waste Management and Radiation Control

Modification signed this 18th day of August 2016

FACILITY OWNER/OPERATOR INFORMATION

LANDFILL NAME: Wasatch Regional Class V

LANDFILL OWNER/
OPERATOR: Wasatch Regional Landfill Inc.
675 South Gladiola
Salt Lake City, Utah 84104
(801) 972-4234

PROPERTY OWNER: State of Utah School and Institutional Trust Lands Administration
675 East 500 South Suite 500
Salt Lake City, Utah 84102-2818
(801) 538-5100

TYPE OF PERMIT: Class V

PERMIT NUMBER: 0501R2

LOCATION: Landfill site is located in all or part of Township 1 north, Range 8 west, Sections 3 and 4 and all or part of Township 2 North Range 8 west, Sections 32, 33, and 34 SLMB; Tooele County, the southeastern corner of the site located at North Lat. 40 deg° 50 min' 28 sec", West Long. 112 deg° 44 min' 0 sec"

PERMIT HISTORY: Permit renewal signed October 20, 2010
Permit Modification signed on January 25, 2013, construction of a 12 acre 1D/2D waste cell.
Permit Modification signed on July 15, 2013, construction of a double lined pond for the storage and evaporation of liquid waste.
Permit Modification signed on August 4, 2016, construction of a double lined liquid waste pond #3 for the storage and evaporation of liquid waste contained in Attachment #1.

PERMIT REQUIREMENTS

Permit as used in this document is defined in UAC R315-301-2(55).

The application, consisting of the Permit Application - Permit renewal for Wasatch Regional Landfill, Prepared by Vector Engineering, Inc., October 20, 2009, (tracking # 09.03277) and Wasatch Regional Landfill Liquid Waste Pond Design Report, Prepared by Vector Engineering, Inc., June 15, 2010, (tracking # 10.02029) Project manual for the construction of the 12 acre 1D/2D waste cell Prepared by Geo-Logic Associates October 31, 2012 (tracking # 12-010796) as deemed complete on the date shown on the signature page of this Permit, are hereby incorporated by reference into this Solid Waste Permit and will be referred to as the Permit

TN201000943

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Application throughout this Permit. All representations made in the Permit Application are part of this Permit and are enforceable under UAC 315-301-5(2). The Permit Application will become part of the operating record of the Landfill. Where differences in wording exist between this Permit and the Permit Application, the wording of this Permit supersedes that of the Permit Application.

The facility shall consist of cells for the disposal of waste as described in Section IB1 of this Permit, hereafter referred to as the Class V cell or cells, and for the disposal of waste as described in section IB2 of this Permit, hereafter referred to as the Construction Waste cell or cells.

By this Permit to own and operate, the Permittees are subject to the following conditions.

I. GENERAL COMPLIANCE RESPONSIBILITIES

A. General Operation

The Permittees shall operate the landfill in accordance with all applicable requirements of UAC R315-302 and 303, for a Class V landfill that are in effect as of the date of this Permit unless otherwise noted in this Permit. Any noncompliance with this Permit or noncompliance with any applicable portions of UCA 19-6-101 through 123 and applicable portions of UAC R315-301 through 320 constitutes a violation of the Permit or applicable statute or rule and is grounds for appropriate enforcement action including permit revocation, modification or denial of a permit renewal application.

B. Acceptable Waste

The following wastes are acceptable for disposal in the Class V cells:

1. Municipal solid waste;
2. Commercial waste;
3. Industrial waste;
4. Construction/demolition waste;
5. Special waste as allowed by UAC R315-315 and authorized in Section III-I of this Permit and limited by this section; and
6. Conditionally exempt small quantity generator hazardous waste as specified in UAC R315-303-4(7)(a)(i)(B) and PCBs as specified by UAC R315-315-7(2).

The following wastes are acceptable for disposal in the Construction Waste cells:

1. Construction/demolition waste, as defined in UAC R315-301-2(17);
2. Yard waste, as defined in UAC R315-301-2(87);
3. Inert waste, as defined in UAC R315-301-2(37);
4. Waste tires, when the requirements of UAC R315-320 are met; and
5. Petroleum contaminated soils as allowed in UAC R315-315-8(3)

C. Prohibited Waste

The following wastes are prohibited for disposal in the Class V cell:

1. Hazardous waste as defined by UAC R315-1 and R315-2;
2. Containers larger than household size (five gallons) holding any liquid, non-containerized material containing free liquids or any waste containing free liquids in containers larger than five gallons; or
3. PCBs as defined by UAC R315-301-2, except as allowed in Section IB (Acceptable Waste) of this Permit.

The following wastes are prohibited for disposal in the Construction Waste cell:

1. Hazardous waste as defined by UAC R315-1 and R315-2;
2. PCBs as defined by UAC R315-301-2(53), except construction/demolition waste containing PCBs as specified by UAC R315-315-7(2)(a) and (c);
3. Household waste, except waste resulting from the abatement, rehabilitation, renovation and remodeling of homes and other residences;
4. Municipal waste;
5. Special waste, except as specified in this Permit;
6. Commercial waste;
7. Regulated asbestos-containing material;
8. Industrial waste;
9. Containers larger than household size (five gallons) holding any liquid, non-containerized material containing free liquids or any waste containing free liquids in containers larger than five gallons.

Any prohibited waste received and accepted for treatment, storage, or disposal at the facility will constitute a violation of this permit, of UCA 19-6-101 through 123 and of UAC R315-301 through 320.

D. Inspections and Inspection Access

The Permittees shall allow representatives of the Director of the Division of Waste Management and Radiation Control or representatives of the Tooele County Health Department, to enter at reasonable times and:

1. Inspect the landfill or other premises, practices or operations regulated or required under the terms and conditions of this Permit or UAC R315-301 through 320;
2. Have access to and copy any records required to be kept under the terms and conditions of this Permit or UAC R315-301 through 320;
3. 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 UAC R315-301 through 320; and
4. Create a record of any inspection by photographic, videotape, electronic, or any other reasonable means.

E. Noncompliance

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

In the event of any noncompliance with any permit condition or violation of an applicable rule, the Permittees shall promptly take any feasible 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.

The Permittees shall document the noncompliance or violation in the operating record on the day the event occurred or the day it was discovered, notify the Director by telephone within 24 hours or the next business day following documentation of the event and give written notice of the noncompliance or violation and measures taken to protect human health and the environment within seven days of Director notification.

Within thirty days of the documentation of the event, the Permittees shall submit to the Director a written report describing the nature and extent of the noncompliance or violation and the remedial measures taken or to be taken to protect human health and the environment and to eliminate the noncompliance or violation. Upon receipt and review of the assessment report, the Director may order the Permittees to perform appropriate remedial measures including development of a site remediation plan for approval by the Director.

In an enforcement action, the Permittees 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 UAC R315-301 through 320 and this Permit.

Compliance with the terms of this Permit does not constitute a defense to actions brought under any other local, State, or Federal laws. This Permit does not exempt the Permittees from obtaining any other local, State or Federal permits or approvals required for the facility operation.

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

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

F. Revocation

This Permit is subject to revocation if any condition of this Permit is not being met. The Permittees shall be notified in writing prior to any proposed revocation action and such action shall be subject to all applicable hearing procedures established under UAC R315-12 and the *Utah Administrative Procedures Act*.

As part of the revocation the Director shall exercise the option to require payment of funds under the financial assurance mechanism held by the Director.

G. Attachment Incorporation

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

II. DESIGN AND CONSTRUCTION

A. Design and Construction

Prior to Construction. The Permittees shall submit construction design drawings and a Construction Quality Control and Construction Quality Assurance (CQC/CQA) Plans for the construction of Class V or Construction Waste cells to the Director for approval prior to each landfill cell, cell liner, run-on and runoff diversion system, waste treatment facility, or final cover construction event. Buildings do not require approval. The Permittees shall construct the Class V cells according to the equivalent design contained in the Permit Application including cells, cell liners, run-on and run-off diversion systems, waste treatment facilities, and the final cover in accordance with the design drawings and CQC/CQA Plans submitted and approved by the Director. The permittees shall construct Construction Waste cells in accordance with the design approved in Permit renewal for Wasatch Regional Landfill, Prepared by Vector Engineering, Inc., October 20, 2009 (tracking # 09.03277) and Wasatch Regional Landfill Liquid Waste Pond Design Report, Prepared by Vector Engineering, Inc, June 15, 2010, (tracking # 10.02029). Project manual for the construction of the 12 acre 1D/2D waste cell Prepared by Geo-Logic Associates October 31, 2012 (tracking # 12-010796)

Subsequent to Construction. The Permittees shall notify the Director upon completion of construction of any landfill cell, cell liner, run-on or run-off diversion system, waste treatment facility, or final cover. Landfill cells may not be used for treatment or disposal of waste until all CQC/CQA documents and construction related documents including as-builts, for all Class V cells, are approved by the Director. The Permittees shall submit as-built drawings for each construction event that are signed and sealed by an engineer registered in the State of Utah.

Partial Final Cover. The Permittees shall notify the Director of any proposed incremental closure or placement of any part of the final cover. Construction of any portion of the final cover shall be considered as a separate construction event and shall be approved separately from any other construction or expansion of the landfill. Design approval must be received from the Director prior to construction and must be accompanied by a CQC/CQA Plan, for each construction season where incremental closure is performed.

All engineering drawings submitted to the Director must be stamped, signed, and approved by a professional engineer with a current registration in Utah.

B. Run-On Control

Drainage channels and diversions shall be constructed as specified in the Permit Application and maintained at all times to effectively prevent runoff from the surrounding area from entering the landfill.

C. Quality Assurance Construction Plan

A quality assurance plan for construction of the liner system, leachate collection system, and final landfill cover shall be submitted by the Permittees along with all necessary documentation to the Director. Director approval must be received prior to construction of any part of the liner system or final cover at the landfill.

A qualified independent third party shall perform the quality assurance function of the approved construction quality control/quality assurance (QC/QA) plan. The results must be submitted as part of the as-built drawings to the Director.

III. LANDFILL OPERATION

A. Operations Plan

The Operations Plan included in the Permit Application shall be kept onsite at the landfill or at the location designated in section III-K of this Permit. The landfill shall be operated in accordance with the operations plan. If necessary, the facility owner may modify the Operations Plan, provided that the modification meets all of the requirements of UAC R315-301 through 320, is as protective of human health and the environment as that approved in the Permit Application, and is approved by the Director Secretary as a minor modification under UAC R315-311-2(1)(a)(xiii). Any modification to the Operations Plan shall be noted in the operating record.

Any modification to the Operations Plan shall be submitted to the Director for approval and is considered a minor permit modification in compliance with UAC R315-311-2(1)(a)(xiii) unless the Director determines the change should be subject to public comment under UAC R315-311-2(1)(b).

B. Security

The Permittees shall operate the Landfill so that unauthorized entry to the facility is prevented. All facility gates and other access routes shall be locked during the time the landfill is not open. At least two persons, employed by the Wasatch Regional Landfill Inc., shall be at the landfill during all hours that the landfill is open. Fencing and any other access controls as shown in the Permit Application shall be constructed to prevent access of persons or livestock by other routes.

C. Training

Permittees shall provide training for on-site personnel in landfill operation, including waste load inspection, hazardous waste identification, and personal safety and protection.

D. Burning of Waste

Intentional burning of solid waste is prohibited and is a violation of UAC R315-303-4(2)(b).

E. Daily Cover

The solid waste received at Class V cells shall be completely covered at the end of each working day with a minimum of six inches of earthen material.

Use of any alternative daily cover must be approved by the Director. If an alternative cover is approved at any time during the life of this permit the following conditions will apply:

1. Apply standard daily cover (minimum six inches of soil) at least once per week, primarily to serve as a firebreak.
2. Apply standard daily cover any time the daily cover will be exposed for greater than 24 hours (normally this occurs once per week and also satisfies Condition E.1 above).
3. Apply standard daily cover when weather conditions (e.g., wind, rain, etc.) prevent proper use of alternate daily cover. Conditions E.1, E. 2 and E.3 do not normally apply if the alternative daily cover is contaminated soil or tire/wood chips.
4. Record alternative daily cover use dates in the facility daily operating log.
5. Permission to use alternative daily cover may be rescinded or amended if the requirements to prevent blowing debris, minimize access to the waste by vectors, minimize the threat of fires at the open face, minimize odors, or shed precipitation are not met, or if necessary to prevent nuisance conditions or adverse impacts to human health and or the environment.

The Permittees shall cover the waste disposed in Construction Waste cells as necessary to prevent fires and to control vectors, blowing litter, odor, scavenging, and fugitive dust. Wastes that are capable of attracting or providing food for vectors, materials that may become windblown litter, or fine materials that may become fugitive dust shall be covered with a minimum of six inches of earth at the end of the working day in which they are received. An alternative cover material may be used when the material meets the requirements of UAC R315-303-4(4)(b) through (d) or when the alternative daily cover meets the requirement of UAC R315-303-4(4)(e).

A minimum of six inches of earthen cover shall be provided no less than once each month for all other wastes received at Construction Waste cells. This cover must consist of soil, no alternative may be used.

At the end of any day of operation, when soil or an alternative cover is placed on Construction Waste cells, the amount and type of cover placed and the area receiving cover shall be recorded in the operating record and certified by the operator.

F. Ground Water Monitoring

The Permittees shall monitor the ground water underlying the landfill in accordance with the Ground Water Monitoring Plan and the Ground Water Monitoring Quality Assurance/Quality Control Plan contained in the Permit Application. If necessary, the facility owner may modify the Ground Water Monitoring Plan and the Ground Water Monitoring Quality Assurance/Quality Control Plan, provided that the modification meets all of the requirements of UAC R315-301 through 320 and is as protective of human health and the environment as that approved in the Permit Application, and is approved by the Director as a minor modification under UAC R315-311-2(1)(a). Any modification to the Ground Water Monitoring Plan and the Ground Water Monitoring Quality Assurance/Quality Control Plan shall be noted in the operating record. Plan changes that are found by the Director to be less protective of human health or the environment than the approved plan are a major modification and are subject to the requirements of UAC R315-311.

Ground water monitoring of Construction Waste cells is not required.

G. Gas Monitoring

The Permittees shall monitor explosive gases at the landfill in accordance with the Gas Monitoring Plan contained in the Permit Application and shall otherwise meet the requirements of UAC R315-303-3(5). If necessary, the Permittees may modify the Gas Monitoring Plan, provided that the modification meets all of the requirements of UAC R315-301 through 320 and is as protective of human health and the environment as that approved in the Permit Application, and is approved by the Director as a minor modification under UAC R315-311-2(1). Any modification to the Gas Monitoring Plan shall be noted in the operating record.

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 UAC R315-303-2(2)(a), the Permittees shall immediately take all necessary steps to ensure protection of human health and notify the Director. Within seven days of detection, place in the operating record the explosive gas levels detected and a description of the immediate steps taken to protect human health. Implement a remediation plan that meets the requirements of UAC R315-303-3(5)(b) and shall submit the plan to, and receive approval from, the Director prior to implementation.

Gas monitoring for the Construction Waste cell is not required.

H. Waste Inspections

The Permittees shall visually inspect incoming waste loads to verify that no wastes other than those allowed by this permit are disposed in the landfill. A complete waste inspection shall be conducted at a minimum frequency of 1 % of incoming loads. Loads to be inspected are to be chosen on a random basis.

All containers capable of holding more than five gallons of liquid will be inspected to assure that the container is empty.

All loads that the operator suspects may contain a waste not allowed for disposal at the landfill will be inspected.

Complete random inspections shall be conducted as follows:

1. The operator shall conduct the random waste inspection at the working face or an area designated by the operator;
2. The load to be inspected will be chosen on a random basis;
3. Loads subjected to complete inspection shall be unloaded at the designated area;
4. Loads shall be spread by equipment or by hand tools;
5. A visual inspection of the waste shall be conducted by personnel trained in hazardous waste recognition and recognition of other unacceptable waste; and
6. The inspection shall be recorded on the waste inspection form found in permit application. The form shall be placed in the operating record at the end of the operating day.
7. Disposal of containers larger than household size (five gallons) holding any liquid, non-containerized material containing free liquids, sludge containing free liquids, or any waste containing free liquids in containers larger than five gallons is prohibited.

I. Disposal of Special Wastes

Animal carcasses may be disposed in the landfill working face and must be covered with other solid waste or earth by the end of the operating day in which they are received.

Asbestos waste shall be handled and disposed in accordance with UAC-315-315-2 in Class V cells only.

If loads of incinerator ash is accepted for disposal it shall be transported in such a manner to prevent leakage or the release of fugitive dust. The ash shall be completely covered with a minimum of six inches of material, or use other methods or material, if necessary, to control fugitive dust. Ash may be used for daily cover when its use does not create a human health or environmental hazard in the Class V cells only.

J. Self Inspections

The Permittees 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. These general inspections shall be completed no less than quarterly and shall cover the following areas: Waste placement, compaction, and cover; cell liner; leachate collection system; fences and access controls; roads; run-on/run-off controls; ground water monitoring wells; final and intermediate cover; litter controls and records. A record of the inspections shall be placed in the daily operating record on the day of the inspection. Areas needing correction, as noted on the inspection report, shall be corrected. The corrective actions shall be documented in the daily operating record.

K. Recordkeeping

The Permittees shall maintain and keep on file at Wasatch Regional Class V Landfill office, a daily operating record and other general records of landfill operation as required by UAC R315-302-2(3).

The daily operating record shall include the following items:

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;
2. Major deviations from the approved plan of operation recorded at the end of the operating day the deviation occurred;
3. Results of other monitoring required by this permit recorded in the operating record on the day of the event or the day the information is received;
4. Records of all inspections conducted by the Permittees, results of the inspections, and corrective actions taken shall be recorded in the record on the day of the event.

The general record of landfill operations shall include the following items:

1. A copy of the Permit including the Permit Application;

2. Results of inspections conducted by representatives of the Director or representatives of the Tooele County Health Department, when forwarded to the Permittees;
3. Closure and Post-closure care plans;
4. Records of employee training;
5. Results of groundwater monitoring; and
6. Results of landfill gas monitoring.

L. Reporting

The Permittees shall prepare and submit to the Director an Annual Report as required in UAC R315-302-2(4). The Annual Report shall include the period covered by the report, the annual quantity of waste received, an annual update of the financial assurance mechanism, a re-application for approval of the financial assurance mechanism, any leachate analysis results, all ground water monitoring results, the statistical analysis of ground water monitoring results, the results of gas monitoring, and all training programs completed.

M. Roads

All access roads, within the landfill boundary, 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.

N. Leachate Evaporation Pond

The leachate evaporation pond shall be operated as a no discharge facility. Compliance with the no discharge condition will be demonstrated by having no leachate in the detection sump. The maximum allowable leakage rate is 200 gallons per acre per day. Any fluid collected in the detection sump shall be contained and pumped back to the leachate evaporation pond.

The Permittees shall report to the Director if fluids are detected in the leachate detection sump or if the leakage rate exceeds 200 gallons per acre per day. Such an event shall be reported verbally within 24 hours and in writing within five working days.

IV. CLOSURE REQUIREMENTS

A. Closure

Final cover of the landfill shall be as shown in the Permit Application. Cover of Class V cells shall meet at a minimum the standard design for closure as specified in the UAC (R315-303-3(4)) plus sufficient cover soil or equivalent material to protect the low permeability layer from the effects of frost, desiccation, and root penetration. A quality assurance plan for construction of the final landfill cover shall be submitted to, and approval of the plan must be received from the Director prior to construction of any part of the final cover at the landfill.

The final cover for Construction Waste cells shall meet the requirements of UAC R315-303-5(5).

B. Title Recording

The Permittees shall meet the requirements of UAC R315-302-2(6) by recording a notice with the Tooele County Recorder as part of the record of title that the property has been used as a landfill. The notice shall include waste locations and waste types disposed.

C. Post-Closure Care

Post-closure care at the closed landfill shall be done in accordance with the Post-Closure Care Plan contained in the Permit Application. Post-closure care shall continue until all waste disposal sites at the landfill have stabilized and the finding of UAC R315-302-3(7)(c) is made.

D. Financial Assurance

The Permittees shall keep in effect and active the currently approved financial assurance mechanism or another approved mechanism that meets the requirements of UAC R315-309 to cover the costs of closure and post-closure care at the landfill. The financial assurance mechanism(s) shall be adequately maintained to provide for the cost of closure and post-closure care at any stage or phase or anytime during the life of the landfill.

E. Financial Assurance Annual Update

An annual revision of closure and post-closure costs for inflation and financial assurance funding as, required by R315-309-2(2), shall be submitted to the Director as part of the annual report.

F. Closure Cost and Post-Closure Cost Revision

The Permittee shall submit a complete revision of the closure and post-closure cost estimates by the date listed on the signature page of this Permit, any time the

facility is expanded, any time a new cell is constructed, or any time a cell is expanded.

V. ADMINISTRATIVE REQUIREMENTS

A. Permit Modification

Modifications to this Permit may be made upon application by the Permittees or by the Director. The Permittees will be given written notice of any permit modification initiated by the Director.

B. Permit Transfer

This Permit may be transferred to a new permittee or new permittees by meeting the requirements of the permit transfer provisions of UAC R315-310-11.

C. Expansion

This permit is for the operation of a Class V Landfill according to the design and Operation Plan described and explained in the permit modification application. Any expansion of the current footprint designated in the description contained in the Permit Application, but within the property boundaries designated in the Permit Application, will require submittal of plans and specifications to the Director. The plans and specifications must be approved by the Director prior to construction.

Any expansion of the landfill facility beyond the property boundaries designated in the description contained in the Permit Application will require submittal of a new permit application in accordance with the requirements of UAC R315-310 and UCA 19-6-108(1)(d) including all approvals required in UCA 19-6-108.

Any addition to the acceptable wastes described in Section 1B will require submittal of all necessary information to the Director and the approval of the Director. Acceptance for PCB bulk product waste under UAC R315-315-7(3)(b) can only be done after submittal of the required information to the Director and modification of Section IC of this Permit.

D. Expiration

Application for permit renewal shall be made at least six months prior to the expiration date, as shown on the signature (cover) page of this Permit. If a timely renewal application is made and the permit renewal is not complete by the expiration date, this Permit shall continue in force until renewal is completed or denied.

F. Construction Approval and Request to Operate

The Permittees shall meet each of the following conditions prior to receipt of waste

in any newly constructed cell:

1. The Permittees shall notify the Director prior to acceptance of waste that all the requirements of this permit have been met and all required facilities, structures and accounts are in place as required.
2. The Permittees shall not construct any portion of a Class V where the bottom elevation is less than five feet above the historic high ground water level or any Construction Waste cell where the bottom elevation is less than 10 feet above the historic high ground water level.

Attachment 1

Liquid Waste Pond #3

1.0 INTRODUCTION

The purpose of this Design Report is to present the design and construction rationale for the Liquid Waste Pond #3 and Solidification Facility at the Wasatch Regional Landfill (WRL) located in Tooele County, Utah. This Design Report was prepared by Geo-Logic Associates (GLA) on behalf of Wasatch Regional Landfill, Inc. for submittal to the Division of Waste Management and Radiation Control and Division of Water Quality for approval.

The proposed project will enable the WRL to comply with existing state water quality regulations and to better manage liquid waste in order to protect water quality. The work includes the construction of a new liquid waste pond which includes a geosynthetic bottom liner system.

2.0 SITE DESCRIPTION

The general site location, shown in Drawing G01 in Appendix A, is roughly 6 miles north of Interstate 80 in Tooele County in an unpopulated section of the county, north/northwest of Grantsville, Utah and south of Rowley, Utah.

There are no residences within several miles of the WRL site and the adjacent parcels are all vacant and undeveloped. A rail spur and County Road 128 on the east side of the parcel are the only uses adjacent to the site. The site is approximately 1,969 acres in size, which is sufficient to handle incoming waste projected over several decades. An additional 640 acres of adjacent Utah State School and Institutional Trust Lands Administration (SITLA) property is planned to accommodate the long-term build out scenario for the landfill. The initial permitting process for the landfill site will cover the 1,969 acres under a ground lease with SITLA. Permitting of the adjacent property is scheduled when the public sector demand for expansion occurs at the WRL site.

3.0 PROJECT DESCRIPTION

The project consists of a double lined pond for the storage and evaporation of liquid waste. The project also consists of a solidification facility for solidification of liquid wastes prior to disposal in the landfill. The lined area of the pond will cover approximately 2.6 acres, and the total construction area is approximately 7.6 acres. Liquid Waste Pond #3 will be located to the south of the existing Liquid Waste Pond #1 and #2 and to the south of the future limits of Phases 2 & 3 of the landfill, as shown in Drawing G02 of the Construction Drawings.

Access to the pond will be via the existing dirt road, until permanent access roads are constructed when Phase 2 is built. From the existing road, a 30-foot wide all-weather road will run along the north, south, and eastern edges of the pond for disposal truck access. A 13-foot wide all-weather road will run around the western sides of the pond. The pond will have seven areas along the northern and eastern edges for discharge into the pond. The locations of the

discharge areas will be clearly marked and will consist of an extra 10-foot wide layer of 60-mil geomembrane. The solidification facility will be located directly to the west of Liquid Waste Pond #3 as shown on Drawing C02.

4.0 LIQUID WASTE POND #3 LINER SYSTEM DESIGN

The pond will be lined with two layers of 60-mil double-sided textured HDPE geomembrane. Two geocomposite strips, running north-south and east-west, will help vent potential gas and air from underneath the pond. This will help mitigate the potential for uplift or bubbling of the liner. GLA has proposed constructing the double lined liquid waste storage pond without the use of a geonet drainage layer between the geomembrane liners. This design relies on the separation created by the texturing on the geomembrane surface to provide for the flow of any liquid that may leak through the primary liner. GLA has successfully used this design for other double lined ponds, including the existing Liquid Waste Ponds #1 & #2 at WRL. The asperity height on the two liners has shown to provide an adequate path for liquid to be conveyed to the leak detection sump.

Transmissivity tests were not performed for this project; however, GLA has performed transmissivity tests for other projects with similar designs. Tests results obtained for similar designs have shown that for a shallow slope of 1% you can expect transmissivity rates in the neighborhood of 1.2×10^{-4} to 1.5×10^{-4} m²/s and minimum flow rates per unit width of 0.01 gpm/ft, can be expected. Leakage rates for a 0.1 cm² hole on the floor of the pond can be expected to be approximately 1.2 gpm. The pond bottom as designed would have the capacity to convey approximately 2.25 gpm to the leak detection sump.

The double-lined pond is superior to a single-lined pond in that it provides leak detection and collection with the secondary liner. A leak detection sump located at the middle of the eastern edge will serve as the point of compliance for the pond. The leak detection sump will be approximately 5-feet by 5-feet. It will be approximately two and a half feet deep and filled with one foot of gravel which will be wrapped in two layers of 8 oz. geotextile. A leak detection trench will be constructed in the middle of the pond flowing west to east. Leakage into the sump will be collected and monitored through an 8-inch diameter HDPE riser pipe. The pond will be monitored for possible leakage on a regular basis as outlined in the Operations & Monitoring Plan provided in Appendix D.

The Technical Specifications related to the construction activities for the proposed pond have been prepared by GLA (see Appendix B). In general, these construction activities will entail the following:

- Clearing, grubbing and stripping the construction area in preparation for the earthworks.
- Performing the necessary excavation and engineered fill to the desired grades of the proposed ponds.

- Preparing and compacting the subgrade for the pond in preparation for placement of geosynthetic materials.
- Constructing the subgrade venting system with the appropriate pipe and geocomposite materials.
- Installing the liner system, which will consist of two layers of 60-mil double-sided textured HDPE geomembrane.
- Construction stormwater controls.

In addition, GLA prepared a drawing plan set for the construction of the new pond including a title sheet, a site plan, a grading plan and control coordinates for the pond, as well as details. A reduced set of Construction Plans are included with this package (see Appendix A).

As shown in the Construction Plans, the new pond will be graded to an inside crest elevation of 4,328 feet above msl. The proposed pond will be built with 2H:1V side slopes that will transition to the floor of the lagoon. The floor of the new pond will be graded to flow towards the center from both north and south sides at 0.5% and towards the east side of the pond at 1%. The low point of the pond will be at the leak detection sump which is approximately at the 4,299 ft elevation.

5.0 SOLIDIFICATION FACILITY DESIGN

The liquid waste solidification facility structure will consist of a reinforced concrete basin appropriately sized for the anticipated volume of liquid waste accepted at the facility including the anticipated volume of the solidifying agent, also referred to as bulking agent. It will have a concrete apron for unloading waste and removal of solidified waste.

The structure will have a secondary containment system in the form of concrete or dike enclosure, or a liner system installed under the structure with sufficient space for leak detection/monitoring. Leak detection and monitoring details, if necessary, will be provided during final detailed design. The liner will be a 60-mil thick High Density Polyethylene (HDPE) geomembrane as a minimum or equivalent. The plan and layout of the facility is shown on Drawing C02.

Design details, technical specifications, and CQA Plan for the solidification facility will be provided during final design for final approval by relevant regulatory agencies prior to construction.

The solidification facility will be operated as outlined in the Operations & Monitoring Plan provided in Appendix D.

6.0 LIQUID WASTE POND #3 DESIGN CONSIDERATIONS

The pond was designed to have a capacity of approximately 13.88 million gallons with 2ft of freeboard, and an ultimate capacity of 15.47 million gallons at the pond crest. The nearest weather station that collected evaporation data was located approximately 30 miles from the landfill. The area receives an average of approximately 13 inches of precipitation a year and can expect to see an average of 67 inches of pan evaporation. The pan evaporation can be conservatively estimated to equal approximately 47 inches of lake evaporation. This gives the pond a net average evaporation capacity of approximately 34 inches a year. With the ponds surface area of approximately 2.38 acres, it will give the pond the ability to evaporate approximately 2.2 million gallons of liquid during an average year.

7.0 CONSTRUCTION SCHEDULE

Construction for the pond and pad area is tentatively planned to start in the summer of 2016 and is anticipated to take approximately a month to complete. The liquid waste solidification facility is tentatively planned for construction in 2017. To ensure that proper construction techniques and procedures are used and that the project is built in accordance with the project Drawings and Specifications a Construction Quality Assurance (CQA) Plan has been prepared and is attached in Appendix C.

8.0 CONCLUSIONS AND LIMITATIONS

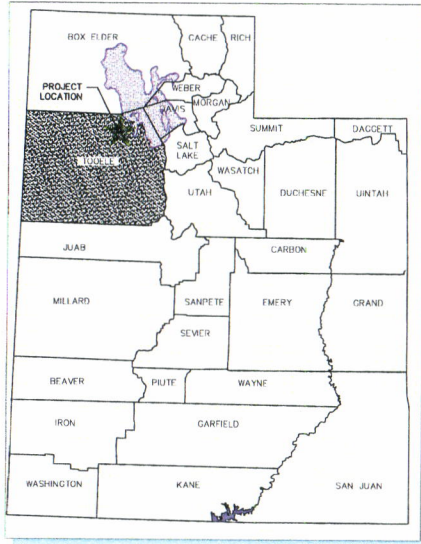
The assumptions presented in this report and the enclosed attachments are based upon our experience at the site, past field investigations, a review of previous reports, and a review of other literature. If the project scope of work changes from that described herein, our analyses should be reviewed and modified, if necessary.

This report was prepared in accordance with generally accepted soils, geosynthetics, and foundation engineering practices applicable at the time the report was prepared and for the project location. GLA makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement, and as presented in this report. Our recommendations consist of professional opinions and conclusions, based on the scope of work outlined herein and that adequate follow-up engineering, field investigations and construction quality assurance are provided, as necessary, to verify that the assumptions used in the design are accurate and the work is constructed properly. It is recommended that GLA be provided the opportunity for a general review of any final construction documents prepared by other consultants or contractors in order that our recommendations may be properly interpreted and implemented.

APPENDIX A
CONSTRUCTION DRAWINGS

WASATCH REGIONAL LANDFILL LIQUID WASTE POND #3 CONSTRUCTION DRAWINGS

PREPARED FOR:
WASATCH REGIONAL
LANDFILL, INC.

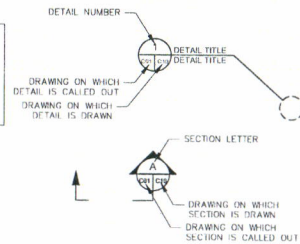


UTAH COUNTIES

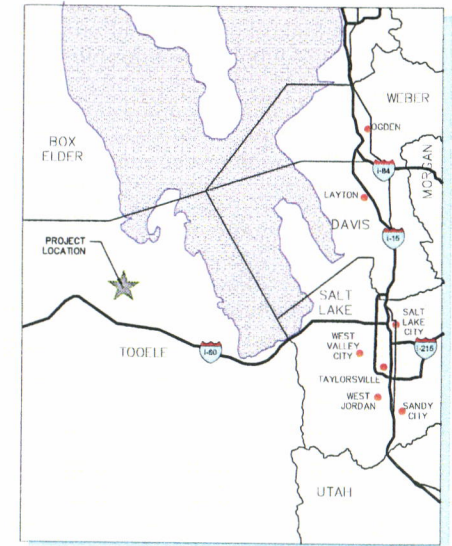
ABBREVIATIONS

Ø	DIAMETER	OC	ON CENTER
FT	FEET	oz	OUNCE
HDPE	HIGH DENSITY POLYETHYLENE	NTS	NOT TO SCALE
MAX	MAXIMUM	%	PERCENT
MIN	MINIMUM	TYP	TYPICAL

SYMBOLS



VICINITY MAP



REGIONAL MAP

DRAWING INDEX

DRAWING NUMBER	TITLE AND DESCRIPTION	LATEST REVISION NUMBER	LATEST REVISION DATE
GENERAL			
G01	TITLE PAGE	0	05/13/16
G02	SITE PLAN & EXISTING CONDITIONS	0	05/13/16
CIVIL			
C01	SURFACE & LINER PLAN	0	05/13/16
C02	LIQUID WASTE SOLIDIFICATION FACILITY CONCEPTUAL PLAN (RESERVED)	0	05/13/16
C03 - C09			
C10	DETAILS	0	05/13/16
C11	DETAILS	0	05/13/16
C12	DETAILS	0	05/13/16
C13	DETAILS	0	05/13/16

NOTES:
1. PIPE BENDS AND CLOSURES ARE SHOWN NTS.

LOCATION: \\N:\Bentley\2016\0000 Liquid Waste Pond #3\Drawings\Civil\Drawings\DWG\DWG-001.dwg DATE: 5/13/2016 3:27 PM PLOT SCALE: 1:12

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REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY

DATE OF ISSUE: 05/13/2016
DESIGNED BY: BJA
DRAWN BY: JM
CHECKED BY: JVR
APPROVED BY: JVR



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1435 Spring Hill Dr, Grass Valley, California 95945
geo-logic.com | 530.272.2448

**WASATCH REGIONAL
LANDFILL, INC.**

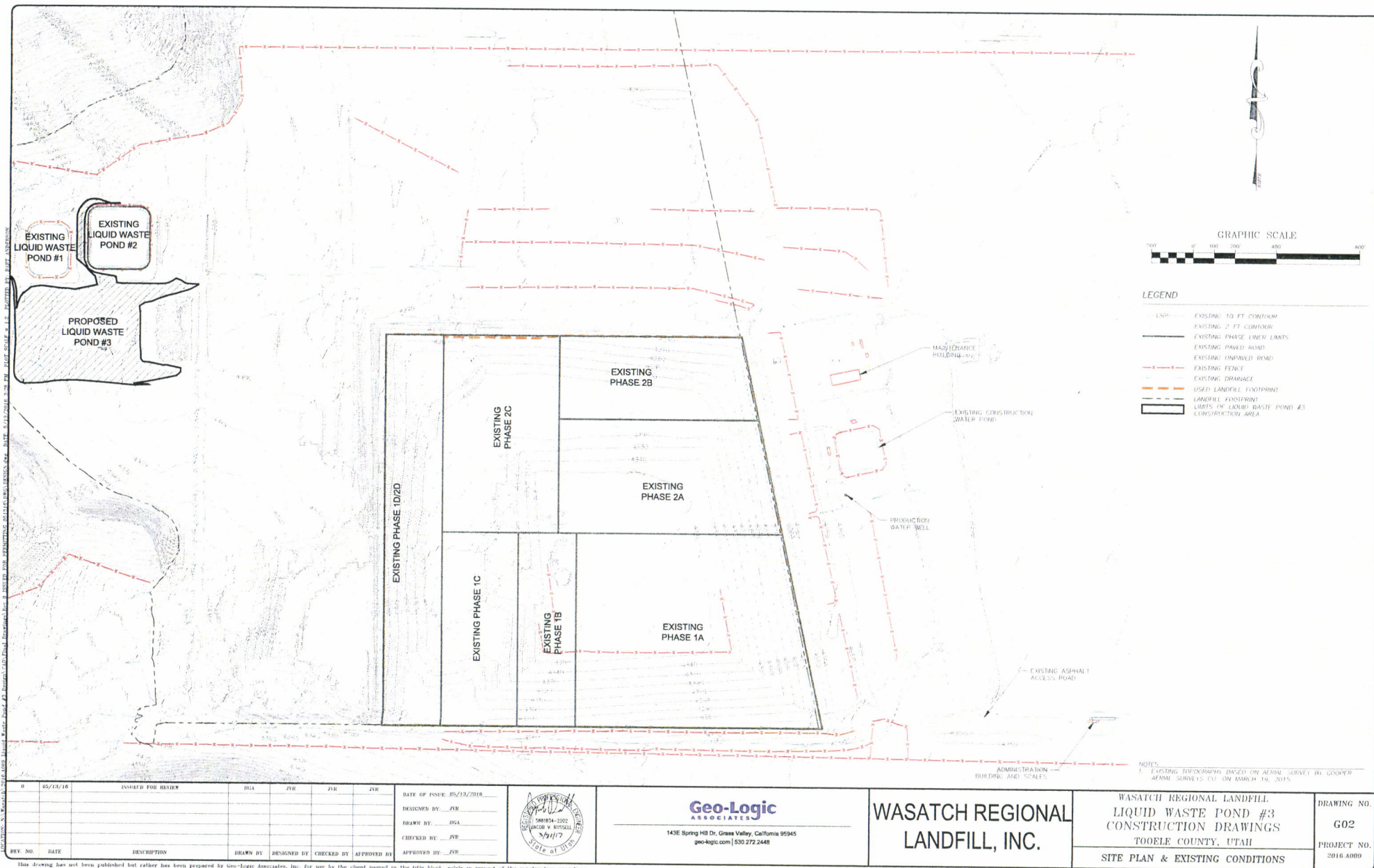
WASATCH REGIONAL LANDFILL
LIQUID WASTE POND #3
CONSTRUCTION DRAWINGS
TOOELE COUNTY, UTAH

TITLE PAGE

DRAWING NO.
G01
PROJECT NO.
2016.A009

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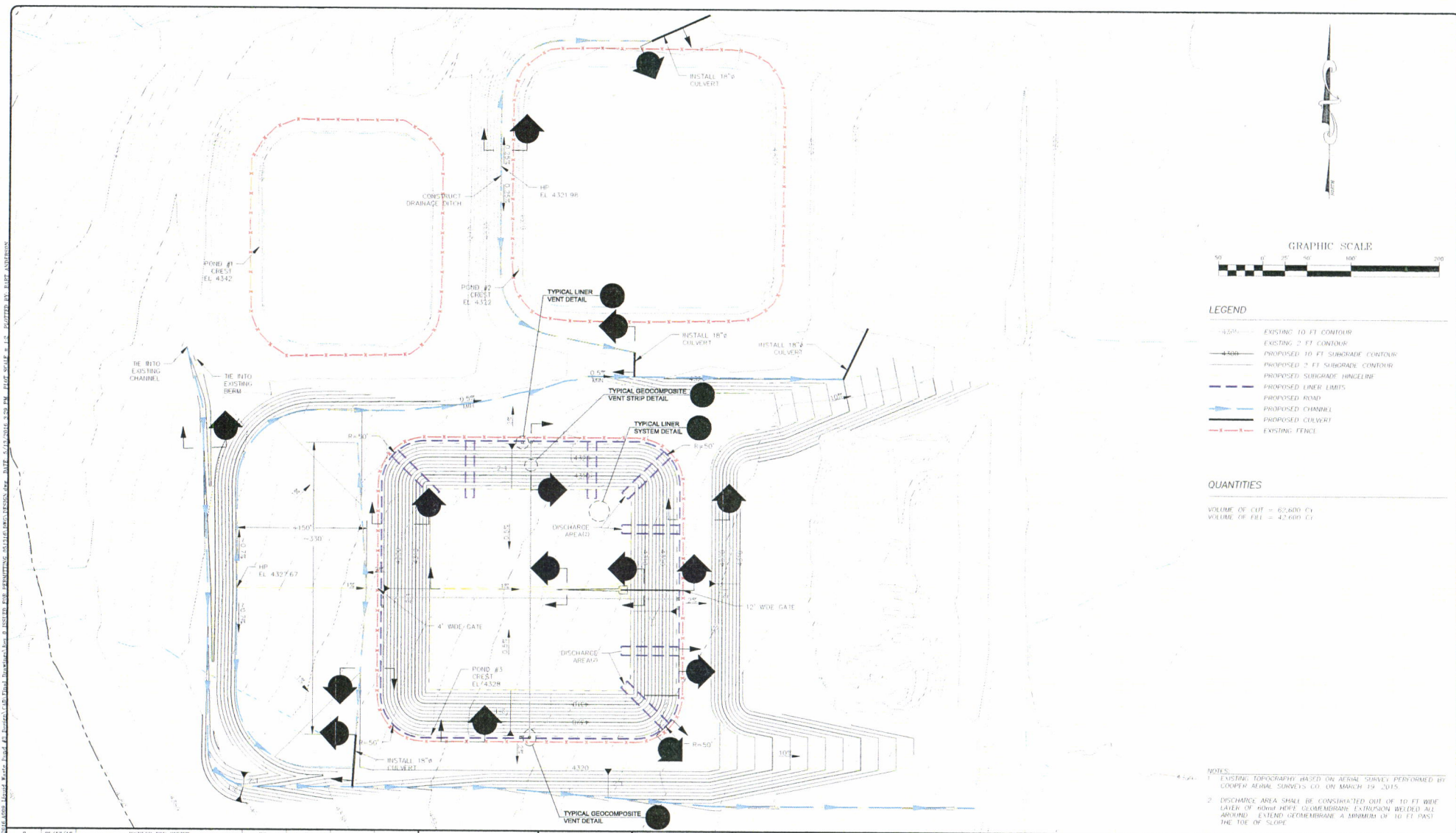
ISSUED FOR PERMITTING



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ISSUED FOR PERMITTING

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DATE OF POST: 05/15/2018
DESIGNED BY: JPR
DRAWN BY: JPR
CHECKED BY: JPR
APPROVED BY: JPR



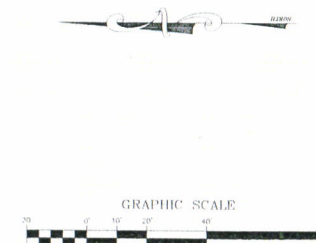
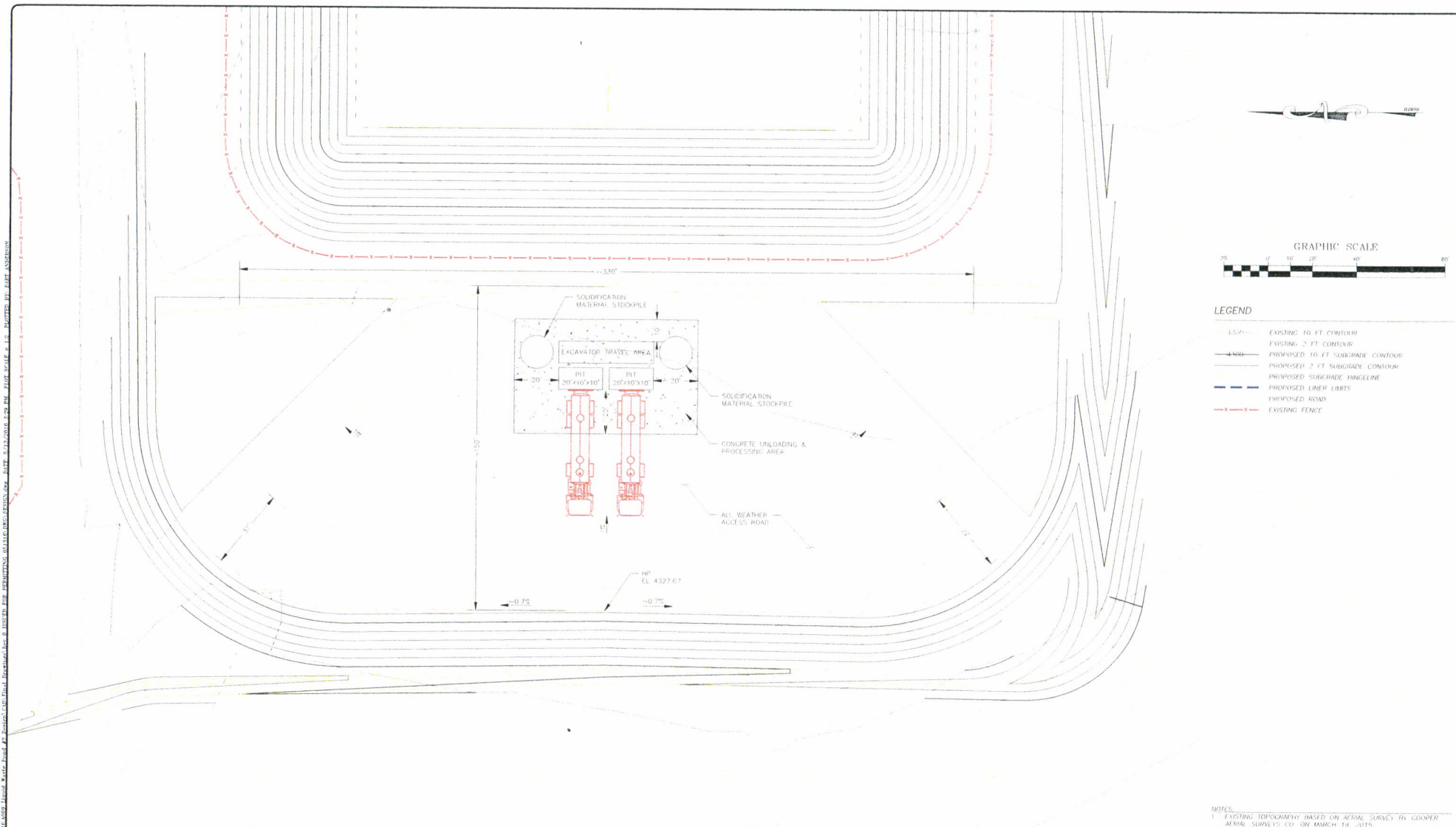
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WASATCH REGIONAL LANDFILL,
LIQUID WASTE POND #3
CONSTRUCTION DRAWINGS
TOOELE COUNTY, UTAH
SUBGRADE & LINER PLAN

DRAWING NO.
C01
PROJECT NO.
2016.0009

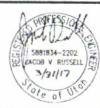
ISSUED FOR PERMITTING



NOTES:
1. EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY BY COOPER
AERIAL SURVEYS CO. ON MARCH 19, 2015.

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DATE OF ISSUE: 05/13/2016
DESIGNED BY: JVR
DRAWN BY: JGA
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WASATCH REGIONAL LANDFILL
LIQUID WASTE POND #3
CONSTRUCTION DRAWINGS
TOOELE COUNTY, UTAH
LIQUID WASTE SOLIDIFICATION FACILITY
CONCEPTUAL PLAN

DRAWING NO.	C02
PROJECT NO.	2016 A009

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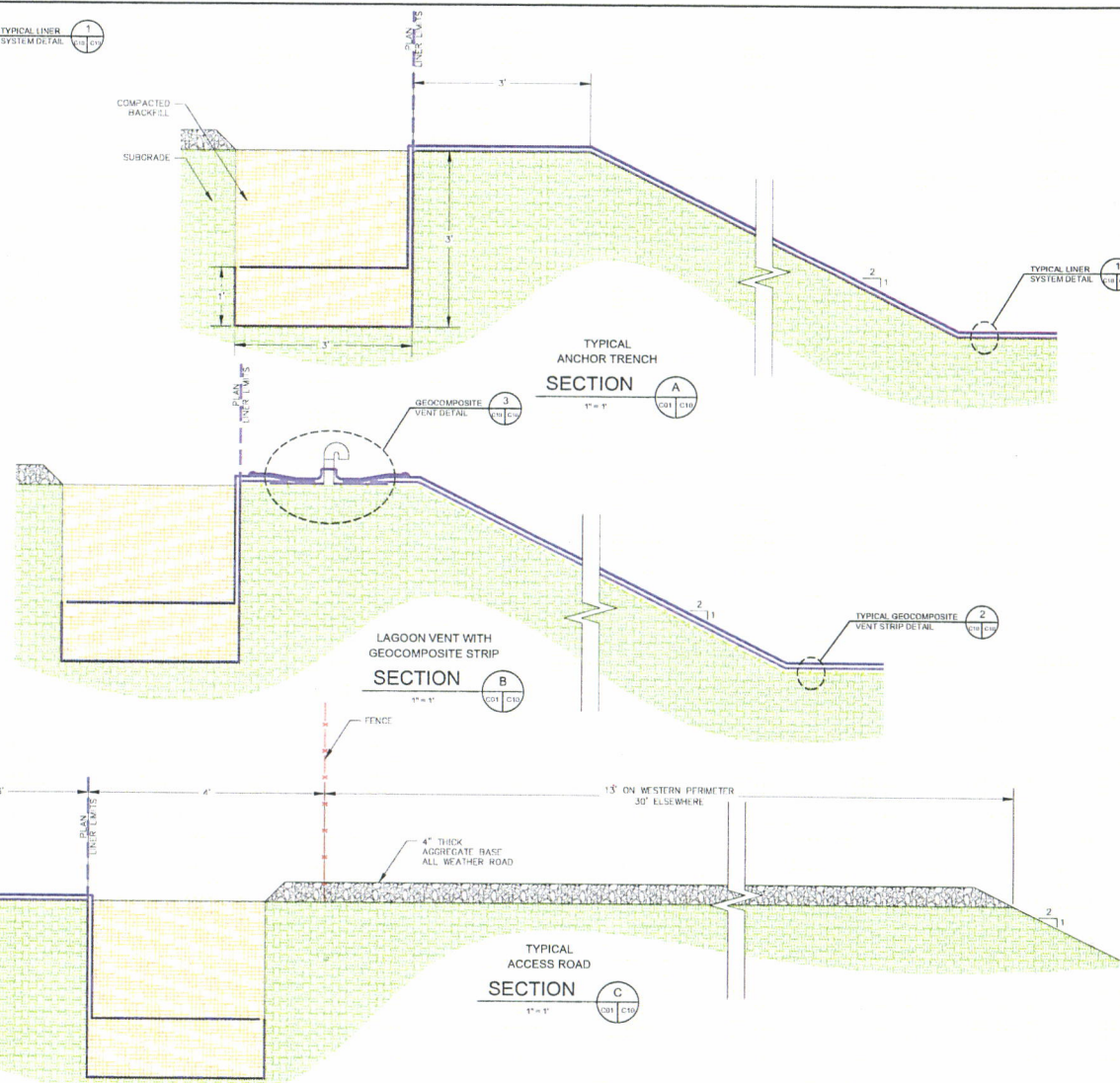
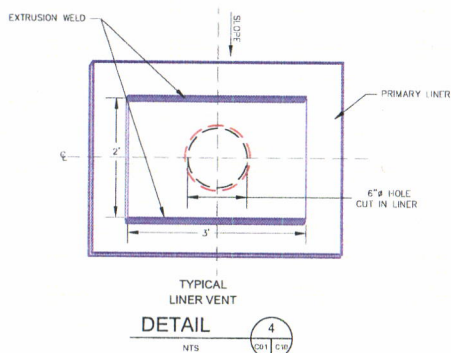
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TYPICAL GEOCOMPOSITE
VENT STRIP
DETAIL

1' = 1'

2

C01 C10



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REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY

DATE OF ISSUE: 05/13/2016
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DRAWN BY: JM
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LIQUID WASTE POND #3
CONSTRUCTION DRAWINGS
TOOELE COUNTY, UTAH

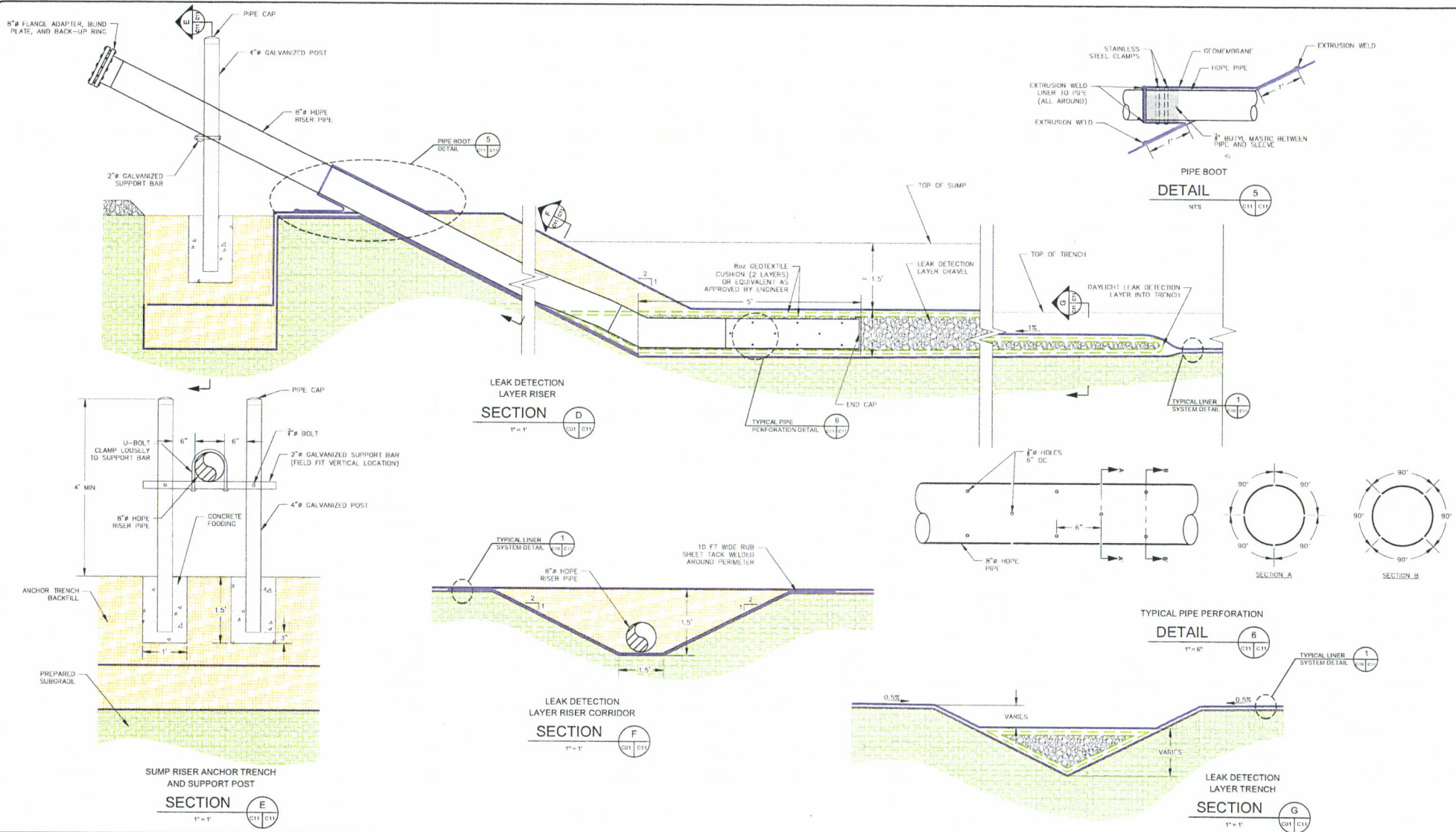
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PROJECT NO.	2016.A009

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DETAILS

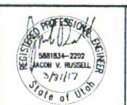
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DATE OF ISSUE: 05/13/2016
 DESIGNED BY: BGA
 DRAWN BY: JVR
 CHECKED BY: JVR
 APPROVED BY: JVR



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 1430 Spring Hill Dr., Grass Valley, California 95945
 geo-logic.com | 530.272.2445

WASATCH REGIONAL LANDFILL, INC.

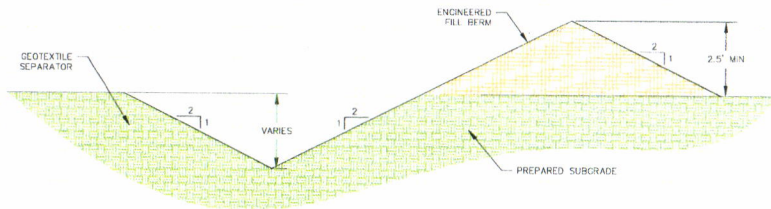
**WASATCH REGIONAL LANDFILL
 LIQUID WASTE POND #3
 CONSTRUCTION DRAWINGS
 TOOELE COUNTY, UTAH**

DRAWING NO.
C11
 PROJECT NO.
 2016.A009

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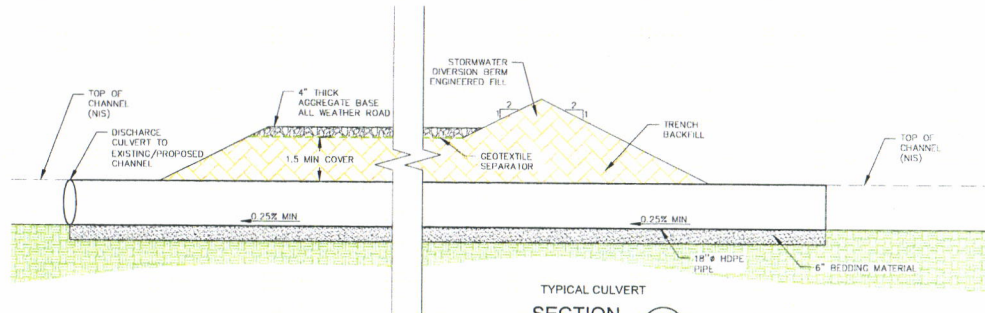


TYPICAL DRAINAGE DITCH

SECTION



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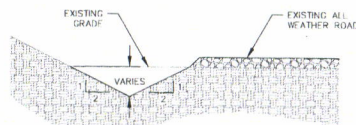


TYPICAL CULVERT

SECTION



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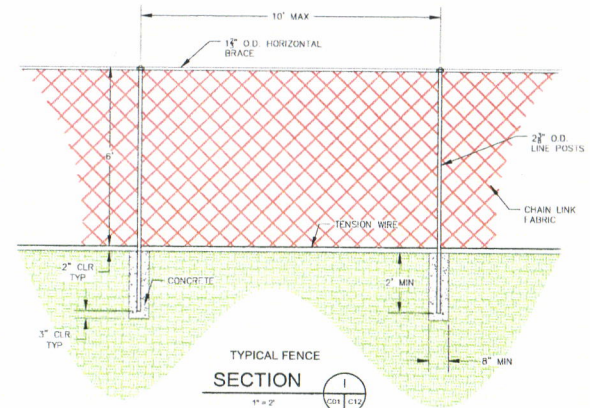


POND #2 DITCH

SECTION



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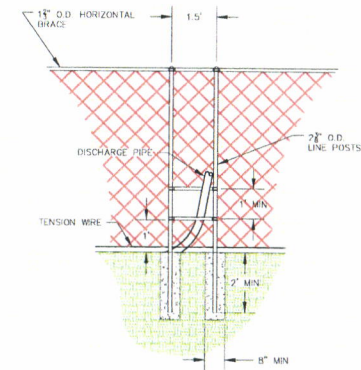


TYPICAL FENCE

SECTION



1" = 2'



TYPICAL DISCHARGE
ACCESS HOLE

SECTION



1" = 2'

REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
0	05/13/18	ISSUED FOR PERMITTING	JW	BGA	JVR	JVR

DATE OF ISSUE: 05/13/2018
DESIGNED BY: BGA
DRAWN BY: JW
CHECKED BY: JVR
APPROVED BY: JVR



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WASATCH REGIONAL LANDFILL
LIQUID WASTE POND #3
CONSTRUCTION DRAWINGS
TOOELE COUNTY, UTAH

DETAILS

DRAWING NO.

C12

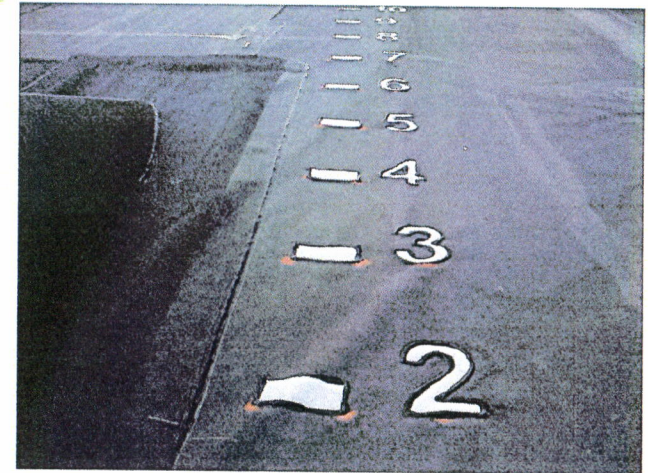
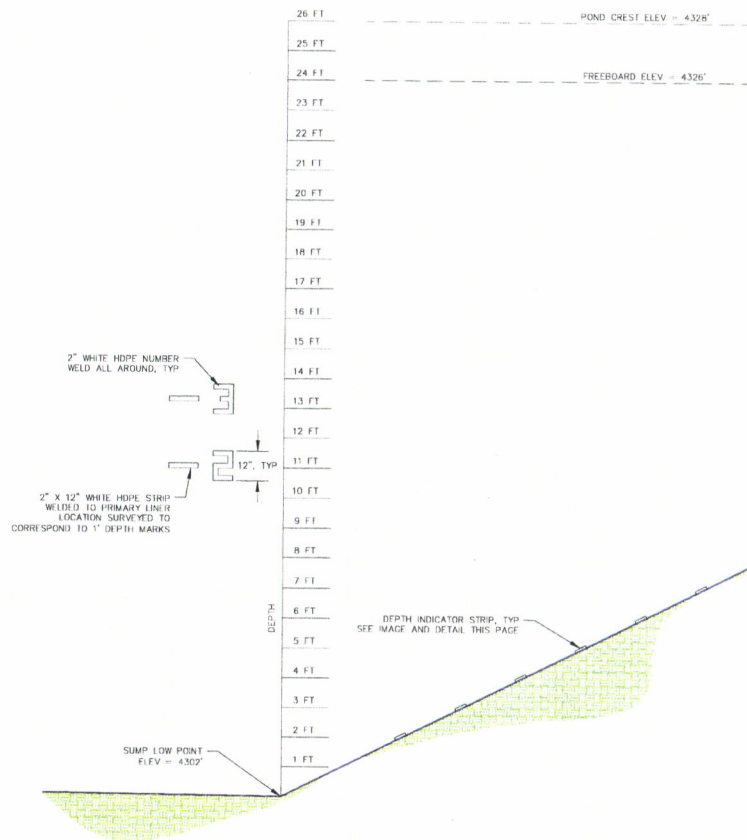
PROJECT NO.

2018.A009

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LOCATION: WASATCH REGIONAL LANDFILL LIQUID WASTE POND #3 SURVEYING DETAILS FOR PERMITTING 05/12/2016 3:27 PM PLOT SCALE = 1" = 10' PLOTTED BY: RAY ANDERSON



REV. NO.	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
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DATE OF ISSUE: 05/18/2016
DESIGNED BY: BGA
DRAWN BY: JM
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APPROVED BY: JVR



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LIQUID WASTE POND #3
CONSTRUCTION DRAWINGS
TOOELE COUNTY, UTAH

DETAILS

DRAWING NO.
C13
PROJECT NO.
2016.A009

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