CONSTRUCTION REPORT EAST LINED AREA PARTIAL CLOSURE

HIDDEN VALLEY LANDFILL

PIERCE COUNTY, WASHINGTON

Prepared for

Land Recovery, Inc.

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Prepared by

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Construction Report East Lined Area Partial Closure Hidden Valley Landfill Pierce County, Washington

The material and data in this report were prepared under the supervision and direction of the undersigned.

EMCON

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SUMMARY

Partial Closure of the East Lined Area at the Hidden Valley Landfill was completed during the months of June, July, August, and September of 1998. The closure was accomplished in substantial conformance with the design as reviewed by the Tacoma-Pierce County Health Department (TPCHD) and Washington Department of Ecology (Ecology).

This report provides background information about the project and documents work was performed in accordance with the design intent and conditions of approval. The following paragraphs summarize the content and conclusions of this report.

Section 1 of the report provides an introduction describing project background, provides a description of the project, and summarizes the quality assurance work performed to document the construction.

Section 2 describes the organizations involved in the project and their responsibilities.

Section 3 describes the major closure components and briefly describes how each major component was constructed.

Sections 4 through 7 describe the construction quality assurance (CQA) work performed by EMCON documenting the project's compliance with the design intent and conditions of approval. Section 4 describes earthwork construction observation and testing, including test standards, and testing frequencies implemented by the CQA Organization. Section 4 also describes CQA work related to erosion an sediment control systems. Section 5 describes geosynthetics conformance testing, and construction observation and field testing for delivery and installation of geosynthetic components of the project. Section 6 describes CQA work related to landfill gas systems. Section 7 describes CQA related to piping systems. Section 8 describes written documentation of the quality assurance program.

Section 9 describes design modifications and modifications to the CQA program made during construction and justification for these design and CQA modifications.

Section 10 provides a statement of compliance by the CQA organization stating the East Lined Area Partial Closure (Closure Construction) was constructed in accordance with the design intent and conditions of approval.

In summary, a CQA program was implemented by EMCON during closure construction. This CQA program, which included observation and testing of the constructed closure components documents the work was completed in accordance with the design intent presented in the construction drawings and specifications. However, like any large construction project, this project was not completed without small construction phase variances to the specifications and/or drawings. These variances and their resolutions are described as appropriate in other sections of this report.

1 INTRODUCTION

1.1 Project Background

EMCON was retained by Land Recovery, Inc., to design the East Lined Area Closure and implement a construction quality assurance (CQA) program during closure construction. Closure construction at the Hidden Valley Landfill in Pierce County, Washington, was completed during the months of June, July, August, September, and October of 1998. The work consisted of closing approximately 13 acres of the remaining 32 acres of active landfill area at the landfill.

Other services provided by EMCON included preparation of this construction report and attached record drawings. The purpose of this report is to document closure construction complies with the design intent and to obtain approval of the landfill closure from the Tacoma-Pierce County Health Department (TPCHD).

Closure construction was completed in compliance with applicable state and federal regulations for solid waste landfills, and in accordance with the construction drawings and specifications issued for the project.

1.2 Closure Description

The approximate 11.43-acre closure area is shown on the record drawings. It covers the eastern end of the landfill and terminates into the north, east, and south perimeter road systems. A small portion of the closure area also ties into the previously closed Southwest and North areas. But, the majority of the closure was terminated where it will connect to future closure construction planned for 1999.

The final cover system consists of three cover types: Types 1, 2, and 3. Type 1 cover was placed on slopes with grades of 20 percent or less. Type 1 cover consists of the following listed from top to bottom: a 12-inch-thick topsoil layer, a non-woven geotextile, a 12-inch-thick drainage layer, and a composite barrier layer. The composite barrier layer consists of a 60-mil textured surface high density polyethylene (HDPE) geomembrane placed in direct contact with a 24-inch-thick layer of low-permeability soil. The low-permeability soil layer has an in-place hydraulic conductivity (permeability of less than or

equal to 1.0×10^{-7} cm/sec.) Soil with this permeability is described as Type A soil throughout this report.

Type 2 cover was installed on 3 horizontal to 1 vertical (3H:1V) slopes. Type 2 cover includes a 12-inch-thick topsoil layer, a non-woven geotextile, a 12-inch-thick drainage layer, and a composite barrier layer. The composite barrier layer consists of a 60-mil textured surface HDPE geomembrane placed in direct contact with a 6-inch-thick layer of low-permeability soil having an in-place permeability of 1.0×10^{-7} cm/sec (Type A soil). The 6-inch Type A soil layer covers an 18-inch-thick layer of low-permeability soil having in-place permeability of less than or equal to 1.0×10^{-4} cm/sec. Soil with a 1.0×10^{-4} cm/sec permeability is described as Type B soil throughout this report.

Type 3 cover was installed on 2H:1V slopes. This cover type includes a 10-inch-thick rip rap erosion protection layer, a non-woven needle punched drainage geocomposite, a 60-mil textured HDPE geomembrane, a geosynthetic clay liner and an 18-inch-thick low-permeability Type B soil layer.

In addition to the three final cover types, major components of the closure construction include the following:

- General earthwork to form the cover system subgrade configuration
- Vertical landfill gas (LFG) extraction wells
- LFG well-head assemblies, 4-inch-diameter solid wall HDPE piping laterals, and a 10-inch-diameter HDPE central header collection pipe
- A drainage pipe system constructed in the drainage layers consisting of 6-inchdeep troughs formed into the composite barrier layer, with 4-inch and 6-inch ADS perforated pipe placed over geomembrane in the troughs
- Stormwater diversion berms
- Stormwater drainage control structures constructed around the perimeter of closure areas consisting of geocomposite and rip rap lined ditches and culverts
- Grass seed mixture and straw mulch placed over topsoil layers
- Access roads

1.3 Construction Quality Assurance

A CQA program was implemented to monitor, test, verify and document construction was completed in accordance with the technical specifications and the design intent. The CQA Organization also provided design clarifications during construction as needed. The CQA program emphasized monitoring and testing of closure components related to the performance of the final cover system, and in particular the geomembrane and low-permeability soil layers which form the composite barrier system. This work generally included the following:

- Performed and documented field and laboratory soils testing for earthfill placement, Type A and B low-permeability soil layer placement, drainage layer placement and topsoil placement.
- Performed and documented geosynthetic materials conformance testing
- Reviewed the geosynthetic manufacture's material certifications
- Reviewed the geomembrane installer qualifications
- Monitored the geomembrane installer's quality control program
- Monitored geotextile and geocomposite installation operations
- Monitored geomembrane installer's seaming operations
- Reviewed welded geomembrane seam field and laboratory test results
- Performed and documented independent third party geomembrane seam testing
- Monitored and documented geomembrane repair operations
- Prepared the final geomembrane panel lay-out as-built drawing

The CQA organization also provided the following services:

- Monitored and documented vertical LFG extraction well construction
- Monitored and documented installation of LFG well-head assemblies, HDPE piping laterals, and HDPE central header collection pipe
- Monitored and documented installation of the drainage pipe system constructed in the drainage layers

- Monitored and documented stormwater diversion berms construction
- Monitored and documented stormwater drainage control structures constructed around the perimeter of closure areas
- Monitored and documented grass seed mixture and straw mulch installation over topsoil layers
- Monitored and documented access road construction
- Prepared record drawings to show as-built conditions of the closure construction

2 CONSTRUCTION PERSONNEL AND RESPONSIBILITIES

2.1 Land Recovery Incorporated (LRI)

Land Recovery, Inc. (LRI), is the owner and operator of Hidden Valley Landfill. They are responsible for complying with federal and state regulations governing closure of the landfill and implementing the East Lined Area Partial Closure construction project.

LRI constructed all of the earthwork and gas piping required for the project.

2.2 EMCON

EMCON was responsible for preparing the engineering design report, construction drawings, and technical specifications describing the scope of closure construction. EMCON also implemented a comprehensive CQA program during construction, provided field engineering services during construction, and prepared this final construction report.

2.3 Serrot Corporation

The Serrot Corporation provided and installed the geosynthetic materials used in the closure project. These geosynthetic materials included: 60-mil HDPE liner, geosynthetic clay liner (GCL), drainage geocomposite, and the majority of the geotextile.

2.4 NW Lining Services

NW Lining Services was responsible for providing and installing a portion of the separation geotextile between the drain rock and the erosion layer.

2.5 DBM Contractors, Inc.

DBM Contractors, Inc., was responsible for the installation of the landfill gas extraction wells.

2.6 D.A. Berg, Inc.

D.A. Berg, Inc., is a registered professional surveyor in the state of Washington and provided all control surveying and as-built surveys.

2.7 Corliss Sand and Gravel, Inc.

Corliss Sand and Gravel, Inc., provided all earthwork materials for the project including, low-permeability soil, drainage rock, bedding sand and topsoil.

3 CONSTRUCTION DETAILS

3.1 Introduction

This section generally describes major components of the closure construction and in some cases methods used to construct these components. Construction quality assurance work performed by EMCON to verify construction complied to specified requirements is described in Sections 4, 5, 6 and 7 of this report.

3.2 Earthfills

Earthfills were placed at various locations and to various depths on the landfill surface to form the cover system subgrade. The earthfills included:

- Adding material to flatten the existing intermediate cover slopes to 3H:1V or flatter.
- Constructing the stormwater diversion berm along the east and south side of the closure area.

Where these earthfills were placed, the soil was hauled to the fill locations in trucks, graded with dozers, and then compacted with pad-foot compactors in loose lifts not exceeding 12 inches.

3.3 Type A Low-Permeability Soil Layer

Type A low-permeability soil was constructed as part of the Type 1 and 2 cover systems. When placed as part of the Type 1 cover, it was placed in four uniform 6-inch-thick compacted lifts. When placed as part of the Type 2 cover it was place in a single 6-inch compacted lift directly over Type B low-permeability soil. Soils used for the Type A cover were processed at a nearby location to be free of deleterious materials, debris, and organic matter, and had a maximum particle size of 1 inch. Grade control stakes were placed on a 50-foot grid pattern to control soil layer thickness. Soil was hauled to its point of placement in trucks, spread with dozers, moisture conditioned using water trucks,

and compacted using a pad-foot compactor. The surface of each lift was scarified by the pads on the compactor drums. Scarified surfaces established bonding between soil lifts.

Type A soil cover compaction was guided by a zone of acceptable compaction. The zone of acceptable compaction established a zone of soil moisture and density resulting in the required permeability, and established guidance for acceptance of field moisture and density testing. Field moisture and density testing was verified by actual permeability testing of the compacted soil.

3.4 Type B Low-Permeability Soil Layer

The majority of the Type B low-permeability soil was in place prior to closure construction constructed as part of the Type 2 cover system. The minimum thickness of 18 inches was confirmed by excavating hand-auger holes into the existing soil cover layer to a depth of 18 inches. In areas where the cover soil was less than 18-inches thick, or in areas where fill had to be added to achieve a 3H:1V or flatter slope (in the Type 2 cover area), Type B low-permeability soil was added until the desired thickness was achieved. The Type B low-permeability soil was placed in uniform 6-inch-thick compacted lifts. Soils used for the Type B cover were processed at a nearby location to be free of deleterious materials, debris, and organic matter and had a maximum particle size of 6 inches. Grade control stakes were placed on a 50-foot grid pattern to control soil layer Soil was hauled to its point of placement in trucks, spread with dozers, moisture conditioned using water trucks, and compacted using a pad-foot compactor. The surface of each lift was scarified by the pads on the compactor drums. Scarified surfaces established bonding between soil lifts. Type B cover compaction was guided by a zone of acceptable compaction. The zone of acceptable compaction established a zone of soil moisture and density resulting in the required permeability, and established guidance for acceptance of field moisture and density testing. Field moisture and density testing was verified by actual permeability testing of the compacted soil.

3.5 Geomembrane

Geomembrane used to construct Type 1, 2 and 3 covers systems was 60-mil-thick, double-sided textured HDPE manufactured by Serrot Corporation. It was delivered to the site in rolls. When unrolled, the geomembrane panel dimensions were approximately 22.5-feet wide by up to 525-feet long. The geomembrane was off-loaded using a Grade-All forklift and was stockpiled at a maximum height of two rolls.

During deployment, the geomembrane was moved into place using the Grade-All forklift, and then deployed by unrolling them into place. Panels were deployed down the slopes and adjusted into place as needed prior to welding the seams. The downhill ends of the panels were then anchored in an anchor trench along the north and west perimeters of the

closure area. Adjacent panels were overlapped a minimum of 4 inches and welded using a double-tracked fusion welding machine. Where the wedge welder could not be used, extrusion welding was used to weld the seams.

3.6 Drainage Layer

Drainage layer materials were processed at a nearby aggregate processing site to meet the designed gradation and permeability requirements. Soils used for drainage layer was free of deleterious materials, debris, and organic matter and met the designed gradation and permeability requirements. Drainage layer material was placed in a single uniform 12-inch-thick lift over the geomembrane. Grade control stakes (platform stakes to protect geomembrane surface) were placed on a 50-foot (interval) grid pattern to control thickness of the drainage layer. Drainage rock was pushed into place using low-ground pressure (LGP) dozers or by use of a conveyor belt on a conveyor truck. For any given area, the material was placed on the lower elevation areas first and filled upward. When LGP dozers deployed the drain rock, the rock was pushed up or across the slope.

3.7 Geotextile

A geotextile filter was installed above the drainage layer to separate topsoil from the drainage layer. These materials were deployed using methods similar to the geomembrane. The geotextile cushion seams were overlapped approximately 12 inches then sewn together.

3.8 Geocomposite

A geocomposite was installed with the Type 3 cover system. It has a dual purpose: to provide adequate drainage of the soil cover system and to cushion the underlying geomembrane. It was installed by unrolling the panels with the long axis of the panel parallel to the slope, cutting them to fit the configuration of the cover system and then connecting the individual panels with plastic ties.

3.9 Geosynthetic Clay Liner

A GCL was installed with the Type 3 cover system, below the access roadway and to form a diversion flap in the drainage layer. The GCL in the Type 3 cover system and access roadway replaces the Type A low-permeability cover soil in the composite barrier system. The GCL was selected to provide an equivalent material to the Type A low-permeability cover soil; however, could be installed through the ditch lines where compaction

equipment for low-permeability soil would not be effective, and over the existing access road to minimize the built-up thickness.

3.10 Rip Rap Erosion Protection

Rip rap erosion protection was installed over the geocomposite for Type 3 cover systems. This material was chosen for its stability and to resist erosion.

3.11 Topsoil

The topsoil layer for Type 1 and Type 2 cover systems was placed in a single uniform 12-inch-thick compacted lift over the geotextile. The soil was free of deleterious materials and debris. Grade control stakes (platform stakes to protect geotextile surface) were placed on a 50-foot (interval) grid pattern to control thickness of the topsoil layer. Soil was hauled into place using dump trucks which accessed the placement area on 36-inch-thick haul roads constructed over the geotextile. Soil was deployed, graded and compacted over the geotextile surface using LGP dozers and a truck conveyor system. The final surface of the topsoil layer was track walked with the dozer (up and down the slope) leaving crawler marks parallel to the contours to minimize surface erosion.

3.12 Vertical LFG Extraction Wells

Nine vertical LFG extraction well borings were drilled through the waste mass using bucket auger drilling methods. Vertical LFG collection well casings were then constructed in the borings as shown on Details 1 and 2, Record Drawing 9. In addition to the 9 new wells, 11 existing well casings were extended to the designed finish grade of the landfill closure.

Wells logs describing drilling conditions are on file with EMCON. After completing well installations, well casings were temporarily capped to mitigate nuisance odors and potential worker exposure to landfill gas.

3.13 Landfill Gas Well-Head Assemblies, Laterals, and Header

Landfill gas well heads, laterals, and headers were constructed after placement of the cover systems. The locations and details of this installation are shown on Record Drawing 5.

3.14 Drainage Pipe System

An drainage pipe system was installed in the drainage layer to increase surface water percolation from this layer. By providing this added drainage, pore pressure in the drainage layer is reduced and this reduction in pore pressure reduces the potential for slope failure.

These drainage pipes consist of perforated piping placed in shallow troughs formed by a GCL flap extending into the drainage layer. The perforated pipes connect to solid wall piping that discharge to surface water drainage systems. Details of the drainage pipe system are shown on Record Drawing 3.

3.15 Stormwater Diversion Berm

The stormwater diversion berm was constructed as part of the intermediate cover, below the HDPE liner system. The diversion berm was constructed by compacting the Type B soil in 6-inch horizontal lifts and then trimming the compacted soil to the designed ditch configuration. Details of the stormwater diversion berm are shown on Section B, Record Drawing 8.

3.16 Erosion Control Materials

The topsoil was protected from erosion by hydroseeding the entire surface and use of a haybale dike approximately along the 550 elevation contour.

3.17 Stormwater Drainage Control Structures

Stormwater drainage control structures include culverts and straw bale barriers. Details of these structures are shown on Record Drawing 8.

4 CONSTRUCTION QUALITY ASSURANCE FOR EARTHWORK

4.1 Introduction

This section describes CQA procedures performed during construction of major earthwork components of the closure construction.

4.2 Earthwork Construction Testing

4.2.1 Test Standards

The following test standards apply to CQA work performed for the landfill closure as called out in the CQA manual and the project technical specifications:

<u>Standard</u>	Test Description
ASTM D-698	Moisture-density relations of soils and soil-aggregate mixtures, using 5½-pound rammer and 12-inch-drop
ASTM D-1556	Density of soil in-place by the sand-cone method
ASTM D-1557	Moisture-density relations of soils and soil-aggregate mixtures, using 10-pound hammer and 18-inch-drop
ASTM D-422	Particle size analysis of soils
ASTM D-2922	Density of soil and soil-aggregate in-place by nuclear methods
ASTM D-3017	Moisture content of soil and soil-aggregate in-place by nuclear methods
ASTM D-2216	Laboratory determination of water (moisture) content of soil, rock, and soil-aggregate mixtures

<u>Standard</u>	Test Description
ASTM D-2434	Method of test for permeability of porous granular material
ASTM D-5084	Method of test for permeability of fine grained soils
ASTM D-4318	Atterberg Limits
ASTM D-1140	Amount of material in soils finer than the No. 200 sieve
ASTM D-2487	Classification of soils for engineering purposes
ASTM D-2217	Practice for wet preparation of soil samples for particle size analysis and determination of soil constants.
ASTM D-2488	Description and identification of soils (visual-manual procedure)
ASTM D-2937	Density of soils by drive cylinder method
WSDOT-605	Method of test for permeability of porous granular material

4.2.2 Test Frequencies

The CQA Manual listed soils tests and required frequencies of these tests for various cover soil layers and earthfills. The manual established a minimum number of tests. Extra testing was conducted whenever work or materials were suspect, marginal, or of poor quality. Any re-tests performed as a result of a failing test did not contribute to the total number of tests performed in satisfying the minimum test frequency.

The first three columns of Table 4-1 below summarize the types of soil materials tested during the project, tests required for each of these materials and the test frequencies. The fourth, fifth and sixth columns summarize the installed quantities of each material, number of tests required to meet the established test frequencies, and the actual number of tests performed.

Soil and laboratory test results described in this section are presented in Appendix B.

Table 4-1 Schedule of Soils Testing

CQA MANUAL REQUIREMENTS			ACTUAL TESTING		
Material	Required Testing	Testing Frequency	Quantity	Number of Tests Required	Number of Actua Tests Performed
Low-Permeability Soil Layer Type A	Moisture-Density Relationship (D698, D1557)	1 per material type	÷	1	1
Low-Permeability Soil Layer Type A (400 series NDT)	Nuclear Moisture- Density (D2922 D3017)	1 per 10,000 sf per 6-inch lift thickness	524,500 SF	52	78
Low-Permeability Soil Layer Type A	Visual classification (D2487 D2488)	Continual during excavation of stockpile handling	-	-	-
Low-Permeability Soil Layer Type A	Liquid limit/Plastic limit determination (D4318)	1 per material type and per 100,000 sf with min. of 1 per 6 inches of thickness	524,500 SF	5	7
Low-Permeability Soil Layer Type A	Gradation (D422)	1 per material type and per 100,000 sf with min. of 1 per 6- inches of thickness	524,500 SF	5	7
Low-Permeability Soil Layer Type A	Hydraulic Conductivity (D5084)	1 per material type and per 100,000 sf with min. of 1 per 6- inches of thickness	524,500 SF	5	7
Low-Permeability Soil Layer Type A	Thickness Verification	Horizontal survey point at base and top of layer grid, spacing on 100 ft. grid and at grade breaks.	524,500 SF	53	135
Low-Permeability Soil Layer Type B (1-300 series NDT)	Nuclear Moisture Density (D2922, D3017)	No frequency specified	7	None	106
Low-Permeability Soil Layer Type B	Visual Classification (D2487 D2488)	At undisturbed sample location or during excavation or stockpile	-	-	-
Low-Permeability Soil Layer Type B	Liquid limit/Plastic limit determination (D4318)	1 per 100,000 sf with min. of 1 per 18-inches of thickness	524,500 SF	5	3
Low-Permeability Soil Layer Type B	Gradation (D422)	1 per 100,000 sf with min. of 1 per 18-inches of thickness	524,500 SF	5	3
Low-Permeability Soil Layer Type B	Hydraulic Conductivity (D5084)	1 per 100,000 sf with min. of 1 per 18- inches of thickness	524,500 SF	5	6
Low-Permeability Soil Layer Type B	Thickness Verification	1 per 10,000 sf using soil auger and tape measure	524,500 SF	53	60
Drainage Layer	Visual Classification (D2487 D2488)	Continual during excavation or stockpile handling	_	-	-

CQA MANUAL REQUIREMENTS			ACTUAL TESTING		
Material	Required Testing	Testing Frequency	Quantity	Number of Tests Required	Number of Actua Tests Performed
Drainage Layer	Gradation (D422)	1 per 1,500 yd ³	19,425 yd³	13	16
Drainage Layer	Hydraulic Conductivity (WSDOT 605)	1 per 5,000 yd³	19,425 yd³	4	15
Drainage Layer	Thickness Verification	1 each 10,000 sf, min. of 2 per acre	524,500	52	~ 500
Topsoil Layer	Visual Classification	Continual during excavation or stockpile handling	-	_	-
Topsoil Layer	Gradation (D422)	1 test per 1,500 yd ³	19,426	13	0
Topsoil Layer	Hydraulic Conductivity (D5084)	1 per 5,000 yd³	19,426	4	1
Topsoil Layer	Thickness Verification	1 per acre; min. of 2 per acre	524,500 SF	13	~ 500

4.2.3 Soil Sample Numbering

The CQA Monitors recorded soil sample numbers in a master log maintained at the site continuously as soil samples were obtained. Information contained in the master log of test samples includes:

- Sample number
- Test(s) to be performed
- Date sampled
- CQA Monitor obtaining sample
- Location sampled
- Location of testing (site vs. off site)
- Date sample sent off site
- Date test results received
- Date testing completed at site
- Test results and remarks

4.2.4 Soil Sample Tagging

The CQA Monitors assigned sample identifications for each soil sample. The sample tag was placed on the soil sample container immediately upon sampling and remained with the soil sample throughout processing. The tag contained the following information:

Sample number

- Material type
- Project name and project number
- Sampling CQA Monitor
- Date sampled
- Test(s) to be performed

4.3 Field Moisture-Density Tests

4.3.1 Test Summaries and Numbering

CQA Monitors maintained summary data and a unique numbering system for field moisture-density tests performed by the nuclear moisture density method (ASTM D2922 and ASTM D3017). The summary was maintained in a data base which identified soil components, date tested, monitor performing the test, and a unique sequential sample number for each soil component. The following numbering sequence was used:

Existing Subgrade	0 - 99
1st Lift	100 - 199
2nd Lift	200 - 299
3rd Lift	300 - 399
4th Lift	400 - 499

No test number was repeated for a given soil component, and re-tests of failing tests were given a letter suffix along with the original test number (i.e., re-tests for a failing Test #201 would be #201A, #201B, etc.).

4.3.2 Test Locations

The intent of the field moisture and density testing program was to provide confidence earthwork materials and their installation complied with the technical specifications. To meet this intent, the CQA Monitors performed moisture/density tests of earthfills, Type A and B low-permeability soil layers and topsoil materials installed as part of the closure construction. Tests locations were randomly selected. But tests were taken at various elevations and spaced somewhat uniformly throughout the entire plan dimensions of the fill to assure a representative portion of the soil fill materials was tested. Moisture-density test locations were chosen without bias and additional testing was performed in suspect or marginal areas. During the work, test locations were plotted on a drawing by the CQA Monitor to verify no significant areas were untested.

4.4 Monitoring and Testing Requirements

CQA work performed by the Monitors for various earthwork components of the construction are summarized in the following paragraphs. Each component had specific construction monitoring and testing requirements as defined in the technical specifications and/or CQA Manual. Soils testing described in this section was performed in accordance with the technical specifications and is presented in summary form in Appendix B.

4.4.1 Earthfills

- Verified by observation construction staking was performed prior to work and survey control points were secured outside the work area.
- Verified by observation soils did not contain deleterious materials or desiccation cracks before placement of subsequent lifts or fill above it.
- Performed visual and manual soil classifications (ASTM D 2488) to verify material source was suitable for earthfills.
- Verified by observation earthfill materials were placed and compacted in 6- to 8-inch lifts.
- Performed 41 moisture-density tests to verify each lift was compacted to the minimum required relative compaction.

4.4.2 Type A and B Low-Permeability Soil Layer

- Reviewed owner's work plan regarding material quality control, moisture conditioning, processing, and placement.
- Reviewed pre-construction test data, and zone of acceptable compaction generated for Type A and B cover soil prior to construction.
- Verified Type A and B cover soils were suitable by performing visual and manual soil classifications (ASTM D2488), #200 wash (ASTM D1140), and Atterberg limits testing (ASTM D4318) before work began and as it proceeded.
- Performed moisture-density relationship testing (ASTM D698 and ASTM D1557) to determine zone of acceptable compaction.

- Verified by observation construction staking was performed where required before work started and survey control points were secured outside the work area.
- Monitored moisture conditioning, aeration, processing, and clod removal before and during placement operations.
- Verified by observation surfaces between lifts were scarified and blended to adequately bond lifts.
- Performed 142 nuclear density (ASTM D2922) and moisture content tests (ASTM D3017) to verify Type A and B soil cover was moisture conditioned and compacted within the zone of acceptable compaction.
- Obtained 3- or 6-inch-diameter relatively undisturbed samples of the in-place Type A and B cover soil material by the drive-cylinder method (ASTM D2937).
 Performed seven permeability tests on the Type A soil and three permeability tests on the Type B soil.
- Verified by observation final surface of soil coming into contact with geomembrane was smooth drum rolled and was free of rocks, debris, or other irregularities that could damage or cause undo stress to the geomembrane.
- Verified by observation Type A and B cover soil was protected from desiccation and erosion until covered by geomembrane.
- Verified by observation any damage caused by desiccation cracks, heavy rains, and other sources was properly repaired before geomembrane placement.
- Coordinated with the Owner to perform low-permeability layer thickness verification surveys as placement and final surfacing operations progressed. Verified corrective actions indicated by verification surveys, as required.

4.4.3 Drainage Layer

- Verified drainage layer materials complied with material gradation requirements by performing 16 sieve analysis tests (ASTM D422).
- Verified drainage layer materials complied with permeability requirements by performing 15 falling-head permeability tests (WSDOT 605).

- Verified by observation underlying geosynthetic installations were not damaged during placement of drainage layer by monitoring drainage layer placement operations.
- Verified by observation drainage layer was placed in an up-slope direction.
- Verified drainage layer material thickness during placement operations by checking thickness against grade control stakes.

4.4.4 Topsoil

- Verified by observation underlying installation and drainage layer placement was completed and in accordance with the technical specifications prior to topsoil placement operations.
- Verified by observation construction staking was performed on a 50-foot grid pattern to control total layer thickness.
- Verified by observation of the control stakes topsoil was placed in a single uniform lift thickness and was placed in an up-slope direction.
- Verified by observation final surface of the topsoil was track walked with crawler dozer leaving track marks perpendicular to the slope.

4.4.5 Culverts and Drains

- Verified by observation and comparison with technical specifications culvert material complied with specified requirements.
- Verified by observation culverts were installed to the lines, grades, and dimensional cross-sections shown on the drawings with a tolerance of 0.1 foot vertical and 1.0 foot horizontal.
- Verified by observation compacted bedding surface was provided for the culvert pipe and the bedding material was conformed to the lower half perimeter of the culvert pipe.

4.4.6 Ditches

 Verified by observation construction staking was performed prior to work and survey control points were secured outside the work area.

- Verified ditches were constructed to the alignments, slopes, flow line elevations, and cross-sections shown on the drawings.
- Verified installation of rip rap and rock erosion protection complied with the drawings.

4.4.7 Site Storm Sewerage Systems

- Verified construction staking was performed to layout system alignments and locations of manholes, inlets, and catch basins. Verified construction staking provided bench mark off-sets with elevation secured outside the work area.
- Verified pipe, pipe couplings, inlets, manholes, and catch basins used to construct
 the site storm sewerage systems comply with product requirements of the
 technical specifications.
- Verified pipe trench was excavated in accordance with the dimensional crosssections and design elevations shown on the drawings.
- Verified all pipes, inlets, manholes, and catch basins were installed in accordance
 with the dimensional cross-sections shown on the drawings, as described in the
 technical specifications, and at the correct invert elevations.

4.5 Construction Phase Problems and Resolutions

4.5.1 Reclamation of Interim Cover

The existing grade was modified on the east side to receive more waste by stripping off the existing interim cover, stockpiling the interim cover, placing the waste, and then replacing the stockpiled interim cover. In the process of removing and replacing the interim cover, pieces of trash and larger rocks became mixed in with the interim cover. During compaction of the interim cover, the interim cover soil was carefully hand screened of this debris using manual labor. The material placement and hand screening was performed until the soil was considered by EMCON's CQA monitor to be in general conformance with the Type B low-permeability soil specifications.

In placing the Type A low-permeability soil, rock greater than 1 inch in diameter would occasionally dislodge from the underlying Type B low-permeability soil and become mixed with the Type A low-permeability soil. EMCON's CQA monitor was on site full time to observe the placement of the Type A low-permeability soil and direct the removal of this larger rock.

4.5.2 Flattening Slopes

Once the Type B low permeability soil was in place over the trash, survey indicated portions of the slopes had areas which were steeper than 3H:1V. These steeper portion of the slopes were filled using 6-inch compacted lifts of Type B low-permeability soil until a 3H:1V slope or flatter was achieved for the Type 2 cover areas. All filling was done under direction of the EMCON Engineer and tested by the CQA monitor.

4.5.3 Drainage Layer Redesign

The drainage layer design initially called for a minimum in-place permeability of 1 cm/sec. This required the drainage aggregate to consist of rounded gravel with little to no sand. Placing this aggregate proved to be problematic on the 3H:1V slopes as the material would tend to roll downslope and was difficult to maneuver in with LGP tracked equipment. It was decided that approximately one part sand would be added to five parts aggregate to increase the internal angle of friction of the aggregate. The addition of the sand, however, reduced the permeability of the drainage layer, requiring a maximum drainage length of 100 feet rather than the drainage length of 300 feet originally designed. To facilitate drainage, perforated, corrugated polyethylene pipe was placed within the drainage layer at a maximum spacing of 100 feet. These drainage pipes and a detail of this system are provided on the as-built drawings.

5 CONSTRUCTION QUALITY ASSURANCE FOR GEOSYNTHETICS

5.1 General

Objectives of the geosynthetics CQA program were to assure proper construction techniques and procedures were used, and assure the project was completed in accordance with the project construction drawings and the technical specifications. By meeting these objectives, the CQA program identified and defined problems during construction, and corrected them before construction was completed.

This section describes CQA procedures performed for the installation of geosynthetic components. The following types of geosynthetics were utilized for this project:

- Textured 60-mil HDPE geomembrane
- Geocomposite
- Non-woven geotextile
- Geosynthetic clay liner

CQA for the geosynthetics installations was performed to verify materials delivered to the site met specified requirements and were installed in accordance with the design. To monitor compliance, EMCON reviewed the manufacture's quality control submittals, performed independent material conformance testing, monitored construction testing, performed independent construction testing, and visually monitored installations. Conformance testing refers to activities taking place before geosynthetics installation. Construction testing includes activities occurring during geosynthetics installation.

CQA conformance and construction testing was conducted in accordance with this CQA manual, and in accordance with the technical specifications.

5.2 Geosynthetic Clay Liner

5.2.1 Manufacturers Quality Control Testing

The GCL manufacturer performed quality control testing as specified in the technical specifications. The CQA Monitor reviewed the manufacturer's quality control tests and verified GCL met the requirements listed in the Technical Specifications.

5.2.2 Delivery

During GCL delivery the CQA Monitor verified the following:

- Verified the GCL was shipped in rolls.
- Verified rolls were wrapped individually in relatively impermeable and opaque protective covers.
- Verified each roll was marked or tagged with the following information: manufacturer's name; product identification; lot and roll numbers; roll dimensions and weight.
- Verified rolls were stacked no more than four high.
- Verified rolls were stored on high level ground, elevated above ground surface and covered with a waterproof covering.
- Verified GCL was not damaged or exposed to excessive moisture during shipping.

5.2.3 Manufacturer Testing

Tests. The GCL manufacturer provided manufacturer quality assurance/quality control (MQA/MQC) certification for all GCL delivered to the project. Table 5-1 lists the quantity of GCL delivered, conformance tests required, the required test frequency, and the number of conformance tests performed. Test results are as follows.

Table 5-1
GCL Conformance Test Summary

Material Component	Square Footage Delivered	MQA/MQC Test Required	Required Test Frequency	Number of MQA/MQC Tests Required	Number of MQA/MQC Tests Performed
Bentonite Component of GCL	134,118	Moisture content	1 per 100 tons	1	1
Geotextile component of GCL	134,118	Grab strength	1 per 100,000 sf	2	25
Manufactured GCL	134,118	Mass per unit area	1 per 200,000 sf	1	25
Manufactured GCL	134,118	Mass per unit area	1 per 40,000 sf	4	
Manufactured GCL	134,118	Moisture content	1 per 40,000 sf	4	25
Manufactured GCL	134,118	Permeability	1 per lot	1	2
Manufactured GCL	134,118	Residual shear strength	1 series of tests for each interface including internal strength	1	1

5.2.4 Subgrade Preparation

Prior to GCL installation, the CQA Monitor verified the following:

- The grades below the GCL were verified and accepted by the Contractor.
- Required documentation for constructed layers, if any, and subgrade preparation below the GCL were completed and accepted.
- Standing water was not present.
- The supporting surface had been rolled to provide a smooth surface and did not contain materials which could damage the GCL.

5.2.5 Deployment and Installation

All installation of GCL was monitored continuously by the CQA Monitor. The CQA Monitor performed the following work during GCL deployment and installation:

- Verified equipment used to deploy GCL over soil did not cause excessive rutting of the subgrade, and the ruts were repaired.
- Verified deployed GCL panels did not have folds or excessive slack.
- Verified GCL on side-slopes was not deployed perpendicular to the direction of the slope unless the area requiring GCL lining was less than one roll width wide.

- Verified GCL was anchored and then unrolled working down to keep the material free from wrinkles and folds.
- Verified horizontal seams were not made on slopes greater than 10 percent.
- Verified bentonite in GCL was evenly distributed, and there were no thin spots, or other panel defects.
- Where defects were noted, recorded the defects and their repair.
- Verified that only panels which could be covered in 1 day were deployed and that panels were not placed during wet weather.
- Verified GCL was protected against wind damage, as required.
- Verified panels were joined by overlapping a minimum of 9 inches along the panel length.
- Verified the overlap was a minimum of 12 inches at ends of roll, and at end of all repair locations.
- Verified loose bentonite paste was applied between overlaps at a minimum rate of 4 ounces per linear foot of overlap.

The CQA Monitor visually inspected GCL for hydration by walking over the GCL to locate soft spots. There was no hydration of the GCL prior to it being covered with geomembrane.

5.3 Geomembrane

5.3.1 Delivery

Upon delivery of geomembrane, the CQA Monitor:

- Inspected geomembrane rolls for damage occurring during shipping and handling, identified damaged materials, and where required verified damaged materials were repaired or set aside.
- Verified the geomembrane was stored in accordance with the technical specifications and was protected from puncture, dirt, grease, water, moisture, mud, mechanical abrasions, excessive heat, direct sunlight, and other damage.

- Verified all manufacturing documentation required by the technical specifications was received and reviewed.
- Verified the geosynthetics receipt log form was completed for all geomembrane materials received (Appendix C-2).

5.3.2 Conformance Testing

Tests. One geomembrane sample was obtained from every 100,000 square feet of material supplied. Table 5-2 lists geomembrane type, the quantity delivered, number of resin batches per material, and the number of conformance tests performed. The material was sampled at the site by the CQA Monitors. The samples were forwarded to an independent testing laboratory for the following conformance tests:

- Density (ASTM D 792, Method A or ASTM D 1505).
- Carbon black content (ASTM D 1603).
- Carbon black dispersion (ASTM D 3015).
- Thickness (ASTM D 1603).
- Tensile properties (ASTM D 638).

Table 5-2
Geomembrane Conformance Test Summary

Geomembrane Type	Square Footage	Number of Resins	Number of
	Delivered	Batches	Conformance Tests
60-mil textured (both sides) HDPE	698,625	2	6

Results of these tests are presented in Appendix C-2. The CQA Manager reviewed all conformance test results for conformance with the technical specifications. All material tested met the specified requirements.

Sampling Procedure. Samples were taken across the entire roll width and were 3 feet long. The CQA Monitor marked the machine direction and the manufacturer's roll identification number on the sample. The CQA Monitor also assigned a conformance test number to the sample and marked the sample with that number.

5.3.3 Geomembrane Installation

Surface Preparation. During installation the CQA Monitors verified by observation the low-permeability soil layer surfaces were prepared in accordance with the technical

specifications. Before geomembrane installation, the subgrade soil surface was inspected by the CQA Monitor and the Installer. The CQA Monitor verified the following:

- All lines and grades for soil surface had been verified by the contractor.
- The soil surface had been rolled and compacted to be free of surface irregularities, loose soil, and protrusions and did not have stones or other objects that could damage the geomembrane.
- The anchor trench dimensions had been checked and the trenches were free of sharp objects and stones.
- There were no excessively soft areas.
- The soil surface was not saturated and no standing water was present.
- The soil surface had not desiccated.
- All construction stakes had been removed and there was no debris, rocks, or any other objects in or on the soil surface.
- The Installer had certified in writing that the surface on which the geomembrane was installed was acceptable.

Panel Placement. Before installing any geomembrane, the Installer submitted panel layout shop drawings in accordance with the technical specifications. The drawings showed the proposed layout of the panels, including panel identification numbers, field seams, and any other details not conforming to the construction drawings.

The CQA Monitors maintained a separate panel layout drawing during construction showing panel numbers, destructive test locations, and large repair locations. This drawing is provided in Appendix C-2. Small repair locations and nondestructive testing was tabulated and shown in Appendix C-2.

During panel placement operations, the CQA Monitor performed the following work in accordance with the technical specifications and CQA manual:

- Recorded panel numbers and dimensions on a panel/seam log.
- Observed the panel surface as it was deployed and recorded panel defects and defect corrective actions (panel rejected, patch installed, extrudate placed over the defect, etc.) on a repair log, and verified by observation and testing that corrective actions were made.

- Verified equipment used during deployment operations did not damage the geomembrane.
- Verified equipment used on the geomembrane did not leak hydrocarbons onto the geomembrane.
- Verified the surface beneath the geomembrane had not deteriorated since previous acceptance. Verified no stones, construction debris, or other damaging items were beneath the geomembrane.
- Verified the geomembrane was not dragged across an abrasive surface. If the geomembrane was dragged across an abrasive surface, it was inspected for scratches and repaired or rejected, if necessary.
- Recorded weather conditions including temperature, wind speed, wind direction, and humidity. Verified the geomembrane was not deployed in the presence of excess moisture (fog, dew, mist, etc.). In addition, verified the geomembrane was not placed when the air temperature was less than 40°F, greater than 100°F, or when standing water or frost was on the ground.
- Verified crews working on the geomembrane did not smoke, wear shoes that could damage the geomembrane, or engage in activities that could damage the geomembrane.
- Verified methods used to deploy the geomembrane minimized wrinkles and panels were anchored to prevent movement by the wind. Verified the Installer corrected any geomembrane damage resulting from wind.
- Verified no more panels were deployed than could be seamed on the same day.

The CQA Monitor informed the Contractor, Installer, and the CQA Manager if any of the above conditions were not met and verified corrective actions were taken.

Field Seaming. Before the start of geomembrane seaming operations and during welding operations, each welder and welding apparatus was tested (trial weld) in accordance with the technical specifications. The CQA Monitor observed all welding operations and verified the Installer quantitatively tested each trial weld for peel adhesion (ASTM D413) and bonded seam strength (ASTM D3083). The trial weld samples were at least 2 feet long (3 feet for double wedge welding machines) and 12 inches wide, with the seam centered lengthwise. The results of the peel and shear tests were recorded on a trial weld log form. The trial welds had to meet specified requirements for peel and shear and the failures had to be either ductile or a film tearing bond (FTB) for a wedge weld. An FTB means the test specimen breaks outside of the seam bond in the parent material, but not in the seam. If at any time the CQA Monitor believed a welding apparatus was

not functioning properly, an additional trial weld was performed. If there were wide changes in temperature (±30°F), humidity, or wind speed, additional trial welds were performed. Each trial weld was allowed to cool to ambient temperature before it was tested.

During seaming operations the CQA Monitor performed the following work in accordance with the technical specifications:

- Verified the Installer had the number of welding apparatuses and spare parts necessary to perform the work.
- Verified equipment used for seaming did not damage the geomembrane.
- Verified contact surfaces of the panels were clean, and free of dust, grease, dirt, debris, and moisture before welding.
- Verified seam grinding was completed less than 1 hour before seam welding, and the upper sheet was beveled (extrusion welding only).
- Verified seam overlap was at least 3 inches or in accordance with manufacturer's recommendations.
- Verified strips of geomembrane, wide enough and long enough to protect the hot wedge welder from running on the subgrade, were placed below the geomembrane.

5.3.4 Construction Testing

Nondestructive Seam Testing. The purpose of nondestructive geomembrane testing was to detect discontinuities or holes in the seams. Nondestructive geomembrane tests include vacuum and air pressure testing. Nondestructive testing was performed over the entire length of the seam.

It was the Installer's responsibility to perform nondestructive testing as part of his quality control (QC) program. The CQA Monitor's responsibility was to verify and document the Installer's QC testing complied with the technical specifications and to document seam defects and repairs. Documentation was made on panel/seam logs and repair logs which are presented in Appendix C-2.

During nondestructive testing, the CQA Monitor observed performance of the testing. If any areas failed, the CQA Monitor marked the area with a waterproof marker compatible with the geomembrane, informed the Installer of the required repairs, and recorded the repair area on the repair log.

Destructive Seam Sampling Procedures and Field Testing. Destructive seam samples were taken at intervals of at least one test per 500 lineal feet of geomembrane seam. However, additional samples were taken if the CQA Monitor suspected a seam did not meet specified requirements. Reasons for taking additional samples included:

- Wrinkling in seam area
- Excess crystallinity
- Suspect seaming equipment or techniques
- Weld contamination
- Insufficient overlap
- Adverse weather conditions
- Failing tests

The installer removed 12-inch-wide by 44-inch-long seam specimens with the seam centered lengthwise at locations identified by the CQA Monitor and field tested 1-inch-wide by 6-inch-long specimens from each end of the sample for peel and bonded seam strength before the remaining 42-inch samples were shipped off-site for laboratory testing. During sampling procedures the CQA Monitor performed the following work in accordance with the technical specifications:

- Observed sample cutting
- Marked each specimen and sample with an identifying number which contained the seam number, destructive sample test number, welder, date and time welded
- Recorded sample locations on the panel layout drawing and panel-seam logs
- Recorded sample locations, weather conditions, and reasons samples were taken (e.g., random sample, visual appearance, result of a previous failure, etc.) on the destructive seam test form

If one or both of the on-site 1-inch specimens failed in either peel or bonded seam strength, the Installer collected additional samples 10 feet in each direction from the point of the failed test. If the second test passed, the contractor capped the seam between the two passing test locations. If subsequent tests failed, the sampling and testing procedure was repeated until the length of the poor quality seam was established by passing test results.

The 42-inch-long sample was 12-inches wide, with the welded seam centered along the length of the sample. Samples were divided into three sections: One 12-inch-wide by 12-inch-long section for the Installer, one 12-inch-wide by 18-inch-long section for CQA laboratory, and one 12-inch-wide by 12-inch-long for the Owner to archive.

Third Party Laboratory Testing. All CQA destructive seam samples obtained for third party (CQA) testing were shipped to a testing laboratory to verify seam quality. The laboratory tested five specimens from each sample in peel and bonded seam strength. Minimum test values are presented in the technical specifications.

If the laboratory test failed in either peel or bonded seam strength, the Installer either reconstructed the entire seam, or collected additional samples at least 10 feet on either side of the failed sample for re-testing. This process was repeated until passing laboratory tests bracketed the failed seam section and the seam between the passing test specimens was repaired. Laboratory testing governed seam acceptance. In no case was field testing of repaired seams used for final acceptance.

5.3.5 Repairs

Portions of geomembrane panels and seams that contained a flaw, a destructive test, nondestructive test cuts or holes, or failed destructive testing, were repaired in accordance with the technical specifications. The CQA Monitor located and recorded all repairs on the repair sheet log (Appendix C-2).

5.3.6 Wrinkles

During placement of materials over the geomembrane, temperature changes, or creep due to equipment loading caused wrinkles to develop in the geomembrane. Wrinkles which could fold over were repaired by cutting out excess material. In no case was material placed over the geomembrane resulting in the geomembrane folding over on itself. The CQA Monitor notified the contractor if wrinkles were being covered by drain rock, and the contractor proceeded with corrective actions. The CQA Monitor documented corrective actions and the contractor removed the wrinkles and preventing damage to the geomembrane surface.

5.4 Geocomposite and Geotextile

5.4.1 Delivery

During delivery of geocomposites and geotextiles the CQA Monitor performed the following work:

Verified equipment used to unload the rolls did not damage the material.

- Verified all manufacturer's documentation required by the technical specifications was received and reviewed.
- Verified by observation gocomposite and geotextile rolls were wrapped in impermeable and opaque protective covers in accordance with the technical specifications.
- Verified each roll was marked or tagged with the following information: manufacturer's name; project identification; lot number; roll number; roll dimensions. This information was entered on the geosynthetic receipt log (Appendix C-3 and C-4).
- Verified material was stored in a location protected from ultraviolet light exposure, precipitation, mud, dirt, dust, puncture, cutting, or any other damaging or deleterious conditions.

5.4.2 Geocomposite Conformance Testing

The CQA Monitor obtained geocomposite conformance test samples for every 100,000 square feet of material delivered to the site. Samples were taken across the entire roll width and were 3 feet long. The CQA Monitor marked the machine direction and the manufacturer's roll identification number on the sample. The CQA Monitor also assigned a conformance test number to the sample and marked the sample with that number.

Table 5-3 lists the quantity of geocomposite delivered to the site, the number of conformance tests required, and the number of conformance tests performed. Tests were performed separately on the geotextile and geonet portions of the material and tests were performed on the geocomposite as delivered to the site. The CQA Monitor forwarded samples of the geotextile portion of the geocomposite to the geosynthetic testing laboratory for the following conformance tests:

- Unit Weight (ASTM D3776)
- Grab Tensile Strength (ASTM D1682)
- Apparent Opening Size (ASTM D422)

The CQA Monitor also forwarded samples of the geonet portion of the geocomposite to the geosynthetic testing laboratory for the following conformance tests:

- Specific Gravity (ASTM D1505)
- Thickness (ASTM D1777)
- Percent Carbon Black (ASTM D1603)

The CQA Monitor forwarded samples of the geocomposite as delivered to the geosynthetic testing laboratory for ply adhesion (ASTM F904) testing.

Table 5-3
Geocomposite Conformance Test Summary

	Square Footage Delivered	Number of Conformance Test Required	Number of Conformance Tests Performed
Geocomposite	173,140	2	2

The material met specified requirements and conformance test results are presented in Appendix C-3.

5.4.3 Geotextile Conformance Testing

Tests. The CQA Monitor obtained geotextile conformance test samples for every 100,000 square feet of material delivered to the site. Samples were taken across the entire roll width and were 3 feet long. The CQA Monitor marked the machine direction and the manufacturer's roll identification number on each sample. The CQA Monitor also assigned a conformance test number to the sample and marked the sample with that number.

Table 5-4 lists the quantity of geotextile delivered to the site, the number of conformance tests required, and the number of conformance tests performed. The CQA Monitor forwarded samples to the geosynthetic testing laboratory for the following conformance tests for the geotextile:

- Fabric Weight (ASTM D3776)
- Grab Tensile Strength (ASTM D4632)
- Mullen Burst Strength (ASTM D3786)
- Puncture Resistance (ASTM D4833)
- Permittivity (ASTM D4491)
- Trapezoidal Tear Strength (ASTM D4533)

Table 5-4
Geotextile Conformance Test Summary

Geotextile Type	Square Footage Delivered	Number of Conformance Tests Required	Number of Conformance Tests Performed
Geotextile Filter	369,000	4	6

The material met specified requirements and conformance test results are presented in Appendix C-4.

5.4.4 Geocomposite and Geotextile Installation

Surface Preparation. Before geocomposite and geotextile installation, the CQA Monitor performed the following in accordance with the technical specifications:

- Verified all underlying lines and grades were verified by the Contractor and Installer.
- Verified soil or geomembrane surfaces did not contain stones that could damage the geocomposite or geotextile.
- Verified geomembrane had been placed and tested.

Placement and Seaming. During placement and seaming the CQA Monitor:

- Observed the geocomposite and geotextile as it was deployed and recorded defects and defect corrective actions (panel rejected, patch installed, etc.), and verified corrective actions were performed.
- Verified crews working on the geocomposite and geotextile did not smoke, wear shoes that could damage the materials, or engage in other activities that could damage the materials.
- Verified the geocomposite and geotextile was securely anchored and temporarily ballast to prevent movement by wind.
- On slopes greater than 20 percent, ensured the geocomposite and geotextile was securely anchored.

- Verified adjacent panels were overlapped and seamed in accordance with the technical specifications.
- Verified the geotextile was not exposed to direct sunlight for more than five days.
- Verified geotextile roll ends overlapped 6 inches as specified by manufacturer.
- Verified the panels were joined in accordance with the technical specifications or their revisions.
- Examined the geocomposite and geotextile after installation to ensure no potentially harmful foreign objects such as needles or rocks were present.

5.4.5 Repairs

Where repairs to geocomposite or geotextile were necessary the CQA Monitor observed the work to assure the following procedures were followed:

- Patching used to repair large holes, tears, and large defects.
- Removal used to replace areas with large defects where the preceding methods were not adequate.

Holes, tears, and defects were repaired in the following manner. Soil or other material which penetrated the defect was removed prior to repair. The defect was patched using the same type of geotextile or geocomposite, lystered into place, with the material overlapped 24 inches in all directions. Any tear, hole, or defect exceeding 10 percent of the roll width was removed and replaced.

5.5 Construction Phase Problems and Resolutions

During construction, rock was generally placed on the geomembrane by pushing aggregate up or laterally. Placing rock above the stormwater control berm was difficult using this methodology because of the length of run required to push material form the northeast corner. Attempts to place rock above the berm from south to north on the east slope resulted in some wrinkling above the berm. One large wrinkle was required to be cut out and repaired using extrusion welding. Other, smaller wrinkles were supported on both sides with aggregate and left in place. The creation of wrinkles due to the placement of aggregate was mitigated by creating more points of access across the perimeter ditch for the LGP dozers such that aggregate could be pushed upward and using a truck mounted conveyor system to place the aggregate.

In one area south of the access road, a tire-width rut in the underlying low-permeability soil was noticed by observing a depression in the geomembrane. This area was repaired by cutting the geomembrane, folding it back, regrading the underlying low-permeability soil across the rut, and placing the geomembrane back over the area. The geomembrane flap cut was then repaired using extrusion welding.

Seam tests along the east side of panel 39 failed, possibly due to dust and/or moisture. It was decided to cap strip the entire length of this panel to mitigate the wedge welding problem in this area.

On the night of September 17, 1998, a storm blew one panel on the north slope that had been deployed but not yet welded to the bottom of the slope. Under supervision of the CQA monitor, the contractor was able to pull the panel back over the undamaged low-permeability soil liner and continue seaming the other panels.

6 CONSTRUCTION QUALITY ASSURANCE FOR PIPE

6.1 Introduction

Perforated and solid polyvinyl chloride (PVC) pipe was utilized to construct the landfill gas system. Corrugated polyethylene pipe was used for site drainage improvements.

CQA objectives for the pipe installations were to verify that the pipe systems were installed in accordance with the design. The CQA program reviewed the Contractor's quality assurance control submittals, monitored construction testing, and monitored installations.

All construction testing was conducted in accordance with the project technical specifications.

6.2 Construction Monitoring

The following sections list the work performed by the CQA Monitors for the PVC pipe delivery, handling, and installation.

6.2.1 Delivery, Handling, and Storage

- Verified chains, end hooks, cable slings, or any other devices that may scar the pipe were not used to the handle the pipe.
- Verified pipe was not damaged during handling operations and that damaged pipe was separated from accepted pipe.
- Verified pipe out-of-roundness did not occur due to excessive stacking heights when the pipe was stored at the site.
- Verified pipe was not damaged by sharp rocks or excessive abrasion when the pipe was pulled into place during jointing, fusion welding, and installation operations.

6.2.2 Connections Installation

The CQA Monitor verified all pipe connections were constructed in accordance with the project specifications and drawings.

6.3 Construction Phase Problems and Resolutions

No construction problems were encountered during installation of pipe over the closure area.

7 CONSTRUCTION QUALITY ASSURANCE FOR LANDFILL GAS SYSTEMS

7.1 Introduction

This section describes the CQA procedures implemented during installation of the landfill gas systems.

7.2 Landfill Gas Systems Quality Assurance

7.2.1 General

The following sections list specific monitoring requirements for each component of the landfill gas system. The CQA program implemented included a review of the contractor's quality control submittal, and construction monitoring. Prior to construction, all contractor submittals were reviewed by the CQA Monitors. During installation materials were inspected to verify they complied with the submittals and project specifications. The CQA Monitor paid special attention to dimensions, materials, and constructed locations of materials. The following sections list specific monitoring performed for each component of the landfill gas system.

7.2.2 Vertical Wells

During construction of LFG vertical wells, the CQA Monitor:

- Verified project safety measures were reviewed and followed.
- Verified vertical PVC pipe casing was slotted or perforated properly.
- Verified non-restricted slip collar was functional.
- Verified pipe diameter and schedule.
- Verified contractor maintained vertical gas well boring log.

- Verified final boring depth.
- Verified pipe connection procedures were in compliance with specifications.
- Verified gravel backfill met specified gradation requirements.
- Verified bentonite backfill material was hydrated chips.
- · Verified vertical casing was centered in the boring.
- Verified bentonite seals were constructed at proper intervals and elevations.
- Verified completed wells were capped to prevent free-venting of landfill gas.

7.2.3 Well Head and Header Pipe Installation

During the installation of PVC pipe connections, the CQA Monitor:

- Verified materials used including, but not limited to the PVC pipe, fittings, flanges, couplings, solvent primer, and solvent cement met specified requirements.
- · Verified pipe diameters and schedules.
- Inspected the pipe and fittings for interior cleanliness and damage prior to placing and joining in their final position.
- Verified all pipe cuts were made at right angles to the axis of the pipe, cuts were smoothed, beveled, and wiped clean.
- Verified exterior surfaces of all pipes and the interiors of all fittings were wiped clean prior to applying the joining materials.
- Verified contractor applied the primer and cement materials in a way that prevented excessive spillage.
- Verified solvent/cement, joints for the PVC pipe, and fittings were made in accord with the manufacturer's recommendations or ASTM D 2855.

7.3 Construction Phase Problems and Resolutions

Deformation of the 4-inch pipe casing at well E28 occurred during installation near the slip joint. The deformation occurred approximately 2 inches below the 4-inch bell when

the pipe was formed. The bells from both the 4-inch and 3-inch PVC pipes were removed and a coupling was welded to each pipe to attach to the slip joint. Screws were placed into the 3-inch pipe below the reducer to insure the pipe would not slip apart during installation. The well casing was installed and backfilled to the designed depth with rock, bentonite, and clay.

8 DOCUMENTATION

The quality assurance plan depended on thorough monitoring and documentation of construction activities. Therefore, the CQA Monitors documented quality assurance requirements were satisfied through observation, testing and documentation of these activities. Documentation consisted of daily record keeping, testing and installation reports, non-conformance reports (if necessary), progress reports, photographic records, design and specification revisions, and this construction report.

8.1 Daily Recordkeeping

At a minimum, daily records were kept consisting of a daily record of construction progress, daily construction report, observation and test data sheets, and, non-conformance/corrective measure reports.

The daily field report summarized ongoing construction and discussions with the Contractor and was prepared by the CQA Monitors. At a minimum, the report included the following:

- Date, project name, project number, and location
- A unique number for cross-referencing and document control
- Weather data
- A description of all ongoing construction for the day in the area of the monitor's responsibility
- An inventory of equipment utilized by the contractor
- Items of discussion and names of parties involved in discussions
- A brief description of tests and observations, identified as passing or failing, or, in the event of failure, a re-test
- Areas of non-conformance/corrective actions, if any

- Summary of materials received and quality documentation
- Follow-up information on previously reported problems or deficiencies
- Record of any site visitors

The daily reports for this project are included in Appendix F.

Observation and test data sheets included the following information, as appropriate for the form being used.

- Date, project name, and location
- A unique number for cross-referencing and document control
- Weather data, as applicable
- A reduced scale site plan showing sample and test locations
- Test equipment calibrations, if applicable
- A summary of test results identified as passing, failing, or, in the event of a failed test, re-test
- Completed calculations

The observation and test data sheets for earthwork are included in Appendix B and for geosynthetics are included in Appendix C.

8.2 Photographs

Construction activities were photographed. Photographs included any significant problems encountered and actions taken to correct these problems. Construction photographs are on file at the EMCON office in Bothell, Washington.

9 MODIFICATIONS DURING CONSTRUCTION

9.1 Introduction

This section describes design modifications and CQA modifications made during construction. Minor design modifications not substantially affecting the design are not discussed, but are shown on the record drawings as are the major modifications described in this section.

9.2 Additional Earthfill Type 2 Cover Slope

Additional earthfill was placed along the top of the existing slope in order to meet the required 3H:1V subgrade slope for a Type 2 cover. This resulted in additional testing of Type B low-permeability soil and general earthfill in 6-inch compacted lifts, as shown in Appendix B.

9.3 Stormwater Control Berm

The stormwater control berm design was modified to be constructed of Type B low-permeability soil rather than Type A low-permeability soil, and a GCL was added above the Type B to provide a low-permeability barrier layer over the berm. This is shown on Section B, Drawing 8 of the as-built drawings provided in Appendix A.

9.4 Access Roadway

GCL was used in place of clay on the access roadway along the north slope. The Engineer obtained approval from TPCHD on September 8, 1998, for this modification. This area of the GCL is shown in Appendix C-1.

9.5 Perimeter Ditch

The concrete channel proposed to bring drainage around the leachate pump risers was not constructed.

9.6 Modified Drainage Layer Permeability and Gradation

Sand was mixed with the drainage stone to provide additional stability. The hydraulic conductivity stated in specification Section 02225 was 1 cm/s. Test results conducted at the site indicated a hydraulic conductivity on the order of 10⁻¹ cm/s. The Engineer reviewed these results and added drainage piping to the design due to the lower hydraulic conductivity test results of the drainage stone with sand mixed in. The locations of the drainage pipes is shown on the record drawings.

The drainage layer grain size was changed to the following:

Sieve Size	Previous Percent Passing	Modified Percent Passing
1-inch	100	100
3/8-inch	20-60	20-30
U.S. No. 4	4-40	4-10
U.S. No. 200	0-3	0-3

9.7 Modified Type A and B Cover Soil Permeability

The hydraulic conductivity of the low-permeability soil for Type A was changed from being less than or equal to 4.7×10^{-6} cm/s to 1.0×10^{-6} cm/s, and for Type B from being less than or equal to 5.4×10^{-4} cm/s to 1.0×10^{-4} cm/s.

9.8 Modifications to Construction Quality Assurance and Quality Control Testing

During construction limited modifications were made to construction testing frequencies and test methods as described in the following paragraphs.

9.8.1 Engineered Fill (Earthfill)

The engineered fill for miscellaneous structures was changed from minimum of 95 percent of the maximum dry density and zero to plus four percent of optimum moisture content to being within the zone of acceptable compaction as determined by pre-construction testing.

9.8.2 GCL

Properties for the geotextile component of the GCL were modified as follows:

Test	Test Designation	Previous Requirement	Modified Requirement
Mass Per Unit Area	ASTM D 3776	5 oz/yd²	6 oz/yd ²
Grab Strength	ASTM D 4632	> 50 lbs	(Deleted)
AOS		<0.250 mm	(Deleted)

Manufacturer's quality control testing frequency for the geotextile component of the GCL was modified as follows:

Test	Previous Testing Frequency	Modified Testing Frequency
Mass Per Unit Area	1 per 10,000 yd ²	1 per 200,000 ft ²
Grab Strength	1 per 10,000 yd ²	1 per 200,000 ft ²

9.8.3 Geomembrane Interface Shear Testing

Interface shear testing (ASTM D 5321) of the textured HDPE geomembrane for the Type 2 and Type 3 cover systems was added to the manufacturer's testing requirements. The Type 2 cover requirement was 140 psi shear at 200 psi normal pressure. The Type 3 cover requirement was 70 psi at 100 psi normal pressure.

10 STATEMENT OF COMPLIANCE

The construction activities described in this report were observed by the Project Engineer and Construction Quality Assurance Monitors from EMCON. Based on direct observations made by EMCON personnel, materials testing, other laboratory testing, and other construction documentation described in this report, EMCON concludes the Hidden Valley Landfill, East Lined Area Partial Closure was constructed in a workman-like manner and in accordance with the intended design.

EMCON

132488 12

Kent W. Wiken, P.E. Senior Project Engineer

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

APPENDIX A RECORD DRAWINGS

EAST LINED AREA PARTIAL CLOSURE HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON

PREPARED FOR

LAND RECOVERY, INCORPORATED

P.O.Box 73057 Puyallup, Wa. 98373 (253) 847-7555

ABBREVIATIONS



18912 North Creek Parkway Suite 200 Bothell, WA. 98011

LEGEND

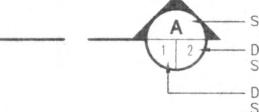
APPROX.	APPROXIMATÉ	[42888]	NATIVE OR EVICTING MATERIAL
CONC	CONCRETE	12/22	NATIVE OR EXISTING MATERIAL
CMP	CORRUGATED METAL PIPE		COMPACTED NATIVE MATERIAL
CPEP Ø OR DIA	CORRUGATED POLYETHYLENE PIPE DIAMETER	19 is	
DEG	DEGREE	\$	3/4" - 0" CRUSHED ROCK
DI	DUCTILE IRON	0.00	BEDDING SAND
DWG	DRAWING		BEDDING SAND
EL	ELEVATION		TYPE 1 FINAL COVER
EXIST	EXISTING		
EQUIV	EQUIVALENT		TYPE 2 FINAL COVER
FL FT	FLOWLINE	0,0,0,0,0	TYPE 3 FINAL COVER
HDPE	HIGH DENSITY POLYETHYLENE		LOW PERMEABILITY SOIL, TYPE A
I.E.	INVERT ELEVATION	[17.64	i
HP	HIGH POINT		PAVEMENT SECTION
L.F.	LINEAL FEET	2020	RIPRAP 3"-6"
MAX	MAXIMUM		
МН	MANHOLE		WASTE
MIN	MINIMUM		¥
NTS	NOT TO SCALE	(1214)	STRUCTURAL FILL
OD	OUTSIDE DIAMETER		
PVC	POLYVINYL CHLORIDE PIPE	W. W.	VEGETATION
PSI	POUNDS PER SQUARE INCH		DRAINAGE GEOCOMPOSITE
PSF	POUNDS PER SQUARE FOOT		DRAINAGE GEOCOMPOSITE
SCH	SCHEDULE	-	GEOSYNTHETIC CLAY LINER (GCL)
SDR	STANDARD DIMENSION RATIO		
THRD	THREADED	Adoption and control representatives and control of the file	60-MIL HPDE GEOMEMBRANE
TYP	TYPICAL		OFOTEVILLE
W/	WITH '		GEOTEXTILE
W/O	WITHOUT	2	SLOPE GRADIENT

344	DITCH LINE
	LIMIT OF DRAINAGE SUB-BASIN
MATERIAL THE THE THE THE	DOWN SLOPE PIPE OR CULVERT
	EXISTING STORM DRAIN
	EXISTING CONTOUR
	INSTALLED
	DITCH LINE
	LIMIT OF DRAINAGE SUB-BASIN
	LIMIT OF EAST LINED AREA PARTIAL CLOSURE
entregiste burnishmen spectations substitute	EAST LINED AREA PARTIAL CLOSURE BOUNDARY
	STRAW BALE BARIER
Р ——	ELECTRIC POWER (AREAL)
	PROPOSED FINAL CONTOUR
	LIMIT OF EXISTING BOTTOM LINER
	PERIMETER DRAINAGE DITCH
	- LIMIT OF FINAL COVER TYPE
	LIMIT PARTIAL CLOSURE
	SPOT ELEVATION SYMBOL
	MANHOLE
	LIGHT POLE
	POWER POLE
	STORM DRAIN CATCH BASIN

EXISTING

DRAWING INDEX			
DRAWING NUMBER	TITLE AND DESCRIPTION	LATEST REVISION NUMBER	LATEST REVISION DATE
	COVER SHEET	0	3/99
1	SITE PLAN	0	3/99
2	FINAL COVER GRADING PLAN	0	3/99
3	DRAINAGE PLAN	0	3/99
4	PERIMETER DITCH PROFILES	0	3/99
5	GAS WELL LAYOUT	0	3/99
6	COVER DETAILS & SECTIONS	0	3/99
7	COVER DETAIL & SECTIONS	0	3/99
8	DRAINAGE DETAIL & SECTIONS	0	3/99
9	GAS SYSTEM DETAILS & SECTION	0	3/99

SYMBOLS:



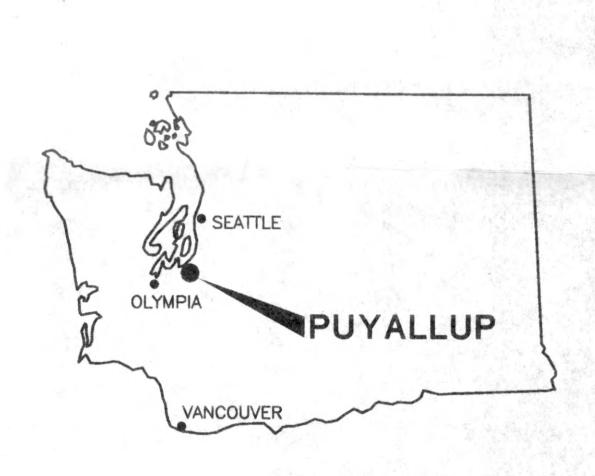
FIRE HYDRANT

SECTION LETTER DRAWING NUMBER ON WHICH SECTION APPEARS DRAWING NUMBER ON WHICH SECTION IS CUT

DETAIL DETAIL NUMBER DRAWING NUMBER ON WHICH DETAIL APPEARS DRAWING NUMBER ON WHICH

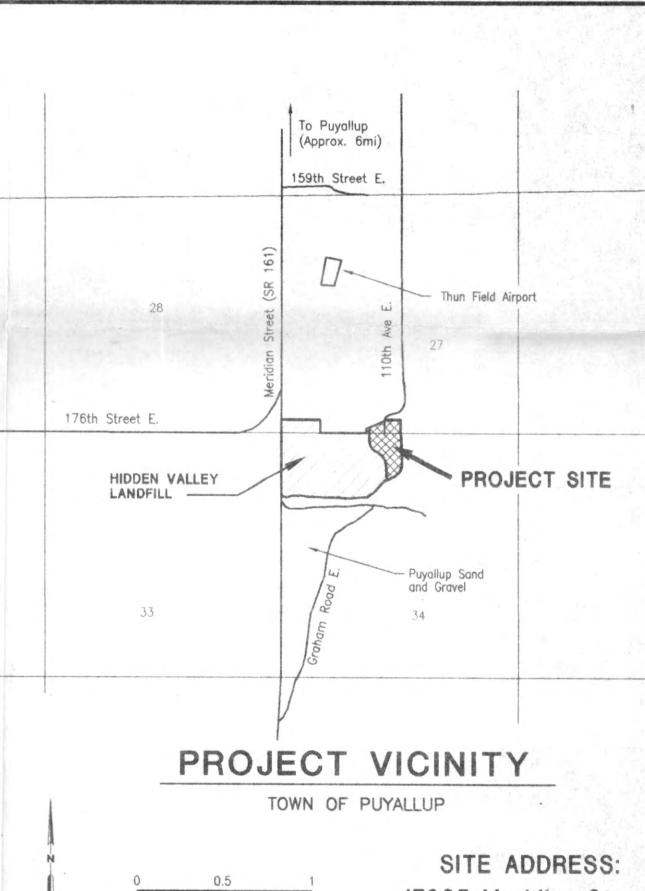
RECORD DRAWINGS

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON SURVEY INFORMATION PROVIDED BY OTHERS, EMCON HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT



LOCATION MAP

STATE OF WASHINGTON



17925 Meridian Street

Base from USGS Fredrickson, Washington Quadrangle

PROJECT MANAGER

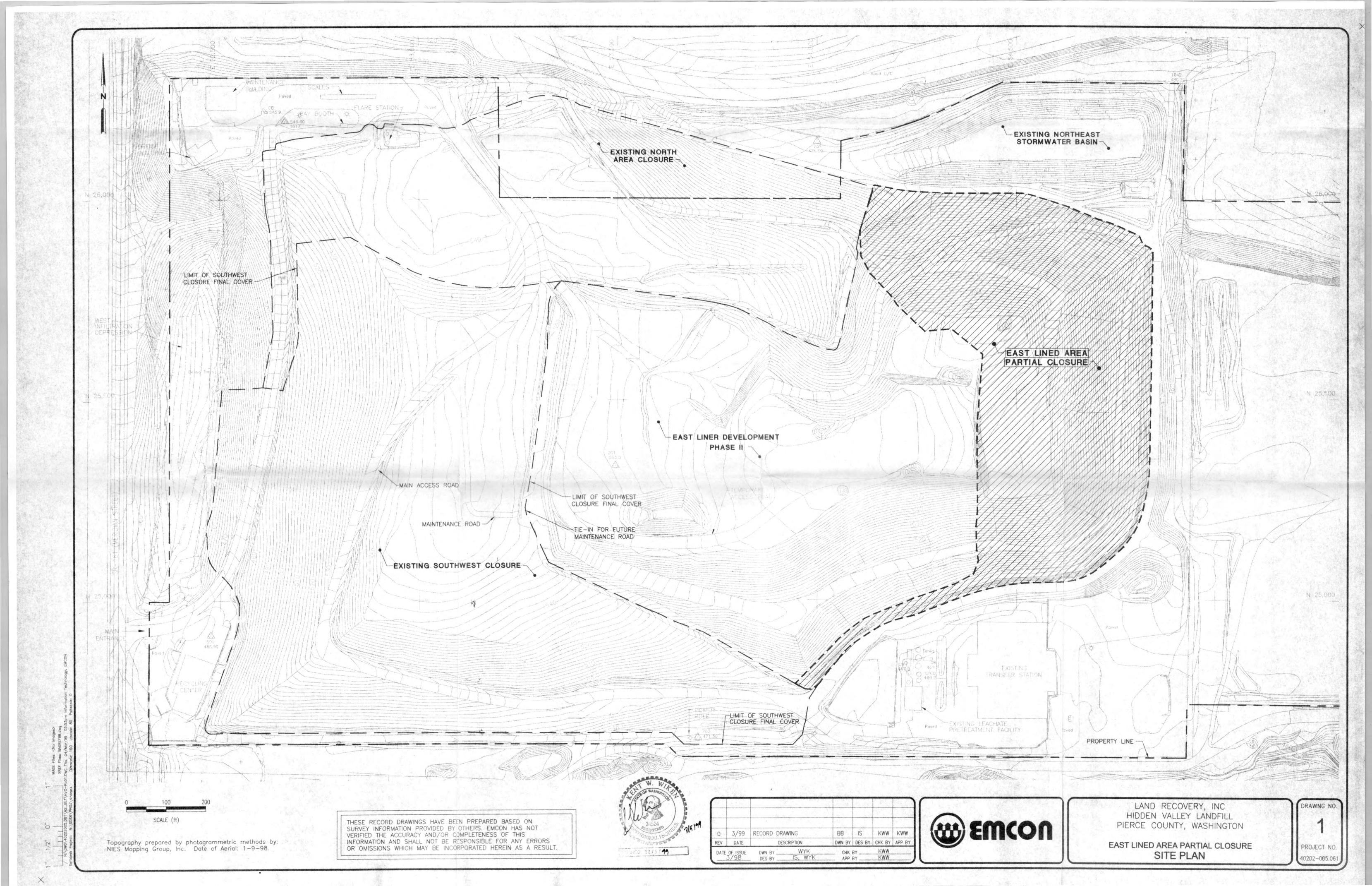
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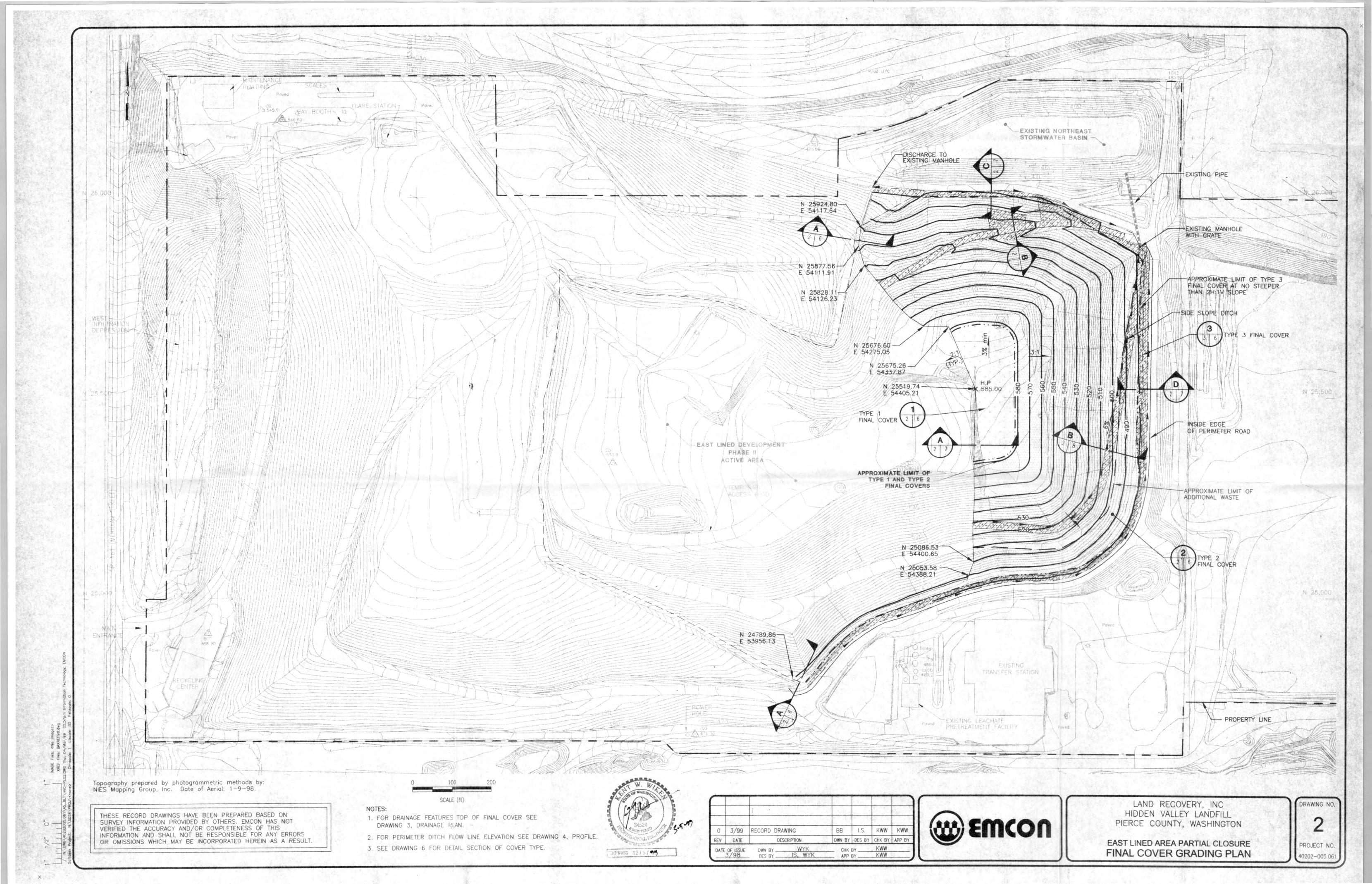
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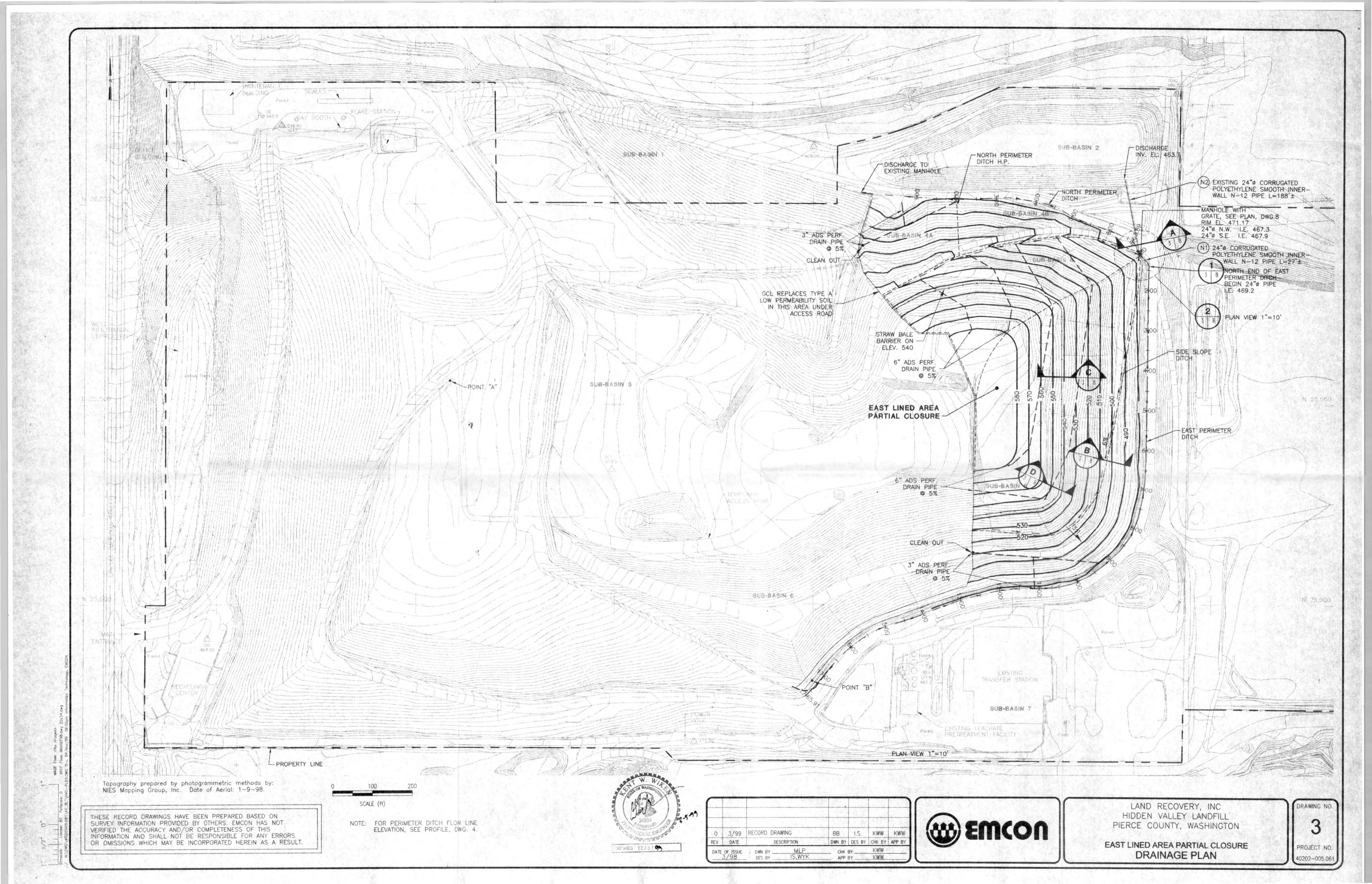
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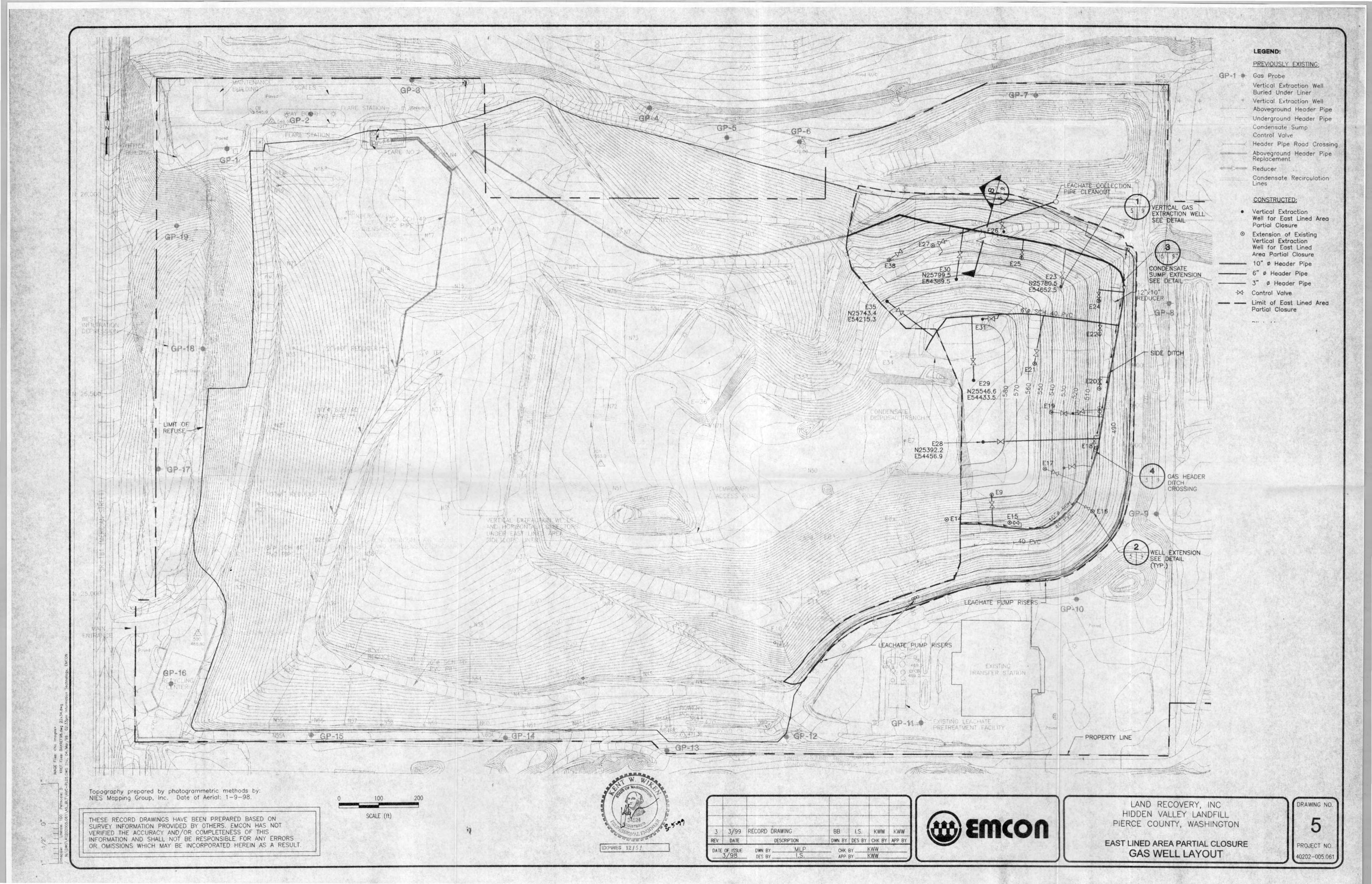


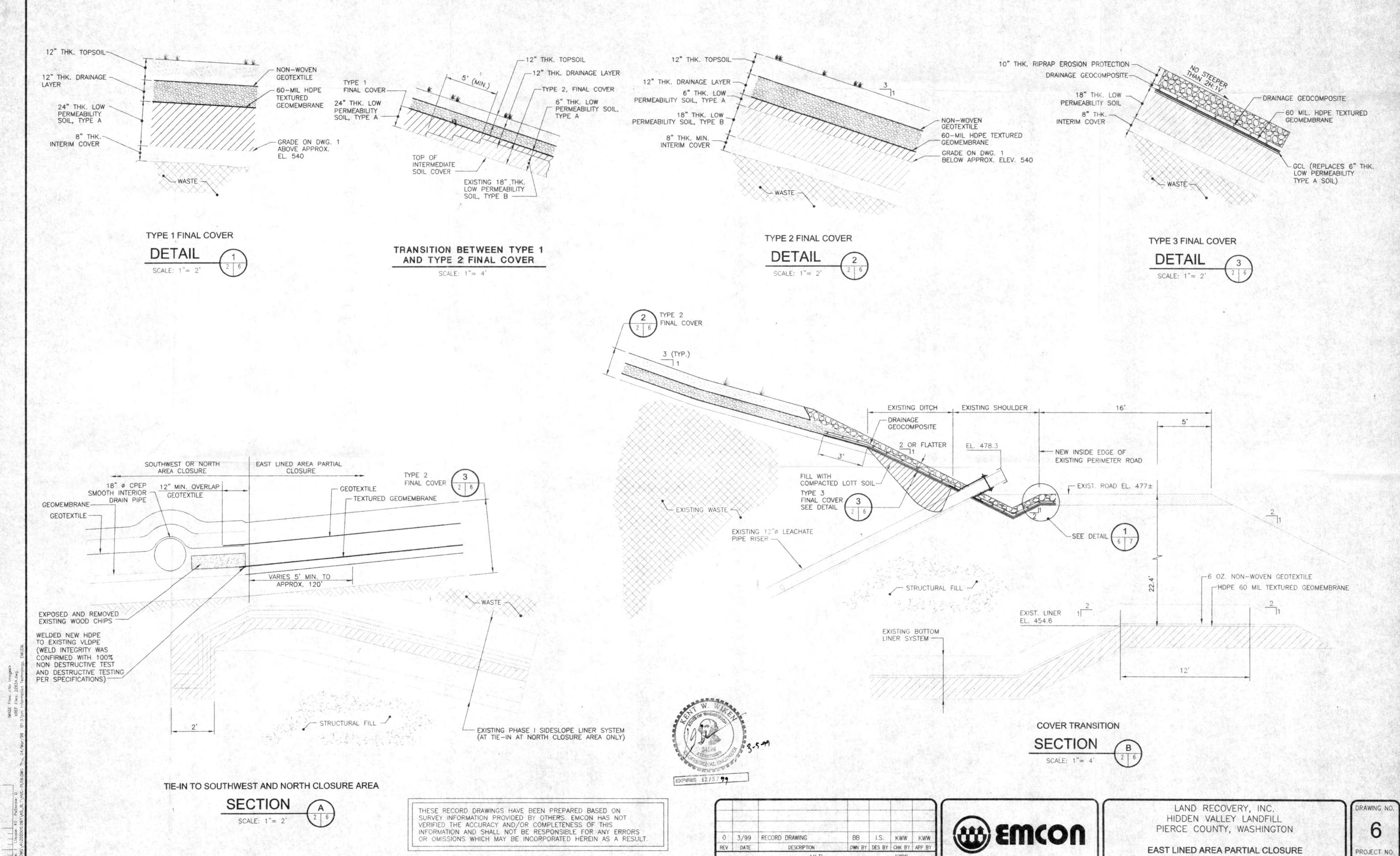




--EXISTING GRADE AT FLOWLINE LOW WATER CROSSING DISCHARGE TO THE RIM OF EXISTING MANHOLE DITCH EXCAVATION -- MANHOLE WITH GRATE 3+00 4+00 1+00 2+00 5+00 STATION AND DITCH FLOW LINE ELEVATION NORTH PERIMETER DITCH EXISTING GRADE AT FLOW LINE DITCH FLOW LINE -EAST PERIMETER DITCH TRANSITIONED TO 2'-6" DEEP AT 50' BEFORE ENTERING 24" PIPE 50' - DITCH BOTTOM EXCAVATION MANHOLE WITH GRATE 468 EXISTING 24" PIPE 1+00 2+00 3+00 4+00 5+00 6+00 7+00 9+00 10+00 11+00 12+00 13+00 15+00 8+00 14+00 16+00 17+00 STATION AND DITCH FLOW LINE ELEVATION EAST AND SOUTH PERIMETER DITCH PROFILE B SCALE: HOR. 1" = 100' 3 4 VER. 1" = 2' LAND RECOVERY INC. DRAWING NO. THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON SURVEY INFORMATION PROVIDED BY OTHERS. EMCON HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT. HIDDEN VALLEY LANDFILL PIERCE COUNTY, WASHINGTON BB I.S. KWW KWW 0 3/99 RECORD DRAWING DWN BY DES BY CHK BY APP B EXPARED 12/5 EAST LINED AREA PARTIAL CLOSURE PROJECT NO. DATE OF ISSUE DWN BY WYK

3/98 DES BY WYK CHK BY KWW
APP BY KWW PERIMETER DITCH PROFILES 40202-005.061





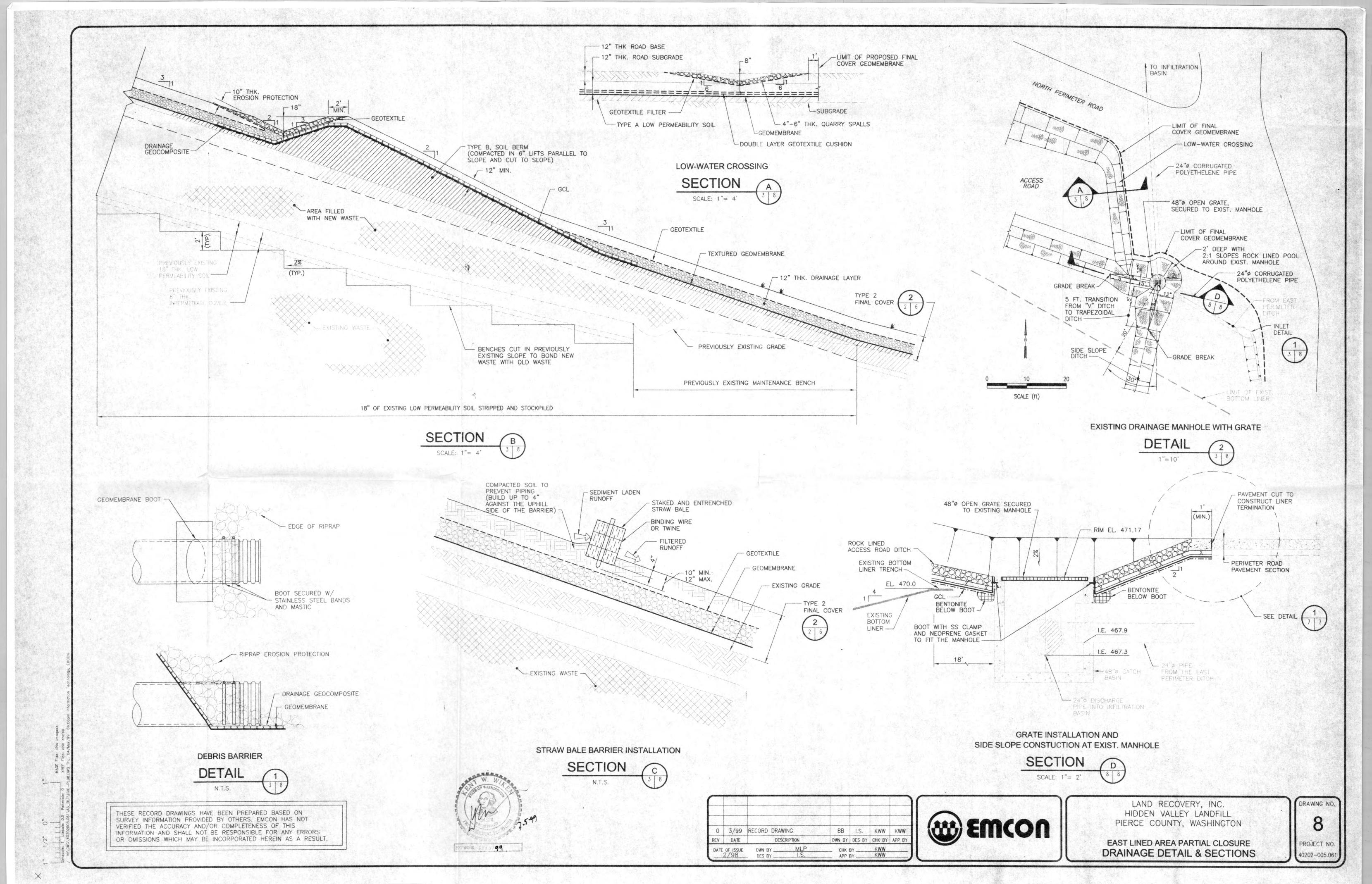
APP BY ____

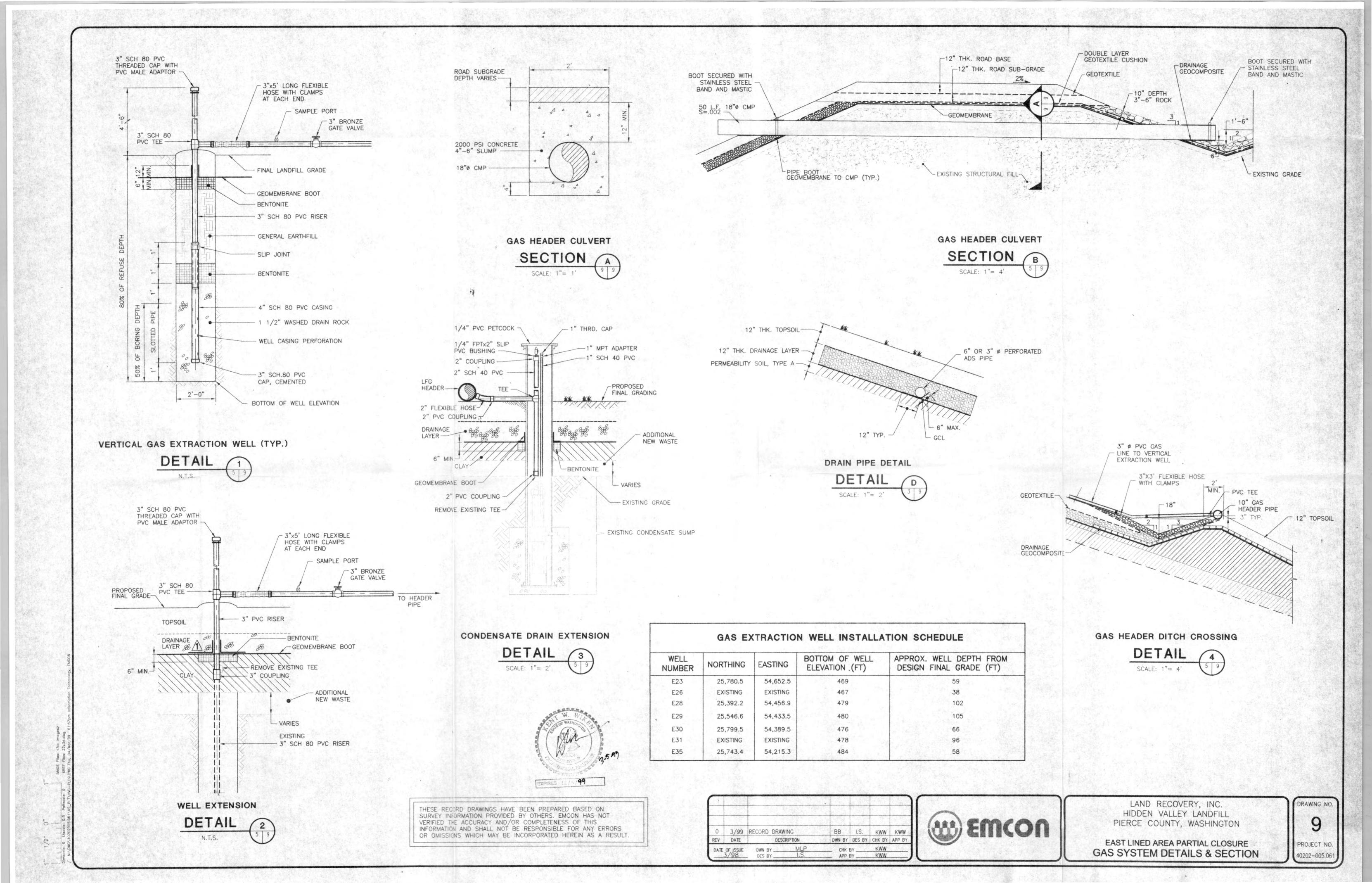
DES BY ____

COVER DETAILS & SECTIONS

40202-005.061

1" 1/2" 0"





APPENDIX B SUMMARY OF EARTHWORK TEST DATA

APPENDIX B EARTHWORK TESTING

B-1a Test Location Drawings: B-1 Existing Type B Low Permeability Soil Thickness Verification B-2 Existing Top of Type B Low Permeability Soil B-3 Nuclear Moisture and Density Tests Additional Low Permeability Soil First Lift B-4 Nuclear Moisture and Density Tests Additional Low Permeability Soil Second Lift B-5 Nuclear Moisture and Density Tests Additional Low Permeability Soil Third Lift B-6 Nuclear Moisture and Density Tests Additional Low Permeability Soil Top 6" Lift B-1b Summary of Nuclear Moisture/Density Tests B-1c Reference Moisture/Density Curves B-1d Permeability Test Data B-1e Liquid Limit/Plastic Limit and Gradations

LOW PERMEABILITY SOIL AND EARTHFILL

B-2 DRAINAGE LAYER

B-2a Permeability Test Data

Thickness Verification

B-2b Gradation

B-3 TOPSOIL

B-1f

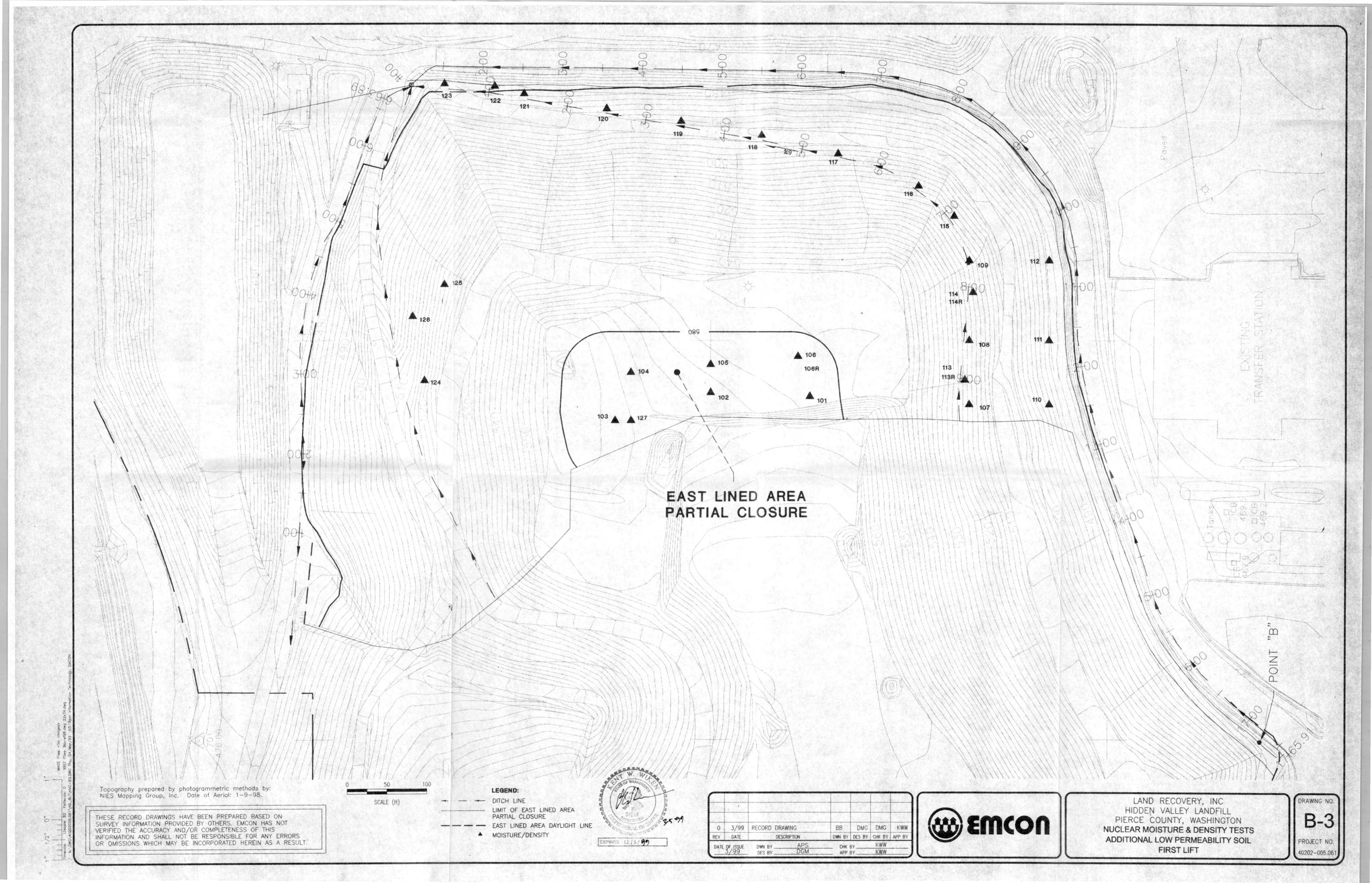
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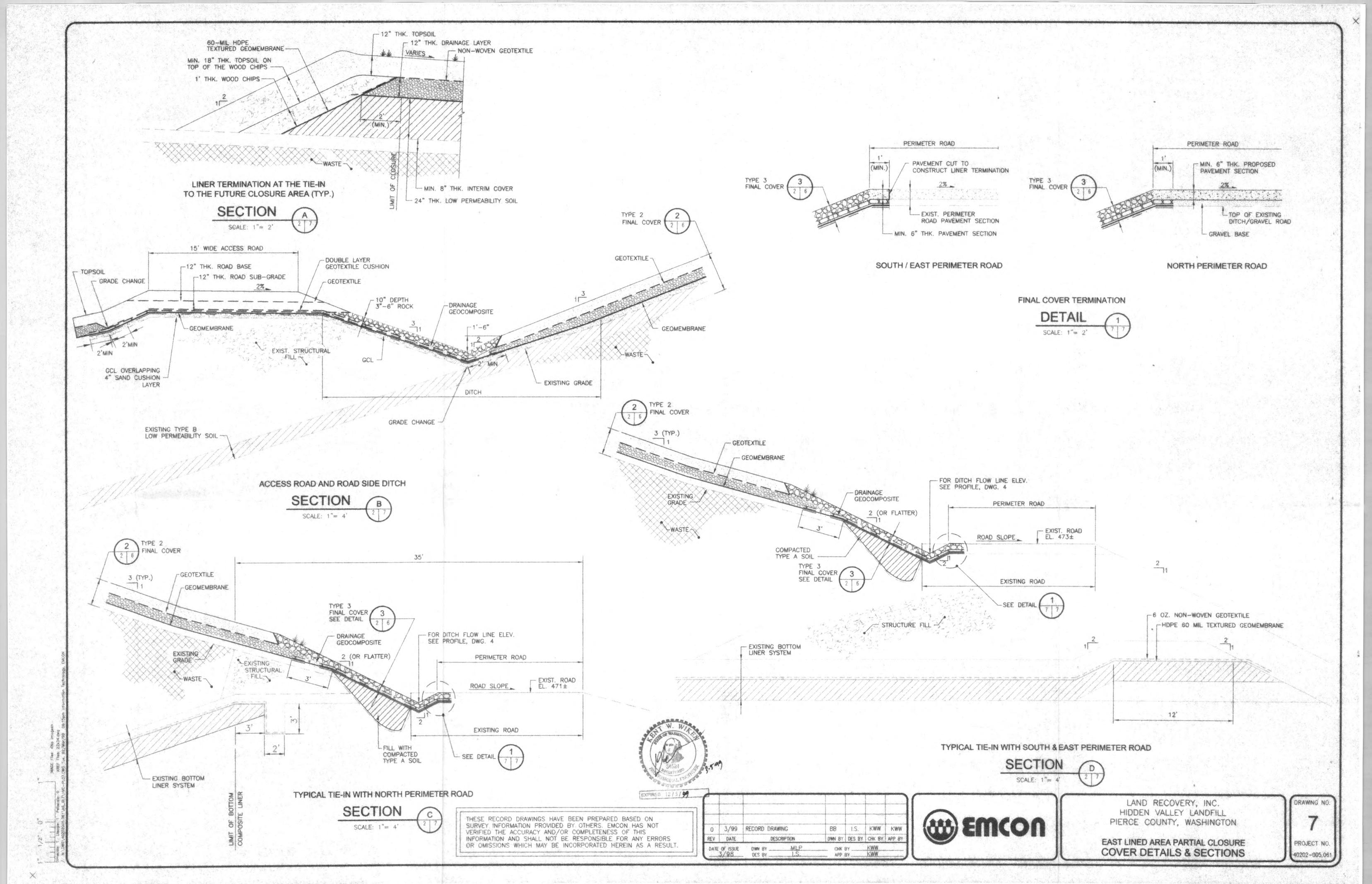
B-3a Permeability Test Data

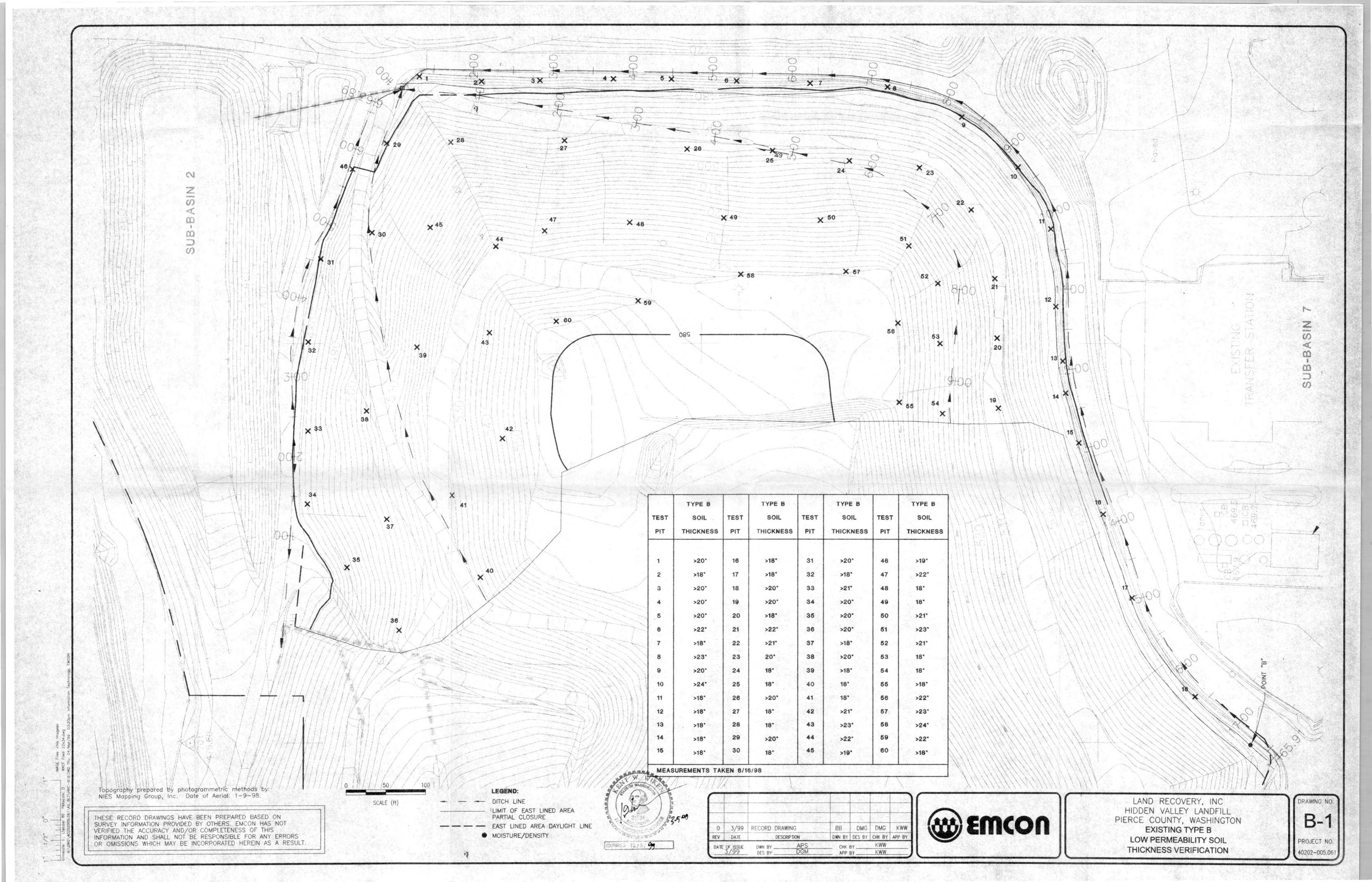
B-1 LOW PERMEABILITY SOIL AND EARTHFILL

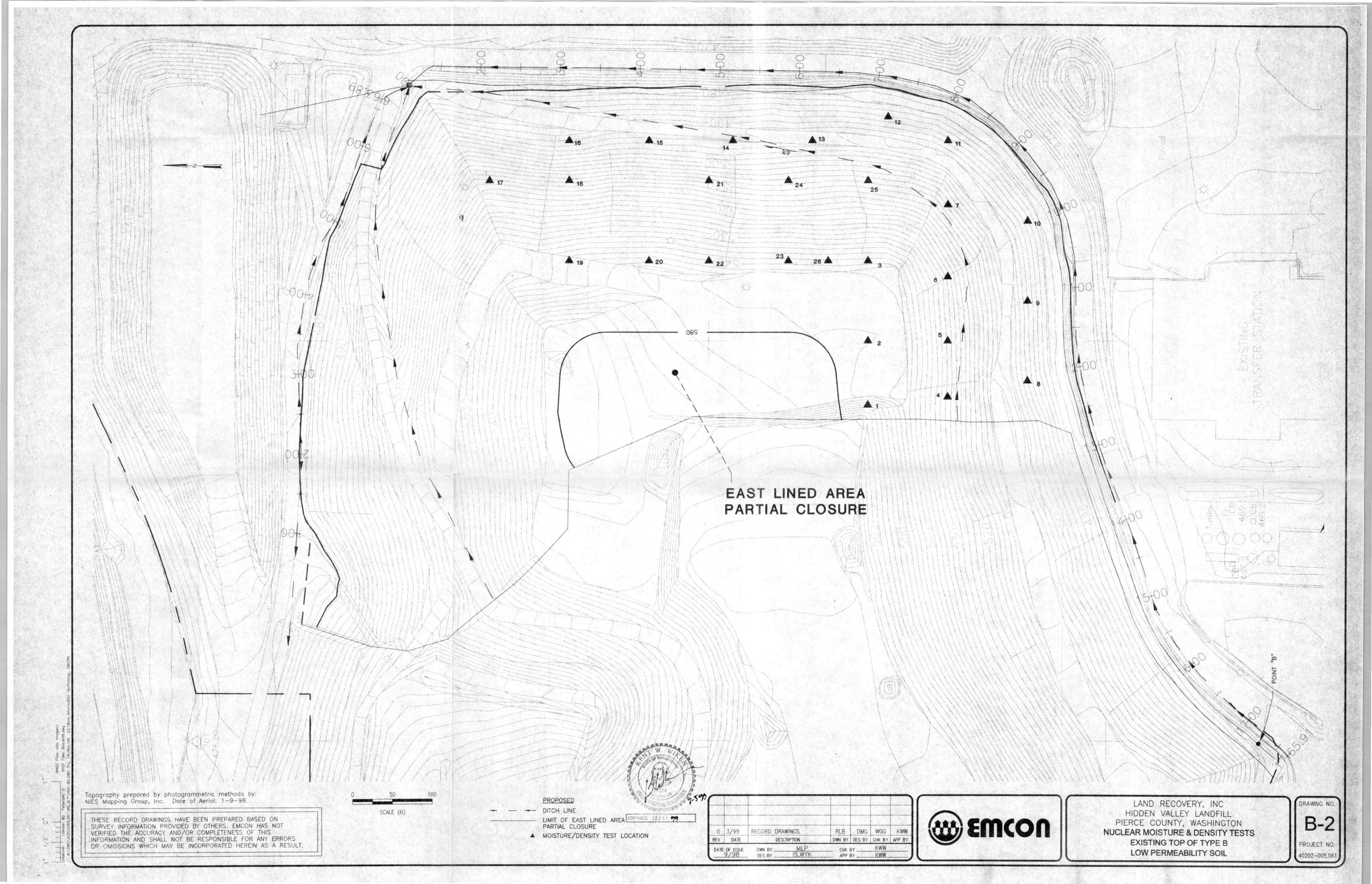
B-1a Test Locations Drawing:

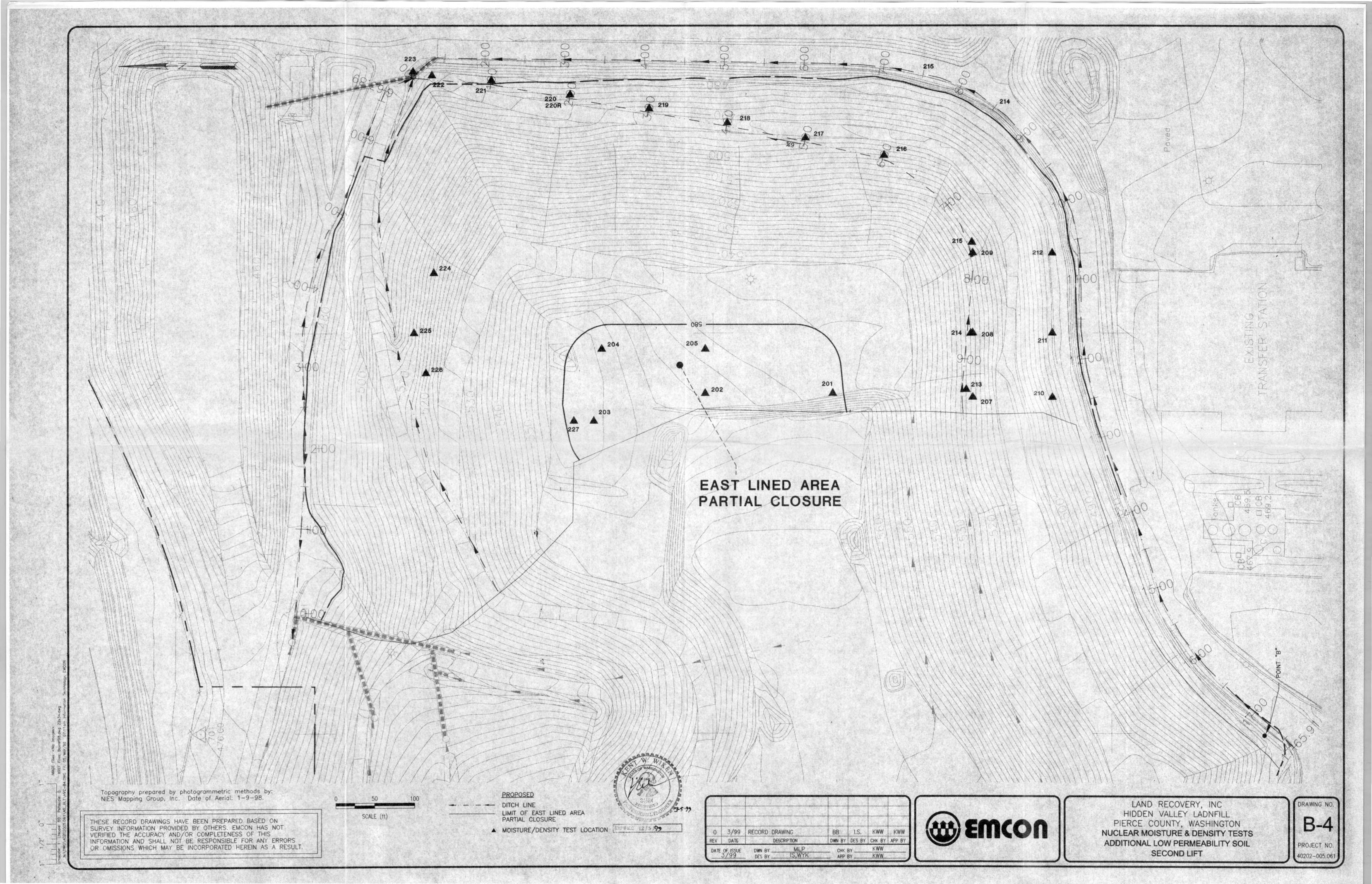
- B-1 Existing Type B Low Permeability Soil Thickness Verification
- B-2 Existing Top of Type B Low Permeability Soil
- B-3 Nuclear Moisture and Density Tests Additional Low Permeability Soil First Lift
- B-4 Nuclear Moisture and Density Tests Additional Low Permeability Soil Second Lift
- B-5 Nuclear Moisture and Density Tests Additional Low Permeability Soil Third Lift
- B-6 Nuclear Moisture and Density Tests Additional Low Permeability Soil Top 6" Lift

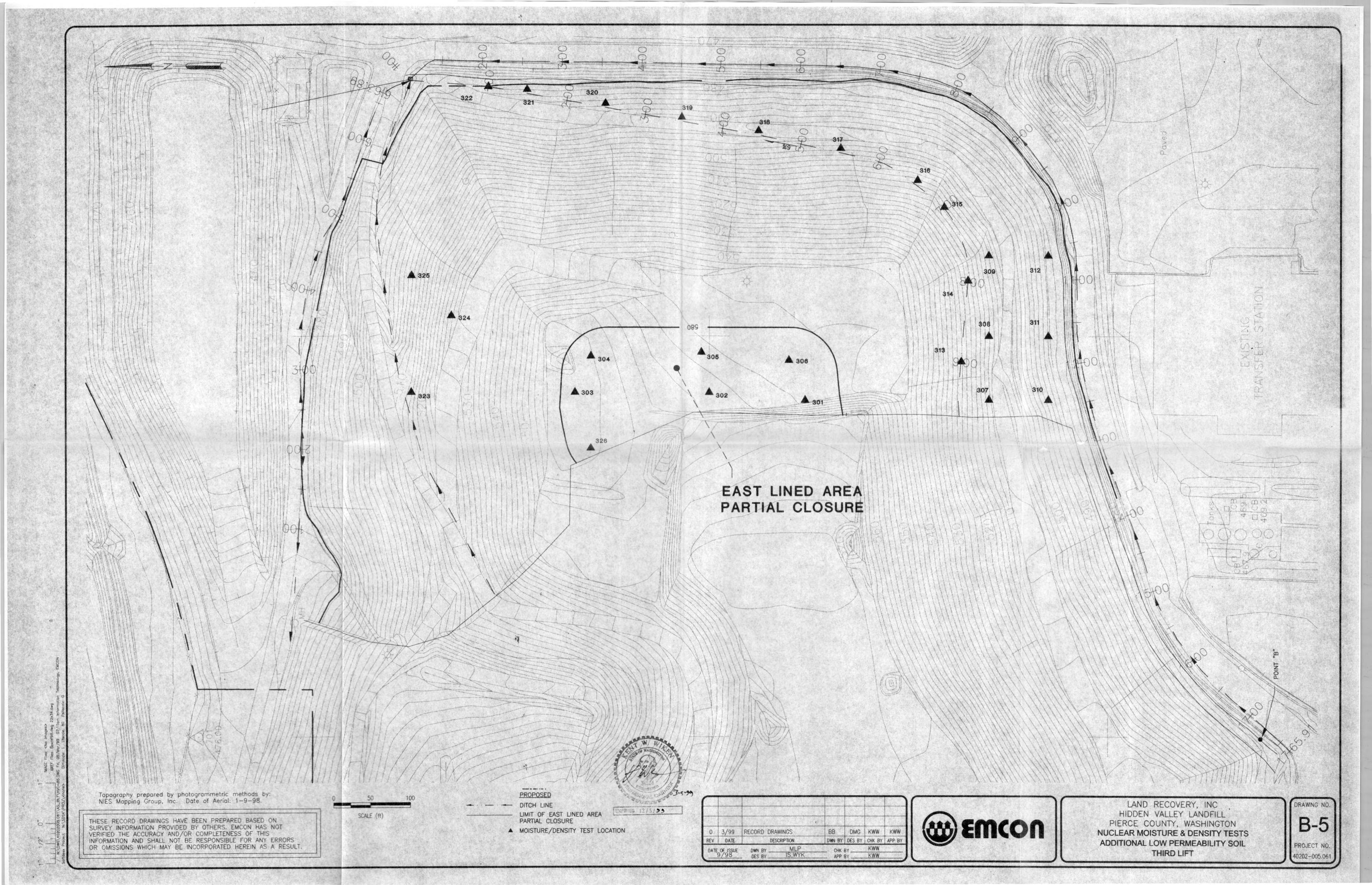


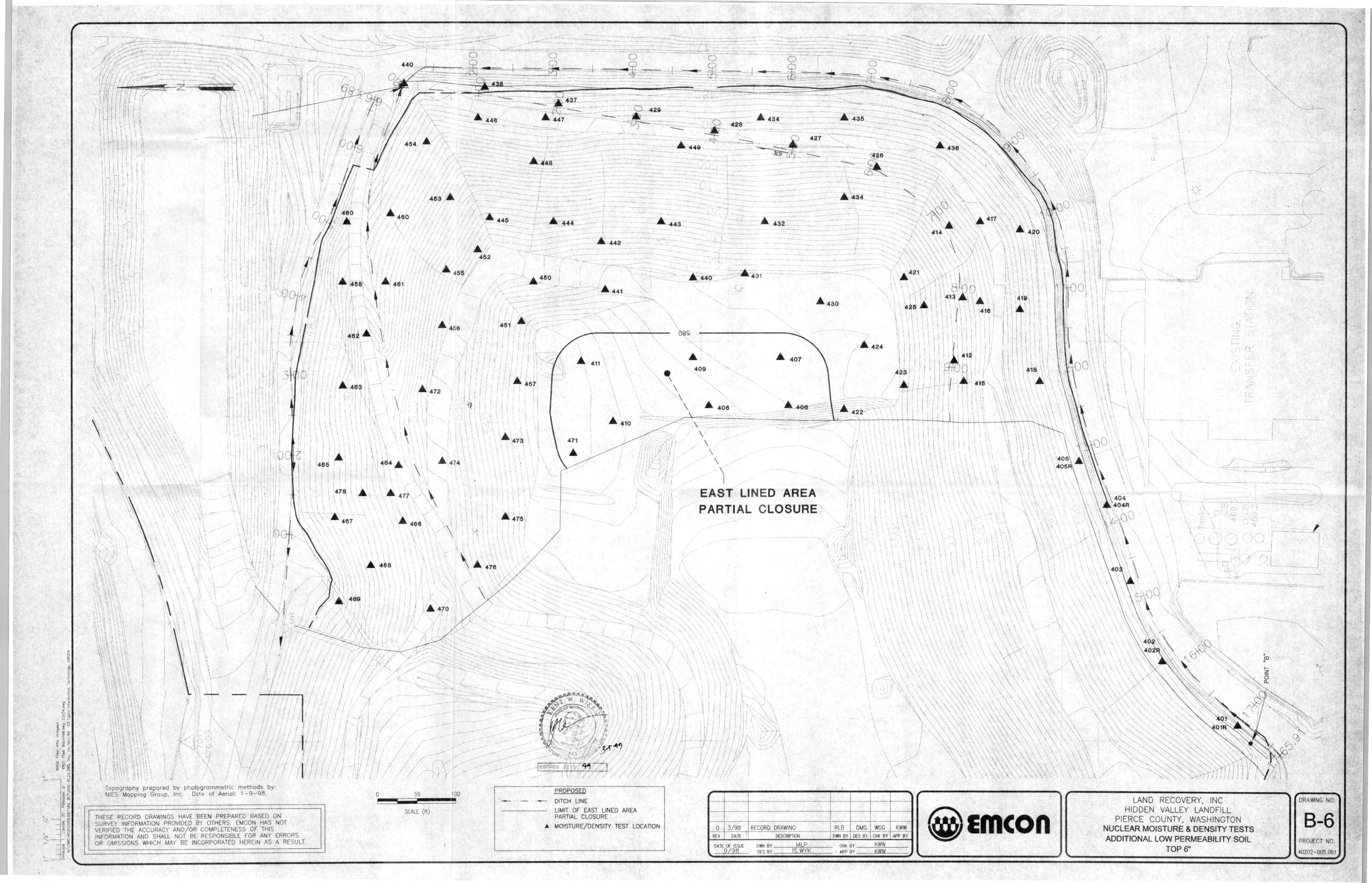












B-1b Summary of Nuclear Moisture/Density Tests



r ivjeut Project No.:	Project No.: 40202-005.060	5.060	rityect. East Lifed Alea Faltal Glosure, nidderl Valley Laffuill ect No.: 40202-005.060	1			Pre Rev	Prepared By: Reviewed By:	Prepared by: Glenn Heath Reviewed By:	am			
Owner: L.R.I	L.R.I.							ested By:	Tested By: Glenn Heath	ath			
Test No.	Date	Material Used	Test Location	Lift No.	Test Depth (in)	Field Moist. (%)	Dry Density (PCF)	Referen D. D. (PCF)	Reference Curve D. D. % (PCF) Moisture	Relative Compaction %	Specified Compaction %	Pass /	Test
-	7/17/98	Corlis Type A	S Slope, N 25300 @ E 54420	SG	#8	29.6	89.2	104.5	20.5	85	Within Zone	Pass	
2	7/17/98	Corlis Type A	S Slope, N 25300 @ E 54500	SG	.a	30.8	87.9	104.5	20.5	84	Within Zone	Pass	
9	7/17/98	Corlis Type A	S Slope, N 25300 @ E 54600	SG	#8	28.2	92.1	104.5	20.5	88	Within Zone	Pass	
4	7/17/98	Corlis Type A	S Slope, N 25200 @ E 54430	SG	#8	23.1	6.86	104.5	20.5	95	Within Zone	Pass	
ഹ	7/17/98	Corlis Type A	S Slope, N 25200 @ E 54500	SG	8#	23.6	98.2	104.5	20.5	94	Within Zone	Pass	
9	7/17/98	Corlis Type A	S Slope, N 25200 @ E 54580	SG	8	22.1	100.7	104.5	20.5	96	Within Zone	Pass	
7	7/17/98	Corlis Type A	S Slope, N 25200 @ E 54670	SG	<u>.</u>	24.7	98.3	104.5	20.5	94	Within Zone	Pass	
8	7/17/98	Corlis Type A	S Slope, N 25100 @ E 54450	SG	*8	26.2	94.6	104.5	20.5	91	Within Zone	Pass	
6	7/17/98	Corlis Type A	S Slope, N 25100 @ E 54550	SG	#8	28.0	90.7	104.5	20.5	87	Within Zone	Pass	
10	7/17/98	Corlis Type A	S Slope, N 25100 @ E 54650	SG	#8	25.6	96.1	104.5	20.5	92	Within Zone	Pass	
11	7/17/98	Corlis Type A	E Slope, N 25200 @ E 54750	SG	" 8	25.9	97.0	104.5	20.5	93	Within Zone	Pass	
12	7/17/98	Corlis Type A	E Slope, N 25275 @ E 54780	SG	8 8	26.4	94.3	104.5	20.5	90	Within Zone	Pass	
13	7/17/98	Corlis Type A	E Slope, N 25370 @ E 54750	SG	#8	27.2	95.0	104.5	20.5	91	Within Zone	Pass	
14	7/17/98	Corlis Type A	E Slope, N 25470 @ E 54750	SG	#8	56.6	94.8	104.5	20.5	91	Within Zone	Pass	
15	7/17/98	Corlis Type A	E Slope, N 25575 @ E 54750	SG	#8	22.8	100.9	104.5	20.5	97	Within Zone	Pass	
16	7/17/98	Corlis Type A	E Slope, N 25675 @ E 54750	SG	*8	22.7	102.0	104.5	20.5	86	Within Zone	Pass	
17	7/17/98	Corlis Type A	E Slope N 25775 @ E 54700	SG	 8	23.1	101.0	104.5	20.5	97	Within Zone	Pass	
18	7/17/98	Corlis Type A	E Slope, N 25675 @ E 54700	SG	<u></u> 8	27.0	94.3	104.5	20.5	06	Within Zone	Pass	
19	7/17/98	Corlis Type A	E Slope, N 25675 @ E 54600	SG	8	12.2	103.7	104.5	20.5	66	Within Zone	Fail	
20	7/17/98	Corlis Type A	E Slope, N 25575 @ E 54600	SG	.8	11.3	119.7	104.5	20.5	115	Within Zone	Fail	
21	7/17/98	Corlis Type A	E Slope, N 25500 @ E 54700	SG	*8	24.9	96.4	104.5	20.5	92	Within Zone	Pass	
22	7/17/98	Corlis Type A	E Slope, N 25500 @ E 54600	SG	8	25.5	0.96	104.5	20.5	92	Within Zone	Pass	
23	7/17/98	Corlis Type A	E Slope, N 25400 @ E 54600	SG	8,8	25.9	96.3	104.5	20.5	92	Within Zone	Pass	
24	7/17/98	Corlis Type A	E Slope, N 25400 @ E 54700	SG	#8	27.6	93.8	104.5	20.5	90	Within Zone	Pass	
25	7/17/98	Corlis Type A	E Slope, N 25300 @ E 54700	SG	#8	26.1	94.0	104.5	20.5	06	Within Zone	Pass	
56	7/17/98	Corlis Type A	E Slope, N 25350 @ E 54600	SG	80	28.0	93.3	104.5	20.5	88	Within Zone	Pass	

Project	t: East Line	d Area Pariiai Ciusi	Project: East Lined Area Partial Closure, Hidden Valley Landilli				7 5	Prepared by: Glenn Heam		dill			
Project No.	Project No.: 40202-005.060)5.060		ľ			Rev	Reviewed By:	Resid				
Owner: L.R.I	: L.R.I.						F	Tested By:	Glenn Heath	ath			
Test No.	Date	Material Used	Test Location	Lift No.	Test Depth	Field Moist.	Dry Density	Reference D. D.	Reference Curve D. D.	Relative Compaction	Specified Compaction	Pass /	Test
5	0/4/00	- -	Ton N 25275 @ 5 54490	,	(II)	(%)	(PCF)	(FCF)	Moisture	% 00	% Within Zone	Pace	Assign
5 5	06/4/00	-			o 4	0.12	102.7	2.4.2	200	06 06	Within Zone	D 0000	
103	8/4/9R	Corliss Type A			, _u	26.8	95.1	104.5	20.5	8 6	Within Zone	Pass	
104	8/4/98	1		-	.9	27.8	94.8	104.5	20.5	6	Within Zone	Pass	
105	8/4/98			-	" 9	27.9	94.4	104.5	20.5	06	Within Zone	Pass	
106	8/4/98	Corliss Type A	Top, N 25390 @ E 54480	-	.9	38.7*	82.1	104.5	20.5	62	Within Zone	Fail	
106R	86/4/8	Corliss Type A	Top SE Corner, N 25390 @ E 54480	-	.9	26.7	94.3	104.5	20.5	06	Within Zone	Pass	
107	86/2/8	Corliss Type A	South Slope, N 25175 @ E 54420	-	,,9	27.3	95.3	104.5	20.5	91	Within Zone	Pass	
108	86/2/8	Corliss Type A	South Slope, N 25175 @ E 54500	-	.9	26.6	92.7	104.5	20.5	89	Within Zone	Pass	
109	86/2/8	Corliss Type A	South Slope, N 25175 @ E 54600	-	. 9	25.5	94.7	104.5	20.5	91	Within Zone	Pass	
110	86/2/8	Corliss Type A	South Slope, N 25075 @ E 54420	-	*9	25.9	94.6	104.5	20.5	91	Within Zone	Pass	
=======================================	86/2/8	Corliss Type A	South Slope, N 25075 @ E 54500	-	,9	26.2	94.0	104.5	20.5	90	Within Zone	Pass	
112	86/2/8	Corliss Type A	South Slope, N 25075 @ E 54600	-	. 9	27.1	93.0	104.5	20.5	89	Within Zone	Pass	
113	8/14/98	Corliss Type B	Sta. 9+00	-	,,9	12.6	105.7	130.6	8.8	81	Within Zone	Fail	
114	8/14/98	Corliss Type B	Sta. 8+10	-	. 9	8.9	111.7	130.6	8.8	86	Within Zone	Fail	
113R	8/14/98	Corliss Type B	Sta. 9+00	-	.9	14.1	117.9	130.6	8.8	90	Within Zone	Pass	
114B	8/14/98	Corliss Type B	Sta. 8+10	-	.9	13.7	120.0	130.6	8.8	92	Within Zone	Pass	
115	8/14/98	Corliss Type B	Sta. 7+00	-	.9	12.2	119.5	130.6	8.8	92	Within Zone	Pass	
116	8/12/98	Corliss Type B	Sta. 6+50	-	.9	10.0	130.7	136	7.9	96	Within Zone	Pass	
117	8/12/98	Corliss Type B	Sta. 5+50	-	, 9	9.7	131.0	136	7.9	96	Within Zone	Pass	
118	8/12/98	Corliss Type B	Sta. 4+50	-	" 9	8.5	135.8	136	7.9	100	Within Zone	Pass	
119	8/18/98	Corliss Type B	Sta.3+50	-	, 9	8.5	134.7	136	7.9	66	Within Zone	Pass	
120	8/22/98	Corliss Type A	Sta. 2+50		.9	9.3	134.7	136	7.9	66	Within Zone	Fail	
121	8/22/98	Corliss Type A	Sta. 1+50	-	.9	8.2	135.7	136	7.9	100	Within Zone	Fail	
122	8/22/98	Corliss Type A	Sta. 1+00	1	9	8.5	135.1	136	7.9	66	Within Zone	Pass	
123	8/22/8	Corliss Type A	Sta. 0+50	1	.9	8.1	135.9	136	7.9	100	Within Zone	Pass	
124	8/31/98	Corliss Type A	N 25860 @ E 54450	-	9	29.4	88.3	104.5	20.5	84	Within Zone	Pass	
125	8/31/98	Corliss Type A	N 25835 @ N 54570	-	. 9	23.8	100.2	104.5	20.5	96	Within Zone	Pass	
126	8/31/98	8/31/98 Corliss Type A	N 25875 @ E 54530	-	.9	29.4	91.9	104.5	20.5	88	Within Zone	Pass	
127	9/12/98	9/12/98 Corliss Type A	Top NW Corner, N 25600 @ E 54400	1	. 9	26.8	94.4	104.5	20.5	90	Within Zone	Pass	





Project:	East Lined	d Area Partial Close	Project: East Lined Area Partial Closure, Hidden Valley Landfill				Pre	Prepared By:	Glenn Heath	ŧ			
Project No.: 40202-005.061	40202-00	5.061					Revi	Reviewed By:	Kin				
Owner: L.R.	L.R.I.						1	ested By:	Tested By: Glenn Heath	uth			
Test No.	Date	Material Used	Test ocation	#! H	Test Depth	Field Moist.	Dry Density	Referenc D. D.	Reference Curve D. D. %	Relative Compaction	Specified Compaction	Pass /	Test
					(in)	(%)	(PCF)	(PCF)	Moisture	%	%	-11	Assign.
201	8/4/98	Corliss Type A	Top, N 25350 @ E 54425	2	.9	31.1	88.0	104.5	20.5	84	Within Zone	Pass	
202	8/4/98	Corliss Type A	Top, N 25510 @ E 54425	2	.9	28.8	92.5	104.5	20.5	89	Within Zone	Pass	1
203	8/4/98	Corliss Type A	Top, N 25650 @ E 54390	2	9	29.7	91.6	104.5	20.5	88	Within Zone	Pass	
204	8/4/98	Corliss Type A		2	9	29.3	92.7	104.5	20.5	89	Within Zone	Pass	
205	8/4/98	Corliss Type A		2	#9	30.5	90.4	104.5	20.5	87	Within Zone	Pass	
206	86/2/8	Corliss Type A	Top SE Corner, N 25390 @ E 54465	2	9	24.3	99.2	104.5	20.5	95	Within Zone	Pass	
207	86/2/8	Corliss Type A	South Slope, N 25175 @ E 54420	2	. 9	26.2	93.4	104.5	20.5	89	Within Zone	Pass	
208	86/2/8	Corliss Type A	South Slope, N 25175 @ E 54500	2	9	27.0	94.5	104.5	20.5	06	Within Zone	Pass	
209	86/2/8	Corliss Type A	South Slope, N 25175 @ E 54600	2	9	26.8	93.7	104.5	20.5	90	Within Zone	Pass	
210	86/2/8	Corliss Type A	South Slope, N 25075 @ E 54420	2	.9	29.1	92.1	104.5	20.5	88	Within Zone	Pass	
211	86/2/8	Corliss Type A	South Slope, N 25075 @ E 54500	2	9	28.4	91.7	104.5	20.5	88	Within Zone	Pass	
212	86/2/8	Corliss Type A	South Slope, N 25075 @ E 54600	2	.9	27.5	92.0	104.5	20.5	88	Within Zone	Pass	
213	8/14/98	Corliss Type B	Sta. 9+10	2	9	12.7	120.2	130.6	8.8	92	Within Zone	Pass	
214	8/14/98	Corliss Type B	Sta. 8+50	2	.9	13.9	119.6	130.6	8.8	92	Within Zone	Pass	
215	8/14/98	Corliss Type B	Sta. 7+50	2	9	12.9	120.9	130.6	8.8	93	Within Zone	Pass	
216	8/21/98	Corliss Type B	Sta. 6+00	2	. 9	9.5	130.8	136	7.9	96	Within Zone	Pass	
217	8/21/98	Corliss Type B	Sta. 5+00	2	9	8.8	132.2	136	7.9	97	Within Zone	Pass	
218	8/21/98	Corliss Type B	Sta. 4+00	2	" 9	9.4	132.3	136	7.9	97	Within Zone	Pass	
219	8/21/98	Corliss Type B	Sta. 3+00	2	.9	8.0	135.1	136	7.9	66	Within Zone	Pass	
220	8/22/98	Corliss Type A	Sta. 2+00	2	.9	*7.2	135.8	136	6.7	100	Within Zone	Fail	
220B	8/22/88	Corliss Type A	Sta. 2+00	2	9	10.2	132.7	136	7.9	98	Within Zone	Pass	
221	8/56/98	Corliss Type A	Sta. 1+00	2	.9	10.5	129.8	136	7.9	95	Within Zone	Pass	
222	8/56/98	Corliss Type A	Sta. 0+25	2	"9	10.7	130.0	136	7.9	96	Within Zone	Pass	
223	8/56/98	Corliss Type A	Sta. 0+00, 8ft E of inlet	2	9	10.0	130.4	136	7.9	96	Within Zone	Pass	
224	8/31/98	Corliss Type A	N 25850 @ E 54575	2	,9	25.8	94.1	104.5	20.5	90	Within Zone	Pass	
225	8/31/98	Corliss Type A	N 25875 @ E 54500	2	9	31.3	9.06	104.5	20.5	87	Within Zone	Pass	
226	8/31/98	Corliss Type A	N 25860 @ E 54450	2	9	27.6	92.2	104.5	20.5	88	Within Zone	Pass	
227	9/12/98	Corliss Type A	Top NW Corner, N 25675 @ E 54390	2	-9	27.2	94.1	104.5	20.5	90	Within Zone	Pass	



Project: East Lined Area Project No.: 40202-005.060	East Lined 40202-005	Area Partial Closur .060	Project: East Lined Area Partial Closure, Hidden Valley Landfill ect No.: 40202-005.060	í			Pre Revi	Prepared By: Glenn Heath Reviewed By: んしし	ilenn Hea	£			
Owner: L.R.	L.R.I.						T	Tested By: Glenn Heath	lenn Hea	th			
Test No.	Date	Material Used	Test Location	Lift No.	Test Depth (in)	Field Moist. (%)	Dry Density (PCF)	Beference Curve D. D. %	e Curve % Moisture	Relative Compaction %	Specified Compaction %	Pass / Fail	Test Assign.
301	8/2/8	Corliss Type A	Top, N 25380 @ E 54420	3	9	27.2	94.4	╟	20.5	06	Within Zone	Pass	
302	86/2/8	Corliss Type A	Top, N 25500 @ E 54430	က	9	25.7	95.7	104.5	20.5	92	Within Zone	Pass	
303	8/2/8	Corliss Type A	Top, N 25670 @ E 54430	3	.9	26.6	92.3	104.5	20.5	88	Within Zone	Pass	
304	86/2/8	Corliss Type A	Top, N 25650 @ E 54475	3	.9	27.6	93.4	104.5	20.5	89	Within Zone	Pass	
305	8/2/8	Corliss Type A	Top, N 25510 @ E 54480	3	9	27.9	94.4	104.5	20.5	90	Within Zone	Pass	
306	86/2/8	Corliss Type A	Top SE Corner, N 25400 @ E 54470	3	"9	27.4	93.5	104.5	20.5	89	Within Zone	Pass	
307	86/2/8	Corliss Type A	South Slope, N 25150 @ E 54420	ဇ	" 9	28.6	91.5	104.5	20.5	88	Within Zone	Pass	
308	86/2/8	Corliss Type A	South Slope, N 25150 @ E 54500	က	"9	28.0	93.8	104.5	20.5	90	Within Zone	Pass	
309	86/2/8	Corliss Type A	South Slope, N 25150 @ E 54600	9	.9	27.5	93.1	104.5	20.5	89	Within Zone	Pass	
310	86/2/8	Corliss Type A	South Slope, N 25075 @ E 54420	9	,,9	27.2	94.7	104.5	20.5	91	Within Zone	Pass	
311	86/2/8	Corliss Type A	South Slope, N 25075 @ E 54500	က	9	28.8	95.6	104.5	20.5	89	Within Zone	Pass	
312	8/1/98	Corliss Type A	South Slope, N 25075 @ E 54600	ဇ	.9	29.4	89.3	104.5	20.5	85	Within Zone	Pass	
313	8/14/98	Corliss Type B	Sta. 9+00	က	9	12.5	121.1	130.6	8.8	93	Within Zone	Pass	
314	8/14/98	Corliss Type B	Sta. 8+00	3	.9	12.2	120.6	130.6	8.8	92	Within Zone	Pass	
315	8/14/98	Corliss Type B	Sta. 7+00	က	.9	12.9	121.7	130.6	8.8	93	Within Zone	Pass	
316	8/21/98	Corliss Type B	Sta.6+50	6	, 9	8.7	136.5	136	7.9	100	Within Zone	Pass	
317	8/23/98	Corliss Type B	Sta. 5+50	3	9	9.2	134.8	136	7.9	66	Within Zone	Pass	
318	8/24/98	Corliss Type B	Sta. 4+50	3	.9	10.0	133.9	136	7.9	98	Within Zone	Pass	
319	8/24/98	Corliss Type B	Sta. 3+50	3	" 9	9.3	134.6	136	7.9	66	Within Zone	Pass	
320	8/26/98	Corliss Type A	Sta. 2+50	3	.9	9.6	135.3	136	7.9	66	Within Zone	Pass	
321	8/26/98	Corliss Type A	Sta. 1+50	က	. 9	9.0	134.7	136	7.9	66	Within Zone	Pass	
322	8/28/98	Corliss Type A	Sta. 1+00	က	.9	8.5	135.0	136	7.9	66	Within Zone	Pass	
323	9/1/98	Corliss Type A	N 25875 @ E 54430	3	.9	24.3	99.1	104.5	20.5	95	Within Zone	Pass	
324	9/1/98	Corliss Type A	N 25825 @ E 54525	9	.9	25.7	96.2	104.5	20.5	92	Within Zone	Pass	
325	9/1/98	Corliss Type A	N 25875 @ E 54575	3	9	26.8	94.6	104.5	20.5	91	Within Zone	Pass	
326	9/12/98	Corliss Type A	Top NW Corner, N 25650 @ E 54360	က	,9	28.8	92.3	104.5	20.5	88	Within Zone	Pass	





Dry Reference Curve (PCF) Relative Moisture Compaction % Specified % 96.3 104.5 20.5 93 Within Zone 96.3 104.5 20.5 93 Within Zone 96.3 104.5 20.5 93 Within Zone 99.1 104.5 20.5 93 Within Zone 98.2 104.5 20.5 90 Within Zone 98.3 104.5 20.5 90 Within Zone 98.3 104.5 20.5 99 Within Zone 98.3 104.5 20.5 99 Within Zone 90.1 104.5 20.5 99 Within Zone 102.5 104.5 20.5 99 Within Zone 103.4 104.5 20.5 99 Within Zone 101.0 104.5 20.5 99 Within Zone 102.8 104.5 20.5 99 Within Zone 103.4 104.5 20.5 99 Wit	
th Moist Dny Helenene Curve Helative Specified (PCF) (PCF) Moisture % % % % % % % % % % % % % % % % % % %	
6* 18.3 96.3 104.5 20.5 92 Within Zone 6* 19.7 97.2 104.5 20.5 93 Within Zone 6* 24.3 99.1 104.5 20.5 95 Within Zone 6* 24.3 99.1 104.5 20.5 82 Within Zone 6* 29.6 85.8 104.5 20.5 82 Within Zone 6* 27.4 93.3 104.5 20.5 88 Within Zone 6* 27.8 96.1 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 99 Within Zone 6* 27.0 102.8 104.5 20.5 99 Within Zone 6* 22.0 104.5 20.5 99 Within Zone 6* 22.0 104.5 20.5 99	Test Location
6* 19.7 97.2 104.5 20.5 93 Within Zone 6* 24.3 99.1 104.5 20.5 95 Within Zone 6* 29.6 85.8 104.5 20.5 82 Within Zone 6* 29.6 85.8 104.5 20.5 89 Within Zone 6* 28.1 93.7 104.5 20.5 89 Within Zone 6* 27.4 93.3 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 98 Within Zone 6* 27.0 102.5 104.5 20.5 98 Within Zone 6* 21.7 103.4 104.5 20.5 98 Within Zone 6* 21.7 103.4 104.5 20.5 98 Within Zone 6* 22.0 104.5 20.5 <td>N 24825 @ E 54020</td>	N 24825 @ E 54020
6* 24.3 99.1 104.5 20.5 95 Within Zone 6* 30.7 86.2 104.5 20.5 82 Within Zone 6* 29.6 85.8 104.5 20.5 82 Within Zone 6* 28.1 93.3 104.5 20.5 89 Within Zone 6* 27.4 93.3 104.5 20.5 88 Within Zone 6* 27.8 91.8 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 99 Within Zone 6* 27.0 92.3 104.5 20.5 99 Within Zone 6* 27.0 102.8 104.5 20.5 99 Within Zone 6* 27.7 103.4 104.5 20.5 99 Within Zone 6* 27.7 118.9 104.5 <td>N 24920 @ E 54100</td>	N 24920 @ E 54100
6* 30.7 86.2 104.5 20.5 82 Within Zone 6* 29.6 85.8 104.5 20.5 82 Within Zone 6* 28.1 93.7 104.5 20.5 89 Within Zone 6* 27.4 93.3 104.5 20.5 89 Within Zone 6* 27.8 96.1 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 98 Within Zone 6* 27.0 92.3 104.5 20.5 98 Within Zone 6* 22.0 102.5 104.5 20.5 99 Within Zone 6* 22.0 102.5 20.5 99 Within Zone 6* 22.0 104.5 20.5 99 Within Zone 6* 15.1 114.8 130.6 8.8 Within Zon	N 24960 @ E 54200
6* 29.6 85.8 104.5 20.5 82 Within Zone 6* 27.4 93.3 104.5 20.5 90 Within Zone 6* 27.4 93.3 104.5 20.5 89 Within Zone 6* 27.6 96.1 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 88 Within Zone 6* 27.0 92.3 104.5 20.5 98 Within Zone 6* 27.0 92.3 104.5 20.5 98 Within Zone 6* 21.7 103.4 104.5 20.5 98 Within Zone 6* 22.0 102.8 104.5 20.5 98 Within Zone 6* 22.0 102.8 104.5 20.5 98 Within Zone 6* 22.0 104.5 20.5 98 Within Zone 6* 15.1 114.8 130.6 8.8 <td>N 24990 @ E 54295</td>	N 24990 @ E 54295
6" 28.1 93.7 104.5 20.5 99 Within Zone 6" 27.4 93.3 104.5 20.5 89 Within Zone 6" 25.6 96.1 104.5 20.5 88 Within Zone 6" 27.0 92.3 104.5 20.5 88 Within Zone 6" 27.0 92.3 104.5 20.5 88 Within Zone 6" 27.0 92.3 104.5 20.5 98 Within Zone 6" 22.8 101.0 104.5 20.5 99 Within Zone 6" 22.5 101.0 104.5 20.5 99 Within Zone 6" 22.0 102.8 104.5 20.5 99 Within Zone 6" 22.0 102.8 104.5 20.5 99 Within Zone 6" 15.1 114.8 130.6 8.8 Within Zone 6" 22.8 104.5 20.5 99 <td>N 25025 @ E 54350</td>	N 25025 @ E 54350
6" 27.4 93.3 104.5 20.5 89 Within Zone 6" 25.6 96.1 104.5 20.5 98 Within Zone 6" 27.8 91.8 104.5 20.5 88 Within Zone 6" 27.0 92.3 104.5 20.5 98 Within Zone 6" 21.9 102.5 104.5 20.5 98 Within Zone 6" 24.8 98.3 104.5 20.5 94 Within Zone 6" 22.5 101.0 104.5 20.5 99 Within Zone 6" 21.7 103.4 104.5 20.5 99 Within Zone 6" 22.0 102.8 104.5 20.5 99 Within Zone 6" 22.0 102.8 104.5 20.5 97 Within Zone 6" 8.7 132.4 136.0 7.9 97 Within Zone 6" 27.5 94.8 104.5 <td>N 24825 @ E 54020</td>	N 24825 @ E 54020
6" 25.6 96.1 104.5 20.5 92 Within Zone 6" 27.8 91.8 104.5 20.5 88 Within Zone 6" 27.0 92.3 104.5 20.5 88 Within Zone 6" 27.0 92.3 104.5 20.5 98 Within Zone 6" 24.8 98.3 104.5 20.5 94 Within Zone 6" 24.8 98.3 104.5 20.5 99 Within Zone 6" 21.7 103.4 104.5 20.5 99 Within Zone 6" 22.0 102.8 104.5 20.5 99 Within Zone 6" 22.0 104.5 20.5 97 Within Zone 6" 8.7 132.4 136.0 7.9 97 Within Zone 6" 27.5 94.8 104.5 20.5 86 Within Zone 6" 27.5 90.5 104.5 20.5	N 24920 @ E 54100
6" 27.8 91.8 104.5 20.5 88 Within Zone 6" 27.0 92.3 104.5 20.5 88 Within Zone 6" 21.9 102.5 104.5 20.5 98 Within Zone 6" 24.8 98.3 104.5 20.5 94 Within Zone 6" 22.5 101.0 104.5 20.5 99 Within Zone 6" 22.0 102.8 104.5 20.5 98 Within Zone 6" 22.0 102.8 104.5 20.5 98 Within Zone 6" 22.0 102.8 104.5 20.5 99 Within Zone 6" 15.1 114.8 130.6 8.8 Within Zone 6" 27.5 94.8 104.5 20.5 91 Within Zone 6" 27.5 90.5 104.5 20.5 88 Within Zone 6" 27.3 90.5 104.5 20.5	N 24960 @ E 54200
6" 27.0 92.3 104.5 20.5 88 Within Zone 6" 21.9 102.5 104.5 20.5 98 Within Zone 6" 24.8 98.3 104.5 20.5 94 Within Zone 6" 22.5 101.0 104.5 20.5 98 Within Zone 6" 22.0 102.8 104.5 20.5 98 Within Zone 6" 22.0 102.8 104.5 20.5 97 Within Zone 6" 15.1 114.8 130.6 8.8 8 Within Zone 6" 27.1 132.4 136.0 7.9 97 Within Zone 6" 27.5 94.8 104.5 20.5 86 Within Zone 6" 27.3 90.5 104.5 20.5 88 Within Zone 6" 27.3 90.5 104.5 20.5 88 Within Zone 6" 29.1 91.6 104.5 <td>N 24990 @ E 54295</td>	N 24990 @ E 54295
6" 21.9 102.5 104.5 20.5 98 Within Zone 6" 24.8 98.3 104.5 20.5 94 Within Zone 6" 22.5 101.0 104.5 20.5 97 Within Zone 6" 22.0 102.8 104.5 20.5 98 Within Zone 6" 22.0 102.8 104.5 20.5 98 Within Zone 6" 22.0 102.8 104.5 20.5 97 Within Zone 6" 15.1 114.8 130.6 8.8 88 Within Zone 6" 8.7 132.4 136.0 7.9 97 Within Zone 6" 27.5 94.8 104.5 20.5 86 Within Zone 6" 28.0 90.1 104.5 20.5 88 Within Zone 6" 29.1 91.6 104.5 20.5 84 Within Zone 6" 29.4 88.3 104.5 <td>N 25025 @ E 54350</td>	N 25025 @ E 54350
6" 24.8 98.3 104.5 20.5 94 Within Zone 6" 22.5 101.0 104.5 20.5 97 Within Zone 6" 21.7 103.4 104.5 20.5 99 Within Zone 6" 22.0 102.8 104.5 20.5 98 Within Zone 6" 22.0 102.8 104.5 20.5 97 Within Zone 6" 15.1 114.8 130.6 8.8 91 Within Zone 6" 8.7 132.4 136.0 7.9 97 Within Zone 6" 27.5 94.8 104.5 20.5 86 Within Zone 6" 28.0 90.1 104.5 20.5 88 Within Zone 6" 29.1 91.6 104.5 20.5 84 Within Zone 6" 29.4 88.3 104.5 20.5 84 Within Zone 6" 29.4 88.3 104.5 <td>N 25390 @ E 54420</td>	N 25390 @ E 54420
6" 22.5 101.0 104.5 20.5 97 Within Zone 6" 21.7 103.4 104.5 20.5 99 Within Zone 6" 22.0 102.8 104.5 20.5 98 Within Zone 6" 22.0 101.5 104.5 20.5 97 Within Zone 6" 15.1 114.8 130.6 8.8 91 Within Zone 6" 8.7 132.4 136.0 7.9 97 Within Zone 6" 27.5 94.8 104.5 20.5 86 Within Zone 6" 27.3 90.7 104.5 20.5 88 Within Zone 6" 27.3 90.5 104.5 20.5 88 Within Zone 6" 29.1 91.6 104.5 20.5 84 Within Zone 6" 27.7 90.3 104.5 20.5 84 Within Zone	N 25400 @ E 54480
6" 21.7 103.4 104.5 20.5 99 Within Zone 6" 22.0 102.8 104.5 20.5 98 Within Zone 6" 22.8 101.5 104.5 20.5 97 Within Zone 6" 15.1 114.8 130.6 8.8 91 Within Zone 6" 13.7 118.9 130.6 8.8 91 Within Zone 6" 27.5 94.8 104.5 20.5 97 Within Zone 6" 27.3 90.5 104.5 20.5 87 Within Zone 6" 27.3 90.5 104.5 20.5 88 Within Zone 6" 29.1 91.6 104.5 20.5 88 Within Zone 6" 29.4 88.3 104.5 20.5 84 Within Zone 6" 29.7 90.3 104.5 20.5 84 Within Zone	N 25490 @ E 54420
6" 22.0 102.8 104.5 20.5 98 Within Zone 6" 22.8 101.5 104.5 20.5 97 Within Zone 6" 15.1 114.8 130.6 8.8 88 Within Zone 6" 13.7 118.9 130.6 8.8 91 Within Zone 6" 27.5 94.8 104.5 20.5 91 Within Zone 6" 27.5 94.8 104.5 20.5 86 Within Zone 6" 27.3 90.5 104.5 20.5 87 Within Zone 6" 29.1 91.6 104.5 20.5 88 Within Zone 6" 29.4 88.3 104.5 20.5 84 Within Zone 6" 27.7 90.3 104.5 20.5 84 Within Zone	N 25510 @ E 54480
6* 22.8 101.5 104.5 20.5 97 Within Zone 6* 15.1 114.8 130.6 8.8 88 Within Zone 6* 13.7 118.9 130.6 8.8 91 Within Zone 6* 8.7 132.4 136.0 7.9 97 Within Zone 6* 27.5 94.8 104.5 20.5 86 Within Zone 6* 27.3 90.5 104.5 20.5 88 Within Zone 6* 29.1 91.6 104.5 20.5 84 Within Zone 6* 29.4 88.3 104.5 20.5 84 Within Zone 6* 29.4 98.3 104.5 20.5 84 Within Zone 6* 27.7 90.3 104.5 20.5 86 Within Zone	N 25610 @ E 54400
6* 15.1 114.8 130.6 8.8 88 Within Zone 6* 13.7 118.9 130.6 8.8 91 Within Zone 6* 8.7 132.4 136.0 7.9 97 Within Zone 6* 27.5 94.8 104.5 20.5 91 Within Zone 6* 27.3 90.7 104.5 20.5 86 Within Zone 6* 29.1 91.6 104.5 20.5 88 Within Zone 6* 29.4 88.3 104.5 20.5 84 Within Zone 6* 27.7 90.3 104.5 20.5 86 Within Zone	N 25650 @ E 54475
6" 13.7 118.9 130.6 8.8 91 Within Zone 6" 8.7 132.4 136.0 7.9 97 Within Zone 6" 27.5 94.8 104.5 20.5 91 Within Zone 6" 27.3 90.1 104.5 20.5 86 Within Zone 6" 27.3 90.5 104.5 20.5 87 Within Zone 6" 29.4 88.3 104.5 20.5 84 Within Zone 6" 27.7 90.3 104.5 20.5 86 Within Zone	Sta. 9+00
6" 8.7 132.4 136.0 7.9 97 Within Zone 6" 27.5 94.8 104.5 20.5 91 Within Zone 6" 28.0 90.1 104.5 20.5 86 Within Zone 6" 27.3 90.5 104.5 20.5 87 Within Zone 6" 29.1 91.6 104.5 20.5 88 Within Zone 6" 29.4 88.3 104.5 20.5 86 Within Zone 6" 27.7 90.3 104.5 20.5 86 Within Zone	Sta. 8+25
6" 27.5 94.8 104.5 20.5 91 Within Zone 6" 28.0 90.1 104.5 20.5 86 Within Zone 6" 27.3 90.5 104.5 20.5 87 Within Zone 6" 29.1 91.6 104.5 20.5 88 Within Zone 6" 29.4 88.3 104.5 20.5 84 Within Zone 6" 27.7 90.3 104.5 20.5 86 Within Zone	Sta. 7+25
6" 28.0 90.1 104.5 20.5 86 Within Zone 6" 27.3 90.5 104.5 20.5 87 Within Zone 6" 29.1 91.6 104.5 20.5 88 Within Zone 6" 29.4 88.3 104.5 20.5 84 Within Zone 6" 27.7 90.3 104.5 20.5 86 Within Zone	N 25170 @ E 54450
6" 27.3 90.5 104.5 20.5 87 Within Zone 6" 29.1 91.6 104.5 20.5 88 Within Zone 6" 29.4 88.3 104.5 20.5 84 Within Zone 6" 27.7 90.3 104.5 20.5 86 Within Zone	N 25150 @ E 54550
6" 29.1 91.6 104.5 20.5 88 Within Zone 6" 29.4 88.3 104.5 20.5 84 Within Zone 6" 27.7 90.3 104.5 20.5 86 Within Zone	N 25150 @ E 54650
6" 27.7 90.3 104.5 20.5 86 Within Zone	N 25075 @ E 54450
6" 27.7 90.3 104.5 20.5 86 Within Zone	N 25100 @ E 54540
	N 25100 @ E 54640
Final 6* 22.6 102.1 104.5 20.5 98 Within Zone Pass	N 25245 @ E 54580
Final 6" 22.7 102.7 104.5 20.5 98 Within Zone Pass	N 25320 @ E 54415
Final 6" 23.8 100.2 104.5 20.5 96 Within Zone Pass	N 25245 @ E 54445





ייים[טוברי	. במצו רווום	חיוכמו מוומו סוסמוס	rioject. East cilied Alea Fattal Closure, Middell Valley Eatluth				ב	Prepared by: Glerin Health		alli			
Project No.:	Project No.: 40202-005.060	5.060					Rev	Reviewed By:	(Sec.	0			
Owner: L.R.I.	: L.R.I.						1	rested By:	: Glenn Heath	ath			
Test No.	Date	Material Used	Test Location	Lift No.	Test Depth (in)	Field Moist. (%)	Dry Density (PCF)	Referen D. D. (PCF)	Reference Curve D. D. % (PCF) Moisture	Relative Compaction %	Specified Compaction %	Pass / Fail	Test Assign
424	8/20/98	Corliss Type A	N 25295 @ E 54495	Final	.9	21.9	101.4	104.5	20.5	26	Within Zone	Pass	
425	8/22/98	Corliss Type A	N 25220 @ E 54545	Final	.9	22.5	101.5	104.5	20.5	97	Within Zone	Pass	
426	8/24/98	-	Sta. 6+00	Final	" 9	9.6	130.7	136.0	7.9	96	Within Zone	Pass	
427	8/24/98	Corliss Type B	Sta. 5+00	Final	.9	8.5	132.9	136.0	7.9	86	Within Zone	Pass	
428	8/24/98	Corliss Type B	Sta. 4+00	Final	. 9	8.0	134.3	136.0	7.9	66	Within Zone	Pass	
429	8/24/98	Corliss Type B	Sta. 3+00	Final	. 9	9.2	133.7	136.0	7.9	98	Within Zone	Pass	
430	8/27/98	Corliss Type A	N 25350 @ E 54550	Final	#9	24.1	100.3	104.5	20.5	96	Within Zone	Pass	
431	8/27/98	Corliss Type A	N 25445 @ E 54585	Final	9	24.7	0.96	104.5	20.5	92	Within Zone	Pass	
432	8/27/98	Corliss Type A	N 25420 @ E 54650	Final	9	25.0	96.1	104.5	20.5	92	Within Zone	Pass	
433	8/27/98	Corliss Type A	N 25320 @ E 54680	Final	.9	24.8	102.8	104.5	20.5	86	Within Zone	Pass	Perm
434	8/27/98	Corliss Type A	N 25425 @ E 54780	Final	.9	27.3	94.7	104.5	20.5	91	Within Zone	Pass	
435	8/27/98	Corliss Type A	N 25320 @ E 54780	Final	. 9	26.2	95.3	104.5	20.5	91	Within Zone	Pass	
436	8/27/98	Corliss Type A	N 25200 @ E 54745	Final	9	26.7	0.96	104.5	20.5	92	Within Zone	Pass	
437	8/28/98	Corliss Type A	Sta. 2+00	Final	.9	7.9	135.8	136.0	7.9	100	Within Zone	Pass	
438	8/28/98	Corliss Type A	Sta. 1+00	Final	9	8.7	135.1	136.0	7.9	66	Within Zone	Pass	
439	8/28/98	Corliss Type A	Sta. 0+00, 5ft E of Inlet	Final	. 9	9.8	134.8	136.0	7.9	66	Within Zone	Pass	
440	8/31/98	Corliss Type A	N 25510 @ E 54580	Final	.9	26.7	94.6	104.5	20.5	91	Within Zone	Pass	
441	8/31/98	Corliss Type A	N 25620 @ E 54565	Final	.9	24.3	92.8	104.5	20.5	92	Within Zone	Pass	
442	8/31/98	Corliss Type A	N 25625 @ E 54625	Final	9	22.2	102.3	104.5	20.5	98	Within Zone	Pass	
443	8/31/98	Corliss Type A	N 25550 @ E 54650	Final	9	25.4	97.2	104.5	20.5	93	Within Zone	Pass	
444	8/31/98	Corliss Type A	N 25685 @ E 54650	Final	9	23.8	100.3	104.5	20.5	96	Within Zone	Pass	Perm
445	8/31/98		N 25765 @ E 54655	Final	"9	22.9	101.0	104.5	20.5	97	Within Zone	Pass	
446	8/31/98	Corliss Type A	N 25780 @ E 54780	Final	,,9	30.1	91.7	104.5	20.5	88	Within Zone	Pass	
447	8/31/98	Corliss Type A	N 25695 @ E 54780	Final	"9	29.4	92.1	104.5	20.5	88	Within Zone	Pass	
448	8/31/98	Corliss Type A	N 25710 @ E 54725	Final	9	26.5	95.2	104.5	20.5	91	Within Zone	Pass	
449	8/31/98	Corliss Type A	N 25525 @ E 54745	Final	,,9	22.5	102.7	104.5	20.5	98	Within Zone	Pass	
450	8/31/98	Corliss Type A	N 25710 @ E 54575	Final	9	23.3	100.4	104.5	20.5	96	Within Zone	Pass	
451	9/2/6	Corliss Type A	N 25725 @ E 54525	Final	9	27.6	92.2	104.5	20.5	88	Within Zone	Pass	
450	9/5/9R	Corlise Type A	N 25780 @ E 54615	Final	9	26.2	95.3	104.5	20.5	91	Within Zone	Pass	

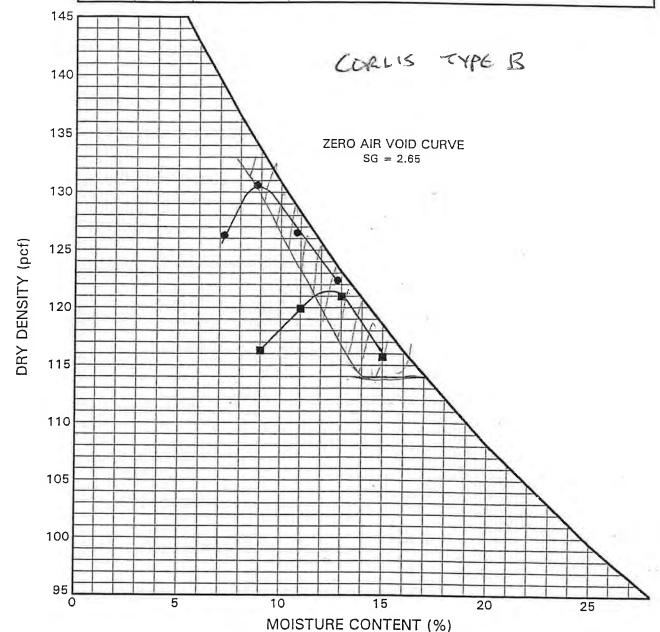




viect: East Lin	Project: East Lined Area Partial Closure, Hidden Valley Landfill	ire, Hidden Valley Landfill				e E	Prepared By:	Glenn Heath	am			
Project No.: 40202-005.061	105.061					Rev	Reviewed By:	Ruce				
Owner: L.R.I.							ested By:	Tested By: Glenn Heath	ath			
Test No. Date	Material Used	Test Location	Lift No.	Test Depth (in)	Field Moist. (%)	Dry Density (PCF)	Referen D. D. (PCF)	Reference Curve D. D. Moisture	Relative Compaction %	Specified Compaction %	Pass / Fail	Test Assign.
9/2/98	3 Corliss Type A	N 25815 @ E 54680	Final	.9	23.8	99.4	104.5	20.5	92	Within Zone		
86/2/6	-	N 25845 @ E 54750	Final	,9	29.4	91.9	104.5	20.5	88	Within Zone	Pass	
9/10/98	8 Corliss Type A	N 25820 @ E 54590	Final	.9	26.2	95.0	104.5	20.5	91	Within Zone	Pass	
9/10/98		N 25825 @ E 54520	Final	.9	24.3	99.1	104.5	20.5	95	Within Zone	Pass	
9/10/98	8 Corliss Type A	N 25730 @ E 54450	Final	.g	25.7	96.2	104.5	20.5	92	Within Zone	Pass	
458 9/10/98	8 Corliss Type A	N 25950 @ E 54575	Final	#9	25.8	94.1	104.5	20.5	90	Within Zone	Pass	
459 9/10/98	8 Corliss Type A	N 25945 @ E 54650	Final	.9	23.9	101.3	104.5	20.5	97	Within Zone	Pass	
460 9/10/98	8 Corliss Type A	N 25890 @ E 54660	Final	#9	24.5	97.4	104.5	20.5	93	Within Zone	Pass	
461 9/10/98	-	N 25896 @ E 54575	Final	.9	24.9	96.2	104.5	20.5	92	Within Zone	Pass	
	-	N 25920 @ E 54510	Final	.9	24.0	2.66	104.5	20.5	95	Within Zone	Pass	
463 9/10/98	-	N 25950 @ E 54445	Final	9	25.1	96.8	104.5	20.5	93	Within Zone	Pass	
464 9/13/98	8 Corliss Type A	N 25880 @ E 54345	Final	#9	23.7	100.3	104.5	20.5	96	Within Zone	Pass	
465 9/13/98	8 Corliss Type A	N 25955 @ E 54355	Final	6"	26.7	96.4	104.5	20.5	92	Within Zone	Pass	
466 9/13/98	8 Corliss Type A	N 25875 @ E 54275	Final	. 9	22.9	100.9	104.5	20.5	26	Within Zone	Pass	
9/13/98	8 Corliss Type A	N 25960 @ E 54280	Final	9	23.2	101.4	104.5	20.5	97	Within Zone	Pass	
9/13/98	8 Corliss Type A	N 25915 @ E 54220	Final	#9	25.6	8.96	104.5	20.5	93	Within Zone	Pass	
9/13/98	8 Corliss Type A	N 25955 @ E 54175	Final	9,	25.0	98.4	104.5	20.5	94	Within Zone	Pass	
9/13/98	8 Corliss Type A	N 25840 @ E 54165	Final	. 9	28.4	92.7	104.5	20.5	88	Within Zone	Pass	
9/14/98	8 Corliss Type A	N 25660 @ E 54360	Final	.9	31.3	90.6	104.5	20.5	87	Within Zone	Pass	
472 9/15/98	_	N 25850 @ E 54440	Final	#9	27.6	98.2	104.5	20.5	94	Within Zone	Pass	
473 9/15/98	8 Corliss Type A	N 25745 @ E 54380	Final	,,9	27.9	91.3	104.5	20.5	87	Within Zone	Pass	
474 9/15/98	8 Corliss Type A	N 25825 @ E 54350	Final	.9	27.0	92.8	104.5	20.5	89	Within Zone	Pass	
475 9/15/98	-	N 25745 @ E 54280	Final	9	26.2	9.96	104.5	20.5	92	Within Zone	Pass	
476 9/15/98	8 Corliss Type A	N 25780 @ E 54220	Final	.9	26.8	94.6	104.5	20.5	91	Within Zone	Pass	
9/15/98	8 Corliss Type A	N 25890 @ E 54310	Final	.9	24.3	98.3	104.5	20.5	94	Within Zone	Pass	
478 9/15/98	8 Corliss Type A	N 25925 @ E 54310	Final	· 9	28.2	91.0	104.5	20.5	87	Within Zone	Pass	

B-1c Reference Moisture/Density Curves

SAMPLE	DEPTH (feet)	CLASSIFICATION	
CORBMOD		(SM) Dark grayish brown, silty SAND with gravel.	
CORBSTD		(SM) Dark grayish brown, silty SAND with gravel.	



SAMPLE:	CORBMOD,	CORBSTD,
TEST METHOD:	ASTM D 1557	ASTM D 69
MAXIMUM DRY DENSITY (pcf):	130.6	121.2
OPTIMUM MOISTURE CONTENT (%):	8.8	12.5
INITIAL MOISTURE CONTENT (%):	4.8	4.8

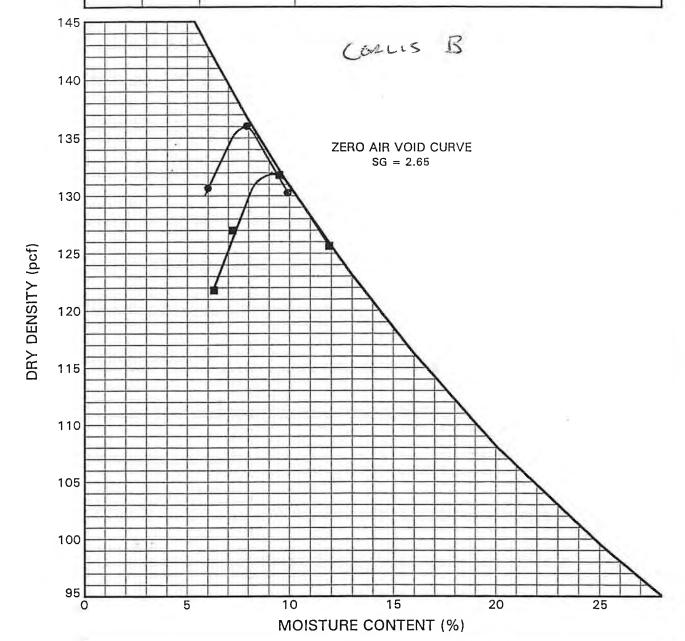


Hidden Valley Landfill Puyallup, Washington COMPACTION TEST RESULT

PROJECT NO.: 98037

FIGURE: 3

SAMPLE	DEPTH (feet)	CLASSIFICATION	
OR2BMOD		(SM) Dark brown, silty SAND with gravel.	
COR2BSTD		(SM) Dark brown, silty SAND with gravel.	



SAMPLE:	COR2BMOD,	COR2BSTD,	
TEST METHOD:	ASTM D 1557	ASTM D 1557	
MAXIMUM DRY DENSITY (pcf):	136.0	131.8	
OPTIMUM MOISTURE CONTENT (%):	7.9	9.5	
INITIAL MOISTURE CONTENT (%):	7.9	7.9	

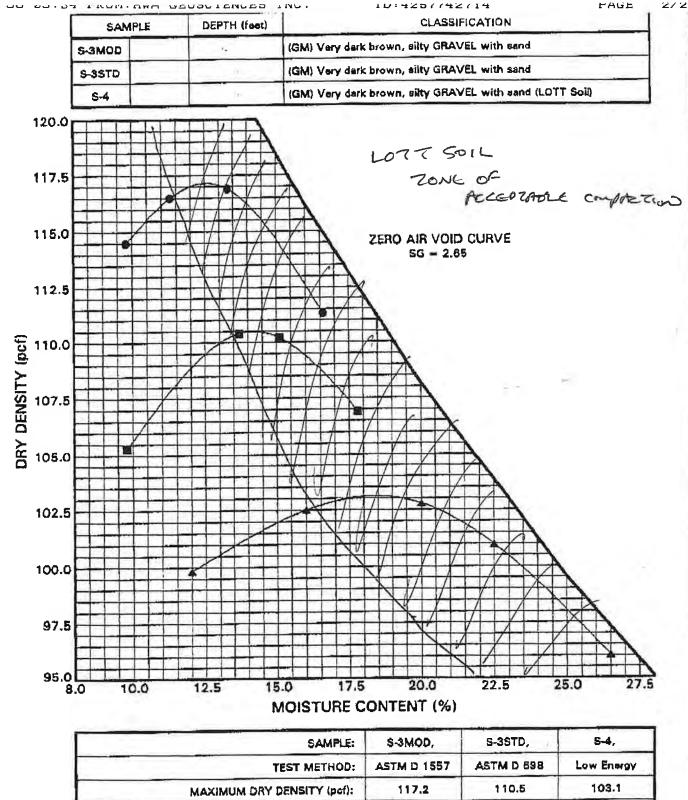


Hidden Valley Landfill Puyallup, Washington

COMPACTION TEST RESULT

PROJECT NO.: 98037

FIGURE:



SAMPLE:	S-3MOD,	S-3STD,	S-4,
TEST METHOD:	ASTM D 1557	ASTM D 698	Low Energy
MAXIMUM DRY DENSITY (pcf):	117.2	110.5	103.1
OPTIMUM MOISTURE CONTENT (%):	12.5	14.3	18.5
INITIAL MOISTURE CONTENT (%):	12.2	12.2	20.0

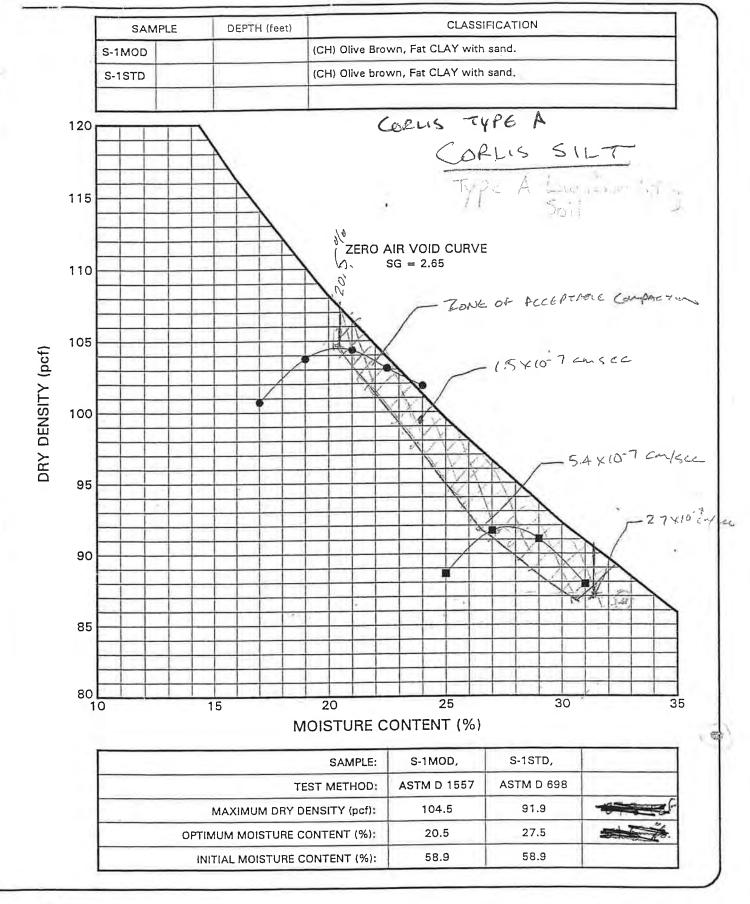


Hidden Valley Landfill

COMPACTION TEST RESULT

PROJECT NO.: 98037

FIGURE: B-1





Hidden Valley Landfill Puyallup, Washington COMPACTION TEST RESULT

PROJECT NO.: 98037

FIGURE: 3

B-1d Permeability Test Data

FALLING HEAD, RISING TAILWATER, CONSTANT VOLUME - FLEXIBLE WALL PERMEAMETER

40202-005-061 Hidden Valley Landfill JOB No.: PROJECT: 9/2/98 LAB START DATE: Washington LOCATION: 9/8/98 Silty clay, olive-brown LAB REP. DATE: MATERIAL: ML TECHNICIAN: 8118 BORING/SAMPLE: Test #23 E. Stope 444 DEPTH/LIFT: PROCTOR #:

SAMPLE ORIENTATION: Vertical PERM FLUID USED: De-aired Tap Water Remold

a. Length of Specimen, L:

1.9 in

b. Avg. Diameter of Specimen:

2.80 in

d. Wet Unit Weight:

c. Sample Volume
(0.7854 * a * b ^ 2):

11.70 cu in

d. Wet Unit Weight:

[(e * 3.8095) / c)]:

120.9 pcf

FINAL CONDITIONS

INITIAL CONDITIONS

 e. Wet Weight Soil:
 371.2 gms
 k. Wet Weight Soil + Tare:
 473.0 gms

 f. Wet Weight Soil + Tare:
 469.5 gms
 l. Dry Weight Soil + Tare:
 389.6 gms

 g. Dry Weight Soil + Tare:
 389.6 gms
 m. Tare Weight:
 98.3 gms

h. Tare Weight: 98.3 gms n. Moisture Content

i. Moisture Content [(k-l)/(l-m)]*100: 28.6 % [(f-g)/(g-h)]*100: 27.4 %

j. Unit Dry Weight
[d/(1+(i/100))]: 94.9 pcf

Specific Gravity of Mercury, δ_{Hg} : 13.55 Maximum Pipet Head, R_{eq} : 2.0 cm
Specific Gravity of Water, δ_{w} : 1.00 Maximum Gradient, i: 30.0 cm/cm

	B COEF	FICIENT D	ETERMIN	ATION			PRI	ESSURE, psi	
Date	Р3	Delta Pressure	Back Pressure, bp	Pore Pressure	B Coeff.	Trial	P3 ep	Inflow ha, in	Outflow ha, out
		10							
		10 10							
4-Sep	70	10	65	75	1	I	70	65	65
	m'	Cumul.	Head R	eading	Total He	ead Loss	Temp	Rt	k @ 20C
Date	Time	Time, s	H,	cm	Δz_p	, cm	С	Kt	cm/sec
9/4/98	15:13		13.	.00					
9/4/98	15:20	420	11.	.20		80	22	0.953	1.2E-07
9/4/98	15:25	720	10.	.50		50	22	0.953	9.9E-08
9/4/98	15:32	1140	9.5	80	3.	20	22	0.953	8.3E-08
9/4/98	15:45	1920	8.0	00	5.	00	22	0.953	8.7E-08
9/4/98	15:50	2220	7.:	50	5.	50	22	0.953	8.6E-08
				14					
				/				1	
3	7								
			1						

Test Method ASTM D 5084-90 Pipet Area = 0.031416 sq cm

Annulus Area = 0.767120 sq cm

FALLING HEAD, RISING TAILWATER, CONSTANT VOLUME - FLEXIBLE WALL PERMEAMETER

JOB No.: 40202-005-061 Hidden Valley Landfill PROJECT: 8/31/98 LAB START DATE: Washington LOCATION: 9/3/98 LAB REP. DATE: Sandy clay, brown MATERIAL: DG 8081 TECHNICIAN: BORING/SAMPLE: Test #15 E. Slope DEPTH/LIFT: PROCTOR #: PERM FLUID USED: De-aired Tap Water SAMPLE ORIENTATION: Vertical Remold 2.80 in b. Avg. Diameter of Specimen: 2.5 in a. Length of Specimen, L: d. Wet Unit Weight: c. Sample Volume [(e * 3.8095) / c)]: 126.7 pcf 15.39 cu in $(0.7854 * a * b ^ 2)$: FINAL CONDITIONS INITIAL CONDITIONS k. Wet Weight Soil + Tare: 612.7 gms 512.1 gms e. Wet Weight Soil: 1. Dry Weight Soil + Tare: 506.8 gms 610.2 gms f. Wet Weight Soil + Tare: 98.1 gms m. Tare Weight: 506.8 gms g. Dry Weight Soil + Tare: n. Moisture Content 98.1 gms h. Tare Weight: 25.9 % [(k-l)/(l-m)]*100:

2.0 cm Equilibrium Head, Req: 16.58 cm Maximum Pipet Head, Rp: 13.55 Specific Gravity of Mercury, δ_{Hg} : 30.0 cm/cm 1.00 Maximum Gradient, i: Specific Gravity of Water, δ_w:

25.3 %

101.1 pcf

	B COEF	FICIENT D	ETERMIN	ATION			PRI	ESSURE, psi	
Date	Р3	Delta Pressure	Back Pressure, bp	Pore Pressure	B Coeff.	Trial	P3 cp	Inflow ha, in	Outflow ha, out
		10 10							
9/2/98	70	10 10	65	75	1	- I	70	65	65
Date	Time	Cumul. Time, s	Head R H,	-		ead Loss , cm	Temp C	Rt	k @ 20C cm/sec
9/2/98	11:02		16.	00					
9/2/98	11:11	540	14.70		1.3	30	22	0.953	6.3E-08
9/2/98	11:25	1380	13.	35	2.0	65	22	0.953	5.3E-08
9/2/98	11:45	2580	12.	00	4.0	00	22	0.953	4.6E-08
9/2/98	12:10	4080	9.9	90	6.	10	22	0.953	4.9E-08
9/2/98	13:06	7440	7.0)5	8.	95	22	0.953	4.7E-08

Test Method ASTM D 5084-90

i. Moisture Content

j. Unit Dry Weight

[(f-g)/(g-h)]*100:

[d/(1+(i/100))]:

Pipet Area = Annulus Area = 0.031416 sq cm 0.767120 sq cm

FALLING HEAD, RISING TAILWATER, CONSTANT VOLUME - FLEXIBLE WALL PERMEAMETER

40202-005-061 Hidden Valley Landfill JOB No.: PROJECT: 9/2/98 LAB START DATE: Washington LOCATION: 9/8/98 LAB REP. DATE: MATERIAL: Silty clay, brown ML 8117 TECHNICIAN: BORING/SAMPLE: Test #3 Top DEPTH/LIFT: PROCTOR #: PERM FLUID USED: De-aired Tap Water Vertical SAMPLE ORIENTATION: Remold b. Avg. Diameter of Specimen: 2.80 in 2.35 in a. Length of Specimen, L: d. Wet Unit Weight: c. Sample Volume [(e * 3.8095) / c)]: 123.0 pcf 14.47 cu in (0.7854 * a * b ^ 2): FINAL CONDITIONS INITIAL CONDITIONS 562.1 gms k. Wet Weight Soil + Tare: 467.2 gms e. Wet Weight Soil: 455.1 gms 1. Dry Weight Soil + Tare: 557.6 gms f. Wet Weight Soil + Tare: 90.4 gms m. Tare Weight: g. Dry Weight Soil + Tare: 455.1 gms n. Moisture Content 90.4 gms h. Tare Weight: [(k-1)/(1-m)]*100;29.3 % i. Moisture Content [(f-g)/(g-h)]*100: 28.1 % i. Unit Dry Weight 96.0 pcf [d/(1+(i/100))]: 2.0 cm Equilibrium Head, Req: 15.71 cm Maximum Pipet Head, Rp: 13.55 Specific Gravity of Mercury, δ_{Hg}: 30.0 cm/cm Maximum Gradient, i: 1.00 Specific Gravity of Water, δ_w:

B COEF	FICIENT D	ETERMIN.	ATION			PRE	SSURE, psi	
Р3	Delta Pressure	Back Pressure, bp	Pore Pressure	B Coeff.	Trial	P3 cp	Inflow he, in	Outflow he, out
	10 10							
70	10 10	65	75	1	1	70	65	65
Time	Cumul. Time, s		- 000			Temp C	Rt	k @ 200 cm/sec
14:25		15.	00					
14:35	600	13.	50	1.5	0	22	0.953	6.7E-08
14:45	1200	12.	50	2.5	0	22	0.953	5.8E-08
14:58	1980	11.	40	3.6	0	22	0.953	5.3E-08
15:05	2400	11.	00	4.0	0	22	0.953	5.0E-08
15:10	2700	10.	60	4.4	0	22	0.953	4.9E-08
	70 Time 14:25 14:35 14:45 14:58 15:05	P3 Delta Pressure 10 10 10 10 10 Time Cumul. Time, s 14:25 14:35 600 14:45 1200 14:58 1980 15:05 2400	P3 Delta Pressure Back Pressure, bp 10 10 10 10 70 10 65 Time Cumul. Time, s Head R H, s 14:25 15. 15. 14:35 600 13. 14:45 1200 12. 14:58 1980 11. 15:05 2400 11.	Pressure Pressure, bp Pressure 10 10 10 10 10 10 65 75 Time Cumul. Head Reading Time, s H, cm 14:25 14:35 600 14:45 1200 14:58 1980 11:40 15:05 2400 11.00	P3 Delta Pressure Back Pressure, bp Pore Pressure B Coeff. 10 10 10 10 10 70 10 65 75 1 Time Cumul. Time, s Head Reading H, cm Total Head Reading AZp, or compared to the pressure of the p	P3 Delta Pressure Back Pressure, bp Pore Pressure B Coeff. Trial 10	P3 Delta Pressure Back Pressure, bp Pore Pressure B Coeff. Trial P3 cp 10	P3 Delta Pressure Back Pressure, bp Pore Pressure B Coeff. Trial P3 cp Inflow ha, in 10

Pipet Area =

Annulus Area =

Test Method ASTM D 5084-90

0.031416 sq cm

FALLING HEAD, RISING TAILWATER, CONSTANT VOLUME - FLEXIBLE WALL PERMEAMETER

40202-005-061 JOB No.: Hidden Valley Landfill PROJECT: LAB START DATE: 9/11/98 Washington LOCATION: 9/15/98 LAB REP. DATE: Silty clay, olive-brown MATERIAL: ML TECHNICIAN: BORING/SAMPLE: Test #35 56 N. Slope DEPTH/LIFT: PROCTOR #:

PERM FLUID USED: De-aired Tap Water Vertical SAMPLE ORIENTATION: Remold

2.80 in b. Avg. Diameter of Specimen: 2.45 in a. Length of Specimen, L: d. Wet Unit Weight: c. Sample Volume 129.9 pcf

[(e * 3.8095) / c)]: (0.7854 * a * b ^ 2): 15.09 cu in FINAL CONDITIONS

INITIAL CONDITIONS

k. Wet Weight Soil + Tare: 612.8 gms e. Wet Weight Soil: 514.4 gms 515.7 gms 1. Dry Weight Soil + Tare: 608.1 gms f. Wet Weight Soil + Tare: 93.7 gms m. Tare Weight: 515.7 gms g. Dry Weight Soil + Tare: n. Moisture Content

93.7 gms h. Tare Weight: [(k-l)/(l-m)]*100: 23.0 % i. Moisture Content [(f-g)/(g-h)]*100: 21.9 %

j. Unit Dry Weight 106.6 pcf [d/(1+(i/100))]:

2.0 cm Equilibrium Head, Req: 16.29 cm Maximum Pipet Head, Rp: 13.55 Specific Gravity of Mercury, δ_{Hg} : 30.0 cm/cm Maximum Gradient, i: 1.00 Specific Gravity of Water, δ_w:

	B COEF	FICIENT I	ETERMIN.	ATION			PRE	ESSURE, psi	
Date	Р3	Delta Pressure	Back Pressure, bp	Pore Pressure	B Coeff.	Trial	P3 cp	Inflow ha, in	Outflow ha, out
		10 10							
V		10			1 3				
14-Sep	70	10	65	75	1		70	65	65
D.	T:	Cumul.	Head R	eading	Total Head Loss		Temp	Rt	k @ 200
Date	Time	Time, s	Н,	em	Δz_p	, cm	С	, Acc	cm/sec
9/14/98	11:14		16.					0.050	7 25 00
9/14/98	11:30	960	13.	50		50	22	0.953	7.2E-08
9/14/98	11:45	1860	8.8	35		15	22	0.953	1.3E-07
9/14/98	12:00	2760	8.3	30	7.	70	22	0.953	1.0E-07
9/14/98	12:30	4560	6.1	10	9.	90	22	0.953	9.3E-08
9/14/98	13:36	8520	3.2	20	12	.80	22	0.953	9.5E-08
				- 1					
							2-2-0		

0.031416 sq cm Test Method ASTM D 5084-90 Pipet Area = Annulus Area = 0.767120 sq cm

FALLING HEAD, RISING TAILWATER, CONSTANT VOLUME - FLEXIBLE WALL PERMEAMETER

40202-005-061 JOB No.: Hidden Valley Landfill PROJECT: 9/22/98 LAB START DATE: Washington LOCATION: 9/25/98 LAB REP. DATE: Clay, brown MATERIAL: MLTest #49 N. Slope TECHNICIAN: BORING/SAMPLE: DEPTH/LIFT: PROCTOR #: PERM FLUID USED: De-aired Tap Water Vertical SAMPLE ORIENTATION: Remold 2.80 in b. Avg. Diameter of Specimen: 2.7 in a. Length of Specimen, L: d. Wet Unit Weight: c. Sample Volume 124.5 pcf [(e * 3.8095) / c)]: 16.63 cu in $(0.7854 * a * b ^ 2)$: FINAL CONDITIONS INITIAL CONDITIONS k. Wet Weight Soil + Tare: 641.4 gms 543.5 gms e. Wet Weight Soil: 526.8 gms 1. Dry Weight Soil + Tare: f. Wet Weight Soil + Tare: 635.4 gms 91.9 gms m. Tare Weight: 526.8 gms g. Dry Weight Soil + Tare: n. Moisture Content 91.9 gms h. Tare Weight: 26.4 % [(k-l)/(l-m)]*100: i. Moisture Content 25.0 % [(f-g)/(g-h)]*100: j. Unit Dry Weight 99.7 pcf [d/(1+(i/100))]: 2.0 cm Equilibrium Head, Req: 17.75 cm Maximum Pipet Head, Rp: 13.55 Specific Gravity of Mercury, δ_{Hg} : 30.0 cm/cm 1.00 Maximum Gradient, i: Specific Gravity of Water, δ_w :

	B COEF	FICIENT D	ETERMIN.	ATION			PRE	ESSURE, psi	
Date	P3	Delta Pressure	Back Pressure, bp	Pore Pressure	B Coeff.	Trial	P3 cp	Inflow ha, in	Outflow ha, out
		10 10							
24-Sep	70	10 10	65	75	1	I	70	65	65
Date	Time	Cumul. Time, s	Head R	eading		ead Loss , cm	Temp C	Rt	k @ 20C cm/sec
9/24/98	05:56		17.	70					
9/24/98	06:15	1140	15.	10		60	22	0.953	6.3E-08
9/24/98	06:27	1860	13.	60	4.	10	22	0.953	6.4E-08
9/24/98	06:45	2940	12.	00	5.	70	22	0.953	6.0E-08
9/24/98	07:00	3840	11.	20	6.	50	22	0.953	5.5E-08
9/24/98	07:20	5040	9.:	55	8.	15	22	0.953	5.7E-08
			8						
				11					

Pipet Area =

Annulus Area =

EMCON TEST#49.XLS

Test Method ASTM D 5084-90

0.031416 sq cm

FALLING HEAD, RISING TAILWATER, CONSTANT VOLUME - FLEXIBLE WALL PERMEAMETER

PROJECT: Hidden Valley Landfill
LOCATION: Washington
MATERIAL: Clay, sandy brown
BORING/SAMPLE: 8035

PROCTOR # : SAMPLE ORIENTATION:

Vertical Remold

a. Length of Specimen, L:

c. Sample Volume(0.7854 * a * b ^ 2):

20.01 cu in

3.25 in

b. Avg. Diameter of Specimen;

2.80 in

40202-005-061

8/19/98

8/24/98

D.G.

Test#4 Final Lift

De-aired Tap Water

FINAL CONDITIONS

d. Wet Unit Weight:

PERM FLUID USED:

LAB START DATE:

LAB REP. DATE:

TECHNICIAN:

DEPTH/LIFT:

JOB No.:

[(e * 3.8095) / c)]:

126.0 pcf

INITIAL CONDITIONS

e. Wet Weight Soil: 661.9 gms
f. Wet Weight Soil + Tare: 760.1 gms

g. Dry Weight Soil + Tare: 622.4 gms
h. Tare Weight: 98.2 gms

i. Moisture Content

[(f-g)/(g-h)]*100:

26.3 %

j. Unit Dry Weight

[d/(1+(i/100))]:

99.8 pcf

k. Wet Weight Soil + Tare:1. Dry Weight Soil + Tare:

764.2 gms 622.4 gms 98.2 gms

m. Tare Weight:n. Moisture Content

[(k-l)/(l-m)]*100:

27.1 %

Specific Gravity of Mercury, δ_{Hg} : Specific Gravity of Water, δ_{w} :

Test Method ASTM D 5084-90

13.55

Equilibrium Head, Req: Maximum Pipet Head, Re; 2.0 cm 20.96 cm

Maximum Gradient, i:

Pipet Area =

Annulus Area =

30.0 cm/cm

	B CUEF	FICIENT L	ETERMIN	ATION			PRI	ESSURE, psi	
Date	P3	Delta Pressure	Back Pressure, bp	Pore Pressure	B Coeff.	Trial	Р3 ср	Inflow ha, in	Outflow ha, out
		10 10							
8/21/98	70	10 10	65	75	1	1	70	65	65
Date	Time	Cumul. Time, s	Head R H,	_	Total He ∆z _p ,	ead Loss , cm	Temp C	Rt	k @ 20C cm/sec
8/21/98	07:00		20.		90 10 10 10 10 10 10 10 10 10 10 10 10 10	5 88 Hg 1 4113		0.050	2 TE 00
8/21/98	07:20	1200	18.			70	22	0.953	3.7E-08
8/21/98	07:39	2340	17.			00	22	0.953	3.5E-08
8/21/98	07:58	3480	16.	.90		70	22	0.953	3.0E-08
8/21/98	08:22	4920	15.	10		50	22	0.953	3.3E-08
8/21/98	09:32	9120	12.	00	8.0	60	22	0.953	3.2E-08

0.031416 sq cm

FALLING HEAD, RISING TAILWATER, CONSTANT VOLUME - FLEXIBLE WALL PERMEAMETER

PROJECT: Hidden Valley Landfill LOCATION: Washington
MATERIAL: Clay, sandy brown
BORING/SAMPLE: 8034

BORING/SAMPLE: PROCTOR #:

SAMPLE ORIENTATION:

Vertical Remold

a. Length of Specimen, L:

c. Sample Volume

(0.7854 * a * b ^ 2):

JC L

JOB No.:

LAB START DATE:

LAB REP DATE:

40202-005-061 8/19/98 8/24/98

LAB REP. DATE: 8/24/98 TECHNICIAN: D.G.

[(k-l)/(l-m)]*100:

DEPTH/LIFT: 70 Test #12 Sub Grade, 3rd lift
PERM FLUID USED: De-aired Tap Water

FINAL CONDITIONS

b. Avg. Diameter of Specimen:

2.80 in

d. Wet Unit Weight:

[(e * 3.8095) / c)]:

k. Wet Weight Soil + Tare:

1. Dry Weight Soil + Tare:

m. Tare Weight:

n. Moisture Content

124.6 pcf

716.9 gms

566.6 gms

31.7 %

92.5 gms

INITIAL CONDITIONS

e. Wet Weight Soil:

f. Wet Weight Soil + Tare:

g. Dry Weight Soil + Tare:

h. Tare Weight:

i. Moisture Content

[(f-g)/(g-h)]*100:

j. Unit Dry Weight

[d/(1+(i/100))]:

594.0 gms

2.95 in

18.16 cu in

686.5 gms 566.6 gms

92.5 gms

25.3 % 99.4 pcf

Equilibrium Head, Req:

2.0 cm 19.21 cm

Specific Gravity of Mercury, δ_{Hg} : Specific Gravity of Water, δ_{w} :

Test Method ASTM D 5084-90

13.55

Maximum Pipet Head, R_p: Maximum Gradient, i:

30.0 cm/cm

	B COEF	FFICIENT D	ETERMIN	ATION			PRI	ESSURE, psi	
Date	P3	Delta Pressure	Back Pressure, bp	Pore Pressure	B Coeff.	Trial	P3 cp	Inflow ha, in	Outflow ha, out
		10							
		10							
8/21/98	70	10 10		75	1	1	70	65	65
Date	Time	Cumul. Time, s		Reading cm	Total He Δz _p ,		Temp C	Rt	k @ 20C cm/sec
8/21/98	09:46		19.	.00					
8/21/98	09:51	300	11.	.20	7.8	30	22	0.953	8.7E-07
8/21/98	09:56	600	7.	10	11.	90	22	0.953	8.5E-07
8/21/98	10:02	960	4.9	90	14.	10	22	0.953	7.7E-07
8/21/98	10:08	1320	3.4	40	15.	60	22	0.953	7.8E-07
8/21/98	10:14	1680	2.5	85	16.	15	22	0.953	7.2E-07
8/21/98	10:23	2220	2.3	30	16.	70	22	0.953	6.9E-07

Pipet Area =

Annulus Area =

0.031416 sq cm

FALLING HEAD, RISING TAILWATER, CONSTANT VOLUME - FLEXIBLE WALL PERMEAMETER

JOB No.: 40202-005-061 Hidden Valley Landfill PROJECT: 9/11/98 LAB START DATE: LOCATION: Washington 9/15/98 Silty clay, olive-brown LAB REP. DATE: MATERIAL: ML SG-30 TECHNICIAN: BORING/SAMPLE: Existing Subspreile DEPTH/LIFT: PROCTOR #: Vertical PERM FLUID USED: De-aired Tap Water SAMPLE ORIENTATION:

Remold Remold

a. Length of Specimen, L:

c. Sample Volume

(0.7854 * a * b ^ 2):

1.95 in

b. Avg. Diameter of Specimen:

d. Wet Unit Weight:

[(e * 3.8095) / c)]:

129.3 pcf

INITIAL CONDITIONS

k. Wet Weight Soil + Tare: 503.8 gms e. Wet Weight Soil: 407.4 gms 429.0 gms I. Dry Weight Soil + Tare: 499.6 gms f. Wet Weight Soil + Tare: g. Dry Weight Soil + Tare: 429.0 gms m. Tare Weight: 92.2 gms n. Moisture Content h. Tare Weight: 92.2 gms 22.2 %

i. Moisture Content [(k-l)/(l-m)]*100: 22.2 % [(f-g)/(g-h)]*100: 21.0 %

j. Unit Dry Weight
[d/(1+(i/100))]: 106.9 pcf

	B COEF	FICIENT L	ETERMIN	ATION			PRI	ESSURE, psi	SURE, psi	
Date	P3	Delta Pressure	Back Pressure, bp	Pore Pressure	B Coeff.	Trial	P3 ep	Inflow ha, in	Outflow ha, out	
		10				100				
		10	1		16 6 10					
9/14/98	70	10 10	65	75	1	1	70	65	65	
D .	m'	Cumul.	Head R	eading	Total He	ad Loss	Temp	Rt	k @ 20C	
Date	Time	Time, s	Н,	cm	Δz_p ,	cm	С	Κι	cm/sec	
9/14/98	10:20		13.	30	Part Control	4 - 10				
9/14/98	10:30	600	11.	.50	1.8	30	22	0.953	8.2E-08	
9/14/98	10:36	960	10.	60	2.7	0	22	0.953	8.1E-08	
9/14/98	10:48	1680	9.2	20	4.1	.0	22	0.953	7.6E-08	
9/14/98	11:00	2400	8.0	00	5.3	10	22	0.953	7.5E-08	
9/14/98	11:09	2940	7.4	40	5.9	00	22	0.953	7.1E-08	
								1)		
		1								

Test Method ASTM D 5084-90

Pipet Area =
Annulus Area =

0.031416 sq cm 0.767120 sq cm

FINAL CONDITIONS

FALLING HEAD, RISING TAILWATER, CONSTANT VOLUME - FLEXIBLE WALL PERMEAMETER

PROJECT: Hidden Valley Landfill Washington LOCATION: Silty clay, olive-brown MATERIAL:

SG-39 BORING/SAMPLE: PROCTOR #:

SAMPLE ORIENTATION:

Vertical Remold

a. Length of Specimen, L:

c. Sample Volume $(0.7854 * a * b ^ 2)$: 2.15 in

13.24 cu in

b. Avg. Diameter of Specimen:

d. Wet Unit Weight:

[(e * 3.8095) / c)]:

JOB No.:

LAB START DATE:

LAB REP. DATE:

TECHNICIAN:

DEPTH/LIFT:

2.80 in

123.8 pcf

40202-005-061

9/11/98

9/15/98

ML

Existy substick

INITIAL CONDITIONS

430.2 gms e. Wet Weight Soil: 529.5 gms f. Wet Weight Soil + Tare:

g. Dry Weight Soil + Tare: 440.3 gms h. Tare Weight: 99.3 gms

i. Moisture Content

[(f-g)/(g-h)]*100:

26.2 %

j. Unit Dry Weight

[d/(1+(i/100))]:

98.1 pcf

k. Wet Weight Soil + Tare:

535.0 gms 440.3 gms 1. Dry Weight Soil + Tare: m. Tare Weight: 99.3 gms

FINAL CONDITIONS

PERM FLUID USED: De-aired Tap Water

n. Moisture Content

[(k-l)/(l-m)]*100:

27.8 %

Specific Gravity of Mercury, δ_{Hg} : Specific Gravity of Water, δ_w:

13.55 1.00 Equilibrium Head, Req: Maximum Pipet Head, Rp:

Maximum Gradient, i:

2.0 cm 14.54 cm

30.0 cm/cm

	B COEF	FICIENT L	ETERMIN	ATION			PRI	ESSURE, psi	
Date	Р3	Delta Pressure	Back Pressure, bp	Pore Pressure	B Coeff.	Trial	P3 ep	lnflow ha, in	Outflow ha, out
		10 10 10							
14-Sep	70	10	65	75	1	1	70	65	65
Date	Time	Cumul. Time, s		leading em	Total He ∆z _p ,		Temp C	Rt	k @ 20C cm/sec
9/14/98	09:00		14.	.50					
9/14/98	09:12	720	12.	.25	2.:	25	22	0.953	8.7E-08
9/14/98	09:20	1200	11.	.20	3.:	30	22	0.953	8.0E-08
9/14/98	09:34	2040	9	50	5.0	00	22	0.953	7.9E-08
9/14/98	09:45	2700	8.:	50	6.0	00	22	0.953	7.6E-08
9/14/98	09:58	3480	7.4	45	7.0	05	22	0.953	7.5E-08

Test Method ASTM D 5084-90

Pipet Area =

0.031416 sq cm

Annulus Area =



Hidden Valley Landfill Project LABORATORY PERMEABILITY TESTING SUMMARY HWA Project No. 98037, Report No. 4

TABLE 1

SAMPLE DESIGNATION	REMOLDING PARAMETERS DRY DENSITY & MOISTURE CONTENT	Hydraulic Conductivity (k) CM/SEC
S-13	99.4 pcf @ 12.0% MC	$k = 3.1 \times 10^{-5}$
S-27	112.3 pcf @ 14.5% MC	$k = 8.5 \times 10^{-6}$
S-37	87.3 pcf @ 22.9% MC	$k = 2.8 \times 10^{-5}$

Existing 5-by-rade

B-1e Liquid Limit/Plastic Limit and Gradations



Project: Hidden Valley Landfill

Project No: 40202-005.061

Boring	7		Plastic		Percent
Exploration	Sample	Liquid	Limit	Plasticity	Passing
Point No.	Depth (ft)	Limit (LL)	(PL)	Index	#200
404	0	57	34	23	70
408	0	58	33	25	69
411	0	39	26	13	68
433	0	54	31	23	66
435	0	46	26	20	76
456	0	44	28	16	50
471	0	45	29	16	50
SG-30	0	38	24	14	77
SG-39	0	43	28	15	74

B-1f Thickness Verification



Project: Hidden Valley Landfill

Survey Provided by: D.A. Berg

Project No: 40202-005.061

Date: 12/23/98

Point #	Northing	Easting	Stored #	Top of Existing Type B Cover	Stored #	Finished Grade	Thickness (finished grade top of existing Type B cover)
1065	25032	54400	4090	483.55		n/a	
1066	25040	54430	4091	485.17		n/a	
1064	25050	54400	4089	489.18		n/a	
1033	25050	54430	4088	488.28		n/a	
1037	25050	54500	4012	484.08		n/a	
1041	25050	54600	4023	479.45		n/a	
1063	25052	54500	4087	486.44	4435	488.93	2.49
1062	25052	54550	4086	484.27	4434	487.24	2.97
1053	25055	54600	4064	481.23	4368	484.32	3.09
1052	25064	54650	4063	480.01	4367	483	2.99
1061	25100	54400	4081	506.25		n/a	
3871	25100	54430	4082	505.16	4304	507.05	1.89
3872	25100	54500	4083	502.28	4300	503.83	1.55
1039	25100	54550	4084	499.88	4301	501.58	1.70
3873	25100	54600	4085	496.12	4302	497.91	1.79
3874	25100	54650	4024	489.88	4303	491.77	1.89
3875	25100	54700	4025	481.73	4328	483.98	2.25
1051	25100	54715	4062	478.43		n/a	
1060	25150	54400	4080	523.62		n/a	
1034	25150	54430	4003	522.37	4305	525.48	3.11
1036	25150	54500	4010	519.6	4306	522.15	2.55
1040	25150	54550	4077	516.73	4307	519.55	2.82
3867	25150	54600	4021	512.5	4308	514.4	1.90
3868	25150	54650	4034	503.76	4309	505.09	1.33
3869	25150	54700	4033	492.36	4310	494.43	2.07
3870	25150	54750	4026	482.27	4329	484.27	2.00
1050	25150	54769	4061	477.86		n/a	
1059	25200	54400	4074	540.46		n/a	
3859	25200	54430	4004	539.39	4315	541.17	1.78
3860	25200	54500	4009	536.52	4314	537.98	1.46
3861	25200	54550	4015	533.66	4313	534.59	0.93
3862	25200	54600	4020	527.52	4312	528.95	1.43
3863	25200	54650	4035	516.75	4311	520.05	3.30
3864	25200	54700	4036	504.63	4331	505.6	0.97
3865	25200	54750	4032	490.11	4330	492.81	2.70
3866	25200	54800	4027	476.4	1	n/a	



Project: Hidden Valley Landfill

Survey Provided by: D.A. Berg

Project No: 40202-005.061

Date: 12/23/98

				Top of Existing Type		Finished	Thickness (finished grade top of existing	
Point #	Northing		Stored #	B Cover	Stored #	Grade	Type B cover)	
1058	25250	54400	4073	556.31	12.12	n/a		
1035	25250	54430	4005	555.55	4316	555.91	0.36	
3852	25250	54500	4008	551.95	4317	553.48	1.53	
3853	25250	54550	4016	549.26	4318	549.48	0.22	
3854	25250	54600	4019	540.47	4319	541.87	1.40	
3855	25250	54650	4038	527.79		n/a		
3856	25250	54700	4037	512.39	4343	516.74	4.35	
3857	25250	54750	4031	495.35	4332	496.99	1.64	
3858	25250	54800	4028	480.65	4365	482.99	2.34	
1049	25250	54814	4060	477.06	4366	479.6	2.54	
1057	25300	54400	4068	571.02	ı	not completed		
3844	25300	54430	4006	570.93	4323	570.35	-0.58	
3845	25300	54500	4007	567.78	4322	567.32	-0.46	
3846	25300	54550	4017	561.99	4321	562.24	0.25	
3847	25300	54600	4018	547.9	4320	549.01	1.11	
3848	25300	54650	4039	532.49	4351	533.31	0.82	
3849	25300	54700	4040	515.42	4342	516.8	1.38	
3850	25300	54750	4030	497.64	4333	498.84	1.20	
3851	25300	54800	4029	482.92	4334	484.85	1.93	
1048	25300	54823	4059	476.4	4335	479.19	2.79	
1056	25331	54400	4067	579.43	4324	579.01	-0.42	
1055	25335	54430	4066	579.85	4325	579.11	-0.74	
1054	25336	54500	4065	576.57	4326	575.87	-0.70	
1099	25350	54400	4161	580.55	4327	581.29	0.74	
1100	25400	54400	4162	582.08		n/a		
3840	25400	54500	4052	579.5	4352	578,69	-0.81	
3841	25400	54600	4047	550.62	4350	551.55	0.93	
3842	25400	54700	4046	516.5	4344	518.16	1.66	
3843	25400	54800	4041	483.06	4336	485.29	2.23	
1047	25400	54824	4058	476.71	4341	478.92	2.21	
1101	25500	54400	4163	582.81		n/a		
3835	25500	54500	4051	580.92	4353	580.42	-0.50	
3836	25500	54600	4048	552.63	4349	553.28	0.65	
3837	25500	54700	4045	517.38	4345	519.02	1.64	
3838	25500	54800	4042	483.11	4337	485.89	2.78	
1046	25500	54826	4057	475.9	4340	478.43	2.53	



Project: Hidden Valley Landfill

Survey Provided by: D.A. Berg

Project No: 40202-005.061

Date: 12/23/98

				Top of Existing Type		Finished	Thickness (finished grade top of existing
Point #	Northing	Easting		B Cover	Stored #	Grade	Type B cover
1102	25600	54400	4164	583.31	4408	583.93	0.62
3828	25600	54500	4050	581.3	4354	581.02	-0.28
3829	25600	54550	4053	569.03	4356	569.2	0.17
3830	25600	54600	4049	552.58	4348	553.24	0.66
3831	25600	54650	4054	535.01	4347	536.28	1.27
3832	25600	54700	4044	517.42	4346	519.44	2.02
1044	25600	54750	4055	499.86	4372	502.16	2.30
3833	25600	54800	4043	483.35	4338	485.83	2.48
1045	25600	54827	4056	475.38	4339	478.53	3.15
1076	25615	54312	4167	580.45		n/a	
1075	25649	54400	4166	581.55	4407	581.76	0.21
1077	25650	54291	4168	571.68			
1070	25650	54510	4093	579.35	4355	579.23	-0.12
3822	25650	54550	4092	567.96	4357	569.52	1.56
3823	25650	54600	4094	551.67	4358	553.25	1.58
3824	25650	54650	4097	534.64	4361	535.99	1.35
3825	25650	54700	4098	516.95	4362	518.94	1.99
3826	25650	54750	4104	499	4371	502.25	3.25
1043	25650	54800	4105	482.89	4373	485.7	2.81
1073	25650	54830	4110	474.64	4374	477.36	2.72
1074	25663	54500	4165	578.87	4406	579.41	0.54
1078	25700	54239	4169	553.78		n/a	
3812	25700	54300	4170	560.66	4402	563.14	2.48
3813	25700	54400	4171	570.23	4403	571.24	1.01
3814	25700	54500	4172	569.09	4404	570.08	0.99
3815	25700	54550	4111	565.02	4405	565.98	0.96
3816	25700	54600	4095	551.51	4359	552.92	1.41
3817	25700	54650	4096	534.25	4360	536.32	2.07
3818	25700	54700	4099	517.51	4363	519.02	1.51
3819	25700	54750	4103	499.53	4370	502.14	2.61
3820	25700	54800	4106	482.86	4376	486.8	3.94
1072	25700	54829	4109	475	4375	478.15	3.15
1080	25750	54188	4180	533.63		n/a	
1079	25750	54300	4231	547.2	4401	549.62	2.42
3797	25750	54400	4178	556.14	4400	557.28	1.14
3805	25750	54500	4177	554.3	4399	556.1	1.80



Project: Hidden Valley Landfill

Survey Provided by: D.A. Berg

Project No: 40202-005.061

Date: 12/23/98

Point #	Northing	Easting	Stored #	Top of Existing Type B Cover	Stored #	Finished Grade	Thickness (finished grade top of existing Type B cover)
3806	25750	54550	4229	550.61	4398	551.98	1.37
3807	25750	54600	4125	543.48	4397	545.62	2.14
3808	25750	54650	4126	534.89	4396	536.15	1.26
3809	25750	54700	4100	518.13	4364	520.23	2.10
3810	25750	54750	4102	500.32	4369	503.24	2.92
3811	25750	54800	4107	483.3	4377	488.22	4.92
1071	25750	54829	4108	475.76	4378	478.18	2.42
3796	25800	54300	4181	531.86	4390	533.19	1.33
1083	25800	54400	4232	541.59	4389	542.33	0.74
3798	25800	54500	4184	539.52	4391	541.57	2.05
3799	25800	54550	4185	535.6	4392	537.63	2.03
3800	25800	54600	4186	527.96	4393	530.79	2.83
3801	25800	54650	4187	520.25	4394	522.36	2.11
3802	25800	54700	4134	512.3	4395	514.56	2.26
3803	25800	54750	4101	501.7	4381	503.7	2.00
3804	25800	54800	4128	484.47	4380	487.07	2.60
1081	25800	54830			4379	477.84	
1103	25820	54300	4182	525.39	4431	527.53	2.14
1113	25824	54200	4214	523.4	4432	525.45	2.05
1114	25845	54150	4215	519.54	4410	521.17	1.63
3786	25850	54200	4217	515.95	4433	518.38	2.43
n/a	25850	54300		n/a	n/a	n/a	
3788	25850	54400	4194	523.93	4388	526.09	2.16
1085	25850	54500	4233	522.67	4387	524.65	1.98
1086	25850	54600	4192	513.17	4386	515.05	1.88
3792	25850	54700	4191	497.17	4385	500.97	3.80
3793	25850	54750	4190	490.04	4384	493.53	3.49
3794	25850	54800			4382	484.24	484.24
1082	25850	54833	4130	474.71	4383	476.71	2.00
1112	25865	54300	4213	517.32	4414	520.03	2.71
1104	25865	54400	4195	518.69	4430	520.56	1.87
1107	25872	54802	4199	475.55		n/a	
1106	25890	54700	4198	486.14	4409	488.43	2.29
1105	25893	54500	4196	507.28		n/a	
1090	25900	54150			4411	504.37	504.37
1089	25900	54200	4216	499.85	4412	502.33	2.48



TABLE B-1f THICKNESS VERIFICATION

Project: Hidden Valley Landfill

Survey Provided by: D.A. Berg

Project No: 40202-005.061

Date: 12/23/98

Facility: East partial Closure

				Top of			Thickness (finished grade
		ll Y		Existing Type		Finished	top of existing
Point #	Northing	Easting	Stored #	B Cover	Stored #	Grade	Type B cover
3787	25900	54300	4222	507.98	4413	509.84	1.86
n/a	25900	54400		n/a	n/a	n/a	
n/a	25900	54500		n/a	n/a	n/a	
3790	25900	54600	4197	497.1	4429	498.81	1.71
n/a	25900	54700		n/a	n/a	n/a	
1111	25911	54400	4212	509.71	4415	512.03	2.32
1117	25920	54740	4227	479.42	4427	481.66	2.24
1108	25928	54700	4200	483.26	4426	485.45	2.19
1110	25931	54500	4202	501.89	4423	504.08	2.19
1118	25933	54740	4228	475.7		n/a	
1109	25939	54600	4201	492.66	4425	493.96	1.30
1116	25948	54700	4226	476.72		n/a	
1092	25950	54200	4218	484.73	4421	488.14	3.41
1091	25950	54300	4221	495.02	4419	496.78	1.76
3783	25950	54400	4223	498.43	4416	500.57	2.14
3784	25950	54500	4203	496	4422	497.79	1.79
3785	25950	54600	4204	489.05	4428	490.6	1.55
1093	25950	54700	n/a	n/a		n/a	
1094	25984	54600	4225	476.38		n/a	
1115	25987	54200	4219	476.77	4420	478.82	2.05
1097	26000	54300	4220	481.23	4418	483.54	2.31
1096	26000	54400	4224	481.34	4417	483.89	2.55
1095	26000	54500	4205	478.62	4424	480.86	2.24

B-2 DRAINAGE LAYER

B-2a Permeability Test Data



Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East partial Closure

Date: 9/19/98 Sampled By: D. Short Tested By: D. Short

Formula: $K=2.3 (L) * Log_{10} (h_1 / h_2)$

Where;

(from HWA Geosciences Inc.)

L = Length of Sample

h₁ = Initial Height of Water above Datum (cm) h₂ = Final Hieght of Water above Datum (cm)

t = Total Test Time

K = Permeability of Sample (cm / sec)

Location Sampled: Southeast corner, upper section of slope.

Material Description:

Medium Coarse Gravel with sand

Sample No.: DR-1

	h₁ (inches)	h ₂ (inches)	t (sec)	K (cm / sec)
A.	24	20	15	0.2775
B.	24	12.5	12.5	0.2483
C.	24	12.5	57	0.2613
			А	vg. = 2.62E-01



Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure Date: 9/20/98
Sampled By: D. Short
Tested By: D. Short

Formula: K=2.3 (L) * Log₁₀ (h₁ / h₂)

Where;

escription: _!	Medium Coarse G	ravel with sand		-	
Sample No.: _	DR-2	Location: South	h Slope East Side, @ Top		
		h ₁ (inches)	h₂ (inches)	t (sec)	K (cm / sec)
	A.	24	20	61	0.2442
	В.	24	12.5	103	0.1446
	C.	24	12.5	107	0.1392
				A	vg. = 1.76E-01
Sample No.:	DR-3	Location: Lowe	er South Slope		
-		h ₁ (inches)	h ₂ (inches)	t (sec)	K (cm / sec)
	A.	24	20	61	0.2442
	В.	24	20	56	0.266
	C.	24	20	59	0.2525
				A	vg. = 2.54E-01
Sample No.:	DR-4	Location: Stock	kpile		
		h₁ (inches)	h ₂ (inches)	t (sec)	K (cm / sec)
	A.	24	20	41	0.3633
	В.	24	20	34	0.4381
	C.	24	20	39	0.3819



Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure Date: 9/22/98
Sampled By: G Heath
Tested By: G Heath

Formula: K=2.3 (L) * Log₁₀ (h₁ / h₂)

†

Where;

(from HWA Geosciences Inc.)

L = Length of Sample

 h_1 = Initial Height of Water above Datum (cm) h_2 = Final Hieght of Water above Datum (cm)

t = Total Test Time

K = Permeability of Sample (cm / sec)

Material Description:

Medium Coarse Gravel with sand

Location: East Lower Slope, South End Sample No.: DR-5 h₂ (inches) t (sec) K (cm / sec) h₁ (inches) A. 24 12.5 282 0.558 296 0.532 В. 12.5 24 12.5 280 0.561 C. 24

Avg. = **5.50E-01**



Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure

Date: 9/23/98 Sampled By: G Heath Tested By: G Heath

Formula: $K=2.3 (L) * Log_{10} (h_1 / h_2)$

Where;

(from HWA Geosciences Inc.)

L = Length of Sample

h₁ = Initial Height of Water above Datum (cm) h₂ = Final Hieght of Water above Datum (cm)

t = Total Test Time

K = Permeability of Sample (cm / sec)

Medium Coarse Gravel with sand Material Description:

C.

Location: East slope, Center, Upper slope Sample No.: DR-7 t (sec) h₁ (inches) h₂ (inches) A. 24 12.5 208.2

24

210.7 0.747 12.5 В. 24 12.5

Avg. = 7.51**E-01**

209.5

Location: Top @ South End Sample No.: DR-8

	h ₁ (inches)	h ₂ (inches)	t (sec)	K (cm / sec)
A.	24	12.5	213.6	0.736
В.	24	12.5	216	0.728
C.	24	12.5	211	0.744

Avg. = **7.36E-01**

K (cm / sec)

0.755

0.751

6.02E-02

6.37E-02

Avg. =

Avg. =



TABLE B-2a DRAIN ROCK PERMEABILITY TEST (FALLING HEAD)

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure Date: 9/24/98

Sampled By: G. Heath

Tested By: G. Heath

Formula: $K=2.3 (L) * Log_{10} (h_1 / h_2)$

Where;

(from HWA Geosciences Inc.)

 $L = Length \ of \ Sample \\ h_1 = Initial \ Height \ of \ Water \ above \ Datum \ (cm) \\ h_2 = Final \ Hieght \ of \ Water \ above \ Datum \ (cm)$

t = Total Test Time

K = Permeability of Sample (cm / sec)

Material Description:

Medium Coarse Gravel with sand

Sample No.: DR-9		Location: N	orth Sic	pe, Lower section		
_		h ₁ (inches)		h ₂ (inches)	t (sec)	K (cm / sec)
	A.	24		12.5	262.2	0.06
	В.	24		12.5	265	0.0593
	C.	24		12.5	261	0.0612

Sample No.: DR-10	Location: SEC	Location: SE Corner, Lower Section				
	h ₁ (inches)	h ₂ (inches)	t (sec)	K (cm / sec)		
A.	24	12.5	250.8	0.0627		
В.	24	12.5	245.4	0.0641		
C.	24	12.5	244.2	0.0644		



Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure Date: 9/26/98
Sampled By: G. Heath
Tested By: G. Heath

Sample No.:

Formula: $K=2.3 (L) * Log_{10} (h_1 / h_2)$

Where;

ι

(from HWA Geosciences Inc.)

C.

L = Length of Sample

 h_1 = Initial Height of Water above Datum (cm) h_2 = Final Hieght of Water above Datum (cm)

t = Total Test Time

K = Permeability of Sample (cm / sec)

Material Description:

Medium Coarse Gravel with sand

Sample No.: DR-11 Location: North Slope, Upper Section

24

t (sec) K (cm / sec) h₁ (inches) h₂ (inches) A. 24 12.5 306 0.0514 298 0.0527 12.5 В. 24 12.5 298.8 0.0526 C. 24

Avg. = <u>5.22E-02</u>

Location: East Slope, Lower Section Sample No.: DR-12 h₁ (inches) h₂ (inches) t (sec) K (cm / sec) 12.5 280.2 0.0561 A. 24 282.6 0.0556 12.5 B. 24

12.5

Avg. = 5.56E-02

0.0551

285.6



Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure

Date: 9/28/98 Sampled By: G. Heath Tested By: G. Heath

Sample No.:

Formula: K=2.3 (L) * Log₁₀ (h₁ / h₂)

Where;

L = Length of Sample

(from HWA Geosciences Inc.)

h₁ = Initial Height of Water above Datum (cm) h₂ = Final Hieght of Water above Datum (cm)

t = Total Test Time

K = Permeability of Sample (cm / sec)

Material Description:

Medium Coarse Gravel with sand

Sample No.: DR-13

Location: North Slope, Lower section

	h ₁ (inches)	h₂ (inches)	t (sec)	K (cm / sec)
Α.	24	12.5	289.8	0.0543
В.	24	12.5	295.2	0.0533
C.	24	12.5	294.6	0.0534

Avg. = **5.37E-02**



Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure

Date: 9/30/98 Sampled By: G. Heath Tested By: G. Heath

Sample No.:

Formula: $K=2.3 (L) * Log_{10} (h_1 / h_2)$

Where;

L = Length of Sample

(from HWA Geosciences Inc.)

h₁ = Initial Height of Water above Datum (cm) h₂ = Final Hieght of Water above Datum (cm)

t = Total Test Time

K = Permeability of Sample (cm / sec)

Material Description: Medium Coarse Gravel with sand

Sample No.: DR-14 Location: North Slope, Lower section

	h ₁ (inches)	h₂ (inches)	t (sec)	K (cm / sec)
A.	24	12.5	288	0.0546
В.	24	12.5	283.8	0.0554
C.	24	12.5	286.2	0.0549

Avg. = **5.50E-02**



Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure

Date: 10/1/98 Sampled By: G. Heath Tested By: G. Heath

Sample No.:

Formula: $K=2.3 (L) * Log_{10} (h_1 / h_2)$

(from HWA Geosciences Inc.)

Where;

L = Length of Sample

h₁ = Initial Height of Water above Datum (cm) h₂ = Final Hieght of Water above Datum (cm)

t = Total Test Time

K = Permeability of Sample (cm / sec)

Medium Coarse Gravel with sand Material Description:

> Location: North Lower Slope, East end Sample No.: DR-15 h₂ (inches) t (sec) h₁ (inches) A. 24 12.5 301.2

> > 298.2 0.0527 12.5 В. 24

> > 297.6 0.0528 12.5 C. 24

> > > Avg. = **5.26E-02**

K (cm / sec)

0.0522

Location: North Upper Slope, West end Sample No.: DR-16

	h ₁ (inches)	h ₂ (inches)	t (sec)	K (cm / sec)
Α.	24	12.5	261.6	0.0601
В.	24	12.5	259.8	0.0605
C.	24	12.5	260.3	0.0604

Avg. = 6.03E-02

B-2b Gradation

TABLE B-2b DRAIN ROCK GRADATION

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure Date: 9/19/98
Sampled By: G. Heath
Tested By: G. Heath

Location Sampled: Southeast corner, upper section of slope. Sample No.: DR-1 Material Description: Medium Coarse Gravel with sand Initial Weight: 25.96 % Passing Passing Spec. Sieve Size Retained 1" 0 25.96 100 100 5.76 22 20-30 3/8" 20.2 1.01 4-10 #4 4.75 200 0.63 0.38 0-3

TABLE B-2b DRAIN ROCK GRADATION

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure

Date: 9/20/98
Sampled By: G. Heath
Tested By: G. Heath

Sample No.:	DR-2	Location: South	Slope East Side, @ To	op		
	Initial Weight: 13.	05				
	Sieve Size	Retained	Passing	% Passing	Spec.	
	1"	0	13.05	100	100	
	3/8"	10.95	2.1	16	20-30	
	#4	1.6	0.5	4	4-10	
	200	0.25	0.25	2	0-3	
sample No.:	DR-3	Location: Lower	r South Slope		_	
	Initial Weight: 19.	45				
	Sieve Size	Retained	Passing	% Passing	Spec.	
	1"	0	19.45	100	100	
	3/8"	13.26	6.19	32	20-30	
	#4	4.09	2.1	11	4-10	
	200	2.01	0.09	0	0-3	
Sample No.:	DR-4	Location: Stock	pile		_	
	Initial Weight: 8.1	7				
	Sieve Size	Retained	Passing	% Passing	Spec.	
	1*	0	8.17	100	100	
	3/8"	6.42	1.75	21	20-30	
	#4	1.06	0.69	8	4-10	
	200	0.57	0.12	1	0-3	

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TABLE B-2b DRAIN ROCK GRADATION

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure Date: 9/22/98

Sampled By: G. Heath
Tested By: G. Heath

Sample No.: DR-5 Location: East Lower Slope, South end

Initial Weight: 21.2

Sieve Size	Retained	Passing	% Passing	Spec.
1**	0	21.2	100	100
3/8"	16.5	4.7	22	20-30
#4	3.64	1.06	5	4-10
200	0.58	0.48	2	0-3

Sample No.: DR-6 Location: NE Corner @ Top, Stockpile

Initial Weight: 17.1

Sieve Size	Retained	Passing	% Passing	Spec.
1"	0	17.1	100	100
3/8"	13.51	3.59	21	20-30
#4	2.22	1.37	8	4-10
200	0.9	0.47	3	0-3

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TABLE B-2b DRAIN ROCK GRADATION

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure Date: 9/23/98

Sampled By: G. Heath Tested By: G. Heath

Sample No.: DR-7 Location: East slope, Center, Upper slope

Initial Weight: 20.8

Sieve Size	Retained	Passing	% Passing	Spec.
1*	0	20.8	100	100
3/8"	16.3	4.5	22	20-30
#4	2.9	1.6	8	4-10
200	0.98	0.62	3	0-3

Sample No.: DR-8 Location: Top @ South End

Initial Weight: 18.8

Sieve Size	Retained	Passing	% Passing	Spec.
1"	0	18.8	100	100
3/8"	14.3	4.5	24	20-30
#4	2.9	1.6	9	4-10
200	1.3	0.3	2	0-3

TABLE B-2b DRAIN ROCK GRADATION

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure Date: 9/24/98
Sampled By: G. Heath
Tested By: G. Heath

Sample No.: DR-9 Location: North Slope, Lower section

Initial Weight: 8.76

Sieve Size	Retained	Passing	% Passing	Spec.
1"	0	8.76	100	100
3/8"	6.39	2.37	27	20-30
#4	1.21	1.16	13	4-10
200	0.97	0.19	2	0-3

Sample No.: DR-10 Location: SE Corner, Lower Section

Initial Weight: 14.2

Sieve Size	Retained	Passing	% Passing	Spec.
19	0	14.2	100	100
3/8"	10.5	3.7	26	20-30
#4	2.4	1.3	9	4-10
200	1.1	0.2	1	0-3

TABLE B-2b DRAIN ROCK GRADATION

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure

Date: 9/26/98

Sampled By: G. Heath Tested By: G. Heath

Sample No.: DR-11 Location: North Slope, Upper Section

Initial Weight: 20.5

Sieve Size	Retained	Passing	% Passing	Spec.
1"	0	20.5	100	100
3/8"	16.2	4.3	21	20-30
#4	3.1	1.2	6	4-10
200	0.98	0.22	1	0-3

Sample No.: DR-12 Location: East Slope, Lower Section

Initial Weight: 17.4

Sieve Size	Retained	Passing	% Passing	Spec.
1"	0	17.4	100	100
3/8"	12.8	4.6	26	20-30
#4	3.1	1.5	9	4-10
200	0.98	0.52	3	0-3

TABLE B-2b DRAIN ROCK GRADATION

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure

Date: 9/28/98
Sampled By: G. Heath
Tested By: G. Heath

Sample No.: <u>DR-13</u>	Location: North	Slope, Lower section		
Initial Weight:12.6_				
Sieve Size	Retained	Passing	% Passing	Spec.
1"	0	12.6	100	100
3/8"	9.7	2.9	23	20-30
#4	1.5	1.4	11	4-10
200	0.97	0.43	3	0-3

TABLE B-2b DRAIN ROCK GRADATION

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure

Date: 9/30/98 Sampled By: G. Heath

Tested By: G. Heath

Sample No.: <u>DR-14</u>	Location: N	orth Slope, Lower section		
Initial Weight:13.7	=			
Sieve Size	Retained	Passing	% Passing	Spec.
1"	0	13.7	100	100
3/8*	10.4	3.3	24	100 20-30
#4	2.1	1.2	9	4-10
200	0.95	0.25	2	0-3

TABLE B-2b DRAIN ROCK GRADATION

Project: Hidden Valley Landfill Project No: 40202-005.061 Facility: East Partial Closure

Date: 10/1/98
Sampled By: G. Heath

Tested By: G. Heath

Sample No.: DR-15

Location: North Lower Slope, East end

Initial Weight: ___16.8

Ciava O'				
Sieve Size	Retained	Passing	% Passing	Spec.
1"	0	16.8	100	100
3/8"	12.2	4.6	27	20-30
#4	2.9	1.7	10	4-10
200	1.3	0.4	2	0-3

Sample No.: DR-16

Location: North Upper Slope, West end

Initial Weight: 21.6

Sieve Size	Retained	Passing	% Passing	Spec.
1	0	21.6	100	100
3/8"	15.8	5.8	27	20-30
#4	3.4	2.4	11	
200	1.8	0.6	3	4-10
			ŭ	0-3

B-3 Topsoil

B-3a Permeability Test Data



SOIL LABORATORY TESTING REPORT

FOR THE

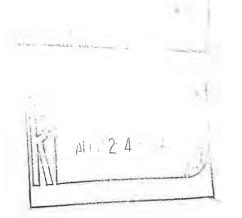
19730-64TH AVE. W., SUITE 200 LYNNWOOD, WA 98036-5957 TEL. 425-774-0106 FAX. 425-774-2714 E-MAIL hwa@hongwest.com

HIDDEN VALLEY LANDFILL PROJECT HWA Project No. 98037 Report No. 5 August 19, 1998

Prepared For

EMCON, Inc. 18912 N. Creek Parkway, Suite 200 Bothell, Washington 98011

Attention: Mr. Kent Wiken, P.E.



In accordance with your request, Hong West & Associates, Inc., has undertaken and completed a testing program outlined by Mr. Kent Wiken of EMCON, Inc. Herein we present the results of our laboratory analyses. The data is summarized in Table 1. The testing was conducted in accordance with the clients' instructions and the procedures outlined below:

GRAIN SIZE ANALYSIS: The grain size distributions for the submitted soil samples were determined in general accordance with ASTM D 422. The results are plotted on Figures 1 and 2.

MOISTURE-DENSITY RELATIONSHIP: The moisture-density relationships (Proctors) for the Corliss B soil sample were determined in general accordance with ASTM D 698 and 1557. The results are plotted on Figure 3.

HYDRAULIC CONDUCTIVITY OF SOIL: The hydraulic conductivity of two remolded soil samples were measured in general accordance with ASTM D 5084. The samples were remolded to the clients specified parameters with regard to the results obtained from ASTM D 698 for the Corliss B soil sample. The topsoil sample was placed within a membrane stretcher in a loose state and allowed to saturate under an effective confining stress of 1 psi. Saturation was induced by subjecting the material to a flow gradient of 4 to 5 generated by a back pressure differential of 1.0 psi for several days within a triaxial pressure chamber. Testing was conducted until inflow was equal to outflow. Subsequent determinations of B coefficient through pore pressure measurements (per ASTM D 4767, par. 8.2.4) confirmed that the degree of saturation for the sample tested was above 95%. The results are presented in Table 1.

August 19, 1998 HWA Project No. 98037, Report No. 5

These tests were conducted utilizing the generally accepted laboratory procedures. Experience has shown that test values derived by these standard methods vary with each representative sample. In addition, it is typical that the engineering properties of soils vary over small distances of lateral or vertical extent. HWA has no knowledge with regard to the extent and quantities of on-site materials that these samples represent.

Thank you for this opportunity to be of service. Should any questions arise, please do not hesitate to contact this office at your earliest convenience.

Respectfully Submitted,

HWA GEOSCIENCES INC.

Steven E. Greene

Senior Engineering Geologist

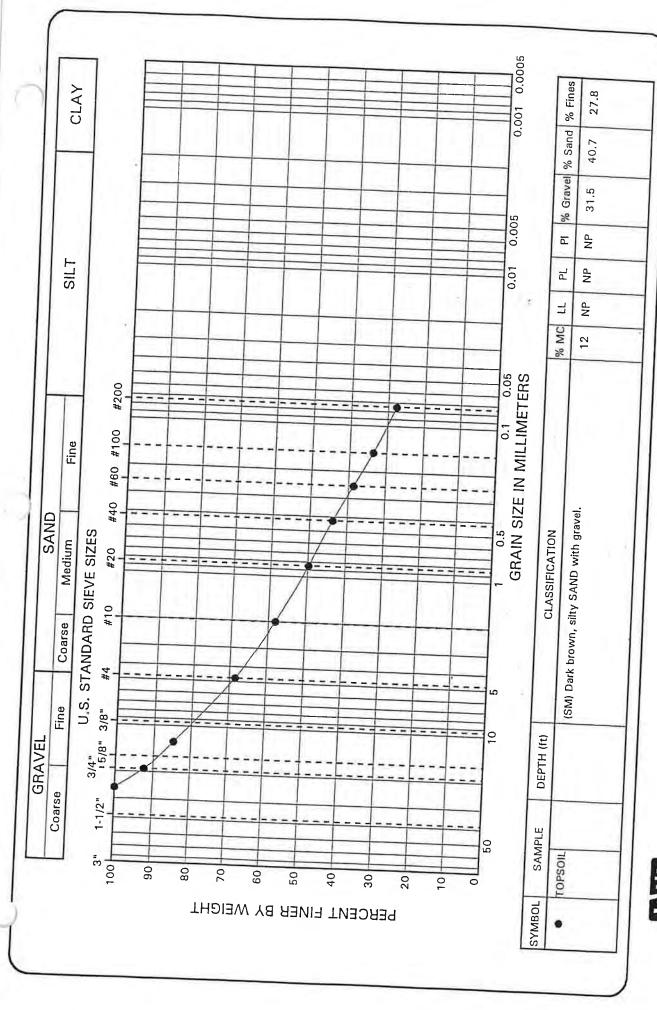
Attachments: Figures 1 & 2 - Grain Size Distributions

Figure 3 - Compaction Test Results



Table 1
Hidden Valley Landfill Project
LABORATORY PERMEABILITY TESTING SUMMARY
HWA Project No. 98037, Report No. 5

Sample Designation	REMOLDING PARAMETERS DRY DENSITY & MOISTURE CONTENT	HYDRAULIC CONDUCTIVITY (k) CM/SEC
Corliss Type B	114.8 pcf @ 12.5% MC	$k = 2.4 \times 10^{-6}$
Topsoil	68.4 pcf @ 16.1% MC	$k = 1.9 \times 10^{-5}$



GRAIN SIZE DISTRIBUTION TEST RESULTS

PROJECT NO.: 98037

HWA GEOSCIENCES INC.

Hidden Valley Landfill Puyallup, Washington

HWAGRSZ 98037 8/19/98

APPENDIX C

SUMMARY OF GEOSYNTHETIC CONFORMANCE AND CONSTRUCTION TESTING

APPENDIX C GEOSYNTHETICS TESTING

C-1	GEOS	SYNTHETIC CLAY LINER
	C-1a	MQA/MQC
	C-1b	GCL Received Log
	C-1c	GCL Moisture Tests
	C-1d	GCL Placement Log
C-2	GEON	MEMBRANE
	C-2a	Conformance Testing
	C-2b	Panel Layout Drawing
	C-2c	Geomembrane Received Log
	C-2d	Trial Welds
	C-2e	Geomembrane Panel and Seaming Log
12	C-2f	Geomembrane Non-Destructive Seam Test Results
	C-2g	Geomembrane Destructive Seam Test Results
	C-2h	Geomembrane Repair Log
	C-2i	MQA/MQC
C-3	GEO	COMPOSITE
	C-3a	MQA/MQC
	C-3b	Conformance Testing
	C-3c	Geocomposite Material Received Log

GEOTEXTILE C-4

- C-4a MQA/MQC C-4b Conformance Testing
- C-4c Geotextile Material Received Log

C-1 GEOSYNTHETICS CLAY LINER

C-1a MQA/MQC Testing

P.O. Box 428 • Lovell, Wyoming 82431 (307) 548-6521 • Fax (307) 548-6413

26-Aug

Mr. Tom Sparks, Serrot Corporation 125 Cassia Way Henderson, NV. 89014-2708 702-566-8600

Dear Mr. Tom Sparks,

Please find enclosed the MQA/MQC	Data Package for G	eosynthetic Clay Li	iner	
(GCL) shipments to	Serrot Corporation			These
shipments left our CETCO - Lovell,	Wy. plant on	24-Aug		
If you have any questions regarding t Mr. Moses Briseno @ 800-322-1149		Cinformation, pleas	se cont	tact

Sincerely,

Noe Garcia
Quality Assurance

GEOSYNTHETIC CLAY LINER

MANUFACTURING QA/QC DATA PACKAGE

SERROT JOB #:

8228

PROJECT NAME:

Hidden Valley Landfill

CUSTOMER PO:

50049

PREPARED FOR:

Serrot Corporation

125 Cassia Way

Henderson, NV. 89014-2708

Telephone #:

702-566-8600

PREPARED BY:

Noe Garcia

Quality Assurance

CETCO

P.O. Box 428 92 Hwy. 37

Lovell, Wy. 82431

Telephone #:

800-322-1149

(Ext. 423)

Fax #:

(307)548-6927

E-Mail:

cetco3@trib.com

GEOSYNTHETIC CLAY LINER

DAILY MANUFACTURING QA/QC DATA

FOR ALL GCL MANUFACTURED ON:

SERROT JOB #:

8228

Project Name:

Hidden Valley Landfill

Prepared For:

Serrot Corporation

Customer PO:

50049

Order #:

88411

Ship Date:

8/24

CONTENTS:

- 1. DAILY GCL PRODUCTION CERTIFICATION
- 2. NEEDLE DETECTION CERTIFICATION
- 3. BENTONITE CLAY CERTIFICATION
- 4. NON-WOVEN GEOTEXTILE MANUFACTURER'S CERTIFICATION
- 5. NON-WOVEN GEOTEXTILE MANUFACTURER'S CERTIFICATION
- 6. GCL MANUFACTURING CERTIFICATION AND TEST RESULTS
- 7. GCL MQA TRACKING FORM

DAILY GEOSYNTHETIC CLAY LINER PRODUCTION CERTIFICATION

GEOSYNTHETIC CLAY LINER MANUFACTURING CERTIFICATION

SERROT JOB #:

8228

PROJECT:

Hidden Valley Landfill

CUSTOMER PO:

50049

SHIP DATE:

8/24

ORDER #:

88411

PRODUCT:

Bentomat DN

Colloid Environmental Technologies Company (CETCO) hereby affirms and certifies that all of the Geosynthetic Clay Liner (GCL) manufactured in this lot achieves the physical and chemical criteria listed on the attached analysis sheet.

Steve Wilkerson

Production Coordinator

Notary-Public

SUSIE FINK - NOTARY PUBLIC

NEEDLE DETECTION CERTIFICATION

CERTIFICATION STATEMENT

TO:

Serrot Corporation

125 Cassia Way

Henderson, NV. 89014-2708

ATTN:

Mr. Tom Sparks,

PROJECT:

Hidden Valley Landfill

ORDER #:

88411

P.O #:

50049

SHIP DATE:

8/24/98

SERROT JOB#:

8228

This statement is to certify that all components of the Geosynthetic Clay Liner manufactured for the above project have been inspected continually for the presence of broken needles through the use of a magnetic removal system.

TECHNOLOGIES CO. (CETCO)

SUSIE FINK - NOTARY PUBLIC STITE OF MY COMMISSION EXPIRES

BENTONITE CLAY CERTIFICATIONS

TECHNICA	L D ATA	SHEET	

ORIGIN INFORMATION

BENTONITE

Manufacturer:

Colloid Environmental Technologies Co.

PRODUCTION

Facility:

Colloid Environmental Technologies Co.

92 HWY. 37

Lovell, WY 82431

Contact:

Jay Bischoff

(800)-322-1159

Brand Name:

CG-50

BENTONITE CERTIFICATE OF ANALYSIS

CETCO

92 HWY. 37 LOVELL, WY 82431

TO:	Serrot Corp	oration		DATE:	8	3/23/98
ATTN:	Mr. Tom Sp	arks,				
Dear Custon		sed to produce our GCL is	CG 50 from	m CETCO, Orde	er Number	See Below
-	f the CG 50 wa est results belov	s tested from Lot Number	082398A	and was p	rovided the	Ŧ
					ROLL #	Daily Results
TEST		METHOD	REQ. SPECIFICAT	ION		RESULTS
Free Swell		ASTM D 5890	24 MLS. / 2g M	IIN.	26.0	Mls.
Fluid Loss		ASTM D 5891	18.0 MLS (MA	AX)	16.4	Mls.
Moisture		ASTM D 2216	12.0 % (MAX))	9.2	%
Passing 200	Mesh	ASTM D 421	1% (Max)		0.8	% V
RET. 10 MI	ESH	ASTM C 136	0 PERCENT		0	%
using Amer						
Tests Cond	ucted By:	SF. MG				
Approved 1	Ву:	Noe Garcia				
In any corre		arding this shipment, please	refer to our Order Nun	nbers listed below	·.	

NON-WOVEN GEOTEXTILE MANUFACTURER'S CERTIFICATION

TECHNICAL DAT	A SHEET	

ORIGIN INFORMATION

NON-WOVEN GEOTEXTILE

Manufacturer:

Synthetic Industries

PRODUCTION

Facility:

Synthetic Industries 4019 Industry Drive Chattanooga, TN. 37416

Contact:

Sid Weiser

Brand Name:

Geotex 651

June 25, 1998

Geosynthetic Products Division Cetco WY Noe Garcia PO BOX 428 Lovel!, WY 82431 BoL; 623929 PO 77495

This is to certify that Product GEOTEXTM 651, a nonwoven polypropylene geotextile produced by Synthetic Industries will meet the following certifiable minimum average roll values when tested in accordance with the proper ASTM test methods. A minimum average roll value is calculated as the mean minus two standard deviations, yielding a 97.5 percent confidence level. This geotextile has been continuously inspected for the presence of needles and none were detected.

PHYSICAL PROPERTY Weight	TEST METHOD ASTM D-5261	U.S. UNITS 6.0 oz/yd²	S'.I. UNITS 200 g/m ²
Thickness	ASTM D-5199	80 mils	2.0 mm
Tensile Strength	ASTM D-4632	170 lbs	755 N
Elongation	ASTM D-4632	50 %	50 %
Trapezoidal Tear	ASTM D-4533	70 lbs	310 N
Mullen Burst	ASTM D-3786	330 psi	2275 Kpa
Puncture Strength	ASTM D-4833	110 lbs	485 N
AOS	ASTM D-4751	70 US Standard Sieve	0.212 mm
Permittivity	ASTM D-4491	1.3 sec ⁻¹	1.3 sec ⁻¹
Permeability	ASTM D-4491	0.24 cm/sec	0.24 cm/sec
Flow Rate	ASTM D-4491	110 gpm/ft²	4480 lpm/m ²
U V Resistance	ASTM D-4355	70 %	70 %

Strength Retained after 500 hours exposure in Xenon Arc Weatherometer

Sincerely, Sid Wesser

Sid Weiser

Technical Manager

Performance Nonwovens Division

Seller makes no warranty, express or implied, concerning the product furnished hereunder other than at the time of delivery it shall be of the quality and specifications stated herein. ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED AND. TO THE EXTENT THAT IT IS CONTRARY TO THE FOREGOING SENTENCE ANY IMPLIED WARRANTY OF MERCHANTABILITY IS EXPRESSLY EXCLUDED. Any recommendations made by the Seller concerning uses or applications of said product are believed reliable and Seller makes no warranty of results to be obtained. If the product does not meet Synthetic Industries current published specifications, and the Customer gives notice to Synthetic Industries before installing the product, then Synthetic Industries will replace the product without charge or refund the purchase price. This Data Sheet supersedes all previous Data Sheets for this style and is subject to change without notice. The effective date for this product data is 02/1897.

ik van conf

06/25/98

11:33 Page 1

Synthetic Industries Individual Roll Data Bill of Tading:623929

Roll Number	Style	Mass/ Unit Osy D5261	Lab Thick mils D5199	(MD) lbs	sile (XMD) lbs D4632	(MD)	yation (XMD) % D4632	(MD) lbs	(XMD) lbs	Mullen Burst psi D3786	Punct Resist 1bs D4833
 6048996A	651	6.1	80	195	207	61	69	86	95	337	110
6049022A	651	6.3	91	216		65		83		344	123
6049026A	651	7.1	89	237	254	65	67	97	89	344	131
6050648A	651	6.6	91	216		61		105		367	130
6050664A	651	6.9	97	228	243	59	74	99	127	414	138
6050676A	651	6.9	101	221	235	61	74	100	117	419	120

Gid Wesser

Synthetic Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles in one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal ear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15,000 sm) for index properties or style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and ermittivity/permeability/water flow rate approximately once every 540,000 sf (50,160 sm), the actual frequency of testing for erformance properties will vary depending upon production schedules, product availability, customer requirements, job pecifications or other agreements arranged with Synthetic Industries prior to the time of purchase. If additional testing is needed to seet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

Once rolls of nonwoven geotextiles are produced, inspected and the test results from the frequency stated above indicates that also produced during the production run meets our published minimum average roll values, approved rolls are shipped for oracle until an order requires the material to be shipped. Since rolls are loaded at the warehouse independent of production sequence ist results listed above may include data from rolls which were not shipped. However, the data provided is from the same roduction run as the rolls actually shipped on this bill of lading.

June 5, 1998

Geosynthetic Products Division Cetco WY Noe Garcia PO BOX 428 Lovell, WY 82431 BoL; 623617 PO 77487

This is to certify that Product GEOTEXTM 651, a nonwoven polypropylene geotextile produced by Synthetic Industries will meet the following certifiable minimum average roll values when tested in accordance with the proper ASTM test methods. A minimum average roll value is calculated as the mean minus two standard deviations, yielding a 97.5 percent confidence level. This geotextile has been continuously inspected for the presence of needles and none were detected.

PHYSICAL PROPERTY Weight	TEST METHOD ASTM D-5261	U.S. UNITS 6.0 oz/yd²	S.I. UNITS 200 g/m ²
Thickness	ASTM D-5199	80 mils	2.0 mm
Tensile Strength	ASTM D-4632	170 lbs	755 N
Elongation	ASTM D-4632	50 %	50 %
Trapezoidal Tear	ASTM D-4533	70 lbs	310 N
Mullen Burst	ASTM D-3786	330 psi	2275 Kpa
Puncture Strength	ASTM D-4833	110 lbs	485 N
AOS	ASTM D-4751 ·	70 US Standard Sieve	0.212 mm
Permittivity	ASTM D-4491	1.3 sec ⁻¹	1.3 sec ⁻¹
Permeability	ASTM D-4491	0.24 cm/sec	0.24 cm/sec
Flow Rate	ASTM D-4491	110 gpm/ft²	4480 lpm/m ²
U V Resistance	ASTM D-4355	70 %	70 %

Strength Retained after 500 hours exposure in Xenon Arc Weatherometer

Sincerely,

Sid Weiser

Technical Manager

Sid Wesser

Performance Nonwovens Division

Seller makes no warranty, express or implied, concerning the product furnished hereunder other than at the time of delivery it shall be of the quality and specifications stated herein. ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED AND, TO THE EXTENT THAT IT IS CONTRARY TO THE FOREGOING SENTENCE ANY IMPLIED WARRANTY OF MERCHANTABILITY IS EXPRESSLY EXCLUDED. Any recommendations made by the Seller concerning uses of applications of said product are believed reliable and Seller makes no warranty of results to be obtained. If the product does not meet Synthetic Industries current published specifications, and the Customer gives notice to Synthetic Industries before installing the product, then Synthetic Industries will replace the product whithout charge or returnd the purchase price. This Data Sheet supersedes all previous Data Sheets for this style and is subject to change without notice. The effective date for this product data is 02/1897

Synthetic Industries Individual Roll Data Bill of Lading:623617

(9)	Roll Number	Style	Mass/ Unit Osy D5261	Lab Thick mils D5199	Tens (MD) 1bs D4632	(XMD) lbs	(MD)	gation (XMD) % D4632	lbs	(XMD) lbs	Mullen Burst psi D3786	Punct Resist 1bs D4833
	6050778A	651	6.2									
	6050788A		6.6	89	207	214	60	72	98		406	116
	6050805A	651	6.9	96	221	233	58	66	97	115	410	
	6050820A	651	6.7	90	208	229	61	67	109	134	379	128
	6050824A	651	6.6	91	212	224	57	69	99	115	371	126
	6050840A	651	6.6	89	215	230	59	69	106	116	367	130
	6050858A	651	7.2	95	207	251	57	72	105	114	407	131
	6050872A	651	6.7	91	209	215	57	65	85	109	404	126
	6050890A	651	6.5	95	210	226	61	68	105	229	385	257

Sid Wesser

Synthetic Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles is one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal tear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15,000 sm) for index properties for style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and Permittivity/permeability/water flow rate approximately once every 540,000 sf (50,160 sm), the actual frequency of testing for performance properties will vary depending upon production schedules, product availability, customer requirements, job specifications or other agreements arranged with Synthetic Industries prior to the time of purchase. If additional testing is needed to meet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

Once rolls of nonwoven geotextiles are produced, inspected and the test results from the frequency stated above indicates that atterials produced during the production run meets our published minimum average roll values, approved rolls are shipped for storage until an order requires the material to be shipped. Since rolls are loaded at the warehouse independent of production sequence test results listed above may include data from rolls which were not shipped. However, the data provided is from the same production run as the rolls actually shipped on this bill of lading.



Geosynthetic Products Division Cetco WY Noe Garcia PO BOX 428 Lovell, WY 82431 BoL; 623499 PO 77487 May 27, 1998

This is to certify that Product GEOTEXTM 651, a nonwoven polypropylene geotextile produced by Synthetic Industries will meet the following certifiable minimum average roll values when tested in accordance with the proper ASTM test methods. A minimum average roll value is calculated as the mean minus two standard deviations, yielding a 97.5 percent confidence level. This geotextile has been continuously inspected for the presence of needles and none were detected.

PHYSICAL PROPERTY Weight	TEST METHOD ASTM D-5261	U.S. UNITS 6.0 oz/yd²	S.I. UNITS 200 g/m ²
Thickness	ASTM D-5199	80 mils	2.0 mm
Tensile Strength	ASTM D-4632	170 lbs	755 N
Elongation	ASTM D-4632	50 %	50 %
Trapezoidal Tear	ASTM D-4533	70 lbs	310 N
Mullen Burst	ASTM D-3786	330 psi	2275 Kpa
Puncture Strength	ASTM D-4833	110 lbs	485 N
AOS	ASTM D-4751	70 US Standard Sieve	0.212 mm
Permittivity	ASTM D-4491	1.3 sec-1	1.3 sec ⁻¹
Permeability	ASTM D-4491	0.24 cm/sec	0.24 cm/sec
Flow Rate	ASTM D-4491	110 gpm/ft²	4480 lpm/m²
U V Resistance	ASTM D-4355	70 %	70 %

Strongth Retained after 500 hours exposure in Xunon Are Weathersmeter

Sincerely,

Sid Weiser

Technical Manager

Sid Wesser

Performance Nonwovens Division

Solior mistos no warranty, express or implied, concoming the product furnished hereunder other than at the limit of delivery it shall be of the quality and specifications stated herein. ANY IMPLIED WARRANTY OF FITHESE FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED AND, TO THE EXTENT THAT IT IS CONTRARY TO THE FOREOGING SENTENCE ANY IMPLIED WARRANTY OF MERCHANTABILITY IS EXPRESSLY EXCLUDED. Any recommendations made by the Seller concerning uses or applications of said product are between reliable and Seller makes no warranty of restate to be obtained. If the product does not most Synthetic Industries current published specifications, and the Customer gives notice to Synthetic Industries before installing the product, then Synthetic Industries will replace the product date for this product date in 02/1097

Synthetic industries, inc.

4019 Industry Drive • Chattanooga, Tennesses • 37416 • USA Telephone • 423-899-0444 • Fax • 423-899-7619 • 1-800-621-0444 05/29/98

Synthetic Industries Individual Roll Data 10:02 Page 1

				f Lading	3:623499	
Roll	Product	Te	neile	Elong	gation	
Number	8tyl.	(MD)	(XMD)	(MD)	(XMD)	
		1bm	lbs	*	¥	

	Roll	Product	Ten	eile	Elong	ation	Trap '	Tear	Mullon	Punct	
	Number	Styl.	(MD)	(XMD)	(MD)	(XMD)	(MD)	(XMD)	Burst	Resist	
1			lbs	lbs	*	¥ .	lbs	lbs	pai	lbs	
			D4632	D4632	D4632	D4632	D4533	D4533	D3786	D4833	
						******			*******		****
	6048946X	651	200		5.0		94		380	122	
	6049086A	651	216	233	63	66	9.0	104	354	115	
	6050636A	651	229	224	60	69	117	132	387	120	
	6050688A	651	235	248	63	72	105	123	386	130	
	6050696A	651	184	220	5 0	72	703	134	361	110	

Sid Wesser

Synthetic Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles is one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal tear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15,000 sm) for index properties for style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and Permittivity/permeability/water flow rate approximately once every 540,000 sf (50,160 sm), the actual frequency of testing for performance properties will vary depending upon production schedules, product availability, customer requirements, job specifications or other agreements arranged with Synthetic industries prior to the time of purchase. If additional testing is needed to meet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

Once rolls of nonwoven geotextiles are produced, inspected and the test results from the frequency stated above indicates that materials produced during the production run meets our published minimum average roll values, approved rolls are shipped for storage until an order requires the material to be shipped. Since rolls are loaded at the warehouse independent of production sequence test results listed above may include data from rolls which were not shipped. However, the data provided is from the same production run as the rolls actually shipped on this bill of lading.

NON-WOVEN GEOTEXTILE MANUFACTURER'S CERTIFICATION

TECHNICAL	L D ATA S HEET	
-----------	------------------------------	--

ORIGIN INFORMATION

NON-WOVEN GEOTEXTILE

Manufacturer:

Synthetic Industries Inc.

PRODUCTION

FACILITY:

Synthetic Industries

4019 Industry Drive

Chattanooga, TN. 37416

CONTACT:

Sid Weiser

BRAND NAME:

Geotex 650



Geosynthetic Products Division

August 20, 1998

American Colliod/WY-Cetco Lovell WY Plant Noe Garcia PO Box 428 Lovell WY 82431

BoL; 624731 624734 624737 624738 PO 77348

This is to certify that Product GEOTEXTM 650, a nonwoven polypropylene geotextile produced by Synthetic Industries will meet the following certifiable minimum average roll values when tested in accordance with the proper ASTM test methods. A minimum average roll value is calculated as the mean minus two standard deviations, yielding a 97.5 percent confidence level.

PHYSICAL PROPERTY Weight	TEST METHOD ASTM D-5261	U.S. UNITS 6.0 oz/yd ²
Thickness	ASTM D-5199	120 mils
Tensile Strength	ASTM D-4632	45 lbs
Elongation	ASTM D-4632	90 %
Trapezoidal Tear	ASTM D-4533	25 lbs
Mulien Burst	ASTM D-3786	190 psi
Puncture Strength	ASTM D-4833	50 lbs

Sincerely,

Sid Weiser

Technical Manager

Performance Nonwovens Division

Soler makes no warranty, express or singlied, concerning the product furnished hereunder other than at the time of sciency a shall be of the quality and specifications stated herein. ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR FURPOSE IS EXPRESSLY EXCLUDED AND, TO THE EXPLIENT THAT IT IS CONTRARY TO THE FOREGOING SENTENCE ANY IMPLIED WARRANTY OF MERCHANTABILITY IS EXPRESSLY EXCLUDED. Any recommendations made by the Saler concoming uses or applications of said product are believed reliable and Soler makes no werranty of mostlis to abilitined. If the product does not meet Synthetic Industries Synthetic Industries are reliable for appointations, and the Customer gives notice to Synthetic Industries before installing the product, then Synthetic Industries will replace the product which is charge or refund the purchase period. This Does Sheet suppressed as previous Data Shoots for this style and is subject to change without notice. The officiene date for this product data is 02/1897

Synthetic Industries, Inc.

4019 Industry Drive • Chattanooga, Tennessee • 37416 • USA Telephone • 423-899-0444 • Fax • 423-899-7619 • 1-800-621-0444

materials produced during the production run meets our published minimum average roll values, approved rolls are shipped for prage until an order requires the material to be shipped. Since rolls are loaded at the warehouse independent of production sequence at results listed above may include data from rolls which were not shipped. However, the data provided is from the same production run as the rolls actually shipped on this bill of lading.

12:52 Page 1

TO:3 1 307 548 6927

08/19/98

Synthetic Industries Individual Roll Data Bill of Lading: 624734

Roll Number	Style	OBV		lbs	(MMD) lbs	(MD)	(XMD) \$ \$	(MD) 1ba	(XMD) lbs	Mullen Burst psi D3786		
 4	650	6.7	131	81	102	104	120	39	32	246	75	
5143795A		7.2	139	78	131	109	122	31	38	252	227	
5143841A		–		• -	110	106	125	31	32	240	63	
5143919A	65 0	6.4	131	83				47	47	251	86	
5143931A	650	7.1	141	100	139	107	133.	2/	~ /	-31		

Sid Wesser

Synthetia Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles is one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal tear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15.000 sm) for index properties for style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and Permittivity/permeability/water flow rate approximately once every \$40,000 sf (50,160 sm), the actual frequency of testing for performance properties will vary depending upon production schedules, product availability, customer requirements, job specifications or other agreements arranged with Synthetic Industries prior to the time of purchase. If additional testing is needed to meet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

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12:52 Page |

08/19/98

Synthetic Industries Individual Roll Data Bill of Lading: 624737

Roll Number	Style	mit	Lab Thick mils D5199	the	(XMD)	(MD)	(XMD)	(MD) 1bs	(XMD) lbs	psí	Resist 1bs	
5143869A	650	6.8	134	80	127	101	121	40.	36 35	260 256	70 72:	
5143872A	650	6.7	129	77	118	97	131	47	35	2.76		

Sid Wesin

Synthetic Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles is one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal tear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15,000 sm) for index properties for style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and Permittivity/permeability/water flow rate approximately once every 540,000 sf (50,160 sm), the actual frequency of testing for performance properties will vary depending upon production schedules, product availability, customer requirements, job specifications or other agreements arranged with Synthetic Industries prior to the time of purchase. If additional testing is needed to meet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

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08/19/98

12:52 Page 1

Synthetic Industries Individual Roll Data Bill of Lading:624731

Roll St Mumber			Thick	(MD) lbs	(XMD) lbs	(MD)	(XMD)	(MD) lbs	(XMD)	Burst psi p3786	Resist lbs	4 8 (5.80)
			145	100	145	108	119	50	44	263	76	
5143924A (550	7.1 6.8 [,]	134	81	114	109	125	39	33	236	74	

Sid Wesan

Synthetic Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles is one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal tear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15,000 sm) for index properties for style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and Permittivity/permeability/water flow rate approximately once every 540,000 sf (50,160 sm), the actual frequency of testing for performance properties will vary depending upon production schedules, product availability, customer requirements, job specifications or other agreements arranged with Synthetic Industries prior to the time of purchase. If additional testing is needed to meet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

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08/19/98

12:53 Page (

Synthetic Industries Individual Roll Data Bill of Lading:624738

	Roll Number	Style	Mass/ Unit Osy D5261	Lab Thick mils	lbs	(XMD) lbs	(MD)	ation (XMD) * D4632	lbs	(MMX) adl	Mullen Burst psi D3786	Punct Resint 1bs D4834
	war a seek		00201	11111								
***	5143831A	650	7.0	132	81		99		48	67	270	
	5143844A	650	7.4.	136	89	186	99	125	43	43	229	100
	5143875A		6.5	130	66	94	96	126	32	24	241	80
	5143935A		6.5	127	88	116	104	120	43	38	217	63

Sid Wesser

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Geosynthetic Products Division

July 22, 1998

American Colliod/WY-Cetco Lovell WY Plant Noe Garcia PO Box 428 Lovell WY 82431

Bol: 624254 PO# 77324

This is to certify that Product GEOTEXTM 650, a nonwoven polypropylene geotextile produced by Synthetic Industries will meet the following certifiable minimum average roll values when tested in accordance with the proper ASTM test methods. A minimum average roll value is calculated as the mean minus two standard deviations, yielding a 97.5 percent confidence level.

PHYSICAL PROPERTY Weight	TEST METHOD ASTM D-5261	U.S. UNITS 6.0 oz/yd ²
Thickness	ASTM D-5199	120 mils
Tensile Strength	ASTM D-4632	45 lbs
Elongation	ASTM D-4632	90 %
Trapezoidal Tear	ASTM D-4533	25 lbs
Mullen Burst	ASTM D-3786	190 psi
Puncture Strength	ASTM D-4833	50 lbs

Sincerely,

Sid Weiser

Technical Manager

Performance Nonwovens Division

Seller makes no warranty, express or implied, concerning the product furnished hereunder other than at the time of delivery it shall be of the quality and specifications stated herein. ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED AND, TO THE EXTENT THAT IT IS CONTRARY TO THE FOREGOING SENTENCE ANY IMPLIED WARRANTY OF MERCHANTABILITY IS EXPRESSLY EXCLUDED. Any recommendations made by the Seller concerning uses or applications of said product are believed reliable and Seller makes no warranty of results to be obtained. If the product does not meet Synthetic Industries current published specifications, and the Customer gives notice to Synthetic Industries before installing the product, then Synthetic Industries will replace the product without charge or refund the purchase price. This Date Sheet supersedes all previous Data Sheets for this style and is subject to change without notice. The effective date for this product data is 02/1897

Synthetic Industries Individual Roll Data Bill of Lading:624254

_	Roll Tumber	Style	Mass/ Unit Osy D5261		(MD) lbs	sile (XMD) lbs D4632	(MD)	gation (XMD) % D4632	(MD) lbs	(XMD) lbs	Mullen Burst psi D3786	Punct Resist 1bs D4833
9	143855A	650	6.9	129	82		104		48		239	
9	143911A	650	6.9	133	86	131	105	131	47	30	233	67
5	143914A	650	6.8	132	88	129	104	124	46	44	238	7.6



Synthetic Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles is one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal tear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15,000 sm) for index properties for style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and Permittivity/permeability/water flow rate approximately once every 540,000 sf (50,160 sm), the actual frequency of testing for performance properties will vary depending upon production schedules, product availability, customer requirements, job specifications or other agreements arranged with Synthetic Industries prior to the time of purchase. If additional testing is needed to meet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

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GEOSYNTHETIC CLAY LINER QUALITY TEST RESULTS

GEOSYNTHETIC CLAY LINER MANUFACTURING CERTIFICATION

TO:

Serrot Corporation

125 Cassia Way

Henderson, NV. 89014-2708

702-566-8600

ATTENTION:

Mr. Tom Sparks,

PROJECT:

Hidden Valley Landfill

SERROT JOB #:

8228

ORDER NUMBER:

88411

PRODUCT:

Bentomat DN

CETCO hereby affirms and certifies that all of the Geosynthetic Clay Liner manufactured in this lot achieves the physical and chemical criteria listed below.

PROPERTY	<u>TEST METHOD</u>	MINIMUM VALUE
Bentonite Mass / Area	ASTM D 5993 *	.80 lbs/sq.ft.
Grab Strength	ASTM D 4632	150 Lbs.
Grab Elongation	ASTM D 4632	15 Percent Typical
Peel Strength	ASTM D 4632	15 Lbs.
Index Flux	ASTM D 5887	1.0 x 10 (-8) $m(3)/m(2)/sec.$ (max.)
Permeability	ASTM D 5084	5 x 10 (-9) cm/sec. (Max)

* Reported at 0 % moisture content.

GAI Lab Accredited Test Methods were followed during conformance testing for:

ASTM D 4632 - Grab Strength and Grab Elongation.

ASTM D 5887 - Index Flux.

ASTM D 5993 - Bentonite Mass/Area.

Colloid Environmental Technologies Co. (CETCO)

Subscribed and sworn to before me this Act day of Aug. 199

issual June

Notary Public



COLLOID ENVIRONMENTAL TECH CO

GCL QUALITY DATA

PO BOX 428 LOVELL

₹ 82431

0 R D E R # 000088411

020-BENTOWAT DN	MATERIAL
199834020 199834020 199834020 199834020 199834020 199834020 199834020 199834020 199834020 199834020 199834020	LOT No.
00002529 00002528 00002528 00002526 00002525 00002525 00002523 00002523 00002521 00002521	ROLL No
1.03 1.03 1.03 1.03 1.03 1.03 1.03 1.03	BENTONITE MASS/AREA 0.75 lb/sqft ASTM D 5993
285.10 285.10 285.10 285.10 285.10 285.10 285.10 285.10 285.10 285.10	GRAB STRENGTH 1501bs marv ASTM D 4632
31.90 31.90 31.90 31.90 31.90 34.40 34.40 34.40 34.40 34.40	PEEL STRENGTH 15 lbs ASTM D 4632

· . . .

NOTE:

An asterisk indicates the actual test done on the roll and the roll tested. If an asterisk is not present, test results are based on the previous roll tested. Mass/Area and Moisture content are tested a minimum of every 40,000sf. Grab Strength is tested a minimum of every 200,000sf. Peel Strength is tested a minimum of every 40,000sf. Bentonite Mass/Area is reported at 0% moisture cont ent. Grab Elongation is tested a minimum of every 200,000sf.

*** End of Report ***

PAGE:

SHIP TO: HIDDEN VALLEY LANDFILL 17925 MERIDIAN ST., E PUYALLUP

GEOSYNTHETIC CLAY LINER MQA TRACKING FORMS

082398A	5143912A	6050648A	2881	2100	150	00002529 020-BENTOMAT DN	00002529
082398A	5143912A	6050644A	2865	2100	150	020-BENTOMAT DN	00002528
082398A	5143912A	6050644A	2872	2100	150	020-BENTOMAT DN	00002527
082398A	5143912A	6050644A	2897	2100	150	020-BENTOMAT DN	00002526
082398A	5143912A	6050644A	2886	2100	150	020-BENTOMAT DN	00002525
082398A	5143912A	6050644A	2866	2100	150	020-BENTOMAT DN	00002524
082398A	5143912A	6050644A	2881	2100	150	020-BENTOMAT DN	00002523
082398A	5143912A	6050809A	2874	2100	150	020-BENTOMAT DN	00002522
082398A	5143912A	6050809A	2874	2100	150	020-BENTOMAT DN	00002521
082398A	5143927A	6050809A	2886	2100	150	020-BENTOMAT DN	00002520
082398A	5143927A	6050809A	2875	2100	150	LOT# 199834020 00002519 020-BENTOMAT DN	LOT# 1998 00002519
CLAY LOT#	GEOSYNTHETIC GEOSYNTHETIC GEOSYNTHETIC TOP ROLL# BOTTOM LOT# BOTTOM ROLL#	GEOSYNTHETIC	ROLL WEIGHT	SQUARE	ROLL LENGTH	MATERIAL	ROLL#
		000088411	ORDER NUMBER 000088411	ORDE			
	SHIP TO: HIDDEN VALLEY LANDFILL 17925 MERIDIAN ST., E PUYALLUP				WY 82431	CETCO LOVELL PLANT PO BOX 428 LOVELL	
	,						
PAGE:	COLLOID ENVIRONMENTAL TECH CO GCL MQA/MQC TRACKING FORM	COLLOID ENVIR	_			7F1 QCT#TF1 5/98 16:51:05	QCG#TF1 8/25/98

TOTAL PAGES

00002530 020-BENTOMAT DN

150

2100

2843 6050648A

5143912A

25,200

TOTAL SQUARE FEET.....

082398A

P.O. Box 428 • Lovell, Wyoming 82431 (307) 548-6521 • Fax (307) 548-6413

24-Aug

Mr. Tom Sparks, Serrot Corporation 125 Cassia Way Henderson, NV. 89014-2708 702-566-8600

Dear Mr. Tom Sparks,

Please find enclosed the MQA/MQC	Data Package	for Geosynthetic Clay Liner		
(GCL) shipments to	Serrot	Corporation	å	These
shipments left our CETCO - Lovell,	Wy. plant on	20-Aug	٠	

If you have any questions regarding the enclosed QA/QC information, please contact Mr. Moses Briseno @ 800-322-1149 (Ext: 421).

Sincerely,

Noe Garcia

Quality Assurance

GEOSYNTHETIC CLAY LINER

MANUFACTURING QA/QC DATA PACKAGE

SERROT JOB #:

8228

PROJECT NAME:

Hidden Valley Landfill

CUSTOMER PO:

50049

PREPARED FOR:

Serrot Corporation

125 Cassia Way

Henderson, NV. 89014-2708

Telephone #:

702-566-8600

PREPARED BY:

Noe Garcia

Quality Assurance

CETCO

P.O. Box 428 92 Hwy. 37

Lovell, Wy. 82431

Telephone #:

800-322-1149

(Ext. 423)

Fax #: E-Mail: (307)548-6927

cetco3@trib.com

GEOSYNTHETIC CLAY LINER

DAILY MANUFACTURING QA/QC DATA

FOR ALL GCL MANUFACTURED ON:

SERROT JOB #:

8228

Project Name:

Hidden Valley Landfill

Prepared For:

Serrot Corporation

Customer PO:

50049

Order #:

88439

Ship Date:

8/20

CONTENTS:

- 1. DAILY GCL PRODUCTION CERTIFICATION
- 2. NEEDLE DETECTION CERTIFICATION
- 3. BENTONITE CLAY CERTIFICATION
- 4. NON-WOVEN GEOTEXTILE MANUFACTURER'S CERTIFICATION
- 5. NON-WOVEN GEOTEXTILE MANUFACTURER'S CERTIFICATION
- 6. GCL MANUFACTURING CERTIFICATION AND TEST RESULTS
- 7. GCL MQA TRACKING FORM

DAILY GEOSYNTHETIC CLAY LINER PRODUCTION CERTIFICATION

GEOSYNTHETIC CLAY LINER MANUFACTURING CERTIFICATION

SERROT JOB #:

8228

PROJECT:

Hidden Valley Landfill

CUSTOMER PO:

50049

SHIP DATE:

8/20

ORDER #:

88439

PRODUCT:

Bentomat DN

Colloid Environmental Technologies Company (CETCO) hereby affirms and certifies that all of the Geosynthetic Clay Liner (GCL) manufactured in this lot achieves the physical and chemical criteria listed on the attached analysis sheet.

Production Coordinator

Subscribed and sworn to before me this 34th day of 4llg.

SUSIE FINK - NOTARY PUBLIC

NEEDLE DETECTION CERTIFICATION

CERTIFICATION STATEMENT

TO:

Serrot Corporation

125 Cassia Way

Henderson, NV. 89014-2708

ATTN:

Mr. Tom Sparks,

PROJECT:

Hidden Valley Landfill

ORDER #:

88439

P.O #:

50049

SHIP DATE:

8/20/98

SERROT JOB #:

8228

This statement is to certify that all components of the Geosynthetic Clay Liner manufactured for the above project have been inspected continually for the presence of broken needles through the use of a magnetic removal system.

COLLOID ENVIRONMENTAL TECHNOLOGIES CO. (CETCO)

Subscribed and sworn to before me this Att day of Aug.



BENTONITE CLAY CERTIFICATIONS

${f T}$ ECHNICAL ${f D}$ ATA ${f S}$ HEET	
---	--

ORIGIN INFORMATION

BENTONITE

Manufacturer:

Colloid Environmental Technologies Co.

PRODUCTION

Facility:

Colloid Environmental Technologies Co.

92 HWY. 37

Lovell, WY 82431

Contact:

Jay Bischoff

(800)-322-1159

Brand Name:

CG-50

BENTONITE CERTIFICATE OF ANALYSIS

CETCO

92 HWY. 37 LOVELL, WY 82431

TO:	Serrot Corpor	ation			DATE:	8/	/22/98
ATTN:	Mr. Tom Spar	ks,					
A sample of	NITE that is use	d to produce our GCL is	CG 50	from CE7	ΓCO, Orde		See Below
following tes	t results below.						
						ROLL #	Daily Results
TEST		METHOD	REQ. SPECIFI	CATION		ACTUAL I	RESULTS
Free Swell		ASTM D 5890	24 MLS./	2g MIN.		27.0	Mls.
Fluid Loss	19	ASTM D 5891	18.0 MLS	(MAX)		15.8	Mls.
Moisture		ASTM D 2216	12.0 % (N	1AX)		8.0	%
Passing 200	Mesh	ASTM D 421	1 % (Ma	x)		0.8	%
RET. 10 ME	SH	ASTM C 136	0 PERCE	NT		0	%
		ä					
using Americ		sults shown above represe st Methods and/or custom					
Tests Condu	cted By:	SF. MG		84			
Approved B	у:	Noe Garcia					
In any corres		ling this shipment, please	refer to our Orde	r Numbers l	isted below		

NON-WOVEN GEOTEXTILE MANUFACTURER'S CERTIFICATION

ORIGIN INFORMATION

NON-WOVEN GEOTEXTILE

Manufacturer:

Synthetic Industries

PRODUCTION

Facility:

Synthetic Industries 4019 Industry Drive Chattanooga, TN. 37416

Contact:

Sid Weiser

Brand Name:

Geotex 651

Geosynthetic Products Division

Cetco WY Noe Garcia PO BOX 428

Lovell, WY 82431

Bol: 624257,624273 PO#77324

This is to certify that Product GEOTEXTM 651, a nonwoven polypropylene geotextile produced by Synthetic Industries will meet the following certifiable minimum average roll values when tested in accordance with the proper ASTM test methods. A minimum average roll value is calculated as the mean minus two standard deviations, yielding a 97.5 percent confidence level. This geotextile has been continuously inspected for the presence of needles and none were detected.

July 22, 1998

PHYSICAL PROPERTY Weight	TEST METHOD ASTM D-5261	U.S. UNITS 6.0 oz/yd²	S.1. UNITS 200 g/m ²
Thickness	ASTM D-5199	80 mils	$2.0 \mathrm{mm}$
Tensile Strength	ASTM D-4632	170 lbs	755 N
Elongation	ASTM D-4632	50 %	50 %
Trapezoidal Tear	ASTM D-4533	70 lbs	310 N
Mullen Burst	ASTM D-3786	330 psi	2275 Kpa
Puncture Strength	ASTM D-4833	110 lbs	485 N
AOS	ASTM D-4751	70 US Standard Sieve	0.212 mm
Permittivity	ASTM D-4491	1.3 sec ⁻¹	1.3 sec ⁻¹
Permeability	ASTM D-4491	0.24 cm/sec	0.24 em/sec
Flow Rate	ASTM D-4491	110 gpm/lt ²	4480 lpm/m
U V Resistance	ASTM D-4355	70 %	70 %

Strength Retained after 500 hours exposure in Xenon Arc Weathernmeter

Sincerely,

Sid Weiser

Technical Manager

Performance Nonwovens Division

Seller makes no warranty, express or implied, concarning the product turnished hereunder other than at the time of delivery it shall be of the quality and specifications stated herein. ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED AND, TO THE EXTENT THAT IT IS CONTRARY TO THE FOREGOING SENTENCE ANY IMPLIED WARRANTY OF MERCHANTABILITY IS EXPRESSLY EXCLUDED. Any recommendations made by the Seller concerning uses applications of said product are believed reliable and Seller makes no warranty of results to be obtained. If the product does not meet Synthetic Industries current published specifications, and the Customer gives notice to Synthetic Industries before installing the product, then Synthetic Industries will replace the product without clining or reliand the purchase pince. This Data Sheet supersedes all previous Data Sheets for this style and is subject to change without notice. The effective date for this product data is 02/1897.

Synthetic Industries Individual Roll Data Bill of Lading:624273

Roll	Style	Mass/	Lab	Ten	sile	Elong	gation	Trap	Tear	Mullen	Punet
Number		Unic	Thick	(MD)	(XMD)	(MD)	(XMD)	(MD)	(XMD)	Burst	Resist
		Osy	mils	lbs	lbs	용	늉	lbs	lbs	psi	lbs
		D5261	D5199	D4632	D4632	D4632	D4632	D4533	D4533	D3786	D4833
6054600A	651	6.5	83	210		55		115		374	117
6054604A	651	6.8	88	221	241	58	63	123	138	393	
6054612A	651	6.5	86	207	230	57	68	90	133	381	
6054620A	651	6.4	83	204	223	56	66	122	140	374	
6054624A	651	6.7	83	236	236	59	74	86	96	377	
6054632A	651	6.4	82	229	222	60	63	87	103	370	118

Sid Wesser

Synthetic Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles is one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal tear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15,000 sm) for index properties for style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and Permittivity/permeability/water flow rate approximately once every 540,000 sf (50,160 sm), the actual frequency of testing for performance properties will vary depending upon production schedules, product availability, customer requirements, job specifications or other agreements arranged with Synthetic Industries prior to the time of purchase. If additional testing is needed to meet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

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Synthetic Industries Individual Roll Data Bill of Lading:624257

)	Roll Number	Style	Mass/ Unit Osy D5261	Lab Thick mils D5199	(MD) lbs	sile (XMD) lbs D4632	(MD) %	gation (XMD) % D4632	(MD) lbs	(XMD) lbs	Mullen Burst psi D3786	Punct Resist 1bs D4833	is	
	6054616A	651	6.7	87	223	228	60	63	85	112	379			
	6054642A	651,	6.4	84										
	6054645A	651	7.3	87										
	6054666A	651	6.7	87	215	236	64	69	127	144	363			
	6054670A	651	6.9	88	227	241	61	64	90	107	379			
	6054674A	651	6.5	85	220		58		130		398			
	6054678A	651	6.8	88	232	235	62	70	92	116	403			
	6054686A	651	6.6	84	219	232	58	66	94	148	410			

Sid Wesser

Synthetic Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles is one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal tear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15,000 sm) for index properties for style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and Permittivity/permeability/water flow rate approximately once every 540,000 sf (50,160 sm), the actual frequency of testing for performance properties will vary depending upon production schedules, product availability, customer requirements, job specifications or other agreements arranged with Synthetic Industries prior to the time of purchase. If additional testing is needed to meet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

Once rolls of nonwoven geotextiles are produced, inspected and the test results from the frequency stated above indicates that materials produced during the production run meets our published minimum average roll values, approved rolls are shipped for storage until an order requires the material to be shipped. Since rolls are loaded at the warehouse independent of production sequence test results listed above may include data from rolls which were not shipped. However, the data provided is from the same production run as the rolls actually shipped on this bill of lading.

NON-WOVEN GEOTEXTILE MANUFACTURER'S CERTIFICATION

	TECHNICAL ${f D}$ ATA ${f S}$ HEET $_$	
--	---	--

ORIGIN INFORMATION

NON-WOVEN GEOTEXTILE

Manufacturer:

Synthetic Industries Inc.

PRODUCTION

FACILITY:

Synthetic Industries 4019 Industry Drive

Chattanooga, TN. 37416

CONTACT:

Sid Weiser

BRAND NAME:

Geotex 650



Geosynthetic Products Division

August 20, 1998

American Colliod/WY-Cetco Lovell WY Plant Noe Garcia PO Box 428 Lovell WY 82431

BoL: 624731 624734 624737 624738 PO 77348

This is to certify that Product GEOTEXTM 650, a nonwoven polypropylene geotextile produced by Synthetic Industries will meet the following certifiable minimum average roll values when tested in accordance with the proper ASTM test methods. A minimum average roll value is calculated as the mean minus two standard deviations, yielding a 97.5 percent confidence level.

PHYSICAL PROPERTY Weight	TEST METHOD ASTM D-5261	U.S. UNITS 6.0 oz/yd ²
Thickness	ASTM D-5199	120 mils
Tensile Strength	ASTM D-4632	45 lbs
Elongation	ASTM D-4632	90 %
Trapezoidal Tear	ASTM D-4533	25 lbs
Mullen Burst	ASTM D-3786	190 psi
Puncture Strength	ASTM D-4833	50 lbs

Sincerely,

Sid Weiser

Technical Manager

Performance Nonwovens Division

Soler makes no warranty, express or implied, concerning the product furnished hereunder other than at the time of delivery a shell be of the quality and specifications stated herein. ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED AND, TO THE EXPREST IN TO THE FOREGOING SENTENCE ANY IMPLIED WARRANTY OF MERCHANTABILITY IS EXPRESSLY EXCLUDED. Any recommendations made by the Selfer concerning uses or applications of said product are believed reliable and Soler makes no warranty of results to be obtained. If the product does not meet Symholic Individual content published appointed in the Customer gives notice to Symholic Individual period individual period regions and the Customer gives notice to Symholic Individual period product and individual period regions of the product does not reflect the product does not reflect the symholic Individual period regions of the product does not reflect the symholic individual period regions of the product does not reflect the symholic individual period regions of the product does not reflect the symholic individual period regions of the symholic individual period regions of the product does not reflect the symholic individual period regions of the product does not reflect the symholic individual period regions of the product does not reflect the symholic individual period regions of the product does not recommend the product does not reflect the product does not region to the product does not region

Synthetic Industries, Inc.

4019 Industry Drive • Chattanooga, Tennessee • 37416 • USA Telephone • 423-899-0444 • Fax • 423-899-7619 • 1-800-621-0444

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08/19/98

12:52 Page 1

Synthetic Industries Individual Roll Data Bill of Lading:624734

Roll Number	Style	Mass/ Unit Osy DS261	Lab Thick mils D\$199	lbs	(XMD) lbs	(MD) %	(XMD) \$ \$ \$ \$	(MD) lbs	(XMD) lbs	Mullen Burst psi D3786	Punct Resist 1bs D4833	***
 5143795A	650	6.7	131	81	102	104	120	39	32	246	75	
5143841A		7.2	139	78	131	109	122	31	38	252		
5143919A		6.4	131	83	110	106	125	31	32	240	63	
51479717		† 1	141	100	139	107	123	47	47	251	86	

Sid Wesser

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108/19/98

12:52 Page 1

Synthetic Industries Individual Roll Data Bill of Lading:624737

Roll Number	style	Mass/ tmit Osy D5261	Lab Thick mils D5199	(MD) lbs	(XMD) 1bs	(MD)	(XMD)	(MD)	(XMD) lbs	pai	Punct Resist 1bs D4833	 344
5143869A		6.8 6.7	134 129	80 77	127	101 97	13j 131	40 47	36 35	260 256	70 72:	

Sid Wesser

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PAGE: 04/05

08/19/98

12:52 Page 1

Synthetic Industries Individual Roll Data Bill of Lading: 624731

Roll Number	Style	Mass/ Unit Osy D5261	Thick mils	уþв	(XMD) lbs	(MD)	(XMD)	(MD) lbs	jpa (XMD)	Mullen Burst psi D3786	Puncr Resist 1bs D4833	
5143924A	650	7.1	145	100	145	108	119	50	44	263	76	
5143929A		6.8	134	81	114	109	125	39	33	236	74	



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08/19/98

12:53 Page t

Synthetic Industries Individual Roll Data Bill of Lading:624738

Roll	Style	Mass/	Lab	Ten	aile	Elong	ation	Trap	Tear	Mullen	Punct.
Number		Unit Osy	Thick mils	(MD) lbs	(XMD)	(MD) *k	& (⊄WX)	(MD) lbs	(MMX)	Burst psi	Resist lbs
		D5261	D5199	104632	D4632	D4632	D4632	D4533	D4533	D3786	D4833

5143831A	650	7.0	132	81		99		48	67	270	
5143844A	650	7.4.	136	89	186	99	175	43	43	229	
5143875A	650	6.5	130	66	94	96	126	32	24	241	8.0
5143935A	650	6.5	127	88	116	104	120-	43	38	217	6.3

Sid Wesser

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GEOSYNTHETIC CLAY LINER QUALITY TEST RESULTS

GEOSYNTHETIC CLAY LINER MANUFACTURING CERTIFICATION

TO:

Serrot Corporation

125 Cassia Way

Henderson, NV. 89014-2708

702-566-8600

ATTENTION:

Mr. Tom Sparks,

PROJECT:

Hidden Valley Landfill

SERROT JOB #:

8228

ORDER NUMBER:

88439

PRODUCT:

Bentomat DN

CETCO hereby affirms and certifies that all of the Geosynthetic Clay Liner manufactured in this lot achieves the physical and chemical criteria listed below.

PROPERTY	TEST METHOD	MINIMUM VALUE
Bentonite Mass / Area	ASTM D 5993 *	.80 lbs/sq.ft.
Grab Strength	ASTM D 4632	150 Lbs.
Grab Elongation	ASTM D 4632	10 Percent Typical
Peel Strength	ASTM D 4632	15 Lbs.
Index Flux	ASTM D 5887	1.0 x 10 (-8) $m(3)/m(2)/sec.$ (max.)
Permeability	ASTM D 5084	5 x 10 (-9) cm/sec. (Max)

* Reported at 0 % moisture content.

GAI Lab Accredited Test Methods were followed during conformance testing for:

ASTM D 4632 - Grab Strength and Grab Elongation.

ASTM D 5887 - Index Flux.

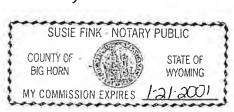
ASTM D 5993 - Bentonite Mass/Area.

Colloid Environmental Technologies Co. (CETCO)

_ 19<u>98</u>.

EDUCATION

Notary Public



QCT#FT2 8:16:13

QCG#FT2 8/24/98

82431 ≩ LOVELL PO BOX 428 LOVELL

0 R D E R # 000088439

41.80* 39.90 39.90 39.90 30.90 30.40 30.40 30.40 30.40 PEEL STRENGTH 15 1bs ASTM D 4632 GRAB STRENGTH 1501bs marv ASTM D 4632 336.20* 276.90 276.90 276.90 276.90 276.90 276.90 276.90 276.90 276.90 276.90 276.90 BENTONITE MASS/AREA 0.75 lb/sqft ASTM D 5993 ROLL No 00002400 00002386 00002384 00002384 00002383 00002381 00002381 00002381 00002381 00002401 199834020 199834020 199834020 199834020 199834020 199834020 199834020 199834020 199834020 199834020 199834020 LOT No. **SASSASSASSAS** 020-BENTOMAT D
020-BENTOMAT D MATERIAL

· · ·

NOTE:

An asterisk indicates the actual test done on the roll and the roll tested. If an asterisk is not present, test results are based on the previous roll tested. Mass/Area and Moisture content are tested a minimum of every 40,000sf. Grab Strength is tested a minimum of every 200,000sf. Peel Strength is tested a minimum of every 40,000sf. Bentonite Mass/Area is reported at 0% moisture cont ent. Grab Elongation is tested a minimum of every 200,000sf.

*** End of Report ***

SHIP TO: HIDDEN VALLEY LANDFILL 17925 MERIDIAN ST., E PUYALLUP

GEOSYNTHETIC CLAY LINER MQA TRACKING FORMS

PAGE:

COLLOID ENVIRONMENTAL TECH CO GCL MQA/MQC TRACKING FORM

QCT#TF1 8:16:12

QCG#TF1 8/24/98

WY 82431 CETCO LOVELL PLANT PO BOX 428 LOVELL

SHIP TO: HIDDEN VALLEY LANDFILL 17925 MERIDIAN SI., E PUYALUP

ORDER NUMBER 000088439

CLAY LOT#	082298A1	082298A1	082298A1	082298A1	082298A1	082298A1	082298A1	082298A1	082298A1	082298A1	082298A1	082298A1	082298A1	08229BA1
GEOSYNTHETIC BOTTOM ROLL#														
GEOSYNTHETIC GEOSYNTHETIC GEOSYNTHETIC TOP ROLL# BOTTOM LOT# BOTTOM ROLL:	5143821A	5143821A	5143821A	5143924A	5143924A	5143924B	5143924A	5143924A	5143924A	5143929A	5143929A	5143929A	5143929A	5143929д
GEOSYNTHETIC TOP LOT#	6054685A	6054685A	6054685A	6054685A	6054685A	6054685A	6054685A	6054685A	6054685A	6054670A	6054670A	6054670A	6054624A	6054624B
ROLL	3020	3002	3019	3001	3000	3012	3027	3044	3018	2974	2952	2939	2936	2974
SQUARE FEET	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
ROLL	150	150	150	150	150	150	150	150	150	150	150	150	150	150
MATERIAL	LOT# 199834020 00002378 020-BENTOMAT DN	020-BENTOMAT DN												
ROLL#	LOT# 199834020 00002378 020-1	00002379	00002380	00002381	00002382	00002383	00002384	00002385	00002386	00002400	00002401	00002402	00002403	00002404

TOTAL PAGES

29,400

TOTAL SQUARE FEET.....

VECTOR

ENGINEERING, INC.

12439 Lona Rica Dr., Salla C, Grian Yellan, CA 93943
(916) 272-2448 Fax: (916) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Client Name: Serrot Corporation

Project Name: Hidden Valley Landfill; No.: 943015.17-788A

Material 1: <--- Geosynthetic Clay Liner (GCL) Bentomat DN (CETCO)

Material 2: ---> Geosynthetic Clay Liner (GCL) Bentomat DN (CETCO)

Substrate: ---> <rasp board>

PEAK STRENGTH

Test Point		mai ess	Shear Stress
	ps/	ps/	psf
1.	0.3	50	940
2.	0.7	100	700
3.	1.4	200	1070

Adhesion:

760 psf

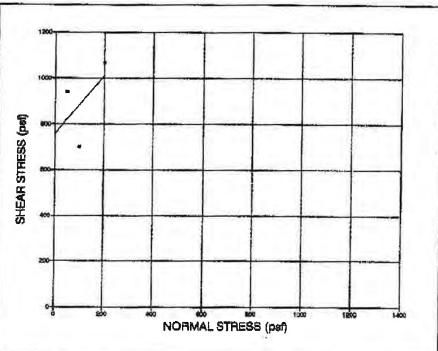
Friction Angle:

52 degrees

Displ. Rate:

0.040 In./min.

NOTE: GRAPH NOT TO SCALE



STRENGTH ENVELOPE

(at 2 5 in dissipanment)

Test Point	Nor Str		Shear Stress
	psi	psf	pst
1.	0.3	50	930
2.	0.7	100	700
3.	1.4	200	1020

Adhesion:

780 psf

Friction Angle:

43 degrees

Displ. Rate:

0.040 in./mln.

SHEAR STRESS (pst)

NOTE: GRAPH NOT TO SCALE

NOTE: The Friction Angle and Adhesion (or Cohesion) results given here are based upon a mathematically determined "best fill line. Further interpretation should be conducted by a qualified professional experienced in geosynthetic and geotechnical engineering.

eccepting the date and results represented on this page, Client egrees to limit the flability of Vector Engineering, Inc. from Client and all other parties for claims arising out of the use of date to the coast for the respective flast(s) represented hason, and Client agrees to their holds a hold hamiless vector from and against all liability in excess of the alcramedioned limit.

Report Date 6/6/96

Reviewed by: KRC

VECTOR

ENGINEERING, INC.

12438 Laura Ries Dr., Eder G., Green Yelley, CA 93945

(916) 272-2448 Fax: (916) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Client Name: Serrot Corporation Project Name: Hidden Valley Landfill; No.: 943015.17-788A Material 1: <---Geosynthetic Clay Liner (GCL) Bentomat DN (CETCO) Material 2: ---> Geosynthetic Clay Liner (GCL) Bentomat DN (CETCO) Substrate: ---> <rasp board> DISPLACEMENT ve SHEAR STRESS Test Normal Point Stress Point-2 1000 pai 1. 50 0.3 SHEAR STRESS (par 800 Pom-1 2. 0.7 100 3. 200 1.4 Point-2 HORIZONTAL DISPLACEMENT (inches)

STANDARD CONDITIONS:

- The "gap" between shear boxes was set at 80 mil (2.0 mm).
- 2. The test specimens were flooded during testing unless noted.
- High Normai Stress (>5psi) was applied using air pressure.
- 4. Low Normal Stress (<5 psi) was applied using dead weights
- 5. The tests were terminated 3.0" displacement unless noted.
- Tests were performed in general accordance with ASTM procedure D 5321-92 Method A using a Brainard-Kilman LG-112 direct shear machine with an effective area of 12 in. x 12 in. (Machine A)

TEST ORIENTATION:	NORMAL STRESS	
GAP >	< TOP BOX W/ RASP BOARD	< BENTOMAT DN
	—> BOTTOM BOX W/ RASP BOARD	< BENTOMAT DN

SPECIAL TEST NOTES:

- 1. The lower textile of the GCL was wrapped around a 12" x 16" rasp board in the lower box.
- 2. The upper textile of the GCL was wrapped around a 12" x 12" rasp board in the upper box.
- 3. Each specimen was hydrated & consolidated under a 50 per Normal Stress app. 24 hr prior to shearing.
- 4. The test was performed in a "wet" or "hydrated" condition.
- Shearing caused a multiple of failure modes, consisting of textile strecking, pull-out of needle punched fibers and the internal day shearing.
- 5. Partial pullout of the needle punched fiber occured in points 1 & 2.
- Complete pullout of the needle punched fiber occurred in point 3.
- Point 1 had higher shear strengths than point 2, possible due to a high consentration of punched fibers.

eccepting the date and resists represented on this page, Cliest agrees to limit the healthy of Vector Engineering, Inc. from Client and all other parties for claims arising out of the use of date to the cost for the respective test(s) represented harmon, and Client agrees to Indemnity and hold harmless Vector from and against all flability in excess of the aforementioned limit.

PLATE 2.

C-1b GCL Received Log

GEOSYNTHETIC CLAY LINER RECEIVED TABLE C-1b

Project: Hidden Valley Landfill

Facility: East Partial Closure

				ROLL SIZE		QC Docs	QA Sample	QA Test	
Date Rec'd	Roll No.	Lot / Batch No.	Ν×Π	Sq. Ft.	Thickness / Weight	Rec'd (Date)	Sent (Date)	Rec'd P/F (Date)	Remarks
7/21/98	1551	199829020	150 14	2100					
7/21/98	1540	199829020	150 14	2100					
7/21/98	1549	199829020	150 14	2100					
7/21/98	1425	199829020	150 14	2100					
7/21/98	1550	199829020	150 14	2100					
7/21/98	1560	199829020	150 14	2100					
7/21/98	1552	199829020	150 14	2100					
7/21/98	1553	199829020	150 14	2100					
7/21/98	1541	199829020	150 14	2100					
7/21/98	1542	199829020	150 14	2100					
7/21/98	1371	199829020	150 14	2100			E		
7/21/98	1372	199829020	150 14	2100					
7/21/98	1370	199829020	150 14	2100					
7/21/98	1485	199829020	150 14	2100					
7/21/98	1423	199829020	150 14	2100					
7/21/98	1424	199829020	150 14	2100					
7/21/98	1396	199829020	150 14	2100					
7/21/98	1483	199829020	150 14	2100					
7/21/98	1422	199829020	150 14	2100					
7/21/98	1538	199829020	150 14	2100					
7/21/98	1539	199829020	150 14	2100					
7/21/98	1562	199829020	150 14	2100					
7/21/98	1563	199829020	150 14	2100					
7/21/98	1565	199829020	150 14	2100					
7/21/98	1554	199829020	150 14	2100					
7/21/98	1561	199829020	150 14	2100					
Manufacturer:								Notes:	
P=Pass				Total Ti	Total This Page:	54600	Sq.Ft.		
F=Fail				Cumulai	Cumulative Total:	54600	Sq.Ft.		

GEOSYNTHETIC CLAY LINER RECEIVED TABLE C-1b

Project: Hidden Valley Landfill

Facility: East Partial Closure

40202-005.061

Project No:

EMCON

7/21/98 7/21/98 7/21/98

7/21/98

Date Rec'd

8/24/98 8/24/98 8/24/98 8/24/98

8/24/98

8/24/98 8/54/98 8/24/98 8/54/98

8/24/98

8/22/88 8/22/98 8/25/98

2100 2100

150 150

199834020 199834020 199834020

> 2523 2520 2522

> > 8/25/98

8/22/98

2521

8/22/98 8/22/98

8/22/98

7 4 14 4 4

2100

150

199834020

/Janufacturer:

P=Pass

F=Fail

Notes:

Sq.Ft. Sq.Ft.

115500 00609

Cumulative Total: Total This Page:

Checked By:

Glenn Heath

Logged By:

TABLE C-1b GEOSYNTHETIC CLAY LINER RECEIVED

Project: Hidden Valley Landfill

40202-005.061

Project No:

Facility: East Partial Closure

Remarks QA Test Rec'd P/F (Date) 8/22/88 8/22/98 Notes: QA Sample Sent (Date) Sq.Ft. Sq.Ft. 147000 QC Docs 31500 Rec'd (Date) Thickness / Weight Cumulative Total: Total This Page: ROLL SIZE Sq. Ft. 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 2100 4 4 4 4 14 4 4 14 4 14 4 4 4 14 4 LXW 150 150 150 150 150 150 150 150 150 Lot / Batch No. 199837020 199837020 199834020 199834020 199837020 199837020 199837020 199837020 199837020 199837020 199837020 199837020 199837020 199837020 199837020 3126 3127 3128 3129 3130 3132 3133 3134 3135 3136 3138 3131 3137 /anufacturer: P=Pass 8/22/8 8/22/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 F≕Fail Date Rec'd

Checked By:

Glenn Heath

Logged By:

C-1c GCL Moisture Log



TABLE C-1c GEOSYNTHETIC CLAY LINER MOISTURE TESTS

Project: Hidden Valley Landfill Project No: 40202-005.061

Facility: East Partial Closure Sampled By: Glenn Heath

Tested By: Glenn Heath

	Roll No.	Panel No.	Size	Weight	Dry Weight	Tare Weight	Moisture %	Spec.	Remarks
8/12/98	1539	19	8"X8"	710.8	668.3	428.7	17.7	< 30%	
8/21/98	1542	39	8"X8"	708.2	665.2	429.2	18.2	< 30%	
8/22/98	1563	62	8"X8"	715.6	669.4	428.6	19.2	< 30%	
8/31/98	1486	100	8"X8"	712.7	670.1	428.7	17.6	< 30%	
9/2/98	2379	138	8"X8"	698.7	655.7	428.6	18.9	< 30%	
9/4/98	2520	157	8"X8"	700.3	656.7	428.9	19.1	< 30%	
9/11/98	1370	190	8"X8"	705.7	665.2	429.4	17.2	< 30%	
9/12/98	1485	215	8"X8"	699.9	658.3	429.5	18.2	< 30%	
9/15/98	2529	262	8"X8"	714.7	670.3	428.5	18.4	< 30%	
9/17/98	3135	279	8"X8"	717.3	671.4	428.7	18.9	< 30%	
9/19/98	3135	285	8"X8"	700.9	655.8	428.6	19.9	< 30%	
	8/21/98 8/22/98 8/31/98 9/2/98 9/4/98 9/11/98 9/12/98 9/15/98	8/21/98 1542 8/22/98 1563 8/31/98 1486 9/2/98 2379 9/4/98 2520 9/11/98 1370 9/12/98 1485 9/15/98 2529 9/17/98 3135	8/21/98 1542 39 8/22/98 1563 62 8/31/98 1486 100 9/2/98 2379 138 9/4/98 2520 157 9/11/98 1370 190 9/12/98 1485 215 9/15/98 2529 262 9/17/98 3135 279	8/21/98 1542 39 8"X8" 8/22/98 1563 62 8"X8" 8/31/98 1486 100 8"X8" 9/2/98 2379 138 8"X8" 9/4/98 2520 157 8"X8" 9/11/98 1370 190 8"X8" 9/12/98 1485 215 8"X8" 9/15/98 2529 262 8"X8" 9/17/98 3135 279 8"X8"	8/21/98 1542 39 8"X8" 708.2 8/22/98 1563 62 8"X8" 715.6 8/31/98 1486 100 8"X8" 712.7 9/2/98 2379 138 8"X8" 698.7 9/4/98 2520 157 8"X8" 700.3 9/11/98 1370 190 8"X8" 705.7 9/12/98 1485 215 8"X8" 699.9 9/15/98 2529 262 8"X8" 714.7 9/17/98 3135 279 8"X8" 717.3	8/21/98 1542 39 8"X8" 708.2 665.2 8/22/98 1563 62 8"X8" 715.6 669.4 8/31/98 1486 100 8"X8" 712.7 670.1 9/2/98 2379 138 8"X8" 698.7 655.7 9/4/98 2520 157 8"X8" 700.3 656.7 9/11/98 1370 190 8"X8" 705.7 665.2 9/12/98 1485 215 8"X8" 699.9 658.3 9/15/98 2529 262 8"X8" 714.7 670.3 9/17/98 3135 279 8"X8" 717.3 671.4	8/21/98 1542 39 8"X8" 708.2 665.2 429.2 8/22/98 1563 62 8"X8" 715.6 669.4 428.6 8/31/98 1486 100 8"X8" 712.7 670.1 428.7 9/2/98 2379 138 8"X8" 698.7 655.7 428.6 9/4/98 2520 157 8"X8" 700.3 656.7 428.9 9/11/98 1370 190 8"X8" 705.7 665.2 429.4 9/12/98 1485 215 8"X8" 699.9 658.3 429.5 9/15/98 2529 262 8"X8" 714.7 670.3 428.5 9/17/98 3135 279 8"X8" 717.3 671.4 428.7	8/21/98 1542 39 8"X8" 708.2 665.2 429.2 18.2 8/22/98 1563 62 8"X8" 715.6 669.4 428.6 19.2 8/31/98 1486 100 8"X8" 712.7 670.1 428.7 17.6 9/2/98 2379 138 8"X8" 698.7 655.7 428.6 18.9 9/4/98 2520 157 8"X8" 700.3 656.7 428.9 19.1 9/11/98 1370 190 8"X8" 705.7 665.2 429.4 17.2 9/12/98 1485 215 8"X8" 699.9 658.3 429.5 18.2 9/15/98 2529 262 8"X8" 714.7 670.3 428.5 18.4 9/17/98 3135 279 8"X8" 717.3 671.4 428.7 18.9	8/21/98 1542 39 8"X8" 708.2 665.2 429.2 18.2 <30%

C-1d GCL Placement Log



Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

Panel No.	Roll No.	Date Placed	Q.A. Mon.		anel Siz L X W	ze	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Remarks
1	1422	8/12/98	GH	25	Х	14	350	8/12/98	350	Trench
2	1422	8/12/98	GH	25	Χ	14	350	8/12/98	700	Trench
3	1422	8/12/98	GH	25	Χ	14	350	8/12/98	1050	Trench
4	1422	8/12/98	GH	25	Х	14	350	8/12/98	1400	Trench
5	1422	8/12/98	GH	25	Χ	14	350	8/12/98	1750	Trench
6	1422	8/12/98	GH	25	X	14	350	8/12/98	2100	Trench
7	1539	8/12/98	GH	25	Х	14	350	8/12/98	2450	Trench
8	1539	8/12/98	GH	25	X	14	350	8/12/98	2800	Trench
9	1539	8/12/98	GH	25	Х	14	350	8/12/98	3150	Trench
10	1539	8/12/98	GH	25	Х	14	350	8/12/98	3500	Trench
11	1539	8/12/98	GH	25	Х	14	350	8/12/98	3850	Trench
12	1539	8/12/98	GH	25	Х	14	350	8/12/98	4200	Trench
13	1483	8/12/98	GH	25	Х	14	350	8/12/98	4550	Trench
14	1483	8/12/98	GH	25	Х	14	350	8/12/98	4900	Trench
15	1483	8/12/98	GH	25	Х	14	350	8/12/98	5250	Trench
16	1483	8/12/98	GH	25	X	14	350	8/12/98	5600	Trench
17	1483	8/12/98	GH	25	X	14	350	8/12/98	5950	Trench
18	1483	8/12/98	GH	25	X	14	350	8/12/98	6300	Trench
19	1538	8/12/98	GH	25	Х	14	350	8/12/98	6650	Trench
20	1538	8/12/98	GH	25	Х	14	350	8/12/98	7000	Trench
21	1538	8/12/98	GH	25	X	14	350	8/12/98	7350	Trench
22	1538	8/12/98	GH	25	X	14	350	8/12/98	7700	Trench
23	1538	8/12/98	GH	25	Х	14	350	8/12/98	8050	Trench
24	1538	8/12/98	GH	25	X	14	350	8/12/98	8400	Trench
25	1562	8/12/98	GH	25	Х	14	350	8/12/98	8750	Trench
26	1562	8/12/98	GH	25	Х	14	350	8/12/98	9100	Trench
27	1562	8/12/98	GH	25	Х	14	350	8/12/98	9450	Trench
28	1562	8/12/98	GH	25	Х	14	350	8/12/98	9800	Trench
29	1562	8/21/98	GH	25	Х	14	350	8/21/98	10150	Trench
30	1562	8/21/98	GH	25	Х	14	350	8/21/98	10500	Trench
31	1541	8/21/98	GH	25	Х	14	350	8/21/98	10850	Trench
32	1541	8/21/98	GH	25	Х	14	350	8/21/98	11200	Trench

Notes:

Total Area This Sheet:

184800

Cumulative Area:

184800

Logged By: Glenn Heath



Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

Panel No.	Roll No.	Date Placed	Q.A. Mon.		anel Siz L X W	ze	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Remarks
33	1541	8/12/98	GH	25	Х	14	350	8/12/98	350	Trench
34	1541	8/12/98	GH	25	Х	14	350	8/12/98	700	Trench
35	1541	8/12/98	GH	25	X	14	350	8/12/98	1050	Trench
36	1541	8/12/98	GH	25	Χ	14	350	8/12/98	1400	Trench
37	1542	8/21/98	GH	25	Χ	14	350	8/21/98	1750	Trench
38	1542	8/21/98	GH	25	Х	14	350	8/21/98	2100	Trench
39	1542	8/21/98	GH	25	Х	14	350	8/21/98	2450	Trench
40	1542	8/21/98	GH	25	Х	14	350	8/21/98	2800	Trench
41	1542	8/21/98	GH	25	Х	14	350	8/21/98	3150	Trench
42	1542	8/21/98	GH	25	Х	14	350	8/21/98	3500	Trench
43	1560	8/21/98	GH	25	Х	14	350	8/21/98	3850	Trench
44	1560	8/21/98	GH	25	Х	14	350	8/21/98	4200	Trench
45	1560	8/21/98	GH	25	Х	14	350	8/21/98	4550	Trench
46	1560	8/21/98	GH	25	Х	14	350	8/21/98	4900	Trench
47	1560	8/21/98	GH	25	Х	14	350	8/21/98	5250	Trench
48	1560	8/21/98	GH	25	Х	14	350	8/21/98	5600	Trench
49	1552	8/21/98	GH	40	Х	14	560	8/21/98	6160	Berm
50	1552	8/21/98	GH	40	Х	14	560	8/21/98	6720	Berm
51	1552	8/21/98	GH	40	Χ	14	560	8/21/98	7280	Berm
52	1425	8/21/98	GH	40	Х	14	560	8/21/98	7840	Berm
53	1425	8/21/98	GH	40	Х	14	560	8/21/98	8400	Berm
54	1425	8/21/98	GH	40	Х	14	560	8/21/98	8960	Berm
55	1550	8/21/98	GH	40	X	14	560	8/21/98	9520	Berm
56	1550	8/21/98	GH	40	Х	14	560	8/21/98	10080	Berm
57	1550	8/22/98	GH	40	X	14	560	8/22/98	10640	Berm
58	1563	8/22/98	GH	40	Х	14	560	8/22/98	11200	Berm
59	1563	8/22/98	GH	25	Х	14	350	8/22/98	11550	Trench
60	1563	8/22/98	GH	25	Х	14	350	8/22/98	11900	Trench
61	1563	8/22/98	GH	25	Х	14	350	8/22/98	12250	Trench
62	1563	8/22/98	GH	25	Х	14	350	8/22/98	12600	Trench
63	1552	8/22/98	GH	25	Х	14	350	8/22/98	12950	Trench
64	1425	8/22/98	GH	25	Х	14	350	8/22/98	13300	Trench

Total Area This Sheet:

208950

Cumulative Area:

393750

Logged By: Glenn Heath



Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

Panel No.	Roll No.	Date Placed	Q.A. Mon.		anel Siz L X W	e.	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Remarks
65	1550	8/22/98	GH	30	Х	14	420	8/22/98	420	Trench
66	1554	8/22/98	GH	30	Х	14	420	8/22/98	840	Trench
67	1554	8/22/98	GH	30	Χ	14	420	8/22/98	1260	Trench
68	1554	8/22/98	GH	30	Χ	14	420	8/22/98	1680	Trench
69	1554	8/22/98	GH	30	Х	14	420	8/22/98	2100	Trench
70	1554	8/22/98	GH	30	Χ	14	420	8/22/98	2520	Trench
71	1540	8/22/98	GH	30	Х	14	420	8/22/98	2940	Trench
72	1540	8/22/98	GH	30	Х	14	420	8/22/98	3360	Trench
73	1540	8/22/98	GH	30	Х	14	420	8/22/98	3780	Trench
74	1540	8/22/98	GH	30	Х	14	420	8/22/98	4200	Trench
75	1540	8/22/98	GH	30	Х	14	420	8/22/98	4620	Trench
76	1371	8/22/98	GH	30	Х	14	420	8/22/98	5040	Trench
77	1371	8/22/98	GH	30	Х	14	420	8/22/98	5460	Trench
78	1450	8/22/98	GH	40	Х	14	560	8/22/98	6020	Berm
79	1450	8/22/98	GH	40	Х	14	560	8/22/98	6580	Berm
80	1450	8/22/98	GH	40	Х	14	560	8/22/98	7140	Berm
81	1486	8/22/98	GH	40	Х	14	560	8/22/98	7700	Berm
82	1486	8/22/98	GH	40	Х	14	560	8/22/98	8260	Berm
83	1486	8/22/98	GH	40	Χ	14	560	8/22/98	8820	Berm
84	1487	8/22/98	GH	40	Х	14	560	8/22/98	9380	Berm
85	1487	8/22/98	GH	40	Х	14	560	8/22/98	9940	Berm
86	1487	8/22/98	GH	40	Х	14	560	8/22/98	10500	Berm
87	1488	8/22/98	GH	40	Х	14	560	8/22/98	11060	Berm
88	1488	8/22/98	GH	40	Х	14	560	8/22/98	11620	Berm
89	1488	8/22/98	GH	40	Х	14	560	8/22/98	12180	Berm
90	1432	8/22/98	GH	40	X	14	560	8/22/98	12740	Berm
91	1432	8/31/98	GH	32	Х	14	448	8/31/98	13188	Trench
92	1432	8/31/98	GH	32	Х	14	448	8/31/98	13636	Trench
93	1432	8/31/98	GH	30	Х	14	420	8/31/98	14056	Trench
94	1485	8/31/98	GH	30	X	14	420	8/31/98	14476	Trench
95	1485	8/31/98	GH	30	Х	14	420	8/31/98	14896	Trench
96	1485	8/31/98	GH	30	Х	14	420	8/31/98	15316	Trench

Total Area This Sheet:

245728

Cumulative Area:

639478

Logged By: Glenn Heath



Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

Panel No.	Roll No.	Date Placed	Q.A. Mon.		anel Siz L X W		Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Remarks
97	1487	8/31/98	GH	30	Х	14	420	8/31/98	420	Trench
98	1488	8/31/98	GH	30	Χ	14	420	8/31/98	840	Trench
99	1450	8/31/98	GH	30	X	14	420	8/31/98	1260	Trench
100	1486	8/31/98	GH	30	Χ	14	420	8/31/98	1680	Trench
101	2403	8/31/98	GH	30	Х	14	420	8/31/98	2100	Trench
102	2403	8/31/98	GH	30	Χ	14	420	8/31/98	2520	Trench
103	2403	8/31/98	GH	30	Х	14	420	8/31/98	2940	Trench
104	2403	8/31/98	GH	50	Х	14	700	8/31/98	3640	Berm
105	2384	8/31/98	GH	50	Х	14	700	8/31/98	4340	Berm
106	2384	8/31/98	GH	50	Х	14	700	8/31/98	5040	Berm
107	2384	8/31/98	GH	50	Х	14	700	8/31/98	5740	Berm
108	2401	8/31/98	GH	50	Х	14	700	8/31/98	6440	Berm
109	2401	8/31/98	GH	50	Х	14	700	8/31/98	7140	Berm
110	2401	8/31/98	GH	50	Х	14	700	8/31/98	7840	Berm
111	2381	8/31/98	GH	50	Х	14	700	8/31/98	8540	Berm
112	2381	8/31/98	GH	50	Х	14	700	8/31/98	9240	Berm
113	2381	8/31/98	GH	50	Х	14	700	8/31/98	9940	Berm
114	2386	8/31/98	GH	50	Х	14	700	8/31/98	10640	Berm
115	2386	9/1/98	GH	30	Х	14	420	9/1/98	11060	Trench
116	2386	9/1/98	GH	30	X	14	420	9/1/98	11480	Trench
117	2386	9/1/98	GH	30	X	14	420	9/1/98	11900	Trench
118	2403	9/1/98	GH	30	Х	14	420	9/1/98	12320	Trench
119	2400	9/1/98	GH	30	Х	14	420	9/1/98	12740	Trench
120	2400	9/1/98	GH	30	X	14	420	9/1/98	13160	Trench
121	2400	9/1/98	GH	30	Х	14	420	9/1/98	13580	Trench
122	2400	9/1/98	GH	30	X	14	420	9/1/98	14000	Trench
123	2400	9/1/98	GH	30	Х	14	420	9/1/98	14420	Trench
124	2385	9/1/98	GH	30	Х	14	420	9/1/98	14840	Trench
125	2385	9/1/98	GH	30	Х	14	420	9/1/98	15260	Trench
126	2385	9/1/98	GH	50	Х	14	700	9/1/98	15960	Berm
127	2383	9/1/98	GH	50	Х	14	700	9/1/98	16660	Berm
128	2383	9/1/98	GH	50	Х	14	700	9/1/98	17360	Berm

Notes:

Total Area This Sheet:

285040

Cumulative Area:

924518

Logged By: Glenn Heath



Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

Panel No.	Roll No.	Date Placed	Q.A. Mon.		anel Siz L X W	ze	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Remarks
129	2383	9/1/98	GH	50	Х	14	700	9/1/98	700	Berm
130	2404	9/1/98	GH	50	Χ	14	700	9/1/98	1400	Berm
131	2404	9/1/98	GH	50	Χ	14	700	9/1/98	2100	Berm
132	2404	9/1/98	GH	50	Χ	14	700	9/1/98	2800	Berm
133	2402	9/1/98	GH	50	Χ	14	700	9/1/98	3500	Berm
134	2402	9/1/98	GH	50	Х	14	700	9/1/98	4200	Berm
135	2402	9/1/98	GH	50	Х	14	700	9/1/98	4900	Berm
136	2382	9/1/98	GH	50	Х	14	700	9/1/98	5600	Berm
137	2385	9/2/98	GH	30	Х	14	420	9/2/98	6020	Trench
138	2379	9/2/98	GH	30	Х	14	420	9/2/98	6440	Trench
139	2379	9/2/98	GH	30	Х	14	420	9/2/98	6860	Trench
140	2379	9/2/98	GH	30	Х	14	420	9/2/98	7280	Trench
141	2379	9/2/98	GH	30	Х	14	420	9/2/98	7700	Trench
142	2523	9/2/98	GH	50	Х	14	700	9/2/98	8400	Berm
143	2523	9/2/98	GH	50	Х	14	700	9/2/98	9100	Berm
144	2523	9/2/98	GH	50	Х	14	700	9/2/98	9800	Berm
145	2525	9/2/98	GH	50	Х	14	700	9/2/98	10500	Berm
146	2525	9/2/98	GH	50	Х	14	700	9/2/98	11200	Berm
147	2525	9/4/98	GH	30	Х	14	420	9/4/98	11620	Trench
148	2379	9/4/98	GH	30	Х	14	420	9/4/98	12040	Trench
149	2527	9/4/98	GH	30	Х	14	420	9/4/98	12460	Trench
150	2527	9/4/98	GH	30	Χ	14	420	9/4/98	12880	Trench
151	2527	9/4/98	GH	30	Χ	14	420	9/4/98	13300	Trench
152	2527	9/4/98	GH	30	Х	14	420	9/4/98	13720	Trench
153	2527	9/4/98	GH	30	Х	14	420	9/4/98	14140	Trench
154	2520	9/4/98	GH	30	Х	14	420	9/4/98	14560	Trench
155	2520	9/4/98	GH	30	Х	14	420	9/4/98	14980	Trench
156	2520	9/4/98	GH	30	Х	14	420	9/4/98	15400	Trench
157	2520	9/4/98	GH	30	Х	14	420	9/4/98	15820	Trench
158	2526	9/4/98	GH	50	Х	14	700	9/4/98	16520	Berm
159	2526	9/4/98	GH	50	Х	14	700	9/4/98	17220	Berm
160	2526	9/4/98	GH	50	Х	14	700	9/4/98	17920	Berm

Notes:

Total Area This Sheet:

311080

Cumulative Area:

1235598

Logged By: Glenn Heath



Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

Panel No.	Roll No.	Date Placed	Q.A. Mon.		anel Siz L X W	ze	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Remarks
161	2530	9/4/98	GH	50	X	14	700	9/4/98	700	Berm
162	2530	9/4/98	GH	50	Χ	14	700	9/4/98	1400	Berm
163	2530	9/4/98	GH	50	Χ	14	700	9/4/98	2100	Berm
164	2521	9/4/98	GH	50	Χ	14	700	9/4/98	2800	Berm
165	2521	9/4/98	GH	50	X	14	700	9/4/98	3500	Berm
166	2521	9/4/98	GH	50	X	14	700	9/4/98	4200	Berm
167	2522	9/4/98	GH	50	X	14	700	9/4/98	4900	Berm
168	2522	9/4/98	GH	50	X	14	700	9/4/98	5600	Berm
169	2522	9/5/98	GH	35	X	14	490	9/5/98	6090	Trench
170	2520	9/5/98	GH	35	Х	14	490	9/5/98	6580	Trench
171	2378	9/5/98	GH	35	Х	14	490	9/5/98	7070	Trench
172	2378	9/5/98	GH	35	Х	14	490	9/5/98	7560	Trench
173	2378	9/5/98	GH	35	Х	14	490	9/5/98	8050	Trench
174	2528	9/5/98	GH	35	Х	14	490	9/5/98	8540	Trench
175	2528	9/5/98	GH	35	X	14	490	9/5/98	9030	Trench
176	2528	9/5/98	GH	35	Х	14	490	9/5/98	9520	Trench
177	2528	9/5/98	GH	50	Х	14	700	9/5/98	10220	Berm
178	1396	9/5/98	GH	50	Х	14	700	9/5/98	10920	Berm
179	1553	9/5/98	GH	50	Х	14	700	9/5/98	11620	Berm
180	1553	9/5/98	GH	50	Х	14	700	9/5/98	12320	Berm
181	1553	9/5/98	GH	50	Х	14	700	9/5/98	13020	Berm
182	1372	9/5/98	GH	50	Х	14	700	9/5/98	13720	Berm
183	1372	9/5/98	GH	50	Х	14	700	9/5/98	14420	Berm
184	1372	9/5/98	GH	50	X	14	700	9/5/98	15120	Berm
185	2524	9/5/98	GH	85	X	14	1190	9/5/98	16310	Berm
186	1396	9/5/98	GH	70	X	14	980	9/5/98	17290	Berm
187	2524	9/5/98	GH	57	X	14	798	9/5/98	18088	Berm
188	1423	9/11/98	GH	67	X	14	938	9/11/98	19026	Trenches & Access Road
189	1423	9/11/98	GH	78	Х	14	1092	9/11/98	20118	Trenches & Access Road
190	1370	9/11/98	GH	89	Х	14	1246	9/11/98	21364	Trenches & Access Road
191	1370	9/11/98	GH	14	Х	14	196	9/11/98	21560	Trench
192	1370	9/11/98	GH	14	X	14	196	9/11/98	21756	Trench

Total Area This Sheet:

344512

Cumulative Area:

1580110

Logged By: Glenn Heath



Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

Panel No.	Roll No.	Date Placed	Q.A. Mon.	Panel Size L X W			Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Remarks
193	1370	9/11/98	GH	14	X	14	196	9/11/98	196	Trench
194	1549	9/11/98	GH	14	Χ	14	196	9/11/98	392	Trench
195	1549	9/11/98	GH	14	X	14	196	9/11/98	588	Trench
196	1542	9/11/98	GH	14	Х	14	196	9/11/98	784	Trench
197	1542	9/11/98	GH	14	Х	14	196	9/11/98	980	Trench
198	1542	9/11/98	GH	14	Х	14	196	9/11/98	1176	Trench
199	1542	9/11/98	GH	14	Х	14	196	9/11/98	1372	Trench
200	1542	9/11/98	GH	14	Х	14	196	9/11/98	1568	Trench
201	1542	9/11/98	GH	14	Х	14	196	9/11/98	1764	Trench
202	1542	9/11/98	GH	50	Х	14	700	9/11/98	2464	Trench & Access Road
203	1565	9/11/98	GH	50	Х	14	700	9/11/98	3164	Trench & Access Road
204	1565	9/11/98	GH	50	Х	14	700	9/11/98	3864	Trench & Access Road
205	1565	9/11/98	GH	50	Х	14	700	9/11/98	4564	Trench & Access Road
206	2524	9/11/98	GH	50	Х	14	700	9/11/98	5264	Trench & Access Road
207	2524	9/11/98	GH	50	Х	14	700	9/11/98	5964	Trench & Access Road
208	2524	9/11/98	GH	50	Χ	14	700	9/11/98	6664	Trench & Access Road
209	2300	9/11/98	GH	50	Х	14	700	9/11/98	7364	Trench & Access Road
210	2300	9/11/98	GH	50	Х	14	700	9/11/98	8064	Trench & Access Road
211	2300	9/11/98	GH	50	Х	14	700	9/11/98	8764	Trench & Access Road
212	2380	9/11/98	GH	50	Х	14	700	9/11/98	9464	Trench & Access Road
213	2380	9/12/98	GH	50	Х	14	700	9/12/98	10164	Trench & Access Road
214	2380	9/12/98	GH	50	Χ	14	700	9/12/98	10864	Trench & Access Road
215	1485	9/12/98	GH	50	Х	14	700	9/12/98	11564	Trench & Access Road
216	1485	9/12/98	GH	50	Х	14	700	9/12/98	12264	Trench & Access Road
217	1485	9/12/98	GH	50	Χ	14	700	9/12/98	12964	Trench & Access Road
218	3130	9/12/98	GH	50	Х	14	700	9/12/98	13664	Trench & Access Road
219	3130	9/12/98	GH	50	Х	14	700	9/12/98	14364	Trench & Access Road
220	3130	9/12/98	GH	50	Х	14	700	9/12/98	15064	Trench & Access Road
221	3133	9/12/98	GH	50	Х	14	700	9/12/98	15764	Trench & Access Road
222	3133	9/12/98	GH	50	Х	14	700	9/12/98	16464	Trench & Access Road
223	3133	9/12/98	GH	50	X	14	700	9/12/98	17164	Trench & Access Road
224	1551	9/12/98	GH	50	Х	14	700	9/12/98	17864	Trench & Access Road

Total Area This Sheet:

242592

Cumulative Area:

1822702

Logged By: Glenn Heath



Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

Panel No.	Roll No.	Date Placed	Q.A. Mon.	Panel Size L X W			Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Remarks
225	1551	9/12/98	GH	50	Х	14	700	9/12/98	700	Trench & Access Road
226	1551	9/12/98	GH	50	Χ	14	700	9/12/98	1400	Trench & Access Road
227	1561	9/12/98	GH	14	X	14	196	9/12/98	1596	Trench
228	3138	9/12/98	GH	14	X	14	196	9/12/98	1792	Trench
229	3138	9/12/98	GH	14	X	14	196	9/12/98	1988	Trench
230	3138	9/12/98	GH	14	Х	14	196	9/12/98	2184	Trench
231	3138	9/12/98	GH	14	Х	14	196	9/12/98	2380	Trench
232	3138	9/12/98	GH	14	Х	14	196	9/12/98	2576	Trench
233	3138	9/12/98	GH	14	Х	14	196	9/12/98	2772	Trench
234	3138	9/12/98	GH	14	Х	14	196	9/12/98	2968	Trench
235	3138	9/12/98	GH	14	Х	14	196	9/12/98	3164	Trench
236	3138	9/12/98	GH	14	Χ	14	196	9/12/98	3360	Trench
237	3138	9/12/98	GH	14	Χ	14	196	9/12/98	3556	Trench
238	3127	9/12/98	GH	14	Х	14	196	9/12/98	3752	Trench
239	3127	9/12/98	GH	14	Х	14	196	9/12/98	3948	Trench
240	3127	9/12/98	GH	14	X	14	196	9/12/98	4144	Trench
241	3127	9/12/98	GH	14	X	14	196	9/12/98	4340	Trench
242	1561	9/12/98	GH	50	Х	14	700	9/12/98	5040	Trench & Access Road
243	1561	9/12/98	GH	50	Х	14	700	9/12/98	5740	Trench & Access Road
244	3127	9/12/98	GH	50	Х	14	700	9/12/98	6440	Trench & Access Road
245	3137	9/12/98	GH	50	X	14	700	9/12/98	7140	Trench & Access Road
246	3136	9/12/98	GH	50	X	14	700	9/12/98	7840	Trench & Access Road
247	3136	9/12/98	GH	50	Χ	14	700	9/12/98	8540	Trench & Access Road
248	3136	9/12/98	GH	50	Χ	14	700	9/12/98	9240	Trench & Access Road
249	3128	9/12/98	GH	50	X	14	700	9/12/98	9940	Trench & Access Road
250	3128	9/12/98	GH	50	X	14	700	9/12/98	10640	Trench & Access Road
251	3128	9/13/98	GH	50	X	14	700	9/13/98	11340	Trench & Access Road
252	3131	9/13/98	GH	50	X	14	700	9/13/98	12040	Trench & Access Road
253	3131	9/13/98	GH	50	X	14	700	9/13/98	12740	Trench & Access Road
254	3131	9/13/98	GH	50	Х	14	700	9/13/98	13440	Trench & Access Road
255	2529	9/13/98	GH	50	Х	14	700	9/13/98	14140	Trench & Access Road
256	2529	9/14/98	GH	50	Х	14	700	9/14/98	14840	Trench & Access Road

Notes:

Total Area This Sheet:

195720

Cumulative Area:

2018422

Logged By: Glenn Heath



TABLE C-1d GEOSYNTHETIC CLAY LINER PLACEMENT LOG

Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

Panel No.	Roll No.	Date Placed	Q.A. Mon.		anel Siz L X W	ze	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Remarks
257	1371	9/14/98	GH	50	Х	14	700	9/14/98	700	Trench & Access Road
258	1371	9/14/98	GH	10	X	14	140	9/14/98	840	Trench
259	1371	9/14/98	GH	10	X	14	140	9/14/98	980	Trench
260	1371	9/15/98	GH	10	X	14	140	9/15/98	1120	Trench
261	1371	9/15/98	GH	10	Х	14	140	9/15/98	1260	Trench
262	2529	9/15/98	GH	10	Х	14	140	9/15/98	1400	Trench
263	2529	9/15/98	GH	10	Х	14	140	9/15/98	1540	Trench
264	3132	9/15/98	GH	12	Х	14	168	9/15/98	1708	Trench
265	3132	9/15/98	GH	12	X	14	168	9/15/98	1876	Trench
266	3132	9/15/98	GH	13	Х	14	182	9/15/98	2058	Trench
267	3132	9/15/98	GH	13	Х	14	182	9/15/98	2240	Trench
268	3132	9/17/98	GH	50	Х	14	700	9/17/98	2940	Trench & Access Road
269	3132	9/17/98	GH	50	Х	14	700	9/17/98	3640	Trench & Access Road
270	3132	9/17/98	GH	50	Х	14	700	9/17/98	4340	Trench & Access Road
271	3126	9/17/98	GH	50	Х	14	700	9/17/98	5040	Trench & Access Road
272	3126	9/17/98	GH	50	Х	14	700	9/17/98	5740	Trench & Access Road
273	3126	9/17/98	GH	50	Х	14	700	9/17/98	6440	Trench & Access Road
274	3126	9/17/98	GH	50	Х	14	700	9/17/98	7140	Trench & Access Road
275	3126	9/17/98	GH	50	Х	14	700	9/17/98	7840	Trench & Access Road
276	3132	9/17/98	GH	13	Х	14	182	9/17/98	8022	Trench
277	3126	9/17/98	GH	12	X	14	168	9/17/98	8190	Trench
278	3135	9/17/98	GH	12	X	14	168	9/17/98	8358	Trench
279	3135	9/17/98	GH	12	X	14	168	9/17/98	8526	Trench
280	3135	9/17/98	GH	11	Χ	14	154	9/17/98	8680	Trench
281	3135	9/17/98	GH	11	X	14	154	9/17/98	8834	Trench
282	3135	9/19/98	GH	11	Χ	14	154	9/19/98	8988	Trench
283	3135	9/19/98	GH	11	Χ	14	154	9/19/98	9142	Trench
284	3135	9/19/98	GH	11	Х	14	154	9/19/98	9296	Trench
285	3135	9/19/98	GH	11	Х	14	154	9/19/98	9450	Trench
286	3135	9/19/98	GH	11	Х	14	154	9/19/98	9604	Trench
287	3135	9/19/98	GH	11	Х	14	154	9/19/98	9758	Trench

Notes:

Total Area This Sheet:

165690

Cumulative Area:

2184112

Logged By: Glenn Heath

Checked By:

C-2 GEOMEMBRANE

C-2a ConformanceTesting

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

181,6

136.3

Client:

EMCON WA

Density (g/cni3)

Date:

7-27-98

Sample:

3803436

Roll #:

Specimen 1

Material:

60ML TEXTURED HDPE

Test			Readings			Avenige
Thickness (mils) ASTM D1593	68,20	68.20	68.80	69.09	69.01	68.66

Specimen 2

ASTM D7	92	0.9425	0.9432	0.9404	0,9420		
Tensile Prop		Specimen I	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Avarago
Tensile Stre						1916	177.3
Yleld Direction A		171.1	167.0	172.8	204.1	171.6	
(ppi)	Direction B	167.9	169.7	172.6	168.2	167.4	169.2
Break	Direction A	144.0	142.0	140.4	144.0	150.0	144.1
(ppi)	Direction B	136.0	120.0	132.0	156.2	136,0	136.0
Elongation						047	23.5
Yield %	Direction A	22.3	21.3	24.7	23.3	25.7	
Livid 70	Direction B	21.8	22.5	21.8	20.3	24.8	22.2
5 1 5		232.8	253.2	205.1	278.5	352.8	264.5
Break %	Direction A	232.0	255,2	-	10066	1767	1916

	Specimen I	Specimen 2	Specimen 3	Avernee
Carbon Black, % ASTM D1603	2,1950	2.0270	2.3250	2.1823

254.7

	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Specimen 6
Carbon Dlack Dispersion ASTM D3015/D2663	A-2	A-1	A-2	Λ-1	A-1	A-1

164.1

226.5

Thickness:

Direction B

Tested with Mitutoyo Model No. 326-711 Digital Micromoter.

Readings taken at 1 foot intervals along length of roll.

Remarks:

Tensile Properties:

1. Orip separation 2.5".

2. Assumed gauge longth 1.3" and 2.5" for yield and break clongations, respectively (as modified by NSF).

3. Direction A - Machine Direction Direction B - Cross-Machine Direction

> Tested by: Entered by:

Checked by: RSA

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Density (g/cm3)

Date:

8-27-98

Sample:

3803734

Material:

60ML TEXTURED HDPE

Test Thickness (mils)			Readings			Average
ASTM D1593	63.60	64.50	60.90	59.90	63.50	62.48

Density (g		Specimen 1	Specimen 2	Specimen 3	Assess	7	
ASTM D	792	0.9406	0.9403	0.9408	Average 0,9406	1	
Tensile Pro		Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Average
Tensile Strength		1				8	
Yield	Direction A	158.0	157.5		F		
(ppi)	Direction B	155.2	158.2	163.2	160.5	156.7	159.2
Break	Direction A	154.2		160.2	154.7	158.2	157.3
(ppi)	Direction B	179.5	158.0	164.2	184.2	175.0	167.1
Elongation	Total B	179.5	166.5	163.5	180.0	171.5	172.2
Yield %	Direction A	14.3	140			The second	
	Direction B	17.3	14.3	18.3	15.8	17.3	16.0
Break %	Direction A	1	17.3	18.3	15.8	15.8	16.9
	Direction B	440.0	455.0	445.0	520.0	515.0	475.0
	Tonection B	555.0	505.0	400.0	5/50	215.0	473.0

490.0

565.0

525.0

528.0

Carbon Plants 8/	Specimen 1	Specimen 2	Specimen 3	Average
Carbon Black, % ASTM D1603	2.390	2.386	2,374	2,383

505.0

Carbon Black Dispersion ASTM D3015/D2663	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Specimen 6
	A-2	A-1	A-1	A-1	A-1	Specifien 6

Remarks:

Thickness:

Tested with Mitutoyo Model No. 326-711 Digital Micrometer.

Readings taken at 1 foot intervals along length of roll.

Tensile Properties:

1. Grip separation 2.5".

2. Assumed guage length of 1.3" and 2.0" for yield and break

elongations, respectively (as modified by NSF).

3. Direction A = Machine Direction Direction B = Cross-Machine Direction

Tested by:

K.H./N.B.

Entered by:

K.H.

Checked by:

RSA

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

8-27-98

Sample:

3803841

Material:

60ML TEXTURED HDPE

Test Thickness (mils)	-		Readings			Average
ASTM D1593	69.70	67.80	62.80	64.90	64.00	65.84

Density (g/cm3)	Specimen 1	Specimen 2	I c		
ASTM D792	0.9411		Specimen 3	Average	
	0.9411	0.9402	0.9408	0.9407	

Tensile Pro ASTM D		Specimen I	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Average
Tensile Str	ength				2	10	11101450
Yield	Direction A	179.7	106.6				
(ppi)	Direction B	190.5	185.5	193.0	178.2	190.2	185.3
Break	Direction A		193.2	189.5	191.2	192.7	191.4
(ppi)	Direction B	195.7	171.7	222.0	217.2	202.7	201.9
Elongation	Direction B	202.5	196.0	174.2	190.0	183.5	189.2
Yield %	Direction A	18.8				1	107.2
	Direction B	17.3	17.3	17.3	14.3	17.3	17.0
Break %	Direction A	520.0	17.3	15.8	14.3	15.8	16.1
	Direction B		425.0	555.0	565.0	515.0	516,0
	i= :: serion D	545.0	510.0	455.0	505.0	465.0	496.0

Specimen 1	Specimen 2	Specimen 3	Average
2.412	2,562	2,496	2,490
		2 410	2 412 2 500

Carbon Black Dispersion	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Specimen 6
ASTM D3015/D2663	A-1	A-1	A-1	A-1	A-1	Бресинен (

Remarks:

Thickness:

Tested with Mitutoyo Model No. 326-711 Digital Micrometer.

Readings taken at 1 foot intervals along length of roll.

Tensile Properties:

1. Grip separation 2.5".

2. Assumed guage length of 1.3" and 2.0" for yield and break elongations, respectively (as modified by NSF).

3. Direction A = Machine Direction Direction B = Cross-Machine Direction

> Tested by: K.H./N.B. Entered by: K.H. Checked by: RSA

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

8-27-98

Sample:

3803798

Material:

60ML TEXTURED HDPE

Test Thickness (mils)			Readings			
ASTM D1593	63.40	62.80	64.40	62.80	63.70	Average 63.42

Density (g/cm3)	Specimen 1	Specimen 2	Specimen 3	
ASTM D792	0.9424	0.9423		В
I WINI DIJE	012 12 1	0.9423	0.9411	0.9419

Tensile Pro ASTM D		Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Average
Tensile Stre	ength	-					
Yield	Direction A	179.2	185.5				
(ppi)	Direction B	187.7		170.7	182.7	184.7	180.6
Break	Direction A		184.5	185.7	182.2	186.0	185.2
(ppi)	Direction B	196.7	208.5	204.0	228.7	243.2	216.2
Elongation	Direction B	194.5	160.7	188.2	211.0	172.5	185.4
	Ter.			7		172.5	100.4
Yield %	Direction A	15.8	18.8	18.8	17.3	172	
	Direction B	15.8	14.3	17.3		17.3	17.6
Break %	Direction A	515.0	550.0		17.3	17.3	16.4
	Direction B	535.0		550.0	605.0	645.0	573.0
		200.0	440.0	515.0	575.0	475.0	508.0

Out District	Specimen 1	Specimen 2	Specimen 3	Average
Carbon Black, % ASTM D1603	2,518	2.547	2,506	2,524

Carbon Black Dispersion	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Specimen 6
ASTM D3015/D2663	A-1	A-2	A-1	A-1	A-1	Specimen (

Remarks:

Thickness:

Tested with Mitutoyo Model No. 326-711 Digital Micrometer.

Readings taken at 1 foot intervals along length of roll.

Tensile Properties:

1. Grip separation 2.5".

2. Assumed guage length of 1.3" and 2.0" for yield and break elongations, respectively (as modified by NSF).

3. Direction A = Machine Direction Direction B = Cross-Machine Direction

> Tested by: K.H./N.B. Entered by: K.H. Checked by: RSA

ID:

AUG 11'98

8:12 No.002 P.02

EMCON

Conformance Sample Test Results

Project:

IIIDDEN VALLEY LANDFILL

Proj. No.

40202.005,061

Client:

BMCON WA

Date:

8-11-98

Sample:

3803060

Material:

60ML TEXTURED HDPE

Test Phickness (mile)			Readings			Avarage
AETM D1593	65.70	72.80	70.00	73.00	72.70	74.21

Donaity (g/	can3)	Specimen 1	Specimon 2	Specimen 3	Average	1	
ASTM D	192	0.9397	0.9419	0.9367	0.9394	1	
Tensile Pro	perties:	Specimen 1			0.0004		
ASTM D	638	obecause 1	Specimen 2	Specimen 3	Receimon 4	Specimen 5	Average
Tensile Stre	mgth	-					
Yield	Direction A	174.7	172.2	175.7	100.0		
(ppi)	Direction B	167.7	171.2		180.0	170.0	174.5
Break	Direction A	186.7	206.0	163.3	166.7	166.2	167.0
(ppl)	Direction B	133.5	143.2	210.5	182.2	135.0	188.1
Hongation		1,000	193,2	176.2	140,2	178.0	154.6
Yield %	Direction A	15.8	15.8	125			
	Direction B	14.3	14.3	14.3	17.3	17.3	16,1
Brook %	Direction A	495.0		15.8	15.0	17.3	15.3
	Direction H	365.0	565.0	\$65.0	480.0	430.0	307.0
		303.0	400.0	500.0	290.0	515.0	414.0

Carbon Black, %	Specimen 1	Specimen 2	Specimen 3	Avenue
ASTM D1603	2.764	2.793		Titleage

Carbon Black Dispersion	specumen i	Specimen 2	Specimen 3	Specimen 4	Out to F	-
				nbechilden d	obecimen?	Specimen (
ASTM D3015/D2663	A-1	A-1	A-1			

Thickness:

Tested with Mitutoyo Model No. 326-711 Digital Micromoter.

Readings taken at 1 foot intervals along length of roll.

Tensile Properties:

1. Grip separation 2.5%

2. Assumed gauge length 1.3" and 2.5" for yield and break

Remarks:

slongations, respectively (as modified by NSP).

3. Direction A = Machine Direction Direction B = Cross-Machine Direction

> Tested by: Entered by:

K.H./N.B. KH

Checked by:

REA

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Cilent:

EMCON WA

Duto:

7-27-98

Sample:

3803447

Roll #:

Material:

60ML TEXTURED HDPE

Tost	000		Rendings			Average
Thickness (mils) AS'I'M D1593	75,44	75.81	75.85	75.56	75.35	75.60

Dennity (Breuzy)	Specimen 1	Specimon 2	Specimen 3	Average	1
ASTM D792	0.9409	0.9433	0.9425	0.9422	1
Tensilo Properties:	Specimen 1	Specimon 2	Commission 2	Carelana A	Sp

Tensilo Pro ASTM D	F 1 17/2 12/2 1	Specimen 1	Specimon 2	Specimen 3	Specimen 4	Specimen 5	Average
Torusile Stre	ength						
Yield	Direction A	206,6	205.5	197.5	196.1	221,5	205,4
(ppi)	Direction B	194.9	201.8	195.3	200,4	198.0	198.1
Hreak	Direction A	180,0	192.0	168.0	188.0	220.0	189.6
(ppi)	Direction B	. 148.0	152.0	192.0	168.0	148.0	161.6
Elongation					100.0	140.0	101.0
Yield %	Direction A	20.3	21.0	23.3	27.8	21.0	22.7
	Direction B	21.8	21.8	23.3	23.8	23.3	22.8
Break %	Direction A	344.0	387.5	336.0	358.0	412.0	367.5
	Direction B	184.0	100.0	386.7	316.4	189.8	235.4

	Specimen 1	Specimen 2	Specimen 3	Average
Carbon Bluck, %				
ASTM D1603	2,1950	2.0270	2.3250	2.1823

	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Specimen 6
Carbon Black Dispersion				-		
ASTM D3015/D2663	A-2	A-1	A-2	A-1	Λ-1	A-1

Thickness:

Tested with Mitutoyo Model No. 326-711 Digital Micromoter.

Readings taken at I foot intervals along length of roll.

Tensile Properties:

1. Grip separation 2.5".

 Assumed gauge length 1.3" and 2.5" for yield and break elongations, respectively (as modified by NSF).

1 Direct

3. Direction A = Machine Direction
Direction B - Cross-Machine Direction

Remarks:

Tested hy:

Entered by: N.B.

Checked by: RSA

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

9-25-98

Sample:

3804352

Material:

60ML TEXTURED HDPE

Test Thickness (mils)	_		Readings			Average
ASTM D1593	73.13	72.96	72.55	72.93	72.80	72.87

Density (g/cm3)	Specimen 1	Specimen 2	Specimen 3	4
ASTM D792	0.9403	0.9404		
		0.2404	0.9412	0.9406

Tensile Pro ASTM D		Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Average
Tensile Stre	ength						- I volugo
Yield	Direction A	199.7	107.5			1	
(ppi)	Direction B	196.2	197.5	202.5	206.5	198.2	200.9
Break	Direction A	182.7	195.0	191.0	195.0	197.5	194.9
(ppi)	Direction B	181.7	167.0	215.5	157.0	175.5	179.5
longation		101.7	182.0	166.5	153.2	139.5	164.6
Yield %	Direction A	14.3	15.8		VELY DE T		
	Direction B	15.8	15.8	17.3	15.8	15.8	15.8
Break %	Direction A	440.0	415.0	15.8	15.8	15.0	15.6
	Direction B	470.0	490.0	520.0	255.0	335.0	393.0
			450.0	425.0	325.0	295.0	401.0

Carbon Black, %	Specimen 1	Specimen 2	Specimen 3	Average
ASTM D1603	2,527	2.557	2,404	Trotage

Carbon Black Dispersion ASTM D3015/D2663	Specimen I	Specimen 2	Specimen 3	Specimen 4	I C	
				Opecimen 4	Specimen 5	Specimen 6
	A-I	A-1	A-1	A-1	A-1	

Remarks:

Thickness:

Tested with Mitutoyo Model No. 326-711 Digital Micrometer.

Readings taken at 1 foot intervals along length of roll.

Tensile Properties:

1. Grip separation 2.5".

2. Assumed guage length of 1.3" and 2.0" for yield and break

elongations, respectively (as modified by NSF).

3. Direction A = Machine Direction Direction B = Cross-Machine Direction

Tested by:

K.H./N.B.

Entered by:

K.H.

Checked by:

RSA

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

9-25-98

Sample:

3804354

Material:

60ML TEXTURED HDPE

Test Thickness (mils)			Readings			Auc
ASTM D1593	72.20	71.99	72.99	72.58	71.91	Average 72.33

Density (g/cm3) ASTM D792	Specimen 1	Specimen 2	Specimen 3	
ABIM DI92	0.9418	0.9405		Average
		0,5403	0.9415	0.9413
Tensile Properties:	Specimen 1	Specimen 2		0.94

Tensile Pro ASTM I	0638	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Custo	
Tensile Str	ength		F. Carlotte		opening -	Specimen 5	Average
Yield (ppi)	Direction A	185.7	185.7	178,5	1 = 1		
Break	Direction B Direction A	179.2	181.5	179.0	184.7	181.0	183.1
(ppi)	Direction B	170.0	216.7	202.0	179.5 205.7	181.0	180.0
longation	T- in centon D	137,7	139.5	139.7	140.5	222.7	203.4
Yield %	Direction A	15.8	100		110.5	128.0	137.1
	Direction B	14.3	17.3	17.3	15.8	15.8	16.4
Break %	Direction A	435,0	545.0	14.3	14.3	14.3	14.3
	Direction B	250.0	325.0	320.0	510.0	580.0	518.0
				320.0	260.0	150.0	261.0

Specimen 1	Specimen 2		
	Specimen 2	Specimen 3	Average
2.370	2,648	2 775	2,598
	10 a	2.270	2 370

Carbon Black Dispersion	Specimen 1	Specimen 2	Specimen 3	Carat		
ASTM D3015/D2663	1		-peditoli 3	Specimen 4	Specimen 5	Specimen 6
7.55 T.W D3013/D2663	A-1	A-1	A-1	A-1	1 - 3 - 3	1

Remarks:

Thickness:

Tested with Mitutoyo Model No. 326-711 Digital Micrometer.

Readings taken at 1 foot intervals along length of roll.

Tensile Properties:

1. Grip separation 2.5".

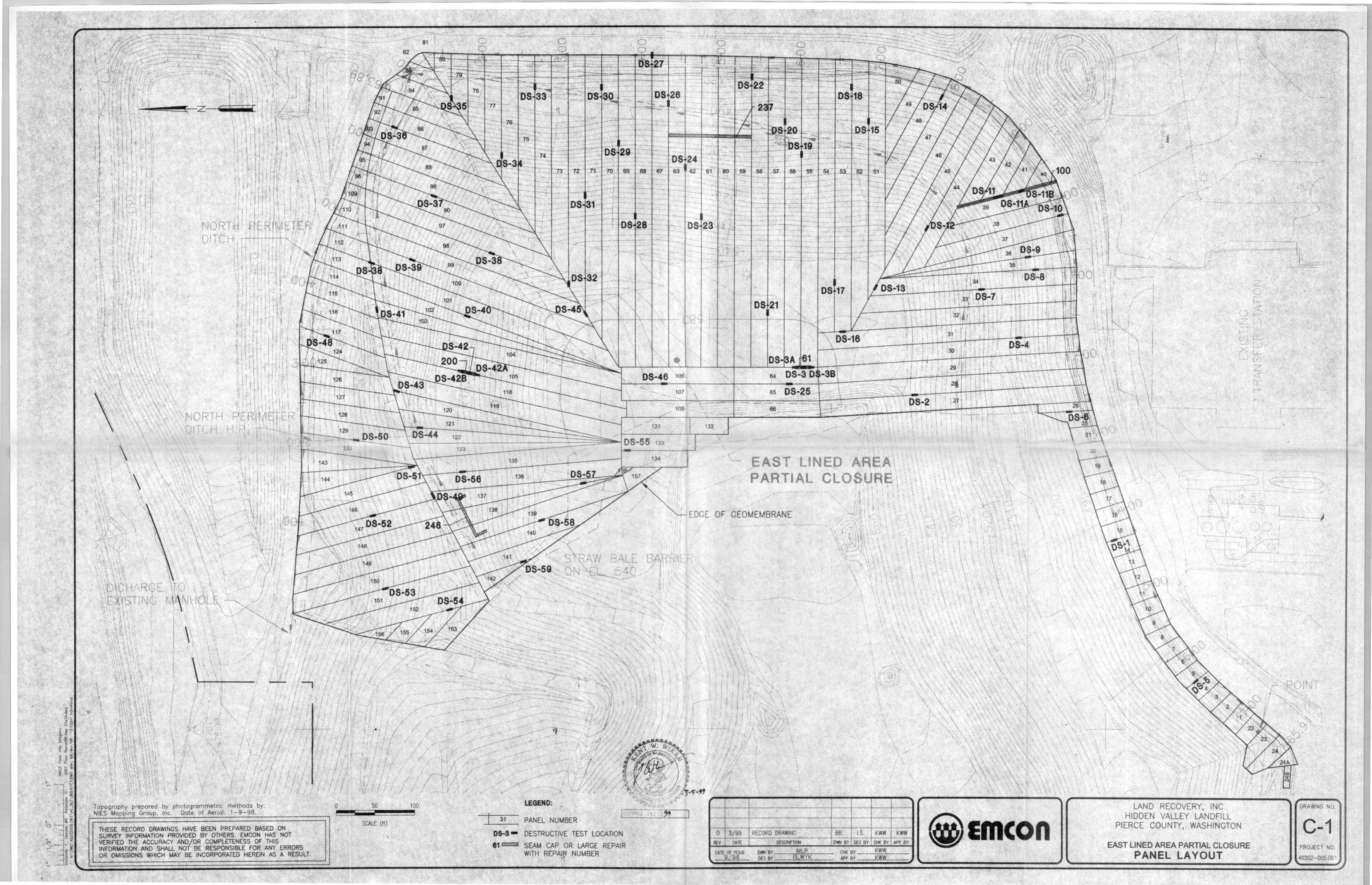
2. Assumed guage length of 1.3" and 2.0" for yield and break elongations, respectively (as modified by NSF).

3. Direction A = Machine Direction Direction B = Cross-Machine Direction

> Tested by: K.H./N.B. Entered by: K.H.

Checked by: RSA

C-2b Panel Layout Drawing



C-2c Geomembrane Received Log

GEOMEMBRANE RECEIVED LOG TABLE C-2c

Project: Hidden Valley Landfill, Puyallup, WA

Facility: East Lined Area Partial Closure

Project No 40202-005.061

				HOLL SIZE		2000	CA Sample	NA Iest	
Date Rec'd	Rolf No.	Lot/ Batch No.	N/7	Sq. Ft.	Thickness (Mils)	Rec'd (Date)	Sent (Date)	Rec'd P/F (Date)	Remarks
8/4/98	3803572	7180524	510 22.5	11475	09				Textured
8/4/98	3803437	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803436	7180524	525 22.5	11812.5	09			8/11/98 P	Textured
8/4/98	3803445	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803438	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803444	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803440	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803443	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803439	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803446	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803454	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803456	7180524	540 22.5	12150	09				Textured
8/4/98	3803453	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803451	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803449	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803452	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803455	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803448	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803450	7180524	525 22.5	11812.5	09				Textured
8/4/98	3803447	7180524	600 22.5	13500	09			7/27/98 P	Textured

Manufacturer: Serrot Corporation

P=Pass F=Fail Logged By: Glenn Heath

Cumulative Total: Total This Page:

237937.5 Sq.Ft. 237937.5 Sq.Ft.

Rws

Checked By:



GEOMEMBRANE RECEIVED LOG **TABLE C-2c**

Project: Hidden Valley Landfill, Puyallup, WA

Facility: East Lined Area Partial Closure

Project No:

					ROLL SIZE		OC Docs	QA Sample	QA lest	
Date Rec'd	Roll No.	Lot/ Batch No.	רעו	W	Sq. Ft.	Thickness (Mils)	Rec'd (Date)	Sent (Date)	Rec'd P/F (Date)	Remarks
8/4/98	3803567	7180524	525	22.5	11812.5	09				Textured
8/4/98	3803568	7180524	525	22.5	11812.5	09				Textured
8/4/98	3803562	7180524	525	22.5	11812.5	09				Textured
8/4/98	3803565	7180524	525	22.5	11812.5	09				Textured
8/4/98	3803566	7180524	525	22.5	11812.5	09				Textured
8/4/98	3803560	7180524	525	22.5	11812,5	09				Textured
8/4/98	3803561	7180524	525	22.5	11812.5	09				Textured
8/4/98	3803563	7180524	525	22.5	11812.5	09				Textured
8/4/98	3803570	7180524	525	22.5	11812.5	09				Textured
8/4/98	3803571	7180524	525	22.5	11812.5	09				Textured

Manufacturer: Serrot Corporation

P=Pass

F=Fail

Logged By: Glenn Heath

Cumulative Total: Total This Page:

118125 Sq.Ft. 356062.5 Sq.Ft.

Mus Checked By:



TABLE C-2c GEOMEMBRANE RECEIVED LOG

Project: Hidden Valley Landfill, Puyallup, WA

Project No:

Facility: East Lined Area Partial Closure

					HULL SIZE		2000	да зашые	162	
Date Rec'd	Roll No.	Lot/ Batch No.	٦/	N/7	Sq. Ft.	Thickness (Mils)	Rec'd (Date)	Sent (Date)	Rec'd P/F (Date)	Remarks
86/2/6	3803800		525	22.5	11812.5	09				Textured
86/8/6	3803801		525	22.5	11812.5	09				Textured
86/6/6	3803802		525	22.5	11812.5	09				Textured
86/2/6	3803804		525	22.5	11812.5	09				Lextured
86/6/6	3803799		525	22.5	11812.5	09				Textured
86/2/6	3803803		525	22.5	11812.5	09				Textured
86/2/6	3803797		525	22.5	11812.5	09				Textured
96/2/6	3803790		525	22.5	11812.5	09				Textured
86/2/6	3803793		525	22.5	11812.5	09				Textured
86/2/6	3803791		525	22.5	11812.5	09				Textured
86/2/6	3803798		525	22.5	11812.5	09			8/27/98 P	Textured
86/6/6	3803845		525	22.5	11812.5	09				Textured
86/6/6	3803805		525	22.5	11812.5	09				Textured
86/6/6	3803842		525	22.5	11812.5	09				Textured
86/8/6	3803841		525	22.5	11812.5	09			8/27/98 P	Textured
86/6/6	3803844		525	22.5	11812.5	09				Textured
86/8/6	3803843		525	22.5	11812.5	09				Textured
86/2/6	3803736		525	22.5	11812.5	09				Textured
86/6/6	3803806		525	22.5	11812.5	09				Textured
86/8/6	3803734		525	22.5	11812.5	09			8/27/98 P	Textured
86/8/6	3803846		525	22.5	11812.5	09				Textured

Manufacturer: Serrot Corporation

P=Pass

F=Fail

·=

Logged By: Glenn Heath

Cumulative Total:

Total This Page:

248062.5 Sq.Ft. 604125 Sq.Ft.

Checked By: Knows

GEOMEMBRANE RECEIVED LOG TABLE C-2c

Project: Hidden Valley Landfill, Puyallup, WA

Project No:

Facility: East Lined Area Partial Closure

Textured Textured Textured Textured Remarks Textured Textured Textured QA Test Rec'd P/F 9/25/98 P 9/25/98 P (Date) QA Sample 9/21/98 9/21/98 Sent (Date) 94500 Sq.Ft. 698625 Sq.Ft. QC Docs Rec'd (Date) Thickness (Mils) Total This Page: Cumulative Total: 9 9 9 9 8 8 9 9 11812.5 11812.5 11812.5 11812.5 11812.5 11812.5 11812.5 ROLL SIZE 11812.5 Sq. Ft. 22.5 22.5 22.5 22.5 22.5 22.5 22.5 22.5 N/N 525 525 525 525 525 525 525 525 Lot/ Batch No. Nanufacturer: Serrot Corporation 3804353 3804357 3804354 3804350 3804355 3804356 Roll No. 3804352 3804351 P≂Pass 9/17/98 9/17/98 9/17/98 9/17/98 9/17/98 9/17/98 9/17/98 9/17/98 Date Rec'd

Mon Man

Checked By:

Logged By: Glenn Heath

F=Fail

C-2d Trial Welds

							TRIA	C-2d TRIAL WELDS	DS						Page 1 of 26	of 26
	Pro	Project:	Hidde	Hidden Valley Landfill	QLIII)				Facility:		East Partial Closure	al.
		Project No.:	9	40202-005.061				-					Monitor:		Glenn Heath	
Test No Date	-	Time	Equip	Equip	Tech	ΔA		Temperatures	Se	Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
			N N	E or F		Monitor	Preheat	Ext	Wedge			Type	Fail		Type	Fail
1 8/12/98	_	13:39	92	щ	90	В			430	115	138	FTB	۵	139	FTB	а.
	-									118	119	FTB	۵.	139	FTB	а
										130	128	EE	م	141	FTB	۵
2 R/12/08		13:45	11	u	S,	표5			420	115	138	FT8	۵	139	FTB	۵
1	-									113	119	FTB	۵	139	FTB	۵
										130	128	ET8	4	141	FTB	۵
	-															
	-															
Specifications:	[Fusion		Extrusion												
			lb/in		n)/qi				Togic	Logged By:	Glenn Heath	£				Ť
	Shear: 1	101	lb/in	101	nj/q				Chec	Checked By:	lamo					

C-2d TRIAL WELDS Hidden Valley Landfill Project:

Page 2 of 26

East Partial Closure

Facility:

Pass/	T T	۵	۵.	۵	ď	a.	۵										
Break	ad.	E	FTB	ETB	FTB	FTB	FTB										
Shear		164	173	172	147	146	160										
Pass/	ig i	۵	۵	۵.	۵	а	գ										
Break	lype	FTB	FTB	FTB	FTB	FTB	FTB										۔
Peel B		139	125	131	N/A	N/A	N/A										Glenn Heath
Peel A		134	147	132	122	115	118										Logged By:
	Wedge	450															Logge
Temperatures	Ĕ																
	Preheat				240												
ΨÖ	Monitor	표			В												
Tech		၁			RL												lb/in
Equip	E or F	ıL			Ш											Extrusion	89
Equip	οN	111			20												lb/in
Time		07:40			08:30											Fusion	79
Date		8/13/98			8/13/98												Peel:
Test No		1 8			2 8						-					Specifications:	

Kun

Checked By:

lp/u

101

lþ/in

101

Shear:

Hidden Valley Landfill	40202-005.061
Project:	Project No.:

.2d	WELDS
ပြ	TRIAL \

Pass/ Fail 凸 ٥ ۵ ۵ ۵ ٩ Д ۵. ₾ ۵. ۵ ۵ ٥ ۵ ۵ East Partial Closure FTB Break Type FT8 FTB FTB FTB FTB FTB FTB E E FTB FTB FTB ETB FTB Glenn Heath 170 5 171 Shear 197 192 159 167 176 193 176 198 180 90 171 Monitor: Facility: Pass/ Fail Δ. <u>-</u> a. ۵. 凸 ۵ ۵ ۵. ۵. ۵ ۵ ۵ ۵ ۵. ₾ Break Type FTB FTB FTB FTB FTB F18 FT8 FTB FTB FTB FTB FTB FTB Peel B 136 133 Š Ϋ́ Ϋ́ 148 136 125 141 135 141 143 129 138 128 Peel A 110 118 133 9 135 143 135 139 33 125 139 44 129 137 141 Wedge 8 420 83 62 Temperatures Ext 250 Preheat Monitor В 공 GH. 윤 Æ ð Tech ဗ္ဗ ₹ 9 ₹ ₹ Equip E or F ш ш ഥ Equip No 133 7 133 167 2 14:30 12:50 12:40 10:40 Time 10:55 8/21/98 8/21/98 8/21/98 8/21/98 8/21/98 Date Test No ιO 4 0 ო

Glenn Heath

Logged By:

bound

Checked By:

lb/in lþ/in

lþ/in D/in

5

Shear: Peel:

2

Extrusion

Fusion

Specifications:

88 101 Page 4 of 26 East Partial Closure Break Type FTB FTB FTB FTB FTB FT8 Glenn Heath Shear 186 <u>4</u> 189 169 158 Monitor: Facility: Pass/ Fail ۵ Д. ۵. ۵ Δ. Φ Break Type FTB FTB FTB FTB FTB Glenn Heath Checked By: Mw J Peel B Y/N Ϋ́ 136 ¥ 128 136 Peel A Logged By: 135 4 128 136 8 126 Wedge 430 TRIAL WELDS Temperatures Ĕ 240 Preheat Q.A Monitor GH H_D Tech ₹ 9 lb/in lb/in Hidden Valley Landfill 40202-005.061 Extrusion 89 Equip E or F 101 ш ட Equip No 133 167 lþ/ju p/in Project No.: Project: Fusion 02:20 13:00 62 101 Time Shear: Peel: 8/22/98 8/22/98 Date Specifications: Test No 2

Pass/ Fail

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of 26	φ		Pass/	Fai	۵	۵	a	۵	۵	a.			
Page 5 of 26	East Partial Closure	leath	Break	Туре	FTB	FTB	FTB	FTB	FTB	FTB			
	East P	Glenn Heath	Shear		145	146	151	175	179	184			
	Facility:	Monitor:	Pass/	Fail	۵	۵	۵	۵	۵.	۵			
			Break	Туре	FTB	FTB	FTB	FTB	FTB	FTB			
			Peel B		133	116	120	145	141	142		Glenn Heath	knew
			Peel A		128	115	124	142	139	145			
ا د	2			Wedge	430			430				Logged By:	Checked By:
C-2d	- WE		Temperatures	Ext									
			ľ	Preheat									
			A9	Monitor	GH			5					
	TUJ.		Tech		၁၄			99				lb/in	lþ/in
	Hidden Valley Landfill	40202-005.061	Equip	E or F	ш			L				8	101
	Hidder	400	Equip	8	167			111				lb/in	lb/in
	Project:	Project No.:	Time		10:00			10:00				Fusion 79	10
6	3		Date		8/31/98			8/31/98					Shear:
0		833	Test No		-			c	7			Specifications:	

TRIAL WELDS	1	1							C-2d							Page 6 of 26	of 26
Project No.			Project:	Hidd	en Valley Lar	IIIJpu		TRIA	IL WEI	LDS				Facility:	1	Partial Closu	ē
Time Equip Tear Monitor Mo		5	Project No.:		0202-005.06	_								Monitor:		Heath	
Strike Total Nonline Est	Test No	Date	Time	Eaulo	Equip	Tech	Ą		Temperature	Se	Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
1,156 7,50 167 1					EorF		Monitor		Ext				Туре	Fail		Type	Fail
118 130 141 F CG CH CH CH CH CH CH CH	-	9/1/98	7:00	167	ıL	c	GH			430	138	148	FTB	۵	174	FTB	۵
11											118	136	FTB	А	168	FTB	Ъ
11											122	130	FTB	۵	164	Æ	a.
11																	
1.10 1.10	2	9/1/98	7:00	111	L .	CG	GH			430	132	131	ETB	а.	173	FTB	۵
1300 187 F BS GH 440 131 119 FTB P 167 FTB											143	138	FTB	a.	161	FTB	۵
MYG8 1300 187 F BS GH 440 131 FTB P 153 FTB MYG8 1300 167 F B GH 440 131 FTB P 153 FTB MYG8 1300 167 F 124 FTB P 153 FTB MYG8 1300 167 F 124 FTB P 161 FTB MYG8 1300 167 FTB P 167 FTB MYG8 1300 167 FTB P 167 FTB MYG9 167 FTB P 167 FTB P 167 FTB MYG9 167 FTB P 167 FTB P 167 FTB Fusion MYG9 P P 167 FTB P 167 FTB Fusion MYG9 P P P 167 FTB <td></td> <td>135</td> <td>190</td> <td>FTB</td> <td>a.</td> <td>167</td> <td>FTB</td> <td>۵</td>											135	190	FTB	a.	167	FTB	۵
13.00 187 F. BS GH CH CH CH CH CH CH CH																	
130 150	n	9/1/98	13:00	187	L	BS	В			440	131	119	FTB	۵	153	FTB	Д
N1/108 13:30 167 F JO GH 430 107 123 FTB P 165 FTB N1/108 13:30 167 F JO GH 430 107 123 FTB P 165 FTB N1/108 13:30 167 FTB P 167 FTB FTB P 167 FTB FTB P 167											128	135	FTB	А	143	FTB	a.
9/1/88 13:00 167 F JC GH 430 107 123 FTB P 161 FTB 13:00 167 FTB P 161 FTB P 167 FTB 13:00 167 FTB P 167 FTB FTB FTB P 167 FTB 14:00 16:00 16:00 FTB P 167 FTB P 167 FTB 16:00 16:00 16:00 FTB P 167 FTB P 167 FTB 16:00 16:00 16:00 FTB P 167 FTB P 167 FTB 16:00 16:00 16:00 FTB P 167 FTB P 167 FTB 16:00 16:00 16:00 FTB P 167 FTB P 167 FTB 16:00 16:00 16:00 FTB P 167											109	124	FTB	а	155	FTB	4
13.00 167 F JC GH 430 107 123 FTB P 153 FTB 13.00 167 F 121 121 121 FTB P 161 FTB 13.00 13.00 111 F 121 127 FTB P 161 FTB 13.00 13.00 111 F 121 127 FTB P 167 FTB 13.00 13.00 13.00 13.00 13.00 13.00 13.00 167 FTB P 167 FTB 13.00<																	
130 111 FTB P 167 FTB	4	9/1/98	13:00	167	ı	Sc	НЭ			430	107	123	FTB	А	153	FTB	Ъ
121 127 FTB											130	111	FTB	Р	161	FTB	D.
Fusion											121	127	FTB	ď	167	FTB	a.
Fusion Extrusion Peel: 79 Ib/in 68 Ib/in Checked By: Checked By:																	
Fusion Extrusion Peel: 79 b/in 68 b/in Checked By:																	
Fusion Extrusion Peel: 79 Ib/in 68 b/in Shear: 101 Ib/in Checked By:																	
Fusion Extrusion Peel: 79 lb/in 68 lb/in Shear: 101 lb/in Checked By:																	
Fusion Extrusion Peel: 79 lb/in 68 lb/in Shear: 101 lb/in Checked By:																	
Fusion Extrusion Logged By: Peel: 79 lb/in 68 lb/in Shear: 101 lb/in Checked By:																	
Peel: 79 lb/in 68 lb/in Logged By: Shear: 101 lb/in 101 lb/in Checked By:	Specification	يز [Fusion		Extrusion												
101 lb/in 101 lb/in Checked Bv:				lb/in	89	1				Logg	ed By:	Glenn Hea	£				í
		Shea		lb/in	5	lb/in				Chec		Buch					

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40202-005.061
Project No.:

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Facility: East Partial Closure

Glenn Heath

Monitor:

Pass/	Fail	۵	۵	۵	<u> </u>	۵	۵	۵	a	۵.							1			
	Type	FTB	FTB	FTB	8	FTB	FTB	FTB	FTB	FTB	4									
Shear		146	130	155	130	190	135	153	152	150										
Pass/	Fail	۵	۵	a.	a.	a.	4	<u>a</u>	۵.	<u>a</u>										
Break	Туре	FTB	FTB	FTB	FTB	ET.	Æ	FTB	FTB	FTB										
Peel B		107	120	122	131	126	119	129	117	120									Glenn Heath	Then
Peel A		131	128	121	132	138	120	130	118	120										
	Wedge	430			430			430											Logged By:	Checked Rv
Temperatures	Ext																			
Ter	Preheat																			
_	Monitor	ВH			용			쁑												
Tech		BS			၁			BS											lb/in	lb/in
Equip	E or F	ш			L			ш										Extrusion	89	101
Equip	- <u>%</u>	187			111			187											lb/in	lþ/in
Time		2:00			00:2			13:00				3						Fusion	6/	101
Date		9/2/8			9/2/98			9/2/98										is:	Peel:	Shear:
Test No		-			2			m										Specifications:		

of 26		Pass/	Fail	۵	۵	a	۵.	а	۵										1	
Page 8 of 26 East Partial Closure	leath	Break	Type	FT8	FTB	FTB	ETB	FTB	FTB											
East P	Glenn Heath	Shear		176	183	179	154	151	155											
Facility:	Monitor:	Pass/	Fail	۵	۵	۵	۵	۵	۵											
		Break	Type	FTB	FTB	FTB	FTB	FTB	FTB									_		
		Peel B		N/A	N/A	N/A	A/N	A/N	A/N									Glenn Heath	3	Jana
		Peel A		124	128	134	412	119	122									Logged By:		Checked By: /
SO			Wedge															000		Chec
G-2d TRIAL WELDS		Temperatures	Ext	250			240	24.7												
TRIAI		1	Preheat																	
		Ą	Monitor	ъ Б			5	5												
Ę.		Tech		ပ္			9	3										ā	b/in	
Hidden Valley Landfill	40202-005.061	Eauip	E or F	Ш			ı	ע									1		5 5	
Hidder	402	Equip	S S	SME001				SIMC 2045										1.61	lb/in	
Project:	Project No.:	Time	2	2:00				13:00										_	101	
) \$ (ated		86/2/6				9/3/98											Peel: Shear:	
	/ 5	ON teeT	201 102	-				2										Specifications:		

						- 1		-		A			
Facility:	Monitor:	Pass/	Fail	Ъ	А	Ь	Ь	۵	۵				
		Break	Туре	FTB	FTB	FTB	FTB	FT8	FTB				
		Peel B		137	139	154	142	139	145				
		Peel A		106	132	154	139	140	133				
SC			Wedge	420			430						
C-2d TRIAL WELDS		Temperatures	Ext										
TRIAL]]	Preheat										
		Αρ	Monitor	В			Н5						
HUB HUB		Tech		ဌ			BS						
Hidden Valley Landfill	40202-005.061	Equip	E or Fi	止			ш						
Hidde	40	Equip	8	167			111						
Project:	Project No.:	Time		8:00			8:00						
(3)	15	Date		9/4/98			9/4/98						
	/5	est No		-			2						

Pass/ Fail

Break Type

Shear

Facility: East Partial Closure

Monitor: Glenn Heath

			2	L 5 U		MOURO	בובוובמו	LAI	Show				Ī			
-	9/4/98	8:00	167	ட	ನ	Н			420	106	137	FTB	۵	184	FTB	۵
										132	139	FTB	۵	188	FTB	Д.
										154	154	FTB	А	181	FTB	۵
2	9/4/98	8:00	111	Ł	BS	В			430	139	142	FTB	۵	172	FTB	a
										140	139	FT8	۵	173	FTB	۵
										133	145	FTB	۵	173	FTB	۵.
Specifications:	ńs:	Fusion		Extrusion												
	Peel:	79	lb/in	89	lb/in				Logg	Logged By:	Glenn Heath	£				1
	Shear:	101	lb/in	101	lb/in				i	1	mil					
									Checi	Checked By:						

of 26	<u>e</u>		Pass/	Fail	۵	۵	С	۵	α.	۵										ã	
Page 10 of 26	East Partial Closure	Heath	Break	Туре	FTB	FTB	FTB	FTB	FTB	FT8											
	East P	Glenn Heath	Shear		185	162	191	145	150	149											
	Facility:	Monitor:	Pass/	E E	۵	a.	۵	٥	А	А											
			Break	Type	FTB	FTB	FTB	FTB	FTB	FTB											
			Peel B		126	132	133	132	121	131									100	Clei II i reali	Men
			Peel A		106	121	120	122	127	139										Logged by.	Checked By:
	DS			Wedge	420			430											_	5507	Chec
C-2d	TRIAL WELDS		Temperatures	Ext																	
	TRIA		1	Preheat																	
			AA	Monitor	GH			용													
	HIII P		Tech		2			BS												u/q	ni/di
	Hidden Valley Landfill	40202-005.061	Equip	EorF	ഥ			ш											Extrusion	88	101
	Hidde	8	Equip	2	167			111												- Ib/in	lb/in
	Project:	Project No.:	Time		9:00			9:10										ľ	Fusion	62	101
1			Date		86/2/6			9/5/98												Peel:	Shear:
	(3)	\$000 \$000 \$000	Test No		-			,	1										Specifications:		

Project:	Project No.:
3	

Hidden Valley Landfill

40202-005.061

TRIAL WELDS

East Partial Closure Facility:

Page 11 of 26

Glenn Heath Monitor:

Toot No	Pater	Time	Fairin	Fauin	Tech	Ao		Temperatures	S	Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
ON JEST			2	Lы		Monitor	Preheat	Ĕ	Wedge			Туре	Fail		Type	Fail
-	86/6/6	7:00	2045	Ë	ನ	용		240		102	N/A	FTB	Ъ	187	FTB	Д
										118	N/A	FTB	۵	175	FTB	а
										138	N/A	FTB	Ь	177	FTB	۵
0	86/6/6	12:48	2045	EX	သ	H5		240		115	N/A	FTB	a	192	FTB	۵
			V-							114	N/A	FTB	۵	198	FTB	۵
										132	N/A	FTB	а	193	FTB	4
Specifications:	ions:	Fusion		Extrusion												

Glenn Heath

Logged By:

lb/in lp/in

88 101

uj/qi lb/in

62 101

Shear:

Know

Checked By:

Hidden Valley Landfill Project No.: 40202-005.061 Project:

C-2d TRIAL WELDS

East Partial Closure Facility:

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Monitor: Glenn Heath

Test No	Date	Time	Equip	Equip	Tech	σĄ	Temperatures		Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
			oN N	E or F		Monitor	Preheat E	Ext Wedge			Type	Fail		Type	Fail
1	9/11/98	09:58	187	Fusion	၁၄	GH		440	136	144	FTB	۵	166	FTB	4
									134	140	FTB	۵	169	FTB	۵
									131	130	FTB	а	189	FTB	۵
2	9/11/98	10:40	111	Fusion	MH	GH GH		430	136	137	FTB	۵	168	FTB	a
									122	136	FTB	a.	170	FTB	۵
									145	138	FTB	Ω.	169	FTB	۵.
m	9/11/98	12:39	187	Fusion	ರ	В		440	135	139	FTB	Ъ	178	FTB	۵
									142	137	FTB	Д	169	FTB	4
									140	141	FTB	۵	169	FTB	۵
4	9/11/98	12:30	111	Fusion	FM	B B		430	128	137	FTB	а	171	FTB	а
									239	130	FTB	А	170	FTB	۵
									134	138	FTB	a.	170	FTB	4
Specifications:	ns:	Fusion		Extrusion											
	Peef:	79	lb/in	89	lb/in			- Log	Logged By:	Glenn Heath	4				ī
	Shear:	101	lb/in	101	lb/in					Sill					
								Che	Checked By:	2/					

No Date						TDIA	C-20 TDIAL WELDS	20						Page 13 of 26	of 26
Date	Project:	Hidder	Hidden Valley Landfill	affil			L VV .	3				Facility:	East F	East Partial Closure	و
Date	Project No.:	402	40202-005.061									Monitor:	Glenn Heath	Heath	
	Time	Equip	Equip	Tech	Φ		Temperatures	11.00	Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
		2	E or F		Monitor	Preheat	Ext	Wedge			Type	Fai		Type	Fai
1 9/12/98 0	07:35	187	Fusion	JC	GH			430	128	147	FTB	а	201	FTB	Δ.
									148	143	FTB	۵	194	FTB	۵
									142	148	ETB	a.	192	FTB	۵
2 9/12/98 0	07:45	111	Fusion	Ā	GH			430	129	138	FTB	۵.	182	FTB	٦
									134	134	FTB	a	190	FTB	۵
									131	149	FTB	С	187	FTB	۵
3 9/12/98 1	12:40	167	Fusion	ဗ္ဗ	GH			430	128	137	FTB	Ь	187	FTB	Ъ
									132	132	FTB	۵	188	FTB	α.
									135	135	FTB	۵	186	FTB	۵
4 9/12/98 1	12:35	187	Fusion	ನ	H9			430	142	140	FTB	а	178	FTB	۵
									144	145	FT8	Д	181	FTB	4
									145	140	FTB	۵	189	FTB	<u>a</u>
5 9/12/98 1	13:20	111	Fusion	FM	В			430	137	140	FTB	۵	190	FTB	4
									136	138	FTB	۵	187	FTB	<u>a</u>
									138	138	FTB	۵	188	FTB	۵
Specifications: F	Fusion 79	lb/in	Extrusion 68	lb/in				Logg	Logged By:	Glenn Heath	£				
Shear:		lb/in	101	lb/in				Chec		Kunus					

_	0						\$	C-2d	٥						Page 14 of 26	of 26
Q.J/		Project:	Hidde	Hidden Valley Landfill	dfill		A N	I KIAL WELDS	S. S.				Facility:	East R	East Partial Closure	ē
***	S	Project No.:		40202-005.061									Monitor:	Glenn Heath	Heath	
Test No	Date	Time	Equip	Equip	Tech	ΑA		Temperatures	S	Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
			2	EorF		Monitor	Preheat	Ext	Wedge			Type	Fail		Type	Fail
-	9/13/98	7:58	111		BS	В			450	136	144	FTB	O.	166	FTB	۵
										134	140	FTB	۵	169	FTB	۵
										131	130	FTB	a .	189	FTB	a
,	9/13/08	7.45	187		ನ				450	142	140	FTB	0.	168	FTB	۵
7										144	145	FTB	۵.	170	FTB	۵
								400		145	140	FTB	۵	169	FTB	۵.
m	9/13/98	7:50	\$		SG			240		115	N/A	FTB	Д	145	FTB	۵.
,										114	N/A	FTB	А	150	FTB	Д
										132	N/A	FTB	۵	149	FTB	۵
4	9/13/98	13:00	111		BS				450	128	137	FTB	۵	168	FTB	a
										139	130	FTB	۵	170	FTB	۵
										134	138	FTB	۵.	169	FTB	۵
												1	(į	E	c
ည	9/13/98	13:20	₹		ဗ္ဗ			240		77.	4 2		L 0	473	2 6	
										130	Q A	FTB	. a	173	819	
Specifications:	ons:	Fusion 79	l)/ql	Extrusion 68	lb/in				Fogg	Logged By:	Glenn Heath	£				
	Shear		lb/in	101	lb/in				Chec		How is					

Project
3)

C-2d

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		Project:	Hidd	Hidden Valley Landfill	Idfill		TRIA	TRIAL WELDS	DS				Facility:	East	East Partial Closure	e e
W		Project No.:	4	40202-005.061									Monitor:		Glenn Heath	
Tost No	Date	Time	Eauip	Eauip	Tech	A		Temperatures		Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
21 120			2	EorF		Monitor	Preheat	Ext	Wedge			Type	Fail		Type	Fai
-	9/14/98	8:15	111	Fusion	BS	GH			450	131	107	ETB	a.	146	FTB	۵
										128	120	FTB	А	130	FTB	۵
										121	122	FTB	۵	155	FTB	۵
2	9/14/98	8:25	187	Fusion	၁				450	122	132	FTB	۵	145	EF.	۵.
										127	121	FTB	а	150	FTB	a
										139	131	FTB	Д	149	FTB	a
m	9/14/98	8:35	\$	EX.	ဗ္ပ			240		124	N/A	FTB	a		FTB	a.
										128	N/A	FTB	Ь		FTB	۵
										134	N/A	FTB	d.		FTB	a.
4	9/14/98	00:6	111	Fusion	FM				450	107	123	FTB	а.	153	FTB	۵
										130	111	FTB	۵	161	FTB	۵
										121	127	FTB	۵	167	FTB	<u>a</u>
ro	9/14/98	12:40	\$	Ē	95			240		106	N/A	FTB	а		EFB	۵
										121	N/A	FTB	а.		FT8	<u>a</u>
										120	N/A	FTB	4		ETB	а.
Specifications:	ions:	Fusion		Extrusion												
	Peel:	79	lb/in	89	lb/in				Logic	Logged By:	Glenn Heath	£				1
			1													

Howen

Checked By:

101 lb/in

lp/in

5

0	6							C-2d	٥						Page 16 of 26	of 26
		Project:	Hidd	Hidden Valley Landfill	ıdfill		ZIZ-) V	2				Facility:	East	East Partial Closure	<u>e</u>
W	5	Project No.:		40202-005.061									Monitor.	Glenn Heath	Heath	
Test No	Date	Time	Equip	Equip	Tech	ΦA		Temperatures	S	Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
			8	E or F		Monitor	Preheat	Ext	Wedge			Type	Fai		Type	Fail
-	9/12/98	9:45	167	Fus.	2				450	134	139	FTB	O.	164	FTB	о.
										147	125	FTB	а	173	FTB	а
										132	131	FTB	a.	172	FTB	4
									,	9	6	E	C	147	ara	٥
2	9/15/98	11:00	=======================================	Fus.	¥ L				004	1 1	2 7	0 1		146	E E	. a
										2 2	126	E E	. a	160	E E	۵
C.	9/15/08	12.45	167	Fils	j,				450	102	119	FTB	4	187	FTB	а
,										118	120	FTB	Ь	175	FTB	Д
										138	120	FTB	а	177	FTB	۵
4	9/15/98	12:55	111	Fus.	Æ				450	115	119	FTB	۵	192	FTB	۵
				Z.						114	118	FTB	۵	198	FTB	۵
										132	118	FTB	а	193	FTB	۵.
ស	9/15/98	13:50	\$	EX.	၅၁			240		132	N/A	FTB	А	173	ETB	۵
										143	N/A	FTB	Ь	161	FTB	۵
										135	N/A	FTB	4	167	FTB	۵
Specifications:	ons:	Fusion		Extrusion						1		4				
	Peel: Shear:	67 79	lb/in	8 5	ni/di ni/di					Logged by:	Glenii nearii					ĭ
					Î.				Chec	Checked By:	MILLOW	5				

Peel A Peel B Break Pass Shear Break Type Fail Type Fail Type Fail Type FTB Type FTB Type Ty	(3	1						ן אואַד	C-2d TRIAL WELDS	8						Page 17 of 26	of 26
Project No. 40202.005.05 Prof.	3		Project:	Hidd	en Valley Lar	Illij			, , ,	5				Facility:	East	Partial Clost	e e
Time Equip Equip Text OA Temperatures Exc Name Text	Æ	5	Project No.:		0202-005.06	_								Monitor:		Heath	
150 No E or F	Test No	Date	Тіте	Equip	Equip	Tech	& A	T	emperature		Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
150 45 56 66 64 240 115 NAA FTB P 139 FTB P 130				%	EorF		Monitor	Preheat	Ext				Type	Fail		Type	Fai
118		9/16/98	9:20	\$	EXt.	90	В		240		115	N/A	FTB	۵	139	FTB	4
15240 45 Ext. Cod Cot Cot											118	N/A	FTB	O.	139	FTB	<u>_</u>
15240											130	N/A	FTB	a.	141	E B	<u>a</u>
113			9	í	i	6	į		240		4.	A/N	E S	م	139	FTB	۵
130 N/A FTB P 141 FTB	-	9/16/98	12:40	8	Ĭ.	3	5		24.7		113	NA	FT8	_	139	FTB	۵
Fusion Extrusion Fusion Extrusion Fusion 101 Ib/in 101 Ib/in Peet: 73 Ib/in 101 Ib/i											130	A N	FT8	۵	141	FT8	Δ.
Fusion Extrusion Fee: 73 Ib/in 101 Ib/in Charles By:																	
Peel: 79 lb/in 101 lb/in Checked By:																	
Fusion Extrusion Fusion Extrusion Fusion (88 lb/ln) Shear: 101 lb/ln Checked By:																	
Fusion Extrusion Peet: 79 lb/in 68 lb/in Shear: 101 lb/in 101 lb/in																	
Fusion																	
Fusion																	
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Fusion																	
Fusion																	
Fusion																	4
Fusion																	
Fusion Extrusion Peel: 79 Ib/lin 68 Ib/lin Shear: 101 Ib/lin Charked By:																	-
Fusion Extrusion Peel: 79 Ib/in Logged By: Shear: 101 Ib/in Charked By:																	4
Fusion Extrusion Peel: 79 lb/in 68 lb/in Shear: 101 lb/in Charked By:																	-
Fusion Extrusion Peel: 79 lb/in 68 lb/in 101 lb/in 101 lb/in																	
Peel: 79 lb/in 68 lb/in 101 lb/in Shear: 101 lb/in 101 lb/in	Specifications	16	Fusion		Extrusion	_											
101 Ib/in 101 Ib/in Charled By				lb/in	88	lb/in				Logg	led By:	Glenn Hea	Ę.				1
		Sheal		lb/in	101	lp/in				ď	Part Bur	Ju w					

Peel A Peel B Break Pass Shear Break 136		(TRIA	C-2d TRIAL WELDS	DS						Page 18 of 26	of 26
	2)	3	Project:	Hidd	en Valley Lar	Idfill			4)				Facility:	East	Partial Closu	e l
Time Figure Figure Time Tim	W	ē	Project No.:		0202-005.06	_								Monitor:	Glenn	Heath	
1796 8-30	Test No	Date	Time	Equip	Equip	Tech	AA		Temperatures		Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
1778 8:30				- 2	EorF		Monitor		Ext				Type	Fail		Type	臺
131 130 FTB FTB	-	9/17/98	8:30	111	Fus.	Α				450	136	144	FTB	۵.	166	FTB	۵
1778 9.00 187 Fus. JC											134	140	FTB	۵	169	FTB	а
17786 9.00											131	130	FTB	а.	189	FTB	۵
1778 9700 167 148 148 148 148 178 181 178 17				107	1	2				450	142	140	ET 8	۵	178	FTB	۵
1758 12.48 111 Fus. FM 450 129 138 FTB P 189 FTB F 1758 12.48 111 Fus. FM 60 134 FTB P 180 FTB F 1758 12.55 187 Fus. JC 450 128 137 FTB P 180 FTB 1778 13.50 45 Ext. CG 240 112 N/A FTB P 159 FTB 1778 13.00 45 Ext. CG 240 112 N/A FTB P 159 FTB 1779 13.00 45 Ext. CG 240 112 N/A FTB P 159 FTB 178 13.00 45 Ext. CG 240 112 N/A FTB P 151 FTB 120 13.00 13.00 13.00 13.00	2	9/1 //98	9:00	18/	i i	3					4	145	FTB	4	181	FTB	۵
17768 12.46 111 Fus. FM 450 129 138 FTB P 182 FTB P 180											145	140	FTB	۵	189	FTB	ட
1758 1248 111 Fus. FM 450 139 178 FTB P 182 FTB 1778 12.55 187 Fus. 12 134 FTB P 190 FTB P 1778 12.55 187 Fus. 12 450 128 FTB P 187 FTB P 1778 12.55 187 Fus. 12 139 130 FTB P 188 FTB FTB 1778 13.00 45 Ext. CG 240 112 N/A FTB P 158 FTB 1778 13.00 45 Ext. CG 240 112 N/A FTB P 158 FTB 1779 13.00 45 Ext. CG 240 112 N/A FTB P 158 FTB 1780 13.00 45 13.00 N/A FTB P <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>																	
1770 134 134 134 154 <td>~</td> <td>9/17/9R</td> <td>12.48</td> <td>111</td> <td>Fus</td> <td>¥</td> <td></td> <td></td> <td></td> <td>450</td> <td>129</td> <td>138</td> <td>FTB</td> <td>4</td> <td>182</td> <td>FTB</td> <td>а.</td>	~	9/17/9R	12.48	111	Fus	¥				450	129	138	FTB	4	182	FTB	а.
17768 12.55 187 FUB. 187 FTB 187 FTB 188 FTB PTB PT											134	134	FTB	۵	190	FTB	Δ.
17708 12.55 187 Fus. JC 450 128 137 FTB P 168 FTB 17708 12.55 187 Fus. JC 139 130 FTB P 170 FTB 17708 13.00 45 Ext. CG 240 112 N/A FTB P 151 FTB 13.00 45 Ext. CG 240 112 N/A FTB P 151 FTB 13.00 45 Ext. CG 240 112 N/A FTB P 151 FTB 13.0 FTB P 152 N/A FTB P 155 FTB 13.0 FTB P 152 N/A FTB P 155 FTB 13.0 FTB P 155 FTB P 155 FTB 13.0 FTB FTB P 155 FTB P											131	149	FTB	а	187	FTB	۵
17796 1255 187 Fus. JC 450 128 137 FTB P 168 FTB 11798 13.00 45 Ext. CG 240 112 N/A FTB P 159 FTB 11798 13.00 45 Ext. CG 240 112 N/A FTB P 154 FTB 11798 13.00 45 Ext. CG 240 112 N/A FTB P 154 FTB 1179 N/A FTB P 154 FTB																	
130 130 45 Ext. CG 240 112 N/A FTB P 156 FTB FTB P 156 FTB FTB	4	9/17/98	12:55	187	Fus.	ಲ್ಗ				450	128	137	FTB	4	168	FTB	_
13.00 45 Ext. CG 240 112 NI/A FTB P 159 FTB FTB											139	130	FTB	۵	170	FTB	۵
13:00 45 Ext. CG											134	138	FTB	۵.	169	ETB	П
13:00 45 Ext. CG 240 112 N/A FTB P 154 FTB 112 N/A FTB P 151 FTB																	
119 N/A FTB P 151 FTB FTB P 151 FTB FTB P 152 FTB FTB P 152 FTB P 155 FTB FTB P 155 FTB FTB P 155 FTB FTB P 155	5	9/17/98		45	Ext.	ဗ္ဗ			240		112	N/A	FTB	۵	154	FTB	<u>a</u>
12			-								119	N/A	FTB	۵	151	FTB	4
Fusion Extrusion Peel: 79 Ib/in 68 Ib/in Shear: 101 Ib/in Checked By:											122	N/A	FTB	Ъ	155	FTB	а.
Fusion Extrusion Peel: 79 Ib/in 68 Ib/in Logged By: Shear: 101 Ib/in Checked By:																	
Fusion Extrusion Peel: 79 Ib/in 68 Ib/in Logged By: Shear: 101 Ib/in Checked By:																	
Fusion Extrusion Peel: 79 Ib/in 68 Ib/in Shear: 101 Ib/in 101 Ib/in																	4
Peel: 79 Ib/in 68 Ib/in Shear: 101 Ib/in 101 Ib/in Checked By:	Specificati	Je.	Fusion		Extrusion												
101 Ib/in 101 Ib/in Checked By:					89	- 1				Fogg	led By:	Glenn Hea	ŧ				î
		Shea		Ip/in	101	lb/in				- Chec	ked Bv:	Grun					

East Partial Closure Glenn Heath Shear 153 ₹ 155 <u>छ</u> 161 167 Monitor: Pass/ Fail Δ. 凸 ۵. ۵ ۵ ۵ Break Type FTB FTB FTB FTB FTB ET B Peel B Ϋ́ Α V N/A ¥ N ¥ X ≸ Peel A 134 128 122 127 139 124 Wedge TRIAL WELDS Temperatures Ext 240 240 Preheat Q.A Monitor GH. В Tech CG ဗ္ဗ Hidden Valley Landfill 40202-005.061 Equip E or F Ĕ ద్ద Equip No 8 4 Project No.: 12:45 11:00 Time 9/18/98 9/18/98 Date Test No 3

Pass/ Fail

Break Type FT8

Page 19 of 26

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FTB

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FTB FTB FTB

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> Glenn Heath Logged By: Checked By:

n/d m/ql 89

5

lb/in lb/in

Shear: 101

Peel:

Extrusion

Fusion 79

Specifications:

Page 20 of 26

			2	Liston Valley I andfill	Ē		TRIA	TRIAL WELDS	DS.				Facility:	East F	Page zu or zo East Partial Closure	97 Ja
/ 5) §	rioject.		cti Valley Lati									Monitor	Glenn Heath	######################################	
		Project No.:	₹	40202-005.061										5		
Test No	Date	Time	Equip	Equip	Tech	δA		Temperatures	S	Peel A	Peel B	Break	Pass/	Shear	Break	Pass/
			No	EorF		Monitor	Preheat	EX	Wedge			Type	Fail		Type	Fail
-	9/19/98	8:30	111	Fus.	FM	H _O			450	122	123	FTB	D.	172	FTB	۵
										115	127	FTB	۵	173	FTB	۵
		1								118	126	FTB	۵	173	ETB	a
0	9/19/98	0330	167	Fus.	၁၄	В			450	106	126	FTB	۵	185	FTB	۵
4										121	132	FTB	Q.	162	FTB	а.
										120	133	FTB	۵	191	FTB	a
~	9/19/98	12.45	111	Fus	Z	퓽			450	102	119	FTB	a.	187	FTB	ما
	8									118	120	FTB	a	175	FTB	۵
										138	120	FTB	a.	177	FTB	а.
4	9/19/98	12:55	167	Z. S.	ನ	푱			450	129	138	FTB	А	182	FTB	۵
										134	134	FTB	А	190	FTB	а
										131	149	FTB	а.	187	FTB	۵
Specifications:	ons:	Fusion		Extrusion												
	Peel:	62	- lb/in	88	lb/in				Logi	Logged By:	Glenn Heath	£				1

Checked By:

lb/in

5

lb/in

Shear: 101

Monitor: N/A FTB P N/A FTB P

Pass/ Fail ₽. ۵ ۵. Page 22 of 26 East Partial Closure Break Type FTB FTB FTB Glenn Heath Shear 155 15 158 Monitor: Facility: Pass/ Fail ۵ ۵ ۵ Break Type F18 FTB FTB Kinner Glenn Heath Peel B ¥, ¥ N/A Peel A 129 129 Checked By: Logged By: Wedge C-2d TRIAL WELDS Temperatures Ext 250 Preheat Q.A Monitor F Tech ВM lb/in lb/in Hidden Valley Landfill 40202-005.061 Extrusion 89 101 Equip E or F Ë. Equip No 2031 flyin lþ/in Project No.: Fusion 79 101 Time 9:15 Shear: Peel: 9/26/98 Date Specifications: Test No -

East Partial Closure Glenn Heath Shear 157 159 Monitor: Facility: Pass/ Fail ۵ ₾ ۵. Break Type FTB FTB FTB Glenn Heath krew Peel B ΑN V ¥. ¥ Y Peel A Logged By: 119 5 5 Checked By: Wedge C-2d TRIAL WELDS Temperatures 250 Preheat Q.A. Monitor 유 단 Tech Ø G lb/in lþ/in Hidden Valley Landfill Extrusion 40202-005.061 88 5 Equip E or F Ë. Equip No 2031 lþ/in lb/in Project No.: Fusion Project: 79 13:10 101 Time Peel: Shear: 9/27/98 Date Specifications: Test No

Pass/ Fail

Break Type

Page 23 of 26

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FTB FT8 FTB

Д Q.

Pass/ Fail ۵ ۵ ۵. Page 24 of 26 East Partial Closure Break Type FT8 FTB Glenn Heath Shear 184 Monitor: Facility: Pass/ Fail م ۵. ۵ Break Type FTB FTB FTB Muse of Glenn Heath Peel B ¥, ¥, ¥ Peel A 6 8 8 156 Logged By: Checked By: Wedge TRIAL WELDS Temperatures 250 Ĕ Preheat Q.A. Monitor 용 Tech ΘM 1b/in lb/in Hidden Valley Landfill 40202-005.061 Extrusion 88 101 Equip E or F EXT: Equip 2031 lb/in lb/in Project No.: Fusion 62 5 Time 8:28 Shear: Peel: 9/27/98 Date Specifications: Test No

Pass/ Fail ۵ ۵ ۵. Page 25 of 26 East Partial Closure Break Type FTB FTB FTB Glenn Heath Shear 55 09 154 Monitor: Facility: Pass/ Fail **_** ۵ ሲ Break Type FTB FTB FTB Lower Glenn Heath Peel B N/A ₹ N N/A Peel A 123 120 Logged By: Checked By: Wedge C-2d TRIAL WELDS Temperatures 240 Preheat Monitor ď 핑 Tech δ lb/in lb/In Hidden Valley Landfill 40202-005.061 Extrusion 101 Equip E or F EX. Equip No 2045 lb/in lb/in Project No.: Fusion 73 101 13:20 Time Shear: Peel: 10/3/98 Date Specifications: Test No

Pass/ Fail ۵ ۵ ۵ ۵. Facility: Southwest Closure Repair Page 26 of 26 Break Type FTB FTB FTB FTB FTB Glenn Heath Shear 166 162 172 167 Monitor: Pass/ Fail ۵ ۵ ۵ ۵ ۵ ۵. Break Type FTB FTB FTB FTB FTB FTB Glenn Heath Muse Peel B ¥ ¥ ¥, ¥, ≸ ¥. Peel A Logged By: 128 130 128 133 131 Checked By: Wedge TRIAL WELDS Ä 240 240 Preheat Monitor Æ GH ð Tech δ S lb/in lb/in Hidden Valley Landfill 40202-005.061 Extrusion 88 Equip E or F 101 Ĕ K Equip No 2045 2045 D/In lb/in Project No.: Fusion 29 101 10:15 12:48 Time Peel: Shear: 10/7/98 10/7/98 Date Specifications: Test No 7

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C-2e Geomembrane Panel and Seaming Log

TABLE C-2e GEOMEMBRANE PANEL AND SEAMING LOG

Page 1 of 22

Project: Hidden Valley Landfill Partial Closure

Facility:

40202-005.061

Project No:

East Partial Closure

1			1	-	1	T	Т		-	1			1	1				1	1		1		- 1
Total Seams Lin Ft	48	92	143	191	240	289	337	382	433	480	526	573	620	999	712	758	805	852	900	948	995	1044	1044
Seam Length	48	47	48	48	49	49	48	48	48	47	46	47	47	46	46	46	47	47	48	48	47	49	
Q.A. Mon.	ВН	ВH	H _D	ВН	ВH	H _D	H _D	ВH	ВH	GH	GH	GH	ВH	GH	GH	αн	ВH	GH	HS.	GH	GH	ВH	ige:
Test Result				Pass										Pass									am foota
DS No.				DS-5										DS-1									Cumulative Seam footage:
Sheet Temp	100														101						87		Cumu
Amb. Temp	91														91						98		
Тіте	14:05	14:17	14:20	14:28	14:35	14:40	14:45	14:55	15:00	15:07	15:20	15:23	15:35	15:43	16:05	15:43	16:25	16:35	16:40	16:47	17:00	17:21	1044
Tech	OB	ರ	OB	ನ	OB	ರ	OB	၁	OB	ပ္	OB	ပ္	08	ನ	08	2	OB	S	OB	S	S	C	1 /
Equip No.	92	11	92	Ξ	95	=======================================	95	Ξ	95	111	95	111	92	111	95	111	92	111	92	#	111	111	This Sh
Date Seamed	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/15/98	8/15/98	8/12/98	8/17/98	8/12/98	8/12/98	8/15/98	8/12/98	8/12/98	8/15/98	8/15/98	8/15/98	8/12/98	n Footage
Seam No.	S1-2	S2-3	S3-4	S4-5	S5-6	2-98	8-2	S8-9	S9-10	S10-11	S11-12	S12-13	S13-14	S14-15	S15-16	S16-17	S17-18	S18-19	S19-20	S20-21	S22-1	S22-23	Total Seam Footage, This Sheet:
Total Area Sq Ft	1127	2300	3496	4623	5773	6923	9608	9223	10350	11500	12650	13846	14996	16100	17227	18354	19504	20654	21827	23000	24173	25346	25346
Date of Final QA	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98	Area:
Panel L Area Fi (Sq Ft)	1127 8	1173 8	1196	1127 8	1150 8	1150 8	1173 8	1127 8	1127 8	1150 8	1150 8	1196	1150	1104	1127 8	1127	1150	1150	1173	1173	1173	1173 8	Cumulative Panel A
g A Ø		-						-	-		-	-	-								-	_	nulative
L X W Feet	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	Cur
	49	1 51	1 52	49	1 50	1 50	1 51	1 49	1 49	1 50	1 50	1 52	1 50	4 48	49	4 49	1 50	H 50	1 51	1 51	1 51	1 51	
Q.A. Mon.	H _D	표	я Н	ВH	В	GH	GH	В	HS	용	퓬	퓬	품	GH	FB	GH	GH	GH GH	GH.	H _O	HB HB	GH	
Date Placed	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	8/12/98	25346
Text'd / Smooth (T /S)	F	L	F	L	F	ь	ь	-	ь	F	F	⊢	F	F	F	F	⊢	⊢	⊢	L	T	Т	eet:
Roll No.	3803570	3803570	3803570	3803570	3803570	3803570	3803570	3803570	3803563	3803563	3803563	3803563	3803563	3803563	3803570	3803563	3803563	3803563	3803561	3803561	3803561	3803561	Panel Area This Sheet:
Panel No.	-	2	6	4	ro	9	7	8	6	9	=	12	5	14	15	9	17	18	19	20	21	22	Panel A

Checked By:

Glenn Heath

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Hidden Valley Landfill Partial Closure

Project: Project No:

40202-005.061

Facility:

East Partial Closure

Total Seams Lin Ft 47 28 97 97 1141 Test Q.A. Seam Result Mon. Length Ξ 47 39 GН GH GH Cumulative Seam footage: DS No. Sheet Temp Amb. Temp 17:33 16:55 Time 97 Tech OB ರ Total Seam Footage, This Sheet: Equip No. 111 92 Date Seamed 8/12/98 S24-S24A 8/12/98 S24A-S24B Seam No. S24B-TN S23-24 Total Area Sq Ft 28560 1150 2300 2990 3214 Date of Final QA 8/13/98 8/13/98 Cumulative Panel Area: Panel Area (Sq Ft) 1150 1150 069 224 23 23 ន œ L X W Feet 20 30 20 28 Q.A. Mon. GH GH ВH GH GH Date Placed 8/12/98 8/12/98 3214 Text'd / Smooth (T /S) - \vdash Panel Area This Sheet: Roll No. 3803561 3803561 Panel No. 23 24A 24B 24

hum Checked By:

> Glenn Heath Logged By:

Project: Hidden Valley Landfill Partial Closure

Facility:

East Partial Closure

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Project No:

40202-005.061

Panel Date of Total Area Seam No. Seamed No. Tech Time Temp Temp Temp Temp Temp Temp Temp Te	537.5 9/2/98 537.5 S21-25 8/21/98 111 CG 14:30 GH 41 41 41	1748 9/2/98 2285.5 S25-26 8/21/98 167 JC 14:02 GH 43 84	9154 9/2/98 11439.5 S26-27 8/21/98 167 JC 13:42 77 91 DS-6 Pass GH 75 159	9131 9/2/98 20570.5 S27-28 8/21/98 111 CG 13:00 DS-2 Pass GH 397 556	9108 9/2/98 29678.5 S28-29 8/21/98 133 VM 13:00 GH 396 952	9062 9/2/98 38740.5 S29-30 8/21/98 167 JC 11:00 DS-3 Fail GH 394 1346	9039 9/2/98 47779.5 S30-31 8/21/98 133 VM 14:00 DS-4 Pass GH 393 1739	7797 9/2/98 55576.5 S31-32 8/21/98 133 VM 14:30 75 90 GH 344 2083								
Date Equip Seamed No.	8/21/98 111	8/21/98 167	8/21/98 167	8/21/98 111	8/21/98 133	8/21/98 167	8/21/98 133	8/21/98 133								
			_	_		_		-								
	9/2/98	9/2/98	9/2/68	9/2/98	9/2/98	9/2/98	9/2/98	9/2/68								
Panel Area (Sq Ft)		1748	9154	9131	9108	9062	9039	7797								
L X W Feet	43 12.5	76 23	398 23	397 23	396 23	394 23	393 23	339 23								
Q.A. Mon.	R	ВH	ВН	ВН	HB HB	GH.	H _D	표								
Date Placed	8/21/98	8/21/98	8/21/98	8/21/98	8/21/98	8/21/98	8/21/98	8/21/98								
Text'd / Smooth (T /S)	L	T	T	F	۲	T	L	ь								
Roll No.	3803561	3803561	3803567	3803568	3803565	3803566	3803560	3803562								
Panel No.	25	26	27	28	59	30	31	32								

Checked By:

Glenn Heath

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Project: Hidden Valley Landfill Partial Closure

40202-005.061

Project No:

East Partial Closure Facility:

		_										-								-		- 10		
Total Seams Lin Ft	321	621	904	1186	1220	1253	1479	1676	1841	1874	1908	1941	1976	2241	2274	2307	2340	2466	2581	2676	2711		3852	
Seam	321	300	283	282	34	33	226	197	165	33	34	33	35	265	33	33	33	126	115	95	35		Ö	
Q.A. Mon.	ВH	H _D	H _D	H _D	표	표	H	표	퓬	표	표	H _D	В	GH	H _D	넁	ВH	품	В	H _D	뜐		age:	
Test Result		Pass	Pass	Pass				Pass		Fail				Pass									am foots	
DS No.		DS-7	DS-8	DS-9				DS-10		DS-11				DS-12									Cumulative Seam footage:	
Sheet Temp					88							72											Cumi	
Amb. Temp					70							99												
Time	13:20	14:20	15:00	15:36	17:25	17:31	17:37	17:30	17:50	18:25	18:32	18:37	18:25	16:40	15:50	15:58	16:06	16:15	18:55	18:59	19:15		2711	
Tech	NM	၁	Ν/	၁	၁၄	S	ರ	N/	ဝ္ပ	၁	၁၄	ဌ	ರ	Ν	ರ	ರ	25	ဌ	Ν	ည	N/		heet:	
Equip No.	133	167	133	167	167	167	167	133	111	167	167	167	167	133	167	167	167	167	133	111	133		e, This S	c.,
Date Seamed	8/22/98	8/25/8	8/22/8	8/22/8	8/22/8	8/22/98	8/22/88	8/22/8	8/22/98	8/22/8	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98		Total Seam Footage, This Sheet:	Mues
Seam No.	S32-33	S33-34	S34-35	S35-36	S36-45	S36-44	S36-37	S37-38	S38-39	S39-43	S39-42	S39-41	S39-40	S44-45	S37-44	S38-44	S39-44	S43-44	S42-43	S41-42	S40-41		Total Sea	Checked By:
Total Area Sq Ft	7360	14260	17231.5	20192.5	25390.5	29944.5	33785.5	34590.5	36108.5	38293.5	41191.5	47079.5	53680.5										137817	
Date of Final QA	9/5/98	9/5/98	86/2/6	9/2/98	9/2/98	9/2/68	9/5/68	9/2/98	9/2/68	9/2/98	9/2/98	9/2/98	9/2/98										Area:	
Panel Area (Sq Ft)	7360	0069	2971.5	2961	5198	4554	3841	805	1518	2185	2898	5888	6601										Cumulative Panel Area:	
w et	23	23	10.5	10.5	23	23	23	23	23	23	23	23	23			1							Cumuk	
L X W Feet	320	300	283	282	226	198	167	35	99	95	126	256	287											
Q.A. Mon.	ВН	В	ВН	ВH	GH	ВH	H _D	GH	HB HB	GH	GH	GH.	표									11		
Date Placed	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98	8/22/98										53680.5	ath
Text'd / Smooth (T/S)		F	۲	F	⊢	T	T	۰	1	۲	۲	Þ	۲										heet:	Glenn Heath
Roll No.	3803448	3803452	3803450	3803450	3803571	3803455	3803450	3803450	3803452	3803452	3803448	3803571	3803455										Panel Area This Sheet:	Logged By:
Panel No.	33	34	35	36	37	38	39	6	14	42	43	44	45										Panel /	Log

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Hidden Valley Landfill Partial Closure Project:

40202-005.061

Project No:

East Partial Closure Facility: Total Seams Lin Ft 1706 1748 1476 1546 1546 1546 1599 1653 1419 1511 283 478 89/ 1057 1441 625 726 5600 Seam Length 195 289 362 283 147 10 35 42 35 35 53 54 53 42 22 Q.A. Mon. Æ GH 띪 GH 윤 GH EH. F. E E H 표 GH 댕 GH 띪 GH. H Cumulative Seam footage: Test Resuit Pass Pass Pass Pass DS-14 DS-16 DS-13 DS-15 DS No. Sheet Temp 102 00 97 Amb. Temp 88 82 87 17:05 17:10 17:15 15:35 16:19 17:00 17:20 Time 14:55 16:03 13:05 13:00 16:33 16:37 16:42 16:48 16:53 14:30 Total Seam Footage, This Sheet: 1748 Tech S S SG SG S S S 8 9 9 ပ္ပ ဗ္ဗ 9 ဗ္ဗ ဗ္ပ 9 2 Equip No. Ξ Ξ 11 111 11 11 Ξ 111 111 Ξ 167 167 Ξ 11 167 Date Seamed 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 Seam No. S31-53 S33-52 S47-48 S48-49 S52-53 S32-52 S50-51 S49-50 S51-52 533-51 S34-51 S46-51 S47-51 S48-51 S49-51 S46-47 S45-46 Total Area Sq Ft 31927.5 177957 23782.5 6367.5 14062.5 40140 10755 16335 17280 Date of Final QA 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 Cumulative Panel Area: 8212.5 6367.5 4387.5 3307.5 2272.5 6502.5 Area (Sq Ft) Panel 8145 945 22.5 22.5 22.5 22.5 22.5 22.5 22.5 22.5 L X W Feet 283 195 362 365 289 147 101 42 Q.A. Mon. GH. GH F. GH R 퓬 R 표 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 8/31/98 Date Placed 8/31/98 8/31/98 40140 Text'd / Smooth (T /S) \vdash \vdash - \vdash \vdash -Panel Area This Sheet: 3803446 3803446 3803456 3803453 3803454 3803449 3803456 3803456 Roll No. Panel No. 46 47 48 20 21 53 49 52

Glenn Heath Logged By:

William Checked By:

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Project: Hidden Valley Landfill Partial Closure

Facility:

East Partial Closure

40202-005.061

Project No:

Roll No.	Text'd / Smooth (T /S)	Date Placed	Q.A. Mon.	L X W Feet	et &	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Seam No.	Date Seamed	Equip No.	Tech	Time	Amb. Temp	Sheet Temp	DS No.	Test Result	Q.A. Mon.	Seam	Total Seams Lin Ft
3803447	T	9/1/98	ВH	369	22.5	8302.5	9/12/98	8302.5	S53-54	9/1/98	167	ဌ	09:48	74	98	DS-17	Pass	HS	364	364
3803451	_	9/1/98	H	413	22.5	9292.5	9/12/98	17595	S54-55	9/1/98	111	20	10:00			DS-18	Pass	퓽	369	733
3803443	_	9/1/98	GH	412	22.5	9270	9/12/98	26865	S55-56	9/1/98	167	9	10:57			DS-19	Pass	표	412	1145
3803439	۲	9/1/98	GH	409	22.5	9202.5	9/12/98	36067.5	S56-57	9/1/98	111	20	11:10			DS-20	Pass	R	409	1554
3803444	۲	9/1/98	GH.	411	22.5	9247.5	9/12/98	45315	857-58	9/1/98	187	BS	11:40	80	91	DS-21	Pass	НS	409	1963
3803440	Ь	9/1/98	ВH	408	22.5	9180	9/12/98	54495	S58-59	9/1/98	167	၁	13:40	84	86	DS-22	Pass	H _D	408	2371
3803445	T	9/1/98	ВН	409	22.5	9202.5	9/12/98	63697.5	S59-60	9/1/98	187	BS	14:25					표	408	2779
									S30-55	9/1/98	11	ರ	11:36					H _D	22	2801
									S31-55	9/1/98	111	၁၄	11:41					GH	22	2823
									S31-54	9/1/98	111	25	11:47					R	22	2845
											i i	11	1			1			ō	Ä
Panel Area This Sheet:	Sheet:	63697.5			Cumula	Cumulative Panel	Area:	241654.5		lotal Seam Footage, This Sheet:	e, Inis S	- 1	2845		Mino	Cumulative seam tootage:	arm root	age:	90	0440

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Checked By:

Logged By: Glenn Heath

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Project: Hidden Valley Landfill Partial Closure

40202-005.061

Project No:

Facility:

East Partial Closure

Total Seams Lin Ft	406	811	1215	1237	1259	1281	1303	1325	1437	1550	1572	1594	1616							T
									-		-			_					1900	10001
Seam Length	406	405	404	22	22	22	22	22	112	113	22	22	22							1
Q.A. t Mon.	픙	용	품	용	퓽	Æ	Æ	용	표	퓬	퓬	표	픙					Ц		stage:
Test Result		Pass	Pass						Pass											am roc
DS No.		DS-23	DS-24						DS-25											Cumulative seam rootage:
Sheet Temp	78		80							97									į	5
Amb. Temp	71		9/							83										
Time	09:50	10:05	11:15	14:20	14:15	14:10	14:05	14:00	11:53	13:20	14:55	15:00	15:05						0	9191
Tech	BS	ပ္	BS	BS	BS	BS	BS	BS	၁၄	BS	BS	BS	BS							- 1
Equip No.	187	111	187	#	111	111	=	111	111	111	111	111	111						i i	e, Inis S
Date Seamed	9/2/98	9/2/98	9/2/98	9/5/98	86/2/6	86/2/6	9/2/98	9/5/68	9/2/98	9/2/98	9/2/98	9/2/98	9/2/98							m Footage
Seam No.	S60-61	S61-62	S62-63	S55-64	S56-64	S57-64	S58-64	S59-64	S64-65	S65-66	S27-66	S28-65	S29-64						- - -	iotal Seam Footage, This Sheet:
Total Area Sq Ft	9135	18247.5	27337.5	29880	32445	35077.5														276732
Date of T	9/20/98	9/20/98	9/20/98	9/50/98	9/20/98	9/20/98														Area:
Panel Area (Sq Ft)	9135	9112.5	0606	2542.5	2565	2632.5														Cumulative Panel
at W	22.5	22.5	22.5	22.5	22.5	22.5														Cumula
L X W Feet	406	405	404	113	114	117														
Q.A. Mon.	ВH	ВH	ВH	GH	ВН	ВН														1
Date Placed	9/2/98	9/5/98	9/2/98	9/5/98	9/2/98	9/2/68														35077.5
Text'd / Smooth (T /S)	F	+	T	F	Т	Т														leet:
Roll No.	3803438	3803572	3803437	3803437	3803447	3803456														Panel Area This Sheet:
Panel No.	19	62	63	64	65 (99														Panel A

Logged By: Glenn Heath

Checked By:

Project: Hidden Valley Landfill Partial Closure

Facility:

East Partial Closure

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Project No: 40202-005.061

			1000																		
Panel No.	Roll No.	Text'd / Smooth (T /S)	Date Placed	Q.A. Mon.	L X Fe	L X W Feet	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Seam No.	Date Seamed	Equip No.	Tech	Time	Amb. Temp	Sheet	DS No.	Test Result	Q.A. Mon.	Seam Length	Total Seams Lin Ft
67	3803799	⊢	9/4/98	ВH	404	22.5	0606	9/20/98	0606	Se3-67	9/4/98	167	ဌ	09:55	202	9/	DS-26	Pass	ВН	404	404
89	3803803	۲	36042	GH	405	22.5	9112.5	9/20/98	18202.5	S67-68	9/4/98	111	BS	10:15			DS-27	Pass	В	402	908
69	3803793	۲	36042	H5	404	22.5	0606	9/20/98	27292.5	89-898	9/4/98	167	ರ	11:08			DS-28	Pass	H _D	400	1206
2	3803801	۲	9/4/98	F.	395	22.5	8887.5	9/20/98	36180	02-698	9/4/98	111	BS	11:40			DS-29	Pass	넁	395	1601
7	3803791	۲	9/4/98	표	358	22.5	8055	9/20/98	44235	S70-71	9/4/98	167	ರ	13:25			DS-30	Pass	В	358	1959
72	3803804	F	9/4/98	퓽	333	22.5	7492.5	9/20/98	51727.5	S71-72	9/4/98	111	BS	14:00	83	94	DS-31	Pass	H	333	2292
73	3803797	1	9/4/98	ВH	306	22.5	6885	9/20/98	58612.5	S72-73	9/4/98	167	S	14:40			DS-32	Pass	GH	306	2598
												F		Ç		į	9	9	Ġ	100	G U
Pane	Panel Area This Sheet:	Sheet:	58612.5			Cumul	Cumulative Panel	el Area:	335344.5		Total Seam Footage, This Sheet:	e, This S	- 1	2598		Engli	Cumulative Seam rootage:	earn roots	age:	171	6021

Checked By: Www

Logged By: Glenn Heath

Hidden Valley Landfill Partial Closure

East Partial Closure

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40202-005.061 Project: Project No: Total Seams Lin Ft 1049 1165 1253 1311 272 512 902 721 13970 Seam Length 116 240 272 209 181 147 88 28 Q.A. Mon. 표 GH 표 GH. 띪 GH 픙 GH Cumulative Seam footage: Test Result Pass Pass Pass DS-33 DS-35 DS-34 DS No. Sheet 2 98 Amb. Temp 74 67 09:15 10:13 10:54 11:00 11:25 11:46 Time 09:27 10:11 1311 Tech Total Seam Footage, This Sheet: ಲ್ಲ ರ Σ BS BS ರ Ξ ರ Equip No. 11 # 167 167 167 167 Date Seamed 9/2/38 86/2/6 9/2/6 86/9/6 86/2/6 86/2/6 86/2/6 86/2/6 Seam No. S73-74 **S74-75 S75-76** S79-80 21e-77 **S77-78 S78-79** S80-81 Total Area Sq Ft 16222.5 23602.5 26212.5 29497.5 364842 28192.5 11520 20295 6120 Date of Final QA 9/50/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 Cumulative Panel Area: 4702.5 4072.5 3307.5 Panel Area (Sq Ft) 6120 5400 2610 1305 1980 22.5 22.5 22.5 22.5 22.5 22.5 22.5 22.5 L X W Feet 272 240 209 181 116 147 88 28 Q.A. Mon. 띪 GH GH GH GH £ F 띪 굕 29497.5 Date Placed 86/2/6 86/2/6 86/2/6 86/2/6 86/2/6 86/2/6 9/2/98 86/2/6 Text'd / Smooth (T /S) \vdash \vdash \vdash -- \vdash \vdash Panel Area This Sheet: 3803803 3803802 3803802 3803804 3803803 3803797 3803791 3803801 Roll No. Panel No. 6/ 74 75 9/ 78 80 81 17

Glenn Heath Logged By:

Checked By: Kincited

Project: Hidden Valley Landfill Partial Closure

Facility:

East Partial Closure

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40202-005.061 Project No:

Panel No.	Roll No.	Text'd / Smooth (T /S)	Date Placed	Q.A. Mon.		. x w Feet	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Seam No.	Date Seamed	Equip No.	Tech	Time	Amb. Temp	Sheet Temp	DS No.	Test Result	Q.A. Mon.	Seam	Total Seams Lin Ft
82A	3803440	T	9/11/98	GH.	26	22	572	9/20/98	572	S82-83	9/11/68	187	သ	13:29					H _D	57	57
82	3803440	L	9/11/98	ВH	09	22	1320	9/20/98	1892	S83-84	9/11/98	187	ರ	13:05	75	88			늉	68	146
83	3803443	L	9/11/98	H _B	98	22	1892	9/20/98	3784	S84-85	9/11/98	111	ΣE	12:50					표	112	258
84	3803454	-	9/11/98	표	102	22	2244	9/20/98	6028	S85-86	9/11/98	187	9	11:40					표	135	393
85	3803453	F	9/11/98	HB	117	22	2574	9/20/98	8602	S86-87	9/11/98	111	FM	11:35	89	82	DS36	Pass	H _O	158	551
98	3803800	-	9/11/98	H _D	126	22	2772	9/20/98	11374	S87-88	9/11/98	187	ನ	11:10					표	178	729
87	3803800	-	9/11/98	표	148	22	3256	9/20/98	14630	S88-89	9/11/98	111	Ψ	11:00					H ₀	200	929
88	3803800	۲	9/11/98	표	171	22	3762	9/20/98	18392	S89-90	9/11/98	187	ನ	10:30	71	87	DS-37	Pass	H	220	1149
89	3803790	-	9/11/98	퓬	190	22	4180	9/20/98	22572	S90-74	9/11/98	187	ರ	14:00					H ₀	34	1183
6	3803790	-	9/11/98	표	226	22	4972	9/20/98	27544	S89-74	9/11/98	187	ರ	14:07					GH	2	1185
9	3803443	-	9/11/98	퓬	34	22	748	9/20/98	28292	S89-75	9/11/98	187	ನ	14:07					표	30	1215
92	3803799	_	9/11/98	ᅜ	36	22	792	9/20/98	29084	S88-75	9/11/98	187	ರ	14:12					표	2	1220
93	3803799	-	9/11/98	F	40	22	880	9/20/98	29964	S88-76	9/11/98	187	ပ္	14:12					표	27	1247
94	3803799	_	9/11/98	용	45	22	066	9/20/98	30954	887-76	9/11/98	187	ပ္	14:17					퓬	6	1256
92	3803793	-	9/11/98	GH	47	22	1034	9/20/98	31988	S87-77	9/11/98	187	ನ	14:19					퓬	23	1279
96	3803793	-	9/11/98	HB	55	22	1210	9/20/98	33198	286-77	9/11/98	187	၁	14:23					표	13	1292
										886-78	9/11/98	187	၁	14:26					둉	20	1312
										885-78	9/11/98	187	၁၄	14:30					표	16	1328
										885-79	9/11/98	187	ನ	14:33					표	16	1344
										S84-79	9/11/98	187	9	14:36					표	20	1364
										S84-80	9/11/98	187	ರ	14:40					용	13	1377
										S83-80	9/11/98	187	JC	14:42	75	90			HS	20	1397
0	Occol Arca This Cheet	1004:	23108			, and C	Cumulative Panel Area:	il Area:	398040	Total Se	Total Seam Footage, This Sheet:	e. This S		1397		Cumu	Cumulative Seam footage:	eam foots	age:	15.	15367
<u>a</u>	Afea	Ollegi.	3			5						-	1								
ം —	Logged Bv:	Glenn Heath	eath							Checked By:		Ewal									

Logged By: Glenn Heath

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Project: Hidden Valley Landfill Partial Closure

40202-005.061

Project No:

Facility:

East Partial Closure

Panel No.	Roll No.	Text'd / Smooth (T /S)	Date Placed	Q.A. Mon.	L X W Feet	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Seam No.	Date Seamed	Equip No.	Tech	Time	Amb. Temp	Sheet	DS No.	Test Result	Q.A. Mon.	Seam	Total Seams Lin Ft
									S83-81	9/11/98	187	ರ	14:57					용	9	10
									S82-81	9/11/98	187	ဌ	14:59					H _D	53	39
									S82A-81	9/11/68	187	2	14:43					표	17	26
									S82A-82	9/11/98	187	၁၄	14:52					ВH	21	77
									S84-91	9/11/98	111	M	13:00					H _O	28	105
									S91-92	9/11/98	11	Ā	14:38					넁	31	136
									S92-93	9/11/98	#	Σ	14:45					H _D	35	171
									S93-94	9/11/98	111	M	15:00	ij				В	38	209
									S94-95	9/11/98	187	၁	15:03					GH	40	249
									895-96	9/11/98	111	ΕM	15:12					HB	47	296
									S85-91	9/11/98	187	သ	15:22					ВН	22	318
									S86-92	9/11/98	187	ဌ	15:26					ЗН	22	340
									S87-93	9/11/98	187	၁	15:30					H _D	22	362
									S88-94	9/11/98	187	ರ	15:34					GH	22	384
									S89-95	9/11/98	187	ဌ	15:38	77	88			GН	22	406
									96-068	9/11/98	187	2	15:42					표	22	428
							1													
Panel	Panel Area This Sheet:	Sheet:	0		Oum	Cumulative Panel	el Area:	398040	Total Sea	Total Seam Footage, This Sheet:	, This Sr	- 1	428		Cumu	Cumulative Seam footage:	am foota	ige:	157	15795
											(2001)									
وَ	Logged By:	Glenn Heath	ath						Checked By:									1		

Glenn Heath

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Hidden Valley Landfill Partial Closure Project:

40202-005.061

Project No:

Facility:

East Partial Closure

Total Seams Lin Ft 3019 2953 2975 3063 3085 3129 3151 3154 1243 1538 1828 2118 2997 3041 3107 2681 2931 2401 959 446 694 18949 Seam Length 248 265 284 295 290 290 283 280 250 22 22 22 22 22 22 22 227 22 22 22 ო Q.A. Mon. GH. 표 픙 GH 띪 표 GH GH 픙 띪 표 GH ВH GH GH GH 뜐 픙 띪 유 Æ 띪 Cumulative Seam footage: Test Result Pass Pass Pass Pass DS No. DS-38 DS-39 **DS-40** DS-46 Sheet Temp 88 75 84 65 Amb. Temp 2 72 82 67 15:18 15:02 14:50 10:55 11:09 12:45 12:55 13:35 13:05 13:30 14:50 15:10 15:06 14:58 14:54 15:22 15:26 10:20 9:12 Time 9:40 9:30 3154 Tech ₹ Σ S S CG 익 9 ပ္ 9 잉 ರ Σ ೪ ರ 9 ರ 9 Total Seam Footage, This Sheet: Σ 9 2 9 ರ Equip No. 11 187 187 187 187 167 187 187 187 187 187 187 187 187 1 187 187 167 167 187 9/12/98 Date Seamed 9/12/98 \$102-103 \$101-102 S103-104 S104-105 S69-101 S100-101 S106-107 S107-108 S106-68 S106-69 S106-64 S107-65 Seam No. S108-66 S106-63 S106-67 S106-61 S106-62 897-98 898-99 S99-100 S106-60 S90-97 Total Area Sq Ft 481112 80718 83072 74184 76274 78474 30690 37070 43450 49698 55880 59180 62480 65736 67056 68596 70290 72138 24200 11682 17622 5965 Date of Final QA 9/20/98 Cumulative Panel Area: 2046 2090 2200 Panel Area (Sq Ft) 1540 1848 2244 2354 3256 1694 6248 6182 3300 3300 5962 5720 5940 6578 6490 6380 6380 1320 22 L X W Feet 295 100 102 260 270 299 290 290 150 150 148 107 284 281 93 95 9 2 84 271 77 GH GH GH £ GH GH. Q.A. Mon. R GH 뜐 GH 핑 띪 GH. 뜐 GH 띪 Æ GH 핑 윤 R 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 83072 Placed 9/12/98 9/12/98 9/12/98 9/12/98 9/12/98 Text'd / Smooth (T /S) \vdash 1-- \vdash \vdash \vdash \vdash \vdash \vdash \vdash \vdash \vdash ۲ - \vdash \vdash \vdash \vdash \vdash Panel Area This Sheet: 3803449 3803843 3803790 3803566 3803805 3803843 3803436 3803436 3803806 3803798 3803844 3803844 3803843 3803805 3803806 3803841 3803798 3803841 Roll No. 3803844 3803841 3803841 117 Panel No. 108 114 116 107 109 112 113 106 110 Ξ 115 100 103 104 105 102 66 101 86 97

Glenn Heath Logged By:

Checked By:

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GEOMEMBRANE PANEL AND SEAMING LOG

GEOMEMBRANE PAN Project: Hidden Valley Landfill Partial Closure

40202-005.061

Project No:

Facility: E

East Partial Closure

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-							_	_		_	-	_	_	-	-	-	_	-	-	_	-	-	-		
	Total Seams Lin Ft	10	33	41	29	75	101	107	136	138	154	159	180	187	192	207	229	289	329	436	520	613	708	19657	
	Seam	10	23	ھ	26	8	56	9	29	2	16	rs	21	7	S	15	22	09	70	77	84	93	95	15	
Ì	Q.A. Mon.	吊	В	Я	GH	GH.	GH	표	표	표	H _D	품	В	H _D	ВH	ВH	GH	В	표	표	표	HB	HB H	age:	
	Test Result				Pass																Pass			eam foot	
V	DS No.				DS-45																DS-47			Cumulative Seam footage:	
	Sheet Temp																							Cumi	
	Amb. Temp																								
	Time	09:12	09:15	09:19	09:50	09:26	09:28	09:34	98:30	09:51	09:51	09:55	09:56	10:01	10:03	10:04	14:00	14:13	14:27	14:42	15:00	15:16	15:35	708	
	Tech	FM	Ä	FM	FM	ΗM	M	Ä	FM	Ħ	2	၁၄	SC	C	သ	JC	JC.	J.	C	2	ನ	ဌ	2	heet:	
	Equip No.	111	111	111	111	111	111	111	111	111	187	187	187	187	187	187	187	187	187	187	187	187	187	e, This S	_
	Date	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	9/12/98	Total Seam Footage, This Sheet:	,
	Seam No.	S70-101	S70-100	S71-100	S71-99	S72-99	S72-98	873-98	873-97	S74-97	S106-101	S106-104	S107-104	S107-105	S107-105	S108-105	S96-109	S109-110	S110-111	S111-112	S112-113	S113-114	S114-115	Total Sea	
	Total Area Sq Ft																							481112	
	Date of Final QA																							el Area:	
	Panel Area (Sq Ft)																							Cumulative Panel	
	L X W Feet																							Cum	
	Q.A. Mon.																								
	Date Placed																							c	,
	Text'd / Smooth (T/S)																							, heet:	::0
	Roll No.																							Panel Area This Sheet	200
	Panel No.																							Joned	2

Logged By: Glenn Heath

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Project: Hidden Valley Landfill Partial Closure

Project No:

East Partial Closure Facility: 40202-005.061

Smooth Placed Mon. Feet Mon. Feet Mon. O Cumulative			Toward /																		
S115-116 S112-116	No.	Roll No.	Smooth (T/S)	Date Placed	Q.A. Mon.	L X W Feet	Panel Area (Sq Ft)				Date Seamed	Equip No.	Tech					Test	Q.A. Mon.	Seam -ength	Total Seams Lin Ft
S97-109 91/298 187 JC 16:19 GH 10:10 GH										S115-116	9/12/98	187	ನ	15:57					3	9	
S88-108 91/298 187 JC 161/3 GH 22 S88-110 91/298 187 JC 162/3 GH 22 S88-110 91/298 187 JC 162/3 GH 22 S88-110 91/298 187 JC 162/3 GH 22 S10/2-112 91/298 187 JC 163/4 GH 22 GH 22 S10/2-112 91/298 187 JC 163/4 GH 22 GH										S116-117	9/12/98	=	-	16:10					5 6	3 5	8
See-11 S										S97-109	9/12/98	187		16:19					5 3	20 20	202
S100-112 9/12/98 187 JC 16:31										S98-110	9/12/98	187		16:23			1		5 3	77 8	224
S100-112 9/12/98 187 JC 16:35 GH 22 S101-113 9/12/98 187 JC 16:35 GH 22 S102-114 9/12/98 187 JC 16:35 GH 22 S103-115 9/12/98 187 JC 16:35 GH 22 GH 22 S103-115 9/12/98 187 JC 16:35 GH 22 GH 2					1					S99-111	9/12/98	187		16:27				T	5 3	77 6	246
S102-114 91/298 187 JC 16:35 GH 22 G										S100-112	9/12/98	187		16:31			-		5 8	3 3	807
S102-114 91/298 187 JC 16:39 GH 22 GH 22 S103-115 91/298 187 JC 16:44 DS-41 Pass GH 22 GH										S101-113	9/12/98	187	-	6:35					H 2	22 22	290
S103-115 9/12/98 187 JC 16:48 DS-41 Pass GH 22 S104-115 9/12/98 187 JC 16:48 GH 22 GH 22 S104-116 9/12/98 187 JC 16:56 GH 22 GH 22 S105-116 9/12/98 187 JC 17:00 GH 22 G										S102-114	9/15/98	187		6:39			T		5 0	2 8	312
S104-116 9/12/98 187 JC 16:56 588 GH 22 16:57 16:58 187 JC 16:58 187 JC 16:58 187 JC 16:59 187 JC 16:59 187 JC 17:00 GH 22 JC 17:00 GH 23 JC 17:00 JC 17:00 GH 23 JC 17:00 JC										S103-115	9/12/98	187		6:44			-	+	H H	3 8	334
S105-116 9/12/98 187 JC 16:56										S104-115	9/12/98	187		6:48			-	-	H	1 2	378
S105-117 9/12/98 187 JC 17:00 GH 222 S105-117 9/12/98 187 JC 17:00 GH 222 GH										-	9/12/98	187			9/	88			i i	1 8	0 00
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444											9/12/98	187	-	6:56			-		<u> </u>	2 6	400
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444											9/12/98	187		2:00			-		H	3 6	444
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444 Cumulative Some feature.																			-		
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444															-	-	1	-	1	+	
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444														+	+		1	1	+	1	
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444												-	1	-	+	+	1	+	+	1	
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444												1	-	+		+		+	+	+	1
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444	1				1								-	+	+	+	+	1	+	1	
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444	1												+	ł	+	+	1	1	+	1	
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444		1	91		-							-	-	+	+	+	+		+	+	1
0 Cumulative Panel Area: 481112 Total Seam Footage, This Sheet: 444 Climitative Soom footage.										-			-	-	+	1	1	+	+	+	
Curriulative Panel Area: 481112 Total Seam Footage, This Sheet: 444 Climitative Scam footage.	anel Area	This Shee	Ť	c		-			_					-	-				-	-	T
						Curnulan	ive Panel A	1	_	Total Seam	Footage, T	his Shee			C	viteliumi	Coom		J		

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Project: Hidden Valley Landfill Partial Closure 40202-005.061

Project No:

TABLE C-2e

GEOMEMBRANE PANEL AND SEAMING LOG

Facility:

East Partial Closure

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Total Seams Lin Ft	31	562	830	1095																	
	281	36	8	9					-												21196
Seam Length	281	281	268	265																	
Q.A. Mon.	ВH	표	H _O	H _D																	age:
Test Result	Fail		Pass																		am foot
DS No.	DS-42		DS-43																		Cumulative Seam footage:
Sheet Temp	20		82																	ļ,	Cumo
Amb. Temp	99		72																		1
Time	6:03	8:03	13:16	14:02																	1095
Tech	BS	ರ	BS	BS															13	l	- 1
Equip No.	111	187	=	=======================================																	This Sh
Date Seamed	9/13/98	9/13/98	9/13/98	9/13/98																	Total Seam Footage, This Sheet:
		-						-	l												al Seam
Seam No.	S105-118	S118-119	S119-120	\$120-121																	Tot
Total Area Sq Ft	6204	12386	15334	18249																	499361
Date of Final QA	9/20/98	9/20/98	9/20/98	9/20/98																	Area:
Panel Language Panel (Sq.Ft)	6204	6182	2948	2915 (Cumulative Panel A
	22 6	22 (11	1		-	-	H	+	+		-	-				-				ımulativ
L X W Feet	282 2	281 2	268	265 1		-		-			-		H		-	-					٥
Q.A. Mon.	GH 2	GH 2	GH 2	GH 2		-	-	-	-			H	-	-				-			
		-					H					T	-	T		T					49
Date Placed	9/13/98	9/13/98	9/13/98	9/13/98																	18249
Text'd / Smooth (T /S)	⊢	ı.	T	_																	heet:
Roil No.	3803734	3803842	3803736	3803736																	Panel Area This Sheet:
Panel R	118 3	119	120	121																	Panel Ar

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TABLE C-2e GEOMEMBRANE PANEL AND SEAMING LOG

Project: Hidden Valley Landfill Partial Closure

Facility:

East Partial Closure

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Project No: 40202-005.061

		_			-	_		_	_		_	_	_	_	-	_	-	_		_
Total Seams Lin Ft	250	200	209	724														. 41	9	21920
Seam	250	250	107	117															ć	N
Q.A. Mon.	HB.	H _D	ВH	H _D																age:
Test Result	Pass		Pass																	am root
DS No.	DS-44		DS-48																-	Cumulative Seam rootage:
Sheet	74																		C	
Amb. Temp	64																			
Time	8:25	8:42	9:30	9:50															ş	424
Tech	BS	ರ	Ā	Σ										= "						- 1
Equip No.	111	187	111	#															ē F	S IUIS O
Date Seamed	9/14/98	9/14/98	9/14/98	9/14/98															l	n Footage
Seam No.	S121-122	S122-123	S117-124	S124-125															- -	l otal seam Footage, This sheet:
Total Area Sq Ft	2750	5500	8074	9394															1	208/22
Date of Final QA	9/20/98	9/20/98	9/20/98	9/20/98																Area:
Panel Area (Sq Ft)	2750	2750	2574	1320															:	Cumulative Panel Area:
o t	=	11	22	Ξ																
L X W Feet	250	250	117	120																
Q.A. Mon.	В	GH	유	нg																
Date	9/14/98	9/14/98	9/14/98	9/14/98																9394
Text'd / Smooth (T /S)	_	F	L	F																neet:
Roll No.	3803736	3803736	3803565	3803568															i	Panel Area Ihis Sheet:
Panel No.	122	123	124	125																Panel A

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Glenn Heath

Hidden Valley Landfill Partial Closure Project:

40202-005.061

Project No:

Facility:

East Partial Closure

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Total Seams Lin Ft 1050 1056 1074 1089 1096 1110 1030 618 746 886 103 152 233 332 352 372 251 357 387 501 2 23030 Seam Length 114 117 128 140 144 7 20 8 15 5 5 22 81 49 8 18 84 17 ß 9 ^ Q.A. Mon. GH GH GH GH E. GH 표 퓬 EH. H 유 GH GH GH FB GH GH 띪 GH H 표 GH Cumulative Seam footage: Test Result Pass Pass DS No. DS-55 DS-50 Sheet Temp 99 82 83 Amb. Temp 9 9/ 7 10:00 10:08 10:28 10:38 11:38 11:42 11:43 16:50 16:50 16:30 10:45 11:20 11:40 13:10 13:15 13:17 13:25 Time 10:58 11:00 13:21 13:27 1110 Tech S Σ Σ 2 9 9 2 9 Σ Σ Σ 2 9 റ 9 2 2 9 익 9 9 Total Seam Footage, This Sheet: Equip No. 11 187 11 Ξ 187 187 187 187 187 187 187 187 187 187 187 187 187 187 111 111 45 Date Seamed 9/15/98 9/12/98 9/15/98 9/12/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 EXT S127-128 \$131-133 S128-129 S132-108 S129-130 S131-108 S132-133 \$126-127 S119-126 Seam No. \$131-132 S133-134 S133-119 S131-119 S125-126 \$120-126 S122-128 S122-129 \$131-118 S108-105 \$120-127 S121-128 Total Area Sq Ft 12122 17446 531217 8778 15664 18524 20614 22462 2772 5698 Date of Final QA 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 Cumulative Panel Area: Area (Sq Ft) 3080 Panel 2772 2926 3344 3542 1078 2090 1848 1782 22 22 22 22 22 22 22 22 22 L X W Feet 126 133 140 152 161 8 49 95 84 Q.A. Mon. GH. GH GH. GH GH GH GH GH 뜐 ЭH 9/15/98 Date Placed 9/15/98 9/12/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 9/15/98 22462 Text'd / Smooth (T /S) \vdash \vdash \vdash -- \vdash - \vdash Panel Area This Sheet: 3803846 3803846 3803734 3803842 3803845 3803436 3803806 Roll No. 3803846 3803439 Panel No. 129 128 130 134 126 127 131 132 133

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Project: Hidden Valley Landfill Partial Closure

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Project No:

Facility:

East Partial Closure

Total Seams Lin Ft 20 80 23050 Seam Length 8 12 Q.A. Mon. F GH. Cumulative Seam footage: Test Result DS No. Sheet Temp Amb. Temp Time 13:30 13:32 Total Seam Footage, This Sheet: 20 Tech 9 ರ Equip No. 187 187 Date Seamed 9/12/98 9/15/98 S123-129 S123-130 Seam No. Total Area Sq Ft 531217 Date of Final QA Cumulative Panel Area: Panel Area (Sq Ft) L x w Feet Q.A. Mon. Date Placed 0 Text'd / Smooth (T /S) Panel Area This Sheet: Roll No. Panel No.

Glenn Heath

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Hidden Valley Landfill Partial Closure Project:

40202-005.061

Project No:

East Partial Closure Facility:

Total Seams Lin Ft 1045 1243 1648 1819 1992 2182 1484 2382 1263 1397 445 645 845 1251 1271 230 25432 Seam Length 215 230 200 200 200 198 126 164 171 173 190 200 7 87 ø 8 Q.A. Mon. 뜐 GH Cumulative Seam footage: Test Result Pass Pass Pass Pass Pass DS No. DS-57 DS-59 DS-51 DS-56 DS-58 Sheet Temp 61 72 69 Amb. Temp 28 64 89 11:30 09:10 09:10 13:45 13:45 Time 10:20 10:32 10:50 11:11 12:50 12:55 11:46 14:17 14:20 14:46 12:52 2382 Tech Total Seam Footage, This Sheet: Ā Σ 9 Σ 9 9 ΕĀ 2 Ξ 9 Σ ರ 9 9 9 9 Equip No. 111 11 11 187 11 187 187 11 187 187 187 187 187 187 187 Date Seamed 9/17/98 9/17/98 9/17/98 9/17/98 9/17/98 9/17/98 9/11/98 9/17/98 9/17/98 9/11/98 9/17/98 9/17/98 9/11/98 9/11/98 9/11/98 9/11/98 S135-136 S138-139 S130-143 S143-144 S144-145 S145-146 S123-135 S136-137 S137-138 S139-140 S141-142 Seam No. S133-135 S146-147 S134-135 S134-136 S140-141 Total Area Sq Ft 581267 11990 14190 18612 40458 45188 50050 22968 26180 9790 28094 29975 31878 36058 5060 Date of Final QA 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 Cumulative Panel Area: Panel Area (Sq Ft) 4730 2200 2200 4356 3212 1914 4730 5060 4422 1903 4180 4400 4862 1881 22 Ξ Ξ 22 22 22 22 22 Ξ Ξ 22 22 22 22 L X W Feet 200 215 230 215 200 146 173 200 198 171 190 221 201 87 O.A. Mon. 퓬 g H ЯH £ ВH 표 ВH GH GH GH GH ВH GН £ gH 9/17/98 9/11/98 9/17/98 9/17/98 9/17/98 9/17/98 9/17/98 9/17/98 9/11/98 Date Placed 9/17/98 9/17/98 9/17/98 9/17/98 9/11/98 50050 Text'd / Smooth (T /S) μ- \vdash H \vdash ۲ -- \vdash \vdash - \vdash \vdash \vdash Panel Area This Sheet: 3804352 3804352 3803846 3803846 3804355 3804355 3803845 3804350 Roll No. 3804357 3804357 3804357 3804351 3804351 3804351 Panel No. 141 135 136 137 138 139 140 142 143 144 145 146 148 147

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TABLE C-2e GEOMEMBRANE PANEL AND SEAMING LOG

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Project: Hidden Valley Landfill Partial Closure

Facility:

East Partial Closure

40202-005.061

Project No:

Panel No.	Roll No.	Text'd / Smooth (T /S)	Date Placed	Q.A. Mon.	L X W Feet	et W	Panel Area (Sq Ft)	Date of Final QA	Total Area Sq Ft	Seam No.	Date Seamed	Equip No.	Tech	Тіте	Amb. Temp	Sheet Temp	DS No.	Test Result	Q.A. Mon.	Seam	Total Seams Lin Ft
149	3804350	L	9/19/98	ВН	225	22	4950	9/20/98	4950	S147-148	9/19/98	111	F	08:50					GH.	215	215
150	3804353	F	9/19/98	GH	220	22	4840	9/20/98	9790	S148-149	9/19/98	167	၁၄	08:30	59	9	DS-52	Pass	표	221	436
151	3804353	T	9/19/98	GH	212	22	4664	9/20/98	14454	S149-150	9/19/98	111	Æ	09:46					ВН	220	656
152	3804355	L	9/16/98	H _D	193	22	4246	9/20/98	18700	S150-151	9/19/98	167	ರ	10:31			DS-53	Pass	В	212	898
153	3803845	T	9/19/98	GH H	87	22	1914	9/20/98	20614	S151-152	9/19/98	111	Ā	10:45					R	193	1061
154	3804350	L	9/19/98	ВH	61	22	1342	9/20/98	21956	S153-154	9/19/98	167	ပ္ပ	11:25	89	71			H _D	61	1122
155	3803845	Т	9/19/98	H _D	48	22	1056	9/20/98	23012	S154-155	9/19/98	11	ΕM	11:50					H _B	48	1170
156	3803845	T	9/19/98	GH	22	22	484	9/20/98	23496	S155-156	9/19/98	167	ನ	11:46					R	22	1192
										S152-153	9/19/98	111	M	13:00	1				н	24	1216
										S152-154	9/19/98	#	Ψ	13:05			DS-54	Pass	ВН	24	1240
										S152-155	9/19/98	11	Ā	13:11	74	81			ЭH	24	1264
-										S152-156	9/19/98	#	Η	13:16					ВН	24	1288
										S135-130	9/19/98	187	ರ	13:00					ВH	Ξ	1299
-										S135-145	9/19/98	187	2	13:03					H5	8	1307
										S136-145	9/19/98	187	ರ	13:05					В	14	1321
										S137-146	9/19/98	187	ರ	13:08			DS-49	Pass	ВH	14	1335
										S137-147	9/19/98	187	ನ	13:11					H _D	6	1344
-										S138-147	9/19/98	187	ರೆ	13:13					H _D	41	1358
										S138-148	9/19/98	167	ರ	13:16					H _D	7	1365
										S139-148	9/19/98	167	ರ	13:18					Ŧ E	15	1380
										S139-149	9/19/98	167	ဝ	13:22					H _D	9	1386
		T L																			
:	i i		0				c		0	G H	L	F		0		į		,		Č	Ç
<u>-</u>	Panel Area This Sheet:	heet:	23496			Cumula	Cumulative Panel	Area:	604/63	lotal sea	lotal Seam Footage, This Sheet:	e, Inis a	- 1	1386			Cumulative Seam rootage:	Sam roug	age:	207	26818

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Project: Hidden Valley Landfill Partial Closure

East Partial Closure

40202-005.061

Project No:

Facility:

Total Seams Lin Ft 15 20 25 46 42 26864 Test Q.A. Seam Result Mon. Length 15 5 2 17 4 GН GH GH. 뜐 F Cumulative Seam footage: DS No. Sheet Temp 88 Amb. Temp 75 13:28 Time 13:23 13:27 13:30 13:34 46 Tech 5 9 2 2 9 Total Seam Footage, This Sheet: Equip No. 167 167 167 167 167 Date Seamed 9/19/98 9/19/98 9/19/98 9/19/98 S140-149 9/19/98 Seam No. S140-150 S141-150 S142-151 S142-152 Total Area Sq Ft 604763 Date of Final QA Cumulative Panel Area: Panel Area (Sq Ft) L X W Feet Q.A. Mon. Date Placed 0 Text'd / Smooth (T /S) Panel Area This Sheet: Roll No. Panel No.

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Project: Hidden Valley Landfill Partial Closure

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Project No:

Facility:

East Partial Closure

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Total Seams Lin Ft 17 47 82 104 105 9 74 106 Test Q.A. Seam Result Mon. Length 1 30 5 4 Ξ 19 GH GH GH GH GH GH GH. GH Cumulative Seam footage: DS No. Sheet 8 Amb. Temp 72 Time 11:10 11:18 11:35 11:04 11:03 10:59 10:48 11:02 Tech 106 CG SG S S SG CG S CG Total Seam Footage, This Sheet: Equip No. 45 45 45 45 45 45 45 45 Date Seamed 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 9/20/98 Seam No. S134-157 S134-158 S136-158 S157-158 S139-158 S137-158 S139-157 S138-158 Total Area Sq Ft 1188 880 605951 Date of Final QA 9/50/98 9/20/98 Cumulative Panel Area: Panel Area (Sq Ft) 880 308 22 22 L X W Feet 40 14 Q.A. Mon. GH GH Date Placed 9/20/98 9/20/98 1188 Text'd / Smooth (T /S) **-**-Panel Area This Sheet: Roll No. 3803843 3803843 Panel No. 157 158

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Glenn Heath

C-2f Geomembrane Non-destructive Seam Test Results

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NON-DESTRUCTIVE AIR PRESSURE OR VACUUM SEAM TEST TABLE C-2f

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Project: Hidden Valley Landfill

Facility: East Partial Closure

GH 871298 Full Seam Length First Fresh	Daisa	Location AIR TEST
GH FULTORS Resolute upup state. POS. FULTOR FULTOR <t< th=""><th>8/13/00</th><th>Stati Final DURA- Block-</th></t<>	8/13/00	Stati Final DURA- Block-
GH 81/2298 Full Seam Length 30 15.05 30	8/12/98	psi. Time 110N age Pass/
GH 817298 Full Seam Length 30 15:06 30 15:10 30 15:06 30 15:11 30 N GH 817298 Full Seam Length 30 15:06 30 15:11 5 N 7 GH 817298 Full Seam Length 30 15:07 30 15:18 30 15:10 5 N P GH 817298 Full Seam Length 30 15:22 30 15:22 30 15:22 N N P GH 817298 Full Seam Length 30 15:22 30 15:22 30 15:22 N N P GH 817298 Full Seam Length 30 15:22 30 15:22 30 15:22 N N P GH 817298 Full Seam Length 30 15:45 30 15:45 N N P GH 817298 Full Seam Length 30 16:2	8/12/98	90 15:05 30 15:10 -
GH 67/200 Full Seam Length 30 15.06 30 15.11 5 N GH 87/200 Full Seam Length 30 15.20 30 15.11 5 N 1 GH 87/200 Full Seam Length 30 15.20 30 15.11 5 N 7 N 7 GH 87/200 Full Seam Length 30 15.22 30 15.21 30 15.22 30 15.22 30 N 7 GH 87/200 Full Seam Length 30 15.22 30 15.22 30 15.22 30 15.22 30 N 7 GH 87/200 Full Seam Length 30 15.22 30 15.22 30 15.22 30 15.22 30 N 7 GH 87/200 Full Seam Length 30 15.24 30 15.22 30 15.22 30 15.22 30 15.22 30	8/12/98	30 15:05 30 15:10 5 N
GH 81208 Full Seam Length 30 15.06 30 15.11 5 N GH 817208 Full Seam Length 30 15.25 30 15.12 5 N 1 GH 817208 Full Seam Length 30 15.21 30 15.22 30 15.22 N N P GH 817208 Full Seam Length 30 15.21 30 15.22 30 15.22 N N P GH 817208 Full Seam Length 30 15.21 30 15.22 30 15.22 N N P GH 817208 Full Seam Length 30 15.24 30 15.24 30 15.24 N N P 3H 817208 Full Seam Length 30 15.42 30 15.24 N N P 3H 817208 Full Seam Length 30 16.27 30 16.32 N N	8/12/98	30 15:06 30 15:14 - N
GH 812208 Full Seam Length 30 15.25 7.511 5 N GH 817208 Full Seam Length 30 15.20 30 15.30 5 N 1 GH 817208 Full Seam Length 30 15.21 30 15.22 5 N N N GH 817208 Full Seam Length 30 15.21 30 15.22 30 15.22 N	8/12/00	30 15:06 30 15:11 5 N
GH ST208 Full Seam Length 30 15.07 30 15.12 5 N GH 817.208 Full Seam Length 30 15.21 30 15.22 5 N 1 GH 817.208 Full Seam Length 30 15.22 30 15.22 5 N N N GH 817.208 Full Seam Length 30 15.23 30 15.28 5 N <	8/12/00	30 15:25 30 15:25 N
GH 81/23/98 Full Seam Length 30 15:18 30 15:28 5 N GH 81/29/98 Full Seam Length 30 15:27 30 15:27 5 N 1 GH 81/29/98 Full Seam Length 30 15:24 30 15:26 5 N 1 N 7 GH 81/29/98 Full Seam Length 30 15:24 30 15:26 5 N 7 N 7 N	8/12/00	30 15:07 30 15:30 5 N
GH 81/298 Full Seam Length 30 15:22 30 15:23 5 N GH 81/298 Full Seam Length 30 15:24 30 15:25 5 N 6 GH 81/298 Full Seam Length 30 15:24 30 15:24 30 15:26 5 N 7 GH 81/298 Full Seam Length 30 15:44 30 15:45 30 15:46 5 N 7 SH 81/298 Full Seam Length 30 15:45 30 15:45 30 15:45 5 N 7 SH 81/298 Full Seam Length 30 15:45 30 16:27 30 16:27 30 16:37 8 N 9 H 81/298 Full Seam Length 30 16:27 30 16:37 30 16:37 30 16:37 30 16:37 30 16:37 30 N 4 </td <td>0/40/00</td> <td>30 15:18 30 15:25 N</td>	0/40/00	30 15:18 30 15:25 N
H. S. 12.08 Full Seam Length 30 15.21 5 N GH 8/12.08 Full Seam Length 30 15.23 30 15.23 5 N N GH 8/12.08 Full Seam Length 30 15.24 30 15.26 5 N N P GH 8/12.08 Full Seam Length 30 15.45 30 15.50 5 N P SH 8/12.08 Full Seam Length 30 15.45 30 15.50 5 N P SH 9/12.08 Full Seam Length 30 16.27 30 16.27 30 16.26 5 N P H 8/12.08 Full Seam Length 30 16.27 30 16.27 30 16.23 5 N P H 8/12.08 Full Seam Length 30 16.27 30 16.23 30 16.23 5 N P H 8/12.08 Full Seam Length 30 16.44 30 16.23 <th< td=""><td>86/21/0</td><td>15:22 30 12:23 5 N</td></th<>	86/21/0	15:22 30 12:23 5 N
GH 871298 Full Seam Length 30 15:23 30 15:28 5 N GH 871298 Full Seam Length 30 15:43 30 15:48 5 N 1 3H 871298 Full Seam Length 30 15:45 30 15:45 5 N 1 3H 871298 Full Seam Length 30 15:45 30 15:45 30 15:50 5 N P 3H 871298 Full Seam Length 30 16:27 30 16:27 30 16:32 5 N P 3H 871298 Full Seam Length 30 16:27 30 16:32 5 N P 3H 871298 Full Seam Length 30 16:27 30 16:32 5 N P 4H 871298 Full Seam Length 30 16:27 30 16:36 30 17:05 30 30 30 30	86/21/0	15:21 50 15:27 5 N
GH 8/12/98 Full Seam Length 30 15:44 30 15:48 5 N 1 3H 8/12/98 Full Seam Length 30 15:45 30 15:45 5 N 1 3H 8/12/98 Full Seam Length 30 15:45 30 16:50 5 N 1 3H 8/12/98 Full Seam Length 30 16:27 30 16:32 5 N 7 3H 8/12/98 Full Seam Length 30 16:27 30 16:32 5 N 7 4H 8/12/98 Full Seam Length 30 16:27 30 16:32 5 N 7 4H 8/12/98 Full Seam Length 30 16:37 30 16:32 5 N 9 4H 8/12/98 Full Seam Length 30 16:36 30 16:36 5 N 9 4H 8/12/98 Full Seam Length 30	8/12/98	15:23 30 15:26 5 N
3H Full Seam Length 3H 15:45 3H 3H 15:45 3H	8/12/98	15:44 5- N
3H 8/12/98 Full Seam Length 3H 15:45 3H 4H 3H 3H 16:27 3H 16:27 3H 16:27 3H 16:32 5H 3H	8/12/98	15:45 50 15:49 5 N
H 8/12/98 Full Seam Length 30 15:50 5 N A H 8/12/98 Full Seam Length 30 15:59 30 16:32 5 N A H 8/12/98 Full Seam Length 30 16:27 30 16:32 5 N A H 8/12/98 Full Seam Length 30 16:27 30 16:32 5 N A H 8/12/98 Full Seam Length 30 16:44 30 16:49 5 N A H 8/12/98 Full Seam Length 30 17:09 30 17:05 5 N A B 8/13/98 Full Seam Length 30 17:09 30 17:05 5 N A B 8/13/98 Full Seam Length 30 09:45 30 09:51 5 N A B 8/13/98 Full Seam Length 30 09:45 30 09:51	+	15:45 30 15:50 5 N
8/12/98 Full Seam Length 30 16:24 5 N Full Seam Length 5 N Full Seam Length 5 N Full Seam Length 30 16:27 30 16:32 5 N Full Seam Length 30 16:27 30 16:32 5 N Full Seam Length 30 16:44 30 16:49 5 N Full Seam Length 30 16:44 30 16:49 5 N Full Seam Length 30 16:44 30 16:49 5 N Full Seam Length 30 16:49 30 16:49 5 N Full Seam Length 30 17:08 28 17:13 5 N Full Seam Length 30 09:44 30 09:49 5 N Full Seam Length 30 09:44 30 09:49 5 N Full Seam Length 30 09:45 30 09:50 5 N Full Seam Length 30 09:45 30 09:50 5 N F	8/12/98	15:50 5 N
H 8/12/98 Full Seam Length 30 16:27 30 16:32 5 N A H 8/12/98 Full Seam Length 30 16:27 30 16:32 5 N P H 8/12/98 Full Seam Length 30 16:46 30 16:46 30 16:32 5 N P H 8/12/98 Full Seam Length 30 16:46 30 16:51 5 N P H 8/13/98 Full Seam Length 30 17:08 28 17:13 5 N P R 8/13/98 Full Seam Length 30 09:44 30 09:49 5 N P R 8/13/98 Full Seam Length 30 09:45 30 09:45 5 N P R 8/13/98 Full Seam Length 30 09:45 30 09:50 5 N P R 8/13/98 Full Seam Length	8/12/98	16:04 5 N
H 8/12/98 Full Seam Length 30 16:27 30 16:32 5 N 6 H 8/12/98 Full Seam Length 30 16:24 30 16:32 5 N 6 H 8/12/98 Full Seam Length 30 16:44 30 16:49 5 N 6 H 8/12/98 Full Seam Length 30 17:08 28 17:05 5 N 7 I 8/13/98 Full Seam Length 30 09:44 30 09:49 5 N 7 8/13/98 Full Seam Length 30 09:45 30 09:50 5 N 9 8/13/98 Full Seam Length 30 09:45 30 09:50 5 N 9 8/13/98 Full Seam Length 30 09:45 30 09:50 5 N 9 8/13/98 Full Seam Length 30 09:45 30 09:50 5	8/12/98	16:32 5 N
H 8/12/98 Full Seam Length 30 16:44 30 16:32 5 N H 8/12/98 Full Seam Length 30 16:44 30 16:31 5 N F H 8/12/98 Full Seam Length 30 17:00 30 17:05 5 N F B 8/13/98 Full Seam Length 30 09:45 30 09:49 5 N P B 8/13/98 Full Seam Length 30 09:45 30 09:49 5 N P B 8/13/98 Full Seam Length 30 09:45 30 09:50 5 N P Christolar B A B <td>8/12/98</td> <td>16:37 30 16:32 5 N</td>	8/12/98	16:37 30 16:32 5 N
Hand Hand <th< td=""><td>8/12/98</td><td>16:32 5 N</td></th<>	8/12/98	16:32 5 N
4 8/13/98 Full Seam Length 30 17:09 30 17:05 5 N 4 8/13/98 Full Seam Length 30 17:08 28 17:13 5 N F 8/13/98 Full Seam Length 30 09:45 30 09:45 30 09:50 5 N F 8/13/98 Full Seam Length 30 09:46 30 09:50 5 N F 8/13/98 Full Seam Length 30 09:46 30 09:51 5 N P	8/12/98	16.46 50 16.49 5 N
8/13/98 Full Seam Length 30 17:05 5 N I 1 8/13/98 Full Seam Length 30 17:08 28 17:13 5 N F 8/13/98 Full Seam Length 30 09:45 30 09:50 5 N F 8/13/98 Full Seam Length 30 09:47 30 09:51 5 N F Full Seam Length 30 09:47 30 09:52 5 N P Full Seam Length 30 09:52 5 N P	8/12/98	17:00 oc 16:51 5 N
1 8/13/98 Full Seam Length 30 09:44 30 09:49 5 N I 8/13/98 Full Seam Length 30 09:45 30 09:50 5 N F 8/13/98 Full Seam Length 30 09:47 30 09:51 5 N F Full Seam Length 30 09:47 30 09:52 5 N F	8/13/98	17:09 50 17:05 5 N
8/13/98 Full Seam Length 30 09:45 30 09:50 5 N 8/13/98 Full Seam Length 30 09:46 30 09:51 5 N H Full Seam Length 30 09:45 30 09:52 5 N H	8/13/98	09:44 50 N
8/13/98 Full Seam Length 30 09:45 30 09:50 5 N 8/13/98 Full Seam Length 30 09:47 30 09:52 5 N Full Seam Length	8/13/98	09-45 50 N
30 09:47 30 09:52 5 N	8/13/98	09:46 30 09:50 5 N
30 16:55 28 CC-32 5 N	06/01/0	09:47 30 09:50 5 N
00,71	441	16:55 28 17:00 N

Psi. 2 3 Min. pressure: Max. press. Loss:

In. Hg Sec. 5 5 Min. Vac Min. Duration:

NON-DESTRUCTIVE AIR PRESSURE OR VACUUM SEAM TEST

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Project: Hidden Valley Landfill

Facility: East Partial Closure

P/F VACUUM TEST Duration Sec. Vac. in. Hg Project No: 40202-005.061 Pass/ Fail ۵. Δ. α. ₽ Δ. Δ, ۵. ٩ Δ ۵ ۵ Δ ۵. Δ. ۵. ۵. Œ. ۵. α. Δ, ۵. Δ. Ω. ۵ Block-Δ. Δ, age Y/N z Z z z Z z z Z z Z z z z Z z Z Z Z z z z z z Z z DURAz TION min 40 2 2 2 S 2 S 2 2 S 2 S Ŋ 2 2 Ŋ 40 10 2 5 ß Ŋ AIR TEST 2 Ŋ 12 τO End 15:10 15:13 15:18 15:21 15:15 15:17 15:38 15:43 15:55 15:58 09:13 15:59 09:15 09:15 09:16 09:17 09:45 09:47 09:50 09:35 09:38 09:55 10:14 09:59 10:09 10:14 Final Press. psi. 30 39 28 32 8 39 30 30 39 30 30 30 39 30 39 8 39 30 99 29 30 29 3 30 30 30 Start Time 15:05 15:18 15:13 15:16 15:12 15:10 15:33 15:38 15:50 15:53 80:60 15:54 09:10 09:10 09:11 09:12 09:42 09:40 09:30 09:33 09:45 09:50 09:54 10:09 10:09 10:04 Press. Stabil psi. 3 30 8 32 39 39 မ္တ 30 99 30 99 3 30 30 8 30 30 39 39 8 8 30 30 30 30 30 Location 8/29/98 | Gas Well to Repair #15 8/22/98 | Repair #16 to S End Repair #15 to S End 8/22/98 |Full Seam Length 8/29/98 | Repair #17 to S End Full Seam Length 8/29/98 | Repair #18 to S End Top to Repair #16 Full Seam Length Full Seam Length 8/22/98 Gas Well to End 8/22/98 | Top to Gas Well 8/29/98 | Top to Repair #17 Top to Repair #18 Gas Well to S End 8/22/98 Top to Gas Well 8/29/98 |Full Seam Length Full Seam Length Full Seam Length Full Seam Length Full Seam Length 8/29/98 | Top to Gas Well Full Seam Length Full Seam Length 8/29/98 |Full Seam Length Full Seam Length 8/22/8 8/25/8 Date Tested 8/22/98 8/22/98 8/53/98 8/53/98 8/53/98 8/53/98 8/53/98 8/53/88 8/53/98 8/53/98 8/53/98 8/53/98 Q.A. Mon. 유 퓬 윤 9 H 유 £ GH 유 유 £ 유 GH. GH 유 유 GH 유 GH £ G. GH. 윤 £ 유 GH GH. Seam No. \$25-26 S26-27 S27-28 S27-28 S28-29 \$29-30 S30-31 S31-32 S30-31 S31-32 S31-32 \$32-33 S32-33 S33-34 S33-34 S34-35 S35-36 S35-36 S36-45 S36-44 S37-38 S36-37 S38-39 S39-43 S39-42 ogged By: S39-41

Checked By:

Min. pressure: 30

Psi.

Min. Vac 10 In. Hg

Pro	Fac
	EMCON

NON-DESTRUCTIVE AIR PRESSURE OR VACUUM SEAM TEST TABLE C-2f

Page 3 of 12

oject: Hidden Valley Landfill

Facility: East Partial Closure

A MIC	Q.A.	Date	Location	1			AIR TEST				VA	VACIIIM TECT	10
seam No.	Mon.	Tested		Stabil Press.	Start	Final Press.	End :	DURA-	Block-		Vac.	Duration	2
S39-40	ВH	8/31/98	Full Seam Length	psi.	D	psi.	ETJe	min	Z N	Fail	in. Hg	Sec.	— ₽/F
S44-45	GH	8/31/98	Top to Repair #98	30	10:15	30	10:20	rc	Z	6			
S44-45	GH	8/31/98	Repair #28 to F End	30	09:35	30	09:40	, ru	Z	2 0			
S37-44	ВН	8/31/98	Full Seam Length	30	09:39	30	09:44	· C	z	. 0	1		
S38-44	GH	8/31/98	Full Seam I enoth	8	10:00	30	10:05	, rc	Z	L 0			
S39-44	표	8/31/98	Full Seam Length	30	09:53	30	09:58	2	z	ם			
S43-44	GH GH	8/31/98	Full Seam Length	30	09:54	30	09:59	2	z	_ 0	1		
S42-43	H _B	8/31/98	Full Seam Length	30	10:05	30	10:10	r)	z	- 0	T		
S41-42	GH.	8/31/98	Full Seam Length	30	10:08	30	10:13	70	z	. a	1		1
S40-41	ЭН	8/31/98	Full Seam Length	90	10:09	30	10:14	5	z	. 0.	1		
S45-46	H _D	9/2/98	Top to Repair #43	90	10:10	30	10:15	20	z	0		1	
S45-46	GH	9/2/98	Repair #43 to E End	30	13:22	30	13:27	5	z		1		-1
S46-47	GH.	9/2/98	Top to Gas Well	90	13:30	30	13:35	2	z	. 0	+		
S46-47	H _D	9/2/98	Gas Well to E End	30	13:00	30	13:05	5	z	. a	1		
S47-48	H _D	9/2/98	Full Seam Length	90	13:04	30	13:09	5	z	. a	1	1	
S48-49	GH.	9/2/98	Full Seam Length	30	13:18	30	13:23	5	z		1	T	
S49-50	HB HB	9/2/98 F	Full Seam Length	8	13:25	30	13:30	5	z	_	-		
-	+	9/2/98 F	Full Seam Length	8	13:27	30	13:32	2	z	. a	r	T	
+	품	9/2/98 F	Full Seam Length	+	11:43	30	11:48	5	z	۵		T	1
+	GH	9/2/98 F	Full Seam Length	+	11:51	32	11:56	5	z				
+	GH S	9/2/98 F	Full Seam Length	1	14:41	32	14:46	5	z	<u>a</u>	+		
+	GH (9/2/98 F	Full Seam Length	+	11:30	30	11:35	5	z		-	1	
S33-51 (GH	9/2/98 F	Full Seam Length	8	11:35	30	11:40	5	z	. a	-	t	
+	-	9/2/98 Fi	Full Seam Length	1	11:38	30	11:43	5	z		+	T	1
+	+		Full Seam Length	+	11:40	30	11:45	2	z	<u>a</u>	+	t	
S47-51 C	GH B	9/2/98 Ft	Full Seam Length	1	11:42	30	11:47	5	z	a	-		
				30	11:48	30	11.53	Ľ	1		1	1	

In. Hg Sec.

9 9

Min. Vac Min. Duration:

Psi.

Min. pressure: 30 Min. pressure:

truck

Checked By:

Project: Hidden Valley Landfill

Facility: East Partial Closure

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					Ī	4	AIR TEST			1	VAC	VACUUM TEST	15
Seam No.	Q.A. Mon.	Date Tested	Location	Stabil Press.	Start Time	Final Press.	End Time	DURA- TION	Block- age	Pass/ Fail	Vac. in. Hg	Duration Sec.	P/F
S48-51	F	9/2/98	Full Seam Length	30	11:50	08	11:55	c ₂	z	۵	l		Ì
849-51	표	86/2/6	Full Seam Length	30	11:50	30	11*55	2	z	۵			
S50-51	HB	9/2/98	Full Seam Length	30	12:41	30	12:46	5	z	Ь			
S53-54	H _O	9/2/98	Full Seam Length	30	11:50	30	11:55	5	z	۵			
S54-55	ВH	9/2/98	Full Seam Length	32	14:41	32	14:46	2	z	۵			
S55-56	ВH	9/2/98	Full Seam Length	32	14:50	32	14:55	5	z	А			
256-57	ВН	86/2/6	Top to Gas Well	32	15:07	32	15:12	5	z	۵.			
S56-57	ВH	9/2/98	Gas Well to E End	32	15:09	32	15:14	5	z	۵			
S57-58	GH	9/2/88	Full Seam Length	32	15:37	32	15:42	2	z	۵			
S58-59	ВH	9/2/98	Full Seam Length	32	15:34	32	15:39	5	z	▄			
S59-60	GH	9/2/98	Top to Gas Well	32	15:40	32	15:45	2	z	а			
S59-60	GH	9/2/68	Gas Well to E End	32	15:43	32	15:48	5	z	Ь			
S30-55	GH	9/5/98	Full Seam Length	32	16:07	32	16:12	5	z	۵			
S31-55	띪	9/2/98	Full Seam Length	32	15:05	30	15:10	2	z	Д			
S31-54	ВН	9/2/98	Full Seam Length	30	15:20	99	15:25	2	z	۵			
S60-61	GH	9/2/68	Top to Repair #58	30	16:07	30	16:12	2	z	Д			
S60-61	ВH	9/2/98	Repair #58 to E End	90	16:09	30	16:14	5	z	Д.			
S61-62	ВΗ	9/2/98	Top to Repair #72	30	16:10	30	16:15	5	z	۵			
S61-62	ВН	9/2/98	Repair #72 to E End	30	16:13	30	16:18	5	z	OL.			
S62-63	В	86/2/6	Full Seam Length	30	16:21	30	16:26	ഹ	z	а.			
S55-64	ВН	9/4/98	Full Seam Length	30	15:02	30	15:07	5	z	۵			
S56-64	ВН	9/4/98	Full Seam Length	30	15:09	30	15:14	2	z	Ъ			
S57-64	ВH	9/4/98	Full Seam Length	30	15:14	30	15:19	22	z	۵			
S58-64	ВН	9/4/98	Full Seam Length	30	15:36	30	15:41	2	z	۵			
S59-64	ВН	9/4/98	Full Seam Length	30	15:33	30	15:38	22	z	Ъ			
S64-65	GH	9/4/98	Full Seam Length	30	15:45	30	16:50	5	z	Ъ			
Logged By:	GH	7			Min. pressure:	essure:	30	Psi.		2	Min. Vac	10	In. Hg
Checked Bv.	Kinny	12			Max. press. Loss:	ss. Loss:	2	Psi.		Min. D	Min. Duration:	10	Sec.
				١	١	١	l	l	١	l	١		1

Project: Hidden Valley Landfill

Facility: East Partial Closure

		racility.	radility: East ratial Glosure				ב ב	Project No: 40202-005.06	#020Z-04	190.30			
						A	AIR TEST				VA(VACUUM TEST	F
Seam No.	Q.A. Mon.	Date Tested	Location	Stabil Press. psi.	Start Time	Final Press. psi.	End Time	DURA- TION min	Block- age Y/N	Pass/ Fail	Vac. in. Hg	Duration Sec.	P/F
S65-66	HB	9/4/98	Full Seam Length	32	16:50	32	16:55	5	z	Pass			
S29-64	ВH	9/4/98	Full Seam Length	30	16:46	30	16:51	5	z	Pass			
S28-65	ЭH	9/4/98	E End to Repair #71	30	16:47	30	16:52	ιΩ	z	Pass			
S28-65	ВH	9/4/98	Repair #71 to W End	30	16:47	30	16:52	5	z	Pass			
S27-66	ВН	9/4/98	Full Seam Length	30	16:50	30	16:57	2	z	Pass			
29-63	GH	9/2/6	Top to Gas Well	32	14:15	32	14:20	2	z	Pass			
S63-67	ВH	9/2/6	Gas Well to E End	32	14:18	32	14:23	5	z	Pass			
89-299	дн	9/2/6	Full Seam Length	32	15:02	32	15:07	2	z	Pass			
89-89	ВН	86/2/6	Full Seam Length	32	14:25	32	14:25	2	z	Pass			
02-698	GH	9/2/6	Full Seam Length	32	15:05	32	15:00	5	z	Pass			
S70-71	ВH	9/2/6	Full Seam Length	32	14:45	32	14:50	r0	z	Pass			
S71-72	GH	9/2/6	Full Seam Length	32	14:47	32	14:52	2	z	Pass			1
S72-73	ВH	9/2/6	Top to Repair #89	32	15:55	32	16:00	2	z	Pass			
S72-73	ВH	9/2/6	Repair #89 to Gas Well	32	16:00	32	16:05	2	z	Pass			
S72-73	ВH	9/2/6	Gas Well to E End	32	15:55	32	16:00	D.	z	Pass			
S73-74	GH.	86/2/6	Full Seam Length	32	16:00	32	16:05	22	z	Pass			
S74-75	GH	86/2/6	Full Seam Length	32	15:54	32	15:59	ις	z	Pass			
S75-76	표	9/2/6	Top to Gas Well	32	15:52	32	15:57	ß	z	Pass			
875-76	H _D	9/2/6	Gas Well to E End	32	15:52	32	15:57	വ	z	Pass			
21-918	H _D	5/5/98	Full Seam Length	32	15:50	32	15:55	5	z	Pass			15
877-78	H _D	5/5/98	Top to Repair No. 89	32	16:10	32	16:15	ις	z	Pass			
S77-78	H _D	2/5/98	Repair No.89 to E End	32	16:15	32	16:20	2	z	Pass			
878-79	ВН	2/5/98	Full Seam Length	32	16:16	32	16:21	c2	z	Pass			
879-80	GH GH	5/5/98	Full Seam Length	32	16:23	32	16:28	rc	z	Pass			
S80-81	H H	5/5/98	Full Seam Length	32	16:37	32	16:42	2	z	Pass			
S82-83	표	9/11/98	Full Seam Length	32	08:32	32	08:37	c2	z	Pass			
Logged By:	GH				Min. pressure:	ssure:	30	Psi.		2	Min. Vac	10	In. Hg
Checked By:	Lower	3			Max. press. Loss:	ss. Loss:	2	Psi.		Min. D	Min. Duration:	10	Sec.
			The state of the s										-

Project: Hidden Valley Landfill

Facility: East Partial Closure

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						ď	AIR TEST				VA	VACUUM TEST	ST
Seam No.	Q.A. Mon.	Date Tested	Location	Stabil Press. psi.	Start Time	Final Press. psi.	End Time	DURA- TION min	Block- age Y/N	Pass/ Fail	Vac. in. Hg	Duration Sec.	P/F
S83-84	ВН	9/11/98	Full Seam Length	32	08:30	32	08:35	2	z	Pass			
S84-85	ВН	9/11/98	Full Seam Length	32	08:04	32	60:80	2	z	Pass			
S85-86	ВH	9/11/98	Full Seam Length	32	07:45	32	02:20	5	z	Pass			
286-87	ВН	9/11/98	Full Seam Length	32	07:40	32	07:45	5	z	Pass			
88-288	ВН	9/11/98	Full Seam Length	32	07:20	32	07:25	5	z	Pass			
S88-89	ВH	9/11/98	Full Seam Length	32	07:15	32	07:20	5	z	Pass			
S89-90	ВН	9/11/98	Top to Gas Well	32	07:29	32	07:34	5	z	Pass			
S89-90	ВН	9/11/98	Gas Well to N End	32	02:30	32	07:35	5	z	Pass			
S90-74	ВH	9/11/98	Full Seam Length	32	02:30	32	07:35	5	z	Pass			
S89-75	ВН	9/11/98	Full Seam Length	32	07:10	32	07:15	2	z	Pass			
S88-76	ВH	9/11/98	Full Seam Length	32	07:17	32	07:22	2	z	Pass			
92-288	ВН	9/11/98	Full Seam Length	32	07:20	32	07:25	5	z	Pass			
S87-77	ВН	9/11/98	Full Seam Length	35	07:50	35	07:55	5	z	Pass			
24-988	ВН	9/11/98	Full Seam Length	32	07:44	32	07:49	5	z	Pass			
886-78	ВН	9/11/98	Full Seam Length	32	07:43	32	07:48	5	z	Pass			
S85-78	ВH	9/11/98	Full Seam Length	32	07:50	32	07:55	2	z	Pass			
S85-79	ВH	9/11/98	Full Seam Length	32	08:20	32	08:25	2	z	Pass			
S84-79	ВH	9/11/98	Full Seam Length	32	08:04	32	60:80	S	z	Pass			
S84-80	ВH	9/11/98	Full Seam Length	32	08:22	32	08:27	ß	z	Pass			
S83-80	В	9/12/98	Full Seam Length	32	08:32	35	08:37	ъ	z	Pass			
S83-81	GH	9/12/98	Full Seam Length	32	08:34	32	08:39	ß	z	Pass			
S82-81	ВH	9/12/98	Full Seam Length	32	08:36	32	08:41	Ŋ	z	Pass			
S82A-81	ВH	9/12/98	Full Seam Length	32	08:45	32	08:50	5	z	Pass			
S82A-82	ВН	9/12/98	Full Seam Length	32	08:45	32	08:20	υ	z	Pass			
S84-91	GH	9/12/98	Full Seam Length	32	09:27	32	09:32	2	z	Pass			
S91-92	ВH	9/12/98	Full Seam Length	32	09:25	32	09:30	22	z	Pass			
Logged By:	CH	+			Min. pr	Min. pressure:	30	Psi		_	Min. Vac	10	In. Hg
Checked Bv.	Kund	3			Max. pre	Max. press. Loss:	2	Psi		Min. D	Min. Duration:	9	Sec.
· Common of					l	١	I	l	l	١	١	I	

NON-DESTRUCTIVE AIR PRESSURE OR VACUUM SEAM TEST TABLE C-2f

Project: Hidden Valley Landfill

EMCON		Facility: East Partial Closure	1			Pro	Project No: 40202-005.061	40202-00	05.061			
					Ā	AIR TEST				VA	VACUUM TEST	ř
Seam No.	Q.A. Date Mon. Tested	Location	Stabil Press. psi.	Start Time	Final Press. psi.	End Time	DURA- TION min	Block- age Y/N	Pass/ Fail	Vac. in. Hg	Duration Sec.	P/F
892-93	GH 9/12/98	Full Seam Length	32	09:22	32	09:27	2	z	۵.			
S93-94	GH 9/12/98	Full Seam Length	32	09:20	32	09:25	r)	z	а.			
S94-95	GH 9/12/98	Full Seam Length	32	96;60	32	09:41	5	z	4			
S95-96	GH 9/12/98	Full Seam Length	32	09:35	32	09:40	ro	z	م			
S85-91	GH 9/12/98	Full Seam Length	32	09:27	32	09:32	гo	z	۵.			
S86-92	GH 9/12/98	Full Seam Length	32	09:25	32	08:60	c)	z	Д.			
S87-93	GH 9/12/98	Full Seam Length	32	09:22	32	09:27	2	z	Ъ			
S88-94	GH 9/12/98	Full Seam Length	32	09:40	32	09:45	5	z	۵			
S89-95	GH 9/12/98	Full Seam Length	32	08:30	32	09:35	ß	z	۵			
96-068	GH 9/12/98	Full Seam Length	32	98:60	32	09:41	2	z	۵			
26-06S	GH 9/12/98	Full Seam Length	32	10:13	35	10:18	2	z	۵			
897-98	GH 9/12/98	Full Seam Length	32	10:11	32	10:16	5	z	۵			
898-99	GH 9/12/98	Full Seam Length	32	10:10	32	10:15	S	z	۵			
899-100	GH 9/12/98	Full Seam Length	32	09:40	32	09:45	2	z	۵			
S100-101	GH 9/12/98	Full Seam Length	32	09:45	32	09:20	2	z	۵.			
S101-102	GH 9/12/98	Full Seam Length	32	09:40	32	09:45	2	z	۵			
S102-103	GH 9/12/98	Full Seam Length	32	98:38	32	09:43	2	z	а			
S103-104	GH 9/12/98	Full Seam Length	32	09:35	32	09:40	2	z	Ъ			
S104-105	GH 9/12/98	Full Seam Length	32	09:25	32	08:30	2	z	Ъ			
\$106-107	GH 9/12/98	Full Seam Length	32	07:21	32	07:26	2	z	۵			
S107-108	GH 9/12/98	Full Seam Length	32	07:20	32	07:25	2	z	۵			
S106-60	GH 9/12/98	Full Seam Length	32	07:22	32	07:27	2	z	۵			
S106-61	GH 9/12/98	Full Seam Length	32	07:22	32	07:27	2	z	Ъ			
S106-62	GH 9/12/98	Full Seam Length	32	08:30	32	08:35	ß	z	۵			
S106-63	GH 9/12/98	Full Seam Length	32	08:30	32	08:35	c)	z	۵.	= V - 7 - 7		
S106-67	GH 9/12/98	Full Seam Length	32	08:30	32	08:35	5	z	Д			
Logged By:	His		1	Min. pr	Min. pressure:	00:00	Psi.			Min. Vac	10	In. Hg
Checked Bv:	www			Max. pre	Max. press. Loss: 00:00	00:00	Psi.		Min. [Min. Duration:	10	Sec.

Project: Hidden Valley Landfill

Facility: East Partial Closure

	=			1									
						A	AIR TEST				VA	VACUUM TEST	ST
Seam No.	Q.A. Mon.	Date Tested	Location	Stabil Press. psi.	Start Time	Final Press. psi.	End Time	DURA- TION min	Block- age Y/N	Pass/ Fail	Vac. in. Hg	Duration Sec.	P/F
S106-68	В	9/12/98	Full Seam Length	32	08:35	32	08:40	5	z	а			
S106-69	H _D	9/12/98	Full Seam Length	32	08:35	32	08:40	2	z	۵.			
S106-64	H9	9/12/98	Full Seam Length	32	07:21	32	07:26	ω	z	۵			
S107-65	R	9/12/98	Full Seam Length	32	07:20	32	07:25	2	z	a.			
S108-66	GH	9/12/98	Full Seam Length	32	07:20	32	07:25	5	z	Д			
S69-101	GH	9/12/98	Full Seam Length	32	10:35	32	10:40	2	z	Ъ			
S70-101	GH	9/12/98	Full Seam Length	32	10:35	32	10:40	Ŋ	z	۵			
870-100	GH	9/12/98	Full Seam Length	32	90:60	32	09:11	5	z	Д			
S71-100	ВH	9/12/98	Full Seam Length	32	90:60	32	09:11	5	z	۵			
871-99	퓬	9/12/98	Full Seam Length	32	09:05	32	09:10	5	z	П			
872-99	윤	9/12/98	Full Seam Length	32	90:60	32	09:10	2	z	۵			
872-98	퓬	9/12/98	Full Seam Length	32	09:15	32	09:20	5	z	a			
873-98	윤	9/12/98	Full Seam Length	32	09:15	32	02:60	5	z	۵			
S73-97	GH	9/12/98		32	09:15	32	09:50	2	z	α			
S74-97	GH	9/12/98	Full Seam Length	32	09:17	32	09:22	2	z	Ъ			
S106-101	GH	9/12/98	Full Seam Length	32	08:53	32	08:57	5	z	Д			
S106-104	GH	9/12/98	Full Seam Length	32	08:53	32	08:58	2	z	Д			
S107-104	GH.	9/12/98		32	08:55	32	00:60	2	z	۵			
S107-105	GH	9/12/98	Full Seam Length	32	08:55	32	00:60	2	z	Д			
S107-105	GH	9/12/98	Full Seam Length	32	08:55	32	00:60	c)	z	۵			
S108-105	GH	9/12/98	Full Seam Length								10	10	۵
896-109	GН	9/12/98	Full Seam Length	32	15:12	32	15:17	5	z	۵			
S109-110	GH	9/12/98	Full Seam Length	32	15:17	32	15:22	ro.	z	Д			
S110-111	GH	9/12/98		32	15:18	32	15:23	5	z	۵			
S111-112	GH	9/12/98	Full Seam Length	32	15:25	32	15:30	2	z	۵			
S112-113	ВH	9/12/98	Full Seam Length	32	15:27	32	15:32	2	z	Ъ			
Logged By:	GH			1	Min. pr	Min. pressure:		Psi.		_	Min. Vac	10	In. Hg
Checked Bv:	Kind	ڔٙ			Max. pre	Max. press. Loss:	00:00	Psi.		Min.	Min. Duration:	10	Sec.

Project: Hidden Valley Landfill

Facility: East Partial Closure

							TOTAL CITY			Ī	1	VACILIM TECT	T _z
						1	ובטן עון				\$	NOON THE	5
Seam No.	Q.A.	Date Tested	Location	Stabil Press.	Start	Final Press.	End	DURA- TION	Block- age	Pass/ Fail	Vac. in. Hq	Duration Sec.	P/F
				psi.		psi.		uim	N/A		,		Î
S113-114	ЭН	9/13/98	Full Seam Length	35	09:04	32	60:60	2	z	ட			
S114-115	GH	9/13/98	Full Seam Length	32	80:60	32	09:13	5	z	Ъ			
S115-116	GH	9/13/98	Top to Gas Well	32	09:10	32	09:15	2	z	۵			
S115-116	GH	9/13/98	Gas Well to N End	32	09:12	32	09:17	5	z	۵			
S116-117	GH	9/13/98	Full Seam Length	32	09:13	32	09:18	co	z	۵			
897-109	GH	9/13/98	Full Seam Length	32	9:04	32	60:60	ß	z	۵			
S98-110	GH.	9/13/98	Full Seam Length	32	10:43	32	10:48	2	z	ط			
S99-111	H ₀	9/13/98	Full Seam Length	32	10:55	32	11:00	2	z	۵			
\$100-112	GH	9/13/98	Full Seam Length	32	10:50	32	10:55	5	z	α.			
S101-113	H ₂	9/13/98	Full Seam Length	32	10:55	32	11:00	2	z	۵.			
\$102-114	H _D	9/13/98	Full Seam Length	32	10:55	32	11:00	2	z	۵			
S103-115	H _D	9/13/98	Full Seam Length	32	10:56	32	11:01	2	z	۵			
S104-115	В	9/13/98	Full Seam Length	32	10:56	32	11:01	ß	z	۵			
\$104-116	H _D	9/13/98	Full Seam Length	32	11:07	32	11:12	5	z	۵			
S105-116	H _D	9/13/98		32	11:08	32	11:13	ည	z	а.			
\$105-117	GH GH	9/13/98	Full Seam Length	32	10:10	32	10:15	2	z	а			
S105-118	GH GH	9/13/98	Full Seam Length	32	09:55	32	10:00	ည	z	Ь			
S118-119	GH	9/13/98	Full Seam Length	32	10:20	32	10:25	2	z	Ъ			
S119-120	GH	9/15/98	Full Seam Length	32	14:35	32	14:40	ည	z	۵			
\$120-121	ВH	9/15/98	Full Seam Length	32	14:00	32	14:05	5	z	а.			
\$121-122	ВН	9/12/98	Full Seam Length	32	14:02	32	14:07	2	z	۵			
\$122-123	ВH	9/12/98	Full Seam Length	32	14:37	32	14:42	ß	z	Δ.			
S117-124	ВН	9/14/98	Full Seam Length	32	11:02	32	11:07	c	z	4			
S124-125	GH	9/14/98	Full Seam Length	32	11:07	32	11:12	2	z	а.			
S131-132	H _D	9/12/98	Full Seam Length	32	12:48	32	12:53	ß	z	а			
\$131-108	GH	9/12/98	Full Seam Length	32	12:52	32	12:57	2	z	۵			
l ogged Bv:	CALI				Min. p	Min. pressure:	00:00	Psi.			Min. Vac	10	In. Hg
	'	Chien			Max. pre	Max. press. Loss:	00:00	Psi.		Min. l	Min. Duration:	10	Sec.
Checked By:	- 1												

Project: Hidden Valley Landfill

Facility: East Partial Closure

	=	Facility:	racility: East Partial Glosure	v			<u>r</u>	Project No: 40202-005.06	4020Z-U	190.00			
						Ā	AIR TEST				VA	VACUUM TEST	TS
Seam No.	Q.A. Mon.	Date Tested	Location	Stabil Press. psi.	Start Time	Final Press. psi.	End Time	DURA- TION min	Block- age Y/N	Pass/ Fail	Vac. in. Hg	Duration Sec.	P/F
8132-108	GH	9/15/98	Full Seam Length	32	13:00	32	13:05	5	z	Ъ			
S131-133	ВН	9/12/98	Full Seam Length	32	13:02	32	13:07	2	z	۵			
\$132-133	ВH	9/15/98	Full Seam Length	32	13:03	32	13:08	2	z	Δ.			
S133-134	ВН	9/12/98	Full Seam Length	32	13:05	32	13:10	2	z	а.			
S133-119	ВH	9/15/98	Full Seam Length	32	13:08	32	13:13	2	z	а			
S131-119	ВH	9/12/98	Full Seam Length	32	13:08	32	13:13	2	z	а.			
S131-118	H _D	9/12/98	Full Seam Length	32	13:10	32	13:15	₁	z	۵.			
S108-109	ВH	9/12/98	Full Seam Length	32	13:11	32	13:16	2	z	۵.			
S125-126	ВH	9/12/98	Full Seam Length	32	13:28	32	13:33	2	z	௳			
S126-127	ВH	9/12/98	Full Seam Length	32	13:32	32	13:37	2	z	Ъ			
S127-128	ВH	9/12/98	Full Seam Length	32	13:34	32	13:39	2	z	а			5
S128-129	ВН	9/12/98	Full Seam Length	32	13:39	32	13:44	2	z	a.			
S129-130	ВН	9/15/98	Full Seam Length	32	13:42	32	13:47	2	z	۵			
S123-135	ВН	9/18/98	Full Seam Length	32	13:24	32	13:29	5	z	۵			
S135-136	ВH	9/18/98	Full Seam Length	32	13:29	32	13:34	2	z	۵			
S136-137	ВH	9/18/98	Full Seam Length	32	13:26	32	13:31	5	z	۵			
S137-138	H _D	9/18/98	Full Seam Length	32	13:26	32	13:31	2	z	Ь			
S119-126	ВH	9/16/98	Full Seam Length	32	11:28	32	11:33	2	z	۵			
S120-126	GH	9/16/98	Full Seam Length	32	11:28	32	11:33	ω	z	۵			
S120-127	ВH	9/16/98	Full Seam Length	32	11:30	32	11:35	Ŋ	z	۵			
S121-128	H _D	9/16/98	Full Seam Length	32	11:31	32	11:36	ro.	z	۵			
S122-128	ВH	9/16/98	Full Seam Length	32	11:31	32	11:36	ro	z	а			
S122-129	ВH	9/16/98	Full Seam Length	32	11:33	32	11:38	2	z	۵			
S122-129	ВН	9/16/98	Full Seam Length	32	11:33	32	11:38	co	z	Д			
S123-129	ВH	9/16/98	Full Seam Length	32	11:35	32	11:40	ις.	z	Ъ			
S123-130	ВH	9/16/98	Full Seam Length	32	11:36	32	11:41	D.	z	Ъ			
Logged By:	47				Min. pressure:	essure:	30	Psi		_	Min. Vac		In. Hg
Checked Bv:	(Twis	Ş			Max. press. Loss:	ss. Loss:	7	Psi:		Min	Min. Duration:	9	Sec.
The state of the s				١	I					I			I

Project: Hidden Valley Landfill

Facility: East Partial Closure

		acility:	Facility: East Partial Glosure				Ę	Project NO: 40202-005.00	4020Z-0	100.00			
						A	AIR TEST				VAC	VACUUM TEST	T.
Seam No.	Q.A. D Mon. Te	Date Tested	Location	Stabil Press. psi.	Start Time	Final Press. psi.	End Time	DURA- TION min	Block- age Y/N	Pass/ Fail	Vac. in. Hg	Duration Sec.	P/F
S138-139	GH 9/1	9/18/98	Full Seam Length	32	14:00	32	14:05	2	z	Д			
S139-140	GH 9/1	9/18/98	Full Seam Length	32	13:50	32	13:55	5	z	а			
S133-135	GH 9/1	9/17/98	Full Seam Length	32	13:45	32	13:50	5	z	۵			
S134-135	GH 9/1	9/17/98	Full Seam Length	32	13:47	32	13:52	5	z	<u>a</u>			
S134-136	GH 9/1	9/17/98	Full Seam Length	32	13:50	32	13:55	2	z	۵			
S140-141	GH 9/1	9/18/98	Full Seam Length	32	13:57	32	14:02	5	z	۵			
S141-142	GH 9/1	9/18/98	Full Seam Length	32	14:02	32	14:07	5	z	۵			
S130-143	GH 9/1	9/18/98	Full Seam Length	32	14:07	32	14:12	2	z	Д			
S143-144	GH 9/1	9/18/98	Full Seam Length	32	14:55	32	15:00	5	z	Ъ			
S144-145	GH 9/1	9/11/98	Full Seam Length	32	14:25	32	14:30	5	z	۵			
S145-146	GH 9/1	9/17/98	Full Seam Length	32	14:58	32	15:03	5	z	۵			
S146-147	GH 9/1	9/17/98	Top to Gas Well	32	15:05	32	15:10	2	z	۵			
S146-147	GH 9/1	9/17/98	Gas Well to N End	32	15:15	32	15:20	2	z	۵			
S147-148	GH 9/1	9/19/98	Full Seam Length	32	13:24	32	13:29	2	z	凸			
S148-149	GH 9/1	9/19/98	Full Seam Length	32	12:55	32	13:00	ß	z	ப			
S148-149	GH 9/1	9/19/98	Top to Gas Well	32	12:58	32	13:03	2	z	۵			
S149-150	GH 9/1	9/19/98	Gas Well to N End	32	13:10	32	13:15	2	z	۵			
S150-151	GH 9/1	9/19/98	Full Seam Length	32	12:55	32	13:00	5	z	а			
S151-152	GH 9/1	9/19/98	Full Seam Length	32	14:05	32	14:10	2	z	ப			
S153-154	GH 9/1	9/19/98	Full Seam Length	32	14:05	32	14:10	2	z	Ъ			
S154-155	GH 9/1	9/19/98	Full Seam Length	32	14:05	32	14:10	2	z	۵			
S155-156	GH 9/1	9/19/98	Full Seam Length	32	14:09	32	14:14	2	z	Д			
S152-153	GH 9/1	9/19/98	Full Seam Length	32	14:11	32	14:16	2	z	а.			
S152-154	GH 9/1	9/19/98	Full Seam Length	32	14:15	32	14:20	2	z	Ъ			
\$152-155	GH 9/1	9/19/98	Full Seam Length	32	14:17	32	14:22	2	z	Ы			
S152-156	GH 9/1	9/19/98	Full Seam Length	32	14:21	32	14:26	2	z	а			
Logged By:	K'Y				Min. pr	Min. pressure:	30	Psi.		_	Min. Vac	10	In. Hg
1	ans				Max. press. Loss:	ss. Loss:	7	Psi.		Min.	Min. Duration:	9	Sec.
Checked by:												١	1

Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No: 40202-005.061

In. Hg Sec. P/F ۵. ۵. ۵ ۵ ۵ ۵ ۵. ۵. **VACUUM TEST** Duration Sec. 유 유 9 9 9 10 9 9 10 Min. Vac Min. Duration: Vac. in. Hg 9 9 9 9 우 9 9 우 Pass/ Fail ۵ Blockage Y/N z DURA-TION min Ŋ Psi. AIR TEST End 8 2 Max. press. Loss: Final Press. psi. Min. pressure: 32 Start Time 15:19 Stabil Press. psi. 32 Location 9/20/98 Full Seam Length 9/20/98 | Full Seam Length 9/20/98 | Full Seam Length 9/20/98 |Full Seam Length 9/20/98 Full Seam Length 9/20/98 | Full Seam Length 9/20/98 Full Seam Length 9/20/98 Full Seam Length 9/20/98 | Full Seam Length Date Tested スダと Ê Q.A. Mon. GH £ 표 GH GH GH. GH GH GH ogged By: Seam No. \$137-158 S134-158 \$136-158 S142-152 S157-158 \$139-158 S138-158 S134-157 S139-157

Checked By:

C-2g Geomembrane Destructive Seam Test Results

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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						P/F	₾	о.	۵	ቤ	<u>а</u>						P/F	₾	凸	۵	Д.	凸						P/F	<u>ቤ</u>	Д	П	<u>а</u>	Д
		111	20	9		Brk Type	FTB	FTB	FTB	FTB	FTB		111	: e	; ; ;		Brk Type	FTB	FTB	FTB	FTB	FT8		167	2	12		Brk Type	FTB	FTB	FTB	FTB	FTB
		Equipt No: 111	Oper.: JC	Repair No.: 6		Sheer	171.31	170.68	173.43	174.12	175.12		Fourint No. 111	Oner . CG	Repair No.: 11		Sheer	165.00	165.81	164.62	165.56	166.81	1	Equipt No: 167	Oper.: JC	Repair No.: 12		Sheer	167.75	167.12	166.62	166.31	167.06
					LabTests	P/F	۵	۵	а.	凸	۵					LabTests	P/F	础	۵.	₾	۵	۵					LabTests	P/F	<u></u>	۵	ш	ட	凸
						Brk Type	FTB	FTB	FTB	FTB	FTB						Brk Type	FIB	HB	FTB	FTB	FTB						Brk Type	FTB	FTB	NFTB	NFTB	FTB
		Equipt Type:				Peel B	124.00	120.43	126.31	118.00	120.81		Fourint Tyne.	المسالدة والأسالة			Peel B	129.37	142.56	129.75	138.69	144.87		Equipt Type:				Peel B	122.87	90.96	116.31	100.87	148.37
	DS-1	Ш				Peel A	143.37	125.06	127.87	136.31	131.12	0 00		ı			Peel A	132.06	128.87	136.06	131.18	136.68	DS-3					Peel A	136.56	151.50	147.93	148.68	145.68
		GН	8/12/98	8/25/98										8/21/9R	8/25/98								ă		8/21/98	8/22/98					Failure	Failure	
		Monitor: GH	Date Welded: 8/12/98	Date Tested: 8/25/98		P/F	۵	۵.	۵				Monitor GH	Date Welded: 8/21/98	Date Tested: 8/25/98		P/F	۵	۵	Д				Monitor: GH	Date Welded: 8/21/98	Date Tested: 8/25/98		P/F	۵	۵	۵		
			Date	Dat		Brk Type	FTB	FTB	FTB					Date	Dat		Brk Type	FTB	FTB	ETB					Date	Dat		Brk Type	FTB	FTB	FTB		
3						Sheer	195	194	190								Sheer	195	188	187								Sheer	194	191	196		
+0202-000.					Field Tests	P/F	۵	۵	_							Field Tests	P/F	۵	۵	۵							Field Tests	P/F	۵	۵	۵		
FIGURE 140 40202-003.00		Date: 8/22/98	S14-15	RL		Brk Type	E B	FTB	FTB				Date: 9/00/08	207708	E. E.		Brk Type	ETB:	FTB	FTB				Date: 8/22/98	S29-30	吊		Brk Type	FTB	FTB	FTB		
		Date:	Seam No:. S14-15	QC Tech: RL		Peel B	145	146	134				Date:	Soom No: C27-38	OC Tech: BL		Peel B	120	146	128				Date:	Seam No:. S29-30	QC Tech: RL		Peel B	124	140	128		
						Peel A	126	131	156								Peel A	122	131	130								Peel A	130	151	159		
	4		_	_		_	_	_	_	-	_		_	_		L	_		-	_			1		_	_	_	-				-	-

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Project: Hidden Valley Landfill

Facility: East Partial Closure

74 9 9 9 Brk Type FTB FTB FTB FTB FTB Equipt No: 167 Oper.: JC Repair No.: 59 Sheer 175.75 174.12 173.00 173.50 LabTests Brk Type FTB FTB FTB FTB FTB Equipt Type: Fusion Peel B 135.67 152.05 145.47 154.75 Peel A 145.17 148.32 154.20 161.65 137.10 DS-3A Monitor: GH Date Welded: 8/21/98 Date Tested: 9/4/98 ₽ ₽ ₽ Brk Type FTB FTB FTB Sheer 155 153 160 Project No.: 40202-005.061 Field Tests P/F P P P Brk Type FTB FTB FTB Date: 9/3/98 Seam No:. S29-30 Tech: RL Peel B 125 119 120 Peel A 122 124 122

							DS-3B							
	Date	86/6/6				Monitor: GH	ВН	Equipt Type:	: Fusion		Equipt No:	167		
	Seam No:	S29-30			Dat	Date Welded: 8/21/98	8/21/98				Oper.: JC	20		
	Tech: RL	. RL			Da	Date Tested: 9/4/98	9/4/98				Repair No.: 60	09		٦
			DS-3B							LabTests				
Peel A	Peel B	Brk Type	P/F	Sheer	Brk Type	P/F	Peel,		Brk Type	P/F	Sheer	Brk Type	P/F	
117	122	FTB	△	148	FTB	а.	107.2		FTB	҆	179.12	FTB	۵	
117	120	FTB	۵	145	FTB	Д	148.8		FTB	凸	178.93	FTB	۵	
119	119	FTB	۵	147	FTB	۵.	131.4		FTB	۵	178.05	FTB	۵	
							150.55	5 147.77	FTB	۵.	178.18	FTB	۵	
							134.7		FTB	₫	176.75	FTB	۵	

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Brk Type FTB FTB FTB FTB FTB Brk Type FTB FTB FTB FTB FTB Equipt No: 111 Oper.: JC Repair No.: 29 Equipt No: 133 Oper.: VM Repair No.: 13 172.37 169.00 170.25 170.12 188.06 188.00 185.62 186.25 Sheer 187.81 Facility: East Partial Closure LabTests LabTests P/A P P P P P Brk Type FTB **Brk Type** Fusion 811 811 811 811 Fusion Equipt Type: Equipt Type: Peel B 140.25 134.37 149.31 136.25 156.30 145.45 140.15 133.85 Peel B 156.87 135.12 154.10 Peel A 138.87 140.06 138.06 154.25 135.27 142.31 DS-5 DS-4 Date Welded: 8/12/98 Date Tested: 9/4/98 Date Welded: 8/21/98 Date Tested: 8/25/98 Monitor: GH Monitor: GH F - - -PP PP P Brk Type FTB FTB FTB Brk Type FTB FTB FTB Project: Hidden Valley Landfill Sheer 189 190 189 150 149 150 Project No.: 40202-005.061 Field Tests Field Tests 74 P P P P Brk Type FTB FTB FTB Brk Type FTB FTB FTB Date: 8/21/98 Seam No:. S30-31 Date: 9/3/98 Seam No:. S4-5 QC Tech: RL Tech: RL Peel B 157 140 139 Peel B 127 131 126 Peel A 133 149 130 126 126 122

							9-SQ								
	Date	Date: 9/3/98				Monitor: GH	GH	Щ	Equipt Type:	Fusion		Equipt No: 167	167		
	Seam No: S26-27	. S26-27			Dat	Date Welded: 8/12/98	8/12/98					Oper.: JC	5		
	Tech	Tech: RL			Da	Date Tested: 9/4/98	9/4/98					Repair No.: 30	30		
			Field Tests								LabTests				
Peel A	Peel B		P/F	Sheer	Brk Type	P/F		Peel A	Peel B	Brk Type	P/F	Sheer	Brk Type	P/F	
129	122		۵	157	FTB	۵		152.62	149.35	FTB	Ъ	179.68	FTB	Д	
132	119	FTB	۵	160	FTB	۵		111.05	148.87	FTB	۵	178.12	FTB	۵	
14	125		۵	149	FTB	۵	Ì	148.80	149.56	FTB	۵	175.50	FTB	۵	
								135.62	150.00	FTB	۵	181.06	FTB	۵	
								146.40	150.00	FTB	۵	177.43	FTB	₾	
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Project: Hidden Valley Landfill

Facility: East Partial Closure

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		Equipt Type: Fusion Equipt No: 167	Oper.: JC Repair No.: 62	LabTests	Peel B Brk Type P/F Sheer Brk Type F	128.82 FTB P 189.12 FTB	139.77 FTB P 188.13 FTB	126.45 FTB P 187.25 FTB	138.40 FTB P	147.45 FTB P 185.43 FTB		Equipt Type: Fusion Equipt No: 133	Oper.: VM	Repair No.: 63	LabTests	Peel B Brk Type P/F Sheer Brk Type	153.60	141.45 FTB P 181.56 FTB	147.72 FTB P 183.43 FTB	162.82 FTB P 185.50 FTB	133.55 FTB P 180.62 FTB		Equipt Type: Fusion Equipt No: 167	Oper.: JC	Repair No.: 64	LabTests	Peel B Brk Type P/F Sheer Brk Type F	143.75 FTB P 188.93 FTB	147.62 FTB P 180.50 FTB	125.06 FTB P 177.06 FTB	134.37 FTB P 180.12	128.62 FTB P 180.18 FTB
	DS-7	į	2/98 98		Peel A	148.75	136.62	157.02	154.57	162.72	DS-8		86/	86		Peel A	138.10	146.20	153.37	150.40	158.12	DS-9		86/2	86		Peel A	147.06	131.43	127.43	137.75	145.37
N		r: GH	d: 8/22 d: 9/4/(_	_		_				r: GH	d: 8/22	d: 9/4/\	-	_			_		-	-	Monitor: GH	d: 8/22	d: 9/4/	_						-
		Monitor: GH	Date Welded: 8/22/98 Date Tested: 9/4/98		P/F	150	凸	۵.				Monitor: GH	Date Welded: 8/22/98	Date Tested: 9/4/98		P/F	₫	Д	۵				Monito	Date Welded: 8/22/98	Date Tested: 9/4/98		P/F	۵	۵	۵		
			Dai		Brk Type	157	FTB	FTB					Dat	Da		Brk Type	FTB	FTB	FTB					Dat	Da		Brk Type	FTB	FTB	FTB		
51					Sheer	161	157	150								Sheer	135	150	150								Sheer	152	149	150		
Project No.: 40202-005.061				Field Tests	P/F	ሲ	₾	۵							Field Tests	P/F	۵	۵	凸							Field Tests	P/F	۵	础	۵		
Project No.:		Date: 9/3/98	S33-34 RL		Brk Type	FTB	FTB	FTB				Date: 9/3/98	S34-35	R		Brk Type	FTB	FTB	FTB				Date: 9/3/98	S35-36	RL		Brk Type	FTB	FTB	FTB		
		Date:	Seam No:. S33-34 Tech: RL		Peel B	124	120	129				Date:	Seam No:. S34-35	Tech: RL		Peel B	129	130	126				Date:	Seam No:. S35-36	Tech: RL		Peel B	139	127	125		
					Peel A	126	126	123								Peel A	143	132	141								Peel A	120	119	113		

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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						P/F	<u>-</u>	<u>а</u>	Ь	<u>а</u>	۵							P/F	Ь	<u>-</u>	Ь	Ь	Ь					
		33	Σ	5		Brk Type F	FTB	FTB	FTB	FTB	FTB			29	O	9.		ø	FTB	FTB	FTB	FTB	FTB			33	M	27
		Equipt No: 133	Oper.: VM	Repair No.: 65			179.68	179.81	179.62	179.68	178.00			Equipt No: 167	Oper.: JC	Repair No.: 66		Sheer	187.56	187.93	184.31	187.87	180.06			Equipt No: 133	Oper.: VM	Repair No.: 67
					LabTests	P/F	۵.	۵.	<u>α</u>	Δ.	۵.						LabTests	P/F	۵.	₾	۵	۵	۵					
		Fusion				Brk Type	FTB	FTB	F18	FT8	FTB			Fusion				Brk Type	FTB	FTB	HB	NFTB	NFTB			Fusion		
		Equipt Type:				Peel B	138.37	145.75	143.00	139,25	146.06			Equipt Type:				Peel B	140.93	141.18	129.56	130.18	140.87			Equipt Type:		
	DS-10	ш				Peel A	147.62	144.37	148.75	145.62	157.06		DS-11	ш				Peel A	130.75	151.31	151.43	122.62	115.93		DS-12			
	ä	GH.	8/22/98	9/4/98									۵	GН	8/22/98	9/4/98						Failure	Failure		٥	GН	8/22/98	9/4/98
		Monitor: GH	Date Welded: 8/22/98	Date Tested: 9/4/98		P/F	Д.	۵.	۵					Monitor: GH	Date Welded: 8/22/98	Date Tested: 9/4/98		P/F	Δ.	۵	۵			1		Monitor: GH	Date Welded: 8/22/98	Date Tested: 9/4/98
			Dat	Da		Brk Type	FTB	FTB	FTB						Dat	Da		Brk Type	ETB	FTB	FTB						Dat	Da
191						Sheer	155	161	153									Sheer	155	150	150							
40202-005.0					Field Tests	P/F	۵	۵	۵.								Field Tests		۵	۵								
Project No.: 40202-005.061		Date: 9/3/98	S37-38	RL		Brk Type	ETB:	FTB	FTB					Date: 9/3/98	S39-43	H.		Brk Type	FTB	FTB	FTB					Date: 9/3/98	S44-45	님
		Date:	Seam No:. S37-38	Tech: RL		Peel B	130	136	117					Date:	Seam No:	Tech: RL		Peel B	130	120	125					Date:	Seam No:. S44-45	Tech:
						Peel A	129	134	123									Peel A	131	118	118							

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Brk Type FTB FTB FTB FTB FTB

Sheer 177.31 178.12 178.75 178.25 179.62

Brk Type FTB FTB FTB FTB FTB

Peel B 144.00 141.62 147.68 135.37 153.75

Peel A 135.62 137.25 135.62 138.31

P/F P P P

Brk Type FTB FTB FTB

Sheer 153 162 149

P/F P P P P

Brk Type FTB FTB FTB

Peel B 118 120 125

Peel A 130 118 131

Field Tests

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Project: Hidden Valley Landfill

Facility: East Partial Closure

IA	Equipt Type: Fusion Equipt No: 167	Oper.: JC Repair No.: 83	LabTests	Peel B Brk Type P/F Sheer Brk Type	138.68 FTB P 195.62 FTB	144.50 NFTB F 196.12 FTB	۵.	149.37 FTB P 193.87 FTB	156.75 FTB P 195.75 FTB		Equipt Type: Fusion Equipt No: 167	Oper:: JC	Repair No.: 84	LabTests	Peel B Brk Type P/F Sheer Brk Type	*104.87 FTB F 182.62 FTB	136.62 FTB P 182.12 FTB	FTB F 180.50	124.56 FTB P 181.75 FTB	120.75 FTB F 183.37 FTB	
DS-11A	Monitor: GH	Date Welded: 8/22/98 Date Tested: 9/9/98		Brk Type P/F	FTB P	FTB P	FTB P			DS-11B	Monitor: GH	Date Welded: 8/22/98	Date Tested: 9/9/98		Brk Type P/F	FTB P Failure	FTB P	FTB P Failure		Failure	
Project No.; 40202-005,061	Date: 9/8/98	Seam No: S39-43 Tech: RL		Peel B Brk Type P/F	127 FTB P	129 FTB	FTB P				Date: 9/8/98	Seam No:. S39-43	Tech: RL		PeelB BrkType P/F	141 FTB P	138 FTB	FTB P			

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Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No.: 40202-005.061

					P/F	Д.	۵	۵	۵	Д						P/F	۵	ᇫ	۵	₾	۵
	111	ce	68		Brk Type	FTB	FTB	FTB	FTB	FTB		167	20	69		Brk Type	FTB	FTB	FTB	FTB	FTB
	Equipt No: 111	Oper.: CG	Repair No.: 68		Sheer	179.18	177.56	178.81	176.56	179.31		Equipt No: 167	Oper.: JC	Repair No.: 69		Sheer	176.81	178.12	176.62	177.18	177.31
				LabTests	P/F	۵	Δ.	ሲ	۵	۵					LabTests	P/F	۵	Δ.	<u></u>	۵	Ь
	Fusion				Brk Type	FTB	FTB	FTB	FTB	FTB		Fusion				Brk Type	FTB	FTB	FTB	FTB	HB
	Equipt Type: Fusion				Peel B	149.43	149.62	126.62	137.12	140.87		Equipt Type: Fusion				Peel B	142.12	147.38	144.93	131.25	135.37
DS-13	Ш				Peel A	133.62	129.56	135.06	132.87	134.12	DS-14	Ш				Peel A	138.31	135.50	135.87	142.37	138.37
Δ	댕	8/31/98	9/4/98								٥	дH	8/31/98	9/4/98							
	Monitor: GH	Date Welded: 8/31/98	Date Tested: 9/4/98		P/F	Δ.	۵.	۵.				Monitor: GH	Date Welded: 8/31/98	Date Tested: 9/4/98		P/F	₾	Δ.	۵		
		Date	Dal		Brk Type	FTB	FTB	FTB					Date	Dat		Brk Type	FTB	ETB	FTB		
					Sheer	162	150	150								Sheer	172	163	150		
				Field Tests	P/F	۵	۵	ሲ							Field Tests	P/F	۵	۵	۵		
	86/2/6	S34-51	R		Brk Type	FTB	FTB	ETB				86/8/6	S46-47	님		Brk Type	FTB	FTB	FTB		
	Date:	Seam No:.	Tech: RL		Peel B	123	130	134				Date:	Seam No:. S46-47	Tech:		Peel B	134	127	126		
					Peel A	129	132	122								Peel A	129	118	116		

	Equipt No: 167	Oper.: JC	Repair No.: 70	LabTests	_		F 185.25 FTB P			
DS-15	Equipt Type:						*119.00 139.15			
SO	Monitor: GH	Date Welded: 8/31/98	Date Tested: 9/4/98		ĮL	_		_	-	
	Mo	Date We	Date Te		Brk Type P/F	FTB F	FTB P	FTB F		
				ests	(,	153	150	150		
	96	-52		Field Tests	k Type P/F	FTB P	FTB P	FTB P		
	Date: 9/3/	Seam No:. S51	Tech: RL				125 F			
					Peel A	109	139	132		

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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		Equipt No: 111	Oper.: CG Repair No.: 73	ş	Sheer Brk Type P/F	FTB	FTB	FTB				Equipt No: 167	Oper.: JC Benair No: 74	I	Sheer Brk Type F	182.81 FTB P	FTB	FTB	FTB	181.12 FTB P		Equipt No: 111	Oper.: CG	Repair No.: 75		Brk Type F	FTB	FTB	FTB	180.18 FTB P	
		Fusion		LabTests	Brk Type P/F	FTB P			FTB P	FTB P		Fusion		LabTests	Brk Type P/F	FTB P		FTB P		FTB P		Fusion			Lal	e F				FTB P	FTB P
		Equipt Type: Fi			Peel B Bri			143.10 N		151.97		Equipt Type: Fi			Peel B Bri	139.32	133.17			156.17		Equipt Type: F								•	138.57
	DS-16		98 8		Peel A	152.27	150.47	*131.07	150.55	141.20	DS-17		ω α		Peel A	144.10	140.65	145.20	134.85	146.65	DS-18		8	8		Peel A	156.82	153.52	158.25	155.32	148.17
		Monitor: GH	Date Welded: 8/31/98 Date Tested: 9/4/98		P/F	<u> </u>	۵.	۵	_			Monitor: GH	Date Welded: 9/1/98	_	P/F	۵	۵.	۵				Monitor: GH	Date Welded: 9/1/98	Date Tested: 9/4/98		P/F	<u> </u>	<u> </u>			
			Date Date		Brk Type	FTB	FTB	FTB					Date		Brk Type	HB.	FTB	FTB					Date	Date		Brk Type	FTB	FT8	FTB		
05.061				sts	Sheer	160	155	155						Sta	Sheer	176	166	160							sts	Sheer	167	160	155		
Project No.: 40202-005.061				Field Tests		۵.								Field Tests		۵.									Field Tests	ш.	3				
Project		Date: 9/3/98	Seam No:. S31-53 Tech: RL		Peel B Brk Type	129 FTB		129 FTB				Date: 9/3/98	Seam No:. S53-54	1001	Peel B Brk Type							Date: 9/3/98	Seam No:. S54-55	Tech: RL		Peel B Brk Type		11 FTB	113 FTE		
			Sear		Peel A Pee								Sean		Peel A Pee		134 13						Sean			Peel A Pee					

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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		167	JC	9	<u> </u>	adk i ybe	FTB	FTB	FTB	FTB	FTB		111	cg	77		Brk Type	FTB	FTB	FTB	FTB	FTB		187	BS	78		Brk Type	FTB	FTB	FTB	FTB	FTB
		Equipt No: 167	Oper.: JC	nepali No	ć	Olleel	173.81	174.12	175.00	173.87	172.37		Equipt No: 111	Oper.: CG	Repair No.: 77		Sheer	170.75	168.18	170.25	168.18	168.62		Equipt No: 187	Oper.: BS	Repair No.: 78		Sheer	171.43	170.43	172.43	160.37	171.06
					LabTests	L	<u>α</u>	<u></u>	ᡅ	۵	ட					LabTests	P/F	ᇫ	۵	۵	۵	ᅀ					LabTests	P/F	_	_	۵	۵	۵
		Fusion			ή 1	olk lype	FT8	FTB	FTB	FTB	NFTB		Fusion				Brk Type	FTB	ETB	HB	FTB	FTB		Fusion				Brk Type	FTB	ETB	FTB	FTB	FTB
		Equipt Type:			7	0	141.45	138.92	139.82	138.57	138.60		Equipt Type: Fusion				Peel B	144.80	144.40	137.75	132.02	136.77		Equipt Type:				Peel B	142.82	135.70	135.30	143.25	147.05
	DS-19	ш			7	۲ ا	133.15	139.02	138.07	140.20	*107.2	DS-20					Peel A	138.62	135.42	140.97	138.42	136.85	DS-21	ш				Peel A	127.00	124.40	138.67	140.27	127.82
	ă	GH.	9/1/98	3/4/30										9/1/98	9/4/98							,	ă	GH	9/1/98	9/4/98							
		Monitor: GH	Date Welded: 9/1/98	ie i esieu.	Ĺ	1	۵.	凸	۵				Monitor: GH	Date Welded: 9/1/98	Date Tested: 9/4/98		P/F	۵	۵.	Д.				Monitor: GH	Date Welded: 9/1/98	Date Tested: 9/4/98		P/F	Д	۵	Д		
			Dat	, La	ř ř	ork iybe	FTB	FTB	FTB					Dat	Da		Brk Type	FTB	FTB	FTB					Dat	Da		Brk Type	FTB	FTB	FTB		
191					d	Sileer	170	176	160								Sheer	175	166	165								Sheer	159	150	149		
Project No.: 40202-005.061					Field Tests	L/1	ሲ	凸	۵.							Field Tests	P/F	凸	ட	₾							Field Tests	P/F	۵	凸	۵.		
Project No.:		Date: 9/3/98	S55-56	į	f	prk Iype	HB B	FTB	FTB				Date: 9/3/98	S56-57	RL		Brk Type	FTB	FTB	FTB				Date: 9/3/98	S57-58	RL		Brk Type	FTB	FTB	FTB		
		Date:	Seam No:. S55-56	Lecil. PL	-	Leel D	125	123	125				Date:	Seam No:. S56-57	Tech: RL		Peel B	132	121	119				Date:	Seam No:. S57-58	Tech: RL		Peel B	117	127	125		
					5	Feel A	132	134	128								Peel A	125	123	122								Peel A	133	125	117		

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Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No.: 40202-005.061

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					P/F	凸	۵	<u>α</u> .	₽	₾						P/F	Д	凸	₫	۵	Д					
	167	20	79		Brk Type	FTB	FTB	FTB	FTB	FTB		111	5	80		Brk Type	FTB	FTB	FTB	FTB	FTB		187	BS	81	
	Equipt No: 167	Oper.: JC	Repair No.: 79		Sheer	177.06	177.75	176.87	172.37	174.68		Equipt No: 111	Oper.: JC	Repair No.: 80		Sheer	166.37	168.25	165.75	163.68	165.31		Equipt No: 187	Oper.: BS	Repair No.: 81	
				LabTests	P/F	۵	a .	₾	₾	۵					LabTests	P/F	ᇫ	凸	۵.	۵.	凸					LabTests
	Fusion				Brk Type	FTB	НВ	FTB	FTB	FTB		Fusion				Brk Type	ETB	FTB	FTB	ᇤ	FTB		Fusion			
	Equipt Type: Fusion				Peel B	142.95	148.30	138.50	135.10	138.65		Equipt Type:				Peel B	151.40	151.52	161.22	164.55	155.70		Equipt Type:			
DS-22	ш				Peel A	124.80	128.90	126.87	146.02	138.54	DS-23	Ш				Peel A	139.72	114.47	118.22	139.87	131.97	DS-24				
Sa	GH	9/1/98	9/4/98								Sa	GH	9/1/6	9/4/98								ă		9/2/98	9/4/98	
	Monitor: GH	Date Welded: 9/1/98	Date Tested: 9/4/98		P/F	۵	۵	С.				Monitor: GH	Date Welded: 9/1/98	Date Tested: 9/4/98		P/F	۵	۵	۵.				Monitor: GH	Date Welded: 9/2/98	Date Tested: 9/4/98	
		Da	Ď		Brk Type	FTB	FTB	FTB					Dai	Ď		Brk Type	FTB	FTB	FTB					Da	۵	
					Sheer	177	170	166								Sheer	178	168	166							
				Field Tests	P/F	۵	۵	۵							Field Tests	P/F	۵	凸	۵							Field Tests
	Date: 9/3/98	S58-59	R		Brk Type	FTB	FTB	FTB				Date: 9/3/98	S61-62	RL		Brk Type	FTB	FTB	FTB				Date: 9/3/98	S62-63	占	
	Date:	Seam No:. S58-59	Tech: RL		Peel B	124	118	134				Date:	Seam No:. S61-62	Tech: RL		Peel B	119	140	136				Date:	Seam No:	Tech: RL	
					Peel A	120	127	114								Peel A	116	120	122							

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P/F P P P P P P

Brk Type FTB FTB FTB FTB FTB

Sheer 166.25 169.68 168.18 165.18

P/F P P P P P P

Brk Type FTB FTB FTB FTB FTB

Peel B 137.27 137.05 158.67 141.95 135.80

Peel A 121.85 127.10 139.27 140.22 131.17

P/F P P P

Brk Type FTB FTB FTB

Sheer 146 130 149

F - - - -

Brk Type FTB FTB FTB

Peel B 138 131 121

Peel A 128 138 110

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Brk Type FTB FTB FTB FTB FTB Equipt No: 111 Oper.: BS Repair No.: 82 Sheer 163.50 156.93 160.81 161.06 164.62 Facility: East Partial Closure LabTests Brk Type FTB FTB FTB FTB FTB Equipt Type: Fusion 128.52 129.10 130.10 122.62 Peel B 124.50 Peel A 147.85 140.30 139.47 134.37 DS-25 Monitor: GH Date Welded: 9/2/98 Date Tested: 9/4/98 P P P P Brk Type FTB FTB FTB Project: Hidden Valley Landfill Sheer 158 149 150 Project No.: 40202-005.061 Field Tests ₽,4 P P P P Brk Type FTB FTB FTB Seam No:. S64-65 Date: 9/3/98 Tech: RL Peel B 129 121 125 Peel A 127 117 139

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F	brk Iype	FTB	FTB	FTB	FTB	FTB		167	2	06		Brk Type	FTB	FTB	FTB	FTB	FTB			111	BS	91		Brk Type	FTB	FTB	FTB	FTB	FTB	
ō	Sheer	163.50	156.93	160.81	161.06	164.62		Equipt No: 167	Oper.: JC	Repair No.: 90		Sheer	174.05	177.52	175.37	179.18	180.43			Equipt No: 111	Oper.: BS	Repair No.: 91		Sheer	190.56	189.87	192.37	190.78	190.75	
) (т. Т	۵	۵.	۵	۵.	۵					LabTests	P/F	۵	ᇫ	۵	۵	۵						LabTests	P/F	۵.	۵	凸	۵.	۵	
H	Brk Iype	FTB	FTB	FTB	FTB	FTB		Fusion				Brk Type	FTB	FTB	FTB	FTB	FTB			Fusion				Brk Type	FTB	FTB	FTB	FTB	FTB	
	Peel B	124.50	128.52	129.10	130.10	122.62		Equipt Type:				Peel B	126.52	132.37	133.15	116.37	126.05			Equipt Type:				Peel B	147.42	155.62	161.77	164.10	167.22	
	Peel A	147.85	140.30	139.47	134.37	141.35	DS-26	ш				Peel A	140.85	127.45	120.87	138.80	140.77		DS-27	_				Peel A	147.65	151.10	161.70	151.15	142.85	
								GH	9/4/98	86/6/6									۵	GН	9/4/98	86/6/6								
ļ	P/F	Δ.	۵	۵.				Monitor: GH	Date Welded: 9/4/98	Date Tested: 9/9/98		P/F	۵.	۵	۵					Monitor: GH	Date Welded: 9/4/98	Date Tested:		P/F	Д	۵.	а.			
1	Brk Type	FTB	FTB	FTB					Date	Dai		Brk Type	FTB	FTB	FTB						Dat	Da		Brk Type	FTB	FTB	FTB			
i	Sheer	158	149	150								Sheer	186	187	180									Sheer	199	187	190			
1,11	P/F	۵	۵.	۵							Field Tests	P/F	۵	۵.	۵								Field Tests	P/F	۵	۵	۵			
				FTB				Date: 9/7/98	263-67	R		Brk Type	FTB	FTB	FTB					Date: 9/7/98	S67-68	RL		Brk Type	Ē	FTB	FTB			
	Peel B	129	121	125				Date:	Seam No:. S63-67	Tech: RL		Peel B	136	138	152					Date:	Seam No:. S67-68	Tech:		Peel B	154	144	140			
	Peel A	127	117	139								Peel A	135	191	126									Peel A	144	145	139			

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								P/F	۵.	۵	Д.	۵	۵						P/F	₫	₫	ᡅ	۵	凸	1					P/F	۵	۵	<u>α</u> .	۵	۵	١
			1	16/ 15	၁	92		Brk Type	FTB	FTB	FTB	FTB	FTB		11	BS	93		Brk Type	FTB	FTB	FTB	FTB	FTB		167	<u></u>	94		Brk Type	FTB	FTB	FT8	FTB	FTB	
	Facility: East Partial Closure			Equipt No: 167	Oper.: JC	Repair No.: 92		Sheer	189.75	190.68	186.68	188.37	152.93		Equipt No: 111	Oper.: BS	Repair No.: 93		Sheer	193.10	192.13	195.16	194.08	194.81		Equipt No: 167	Oner . IC	Repair No.: 94	1	Sheer	192.43	193.18	190.16	192.68	188.37	
ဖွ	ast Partia						LabTests	P/F	о_	۵	Д.	₾	۵.					LabTests	P/F	۵	₾	ᇫ	۵	۵					LabTests	P/F	۵	۵	۵	۵	۵	
r Result	Facility: E			Fusion				Brk Type	HB	FTB	FTB	FTB	FTB		Fusion				Brk Type	FTB	FTB	FTB	FTB	FTB		Fusion				Brk Type	FTB	FTB	FTB	FTB	FTB	
AM TEST			£	equipt Type:				Peel B	125.85	151.42	138.30	155.40	163.60		Equipt Type:				Peel B	132.92	147.85	138.82	132.28	116.60		Equipt Type:	;			Peel B	149.12	164.32	149.92	160.70	149.30	
LE C-2g CTIVE SE				Ū				Peel A	148.40	128.67	141.12	138.60	122.97	DS-29					Peel A	143.02	150.10	149.45	150.00	149.95	DS-30					Peel A	146.07	160.60	136.12	150.05	139.20	
TABI		ľ		H 5	9/4/98	86/6/6										9/4/98	86/6/6										9/4/98	86/6/6								
ANE DI				Monitor: GH	Date Welded: 9/4/98	Date Tested: 9/9/98		P/F	۵.	Д	Д.				Monitor: GH	Date Welded: 9/4/98	Date Tested: 9/9/98		P/F	۵	Д.	۵				Monitor: GH	Date Welded: 9/4/98	Date Tested: 9/9/98		P/F	Ъ	۵	۵			
TABLE C-29 GEOMEMBRANE DESTRUCTIVE SEAM TEST RESULTS					Date	Dat		Brk Type	FTB	FTB	FTB					Date	Dat		Brk Type	FTB	FTB	FTB					Date	Dat		Brk Type	FTB	FTB	FTB			
B	/ Landfill							Sheer	203	199	200								Sheer	180	193	178			ı					Sheer	206	200	190			
	Project: Hidden Valley Landfill	Project No.: 40202-005.061					Field Tests	P/F	۵	ட	۵.							Field Tests	P/F	۵	۵	۵.							Field Tests	P/F	۵	. 🗅	۵			
	Project:	roject No.:	9	Date: 9/7/98	69-898	RL		Brk Type	FTB	FTB	FTB					S69-70	꿈		Brk Type	FTB	FTB	FTB					270.71			Brk Type	Ë	E E	FTB			
(ı	Date:	Seam No:. S68-69	Tech: RL		Peel B	148	139	150				Date:	Seam No:. S69-70	Tech: RL		Peel B	152	159	199				Date:	Coam No. C70-71	Jedin No.: 37		Peel B	129	161	156			
	∵ 5							Peel A	128	161	135								Peel A	132	130	132								Peel A	145	148	141			

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Project: Hidden Valley Landfill

TABLE C-29 GEOMEMBRANE DESTRUCTIVE SEAM TEST RESULTS

Facility: East Partial Closure

		111	BS	95		Brk Type	НВ	FTB	FTB	FTB	FTB		167	2	96	
		Equipt No: 111	Oper.: BS	Repair No.: 95		Sheer	190.27	192.56	189.26	190.87	188.81		Equipt No: 167	Oper.:	Repair No.: 96	
					LabTests	P/F	۵	凸	۵.	础	<u>α</u>					Tabl
		Fusion				Brk Type	FTB	FTB	FTB	FTB	ELE BL		Fusion			
		Equipt Type: Fusion				Peel B	138.47	141.70	133.32	142.30	143.10		Equipt Type: Fusion			
	DS-31	Ш				Peel A	131.35	137.70	138.82	136.37	143.62	DS-32	ш			
	SQ	GH	9/4/98	86/6/6								SO	GH	9/4/98	86/6/6	
		Monitor: GH	Date Welded: 9/4/98	Date Tested: 9/9/98		P/F	۵	۵	۵				Monitor: GH	Date Welded: 9/4/98	Date Tested: 9/9/98	
			Date	Da		Brk Type	FTB	FTB	FTB					Dat	Da	
191						Sheer	196	190	188							
10202-005.0					Field Tests	P/F	凸	۵	₾							
Project No.: 40202-005.061		Date: 9/7/98	SS71-72	Tech: RL		Brk Type	FTB	FTB	FTB				Date: 9/7/98	S72-73	님	1
		Date:	Seam No:	Tech:		Peel B	140	147	199				Date:	Seam No.: S72-73	Tech: RL	
						Peel A	134	145	152							

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Brk Type FTB FTB FTB FTB FTB

Sheer 189.43 190.62 191.12 190.75

P, 9 9 9 9

Brk Type FTB FTB FTB FTB FTB

Peel B 167.62 150.43 155.31 155.12

Peel A 145.43 156.31 147.37 157.37

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Brk Type FTB FTB FTB

Sheer 205 190 195

P, P

Brk Type FTB FTB FTB

Peel A 157 146 134

Peel B 113 138 134

LabTests

						DS-33	33						
Date	Date: 9/7/98				Monitor: GH	GH	Ш	Equipt Type:	Fusion		Equipt No: 111	111	
in No:	. S74-75			Date	Date Welded: 9/5/98	9/2/6					Oper.:	BS	
Tech	: RL			Da	Date Tested: 9/9/98	86/6/6					Repair No.: 97	97	
		Field Tests								LabTests			
Peel B		P/F	Sheer	Brk Type	P/F		Peel A	Peel B	Brk Type	P/F	Sheer	Brk Type	P/F
165	FTB	۵	218	E B	۵.		161.87	148.37	FTB	۵	198.12	FTB	۵
155		<u>a</u>	200	FTB	۵		158.90	136.93	FTB	ᡅ	194.25	FTB	۵.
141		۵	199	FTB	۵		161.12	144.18	FTB	Δ.	198.81	FTB	۵.
							153.50	141.25	FTB	۵.	197.31	FTB	۵
							160.56	158.06	FTB	۵	199.62	FTB	Ь

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Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No.: 40202-005.061

Peel A 154 149 152 Peel A 154	Date: 9/7/98 Seam No.: S76-77 Tech: RL Peel B Brk Type 147 FTB 159 FTB 163 FTB 163 FTB Peel B Brk Type 130 FTB		Field Tests P/F P P Field Tests P/F Field Tests	Sheer 200 Sheer 200 Sheer 200 Sheer 200 200 200 200 200 200 200 200 200 20	Dat	Monitor: GH Date Welded: 9/3/98 P P P P P P P P P P P P P P P P P P P	DS-33		Equipt Type: Fusion Peel B Brk Type 143.00 FTB 148.25 FTB 152.75 FTB 150.31 FTB 151.75 FTB 151.75 FTB 161.75 FTB 161.75 FTB 161.75 FTB	Fusion	LabTests P/F P P P P P P P P P P P P P P P P P P	Equipt No: 111 Oper.: BS Repair No.: 98 Sheer Bri 193.25 190.87 192.56 189.00 189.43 Equipt No: 111 Oper.: FM Repair No: 99 Sheer Bri 197.12		X	
127	199	FTB	۵.	190	FTB	۵	÷÷·	149.31	132.37	8T E	<u>ር</u> ይ 1	197.93	8E 1	a a (
							, -	145.81	138.68	E	۵.	195.00	FTB	۵	

							DS-36						
	Date	Date: 9/15/98				Monitor: GH	GH GH	Equipt Type:	Fusion		Equipt No: 111	111	
	Seam No:	. S86-87			Date	Date Welded: 9/11/98	9/11/98				Oper.:	ΕM	
	Tech: RL	. R.			Daf	Date Tested: 9/16/98	9/16/98				Repair No.: 156	156	
			Field Tests							LabTests			
Peel A	Peel B	Brk Type	P/F	Sheer	Brk Type	P/F	/ Peel /		Brk Type	P/F	Sheer	Brk Type	P/F
130	138	FTB	۵	150	FTB	۵	150.7.		FTB	₽	181.43	FTB	<u>ا</u>
129	192	ETB	۵	151	FTB	۵	150.90	0 150.90	FTB	۵	183.87	FTB	Д.
119	131	FTB	۵	160	FTB	Ъ	145.3		FTB	Д	183.00	FTB	Д
							152.4;		FTB	۵	182.43	FTB	Д
							152.3		FTB	۵	183.62	FTB	Ъ

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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					P/F	凸	凸	۵	凸	۵						P/F	凸	۵	۵	۵	۵						P/F	凸	Ъ	凸	<u>а</u> 1	о.
		187	JC 157		Brk Type	FTB	FTB	FTB	FTB	ETB		187	JC	158		Brk Type	FTB	FTB	FTB	FTB	FTB		187	5	159		Brk Type	FTB	FTB	FTB	H H	FTB
		Equipt No: 187	Oper.: JC Repair No.: 157		Sheer	174.50	174.81	173.68	174.40	170.18		Equipt No: 187	Oper.: JC	Repair No.: 158		Sheer	179.25	180.87	181.63	177.68	178.43		Equipt No: 187	Oper.: JC	Repair No.: 159		Sheer	179.68	183.76	179.12	180.60	184.06
				LabTests	P/F	Д.	凸	ቤ	۵	۵					LabTests	P/F	<u>а</u>	۵	۵	┙	۵				- 1	LabTests	P/F	ᡅ	۵	₾	<u>a</u> 1	<u>а</u>
		Fusion			Brk Type	FTB	FTB	FTB	FTB	FTB		Fusion				Brk Type	FTB	EE EE	FTB	FTB	F18		Fusion				Brk Type	FTB	FTB	E E	FTB	EL
		Equipt Type:			Peel B	135.27	136.12	143.80	143.35	137.30		Equipt Type:				Peel B	156.05	151.42	161,55	161.87	155.97		Equipt Type:				Peel B	135.12	142.92	143.92	152.95	160.50
	37	Ш			Peel A	137.62	139.32	139.97	125.70	123.00	38	Щ				Peel A	147.13	159.27	154.80	145.25	150.30	99			1		Peel A	143.37	147.40	142.75	151.20	152.72
	DS-37	GН	9/11/98 9/16/98								DS-38	GH	9/15/98	9/16/98								DS-39		9/12/98	86/91/6							
		Monitor: GH	Date Welded: 9/11/98 Date Tested: 9/16/98		P/F	۵	۵	۵				Monitor: GH	Date Welded: 9/12/98	Date Tested: 9/16/98		P/F	Δ.	۵	۵				Monitor: GH	Date Welded: 9/12/98	Date Tested: 9/16/98		P/F	۵	Δ.	۵		
			Date		Brk Type	FTB	FTB	FTB					Dat	Da		Brk Type	FTB	FTB	FTB					Dat	Da		Brk Type	FTB	FTB	FTB		
191					Sheer	162	160	150								Sheer	168	170	165								Sheer	131	123	121		
40202-005.0				Field Tests	P/F	₾	۵.	۵							Field Tests	P/F	۵.	۵.	۵							Field Tests	P/F	۵	۵.	⊾		
Project No.: 40202-005.061		Date: 9/15/98	S89-90 RL		Brk Type	FTB	FTB	FTB				Date: 9/15/98	86-268	R		Brk Type	FTB	FTB	FTB				Date: 9/15/98	S99-100	님		Brk Type	FTB	FTB	FTB		
Р		Date:	Seam No:. S89-90 Tech: RL		Peel B	100	131	143				Date:	Seam No:. S97-98	Tech: RL		Peel B	138	146	132				Date:	Seam No:. S99-100	Tech: RL		Peel B	121	129	138		
					Peel A	130	107	106								Peel A	137	136	131								Peel A	129	132	130		

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artial Closure		Equipt No: 187 Oper.: JC	Repa		Sheer Brk Type F	FTB	FTB	185.75 FTB P		185.19 FTB P		Found No. 111	Oper:: FM	Repair No.: 161	۱	Sheer Brk Type P/F	FTB		164.47 FTB P	167.05 FTB P	174.20 FTB P		Equipt No: 187	Oper.: JC	Hepair No.: 162	j.	Sneer Brk lybe r	. H		FTB	FTB		
Facility: East Partial Closure	11	Equipt Type: Fusion		La	Brk Type F	FTB	135.80 FTB P	151.87 FTB P	141.00 FTB P	160.30 FTB P		Equipt Tyne: Fusion			LabTests	ē			151.27 FTB P	144.02 FTB P	152.95 FTB P		Equipt Type: Fusion			La	Feel BIK IVPe P/F	NET B		NFTB	NFTB		1.20 m
	DS-40		Date Tested: 9/16/98				140.92	142.85	140.02	146.30	DS-41		86/6	Date Tested: 9/16/98		Peel A	138.17	140.07	160.40	143.00	139.05	DS-42	Monitor: GH Eq	Date Welded: 9/13/98	Date Tested: 9/16/98		Feel A	Tailure	Failure	Failure			
'Landfill		Mon Date Welc	Date Tes		Brk Type F	FTB	162 FTB P	FTB				Mon	Date Welc	Date Tes		Sheer Brk Type P/F	ETB:						Mon	Date Welc	Date Tes		Φ		140 FTB P	<u>.</u>			
Project: Hidden Valley Landfill Project No.: 40202-005.061		Date: 9/15/98 Seam No:. S101-102	Tech: RL	Field Tests	3 Brk Type F		144 FTB P	FIB				Date: 0/15/08	Seam No: S103-115	Tech: RL	Field Tests	Peel B Brk Type P/F	FTB		FTB				Date: 9/15/98	Seam No:. S105-118	Tech: RL	Fiel	3 Brk Type F						
EMCOU		Š			∢	131	123	121					ĝ,	3		Peel A		124	125					Se			-	- c	801	3			

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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						P/F	۵.	۵.	۵	۵.	۵							P/F	凸	۵.	┙	Д	۵			
		111	BS	187		Brk Type	FTB	FTB	FTB	FTB	FTB			111	BS	188		Brk Type	FTB	FTB	FTB	FTB	FTB			
		Equipt No: 111	Oper.: BS	Repair No.: 187		Sheer	170.10	171.97	173.75	172.27	169.70			Equipt No: 111	Oper.: BS	Repair No.: 188		Sheer	171.30	172.35	171.95	172.40	170.77			
					LabTests	P/F	۵	۵	۵	Ь	۵						LabTests	P/F	Д	Ъ	凸	₾.	۵			
		Fusion				Brk Type	FTB	FTB	FTB	FTB	FTB			Fusion				Brk Type	FTB	FTB	FTB	FTB	FTB			
		Equipt Type: Fusion				Peel B	142.05	130.45	131.67	137.07	128.92			Equipt Type: Fusion				Peel B	128.82	118.57	130.47	119.75	112.82			
	42A	Ш				Peel A	124.32	130.35	130.75	133.10	136.07		DS-42B					Peel A	136.20	135.65	138.92	137.02	140.00			
	DS-45	GH	9/13/98	9/21/98									-SO		9/13/98	9/21/98										
		Monitor: GH	Date Welded: 9/13/98	Date Tested: 9/21/98		P/F	<u>a</u>	۵	۵					Monitor: GH	Date Welded: 9/13/98	Date Tested: 9/21/98		P/F	۵	<u>ь</u>	۵					
			Date	Dat		Brk Type	FTB	FTB	FTB						Date	Da		Brk Type	FTB	FTB	FTB					
161						Sheer	158	160	160									Sheer	172	169	157			Ý		
40202-005.0					Field Tests	P/F	Д.	۵	Д.								Field Tests	P/F	₾	۵	₾					
Project No.: 40202-005.061		Date: 9/20/98	S105-118	RL		Brk Type	FTB	FTB	FTB					Date: 9/20/98	S105-108	R		Brk Type	FTB	FTB	FTB					
T T		Date:	Seam No:. S105-118	Tech: RL		Peel B	128	137	136					Date:	Seam No:	Tech: RL		Peel B	141	140	137					
Ī						Peel A	132	124	127									Peel A	128	130	132					

Logged By: Glenn Heath

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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		111	BS	163		Brk Type	FTB	FTB	FTB	FTB	FTB			111	BS	164		Brk Type	FTB	FTB	FTB	FTB	FTB			187	ပ္ မ်	CQI	i i	ork Type FTB	FTB	FTB	FTB	FTB			
		Equipt No: 111	Oper.: BS	Repair No.: 163		Sheer	159.43	159.60	159.62	158.63	160.81			Equipt No: 111	Oper.: BS	Repair No.: 164		Sheer	164.93	169.23	169.81	164.10	169.97			Equipt No: 187	Oper.: JC	Repair No.: 165		Sneer 173.16	179.56	177.37	176.63	173.52			
					LabTests	P/F	Д	₫	Д.	۵	凸						LabTests	P/F	۵	ட	ட	D.	۵						Labrests	, F	۵	۵	ш	۵.		Leveled	
		Fusion				Brk Type	FTB	FTB	FTB	FTB	FTB			Fusion				Brk Type	FTB	NFTB	NFTB	FTB	FTB			Fusion			1	Bir Type	FTB	FTB	NFTB	HB		Ì	
		Equipt Type:				Peel B	135.81	145.43	135.00	135.43	136.50			Equipt Type:				Peel B	128.62	*132.25	126.87	149.13	135.81			Equipt Type:				Peel B 125.96	121.56	122.43	113.00	131.37		Checked Bv:	
	DS-43	ш				Peel A	150.18	147.00	142.56	150.93	149.12		DS-44	ш				Peel A	129.53	133.31	*115.06	130.31	131.81		DS-45				:	Peel A 139.97	131.31	141.93	*116.9	138.75			
	۵	GH	9/13/98	9/16/98									Δ	GH	9/14/98	9/16/98								-111	Δ	GН	9/12/98	86/91/6									
		Monitor: GH	Date Welded: 9/13/98	Date Tested: 9/16/98		P/F	۵	<u>n</u>	Δ.					Monitor: GH	Date Welded: 9/14/98	Date Tested: 9/16/98		P/F	۵	۵	۵.					Monitor: GH	Date Welded: 9/12/98	Date Tested: 9/16/98		ξ <u>σ</u>							
			Dat	Da		Brk Type	FTB	FTB	FTB						Dat	Da		Brk Type	FTB	FTB	FTB						Dat	Da		Brk lype FTB	ETB	FTB					
961						Sheer	135	138	133									Sheer	128	132	130									Sheer	160	159					
40202-005.0					Field Tests	P/F	۵	۵	۵								Field Tests	P/F	۵	۵	Δ								Field Tests	P/F	. 🗅	. a.				Ŧ	
Project No.: 40202-005.061		Date: 9/15/98	Seam No:. S119-120	FI		Brk Type	FTB	FTB	FTB					Date: 9/15/98	Seam No.: S121-122	H		Brk Type	FTB	FTB	FTB					Date: 9/15/98	S71-99	RL		Brk Type	H H	1 E	l -			Located By: Glenn Heath	. GIGHT 1104
EMCON		Date:	Seam No:	Tech: RL		Peel B	119	130	122					Date:	Seam No:	Tech: RL		Peel B	119	118	112					Date	Seam No:. S71-99	Tech: RL		Peel B	3 5	114				- Popper	Logger
, j						Peel A	120	127	114									Peel A	108	107	103									Peel A	2 9	2 5	:				

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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		167	CG	166		Brk Type	FTB	FTB	FTB	FTB	FTB		187	20	167		Brk Type	FTB	FTB	FTB	FTB	FTB		111	FM	168		Brk Type	FT 8	FTB	FTB	FTB	HB
		Equipt No: 167	Oper.: CG	Repair No.: 166		Sheer	169.37	171.06	160.81	168.50	169.56		Equipt No: 187	Oper.: JC	Repair No.: 167		Sheer	183.62	182.62	182.47	181.37	183.13		Equipt No: 111	Oper.: FM	Repair No.: 168		Sheer	177.07	174.65	175.82	169.87	172.70
					LabTests	P/F	凸	₾	۵	凸	۵					LabTests	P/F	۵	۵	۵	۵	۵					LabTests	P/F	۵.	۵	₾	۱ ۵	<u>.</u>
		Fusion				Brk Type	FTB	FTB	ETB	HB HB	FTB		Fusion				Brk Type	FTB	ETB	EE.	FTB	FTB		Fusion				Brk Type	FTB	FTB	FTB	FTB	HB HB
		Equipt Type:				Peel B	126.31	150.87	149.68	138.25	165.75		Equipt Type:				Peel B	136.57	149.57	129.56	130.17	138.12		Equipt Type:				Peel B	140.05	129.37	134.32	139.49	137.23
	46	Ш				Peel A	134.97	130.00	134.37	132.56	131.68	47	Ш				Peel A	144.37	144.60	131.68	131.25	142.30	48	Ш				Peel A	144.62	141.37	143.31	141.56	145.57
	DS-46	GH	9/12/98	9/16/98								DS-47	H5	9/12/98	9/16/98								DS-48	GH	9/14/98	9/16/98							
	-SO	Monitor: GH	: Welded: 9/12/98	e Tested: 9/16/98		P/F	<u>a</u>	_				-SO	Monitor: GH	: Welded: 9/12/98	e Tested: 9/16/98		P/F	۵	۵.	۵.			SO	Monitor: GH	Welded: 9/14/98	e Tested: 9/16/98		P/F		<u> </u>	۵		
	-SQ	Monitor: GH	Date Welded: 9/12/98	Date Tested: 9/16/98			FTB P					-SO	Monitor: GH	Date Welded: 9/12/98	Date Tested: 9/16/98		Brk Type P/F		FTB P				DS	Monitor: GH	Date Welded: 9/14/98	Date Tested: 9/16/98		ē		FTB P			
)61	-SO	Monitor: GH	Date Welded: 9/12/98	Date Tested: 9/16/98		r Brk Type	FTB	FTB	FTB			-SO	Monitor: GH	Date Welded: 9/12/98	Date Tested: 9/16/98			FTB	FTB				SO	Monitor: GH	Date Welded: 9/14/98	Date Tested: 9/16/98			FTB	FTB			
40202-005.061	-SO	Monitor: GH	Date Welded: 9/12/98	Date Tested: 9/16/98	Field Tests	Sheer Brk Type	FTB	148 FTB	144 FTB			-SO	Monitor: GH	Date Welded: 9/12/98	Date Tested: 9/16/98	Field Tests	Brk Type	158 FTB	FTB	157 FTB			SO	Monitor: GH	Date Welded: 9/14/98	Date Tested: 9/16/98	ssts	Brk Type	147 FTB	147 FTB	148 FTB		
Project No.: 40202-005.061	SO					P/F Sheer Brk Type	P 145 FTB	P 148 FTB	144 FTB			·SO				Field Tests	Sheer Brk Type	P 158 FTB	155 FTB	P 157 FTB			SO			Date Tested:		e P/F Sheer Brk Type	P 147 FTB	147 FTB	P 148 FTB		
Project No.: 40202-005.061	SO		06-107	Tech: RL Date Tested: 9/16/98		P/F Sheer Brk Type	FTB P 145 FTB	FTB P 148 FTB	P 144 FTB			SO	Date: 9/15/98 Monitor: GH	Seam No.: S113-112 Date Welded: 9/12/98			P/F Sheer Brk Type	P 158 FTB	FTB P 155 FTB	FTB P 157 FTB			SO	Date: 9/15/98 Monitor: GH	17-124	Tech: RL Date Tested: 9/16/98		P/F Sheer Brk Type	FTB P 147 FTB	P 147 FTB	FTB P 148 FTB		

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Project: Hidden Valley Landfill

Facility: East Partial Closure

	DS-49	Monitor: GH Equipt Type: Fusion Equipt No: 187	Date Tested: 9/22/98 Repa	Field Tests LabTests	P/F Sheer Brk Type P/F Peel A Peel B Brk Type P/F Sheer Brk Type F	P 178 FTB P 141.72 142.85 FTB P 170.62	P 180 FTB P 154.12 141.92 FTB P 172.25 FTB	P 185 FTB P 146.70 131.17 FTB P 171.75 FTB	138.62 141.35 FTB P 172.25 FTB	170.43 FTB		Monitor: GH Equipt Type: Fusion Equi	Date Welded: 9/15/98	Date Tested: 9/22/98 Repair No.: 219	Field Tests LabTests	P/F Sheer Brk Type P/F Peel A Peel B Brk Type P/F Sheer Brk Type F	P 180 FTB P 160.22 139.52 FTB P 191.82	P 190 FTB P 128.97 145.75 FTB P 190.81 FTB	P 193 FTB P 162.50 132.90 FTB P 191.56 FTB	140.70 FTB P 192.68 FTB	FTB P 191.56 FTB	77 THE	DS-51	Monitor: GH Equipt Type: Fusion Equi	Date Welded: 9/17/98	Dale Testeu, 9/2/30	Field Lests	P 176 FTB P 122.77 137.77 FTB P 169.42 FTB	P 175 FTB P 131.45 141.10 FTB P 168.82	P 180 FTB P 150.65 123.85 FTB P 166.60 FTB	166.37 FTB	FTB P 165.82 FTB		All w	
Project No.: 40202-005.061		Date: 9/20/98	Seam No:: S137-145 Tech: RL		Sheer	P 178		FTB P				Date: 9/20/98	Seam No:. S129-130	Tech: RL		Sheer	FTB P 180		FTB P					Date: 9/20/98	Seam No.: S145-146	Iecn: RL	Choor	FTB P 176	FTB P	FTB P					
					Peel A	130	110	126								Peel A	120	119	130								7 700	140	126	129					

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Project: Hidden Valley Landfill

Facility: East Partial Closure

Project No.: 40202-005.061

	Equipt No: 167	Oper.: JC	Repair No.: 221		Brk Type F	170.37 FTB P	FTB	FTB	FTB	172.02 FTB P		Equipt No: 167	Oper.: JC	Repair No.: 222		Sheer Brk Type P/F	FTB	171.27 FTB P			169.97 FTB P		Equipt No: 111	Oper.: FM	Repair No.: 223	
	Equ		Repa	LabTests			F 17			•		Equ		Rep	LabTests	P/F S		P 17		•	·		Edr		Rep	LobTooto
	Fusion				Brk Type	FTB	NFTB	FTB	NFTB	FTB		Fusion				Brk Type	NFTB	FTB	FTB	FTB	FTB		Fusion			
	Equipt Type:				Peel B	117.90	*111.07	135.80	135.40	122.90		Equipt Type:				Peel B	131.15	138.75	131.92	126.42	132.92		Equipt Type:			
DS-52	ш				Peel A	143.35	144.77	118.32	*100.67	134.67	DS-53					Peel A	*83.55	101.50	85.60	103.50	107.37	DS-54				
D	GH	9/19/98	9/22/6								۵	GH	9/19/98	9/22/98								۵	GH	9/19/98	9/22/98	
	Monitor: GH	Date Welded: 9/19/98	Date Tested: 9/22/98		P/F	۵	۵	Д.				Monitor: GH	Date Welded: 9/19/98	Date Tested: 9/22/98		P/F	Д	۵.	<u>_</u>				Monitor: GH	Date Welded: 9/19/98	Date Tested: 9/22/98	
		Da	Ö		Brk Type	FTB	FTB	FTB					Da	ă		Brk Type	FTB	FTB	FTB					Da	Õ	
					Sheer	166	170	165								Sheer	160	166	165							
				Field Tests	P/F	۵.	<u>α</u>	<u>a</u> .							Field Tests	P/F	Δ.	۵.	۵							i
	Date: 9/20/98	S148-149	RL		Brk Type	FTB	FT B	FTB				Date: 9/20/98	S150-151	R	ı		FTB	FTB	FTB				Date: 9/20/98	Seam No.: S154-152	R.	
	Date:	Seam No:. S148-149	Tech: RL		Peel B	106	123	110				Date:	Seam No:.	Tech: RL		Peel B	125	132	120				Date:	Seam No:	Tech: RI	
					Peel A	110	120	130								Peel A	120	130	129							

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Brk Type FTB FTB FTB FTB FTB

Sheer 172.72 173.30 171.35 173.70 170.15

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145.45 135.47 134.75 134.92

Peel A 147.95 138.20 144.65 146.30

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Brk Type FTB FTB FTB

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Brk Type FTB FTB FTB

Peel B 98 120 119

100 110 115

Peel A

Sheer

Field Tests

LabTests

Brk Type NFTB

Peel B *110.1

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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		187	JC 224		Brk Type	FTB	FTB	FTB	FTB	FTB		187	JC 225		Brk Type	FTB	FTB	FTB	FTB	F TB		187	JC 226		Brk Type	FTB	FTB	FTB	FTB
		Equipt No: 187	Oper.: JC Repair No.: 224		Sheer	169.85	170.75	168.80	170.95	168.57		Equipt No: 187	Oper.: JC Repair No.: 225		Sheer	181.00	181.20	181.67	182.10	180.67		Equipt No: 187	Oper.: JC Repair No.: 226			177.40	178.05	176.82	176.85
				LabTests	P/F	۵.	۵	<u>α</u>	۵	۵				LabTests	P/F	۵	۵.	<u>α</u>	₾	۵				LabTests	P/F	Д	ᡆ	凸	۵
		Fusion			Brk Type	FTB	FTB	E E	FTB	FTB		Fusion			Brk Type	HB.	FTB	HB	HB	F18		Fusion			Brk Type	FTB	E E	FTB	FTB
		Equipt Type:			Peel B	138.47	148.22	149.87	141.05	113.40		Equipt Type:			Peel B	145.85	144.55	152.12	140.52	154.05		Equipt Type:			Peel B	140.97	153.52	137.80	150.70
	55	Ш			Peel A	147.62	129.55	142.20	150.00	145.82	.56				Peel A	149.42	144.00	154.17	150.15	136.60	-57				Peel A	136.15	150.10	130.25	135.52
	DS-55	GH	9/15/98 9/22/98								DS-56		9/17/98 9/22/98								DS-57		9/17/98						
		Monitor: GH	Date Welded: 9/15/98 Date Tested: 9/22/98		P/F	۵	۵	۵				Monitor: GH	Date Welded: 9/17/98 Date Tested: 9/22/98	i i	P/F	۵.	۵	۵				Monitor: GH	Date Welded: 9/17/98 Date Tested: 9/22/98		P/F	۵	۵	Д	
			Date Dat		Brk Type	FTB	FTB	FTB					Date		Brk Type	FTB	FTB	FTB					Date		Brk Type	FTB	FTB	FTB	
190					Sheer	170	165	180							Sheer	160	175	175							Sheer	170	170	190	
10202-005.0				Field Tests	P/F	۵	۵	۵.						Field Tests	P/F	Д	۵.	۵						Field Tests	P/F	۵	۵	۵.	
Project No.: 40202-005.061		Date: 9/20/98	S133-134 RL		Brk Type	FTB	FTB	FTB				Date: 9/20/98	S135-136 RL		Brk Type	ETB.	FTB	FIB				Date: 9/20/98	S137-138 BI		Brk Type	FTB	EHB	FTB	
P		Date:	Seam No:. S133-134 Tech: RL		Peel B	125	132	110				Date:	Seam No:. S135-136 Tech: BL		Peel B	130	125	118				Date:	Seam No.: S137-138 Tech: RI		Peel B	140	135	120	
j					Peel A	120	130	120							Peel A	133	129	130							Peel A	138	140	129	

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Project: Hidden Valley Landfill

Facility: East Partial Closure

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Project No.: 40202-005.061

₽/4 Ч Ч Ч Ч Ч Ч Brk Type FTB FTB FTB FTB Equipt No: 187 Oper.: JC Repair No.: 227 Sheer 171.90 172.00 171.85 171.15 172.07 LabTests P/F P P F F Brk Type FTB FTB FTB FTB FTB Equipt Type: Fusion Peel B 140.12 140.47 134.47 143.67 142.30 Peel A 140.45 149.62 146.95 *61.12 140.90 DS-58 Date Welded: 9/17/98 Date Tested: 9/22/98 Monitor: GH ₩ ₽ ₽ ₽ Brk Type FTB FTB FTB Sheer 160 170 166 Field Tests P/F 9 9 9 Brk Type FTB FTB FTB Date: 9/20/98 Seam No:. S139-140 Tech: RL Peel B 125 120 135 Peel A 120 124 139

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			Brk Type P/F	TB F	TB F	TB F	TB F	TB 8T	
Equipt No: 187	Repair No.: 228								
Equipt	Repair	s		171.90	172.	171.	171.	170.	
		LabTests	P/F	Д	凸	۵	۵	<u>α</u>	
Fusion			Brk Type	FTB	FTB	FTB	FTB	FTB	
Equipt Type: Fusion			Peel B	135.10	137.00	136.65	135.98	154.55	
			Peel A	146.32	142.47	120.67	147.55	152.42	
GH 9/17/98	9/22/98								
Monitor: GH	Date Tested: 9/22/98		P/F	۵	۵.	۵.			
Ç	Da	l							
			Brk Type	FTB	FTB	FTB			
				150 FTB					
		Field Tests							
9/20/98	. 01417142 . RL	Field Tests	P/F Sheer		P 155	P 165			
Date: 9/20/98	Jech: RL	Field Tests	Brk Type P/F Sheer	P 150	FTB P 155	FTB P 165			

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C-2h Geomembrane Repair Log



TABLE C-2h GEOMEMBRANE REPAIR LOG

Procject: Hidden Valley Landfill

Facility:

East Partial Closure

Project No. 40202-005.061

Repair No.	Date	Mon.	Description	Location	Repair Date	Test Date	Pass / Fail
1	8/13/98	GH	P24-TN	Filler Panel, Old liner to New	8/13/98	8/22/98	Pass
2	8/13/98	GH	Patch 3'X4'	Trench Bottom @ Tie-In	8/13/98	8/22/98	Pass
3	8/13/98	GH	Patch 4'X10'	Trench Bottom @ Tie-In	8/13/98	8/22/98	Pass
4	8/13/98	GH	Pump Station Boots	Panel 3, 5' N of Trench Bottom	8/22/98	8/22/98	Pass
5	8/13/98	GH	3 Cleanout Boots	Panel 17, 5' N of Trench Bottom	8/22/98	8/22/98	Pass
6	8/21/98	GH	3'X6' Patch	P14-15, 10ft South of AT, DS-1	8/22/98	8/22/98	Pass
7	8/21/98	GH	Patch, 3'X3'	S27-28, @ Top of berm, Burnout	8/22/98	8/22/98	Pass
8	8/21/98	GH	Patch, 3'X3'	S28-29, @ Top of berm, Burnout	8/22/98	8/23/98	Pass
9	8/21/98	GH	Patch, 2'X10'	S29-30, @ Top of berm, Burnout	8/22/98	8/23/98	Pass
10	8/21/98	GH	Boot	S27-28, @ Gas Extraction Well	8/22/98	8/23/98	Pass
11	8/21/98	GH	3'X6' Patch	S27-28, 215ft N of S toe, DS-2	8/22/98	8/23/98	Pass
12	8/21/98	GH	3'X6' Patch	S29-30, 348ft N of S toe, DS-3	8/22/98	8/23/98	Pass
13	8/21/98	GH	3'X6' Patch	S30-31, 75ft N of S toe, DS-4	8/22/98	8/23/98	Pass
14	8/21/98	GH	Boot	S31-32, @ Gas Extraction Well	8/23/98	8/23/98	Pass
15	8/22/98	GH	2'X3' Patch	S31-32, @ Top of berm, Burnout	8/23/98	8/23/98	Pass
16	8/22/98	GH	2'X2' Patch	S30-31, 160' S of Top of slope, Burnout	8/23/98	8/23/98	Pass
17	8/22/98	GH	2'X2' Patch	S32-33, 180' S of top of slope, Burnout	8/23/98	8/23/98	Pass
18	8/22/98	GH	3'X6' Patch	S33-34, @ Face of berm, Burnout	8/23/98	8/23/98	Pass
19	8/22/98	GH	Boot	S35-36, @ Gas Extraction Well	8/23/98	8/23/98	Pass
20	8/22/98	GH	2'X3' Patch	S36-37-44, Intersection	8/23/98	8/23/98	Pass
21	8/22/98	GH	2'X2' Patch	S37-38-44, Intersection	8/23/98	8/23/98	Pass
22	8/22/98	GH	2'X2' Patch	S38-39-44, Intersection	8/23/98	8/23/98	Pass
23	8/22/98	GH	2'X2' Patch	S39-43-44, Intersection	8/23/98	8/23/98	Pass
24	8/22/98	GH	2'X2' Patch	S39-42-43, Intersection	8/23/98	8/23/98	Pass
25	8/22/98	GH	2'X2' Patch	S39-41-42, Intersection	8/23/98	8/23/98	Pass
26	8/22/98	GH	2'X2' Patch	S39-40-41, Intersection	8/23/98	8/23/98	Pass
27	8/22/98	GH	2'X2' Patch	S44-45, 10' N of berm, Burnout	8/23/98	8/23/98	Pass
28	8/22/98	GH	4'X4' Patch	S44-45, @ top of berm, Burnout	8/23/98	8/23/98	Pass
29	8/22/98	GH	4X2' Patch	S4-5, 15' S of AT, DS-5	8/23/98	8/23/98	Pass
30	8/22/98	GH	4X2' Patch	S25-26, 30'N of toe, DS-6.	8/23/98	8/23/98	Pass
31	8/22/98	GH	3X6' Patch	S39-40, Trench to Roadway, Fill-in triangle	8/23/98	8/23/98	Pass

Specified Requirements:

Logged By: Glenn Heath 10 In. Hg.

Vacuum Pressure: Min. Dwell Time:

10 seconds

Checked By: Www



TABLE C-2h **GEOMEMBRANE REPAIR LOG**

Procject: Hidden Valley Landfill

Facility: East Partial Closure

Project No. 40202-005.061

Repair No.	Date	Mon.	Description	Location	Repair Date	Test Date	Pass / Fail
32	8/22/98	GH	3X4' Patch	S36-44-45, Intersection	8/23/98	8/23/98	Pass
33	8/31/98	GH	2'X2' Patch	S31-52-53, Intersection	9/3/98	9/3/98	Pass
34	8/31/98	GH	3X4' Patch	S32-52-53, Intersection	9/3/98	9/3/98	Pass
35	8/31/98	GH	3X4' Patch	S33-34-51, Intersection	9/3/98	9/3/98	Pass
36	8/31/98	GH	4X5' Patch	S34-35-36-45-51, Intersection	9/3/98	9/3/98	Pass
37	8/31/98	GH	2'X2' Patch	S45-46-51, Intersection	9/3/98	9/3/98	Pass
38	8/31/98	GH	3X4' Patch	S46-47-51, Intersection	9/3/98	9/3/98	Pass
39	8/31/98	GH	2'X2' Patch	S47-48-51, Intersection	9/3/98	9/3/98	Pass
40	8/31/98	GH	3X4' Patch	S48-49-51, Intersection	9/3/98	9/3/98	Pass
41	8/31/98	GH	2'X2' Patch	S49-50-51, Intersection	9/3/98	9/3/98	Pass
42	8/31/98	GH	2'X2' Patch	S33-51-52, Intersection	9/3/98	9/3/98	Pass
43	8/31/98	GH	2'X2' Patch	S45-46, 33ft N of toe, Burnout	9/3/98	9/3/98	Pass
44	8/31/98	GH	Boot	S46-47, @ Gas Extraction Well	9/3/98	9/3/98	Pass
45	8/31/98	GH	2X3' Patch	S30-31-55, Intersection	9/3/98	9/3/98	Pass
46	8/31/98	GH	2'X2' Patch	S31-53-55, Intersection	9/3/98	9/3/98	Pass
47	8/31/98	GH	2'X2' Patch	S31-53-54, Intersection	9/3/98	9/3/98	Pass
48	9/2/98	GH	2X3' Patch	S29-30-55-64, Intersection	9/3/98	9/3/98	Pass
49	9/2/98	GH	2'X2' Patch	S28-29-64-65, Intersection	9/3/98	9/3/98	Pass
50	9/2/98	GH	3X4' Patch	S27-28-65-66, Intersection	9/3/98	9/3/98	Pass
51	9/2/98	GH	3X3' Patch	S55-56-64, Intersection	9/3/98	9/3/98	Pass
52	9/2/98	GH	2X3' Patch	S56-57-64, Intersection	9/3/98	9/3/98	Pass
53	9/2/98	GH	2X3' Patch	S57-58-64, Intersection	9/3/98	9/3/98	Pass
54	9/2/98	GH	2X3' Patch	S58-59-64, Intersection	9/3/98	9/3/98	Pass
55	9/2/98	GH	Boot	P56, @ Gas Extraction Well	9/3/98	9/3/98	Pass
56	9/2/98	GH	Boot	S59-60, @ Gas Extraction Well	9/3/98	9/3/98	Pass
57	9/2/98	GH	2'X2' Patch	S56-57, 187ft W of Toe, Burnout	9/3/98	9/3/98	Pass
58	9/2/98	GH	3X4' Patch	S60-61, @ Top of Berm, Burnout	9/3/98	9/3/98	Pass
59	9/2/98	GH	3X6' Patch	S29-30, 358' N of S Toe, DS-3A	9/3/98	9/3/98	Pass
60	9/2/98	GH	3X6' Patch	S29-30, 338' N of S Toe, DS-3B	9/3/98	9/3/98	Pass
61	9/2/98	GH	Seam Cap	S29-30, 338' to 358' N of S toe	9/3/98	9/3/98	Pass
62	9/2/98	GH	3X6' Patch	S33-34, 126' S of N End, DS-7	9/3/98	9/3/98	Pass

Specified Requirements:

Vacuum Pressure:

10 In. Hg.

Min. Dwell Time:

10 seconds

Logged By: Glenn Heath

Checked By:



Procject: Hidden Valley Landfill

Facility:

East Partial Closure

Project No.

40202-005.061

Repair No.	Date	Mon.	Description	Location	Repair Date	Test Date	Pass / Fail
63	9/2/98	GH	3X6' Patch	S34-35, 50' N of S toe, DS-8	9/3/98	9/3/98	Pass
64	9/2/98	GH	3X6' Patch	S35-36, 60' S of N, DS-9	9/3/98	9/3/98	Pass
65	9/2/98	GH	3X6' Patch	S37-38, 10' S of N, DS-10	9/3/98	9/3/98	Pass
66	9/2/98	GH	3X6' Patch	S39-42, 6' S of N, DS-11	9/3/98	9/3/98	Pass
67	9/2/98	GH	3X6' Patch	S44-45, 175' N of S, DS-12	9/3/98	9/3/98	Pass
68	9/2/98	GH	3X6' Patch	S34-51, 10' S of N, DS-13	9/3/98	9/3/98	Pass
69	9/2/98	GH	3X6' Patch	S47-48, 25' W of E, DS-14	9/3/98	9/3/98	Pass
70	9/2/98	GH	3X6' Patch	S51-52, 75' W of E, DS-15	9/3/98	9/3/98	Pass
71	9/2/98	GH	2X6' Patch	S65-28, 8' W of E End, Burnouts	9/3/98	9/3/98	Pass
72	9/2/98	GH	2X4' Patch	S61-62, @ Top of Berm, Burnout	9/3/98	9/3/98	Pass
73	9/2/98	GH	3X6' Patch	S31-53, @ CL of P53, DS-16	9/3/98	9/3/98	Pass
74	9/2/98	GH	3X6' Patch	S53-54, 280' W of E Toe, DS-17	9/3/98	9/3/98	Pass
75	9/2/98	GH	3X6' Patch	S52-55, 25' W of E Toe, DS-18	9/3/98	9/3/98	Pass
76	9/2/98	GH	3X6' Patch	S55-56, 120 W of E Toe, DS-19	9/3/98	9/3/98	Pass
77	9/2/98	GH	3X6' Patch	S56-57, 80' W of E Toe, DS-20	9/3/98	9/3/98	Pass
78	9/2/98	GH	3X6' Patch	S57-58, 420' W 0f E Toe, DS-21	9/3/98	9/3/98	Pass
79	9/2/98	GH	3X6' Patch	S58-59, 25' E of E Toe, DS-22	9/3/98	9/3/98	Pass
80	9/2/98	GH	3X6' Patch	S61-62, 200' W of E Toe, DS-23	9/3/98	9/3/98	Pass
81	9/2/98	GH	3X6' Patch	S62-63, 140' W of E Toe, DS-24	9/3/98	9/3/98	Pass
82	9/2/98	GH	3X6' Patch	S64-65, 70' S of N end, DS-25	9/3/98	9/3/98	Pass
83	9/8/98	GH	3X6' Patch	S39-42, 3' S of N, DS-11A	9/3/98	9/3/98	Pass
84	9/8/98	GH	3X6' Patch	S39-41, 3' S of N, DS-11B	9/3/98	9/3/98	Pass
85	9/8/98	GH	Boot	P70, @ Gas Extraction Well,	9/8/98	9/8/98	Pass
86	9/8/98	GH	Boot	S63-67, @ Gas Extraction Well	9/8/98	9/8/98	Pass
87	9/8/98	GH	Boot	S75-76, @ Gas Extraction Well	9/8/98	9/8/98	Pass
88	9/8/98	GH	Boot	S72-73, @ Gas Extraction Well	9/8/98	9/8/98	Pass
89	9/8/98	GH	2X2' Patch	S72-73, 125' W of Toe, Burnout	9/8/98	9/8/98	Pass
90	9/8/98	GH	2'X3' Patch	S63-67, 60' W of E Toe, DS-26	9/8/98	9/8/98	Pass
91	9/8/98	GH	2'X3' Patch	S67-68, #00' W of E Toe, DS-27	9/8/98	9/8/98	Pass
92	9/8/98	GH	2'X3' Patch	S68-69, 200' W of E Toe, DS-28	9/8/98	9/8/98	Pass
93	9/8/98	GH	2'X3' Patch	S69-70, 110' W of E Toe, DS-29	9/8/98	9/8/98	Pass

Specified Requirements:

Vacuum Pressure:

10 In. Hg.

Min. Dwell Time:

10 seconds

Logged By: Glenn Heath

Checked By: Haw



Procject: Hidden Valley Landfill

Facility:

East Partial Closure

Project No.

40202-005.061

Repair No.	Date	Mon.	Description	Location	Repair Date	Test Date	Pass . Fail
94	9/8/98	GH	2'X3' Patch	S70-71, 40' W of E Toe, DS-30	9/8/98	9/8/98	Pass
95	9/8/98	GH	2'X3' Patch	S71-72, 175' W of E Toe, DS-31	9/8/98	9/8/98	Pass
96	9/8/98	GH	2'X3' Patch	S72-73, 306' W of E Toe, DS-32	9/8/98	9/8/98	Pass
97	9/8/98	GH	2'X3' Patch	S74-75, 40' W of E Toe, DS-33	9/8/98	9/8/98	Pass
98	9/8/98	GH	2'X3' Patch	S76-77, 125' W of E Toe, DS-34	9/8/98	9/8/98	Pass
99	9/8/98	GH	2'X3' Patch	S79-80, 75' W of E Toe, DS-35	9/8/98	9/8/98	Pass
100	9/10/98	GH	Seam Cap (Seam Failure)	S39-43, S39-42, S39-41,& S39-40	9/10/98	9/10/98	Pass
101	9/11/98	GH	2X3' Patch	S81-82-82A, Intersection	9/13/98	9/13/98	Pass
102	9/11/98	GH	3X3' Patch	S81-82-83, Intersection	9/13/98	9/13/98	Pass
103	9/11/98	GH	2X2' Patch	S80-81-83, Intersection	9/13/98	9/13/98	Pass
104	9/11/98	GH	2X2' Patch	S80-83-84, Intersection	9/13/98	9/13/98	Pass
105	9/11/98	GH	2X3' Patch	S79-80-84, Intersection	9/13/98	9/13/98	Pass
106	9/11/98	GH	2X2' Patch	S78-84-85, Intersection	9/13/98	9/13/98	Pass
107	9/11/98	GH	2X2' Patch	S78-79-85, Intersection	9/13/98	9/13/98	Pass
108	9/11/98	GH	2X2' Patch	S85-86-78, Intersection	9/13/98	9/13/98	Pass
109	9/11/98	GH	2X2' Patch	S77-78-86, Intersection	9/13/98	9/13/98	Pass
110	9/11/98	GH	2X2' Patch	S77-86-87, Intersection	9/13/98	9/13/98	Pass
111	9/11/98	GH	2X2' Patch	S76-77-87, Intersection	9/13/98	9/13/98	Pass
112	9/11/98	GH	2X3' Patch	S76-87-88, Intersection	9/13/98	9/13/98	Pass
113	9/11/98	GH	2X8' Patch	S75-76-88-89, Intersection	9/13/98	9/13/98	Pass
114	9/11/98	GH	2X8' Patch	S74-75-89-90, Intersection	9/13/98	9/13/98	Pass
115	9/12/98	GH	3X3' Patch	S90-97-73-74, Intersection	9/13/98	9/13/98	Pass
116	9/12/98	GH	2X3' Patch	S73-97-98, Intersection	9/13/98	9/13/98	Pass
117	9/12/98	GH	2X2' Patch	S72-73-98, Intersection	9/13/98	9/13/98	Pass
118	9/12/98	GH	2X2' Patch	S72-98-99, Intersection	9/13/98	9/13/98	Pass
119	9/12/98	GH	2X2' Patch	S71-72-99, Intersection	9/13/98	9/13/98	Pass
120	9/12/98	GH	2X2' Patch	S99-100-71, Intersection	9/13/98	9/13/98	Pass
121	9/12/98	GH	2X3' Patch	S70-71-100, Intersection	9/13/98	9/13/98	Pass
122	9/12/98	GH	2.5X2.5' Patch	S100-101-70, Intersection	9/13/98	9/13/98	Pass
123	9/12/98	GH	2X2' Patch	S69-70-101, Intersection	9/13/98	9/13/98	Pass
124	9/12/98	GH	2X2' Patch	S69-101-106, Intersection	9/13/98	9/13/98	Pass

Specified Requirements:

10 ln. Hg.

Vacuum Pressure: Min. Dwell Time:

10 seconds

Checked By:

Logged By: Glenn Heath



Procject: Hidden Valley Landfill

Facility:

East Partial Closure

Project No.

40202-005.061

Repair No.	Date	Mon.	Description	Location	Repair Date	Test Date	Pass Fail
125	9/12/98	GH	2X3' Patch	S101-102-103-104-106, Intersection	9/13/98	9/13/98	Pass
126	9/12/98	GH	Boot	P83, @ Condensate Sump	9/13/98	9/13/98	Pas
127	9/12/98	GH	Boot	24" Culvert At NE Corner	9/13/98	9/13/98	Pas
128	9/12/98	GH	Boot	NE Inlet	9/16/98	9/16/98	Pas
129	9/12/98	GH	2.5X2.5' Patch	S60-61-106, Intersection	9/13/98	9/13/98	Pas
130	9/12/98	GH	2X3' Patch	S61-62-106, Intersection	9/13/98	9/13/98	Pas
131	9/12/98	GH	2X2' Patch	S62-63-106, Intersection	9/13/98	9/13/98	Pas
132	9/12/98	GH	3X3' Patch	S63-67-106, Intersection	9/13/98	9/13/98	Pas
133	9/12/98	GH	2.5X2.5' Patch	S67-68-106, Intersection	9/13/98	9/13/98	Pas
134	9/12/98	GH	2X3' Patch	S68-69-106, Intersection	9/13/98	9/13/98	Pas
135	9/12/98	GH	2X2' Patch	S65-64-106-107, Intersection	9/13/98	9/13/98	Pas
136	9/12/98	GH	2X2' Patch	S65-66-107-108, Intersection	9/13/98	9/13/98	Pas
137	9/12/98	GH	2.5X2.5' Patch	S59-60-64-106, Intersection	9/13/98	9/13/98	Pa
138	9/12/98	GH	2.5X2.5' Patch	S104-106-107, Intersection	9/13/98	9/13/98	Pa
139	9/12/98	GH	3X3' Patch	S104-105-107, Intersection	9/13/98	9/13/98	Pa
140	9/12/98	GH	2X3' Patch	S105-108-118, Intersection	9/13/98	9/13/98	Pa
141	9/12/98	GH	2X2' Patch	S105-107, Intersection	9/13/98	9/13/98	Pa
142	9/12/98	GH	2X2' Patch	S84-85-91, Intersection	9/13/98	9/13/98	Pa
143	9/12/98	GH	2X2' Patch	S85-86-91-92, Intersection	9/13/98	9/13/98	Pa
144	9/12/98	GH	2X2' Patch	S86-87-92-93, Intersection	9/13/98	9/13/98	Pa
145	9/12/98	GH	2X2' Patch	S87-88-93-94, Intersection	9/13/98	9/13/98	Pa
146	9/12/98	GH	2X2' Patch	S88-89-94-95, Intersection	9/13/98	9/13/98	Pa
147	9/12/98	GH	3X 4' Patch	S89-90-95-96, Intersection	9/13/98	9/13/98	Pa
148	9/12/98	GH	2.5X2.5' Patch	S90-97-96-109, Intersection	9/13/98	9/13/98	Pa
149	9/12/98	GH	2.5X2.5' Patch	S97-98-109-110, Intersection	9/13/98	9/13/98	Pa
150	9/12/98	GH	2X4' Patch	S98-99-110-111, Intersection	9/13/98	9/13/98	Pa
151	9/12/98	GH	2X3' Patch	S99-100-111-112, Intersection	9/13/98	9/13/98	Pa
152	9/12/98	GH	2X2' Patch	S100-101-112-113, Intersection	9/13/98	9/13/98	Pa
153	9/12/98	GH	2X2' Patch	S101-102-113-114, Intersection	9/13/98	9/13/98	Pa
154	9/12/98	GH	2X2' Patch	S102-103-114-115, Intersection	9/13/98	9/13/98	Pa
155	9/12/98	GH	3X3' Patch	S103-104-115-116, Intersection	9/13/98	9/13/98	Pa

Specified Requirements:

10 In. Hg.

Vacuum Pressure: Min. Dwell Time:

10 seconds

Checked By:

Logged By: Glenn Heath



Procject: Hidden Valley Landfill

Facility:

East Partial Closure

Project No. 40202-005.061

Repair No.	Date	Mon.	Description	Location	Repair Date	Test Date	Pass / Fail
156	9/14/98	GH	3X6' Patch	S86-87, 35' S of N Toe, DS-36	9/15/98	9/16/98	Pass
157	9/14/98	GH	3X6' Patch	S89-90, 110' S of N Toe, DS-37	9/15/98	9/16/98	Pass
158	9/14/98	GH	3X6' Patch	S97-98, 202' S of N Toe, DS-38	9/15/98	9/16/98	Pass
159	9/14/98	GH	3X6' Patch	S99-100, 115' S of N Toe, DS-39	9/15/98	9/16/98	Pass
160	9/14/98	GH	3X6' Patch	S101-102, 205' S of N Toe, DS-40	9/15/98	9/16/98	Pass
161	9/14/98	GH	3X6' Patch	S103-115, @ CL of P103, DS-41	9/15/98	9/16/98	Pass
162	9/14/98	GH	3X6' Patch	S105-118, 220 S of N Toe, DS-42	9/15/98	9/16/98	Pass
163	9/14/98	GH	3X6' Patch	S119-120, 25' S of N Toe, DS-43	9/15/98	9/16/98	Pass
164	9/14/98	GH	3X6' Patch	S121-122, 150' S of N Toe, DS-44	9/15/98	9/16/98	Pass
165	9/14/98	GH	3X6' Patch	S71-99, @ CL of P99, DS-45	9/15/98	9/16/98	Pass
166	9/14/98	GH	3X6' Patch	S106-107, 55' S of N End, DS-46	9/15/98	9/16/98	Pass
167	9/14/98	GH	3X6' Patch	S112-113, 70' S of N Toe, DS-47	9/15/98	9/16/98	Pass
168	9/14/98	GH	3X6' Patch	S117-124, 35' S of N Toe, DS-48	9/15/98	9/16/98	Pass
169	9/12/98	GH	2X3' Patch	S104-105-116-117, Intersection	9/13/98	9/13/98	Pass
170	9/15/98	GH	2X2' Patch	S105-118-117-124, Intersection	9/15/98	9/16/98	Pass
171	9/15/98	GH	2X3' Patch	S118-119-124-125-126, Intersection	9/15/98	9/16/98	Pass
172	9/15/98	GH	2X2' Patch	S119-120-126, Intersection	9/16/98	9/16/98	Pass
173	9/15/98	GH	2X3' Patch	S120-126-127, Intersection	9/16/98	9/16/98	Pass
174	9/15/98	GH	2X2' Patch	S120-121-127, Intersection	9/16/98	9/16/98	Pass
175	9/15/98	GH	2X2' Patch	S127-128-121, Intersection	9/16/98	9/16/98	Pass
176	9/15/98	GH	2X2' Patch	S121-122-128, Intersection	9/16/98	9/16/98	Pass
177	9/15/98	GH	2X3' Patch	S122-128-129, Intersection	9/16/98	9/18/98	Pass
178	9/15/98	GH	2.5X2.5' Patch	S122-123-129, Intersection	9/16/98	9/18/98	Pass
179	9/15/98	GH	2X3' Patch	S123-129-130, Intersection	9/18/98	9/18/98	Pass
180	9/15/98	GH	2X2' Patch	S108-118-131, Intersection	9/18/98	9/18/98	Pass
181	9/15/98	GH	2X3' Patch	S118-119-131, Intersection	9/18/98	9/18/98	Pass
182	9/17/98	GH	2.5X2.5' Patch	S119-131-133, Intersection	9/18/98	9/18/98	Pass
183	9/17/98	GH	3X6' Patch	S119-120-121-122-123-133-135, Intersection	9/18/98	9/18/98	Pass
184	9/17/98	GH	2X3' Patch	S133-134-135, Intersection	9/18/98	9/18/98	Pass
185	9/17/98	GH	2X2' Patch	S134-135-136, Intersection	9/18/98	9/18/98	Pass
186	9/17/98	GH	2X2' Patch	S123-130-135, Intersection	9/18/98	9/18/98	36056

Specified Requirements:

Vacuum Pressure: 10 ln. Hg.

Min. Dwell Time:

10 seconds

Logged By: Glenn Heath

knew Checked By:



Procject: Hidden Valley Landfill

Facility:

East Partial Closure

Project No. 40202-005.061

Repair No.	Date	Mon.	Description	Location	Repair Date	Test Date	Pass / Fail
187	9/17/98	GH	3X6' Patch	S105-118, 230' S of N Toe, DS-42A	9/17/98	9/18/98	Pass
188	9/17/98	GH	3X6' Patch	S105-118, 210' S of N Toe, DS-42B	9/17/98	9/18/98	Pass
189	9/17/98	GH	2X2' Patch	S130-135-143-144-145, Intersection	9/18/98	9/18/98	Pass
190	9/17/98	GH	2X2' Patch	S135-136-145, Intersection	9/18/98	9/18/98	Pass
191	9/17/98	GH	2X2' Patch	S136-137-146, Intersection	9/18/98	9/20/98	Pass
192	9/17/98	GH	2X2' Patch	S137-146-147, Intersection	9/18/98	9/20/98	Pass
193	9/17/98	GH	2X2' Patch	S137-138-147, Intersection	9/18/98	9/20/98	Pass
194	9/17/98	GH	2.5X2.5' Patch	S138-147-148, Intersection	9/20/98	9/20/98	Pass
195	9/17/98	GH	2X3' Patch	S138-139-148, Intersection	9/20/98	9/20/98	Pass
196	9/19/98	GH	2X2' Patch	S139-148-149, Intersection	9/20/98	9/20/98	Pass
197	9/19/98	GH	2X2' Patch	S139-140-149, Intersection	9/20/98	9/20/98	Pass
198	9/19/98	GH	2X3' Patch	S140-149-150, Intersection	9/20/98	9/20/98	Pass
199	9/19/98	GH	2.5X2.5' Patch	S140-141-150, Intersection	9/20/98	9/20/98	Pass
200	9/19/98	GH	Seam Cap	S105-118, 210' to 230' S of N Toe	9/20/98	9/20/98	Pass
201	9/19/98	GH	2X2' Patch	S141-142-150-151, Intersection	9/20/98	9/20/98	Pass
202	9/19/98	GH	2X2' Patch	S142-151-152, Intersection	9/20/98	9/20/98	Pass
203	9/19/98	GH	2X2' Patch	S152-153-154, Intersection	9/20/98	9/20/98	Pass
204	9/19/98	GH	2X2' Patch	S152-154-155, Intersection	9/20/98	9/20/98	Pass
205	9/19/98	GH	2.5X2.5' Patch	S152-155-156, Intersection	9/20/98	9/20/98	Pass
206	9/19/98	GH	2.5X2.5' Patch	P70, 60' E of W end, Gas Vent	9/20/98	9/20/98	Pass
207	9/19/98	GH	Boot	S115-116, @ Gas Extraction Well	9/20/98	9/20/98	Pass
208	9/19/98	GH	Boot	P130, @ Gas Extraction Well	9/20/98	9/20/98	Pass
209	9/19/98	GH	Boot	S148-149, @ Gas Extraction Well	9/20/98	9/20/98	Pass
210	9/19/98	GH	Boot	S146-147, @ Gas Extraction Well	9/20/98	9/20/98	Pass
211	9/19/98	GH	Boot	S89-90, @ Gas Extraction Well	9/20/98	9/20/98	Pass
212	9/19/98	GH	Boot	P99, @ Gas Extraction Well	9/20/98	9/20/98	Pass
213	9/19/98	GH	Boot	P105, @ Gas Extraction Well	9/20/98	9/20/98	Pass
214	9/19/98	GH	2X2' Patch	S108-131-132, Intersection	9/20/98	9/20/98	Pass
215	9/19/98	GH	2.5X2.5' Patch	S131-132-133, Intersection	9/20/98	9/20/98	Pass
216	9/20/98	GH	2X3' Patch	S136-137-134-158, Intersection	9/20/98	9/20/98	Pass
217	9/20/98	GH	2X2' Patch	Pucture, 3' S of Gas Well, in P59	9/20/98	9/20/98	Pass

Specified Requirements:

Logged By: Glenn Heath

Vacuum Pressure:

10 In. Hg.

Min. Dwell Time:

10 seconds

Checked By: Knul



Procject: Hidden Valley Landfill

Facility:

East Partial Closure

Project No.

40202-005.061

Repair No.	Date	Mon.	Description	Location	Repair Date	Test Date	Pass Fail
218	9/20/98	GH	3X6' Patch	S146-137, 6' E of W Edge, DS-49	9/20/98	9/20/98	Pass
219	9/20/98	GH	3X6' Patch	S129-130, 70' S of N Toe, DS-50	9/20/98	9/20/98	Pas
220	9/20/98	GH	3X6' Patch	S144-145, 145' S of N Toe, DS-51	9/20/98	9/20/98	Pas
221	9/20/98	GH	3X6' Patch	S147-148, 105' S of N Toe, DS-52	9/20/98	9/20/98	Pas
222	9/20/98	GH	3X6' Patch	S150-151, 120' S of N Toe, DS-53	9/20/98	9/20/98	Pas
223	9/20/98	GH	3X6' Patch	S152-154, 15' S of P152-153-154 Int, DS-54	9/20/98	9/20/98	Pas
224	9/20/98	GH	3X6' Patch	S133-134, 8' S of N End of Seam, DS-55	9/20/98	9/20/98	Pas
225	9/20/98	GH	3X6' Patch	S135-136, 50' S of N Toe, DS-56	9/20/98	9/20/98	Pas
226	9/20/98	GH	3X6' Patch	S137-138, 167' S of N Toe, DS-57	9/20/98	9/20/98	Pas
227	9/20/98	GH	3X6' Patch	S139-140, 105' S of N Toe, DS-58	9/20/98	9/20/98	Pas
228	9/20/98	GH	3X6' Patch	S141-142, 75' S of N Toe, DS-59	9/20/98	9/20/98	Pas
229	9/26/98	GH	Boot Replacement	Gas Well, P55 @ Top of Closure	9/26/98	9/26/98	Pas
230	9/26/98	GH	Boot Replacement	Gas Well, S31-32	9/26/98	9/26/98	Pas
231	9/26/98	GH	1X2 Patch	Abrasion, P29 @ Approx CL, 100' N of Berm	9/26/98	9/26/98	Pas
232	9/26/98	GH	1X1' Patch	Abrasion, P29, 4' E of CL, 100' N of Berm	9/26/98	9/26/98	Pas
233	9/26/98	GH	2X2 Patch	Puncture, P31, 6' W of CL, 100 N of Berm	9/26/98	9/26/98	Pas
234	9/26/98	GH	Boot Replacement	Gas Well @ CL P56	9/26/98	9/26/98	Pas
235	9/26/98	GH	Boot Replacement	Gas Well @ S35-36	9/26/98	9/26/98	Pas
236	9/26/98	GH	2X2' Patch	P41 @ Approx. CL, Small Puncture	9/26/98	9/26/98	Pas
237	9/30/98	GH	87ft of Ext Weld	P59 thru 63, 12ft W of Berm, Wrinkle	10/13/98	10/3/98	Pas
238	10/1/98	GH	2X2 Patch	P33, 100ft S of Berm	10/12/98	10/3/98	Pas
239	10/1/98	GH	3X3 Patch	P72, Gas Vent hole, 3ft E of Berm	10/13/98	10/3/98	Pas
240	10/1/98	GH	2X2 Patch	Puncture, P115 11 ft N of Access Road	10/13/98	10/3/98	Pas
241	10/12/98	GH	2X2 Patch	Puncture, P87 10 ft S of Access Road	10/13/98	10/13/98	Pas
242	10/12/98	GH	2X2 Patch	Puncture, P99, 165 ft S of Access Road	10/13/98	10/13/98	Pas
243	10/13/98	GH	2X2 Patch	P97, Gas Vent Hole, Top of Closure	10/13/98	10/13/98	Pas
244	10/13/98	GH	3X3 Patch	Puncture, P71, 35 ft E of Top of Closure	10/13/98	10/13/98	Pas
245	10/14/98	GH	3X3 Patch	P104, Gas Vent, Top of Closure	10/14/98	10/14/98	Pas
246	10/15/98	GH	3X3 Patch	P45, Gas Vent, 10 ft E of Berm	10/15/98	10/15/98	Pas
247	10/15/98	GH	3X3 Patch	P31, Gas Vent, 8 ft S of Berm	10/15/98	10/15/98	Pas
248	10/15/98	GH	Cap Strip	P137-138-139, 25 ft S of Maintenance Road	10/15/98	10/15/98	Pas

Specified Requirements:

Vacuum Pressure:

10 ln. Hg.

Min. Dwell Time:

10 seconds

Logged By: Glenn Heath

Checked By:

HWW

C-2i MQA/MQC

SERROT CERTIFICATE OF QUALITY ASSURANCE

SALES ORDER #:8228

RESISTANCE TO SOIL BURIAL

MULTI-AXIAL NOITABLONG

LOW TEMP. BRITTLENESS

.T.O.O.L.T.

Certified

Batch

Certified

<± 10 <± 10 <± 10 <± 10

>15 >15 >15 >15

>100 >100

>100 >100 >100 >100 >100 >100

Pass Pass Pass

± 10

%

>15

minutes Batch

-100° F

>15 >15

<± 10

<± 10

>15

Pass Pass

> >200 >200

-0.10 -0.10

>80000

PROJECT NAME: Hidden Valley Landfill MATERIAL TYPE: 60 mil HDT

Character Char					7	CATIC	ON: Puy	LOCATION: Puyallup, WA	≰ .						
NSF NSF		HICKNESS	HICKNESS IINIWNW		ELD CONG. @	SEAK @	ЯА	ИСТИВЕ	SBON BLACK	PERSION REDON BLACK	YTISI	TFLOW	NSIONAL	STANT (TICITY YTIOIT
Every 50,000 5	TEST METHOD D59 (modifications)	1984	≥ F D5994	D638	D638	D638		D. FTMS101	D1603	D3015	DZ83	WEL.	AT S	MOTO CON:	MODI
No. No.	Щ	70	Fyon	0000	JON			2065				015.00		D2397	D638
s mils ppi % % lb % opt SqFt Datable SqFt Datable SqFt Datable SqFt Batch 1 54 112 13 100 45 80 2.0-3.0 A1,A2,B1 0.94-0.95 <1.0	PREQUENCY	Soll	Roll	SqFt	50,000 SqFt	50,000 SqFt	50,000 SaFt	50,000 SoF	50,000	50,000	100,000	Botol	100,000		
54 17 13 10 45 80 2.0.3.0 A1,A2,B1 9,9cc 9/10 min % hr 58 165 13 362 55 110 2.0.3.0 A1,A2,B1 0.94-0.95 <1.0	UNITS	nils	mils	jod	%	/6		1 iho	adri	SqFt	SqFt	סמוכוו	SqFt	Batch	Certified
58 165 19 362 55 110 2.50 A1 0.944 0.95 <1.0 ± 2 >200 59 162 188 19 359 64 132 2.60 A1 0.944 0.149 -0.12 >200 59 161 19 439 64 132 2.60 A1 0.944 0.149 -0.12 >200 59 162 18 439 64 132 2.60 A1 0.944 0.149 -0.12 >200 59 162 18 438 57 113 2.60 A1 0.944 0.149 -0.12 >200 69 170 17 405 56 113 2.60 A1 0.947 0.149 -0.12 >200 60 165 17 492 56 113 2.53 A1 0.947 0.149 -0.10 >200 >20 58 161 17		09	54	112	13	100	O AF	Q o	%		g/cc	g/10 min	%	h	1000
58 165 19 362 55 110 2.50 A1 0.944 0.149 -0.12 >200 59 161 19 439 64 132 2.60 A1 0.944 0.149 -0.12 >200 59 161 19 439 64 132 2.60 A1 0.944 0.149 -0.12 >200 59 162 18 438 57 113 2.60 A1 0.944 0.149 -0.12 >200 59 170 17 405 56 113 2.60 A1 0.944 0.149 -0.12 >200 60 165 17 405 56 113 2.53 A1 0.947 0.149 -0.12 >200 >20 58 161 17 506 54 113 2.42 A1 0.947 0.149 -0.10 >200 >							2	000	2.0-3.0		0.94-0.95	4.0	+2	1000	psi
62 188 19 359 64 132 2.60 A1 0.944 0.149 -0.12 >200 59 161 19 439 64 132 2.60 A1 0.944 0.149 -0.12 >200 59 162 18 439 64 132 2.60 A1 0.944 0.149 -0.12 >200 59 162 18 438 57 113 2.60 A1 0.944 0.149 -0.12 >200 59 170 17 405 56 113 2.60 A1 0.944 0.149 -0.12 >200 60 165 17 405 56 113 2.53 A1 0.947 0.149 -0.10 >200 58 161 17 506 54 113 2.42 A1 0.947 0.149 -0.10 >200 >20		09	58	165	0	260	1						11	2000	>80000
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59 170 478 57 143 2.60 A1 0.944 0.149 -0.12 >200 60 165 17 405 56 143 2.53 A1 0.947 0.149 -0.12 >200 58 161 17 506 54 113 2.53 A1 0.947 0.149 -0.10 >200 58 161 17 506 54 113 2.42 A1 0.947 0.149 -0.10 -200	1	61	59	163	40	407	25	113	2.60	A1	0.944	0 140	21.0	>200	>80000
60 165 17 492 56 113 2.53 A1 0.947 0.149 -0.10 >200 58 161 17 506 54 113 2.42 A1 0.947 0.149 0.010 >200	17	61	59	170	12	438	27	113	2,60	A1	0.944	0 140	21.0	>200	>80000
58 161 17 506 54 113 2.42 A1 0.947 0.149 0.010 >200	1	31	09	165	17	405	99	113	2.53	A1	0.947	0 149	20.00	>200	>80000
300 54 113 2.42 A1 0.947 0.149 0.10	100	0	58	161	11	764	26	113	2.53	A1	0.947	0.149	0.00	2200	>80000
֡		1		1	-	200	56	113	2.42	A	0.947	0.140	40	2200	>80000

Certified By: (July Arms) Quality Control Laboratory/Supervisor 9/16/98

QC Rolls Released Job Number: 8228

Additional material

Job Title: Hidden Valley Landfill

9/16/98 1:52:35 PM

Order ID: 8228H

Sold To: Land Recovery, Inc. Job Location: Puyallup, WA USA

Material Code: HDT060

Material Description: HDPE Texture, 60 mil

Purchase Order Description: HDPE Texture, 60 mil

Roll Dimension: 525 X 22.5

Order Qty:

Comments:

94,500.0

SF # of Rolls:

8.0

MC Release Qty: Total Released:

This is not a release for shipping

lotal R	eleased: 94,500.0	# of Rolls:	8.0	This is r	not a release f	or shipping
Roll Number 3804350	Description	Roll Dîmension	SqFt	Ship Wt. (Ibs)	Resin Batch ID	Order
3804351 3804352 3804353 3804354 3804355 3804356 3804357 Jumber of	HDPE TEXTURED 60 MIL ROlls: 8	525 X 22.5 525 X 22.5	11,812.5 11,812.5 11,812.5 11,812.5 11,812.5 11,812.5 11,812.5 11,812.5	4,209 4,271 4,318 4,249 4,275 4,295 4,288 4,299	H051258 H051258 H051258 H051258 H051258 H051258 H051258 H051258	8228H 8228H 8228H 8228H 8228H 8228H 8228H 8228H

JUN-11-98 THU 8:54 AM

FAX NO. 8826368



June 10, 1998

Doug Wells Serrot Corp 125 Cassia Way Henderson, NV 89014

CERTIFICATE OF ANALYSIS

Product:

9642

175285 - 8000

Lot Number: Destination:

H051258

Chevron Order #: Package:

CHVX898032

Weight (lbs):

Henderson

Customer Order #:

30256

Ship Date:

171,550

6/ 9/98

Following is the data on the subject material as determined by the Quality Control Department:

Property Melt Index HLMI Density OIT

& Bertin

Value 0.14 11.3 0.9373

Units gms/10 min gms/10 min gms/cc

142.0

The data set forth herein has been carefully compiled by Chevron Chemical Company. However, there is no warranty of any kind, either expressed or implied, applicable to its use and the user assumes all risk and liability in connection therewith.

Sincerely,

Supervisor

Quality Control

Customer Fax: 702-566-4745

For inquiry, contact Customer Service at the following number: Film, Coating. Pipe Applications: 1-800-231-3826 Molding Applications: 1-800-231-3828

QC Rolls Released

Job Number: 8228

Job Title: Hidden Valley Landfill

7/30/98 10:09:01 AM

Order ID: 8228A

Sold To: Land Recovery, Inc. Job Location: Puyallup, WA USA

Material Code: HDT060

Material Description: HDPE Texture, 60 mil

Conf. at plant Comments:

Purchase Order Description: HDPE Texture, 60 mil

Roll Dimension: 525 X 22.5

Order Qty:

602,464.0

of Rolls: SF

51.0

This is not a release for shipping

MC Release City: Total Released:

356,062.5

of Rolls: 30.0

I OLAH ING	IORSOW.	9401	nor.o		R OI IOIN	44.4			
Roll Number	Descript	ion	1	2 210	Roil Dimension	SqFt	Ship ' Wt. (ibs)	Resin Batch ID	Order ID
3803436	HOPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	3,736	7180254	8228A
3803437	HDPE TEX	TURED	60 MIL		525 X 22.5	11,812.5	3,796	7180254	6228A
3803438	HDPE TEX	TURED	60 MIL		525 X 22.5	11,812.5	3,791	7180254	8228A
803439	HDPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	3,786	7180254	8228A
803440	HDPE TEX	TURED	60 MIL	:	525 X 22.5	11,812.5	3,953	7180254	8228A
803443	HDPE TEX	TURED	60 MIL		525 X 22.5	11,812.5	4,192	7180254	8228A
3803444	HDPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	3,988	7180254	8228A
803445	HDPE TEX	TURED	60 MIL		525 X 22.5	11,812.5	4,170	7180254	8228A
803446	HOPE TEX	TURED	BO MIL		525 X 22.5	11,812.5	4,214	7180254	8228A
803447	HDPE TEX	TURED	60 MIL		600 X 22.5	13,500.0	4,836	7180254	8228A
803448	HOPE TEX				525 X 22.5	11,812.5	4,261	7180254	8228A
803449	HOPE TEX	TURED	60 MIL	•	525 X 22.5	11,812.5	4,186	7180254	8228A
803450	HOPE TEX	TURED	60 MIL	•	525 X 22.5	11,812.5	4,199	7180254	8228A
803451	HDPE TEX	TURED	60 MIL		525 X 22.5	11,812.5	4,230	7180254	8228A
803452	HOPE TEX	TURED	60 MIL		525 X 22.5	11,812.5	4,240	7180254	8228A
803453	HOPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	4,226	7180254	8228A
803454	HOPE TEX	TURED	60 MIL		525 X 22.5	11,812.5	4,257	7180254	8228A
803455	HDPE TEX	KTURED	60 MIL		525 X 22.5	11,812.5	4,261	7180254	8228A
803456	HDPE TEX				540 X 22.5	12,150.0	4,325	7180254	8228A
803560	HDPE TEX				525 X 22.5	11,812.5	4,076	- H051225	8228A
803561	HDPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	4,081	H051225	822BA
803562	HDPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	4,096	H051225	6228A
803563	HDPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	4,136	H051225	8228A
803565	HDPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	4,171	H051225	8228A
803566	HDPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	4,176	H051225	8228A
803567	HDPE TEX	CTURED	60 MIL		525 X 22.5	11,812.5	4,171	H051225	8228A
803568	HOPE TEX	CTURED	60 MIL	:	525 X 22.5	11,812.5	4,166	H051225	8228A
803570	HDPE TE				525 X 22.5	11,812.5	4,182	H051225	8228A
3803571	HDPE TEX				525 X 22.5	11,812.5	4,230	H051225	8228A
803572	HOPE TE				510 X 22.5	11,475.0	4,111	H051225	8228A
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This report includes all rolls released, including rolls that have been shipped.

7025668546;

Aug-10-98 10:57AM;

Page 3

QC Rolls Released

Job Number: 8228

Job Title: Hidden Valley Landfill

Order ID: 8228A

Sold To: Land Recovery, Inc.

Job Location: Puyallup, WA USA

Number of Rolls: 30 -

7/30/98 10:09:09 AM

356,062.5

124,243

<± 10

>100

90.0

Sor 7/30/98

RING

SERROT CERTIFICATE OF QUALITY ASSURANCE

SALES ORDER #:8228 Certified \$ 10 ₹ 10 410 ₹ 10 \$ 10 C# 10 ## <±10 <± 10 4 10 €± 10 2 RELONGATION AMULTI-AXIAL Batch る T1.088 Batch >100 \$1.8 >100 ×100 ×100 ×160 >100 ×100 >160 >100 >100 >100 × 8 >100 >100 Certified GLOW TEMP. -100PF Pass Pags Perss Pass Pass Certified >80000 THOMSAUS >80000 >80000 MODULUS OF GAO. App A Batch NOTCHED CONSTANT >200 82% >200 >200 >200 >200 >200 >200 100,000 SqFt YTIJIBATZ 0.23 -0.23 DIMENSIONAL -0.23 * -0.12 -0.12 -0.12 -0.12 -0.12 -0.12 g/10 min Batch MELT FLOW 0.123 0.123 0.123 0.123 0.123 100,000 0.94-0.95 SQF 0.844 DENSITY JO/C 0.044 0.944 0.944 0.947 0.847 0.947 0.947 50,000 SqFt A1,A2,B1 NOISPERSION CARBON BLACK Z Z 2 2 ¥ 2 2 22 2 2 A A1 50,000 2.03.0 CARBON BLACK 88 F 2.41 2.41 2.75 2.70 2.70 LOCATION: Puyallup, WA 2.31 2.31 50,000 E PUNCTURE 2005 SOF 100 Ð 8 108 8 8 107 107 8 8 119 119 50,000 JE S HAH. 七 Ð \$ 2 2 ş 22 3 百 3 2 25 28 28 8 8 8 8 8 50,000 SQFt BREAK @ 200 244 S 88 88 388 8 2 244 50,000 (IEFD SOF NSF 2 ELONG, @ 2 49 PROJECT NAME: Hidden Valley Landfill 50,000 SIEFD SqF 3 LENSIFE @ 42 138 142 155 158 葛 183 器 166 8 8 157 187 HICKNESS Ros mis Y. MUMINIM 28 28 28 8 器 88 MATERIAL TYPE: 60 mil HDT 88 28 8 8 200 8 83 88 28 25 88 29 LHICKNESS Roll 88 AVERAGE 8 8 8 8 88 8 61 81 9 8 8 81 8 81 81 TEST METHOD 19 TEST DESCRIPTION FREQUENCY UNITS (modifications) Certified By: (July Outline) Quality Control Laboratory/Surper COT/BLEND 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180254 7180264 3803440 3803443 3803445 3803445 3803487 3803447 3803448 3803449 3803450 3803451 3803452 3803453 3803455 3803456

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:MATE: 01 80-01-84A

TO SOIL BURIAL

BRESISTANCE JAUR JIOS OT

7025668546;

Sent By: Serrot Submittals;

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7100,000 0.941
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MUMINIMUM S S S S S S S S S S S S S S S S S S
BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
TEST DESCRIPTION TEST METHOD (modifications) FREQUENCY TEST METHOD TEST ME
ROLL # S 3803580 3803582 3803582 3803583 3803583 3803583 3803583 3803571 803571



June 8, 1998

Doug Wells Serrot Corp 125 Cassia Way Henderson, NV 89014

CERTIFICATE OF ANALYSIS

Product:

9642

Lot Number:

HQ51225

Chevron Order #:

175285 - 2000

Destination:

Henderson

Package:

SCJX891954

Weight (lbs):

174,550

Customer Order #:

30256

Ship Date:

6/ 5/98

Following is the date on the subject material as determined by the Quality Control Department:

Property Melt Index HLMJ

<u>Yalue</u> 0.13 12.3

gms/10 min gms/10 min

Density: OIT

0.9383 131.0

gms/cc

The data set forth herein has been carefully compiled by Chevron Chemical Company. However, there is no warranty of any kind, either expressed or implied, applicable to its use and the user assumes all risk and liability in connection therewith.

Sincerely,

4 & Bertin G. G. Berth Supervisor Quality Control

Customer Fax: 702-566-4745

For inquiry, contact Customer Service at the following number: Film, Coating, Pipe Applications. 1-800-231-3826

Molding Applications:

1-800-231-3828



PHILLIPS CHEMICAL COMPANY

A DIVISION OF PHILLIPS PETROLEUM COMPANY

BOX 792 * PHONE: 713 475-3666 PASADENA, TEXAS 77501-0792

PHILLIPS PLASTICS RESINS Houston Chemical Complex

April 09, 1998

JHV# 7703-98

FAX: 702-566-4745

Serrot Corporation 125 Cassia Way Henderson, NV 89014

Doug Wells

This letter will certify that the Marlex* resin shown below, as supplied by Phillips Chemical Company, conforms to our manufacturing specification.

Type: Lot Number:

P.O. Number:

Date Shipped: Package: Quantity:

HLMI Flow Rate, ASTM D1238: 12.3 G/10 MIN Density, ASTM D1505:

Melt Index, ASTM D1238: Production Date:

HHM TR-400G

7180254 30253

04/08/98 PSPX 2368

186100 LBS.

.938 G/CC .090 G/10 MIN

02/19/98

J. H. Vaden Quality Assurance Manager

For COA questions call Sharon Robinette, 713-475-3625

* Reg. U.S. Pat. Off.

QA-File-RC CC:

C-3 GEOCOMPOSITE

C-3a MQA/MQC

MOA REPRESENTATIVE

MANUFACTURING QUALITY ASSURANCE REPORT

of Rolls: 87 ROLLS

Sampling Frequency: Every 100,000 st / every LOT for Conf. PGL representative Type of MOA: LEVEL II Sampled By: MANUFACTURED by: EVERGREEN TECHNOLOGY MATERIAL: GEOCOMPOSITE PROJECT: HIDDEN VALLEY

B01455B

MANUFACTURING QUALITY ASSURANCE REPORT

PROJECT: HIDDEN VALLEY MATERIAL: GEOCOMPOSITE

Type of MGA: LEVEL II Sampling Frequency: Every 100,000 at / every LOT for Conf.

of Rolls: 87 ROLLS

UFACTURED by	NUFACTURED by: EVERGREEN TECHNOLOGY	CHNOLOG	A.	Sampled By:	PGL representative				
Geocompostis Lot Number	Geocumposite Rolf Number	Number	Geonet Lot Number	Geonet Roll Number	GeotextRe (TOP) Lot Number	Geotextile (TOP) Roll Number	Geotextile(Bottom) Lot Number	Geotextite (Bottom) Rolf Number	Sampled sent to Emcon
84048	8404691	889	83055	8302488	80028	8014545	80028	8014540	
84048	8404692	57	83055	8302496	80008	8014545	80068	8014540	
84048	8404693	85	83055	8302496	80068	8014545	80068	80/4540	
84048	8404694	58	83065	8302496	80068	B014545	80058	8014540	
84048	8404695	99	83055	8302496	89008	8014545	89008	8014540	
84048	8404696	159	83055	8302496	80068	8014545	89008	8014540	
84048	8404697	62	83055	8302496	80068	8014545	89008	8014540	
84048	8404698	63	83055	8302490	89008	8014562	89008	8014572	
84048	8404699	99	83055	B302490	80058	8014562	85008	8014572	
84048	6404700	65	83055	8302490	85008	8014562	85008	8014572	
84048	8404701	98	83055	8302490	80068	8014562	89008	8014572	
84048	8404702	67	83055	8302494	89008	9014562	89008	8014572	
84048	8404703	89	83055	8302494	800028	8014562	89008	8014572	
84048	8404704	69	83055	8302494	80058	B014562	80068	8014572	
84048	8404705	202	83055	8302494	89008	8014562	89008	8014572	
84048	8404706	71	83055	8302484	89008	9014562	80028	8014572	
84048	8404707	7.2	83055	8302492	89008	8014581	80008	8014552	
84048	8404708	73	83055	8302492	80068	8014581	80058	8014552	
84048	8404709	74	83055	8302492	80028	8014581	80008	8014552	
84048	8404710	75	83055	8302492	80028	8014581	80068	8014552	
84048	8404711	76	83055	8302.492	80068	8014581		8014552	
84048	8404712	77	83055	8302489	89008	8014581	80068	8014552	
84048	8404713	78	83055	8302489	80068	9014581		8014552	
84048	8404714	7.8	83055	8302489	80068	8014581	80028	8014552	
84048	8404715	28	83055	8302489	89008	8014580	80028	8014544	
84048	8404722	26	83055	8302489		8014580	80028	8014544	
84048	8404723	82	83055	8302495	80068	8014580	80068	8014544	
84048	8404724	83	83055	8302495	80028	8014580	80068	8014544	
84048	8404725	84	83055	8302495		9014580	8008	8014544	100
84048	8404726	88	83055	8302139	80028	8014580	80028	8014544	

MOA KEPKESENTATIVE

MANUFACTURING QUALITY ASSURANCE REPORT

PROJECT:	PROJECT: HICKOEN VALLEY	-		Owner, Santa	William Englander	Campillar Emorgany Essent 400 000 of / every OT for Conf	ary I OT for Conf.	# of Rolls:	# of Rolls: 87 ROLLS
MATERIAL	MATERIAL: GEOCOMPOSITE	CHINOLOG	λ.	Sampled By:	PGL representative	9			
Geocomposite Lot Member	Geocomposite Rot Number	Number	Geonet Lot Number	10	Geotextile (TOP) Lot Number	Geotextile (TOP) Roll Number	Geotextia (Bottom) Lot Number	Geotaxtife (Bottom) Roll Number	Sampled sent to Emcon
SANAR	8404635	-	83055	8302479	80058	8014568	80058	8014564	XXXXXXXX
BAUAB	8404636	7	83055	6302480	80058	8014568	80058	8014564	
BADAB	8404637	3	83055	8302480	80058	8014568	80058	8014564	
BACAB	RADARSB	4	83055	8302480	80058	8014568	80028	8014564	
BADAB	B404639	6	83055	8302480	80058	8014568	80058	8014564	
BANAB	8404640	\$	83055	8302480	80058	8014568	80028	8014564	
BAUAB	R404641	1	83055	8302482	80058	8014568	80058	8014564	
84048	R404642	8	83055	8302482	80028	8014559	80058	8014570	
RANAB	P404643	6	83055	8302482	80028	8014559	80028	18014570	
BANAB	R404644	10	83065	8302482	80028	8014559	80028	8014570	
BAOAB	8404645	-	83055	8302482	80028	B014559	80058	8014570	
BANAB	8404646	12	83055	8302483	80028	8014559	80058	8014570	
BAUAB	8404647	13	83055	8302483	80028	BO14559	80058	8014570	
BACAB	8404648	4	83055	83024B3	80008	8014559	80028	8014570	
BADAB	8404649	150	83055	8302483	89008	8014559	80028	B014570	
STORE BACAR	BADARED	9	83055	8302483	80058	8014549	80058	8014558	
BACAB	8404651	12	83055	8302484	80028	8014549	80028	8014558	
RADAR	8404652	18	83055	8302484	89008	8014549	80058	8014558	
RADAR	8404653	19	83055	8302484	800068	6014549	80028	8014558	
BACAR	8404654	20	83055	8302484	89008	8014549	80058	8014558	
RADAB	8404655	21	93028	8302484	80028	8014549	80028	8014558	
84048	8404658	22	83055	8302481	89006	8014549		8014558	8
84048	8404657	23	83055	8302481	80028	8014549		8014558	
84048	8404658	24	83055	8302481	80028	B014550	90028	8014548	
84048	8404659	25	83025	8302481	80069	B014550	80028	8014548	
SACAS	SANAGEN	26	83055	8302481	80028	8014550	85008	8014548	

MOA REPRESENTATIVE

MANUFACTURING QUALITY ASSURANCE REPORT

PROJECT:	PROJECT: HIDDEN VALLEY			Type of MOA: LEVEL II	LEVEL.II				
MATERIAL:	GEOCOMPOSITI	ш		San	npling Frequency:	Sampling Frequency: Every 100,000 of I every LOT for Conf.	ery LOT for Conf.	# Of House:	# OF KOUSE: 87 KULLS
VUFACTURED by:	EVERGREEN TE	CHANOLOG	٨.	Sampled By:	Sampled By: PGL representative				
Geocomposite	Geoconsposite Roll Number	Nember	Geonet Lot Number	Œ	Geomet Geotextile (TOP) Rofi Number Lot Number	Geoteatile (TOP) Roll Number	Geotentifie Bottom) Lot Number	Geomet Geotextile (TOP) Geotextile (TOP) Geotextile (Bottom) Geotextile (Bottom) Sampled sent to Emcon	Sampled sent to Emron
84048	8404727	\$	83055	8302139	80028	8014573	80028	8014544	
84048	8404728	87	83055	8302139	80058	8014573	80028	8014574	

C-3b Conformance Testing

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005,061

Client:

EMCON WA

Date:

7-23-98

Roll #:

8404664

Material:

GEOCOMPOSITE

PLY ADHESION ASTM F904

	Machine	Direction	Cross Machin	e Direction
	Force # to	Separate	Force # to	Separate
Specimen	Ply 1	Ply 2	Ply 1	Ply 2
1	1.2	2.1	3.2	3.6
2	2.3	1.6	2.3	2.3
3	3.2	2.1	3.8	2.4
4	3.0	2.1	5.5	2.1
5	4.1	1.9	3.6	2.7
Average	2.8	2.0	3.7	2.6

Remarks:

Sample size 1" x 10"

Hydraulic Transmissivity	Trial 1	Trial 2	Trial 3	Average
gpm				
ASTM D4716	1.284	1.284	1.284	1.284

Remarks:

Hydraulic Gradient:

0.5

Normal Compressive Stress: 100 psf

Geonet tested between rigid plates with normal compressive stress

applied for one hour (approximate time). Sample size: 14" x 12" (Effective 12" x 12")

Hydraulic Transmissivity O = (QL)/(WH)gpm/ft width

Tested by:

K.H.

Entered by:

K.H.

Checked by: R.S.A.

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll #: Material: - . - . - - **- -**

84046365

GEOCOMPOSITE

PLY ADHESION ASTM F904

	Machine	Direction	Cross Machin	e Direction
	Force # to	Separate	Force # to	Separate
Specimen	Ply 1	Ply 2	Ply 1	Ply 2
1	1.4	3.8	4.7	3.0
2	3.2	2.4	2.7	2.6
3	2.3	4.8	4.4	2.2
4	2.0	2.7	5.1	3.0
5	2.1	3.0	4.4	3.2
Average	2.2	3.3	4.3	2.8

Remarks:

Sample size 1" x 10"

Tested by: K.H.
Entered by: K.H.
Checked by: R.S.A.

GEOTEXTILE CONFORMANCE TESTING

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll #:

8014564

(BOTTOM GEOCOMPOSITE COMPONENT)

Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

	Machine	Direction	Cross Mach	ine Direction
Specimen	Breaking Load #'s	Apparent Elongation %	Breaking Load #'s	Apparent Elongation %
1	150.31	132.7	226.56	45.0
2	176.50	130.0	248.00	49.3
3	178.12	122.7	189.43	42.7
4	206.75	129.3	203.50	41.7
5	174.56	115.0	239.37	44.3
Average	177.25	125.9	221.37	44.6

FABRIC WEIGHT

ASTM D3776

Specimen	1	2	3	4	5	Average
Unit Weight						l
(oz/yď²)	6.01	6.04	6.63	7.44	7.04	6.63

Remarks:

Sample Size 6" x 6" (approx.)

APPARENT OPENING SIZE

	ASTM D4751
AOS (mm)	0.14

Tested By:

K.H./N.B.

Entered By:

K.H.

Checked By:

GEOTEXTILE CONFORMANCE TESTING

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll #:

8014548

(BOTTOM GEOCOMPOSITE COMPONENT)

Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

	Machine	Direction	Cross Mach	ine Direction
Specimen	Breaking Load #'s	Apparent Elongation %	Breaking Load #'s	Apparent Elongation %
1	154.68	132.3	219.31	48.3
2	177.00	132.0	231.43	40.7
3	139.62	133.0	235.31	43.3
4	180.68	133.0	207.31	40.0
5	215.43	129.3	172.68	42.3
Average	173.48	131.9	213.21	42.9

FABRIC WEIGHT

ASTM D3776

Specimen	1	2	3	4	5	Average
Unit Weight						
(oz/yď²)	7.11	7.04	6.32	6.59	6.61	6.73

Remarks:

Sample Size 6" x 6" (approx.)

APPARENT OPENING SIZE

	ASTM D4751
AOS (mm)	0.15

Tested By:

K.H./N.B.

Entered By:

K.H.

Checked By:

GEOTEXTILE CONFORMANCE TESTING

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll#:

8014550

(TOP GEOCOMPOSITE COMPONENT)

Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

		4.000 A A1A A	1000	
	Machine	Direction	Cross Mach	ine Direction
Specimen	Breaking Load #'s	Apparent Elongation %	Breaking Load #'s	Apparent Elongation %
1	161.00	136.7	243.62	43.3
2	143.81	118.7	215.93	40.0
3	194.87	132.7	241.06	48.3
4	151.18	133.3	238.25	46.0
5	228.00	125.7	208.00	46.0
Average	175.77	129.4	229.37	44.7

FABRIC WEIGHT

ASTM D3776

Specimen	1	2	3	4	5	Average
Unit Weight						
(oz/yď²)	6.83	6.86	6.43	7.10	7.37	6.92

Remarks:

Sample Size 6" x 6" (approx.)

APPARENT OPENING SIZE

ASTM D4751

AOS (mm) 0.14

Tested By:

K.H./N.B.

Entered By:

K.H.

Checked By:

GEOTEXTILE CONFORMANCE TESTING

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll #:

8018568

(TOP GEOCOMPOSITE COMPONENT)

Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

	Machine	Direction	Cross Machi	ne Direction
	Breaking	Apparent	Breaking	Apparent
Specimen	Load #'s	Elongation %	Load #'s	Elongation %
1	213.50	127.0	236.37	48.3
2	202.50	125.7	234.75	49.3
3	208.62	122.0	229.81	49.0
4	218.43	124.7	162.06	42.7
5	151.18	126.0	224.93	41.7
Average	198.85	125.1	217.58	46.2

FABRIC WEIGHT

ASTM D3776

Specimen	1	2	3	4	5	Average
Unit Weight						
(oz/yď²)	6.88	6.53	6.82	6.38	6.83	6.69

Remarks:

Sample Size 6" x 6" (approx.)

APPARENT OPENING SIZE

ASTM D4751
AOS (mm) 0.16

Tested By:

K.H./N.B.

Entered By:

K.H.

Checked By:

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll#:

8302479

Material:

GEONET

Test			Readings	
Thickness (inches)	0.205	0.207	0.208	

Thickness (inches) 0.205	
111111111111111111111111111111111111111	.207
ASTM D1777 0.205 0.212 0.206 0.208 (.201 0.207

Density (g/cm3)	Specimen 1	Specimen 2	Specimen 3	Average
ASTM D792	0.9500	0.9519	0.9515	0.9511

Carbon Black Content (%)	Specimen 1	Specimen 2	Specimen 3	Average
ASTM D1603	2.376	2.348	2.200	2.308

Remarks:

Thickness:

Tested with Mitutoyo Model No. 293-701 Digital Micrometer.

Readings taken at 1 foot intervals.

Tested by:

N.B.

Entered by:

K.H.

Checked by: R.S.A.

Conformance Sample Test Results

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

0.210 0.206 40202.005.061

Client:

EMCON WA

Date:

7-24-98

Average

0.211

Roll#:

8404661

Material:

GEONET

Test			Readings		
Thickness (inches)	0.216	0.217	0.202	0.217	
ASTM D1777	0.208	0.213	0.208	0.217	

Density (g/cm3)	Specimen 1	Specimen 2	Specimen 3	Average
ASTM D792	0.9496	0.9507	0.9518	0.9507

Carbon Black Content (%)	Specimen 1	Specimen 2	Specimen 3	Average
ASTM D1603	2.369	2.184	2.289	2.281

Remarks:

Thickness:

Tested with Mitutoyo Model No. 293-701 Digital Micrometer,

Readings taken at 1 foot intervals.

Tested by:

N.B.

Entered by:

K.H.

Checked by: R.S.A.

C-3c Geocomposite Drain Material Received

GEOCOMPOSITE DRAIN MATERIAL RECEIVED TABLE C-3b

Project: Hidden Valley Landfil

Facility: East Partial Closure

					ROLL SIZE		QC Docs	QA Sample	QA Test	
Date Rec'd	Roll No.	Lot / Batch No.	MXT	2	Sq. Ft.	Thickness / Weight	Rec'd (Date)	Sent (Date)	Rec'd P/F (Date)	Remarks
8/11/98	8404702	84048	225	13.5	3037.5					
8/11/98	8404692	84048	225	13.5	3037.5					
8/11/98	8404664	84048	225	13.5	3037.5				7/24/1998 P	
8/11/98	8404685	84048	225	13.5	3037.5					
8/11/98	8404698	84048	225	13.5	3037.5					
8/11/98	8404695	84048	225	13.5	3037.5					
8/11/98	8404707	84048	225	13.5	3037.5					
8/11/8	8404684	84048	225	13.5	3037.5					
8/11/8	8404697	84048	225	13.5	3037.5					
8/11/98	8404696	84048	225	13.5	3037.5					
8/11/8	8404694	84048	225	13.5	3037.5					
8/11/8	8404705	84048	225	13.5	3037.5					
8/11/8	8404691	84048	225	13.5	3037.5					
8/11/8	8404714	84048	225	13.5	3037.5					
8/11/8	8404701	84048	225	13.5	3037.5					
8/11/8	8404711	84048	225	13.5	3037.5					
8/11/98	8404689	84048	225	13.5	3037.5					
8/11/98	8404687	84048	225	13.5	3037.5					
8/11/98	8404710	84048	225	13.5	3037.5					
8/11/8	8404700	84048	225	13.5	3037.5					
8/11/98	8404690	84048	225	13.5	3037.5					
8/11/98	8404708	84048	225	13.5	3037.5					
8/11/98	8404712	84048	225	13.5	3037.5					
8/11/8	8404699	84048	225	13.5	3037.5					
8/11/8	8404709	84048	225	13.5	3037.5					
8/11/98	8404703	84048	225	13.5	3037.5					
8/11/8	8404688	84048	225	13.5	3037.5					
8/11/98	8404713	84048	225	13.5	3037.5					
8/11/8		84048	225	13.5	3037.5					
Manufacturer:	Evergreen Technologies	hnologies							Notes:	
P=Pass					Total Th	Total This Page:	88087.5	Sq.Ft.		
F=Fail					Cumulat	Cumulative Total:	88087.5	Sq.Ft.		

TABLE C-3b GEOCOMPOSITE DRAIN MATERIAL RECEIVED

Facility: East Partial Closure

Project: Hidden Valley Landfil

No. No.						ROLL SIZE		QC Docs	QA Sample	QA Test	
84046715 84048 225 13.5 3007.5 Responsible of the process of th	Date lec'd	Roll No.	Lot / Batch No.	LX	W	Sq. Ft.	Thickness / Weight	Rec'd (Date)	Sent (Date)	Rec'd P/F (Date)	Remarks
8404660 84048 225 13.5 3007.5	1/98	8404715	84048	225	13.5	3037.5					
8404664 840464 84046 225 13.5 3037.5 R 8404662 84048 225 13.5 3037.5 R R 8404663 84048 225 13.5 3037.5 R R 8404663 84048 225 13.5 3037.5 R R 8404670 84048 225 13.5 3037.5 R R 8404672 84048 225 13.5 3037.5 R R 8404673 84048 225 13.5 3037.5 R R 8404674 84048 225 13.5 3037.5 R R 8404676 84048 225 13.5 3037.5 R R 8404677 84048 225 13.5 3037.5 R R 8404680 84048 225 13.5 3037.5 R R 8404681 84048 225 13.5 3037.5 R	1/98	8404660	84048	225	13.5	3037.5					
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7 Total This Page: 85050 Sq.Ft. Cumulative Total: 173137.5 Sq.Ft.	1/98	8404659	84048	225	13.5	3037.5					
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	Fail					Cumulat	ive Total:	173137.5	Sq.Ft.		

C-4 GEOTEXTILE

C-4a MQA/MQC

MANUFACTURING QUALITY ASSURANCE REPORT

HIDDEN VALLEY LE PROJECT: MATERIAL: GEOTEXTILE

Type of MQA: LEVEL 2
Frequency: Every Lot & or every 100,000 sq ft
of Rolls: 62

7	NUFACTURED by: EVE	No.	Liner Roll #	Sampled by PGL Sent to EMCON
Date	TG700180300N1N	1	8003965	XXXXXXXXXXXXX
/20/98	TG700180300N1N	2	8003972	
/20/98	TG700180300N1N	3	8004019	
/20/98	TG700180300N1N	4	8004022	
//20/98	TG700180300N1N	5	8004025	
//20/98	TG700180300N1N	6	8004033	
7/20/98	TG700180300N1N	7	8004039	
7/20/98	TG700180300N1N	8	8004044	
7/20/98	TG700180300N1N	9	8004047	
7/20/98	TG700180300N1N	10	8004050	
7/20/98	TG700180300NCN	11	8003876	
7/20/98		12	8003950	
7/20/98	TG700180300NCN TG700180300NCN	13	8003951	
7/20/98	TG700180300NCN	14	8003952	XXXXXXXXXX
7/20/98	TG700180300NCN	15	8003953	
7/20/98	TG700180300NCN	16	8003954	
7/20/98		17	8003955	
7/20/98	TG700180300NCN	18	8003956	
7/20/98	TG700180300NCN	19	8003957	
7/20/98	TG700180300NCN	20	8003958	
7/20/98	TG700180300NCN	21	8003983	
7/20/98	TG700180300NCN	22	8003964	10/2
7/20/98	TG700180300NCN	23	8003965	
7/20/98	TG700180300NCN	24	6003967	
7/20/98	TG700180300NCN	25	8003989	
7/20/98	TG700180300NCN	26	8003973	
7/20/98	TG700180300NCN	27	8003974	
7/20/98	TG700180300NCN	28	8003975	XXXXXXXXXXXX
7/20/98		29	8003976	
7/20/98		30	8003977	
7/20/98	TG700180300NCN	31	8003978	
	The state of the state of the state of	32	8003979	
7/20/98		33	8003980	
	TG700180300NCN	34	8003981	
7/20/98				
7/20/98	TG700180300NCN	35	8003982	
7/20/98	TG700180300NCN	36	8003983	
7/20/98	TG700180300NCN	37	8003984	
7/20/98	TG700180300NCN	38	8003985	-
7/20/98	TG700180300NCN	39	8003986	-
7/20/98	TG700180300NCN	40	8003987	
7/20/98	TG700180300NCN	41	8003988	
7/20/98	3 TG700180300NCN	42	8003989	xxxxxxxxxxxxx

MOC REPRESENTATIVE

MANUFACTURING QUALITY ASSURANCE REPORT

PROJECT: HIDDEN VALLEY LF
MATERIAL: GEOTEXTILE

Type of MQA: LEVEL 2
Frequency: Every Lot & or every 100,000 sq ft
of Rolls: 52

M	ANUFACTURED by: EV		# of Rolls: 82	-1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -
Date	ITEM NUMBER	No.	Liner Roll #	Sampled by PGL Sent to EMCON
7/20/98	TG700180300NCN	44	8003991	
7/20/98	TG700180300NCN	45	8003992	
7/20/98	TG700180300NCN	46	8003993	
7/20/98	TG700180300NCN	47	8003994	
7/20/98	TG700180300NCN	48	8003995	
7/20/98	TG700180300NCN	49	6003996	
7/20/98	TG700180300NCN	50	8003997	
7/20/98	TG700180300NCN	51	8003999	
7/20/98	TG700180300NCN	52	8004000	4
7/20/98	TG700180300NCN	53	8004004	
7/20/98	TG700180300NCN	54	8004006	
7/20/98	TG700180300NCN	66	8004007	
7/20/98	ŤG700180300NČN	56	8004009	
7/20/98	TG700180300NCN	57	8004020	XXXXXXXXXXXXXXX
7/20/98	TG700180300NCN	58	8004021	
7/20/98	TG700180300NCN	59	8004023	
7/20/98	TG700180300NCN	60	8004024	
7/20/98	TG700180300NCN	61	8004026	
7/20/98	TG700180300NCN	62	8004027	
7/20/98	TG700180300NCN	63	8004028	
7/20/98	TG700180300NCN	64	6004029	
7/20/98	TG700180300NCN	65	8004030	
7/20/98	TG700180300NCN	66	8004031	
7/20/98	TG700180300NCN	67	6004032	
7/20/98	TG700180300NCN	68	8004034	
7/20/98		69	8004035	
7/20/98	TG700180300NCN	70	8004036	
7/20/98		71	8004037	XXXXXXXXXXXX
7/20/98		72	8004038	
7/20/98		73	8004040	
7/20/98	TG700180300NCN	74	8004041	
7/20/98		75	8004042	
7/20/98		76	6004043	
7/20/98	TG700180300NCN	77	8004045	
7/20/98	TG700180300NCN	78	8004045	
7/20/98		79	8004048	
7/20/98	TG700180300NCN	80	8004049	
7/20/98	TG700180300NCN	81	8004051	
7/20/98	TG700180300NCN	82	6004052	

MQC REPRESENTATIVE



October 14, 1998

Charlie Scott Northwest Linings & Geotextiles 21000 77 Ave. South Kent, WA 98032 Fax# 253/872.9576

Pages: 1

Land Recovery Inc., Puyallup WA

Dear Charlie:

Synthetic Industries' GEOTEX® 701 nonwoven geotextile can meet the minimum average roll value (MARV) mass per unit area of 6.0 oz/yd2 specified on the above referenced project.

Any further questions, please feel free to call.

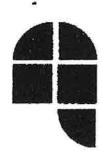
Sincerely,

Eddie E. Cooper

Eddi E. Coopen

Engineering Assistant, Construction • Civil Engineering Products Group

CC: Andy Constantine, Synthetic Industries



NORTHWEST LININGS & GEOTEXTILE PRODUCTS, Inc.

21000 77th AVE. SOUTH **KENT, WA 98032** 253-872-0244 FAX 253-872-0245

Wednesday, October 14, 1998

Land Recovery, Inc. Attn: Jim Crondell P.O. Box 73057 Puyallup, WA. 98373

RE:

Geotextile Letter of Certification

Dear Jim:

We hereby certify that the Synthetic Industries Geotex 701 Non-woven fabric supplied for the project noted below shall meet and/or exceed the attached product specifications, as approved by your engineer.

Project Spec. N/A

Ref.:

Closure "98"

Shipping Date: 10/14/98

Quantity Shipped: 12,500 SY

Roll Dimensions:

 $15" \times 300"$

Roll Number(s):

5120131a, 5120032a, 5120049a, 5119959a, 5120040a, 5120053a,

5120128a, 5120055a, 5120135a, 5120072a, 5120283a, 5120056a, 5120138a, 5120282a, 5120037a, 5120039a, 5120067a, 5120043a, 5120058a, 5120062a, 5120065a, 5120211a, 5119940a, 5120171a,

5120044a

Customer:

Land Recovery, Inc.

NWL G#: 16310

NWL Run#:

N/A

Other:

Synthetic Industries B/L # 178071 – 9/16/98

Sincerel

Inside Sales Assistant

September 23, 1998



Geosynthetic Products Division

Kent, WA 98032 BoL: 178071

North West Linings & Geotextile Products Inc Charli Scott 21000 77th Avenue South

This is to certify that Product GEOTEXTM 701, a nonwoven polypropylene geotextile produced by Synthetic Industries will meet the following certifiable minimum average roll values when tested in accordance with the proper ASTM test methods. A minimum average roll value is calculated as the mean minus two standard deviations, yielding a 97.5 percent confidence level.

PHYSICAL PROPERTY Tensile Strength	TEST METHOD ASTM D-4632	U.S. UNITS 180 lbs	800 N
Elongation	ASTM D-4632	50 %	50 %
Trapezoidal Tear	ASTM D-4533	75 lbs	330 N
Mullen Burst	ASTM D-3786	330 psi	2275 Kpa
Puncture Strength	ASTM D-4833	100 lbs	445 N
AOS	ASTM D-4751	70 US Standard Sieve	0.212 mm
Permittivity	ASTM D-4491	1.5 sec-1	1.5 sec ⁻¹
Permeability	ASTM D-4491	0.34 cm/sec	0.34 cm/sec
Flow Rate	ASTM D-4491	110 gpm/ft²	4480 lpm/m ²
U V Resistance Strength Retained after 500 hours exposure in Xonon Ar	ASTM D-4355	70 %	70 %

Sincerely

Sid Weiser

Technical Manager

Performance Nonwovens Division

Seller makes no werranty, express or implied, concerning the product furnished herounder other than at the time of delivery it shall be of the quality and specifications stated herein. ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED AND, TO THE EXTENT THAT IT IS DONTRARY TO THE FOREGOING SENTENCE ANY IMPLIED WARRANTY OF MERCHANTABILITY IS EXPRESSLY EXCLUDED. Any recommendations made by the Seller concerning uses or applications of said product are believed reliable and Seller makes no warranty of results to be obtained. If the product does not meet Synthetic Industries current published. specifications, and the Customer gives notice to Synthetic Industries before installing the product, then Synthetic Industries will replace the product without charge or refund the purchase price. This Data Sheet superscaes all previous Data Sheets for this style and is subject to change without notice. The effective date for this product data is 02/1887.

		STR	AIGHT	BILL OF LADI	NG LE	178071	NG#
CARRIER COVEN	ANT					PERMANENT	IGA, TH
ATALTON, GA			SHIF	PER	GEOTEXTILE	SHIPPERSN	
PRODUCTS (IN 21000 77TH A KENT WA 9803	VENUE SOU	TH 210	DUCTS 000 771 IT WA 9	TH AVENUE 9	OUTH	32618	SEAL NO. 000 884/
SHIPPING INSTRU	CTIONS	0		no	COLLECT ON DELIVERY	lesting, if this strained agraes electric factor actions along a place agraes and to written payment of the comer shall be written payment of the comer and the company of	of conditions of assistation bit is to be delivered to the co- all of the assistance, the co- sitioning statement, make delivery of this shipma- gitt and of other lawful change.
					1	do Prepaid*	EPAID
RDERH LINE 26675 001 CONSTR.	STYLE 701 COLO	GEDTEX (R) R Inche	46	E	- ITEM	WEIGHT	
		ACK 180.00 ACK 180.00		100.00	5119940A 3119959A	222.0 222.0	

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2 66 75		701	GEDTEX	(京)				
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		GQ4	BLACK	180.000 X	100.00	511 994 0A	222.06	
		604	BLACK	180,000 X	100.00	3119959A	222.06	
		604	BLACK	180,000 X	100.00	511 9960 A	222.06	
		604	BLACK	180.000 X	100.00	5119964A	222.06	
		B04	BLACK	180.000 X	100.00	5119 994 A	222.06	
		804	BLACK	180.000 X	100.00	5120003A	222-06	
		804	BLACK	180.000 X	100.00	5120004 A	222.06	
		G04	BLACK	180.000 X	100.00	5120030A	222.06	
		G04	BLACK	180.000 X	100.00	5120031A	222.06	
		G04	BLACK	180.000 X	100.00	5120032A	222.06	
		604	BLACK	180.000 X	100.00	5120 0 35A	222.06	
		604	BLACK	180.000 X	100.00	5120036A	222.06	
		G04	BLACK	180.000 X	100.00	5120037A	222.06	
		B04	BLACK	180.000 X	100.00	5120039A	222.06	
		004	BLACK	180.000 X	100.00	5120040A	222.06	
		304	BLACK	180.000 X	100.00	5120041A	222-06	
		G04	BLACK	180.000 X	100.00	5120042A	222.04	
		G 04	BLACK	180,000 X	100,00	5120043A	222.06	
		604	BLACK	180.000 X	100.00	3120044A	222.06	
		304	RLACK	180.000 X	100.00	5120045A	222.06	
		BO4	BLACK	180.000 X	100-00	3120047A	222.06	
		304	BLACK	180.000 X	100-00	5120048A	222.06	
		GO4	BLACK	180.000 X	100-00	5120049A	222.06	

RECEIVED, subject to the classifications and fawlidy find buffile in effect on the date of the issue of this Bill of Leding, the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which seld carrier their order to be understood throughout this content as meaning any corson or corporation in passession of the property under the content) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the town to apparent to the party at any time interests in pill or any property over all of any person of seld route to destination, and as to each party at any time interests in pill or any or any property that every service to up performed over all or any portions that the terms and conditions to up a person of the party and the terms and conditions of the seld bill of lading, including those on the pack thereof, sell this is a notice carrier destination of the sell bill of lading, including those on the pack thereof, sell forth in the classification or tariff which governs the transportation of this shipment, and the sell terms and conditions are hereby agreed to by the shipper and accepted for himself and his shipment.

If the shipment moves between two parts by a carrier by water, the tex requires that the bill of lecting shall state whether it is "comer" or shipper's weight," NOTE-Where the rate is departable on water, abspect or declared to state appellically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not second and the property of the property is hereby specifically stated by the shipper to be not second and the property of the property is hereby specifically stated by the shipper to be not second and the property of the property is hereby specifically attend by the shipper to be not second and the property of the property is hereby specifically attend by the shipper to be not second and the property of the property is hereby specifically attend by the shipper to be not second and the property of the property is hereby specifically attend by the shipper to be not second and the property of the property is hereby specifically in the shipper to be not second and the property is hereby specifically in the shipper to be not second and the property is hereby specifically in the shipper to be not second and the property is not sec

SHIPPER, PER Mengoner	O 0	TAL YDS	ÇASES	RALES	POLLS	TOTAL PCS.	TOTAL WT,
AGENT, PER COVERED TRIME	, SLAC						
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a La Vierra au					BILL OF LAD		BILL OF LADI	NG #
CARRIER COVE	THAM			-			PERMANENT	
ABALTON, GA		DATE 9/	4/00	SH	WUVEN FI	ARKICS DIA OF	SYNTHETIC	
011930-0000				930-0			SHIPPERSN	UMBERS
MORTHWEST L		& GEOTEXT				& GEDTEXTILE		
PRODUCTS (II	NC)		PRO	DUCTS	(INC)		TRAILER NO.	SEAL NO.
21000 77TH A		SOUTH	210	00 77	TH AVENUE	SOUTH	- 0	4001
KENT WA 9803	32		KEN	IT WA	7 8032		32618	000 884
SHIPPING INSTR	I ICTIONS		•			COLLECT ON DELIVERY	inding if this chamel eighte without recou signer, shall signifie to The corner shall no	of conditions of applications in the conditions. In the condition, the filter of the condition of the condition of this state of the condition of
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						\$		RE OF CONSIGNORY propied, write or distrip her
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CONSTR.		OLOR	Inche		Z E	- ITEM	WEIGHT LR	 Q
	604	BLACK	180.00		100.00	5120050A	222.0	6
	B04	BLACK	180.00	0 X	100.00	5120051A	222.0	6
	G04	BLACK	180.00	o x	100.00	5120052A	222.0	
	GO4	BLACK	180.00	O X	100.00	5120053A	222.0	
	604	FLACK	180.00	_	100-00	5120054A	222.0	
	604	BLACK	180.00		100.00	5120055A	222.0	
	604 604	BLACK	180.00		100.00	3120056A	222.0 222.0	
	G04	BLACK BLACK	180.00		100.00	5120058A 5120059A	222.0	
	G04	BITACK	180.00		100-00	5120057A 5120061A	222.0	
	G 04	BLACK	180.00	-	100.00	5120062A	222.0	
	G04	BLACK	180.00		100-00	512006ZA	222.0	
	504	PLACK	180.00		100-00	5120064A	222.0	_
	604	BLACK	180.00		100.00	5120065A	222.0	-
	504	BLACK	180.00		100.00	5120046A	222.0	
	G04	BLACK	190.00		100.00	5120067A	222.0	6
	G04	BLACK	1.80.00	o x	100-00	51200 60 A	222.0	
	804	PLACK	160.00		100.00	5120069A	222.0	
	604	BLACK	180.00		100.00	5120072A	222.0	
	604	BLACK	180,00		100.00	5120114A	222.0	
	G04	MUACK	180.00	o x	100.00	5120116A	222.0	4

RECEIVED, subject to the classifications and lawfully filed tertits in effect on the date of the issue of this Bill of Lading, the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said certier (the word garder being understood throughout this contract as meaning any person or corporation in post-assign of the property under this contract as meaning any person or corporation in post-assign of the property under this contract as meaning any person or corporation in the route, otherwise to getter to getter to getter to destination, if on the route to getter the interest of an interest of any of said property, that every sendoe to be performed over all or any portion that the terms and conditions of the Uniform Contests Straight Eit of Lading set faith (1) in Uniform Property in the said and the said of the said and the said the of teating. Including those on the back thereof, set first the late a real events of the shipment, and the said terms and conditions are hereby agreed to by the shipper and eccepted for hunself and his assigns.

100.00

100.00

5120122A

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222.06

222.06

180.000 X

180,000 X

G04

604

BLACK

BLACK

SHIPPER, PER Manyaner	TOTAL YOS	CASES	BALES	HOLLS	TOTAL PGS	TOTAL WT.
AGENT, PER COVERS TRATE , SLAC	1					
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REIGHT CLASS:

WEIGHT

20675.36

			STRAI	GHT BILL OF LA	LDING LABLE	BILL OF LADING # 178071
CARRIER COVE	NANT				-	PERMANENTADORESS
		DATE		SHIPPER	PABRICE DIV CH	BYNTHETIC
ADALTON, GA		DATE 9/1				SHIPPER'S NUMBERS
WORTHWEST LI		& GEOTEXT	THE BORTH	IO-COOU WEST LININGS ICTS (INC)	& GEOTEXTILE	
21000 77TH 4 MENT WA 980	AVENUE	HTUOS	21000	77TH AVENUE WA 98032	E SOUTH	TRAILERING SEAL NO. 3268 00088 Subject to Section 7 of conditions of age lading. It this abiparant is to be delivered stricted writing recourse on the centern spinor, shall signific following alter ment.
SHIPPING INSTR	UCTIONS	***************************************	***		COLLECT ON DELIVERY	The camer shall not make delivery of the without payment of traight and all other law
				!	200	CHOMATIANE OF COMERCINON
					Ψ	If charges are to be proposed, write or star the Proposed*
						1
- to the same						PREPAID
	STYLI 701 C	E PRODUC GEOTEX DLOR	£	1 Z E	ITEM	WEIGHT D
6675 001	701 C	GEDTEX ROLO	((R) S Inches	I Z E		WEIGHT D
5675 001	701	GEOTEX DLOR BLACK	(R) S Inches 180.000	LY X 100.00	5120124A	WEIGHT D LB 222.06
5675 001	701 C(GEDTEX ROLO	(R) 	LY X 100.00 X 100.00		WEIGHT D
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6675 001	701 C0 604 604 604	GEOTEX DLOR BLACK BLACK BLACK	(R) Inches 180.000 180.000	LY X 100.00 X 100.00 X 100.00 X 100.00	5120124A 5120128A 5120130A	WEIGHT D LB 222.04 222.05 222.06
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6675 001	701 CI 604 604 604 604 904	GEOTEX DLOR BLACK BLACK BLACK BLACK BLACK BLACK	Inches 180.000 180.000 180.000 180.000 180.000	X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00	5120124A 5120128A 5120130A 5120131A 5120133A	WEIGHT D LB 222.06 222.06 222.06 222.06 222.06
6675 001	701 C0 604 604 604 604 604 604	GEOTEX DLOR BLACK BLACK BLACK BLACK BLACK BLACK	Inches 180.000 180.000 180.000 180.000 180.000 180.000	X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00	5120124A 5120128A 5120130A 5120131A 5120133A 5120134A	WEIGHT D LB 222.06 222.06 222.06 222.06 222.06 222.06
6675 001	701 CI 604 604 604 604 604 604 604	GEOTEX DLOR BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK	(R) Inches 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000	X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00	5120124A 5120128A 5120130A 5120131A 5120133A 5120134A 5120135A	WEIGHT D LB 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06
6675 001	701 CI 604 604 604 604 604 604 604	GEOTEX DLOR BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK	Inches 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000	X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00 X 100.00	5120124A 5120128A 5120130A 5120131A 5120133A 5120134A 5120135A 5120136A	WEIGHT D LB 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06
6675 001	701 CI 604 604 604 604 604 604 604	GEOTEX DLOR BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK	(R) Inches 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000	X 100.00 X 100.00	5120124A 5120128A 5120131A 5120131A 5120133A 5120135A 5120136A 5120136A 5120140A 5120145A	WEIGHT D LB 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06
5675 001	701 CI 604 604 604 604 604 604 604 604	GEOTEX DLOR BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK	(R) Inches 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000	X 100.00 X 100.00	5120124A 5120128A 5120131A 5120133A 5120134A 5120135A 5120136A 5120136A 5120140A 5120145A 5120144A	WEIGHT Q LB 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06
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4675 001	701 CI 604 604 604 604 604 604 604 604	GEOTEX DLOR BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK	(R) Inches 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000 180.000	X 100.00 X 100.00	5120124A 5120128A 5120131A 5120133A 5120134A 5120135A 5120136A 5120136A 5120140A 5120145A 5120144A	WEIGHT Q LB 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06 222.06

PECEIVED, subject to the classifications and lawfully filed jurifis in effect on the class of this Bill of funding, the property described below, in appearent good order, except as noted (contents and condition of contents of packages unforteenty), marked, consigned, and destined as inclosed below, which said carrier (the word carrier being understood firreuphout this contract as meaning any parameter or comparity under the contract) spread to carry to its usual piece of delivery at said cestimation, it is mutually agreed, as to each party or under the contract of said property over all of any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed over all or say portion to the treatment of the uniform borroad before the contract of the said said or the carrier of the order of the uniform borroad before the performed over all or said vertices of the uniform borroad before the carrier observation in the said said on the carrier of the said that it is not to be performed. If this is a relative said and the said this is a relative to a relative to the performent, or (2) in the applicable matter across elevational and the first contract of the said this is a relative to the performent. If the performent of the said this is a relative to the property artifice that is a relative to the treatment of the said this is a relative to the property artifice that is a said to the formal and the said terms and conditions are hardly agreed to by the efficient and accepted for himself and his saidness.

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If the shipment moves between two parts by a carrier by water, the law requires that the toti of lading shall state whether it is "carrier's or shipper's weight." NOTE-Where the rate is department on union, shippers are required to state specifically in writing the agreed or deplaced or deplac

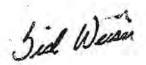
SHIPPER, PER Ma 2000	FOTAL YDS	CASES	BALES	ROLLS	TOTAL PCS	TOTAL WT
AGENT, PERSONE AND TRME	La = 9680.00			92	92	20675
781-4 \$1/90'A \$55-1 \$31	ENGE-STRINELLE INDOSE	Cm2	67100071 -	ሰ፣ የስግነ	חבו אל מס	

09/21/98

Synthetic Industries Individual Roll Data Bill of Lading:178071 10:50 Page 1

Roll	Product	Tex	asile	Elono	ration	Trap	Tear	Mullen	Punct	
Number	Style	(MD)	(XMD)	(MD)	(XMD)	(MD)	(XMD)	Burst	Resist	
		lbs D4632	lbs D4632	8 54600	*	lbs	lbs	្រុក្	lbs	
 		D4632	D4632	D4632	D4632	D4533	D4533	D3786	D4833	
4130020A	1201	348	408	73	81	148	204	601	202	
4130030A	1201	351	446	75	82	140	203	690	208	
5119940A	701	194		60		85		347	109	
511 99 60A	701	202	218	58	75	90	101	363	107	
512003 0A	701	194	210	61	75	100	114	363	3. 2. 1	
5120040A	701	197	204	58	82	96	101	340	106	
5120050A	701	195		58		93		373	114	
5120130A	701	202	197	59	80	90	99	351	121	
5120140A	701	207	212	60	77	91	105	341	118	
5120160A	701	192	214	60	74	81	113	351	111	
5147960A	451	123	155	64	71	60	76	251	7:	
5148060A	451	132	156	68	68	58	84	270	76	

This test data includes all of the roll #'s listed on this certification



Synthetic Industries' current standard manufacturing quality control (MQC) testing frequency for GEOTEX nonwoven geotextiles is one (1) test per 90,000 sf (8,360 sm) for index properties (mass per unit area, thickness, grab tensile and elongation, trapezoidal tear, mullen burst and puncture resistance) for styles heavier than 601 and one (1) test per 162,000 sf (15,000 sm) for index properties for style 601 and lighter. Although we strive to test our nonwoven geotextiles for apparent opening size (AOS) and Permittivity/permeability/water flow rate approximately once every 540,000 sf (50,160 sm), the actual frequency of testing for performance properties will vary depending upon production schedules, product availability, customer requirements, job specifications or other agreements arranged with Synthetic Industries prior to the time of purchase. If additional testing is needed to meet higher frequencies required by the project specifications, it is the purchaser's responsibility to notify Synthetic Industries and ask for assistance in calculating the costs for the additional tests.

Once rolls of nonwoven geotextiles are produced, inspected and the test results from the frequency stated above indicates that interials produced during the production run meets our published minimum average roll values, approved rolls are shipped for storage until an order requires the material to be shipped. Since rolls are loaded at the warehouse independent of production sequence test results listed above may include data from rolls which were not shipped. However, the data provided is from the same production run as the rolls actually shipped on this bill of lading.

C-4b Conformance Testing

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll #:

8003952 Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

	100	ASTM I	04632	
	Machine	Direction	Cross Mach	ine Direction
Specimen	Breaking Load #'s			Apparent Elongation %
1	324.37	148.3	281.31	60,7
2	283.50	141.7	238.06	65.0
3	317.06	137.3	271.00	74.3
4	341.25	134.7	317.12	81.7
5	275.43	153.3	282.43	66.7
Average	308.32	143,1	277.98	69.7

TRAPEZOIDAL TEARING STRENGTH

ASTM D4533

	AST	M D4533
Specimen	Machine Direction Breaking Load #'s	Cross Machine Direction Breaking Load #'s
1	127.43	134.81
2	112.12	114.87
3	93.87	156.43
4	107.18	108.00
5	106.00	136.43
Average	109.32	130.11

PUNCTURE RESISTANCE

Oi			ASTM D48	833		
Specimen		2	3	1		
Load #'s	129.12	119.25	124.31	110.25	3	Average
				110.25	116.12	119.81

FABRIC WEIGHT

ASTM D3776

Specimen		1 2	AS1M D3770)		
Unit Weight		1	3	4	5	Average
(oz/yď²)	9.78	9.16	8.89	7.00		
Remarks: S	Sample Size 6	" х 6" (арргох.)	0.05	7.99	8.93	8.95

PERMITTIVITY

ASTM D4491

1.679	s-1
Average of f	our and di

Average of four readings,

MULLEN BURST STRENGTH

Test Number	-		ASTM	D3786	5						
	1	2	3	4	15	-	T =				
Burst Strength (psi)	460	325	425	360	380	200	1	8	9	10	Average
	1.		1	300	1 300	390	415	375	415	390	394

Tested By:

K.H./N.B.

Entered By: Checked By:

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll #:

8003966

Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

_	Machine	ASTM I	Cross Machine Direction			
Specimen	Breaking Load #'s	Apparent Elongation %	Breaking Load #'s	Apparent Elongation %		
1	335.12	129.7	324.12	73,3		
2	316.43	130.0	310.68	73.3		
3	286.43	128.3	279.68	78.3		
4	264.56	116.7	266.56	76.0		
5	279.50	133.3	285.31	73.0		
Average	296.41	127.6	293.27	74.8		

TRAPEZOIDAL TEARING STRENGTH

ASTM D4533

	AST	M D4533				
Specimen	Machine Direction Breaking Load #'s	Cross Machine Direction				
1	135.62	Breaking Load #'s				
2	105.12	91.31				
3	165.93	101.75				
4	133.12	102.31				
5	159.37	115.56				
Average	139.83	108.26				

PUNCTURE RESISTANCE

Sansian I			ASTM D48	833		
Specimen	L. I.	2	3	1		
Load #'s	97.06	130.62	125.37	110.01	5	Average
			123.37	118.31	121.18	118.51

FABRIC WEIGHT

ASTM D3776

Specimen			ASTM D3776	5		
Unit Weight		1	3	4	5	Average
(oz/yď²)	10.03	9.48	9.43	0.00	-	Trerage
Remarks:	Sample Size 6'	x 6" (approx.)	7.43	9.57	7.89	9.28

PERMITTIVITY

ASTM I)4491
1.637	s-1
Average of fo	our readings.

MULLEN BURST STRENGTH

Test Number	1	2	1 2	D3786	_						
Burst Strength (psi)	-	4	3	4	5	6	7	0	•		
Sarst Buengui (psi)	345	330	460	420	405	205	-	- 6	9	10	Average
				720	403	395	445	410	390	385	399

Tested By:

K.H./N.B.

Entered By: Checked By:

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll #:

8003975

Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

	10.00	Machine Direction Cross Machine Direction						
	Machine	Direction	Cross Machine Direction					
Specimen	Breaking Load #'s	Apparent Elongation %	Breaking Load #'s	Apparent Elongation %				
1	326.75	153.3	292.81	71.0				
2	297.75	136.7	256.00	70.0				
3	335.18	133.3	273.00	66.0				
4	307.93	143.7	266.25	66,3				
5	268.93	137.0	262.00	66.0				
Average	307.31	140.8	270.01	67.9				

TRAPEZOIDAL TEARING STRENGTH

ASTM D4533

C	Machine Direction	Cross Machine Direction		
Specimen	Breaking Load #'s	Breaking Load #'s		
1	102.68	123,25		
2	93.37	137.93		
3	113.56	128.00		
4	130.25	115.12		
5	136.31	129.87		
Average	115.23	126.83		

PUNCTURE RESISTANCE

ASTM D4833

Specimen			ASTM D48	333		
Load #'s	105.50	2	3	4	5	T .
LOGICI IT'S	125.50	121.50	124.81	142.81	97.43	Average
					77.43	122.41

FABRIC WEIGHT

Special I			ASTM D3776			
Specimen Unit Weight		2	3	1 4	1 5	1
(oz/yd²)	8.38	8,92	2.5			Average
Remarks: S	imple Size 6	" x 6" (approx.)	8.74	9.13	10.10	9.05

PERMITTIVITY

ASTM D4491 1.672 5-1

Average of four readings.

MULLEN BURST STRENGTH

Burst Strength (psi) 360 390 415 25 6 7 8 9	
Burst Strength (psi) 360 390 415 370 350 400 365 385 400 4	0 Average

Tested By:

K.H./N.B.

Entered By: Checked By:

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll #:

8003990

Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

		ASTM I	04632	
	Machine	Direction	ine Direction	
Specimen	Breaking Load #'s	Apparent Elongation %	Breaking Load #'s	Apparent Elongation %
_1	206.81	143.3	219.68	66,3
2	233.68	147.3	302.68	66.0
3	174.00	146.0	290.18	62.7
4	178.56	155.0	284.06	63.0
5	207.75	144.3	271.50	59.7
Average	200.16	147.2	273.62	63.5

TRAPEZOIDAL TEARING STRENGTH

ASTM D4533

	AST	M D4533		
Specimen	Machine Direction Breaking Load #'s	Cross Machine Direction		
	Dreaking Load #'s	Breaking Load #'s		
1	114.12	162.81		
2	168.87	146.25		
3 101.87 4 104.81		130.56		
		132.12		
5	141.31	130.43		
Average	126.20	140.43		

PUNCTURE RESISTANCE

ASI	M D4833	1833	
pecimen 1 2 3	D 1033		

Spacion on			ASTM D48	333		
Specimen		2	3	T 4		
Load #'s	140.50	110.06	111.81	100.10	5	Average
			111.01	123.18	126.00	122.31

FABRIC WEIGHT

C			ASTM D3776			
Specimen Unit Weight		2	3	4	15	T A
(oz/yd²)	7.91	8.88	9.60			Average
Remarks:	Sample Size 6	" x 6" (approx.)	8.62	8.33	9.62	8.67

PERMITTIVITY

ASTM D4491 Average of four readings,

MULLEN BURST STRENGTH

ASTM D3786

Test Number	1.1	2	3	Δ	1 5	-	1				
Burst Strength (psi)	405	340	340	400	13	6	7	8	9	10	Average
	1.00	340	340	400	440	425	350	365	380	400	385

Tested By:

K.H./N.B.

Entered By: Checked By:

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll#: 8004020

Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

	Machine	Direction	Cross Mach	nine Direction
Specimen	Breaking Load #'s	Apparent Elongation %	Breaking Load #'s	Apparent Elongation %
1	334.50	135.0	270.12	65.0
2	325.25	126.0	281.62	66.7
3	309.81	132.0	329.00	67.3
4	344.37	121.7	300.25	72.3
5	278.18	125.0	301.81	66.7
Average	318.42	127.9	296.56	67.6

TRAPEZOIDAL TEARING STRENGTH

ASTM D4533

D	Machine Direction	Cross Machine Direction		
Specimen	Breaking Load #'s	Breaking Load #'s		
1	96.25	116.37		
2	98.43	112.75		
3	99.18	106.62 118.00 128.87		
4	124.18			
5	90.18			
Average	101.64	116,52		

PUNCTURE RESISTANCE

ASTM D4833

Specimen			ASTM D48	333		
Load #'s	1776.00	2	3	4	5	T the second
LOGO #5	176.37	126.87	102.56	117.18	110000	Average
		11/		117.18	117.62	128.12

FABRIC WEIGHT

ASTM D3776

Specimen		1 2	ASTM D3776	,					
Unit Weight			3	4	5	Average			
(oz/yd²)	9.47	10.75	10.23	201		Trotage			
Remarks:	Sample Size 6	x 6" (approx.)	10.23	8.96	8.89	9.66			

PERMITTIVITY

ASTM D4491 1.800 Average of four readings.

MULLEN BURST STRENGTH

ASTM D3786

Test Number	1	2	3	4 D3786			_				
urst Strength (psi)	360	445	415	277	1 3	6	7	8	9	10	Average
	1000	143	415	375	375	390	365	390	400	405	392

Tested By:

K.H./N.B.

Entered By: Checked By:

Project:

HIDDEN VALLEY LANDFILL

Proj. No.

40202.005.061

Client:

EMCON WA

Date:

7-24-98

Roll #:

8004037

Test Condition:

Moisture Equilibrium

GRAB BREAKING LOAD & ELONGATION

ASTM D4632

	Machine	ASTM I Direction		nine Direction
Specimen	Breaking Load #'s	Apparent Elongation %	Breaking Load #'s	Apparent Elongation %
1	248.75	133.3	334.68	78.3
2	216.56	130.0	295.62	75.0
3	285.68	129.3	338.00	76.7
4	263.18	137.3	274.93	67.0
5	256.25	126.0	293.75	66.0
Average	254.08	131.2	307.40	72.6

TRAPEZOIDAL TEARING STRENGTH

ASTM D4533

	AST	M D4533
Specimen	Machine Direction Breaking Load #'s	Cross Machine Direction
	Dicaking Load #8	Breaking Load #'s
1	92.25	144.81
2	91.56	143.18
3	114.06	123.31
4	142.06	122.06
5	98.68	123,87
Average	107.72	131.45

PUNCTURE RESISTANCE

C ·			ASTM D48	233		
Specimen Load #'s	F	2	3	1 4		
Load #'s	112.56	95.06	102.50	106.75	5	Average
			102.50	126.75	109.18	109.21

FABRIC WEIGHT

ASTM D3776

Specimen	Weight d²) 8.74	1 2	ASTM D3776	5		
Unit Weight		1	3	4	5	Average
(oz/yd²)		8.92	7.18	0.00		Trorage
Remarks:	Sample Size 6	" x 6" (approx.)	,,,10	9.06	8.80	8.54

PERMITTIVITY

ASTM I	04491
1.715	s-1
Average of C	

Average of four readings.

MULLEN BURST STRENGTH

ASTM D3786

Test Number	1	2	1 3	I D3786	-						
Burst Strength (psi)	360	375	360	390	5	6	7	8	9	10	Average
		575	300	390	375	415	390	400	375	395	384

Tested By:

K.H./N.B.

Entered By: Checked By:

C-4c Geotextile Material Received Log

Project: Hidden Valley Landfil

D. C. M. Weight CLX W. Sq. Ft. Thickness / Weight Thickness / Weight ASample (Date) CDA Test CDA Test <th< th=""><th>Roll</th><th>Lot / Batch No.</th><th></th><th>ROLL SIZE</th><th></th><th>OC Doce</th><th></th><th></th><th></th></th<>	Roll	Lot / Batch No.		ROLL SIZE		OC Doce			
876 B0006 300 15 4500 Tomil 6oz Chaie) Chaie) Chaie C	No.		ΓΧW	Sq. Ft	Thickness /	Bec'd	QA Sample	QA Test	
950 80006 300 15 4500 120mil (6oz 150mil (6oz 15	8003876	90008	1		Weight	(Date)	Sent	Rec'd P/F	
951 80006 300 15 4500 120mil / 6oz 952 80006 300 15 4500 120mil / 6oz 953 80006 300 15 4500 120mil / 6oz 954 80006 300 15 4500 120mil / 6oz 955 80006 300 15 4500 120mil / 6oz 96 80006 300 15 4500 120mil / 6oz 80 80006 300 15 4500 120mil / 6oz 8 80006 300 15 4500 120mil / 6oz 8 80006 300 15 4500 120mil / 6oz 9 80006 300 15 4500 120mil / 6oz 1	8003950	90008	1	4500	120mil / 6oz		(Date)	(Date)	Remarks
952 80006 300 15 4500 120mil / 6oz 553 80006 300 15 4500 120mil / 6oz 554 80006 300 15 4500 120mil / 6oz 555 80006 300 15 4500 120mil / 6oz 557 80006 300 15 4500 120mil / 6oz 57 80006 300 15 4500 120mil / 6oz 58 80006 300 15 4500 120mil / 6oz 58 80006 300 15 4500 120mil / 6oz 59 80006 300 15 4500 120mil / 6oz 50 80006 300 15 4500 120mil / 6oz 6 80006 300 15 4500 120mil / 6oz 7 80006 300 15 4500 120mil / 6oz 8 80006 300 15 4500 120mil / 6oz 8	8003951	80008		4500	120mil / 6oz				
953 80006 300 15 4500 120mil / 6oz 654 80006 300 15 4500 120mil / 6oz 655 80006 300 15 4500 120mil / 6oz 56 80006 300 15 4500 120mil / 6oz 57 80006 300 15 4500 120mil / 6oz 58 80006 300 15 4500 120mil / 6oz 58 80006 300 15 4500 120mil / 6oz 58 80006 300 15 4500 120mil / 6oz 6 80006 300 15 4500 120mil / 6oz 7 80006 300 15 4500 120mil / 6oz 8 80006 300 15 4500 120mil / 6oz 9 80006 300 15 4500 120mil / 6oz 1 80006 300 15 4500 120mil / 6oz 1	8003952	80008	1	4500	120mil / 60z				
154 8,000 15 4500 120mil/6oz 155 80006 300 15 4500 120mil/6oz 156 80006 300 15 4500 120mil/6oz 157 80006 300 15 4500 120mil/6oz 158 80006 300 15 4500 120mil/6oz 159 80006 300 15 4500 120mil/6oz 15 80006 300 15 4500 120mil/6oz 15 80006 300 15 4500 120mil/6oz 16 80006 300 15 4500 120mil/6oz 16 80006 300 15 4500 120mil/6oz 16 80006 300	8003953	00000		4500	120mil / Boz				
55 80006 300 15 4500 120mil/6oz 56 80006 300 15 4500 120mil/6oz 57 80006 300 15 4500 120mil/6oz 58 80006 300 15 4500 120mil/6oz 58 80006 300 15 4500 120mil/6oz 58 80006 300 15 4500 120mil/6oz 56 80006 300 15 4500 120mil/6oz 56 80006 300 15 4500 120mil/6oz 57 80006 300 15 4500 120mil/6oz 58 80006 300 15 4500 120mil/6oz 58 80006 300 15 4500 120mil/6oz 59 80006 300 15 4500 120mil/6oz 6 80006 300 15 4500 120mil/6oz 6 80006	8003954	90000		4500	120mil / Ec-			7/24/98 P	
80006 300 15 4500 120mil/6oz 56 80006 300 15 4500 120mil/6oz 57 80006 300 15 4500 120mil/6oz 58 80006 300 15 4500 120mil/6oz 53 80006 300 15 4500 120mil/6oz 54 80006 300 15 4500 120mil/6oz 55 80006 300 15 4500 120mil/6oz 6 80006 300 15 4500 120mil/6oz 7 80006 300 15 4500 120mil/6oz 8 80006 300 15 4500 120mil/6oz 9 80006 300 15 4500 120mil/6oz 1 80006 300 15 4500 120mil/6oz 1 80006 300 15 4500 120mil/6oz 1 80006 300 <	ROOPOEE	90000		4500	700 / 111107				
80006 300 15 4500 120mil / 6oz 55 80006 300 15 4500 120mil / 6oz 58 80006 300 15 4500 120mil / 6oz 53 80006 300 15 4500 120mil / 6oz 54 80006 300 15 4500 120mil / 6oz 6 80006 300 15 4500 120mil / 6oz 7 80006 300 15 4500 120mil / 6oz 8 80006 300 15 4500 120mil / 6oz 9 80006 300 15 4500 120mil / 6oz 1 80006	8003933	90008		4500	120mil / 6oz				
57 80006 300 15 4500 120mil / 6oz 58 80006 300 15 4500 120mil / 6oz 53 80006 300 15 4500 120mil / 6oz 54 80006 300 15 4500 120mil / 6oz 55 80006 300 15 4500 120mil / 6oz 6 80006 300 15 4500 120mil / 6oz 7 80006 300 15 4500 120mil / 6oz 8 80006 300 15 4500 120mil / 6oz 8 80006 300 15 4500 120mil / 6oz 1 <	9085000	90008		0001	T20mil / 6oz				
58 80006 300 15 4500 120mil / 6oz 33 80006 300 15 4500 120mil / 6oz 34 80006 300 15 4500 120mil / 6oz 36 80006 300 15 4500 120mil / 6oz 45 80006 300 15 4500 120mil / 6oz 80006 300	8003957	80008		4500	120mil / 6oz				
33 80006 300 15 4500 120mil / 6oz 34 80006 300 15 4500 120mil / 6oz 55 80006 300 15 4500 120mil / 6oz 6 80006 300 15 4500 120mil / 6oz 7 80006 300 15 4500 120mil / 6oz 9 80006 300 15 4500 120mil / 6oz 1 80006 300 15 4500 120mil / 6oz 80006 300 15 4500 120mil / 6oz 80006 300	8003958	80008		4500	120mil / 6oz				
34 B0006 300 15 4500 120mil/6oz 55 80006 300 15 4500 120mil/6oz 6 80006 300 15 4500 120mil/6oz 7 80006 300 15 4500 120mil/6oz 8 80006 300 15 4500 120mil/6oz 1 80006 300 15 4500 120mil/6oz 8 80006 300	8003963	80006	1	4500	120mil / 602				
80006 300 15 4500 120mil/6oz 6 80006 300 15 4500 120mil/6oz 7 80006 300 15 4500 120mil/6oz 9 80006 300 15 4500 120mil/6oz 2 80006 300 15 4500 120mil/6oz 3 80006 300 15 4500 120mil/6oz 4 80006 300 15 4500 120mil/6oz 8 80006 300 15<	8003964	00000		4500	120mil / Co-				
80006 300 15 4500 120mil/6oz 7 80006 300 15 4500 120mil/6oz 9 80006 300 15 4500 120mil/6oz 9 80006 300 15 4500 120mil/6oz 1 80006 300 15 4500 120mil/6oz 80006 300 </td <td>200000</td> <td>90009</td> <td></td> <td>4500</td> <td>700 / 11110 707</td> <td></td> <td></td> <td></td> <td></td>	200000	90009		4500	700 / 11110 707				
6 80006 300 15 4500 120mil/6oz 9 80006 300 15 4500 120mil/6oz 9 80006 300 15 4500 120mil/6oz 1 80006 300 15 4500 120mil/6oz 80006 <td>COSCOO</td> <td>90008</td> <td></td> <td>4500</td> <td>LZUMII / 6oz</td> <td></td> <td></td> <td></td> <td></td>	COSCOO	90008		4500	LZUMII / 6oz				
7 80006 300 15 4500 120mil / 6oz 9 80006 300 15 4500 120mil / 6oz 2 80006 300 15 4500 120mil / 6oz 4 80006 300 15 4500 120mil / 6oz 5 80006 300 15 4500 120mil / 6oz 8 80006 30 15 4500 120mil / 6oz 8 80006 30 15 4500 120mil / 6oz 8 80006 30 15 4500 120mil / 6oz	9965008	80008		4500	120mil / 6oz		1		
9 80006 300 15 4500 120mil / 6oz 2 80006 300 15 4500 120mil / 6oz 4 80006 300 15 4500 120mil / 6oz 5 80006 300 15 4500 120mil / 6oz 8 80006 300 15 4500 120mil / 6oz	8003967			4500	120mil / 6oz				
2 80006 300 15 4500 120mil / 6oz 3 80006 300 15 4500 120mil / 6oz 4 80006 300 15 4500 120mil / 6oz 8 80006 300 15 4500 120mil / 6oz	8003969	<u> </u>		4500	120mil / 6oz	1		7/24/98 P	
3 80006 300 15 4500 120mil/6oz 4 80006 300 15 4500 120mil/6oz 8 80006 300 15 4500 120mil/6oz 8 80006 300 15 4500 120mil/6oz 8 80006 300 15 4500 120mil/6oz	8003972	T		4500	120mil / 6oz				
4500 120mil / 6oz 80006 300 15 4500 120mil / 6oz	8003973	1		4500	120mil / 6oz				
80006 300 15 4500 120mil/6oz	8003974	1		4500	120mil / 607				
80006 300 15 4500 120mil/6oz	8003975	1	1	4500	120mil / Goz				
80006 300 15 4500 120mil / 6oz	8003976	1		4500	120mil / 602				
80006 300 15 4500 120mil / 6oz	8003977	1		4500	120mil / C.			7/24/98 P	
80006 300 15 4500 80006 300 15 4500 80006 300 15 4500 80006 300 15 4500 80006 300 15 4500 80006 300 15 4500	8003070	1		4500	100 / III / 200				
80006 300 15 4500 80006 300 15 4500 80006 300 15 4500 80006 300 15 4500 80006 300 15 4500	9/60000			4500	120mll / 60z				
80006 300 15 4500 80006 300 15 4500 80006 300 15 4500 80006 300 15 4500	8003979			4200	120mil / 6oz				
80006 300 15 4500 80006 300 15 4500 80006 300 15 4500 15 4500 15 4500	8003980			4500	120mil / 6oz				
80006 300 15 4500 80006 300 15 4500	8003981	1		4500	120mil / 6oz	1			
80006 300 15 4500 80006 300 15 4500	3003982	1		4500	120mil / 602				
60006 300 15 4500	3003983	1	1	4500	120mil / 60-				
200		1		4500	120mil / 65-				

Sq.Ft. Sq.Ft.

126000 126000

Cumulative Total: Total This Page:

Checked By:

Glenn Heath

Logged By:

F=Fail

A sto.
<i>" =</i>

Project: Hidden Valley Landfil

Project No:

40202-005.061

Facility: East Partial Closure

		Benezice	T. C.																												
	Bec'd Bu	(Date)	(oma)							7/24/98 P															7/24/9R P	-					
OA Sample	Sent	(Date)																													
QC Docs	Rec'd	(Date)																						,							
	Thickness /	Weight	120mil / 6oz	120mil / 6oz	120mil / 6oz	120mil / 602	120mil / 60z	120mil / 60z	120mil / 602	120mil / 607	120mil / 6oz	120mil / 602	120mil / 6oz	120mil / 602	120mil / 602	400-ii / 007	120mil / 60z	Zog / Imozi	120mil / 6oz												
HOL SIZE	Sq. Ft.		4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	7500	0004	4500	4500	4500	4500	4500	4500	4200	4500	4500	4500	4500	4500	4500
	LXW	300	1			300 15	300 15	300 15	300 15	300 15	300 15	300 15	300 15	300 15	300 15	300 15							300 15			300	1		300		
Lot / Batch No		80006	BOODE	00000	90008	00000	90008	90008	80008	90008	90008	90008	90008	90008	90008	90008	90008	80008	80006	80008	BOODE	1	t	1	1	1	Ī	1	1	<u> </u>	1
Roll	No.	8003984	8003985	8003986	8003987	100000	90003888	6065000	000000	000000	288000	8003933	90000994	800000	9886009	8003997	8003999	8004000	8004004	8004006	8004007	8004009	8004019	8004020	8004021	8004022	8004023	8004024	8004025	8004026	
Date	Rec'd	8/11/98	8/11/98	8/11/98	8/11/98	8/11/9R	8/11/98	8/11/98	8/11/98	8/11/98	8/11/98	8/11/98	8/11/98	8/11/98	8/11/09	06/11/00	8/11/98	8/11/98	8/11/98	8/11/98	8/11/98	8/11/98	8/11/98	8/11/98	8/11/98	8/11/8	8/11/98	8/11/98	8/11/98	8/11/98	

Sq.Ft. Sq.Ft.

126000 252000

Checked By:

Glenn Heath

Logged By:

P=Pass

F=Fail

Cumulative Total: Total This Page:

Project: Hidden Valley Landfil

Project No:

8 8 8 44 44 45 45 45 60 45 60 45 60 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Project No: 40202-005,061 Lot / Batch No. L X W 80006 300 15
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Sq.Ft.

117000 369000

Cumulative Total:

Checked By:

Glenn Heath

Logged By:

Project: Hidden Valley Landfil

tial Closure				Remarks																																
Facility: East Partial Closure		QA Test	Rec'd P/F	(Date)																																
		QA Sample	Sent	(Date)										1																						Notes:
		QC Docs	(Date)	(care)												1															1	1				112500 Sa Er
Ĭ		Thickness /	Weight	120mil / 6oz	120mil / 607	120mil / 602	120mil / 602	120mil / 62-	120mil / 60-	120mil / C-	120mil / 6	400 " 100Z	ZOUMIII / 60Z	120mil / 6oz	120mil / 6oz	120mil / 6oz	120mil / 607	120mil / 607	700 11110	Z09 / IIIIN 7	120mil / 6oz	120mil / 6oz	120mil / 602	120mil / ea-	100-11/007	140F III / 60Z	I ZOMII / 60z	120mil / 6oz	120mil / 6oz	120mil / 6oz	120mil / 607					
	ROLL SIZE	, ti	7 de 1 t.	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	0004	4500	4500	4500	4500	AEDO	4200	4500	4500	4500	4500	1	1	1	1		4500					Total This Page:
40202-005.061		Γ×Μ	300 15	1	1	1		300 15	1	300 15	300 15	300 15	300 15	300 15	300 15		1		300 15	300 15	300 15			1	300 15	300 15	300 15	300 15			0					
Project No:	1 of / Botch M.	Selen No.	80006	80006	80008	80008	ROODE	80006	ROOP	00000	90000	00000	90008	90008	90008	80006	<u> </u>	+	1			90008	1	1	1	1		90008	90008	80006		1				
FILICOL	Roll	No.	5119940a	5119959a	5120032a	5120037a	5120039a	5120040a	5120043a	5120044a	5120049a	5120053a	51200552	5120050	Security	5120058a	5120062a	5120065a	5120067a	5120070	21200/2a	5120128a	5120131a	5120135a	5120138a	51201719	51900112	1000118	3120282a	5120283a						
	Date	Hec'd	10/14/98	10/44/00	40/44/98	10/14/98	10/14/98	10/14/98	10/14/98	10/14/98	10/14/98	10/14/98	10/14/98	+	+	+	+	-		10/14/98	+	+	1	-		-	10/14/98	+	+	+				Manufacturer:	P=Pass	F=Fail

Sq.Ft. Sq.Ft.

481500 112500

Cumulative Total:

Kewa

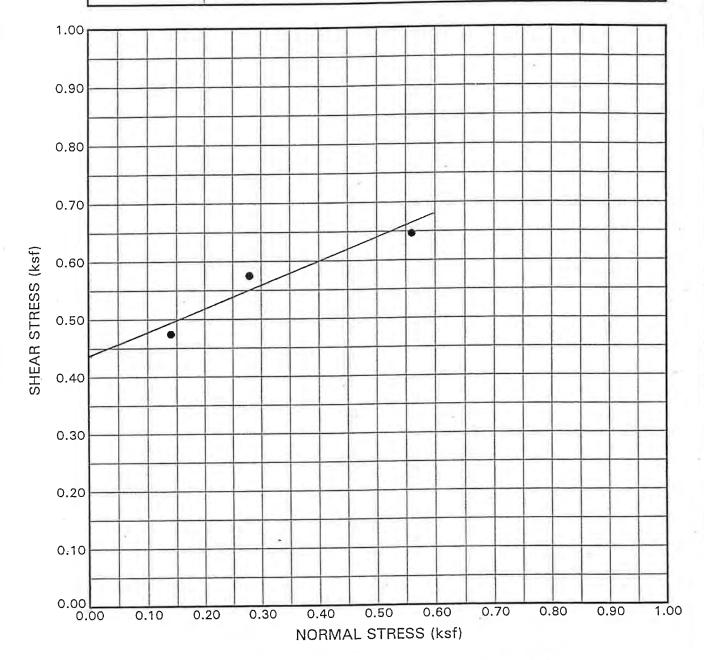
Checked By:

Dagan Short

Logged By:

APPENDIX D SUMMARY OF INTERFACE DIRECT SHEAR TESTING

SA	MPLE	DEPTH (feet)	CLASSIFICATION
S-1	TYPEA		(CH) Olive brown, Fat CLAY with sand.
TEST CO	NDITIONS:	Peak values plott	ed for remolded specimens.



FRICTION ANGLE (degrees)	21
APPARENT COHESION (psf)	440
AVERAGE DRY DENSITY (pcf)	87.3
AVERAGE WATER CONTENT (%)	31.5

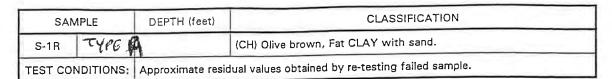


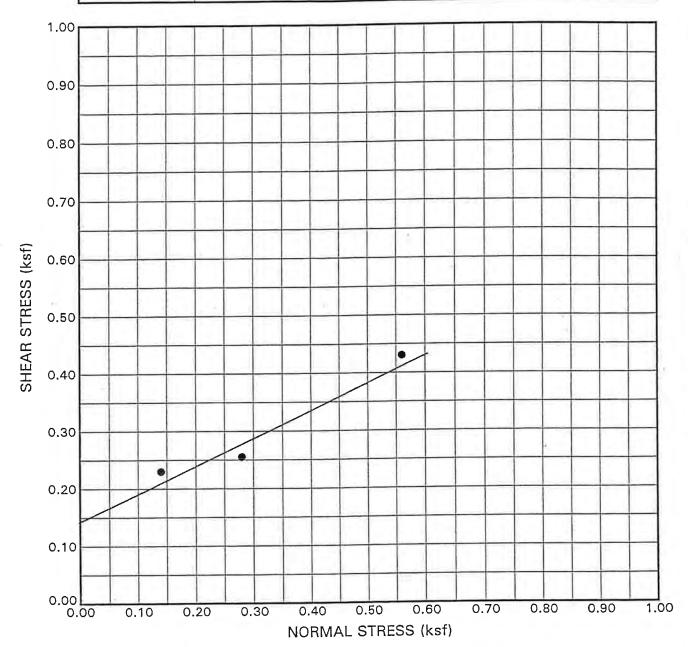
Hidden Valley Landfill Puyallup, Washington **DIRECT SHEAR** TEST RESULT

PROJECT NO.: 98037

FIGURE:

3





FRICTION ANGLE (degrees)	26
APPARENT COHESION (psf)	140
AVERAGE DRY DENSITY (pcf)	87.3
AVERAGE WATER CONTENT (%)	31.5



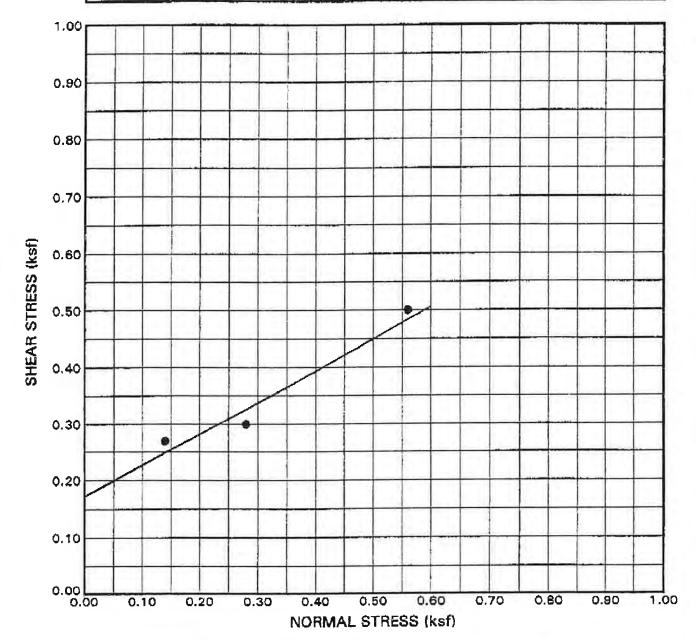
Hidden Valley Landfill Puyallup, Washington **DIRECT SHEAR TEST RESULT**

PROJECT NO .: 98037

FIGURE: 4

2/3

SA	MPLE	DEPTH (feet)	CLASSIFICATION					
S-4	TYPEB		(GM) Very dark brown, silty GRAVEL with sand (LOTT Soil)					
TEST CO	NDITIONS:	Specimens remo	ded to match field density and moisture content.					



FRICTION ANGLE (degrees)	30
APPARENT COHESION (psf)	170
AVERAGE DRY DENSITY (pcf)	88.7
AVERAGE WATER CONTENT (%)	20.9

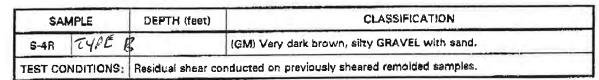


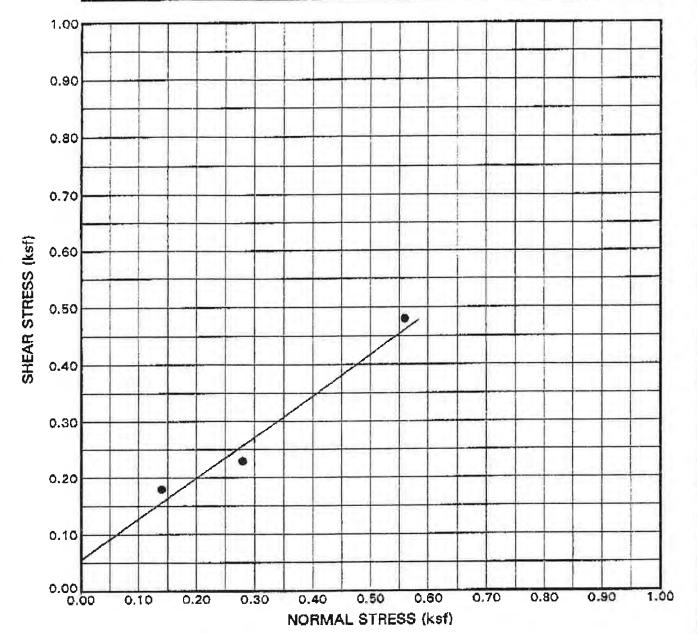
Hidden Valley landfill Puyallup, Washington **DIRECT SHEAR TEST RESULT**

PROJECT NO .: 98037

FIGURE:

3/3





36
60
88.7
20.9



Hidden Valley landfill Puyallup, Washington **DIRECT SHEAR** TEST RESULT

PROJECT NO .: 98037

FIGURE:

VECTOR ENGINEERING, INC. 13438 Lama Rico Dr., Suine C, Graw Velley, CA 95945 (916) 272-2448 Fazz (916) 272-8553

Client Name: Serrot Corp.

LARGE SCALE DIRECT SHEAR REPORT

Project Name: Hidden Valley Landfill; No.: 943015.17-788B

Material 1: <--- Compacted Clay Liner (CCL)

Material 2: ---> Geosynthetic Clay Liner (GCL) Bentomat DN Woven (CETCO)

7025668546;

Substrate: ---> <concrete board>

PEAK STRENGTH

Test Point	Nor Str	Shear Stress	
	psi	paf	pst
1.	0.3	43	100
2.	0.7	101	120
3.	1.4	202	160

Adhesion:

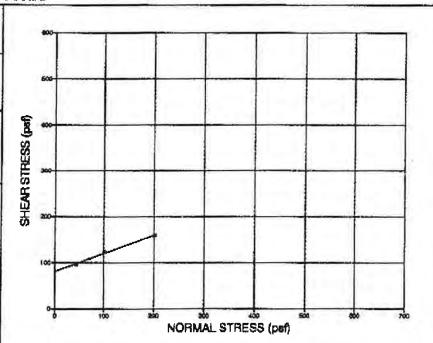
80 psf

Friction Angle:

22 degrees

Displ. Rate:

0.200 in./min.



NOTE: GRAPH NOT TO SCALE

STRENGTH ENVELOPE

(at 2.5 in. displacement)

Test Point	Nor Str	mai ess	Shear Stress
	psi	pst	psf
7.	0.3	49	160
2.	0.7	101	150
3.	1.4	202	210

Adhesion:

140 psf

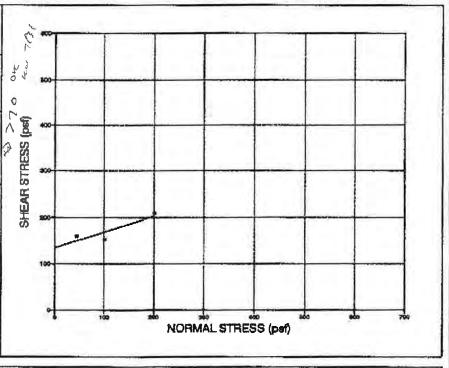
Friction Angle:

19 degrees

Displ. Rate;

0.200 in./min.

NOTE: GRAPH NOT TO BCALE



NOTE: The Friction Angle and Adhesion (or Cohesion) results given here are based upon a mathematically determined 'best fit' line. Further interpretation should be conducted by a qualified professional experienced in geosynthetic and geotechnical engineering.

vaccepting the data and results represented on this page. Offers agrees to limb the Habitty of Vaccor Engineering, the From Client and all other parties for chalms arising out of the use of is data to the cost for the respective met(s) represented horson, and Offers agrees to indemnify and hold harmless Vestor from and against all Hability in excess of the elementational time.

Report Date 5/18/95

Reviewed by HER

HORIZONTAL DISPLACEMENT (inches)

VECTOR ENGINEERING.INC. 13434 Lone Bine Dr., Salie C, Grain Velley, CA 95945 (916) 272-2448 Fox: (910) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Client Name: Serrot Corp. Project Name: Hidden Valley Landfill; No.: 943015.17-788B Material 1: Compacted Clay Liner (CCL) ---> Material 2: Geosynthetic Clay Liner (GCL) Bentomat DN Woven (CETCO) ---> Substrate: <concrete board> DISPLACEMENT Va SHEAR STRESS Test Normal **Point** Stress 08/ psf 1. 43 0.3 SHEAR STRESS (pst) 0.7 2. 101 150 202 3. 1.4 **MOISTURE DATA** (Soll) Initial Moisture Content. 31.50% Initial Dry Density: 87.30 pcf

STANDARD CONDITIONS:

2.

41.1

3.

39.2

Final Moisture Content:

Ť.

37.9

- 1. The "gap" between shear boxes was set at 80 mil (2.0 mm).
- 2. The test specimens were flooded during testing unless noted.
- 3. High Normal Stress (>5psi) was applied using air pressure.
- 4. Low Normal Stress (<5 psi) was applied using dead weights
- 5. The tests were terminated 3.0" displacement unless noted,
- Tests were performed in general accordance with ASTM procedure D 5321-92 Method B using a Brainard-Kilman LG-112 direct shear machine with an effective area of 12 in, x 12 in. (Machine C)



SPECIAL TEST NOTES:

- 1. The Bentomat was wrapped & stapled to a rasp board and secured in the bottom box.
- 2. The CCL specimens were compacted in the upper box to the required specifications.
- 3. Each GCL specimen was hydrated under a Normal Stress of 50 par app. 24 hr prior to consolidation.
- 4. Each specimen was consolidated under the specified Normal Stress app. 24 hr. before shearing.
- 5. Shearing occured at the contact between the Soll and the Bentomat.
- 6. Minor stretching, and tearing was observed on the GCL specimens.

y accepting the date and results represented on this page, Chiert agrees to limit the Hebitty of Vector Engineering, Inc. from Client and all other parties for claims withing out of the use of this date to the cost for the respective test (s) represented harmon, and Client agrees to Indernity and hold harmless Vector from and against all liability in excess of the eforementioned limit

PLATE 2.

(916) 272-2448 Fax: (916) 272-8555

TOR LARGE SCALE DIRECT SHEAR REPORT

Client Name: Serrot Corp. Project Name: Hidden Valley Landfill; No.: 943015.17-788C

Material 1: <--- 60 mil (1.5 mm) HDPE Textured (Serrot #3802267)

Material 2: ---> Geosynthetic Clay Liner (GCL) Bentomat DN Woven (CETCO)

Substrate: ---> <concrete board>

PEAK STRENGTH

Test Point	Nor Str	mai ess	Shear Stress
	pai	paf	psf
1.	0.3	50	100
2.	0.7	100	120
3.	1.4	200	200

Adhesion:

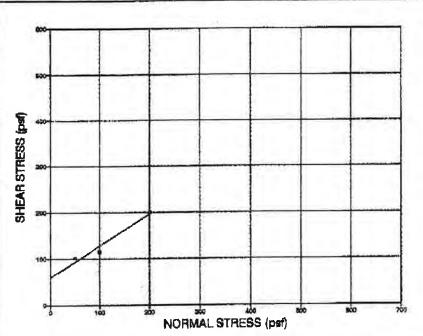
60 psf

Friction Angle:

34 degrees

Dispi. Rate:

0.200 in./min.



NOTE: GRAPH NOT TO SCALE

STRENGTH ENVELOPE

(at 2.5 in. displecement)

Test Point	Nor Str		Shear Stress
	lea	psf	pat
1.	0.3	50	80
2.	0.7	100	90>
3.	1,4	200	160

Adhesion:

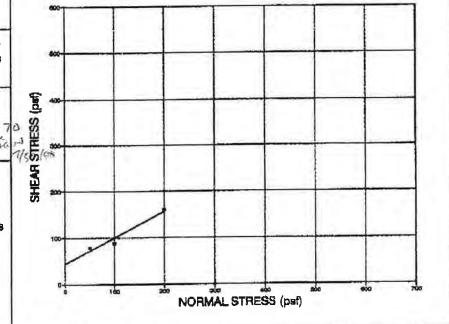
40 psf

Friction Angle:

29 degrees

Displ. Rate:

0.200 in./min.



NOTE: The Friction Angle and Adhesion (or Cohesion) results given here are based upon a mathematically determined "beet fit" line. Further interpretation should be conducted by a qualified professional experienced in geosynthetic and geotechnical engineering.

By eccepting the data and results represented on this page, Client agrees to limit the Hability of Vector Engineering, Inc. from Client and all other parties for alsints arising out of the use of this data to the coul for the respective had(a) represented hereon, and Client agrees to indemnify and hold harmless Vector from and against all Hability in excess of the storementioned limit

Report Date 6/90/68

NOTE: GRAPH NOT TO SCALE

Reviewed by:

(916) 272-2448 Fax: (916) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Project Name: Hidden Valley Landfill; No.: 943015.17-788C Client Name: Serrot Corp.

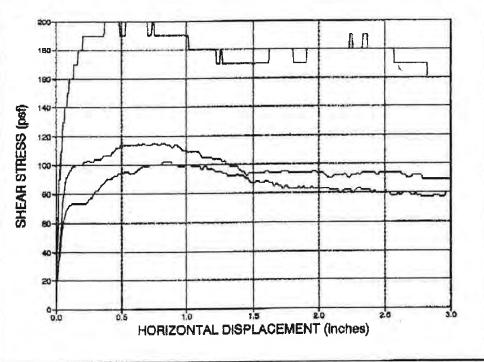
60 mil (1.5 mm) HDPE Textured (Serrot #3802267) Material 1: <---

Geosynthetic Clay Liner (GCL) Bentomat DN Woven (CETCO) Material 2: --->

Substrate:

---> <concrete board>

DISPLACEMENT VE SHEAR STRESS Test Normal Stress Point أوم pef 1. 0.3 50 100 0.7 2. 200 1.4 3.



STANDARD CONDITIONS:

- 1. The "gap" between shear boxes was set at 80 mil (2.0 mm).
- 2. The test specimens were flooded during testing unless noted.
- 3. High Normal Stress >5 psi (34 kPa) was applied using air pressure.
- Low Normal Stress <5 psi (34 kPa) was applied using dead weights
- 5. The tests were terminated 3.0"(75 mm) displacement unless noted.
- 6. Tests were performed in general accordance with ASTM procedure D 5321-92 Method A using a Brainard-Kilman LG-112 direct shear machine with an effective area of 12 x 12 in.(900 x 300 mm).

NORMAL STRESS TEST ORIENTATION: < HDPE GAP > < BENTOMAT DN **BOTTOM BOX W/ RASP BOARD**

SPECIAL TEST NOTES:

- The Bentomat was wrapped & stapled to a rasp board and secured in the bottom box.
- The HDPE specimen was boilted to the upper shear box with standard clamps.
- 3. Each GCL specimen was hydrated under a Normal Stress of 50 psf (2 kPa) app. 24 hr prior to consolidation.
- 4. Each specimen was consolidated under the specified Normal Stress app. 24 hr. before shearing.
- 5. Shearing occured at the contact between the HDPE and the Bentomat.
- 6. Minor stretching, and tearing was observed on the GCL specimens.

By excepting the data and results represented on this page, Citers agrees to limit the liability of Vector Engineering, inc. from Citers and all other parties for claims arising said of the use of this data to the cost for the respective test(s) represented become, and Citers agrees to Indemnity and hold harmless Vector from and against all liability in excess of the alcrementioned limit

PLATE 2.

VECTOR ENGINEERING, INC. 12438 Lone Rice Dr., Solite C, Groov Yelley, CA. 95945 (916) 272-2448 Fax: (916) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Client Name: Serrot Project Name: Hidden Valley Landfill; No.: 943015.17-788D

Material 1: <--- Compacted Clay Liner (CCL)

Material 2: ---> 60 mil (1.5 mm) HDPE Textured (Serrot 3802267)

Substrate: ---> Drainage Aggregate

PEAK STRENGTH

Test Point	Normal Stress		Shear Stress
	psi	psi	psf
1.	1.0	140	190
2.	1.9	280	330
3.	3.9	560	620

Adhesion:

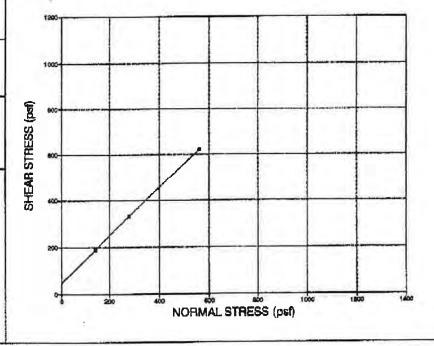
50 psf

Friction Angle:

46 degrees

Displ. Rate:

0.040 in./min.



NOTE: GRAPH NOT TO SCALE

STRENGTH ENVELOPE

	Minimum S	heer Street	18
Test Point	Normal Stress		Shear Stress
	psi	pst	psf
1.	1.0	140	130
2.	1.9	280	290 /
3.	3.9	560	500

Adhesion:

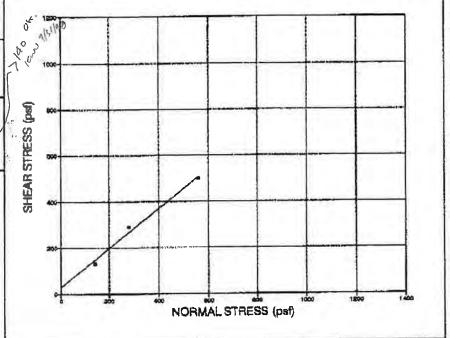
30 psf

Friction Angle:

41 degrees

Displ. Rate:

0.040 in./min.



NOTE: The Friction Angle and Adhesion (or Cohesion) results given here are based upon a mathematically determined "best fit" line. Further interpretation should be conducted by a qualified professional experienced in geosynthetic and geotechnical engineering.

By accepting the data and results represented on this page, Client agrees to limit the liability of Vector Engineering, inc. from Client and all other parties for definis entire data to the cooperative test(a) represented harbon, and Client agrees to Indemnify and hold harmtest Vector from and against all liability in excess of the aforementioned limit.

Report Date E/3/66

NOTE: GRAPH NOT TO SCALE

Reviewed by:

PLATE 1.

(916) 272-2448 Fex: (916) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Project Name: Hidden Valley Landfill: No.: 943015.17-788D Client Name: Serrot <---Compacted Clay Liner (CCL) Material 1: 60 mil (1.5 mm) HDPE Textured (Serrot 3802267) ---> Material 2: ---> Drainage Aggregate Substrate: DISPLACEMENT 700 ve SHEAR STRESS Normai Test Point Stress psf psi 1. 1.0 140 500 SHEAR STRESS (psf 280 2. 1.9 3.9 560 3. MOISTURE DATA 300 (Clay) Initial Moisture Content: 500 31.5% Initial Dry Density: 87,3 pcf Final Moisture Content:

35.7 STANDARD CONDITIONS:

2.

1.

38.7

3.

36.7

- 1. The "gap" between shear boxes was set at 80 mil: (2.0 mm).
- 2. The test specimens were flooded during testing unless noted.
- 3. High Normal Stress (>5psl) was applied using air pressure.
- 4. Low Normal Stress (<5 psi) was applied using dead weights
- 5. The tests were terminated 3.0" displacement unless noted.
- Tests were performed in general accordance with ASTM procedure D 5321-92 Method B using a Brainard-Kilman LG-112 direct shear machine with an effective area of 12 in. x 12 in. (Machine A)



HORIZONTAL DISPLACEMENT (inches)

SPECIAL TEST NOTES:

- 1. Each specimen of HDPE was cut to 14"x 20" dimensions.
- 2. The HDPE specimen was bolted to the lower shear box with channel clamps.
- 3. The compacted clay liner was molded into the top shear box to a density of 87.3 pcf.
- 4. The Drainage Aggregate was molded into the bottom box to a density of 109.5 pcf.
- Each test point was consolidated under specified Normal Stress approximately 24 hr prior to shearing.
- 6. Shearing occured at the contact between the HDPE and Clay.

erted on this page, Client agrees to limit the Hebility of Vantor Engineering, inc. from Client and all other parties for claims arising out of the use of a(s) represented hereon, and Client agrees to indemnify and hold harmless Vactor from and against all Hability in excess of the eforemaniforms limit

PLATE 2

VECTOR ENGINEERING, INC. 12434 Lone Rice Dr., Salte C. Green Velley, CA 93943 (916) 272-2446 Fazz (916) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Client Name: Serrot Project Name: Hidden Valley Landfill; No.: 943015.17-788E

Material 1: <--- Drainage Aggregate

Meterial 2: ---> 60 mli (1,5 mm) HDPE Textured (Serrot 3802267)

Substrate: ---> Compacted Clay Liner (CCL)

STRENGTH ENVELOPE

(at 0.1 - 0.2 in, displacement) Shear Normal Test Stress Stress Point pal psf pef 130 140 1. 1.0 280 260 1.9 2.

3.9

Adhesion:

3.

70 paf

560

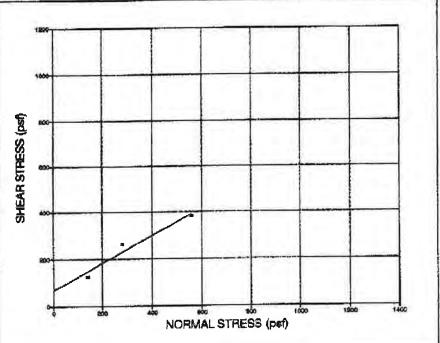
Friation Angle:

30 degrees

380

Displ. Rate:

0.040 in./min.



NOTE: GRAPH NOT YO ECALE

STRENGTH ENVELOPE

Minimum Shear Stressus

Test Point	Normal Stress		Shear Stress
	psi	per	psf
1.	1.0	140	100
2.	1.9	280	230
з.	3.9	560	340

Adhesion:

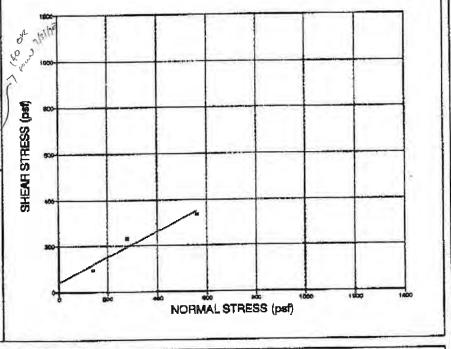
40 psf

Friction Angle:

29 degrees

Displ. Rate:

0.040 in./min.



NOTE: The Friction Angle and Adhesion (or Cohesion) results given here are based upon a mathematically determined "best fit" inc.
Further interpretation should be conducted by a qualified professional experienced in geosynthetic and geotechnical engineering.

By accepting the data and results represented on title page, Chart agrees to limit the liability of Yester Engineering, Inc. from Cities and other parties for chalms entiring out of the use of this data to the page for the respective test(s) represented hazarn, and Citiest agrees to indemnity and hold farmless Vacion from and against all liability in excess of the aforementioned limit,

Report Date 6/5/96

NOTE: GRAPH NOT TO SCALE

Reviewed by: KRE

PLATE 1.

VECTOR ENGINEERING, INC. 12458 Lana Blee Dr., Brits C, Grass Valley, CA 95945 (916) 272-2448 Fax: (916) 272-8553

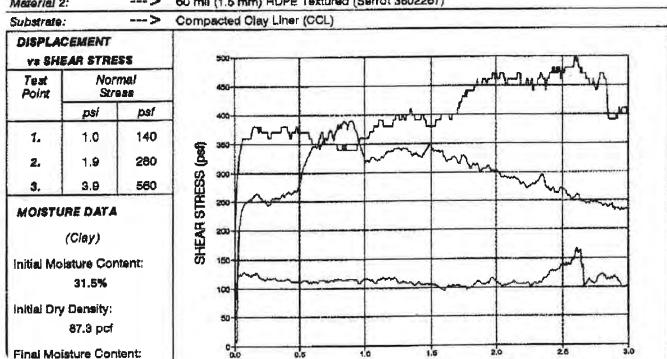
LARGE SCALE DIRECT SHEAR REPORT

Cilent Name: Serrot Project Name: Hidden Valley Landfill; No.: 943015.17-788E

Material 1: C--- Drainage Aggregate

Material 2: C--> 60 mil (1.5 mm) HDPE Textured (Serrot 3802267)

7025668546;



STANDARD CONDITIONS:

2.

38,5

1.

43.0

3.

39.8

- 1. The "gap" between shear boxes was set at 80 mil (2.0 mm).
- 2. The test specimens were flooded during testing unless noted.
- 3. High Normal Stress (>5psi) was applied using air pressure.
- 4. Low Normal Stress (<5 psi) was applied using dead weights
- 5. The tests were terminated 3.0" displacement unless noted.
- Tests were performed in general accordance with ASTM procedure D 5321-92 Method B using a Brainard-Kilman i.G-112 direct shear machine with an effective area of 12 in, x 12 in. (Machine A)



HORIZONTAL DISPLACEMENT (inches)

SPECIAL TEST NOTES:

- 1. Each specimen of HDPE was cut to 14"x 20" dimensions.
- The HDPE specimen was boited to the lower shear box with channel clamps.
- 3. The clay was moided into the lower shear box to a density of 87.3 pcf as a substrate below the geomembrane
- 4. The Drainage Aggregate was molded into the upper box at a density of 109.5 pcf.
- 5. Each test point was consolidated under specified Normal Stress approximately 24 hr prior to shearing.
- 6. Shearing occured at the contact between the HDPE and the Drainage Gravel.
- 7. The peak shear data is presented based on low strain values, high strain peaks are not used.
- 8. The erratic shape of the stress strain curve, is due to the irregular aggreate shape, dilatancy

and edge effects.

By eccepting the case and results represented on this page, Client agrees to limit the Rabitly of Vector Engineering, Inc. from Client and all other parties for plains talking out of the use of the desire to the cost for the respective test(s) represented hereon, and Client agrees to Instantify and told hereises Vector from and against all Hability in excess of the efforementioned limit.

PLATE 2



LARGE SCALE DIRECT SHEAR REPORT

Client Name: Serrot Corporation Project Name: Hidden Valley Landfill; No.: 943015.17-788F

Material 1: <--- 60 mll (1.5 mm) HDPE Textured (Serrot 3602267)

Material 2: ---> Geocomposite (Tensar)

Substrate: ---> < Drainage Aggregate>

PEAK STRENGTH

Test Point	Normal Stress		Shear Stress
	psi	pst	paf
1.	0.3	50	220
2.	0.7	100	410
3.	1.4	200	470

Adhesion:

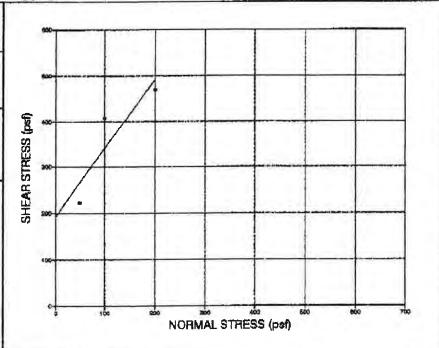
190 psf

Friction Angle:

56 degrees

Displ. Rate:

0.040 In./min.



STRENGTH ENVELOPE

(at 2,5 in. displacement)

Test Point	Normal Stress		Shear Stress
	psi	psf	psf
7.	0.3	50	190
2.	0.7	100	310
з.	1.4	200	330

NOTE: GRAPH NOT TO SCALE

Adhesion:

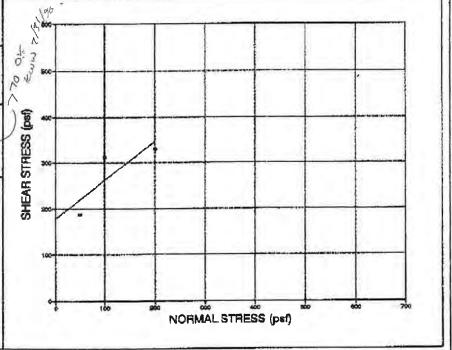
180 psf

Friction Angle:

40 degrees

Displ. Rete:

0.040 in./min.



NOTE: The Friction Angle and Adhesion (or Cohesion) results given here are based upon a mathematically determined "best fit" line. Further interpretation should be conducted by a qualified professional experienced in geosynthetic and geotechnical angineering.

By accepting the date and rewrite represented on this page, Client agrees to limit the liability of Vector Empireering, the, from Others and all other parties for ofsime arising our of the use of this date to the cost for the respective test(s) represented harmon, and Others agrees to indemnify and hold harminess vector from and against all Hability in excess of the aforementationed limit.

Report Date 6/8/98

NOTE: GRAPH NOT TO SOALE

Warred by KAC

PLATE 1.

HORIZONTAL DISPLACEMENT (inches)

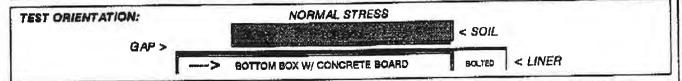
(916) 272-2448 Fax: (916) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Project Name: Hidden Valley Landfill; No.: 943015.17-788F Client Name: Serrot Corporation 60 mil (1.5 mm) HDPE Textured (Serrot 3802267) Material 1: ---> Geocomposite (Tensar) Material 2: ---> <Drainage Aggrégate> Substrate: DISPLACEMENT VE SHEAR STRESS Normal Test **Stress** Point psf psi 400 50 0.3 1. 350 SHEAR STRESS (psf) 100 0.7 2. 300 200 3. 1.4 250 200 100

STANDARD CONDITIONS:

- 1. The "gap" between shear boxes was set at 80 mil (2.0 mm).
- 2. The test specimens were flooded during testing unless noted.
- 3. High Normal Stress (>5psi) was applied using air pressure.
- 4. Low Normal Stress (<5 psl) was applied using dead weights
- 5. The tests were terminated 3.0" displacement unless noted.
- Tests were performed in general accordance with ASTM procedure D 5321-92 Method A using a Brainard-Kilman LG-112 direct shear machine with an effective area of 12 in, x 12 in. (Machine A)



SPECIAL TEST NOTES:

- 1. Each specimen of HDPE was cut to 14"x 16" dimensions.
- 2. The HDPE specimen was boilted to the upper shear box with standard clamps.
- Each specimen of Geocomposite was cut to 14"x 20" dimensions.
- 4. The Geocomposite was boilted to the lower shear box with "channel clamps".
- 5. Each test point was consolidated under specified Normal Stress approximately 15 min prior to shearing.
- Shearing occurred at the contact between the HDPE and Geocomposite.

ists and results represented on this page, Citien agrees to limit the Hability of Yector Engineering, Inc. from Citient and all other parties for citiens arising out of the use of at for the respective test(e) represented fareon, and Citient agrees to indemnify and hold harmless Vactor from and against all Hability in excess of the eforementioned limit

PLATE 2.

LARGE SCALE DIRECT SHEAR REPORT

VECTOR

ENGINEERING, INC.

12439 Long Ries Dr., Dalin C., Gran Valley, CA 93945
(916) 272-2448 Faz: (916) 272-8553

Client Name: Serrot Project Name: Hidden Valley Landfill; No.: 943015.17-788G

Material 1: <--- Tensar Composite

Material 2: ---> Drainage Aggregate

Substrate: --> <concrete board>

PEAK STRENGTH

Normal Shear Test Stress Stress **Point** D\$/ psf DSf 180 7. 0.3 50 0.7 100 320 2 270 200 1.4

Adhesion:

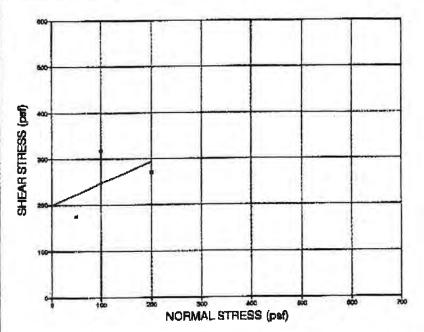
200 psf

Friction Angle:

25 degrees

Dispi. Rate:

0,040 In./min.



NOTE: GRAPH NOT TO SCALE

13/1/2 STRENGTH ENVELOPE (at 2.5 In. displecement) 0 Shear Test Normai Stress Stress 0 Point psf ps/ psf 3 120 0.3 50 1. SHEAR STRESS 0.7 100 270 2. 220 200 3. 1.4 Adhesion: 140 pat Friction Angle: 28 degrees in./mln. 0.040 Displ. Rate: NORMAL STRESS (pef) NOTE: GRAPH NOT TO SCALE

NOTE: The Friction Angle and Adhesion (or Cohesion) results given here are based upon a mathematically determined "best fit" line.
Further interpretation should be conducted by a qualified professional experienced in geosynthetic and geotechnical engineering.

By accepting the date and results represented on this page, Client agrees to field the liability of Vector Engineering, Inc. from Others and all other parties for missing out of the use of this date to the cost for the respective tool(s) represented harmon, and Client agrees to indemnify and hold harminess Vector from and against all liability in excess of the abrementioned limit.

Report Date 6/21/97



PLATE 1.

(916) 272-2448 Fax: (916) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Client Name: Serrot Project Name: Hidden Valley Landfill: No.: 943015.17-788G Material 1: Tensar Composite Material 2: ---> Drainage Aggregate Substrate: ---> <concrete board> DISPLACEMENT Va SHEAR STRESS Test Normal Point Stress pai psf 1. 0.3 50 200 SHEAR STRESS (par) 2. 0.7 100 3. 1.4 200 MOISTURE/DENSITY DATA (Aggregate) Initial Moisture Content: 100 0% Initial Dry Density: 109.5 pcf HORIZONTAL DISPLACEMENT (inches)

STANDARD CONDITIONS:

- 1. The "gap" between shear boxes was set at 80 mil (2.0 mm).
- 2. The test specimens were flooded during testing unless noted.
- High Normal Stress (>5psi) was applied using air pressure.
- 4. Low Normal Stress (<5 psi) was applied using dead weights
- 5. The tests were termineted 3.0" displacement unless noted.
- 6. Tests were performed in general accordance with ASTM procedure D 5321-92 Method B using a Brainard-Kilman LG-112 direct shear machine with an effective area of 12 in. x 12 in. (Machine A)

TEST ORIENTATION:		NORMAL STRESS	
GAP >		< TOP BOX	< Geocomposite
	>	BOTTOM BOX	< Aggregate

SPECIAL TEST NOTES:

- 1. Each specimen of Geocomposite was cut to 14"x 20" dimensions.
- 2. The Geocomposite specimen was bolted to the upper shear box with standard clamps.
- 3. Each test point was consolidated under specified Normal Stress approximately 15 min prior to shearing.
- 4. Shearing occured at the contact between the Geocmposite and Aggregate.
- 5. The erratic shape of the stress strain curve is due to the irregular aggregate shape, dilatancy
- 6. Strength envelopes presented are effected by the irregular aggregate as noted above.

By eccepting the data and results represented on ride page, Olient egrees to limit the liability of Vector Engineering, Inc. from Olient and all other parties for claims arising out of the use of the data to the respective lead(a) represented hereon, and Crient agrees to Indomnity and hold harmlass Vector from and against all Bability in success of the aforementioned limit.

1345 Lana Bica Do. Bailo C. Gram Veller. CA 23045 (916) 272-2448 Fax: (916) 272-8553

LARGE SCALE DIRECT SHEAR REPORT

Client Name: Serrot Project Name: Hidden Valley Landfill: No.: 943015.17-788G-1 <---

Material 1: Tensar Composite Material 2: ---> Drainage Aggregate Substrate ---> <concrete board>

STRENGTH ENVELOPE

LOW STRAIN (0.25 In.)

Test Point	No. Str	Shear Stress	
-	pal	ps/	psf
7.	0.8	50	40
2.	0.7	100	80
3.	1.4	200	120

Adhesion:

20 D8f

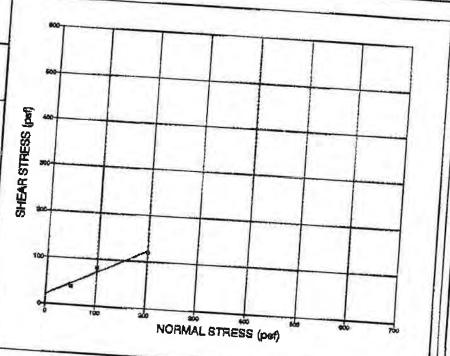
Friction Angle:

27 degraes

Dispi. Rate:

0.040 in./min.

NOTE: GRAPH NOT TO SCALE



STRENGTH	ENVELOPE

HIGH STRAIN (1.5 In.)

Test Point	No.	Shear Stress	
	ps/	psf	psf
1.	0.3	50	60
2.	0.7	100	180
3.	1,4	200	270

Adhesion:

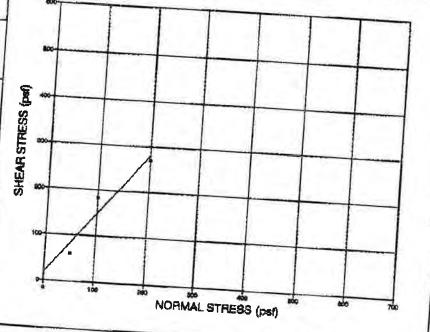
50 per

Friction Angle:

53 degrees

Displ. Rate:

0.040 in./min.



NOTE: GRAPH NOT TO SCALE

NOTE: The Friction Angle and Adhesion (or Cohesion) results given here are based upon a mathematically determined "beet fit" line.

Further interpretation should be conducted by a qualified professional experienced in geosynthetic and geotachnical engineering.

By accepting the data and reacted an object agrees to limit the Hability of Vector Engineering, inc. from Client acre for lower parties for claims action on the page. Client agrees to limit the Hability of Vector Engineering, inc. from Client acre for the respective reacts) represented increases to Indianally and hability and hability and page at I tability in excess of the advanced limit.

PLATE 1.

APPENDIX E DAILY REPORTS



DDO IEST :::		DAILY CONS	TRUCTION RE	PORT	
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure					
PROJECT NO.: 40202-005.061			-		
REPORT NO.: 01			DAY S	M T W TH F S	
CLIENT: LRI					
CONTRACTOR: LRI			WEATHER TEMP.(°F)		
REPORT BY:Glen	REPORT BY:Glenn Heath			Clear Lt. Wind 85 TIME ARRIVED: 14:00 TIME DEPARTED: 17:00	
		AVEDA		4:00 TIME DEPARTED: 17:00	
COA	ITRACTOR		BE FIELD FORCE		
	CONTRACTOR PERSONNEL LRI 1		EQUIPMENT IN OPERATION 1 D-4 Dozer		
		· v	ISITORS		
TIME 14:00	NAME	REP	RESENTING	DEMARKS	
	Kent Wiken		EMCON	REMARKS Project Orientation	
Non-Conforming Ma	terials or Wests				
	III LOUID Recult in Delevi	01-			
Tests Performed, Ob he field lab.	servations, Results, Ret		ith Kent Wiken And Jin		
Tests Performed, Ob the field lab.	servations, Results, Ret	ests: Toured the site w	ith Kent Wiken And Jin	n Crandall, then unloaded lab equipment and set up t the field lab set up. We toured the site and looked ment and set it up in preparation for testing. Kent	
Tests Performed, Ob he field lab. CONSTRUCTION AC at the various tasks the at 17:00	eservations, Results, Ret CTIVITIES: On site along hat are going to be perfo bhrs.	ests: Toured the site w	ith Kent Wiken And Jin		
Tests Performed, Ob the field lab.	EN: No	ests: Toured the site was	ith Kent Wiken And Jin	n Crandall, then unloaded lab equipment and set up the field lab set up. We toured the site and looked ment and set it up in preparation for testing. Kent	



DAIL	Y CONST	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East Lined Area	Partial Closure	DATE: 7/1/98
PROJECT NO.: 40202-005.061		DAY S M T W TH F S
REPORT NO.: 02		
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		Overcast, Lt. Wind 78
REPORT BY:Glenn Heath		TIME ARRIVED: 08:00 TIME DEPARTED: 17:30
AVERAGE		E FIELD FORCE
CONTRACTOR PER LRI	1 A	EQUIPMENT IN OPERATION 1 D-4 Dozer
		ISITORS
TIME NAME	REPF	RESENTING REMARKS
Non-Conforming Materials or Work:		
Follow-Up of Previously Reported Deficiencies:		
Field Problems Which Could Result in Delay, Chang		
Tests Performed, Observations, Results, Retests: Muncrated. Observed the pushing of clay down the So		thel Office to obtain more lab equipment and supplies, returned to site, and
blast sand for the sand cone test vand went to the B	othel office to loa	d out all the sieves had arrived along with the sieve shaker. I purchased ad the equipment. I returned to the site at 14:00hrs unloaded, and andcone test is not ready as of this date as it needs to be dried to a
WERE PHOTOS TAKEN: No		
FIELD REPRESENTATIVE		DATE
REVIEWED BY		DATE



PROJECT: Hidden		DAILY CONST	IRUCTIO	ON REPORT
	Valley Landfill, East L	ined Area Partial Closure	DATE: 7	
PROJECT NO.: 40202-005.061			-	
REPORT NO.: 03			DAY	S M T W TH F S
CLIENT: LRI			4	MEATIES O
CONTRACTOR: LRI			WEATHER TEMP_(°F) Overcast, Lt. Wind 78 TIME ARRIVED: 08:00 TIME DEPARTED: 17:00	
REPORT BY:Glenn Heath				
		AVERAG	E FIELD FO	
CONTRACTOR PERSONNEL 1		- 112010	EQUIPMENT IN OPERATION 1 D-4 Dozer	
		V	SITORS	
TIME	NAME		RESENTING	
				REMARKS
Non-Conforming Mater	rials or Work:			
ONSTRUCTION ACT	IVITIES: On site to ob	serve the delivery of clay	liner materia	ay to the top of the South and East slopes. I met with
ONSTRUCTION ACT	IVITIES: On site to ob	serve the delivery of clay	liner materia	al. I also, by measuring off of the exsisting extaction wells shot them in and are supposed to fax the locations and the specs for balance of the day. Off site at 17:00hrs.
ONSTRUCTION ACTI cated two new wells. I evations to the Bothell	IVITIES: On site to ob I met with the DBM su I office this week. I wo	serve the delivery of clay	liner materia	al. I also, by measuring off of the excipting extention
ONSTRUCTION ACT	IVITIES: On site to obtain the limit with the DBM sulforting of the limit week. I would be supported to the limit with the limit week. I would be supported to the limit with the limit with the limit week. I would be supported to the limit with th	oserve the delivery of clay irveyors and stked the we orked on the lab some mo	liner materia	al. I also, by measuring off of the excipting extention



	DAILY CONST	RUCTION REPORT	
PROJECT: Hidden Valley Landfill, East Lin	ed Area Partial Closure	DATE: 7/6/98	
PROJECT NO.: 40202-005.061		DAY S M 7	T W TH F S
REPORT NO.: 04			
CLIENT: LRI		WEATHER	TEMP.(°F)
CONTRACTOR: LRI		Sunny, Lt. Wind	80
REPORT BY:Glenn Heath		TIME ARRIVED: 06:30	TIME DEPARTED: 15:30
	AVERAG	E FIELD FORCE	
CONTRACTOR LRI	PERSONNEL 2		NT IN OPERATION None
		SITORS	
TIME NAME	REP	RESENTING	REMARKS
Non-Conforming Materials or Work:			
Follow-Up of Previously Reported Deficience	ies:		
Field Problems Which Could Result in Delay	/, Change Order or Claim	1:	
Tests Performed, Observations, Results, Re	etests: Ordered more e	equipt. for field observation and	obtained information for scheduling.
CONSTRUCTION ACTIVITIES: On site at 0 Wiken and found out they will be drilling the request called the Ft. Worth office and inqui the trench work and gas well drilling operation	two gas extraction wells red about getting a gas n	on Thurs and Fri of this week, I nonitor. They had one they coul	s was performed this date. I called Kent I informed Jim Crandall of this. I, at Kent's Id send us and I sent for it so I could monitor
WERE PHOTOS TAKEN: No			
FIELD REPRESENTATIVE		DATE	
REVIEWED BY		DATE	



	DAILY CONST	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East L	ined Area Partial Closure	DATE: 7/7/98
PROJECT NO.: 40202-005.061		DAY S M T W TH F S
REPORT NO.: 05		
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		Overcast, Lt. Wind 83
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30 TIME DEPARTED: 16:00
	AVERAG	E FIELD FORCE
CONTRACTOR LRI	PERSONNEL 1	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer
	V	ISITORS
TIME NAME	REP	RESENTING REMARKS
Non-Conforming Materials or Work:		
Follow-Up of Previously Reported Deficien	ncies:	
Field Problems Which Could Result in Del	ay, Change Order or Claim	1:
Tests Performed, Observations, Results, F	Retests: Observed pushing	ng clay down South slope and spreading to dry.
two wells will begin tomorrow morning. Pe Crandall told me he will send Cris to help b	te Sybert faxed me some fouild the casings for the we	
8 Ws fofal		
8 ws total 1 hr prep for	gas well	install
WERE PHOTOS TAKEN: No		
FIELD REPRESENTATIVE		DATE
REVIEWED BY		DATE



DAILY CONSTRUCTION REPORT				
PROJECT: Hidden Valley Landfill, East Line	ed Area Partial Closure	DATE: 7/8/98		
PROJECT NO.: 40202-005.061		DAY S M T W TH F S		
REPORT NO.: 06				
CLIENT: LRI		WEATHER TEMP.(°F)		
CONTRACTOR: LRI		Overcast, Lt. Wind 83		
REPORT BY:Glenn Heath		TIME ARRIVED: 07:00 TIME DEPARTED: 19:30		
	AVERAGE	FIELD FORCE		
CONTRACTOR LRI	PERSONNEL 1	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer 1 LL Drilling Rig 1 support truck		
	VI	SITORS		
TIME NAME	REPI	RESENTING REMARKS		
Non-Conforming Materials or Work:				
Follow-Up of Previously Reported Deficiencies	es:			
Field Problems Which Could Result in Delay	, Change Order or Claim			
Tests Performed, Observations, Results, Re-	tests: Observed comple	ete construction of Gas Well E-29		
CONSTRUCTION ACTIVITIES: On site at 07:00hrs to observe the drilling, casing placement, and backfilling of Gas Well E29. Cris and I built the casings for both E28 and E29 and placed them near the locations for placement. The drilling contractorbegan drilling on E-29 at approx. 10:15 and drilled to approx. 60ft when the excavated trash began shedding some water. We at this time asked if the drilling and completion car be completed this date due to the water. Jim Crandall gave the permission and we completed the well at approx. 19:30hrs. All went smoothly and with little problems. Gas well E28 will be drilled tomorrow.Off site at 19:30hrs.				
12.5 fotal hrs - East Gas System const				
WERE PHOTOS TAKEN: Yes, of th	e drill rig and the excava	ted trash.		
FIELD REPRESENTATIVE		DATE		
REVIEWED BY	-	DATE		



		PORT		
PROJECT: H	idden Valley Landfill, East Line	ed Area Partial Closure	DATE: 7/9/98	
	PROJECT NO.: 40202-005.061		DAY S	M T W TH F S
REPORT NO.: 07		DAY		
CLIENT: LRI		WEATH		
CONTRACTOR: LRI		Overcast, Lt		
REPORT BY:Gienn Heath		TIME ARRIVED: (
		E FIELD FORCE	Time Berrittee. Total	
	CONTRACTOR PERSONNEL LRI 1 2			EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer 1 LL drill rig and 1 support truck
		V	ISITORS	
TIME 10;00 10;00 10:00	NAME Kent Wiken and Pete S	ybert	RESENTING EMCON DOE 'y Health Dept.	REMARKS Met with County and State Officials Inspection Inspection
Non-Conformir	ng Materials or Work:			
1	Previously Reported Deficienci			
Field Problems Tests Performs CONSTRUCTI joining the 4" a eventually had below the redu bentonite, and	ed, Observations, Results, Drilling and and 3" pipes together as deform to cut the bells from both pipes user to insure the pipe would not clay to complete the task. Kell reading. They left site at appropriate the site at appropriate in the pipe would not be the task.	tests:Drilling and completion of Gas Extra mation of the 4"pipe had as and place a coupling ot slip apart while being at Wiken and Pete Sybe	etion of Gas Extraction action Well No. E28 we occured approx. 2" be to weld the slip joint to placed into the hole. It were on site to ment 17:00hrs.	vas performed this date. vas performed this date. Some problems occured with pelow the bell when the pipe was formed. We to Setr screws were screwed into the 3" pipe just. The well was then filled to proper depth with rock, tet with the County and State officials and to talk to me
Field Problems Tests Performs CONSTRUCTI joining the 4" a eventually had below the redu bentonite, and	ed, Observations, Results, Servation, Servation, Results,	tests:Drilling and completion of Gas Extramation of the 4"pipe had es and place a coupling ot slip apart while being nt Wiken and Pete Sybe ox. 13:30hrs. I left site a	ection of Gas Extraction lection Well No. E28 we occured approx. 2" to weld the slip joint to placed into the hole. It were on site to ment 17:00hrs.	vas performed this date. Some problems occured with pelow the bell when the pipe was formed. We to Setr screws were screwed into the 3" pipe just. The well was then filled to proper depth with rock,
Tests Performe CONSTRUCTI joining the 4" a eventually had below the redu bentonite, and about gas well	ed, Observations, Results, Servation, Servation, Results,	tests:Drilling and completion of Gas Extramation of the 4"pipe had and place a coupling ot slip apart while being the Wiken and Pete Sybe ox. 13:30hrs. I left site a	etion of Gas Extraction Well No. E28 we occured approx. 2" be to weld the slip joint the placed into the hole. It were on site to ment 17:00hrs.	vas performed this date. Some problems occured with pelow the bell when the pipe was formed. We to Setr screws were screwed into the 3" pipe just. The well was then filled to proper depth with rock,



DAILY CONSTRUCTION REPORT				
PROJECT: Hidden Valley Landfill, East Li	ned Area Partial Closure	DATE: 7/10/98		
PROJECT NO.: 40202-005.061		DAY S M T W TH F S		
REPORT NO.: 08				
CLIENT: LRI		WEATHER TEMP.(°F)		
CONTRACTOR: LRI		Sunnyt, Lt. Wind 80		
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30 TIME DEPARTED: 16:00		
AVERAGE		E FIELD FORCE		
CONTRACTOR LRI	PERSONNEL 1	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer		
LKI		i soiiii Deele Doso Dozei		
	V	SITORS		
TIME NAME	REP	RESENTING REMARKS		
Non-Conforming Materials or Work:				
Follow-Up of Previously Reported Deficien	oios:			
Follow-op of Previously Reported Delicien	cies.			
Field Problems Which Could Result in Dela	ay, Change Order of Claim	N.		
1-2				
Tests Performed, Observations, Results, F	Retests: Began Taking G	as probe and Extraction well readings, this date.		
CONSTRUCTION ACTIVITIES: Went to B site and took readings on all of the gas pro	othell Office to obtain last bes and some of the gas	of field lab equipt. and to turn in the Leak Test Kit for Troxler. Returned to extraction wells. Off site at 17:00hrs.		
8 Ws	fotal	System otus -005,054 Monitoring		
6 W5	fo Gas	System 0+m -005,059		
		Monit oring		
		,		
WERE PHOTOS TAKEN: No				
WERE PHOTOS TAKEN: No				
4				
FIELD REPRESENTATIVE		DATE		
		DATE		
REVIEWED BY		DATE		



	DAILY CONST	RUCTION REPORT				
PROJECT: Hidden Valley Landfill, East Li	ned Area Partial Closure	DATE: 7/13/98				
PROJECT NO.: 40202-005.061		DAY S M T W TH F S				
REPORT NO.: 09						
CLIENT: LRI		WEATHER TEMP.(°F)				
CONTRACTOR: LRI		Partly Cloudyt, Lt. Wind 80				
REPORT BY:Glenn Heath		TIME ARRIVED: 08:00 TIME DEPARTED: 17:00				
	AVERAGI	E FIELD FORCE				
CONTRACTOR LRI	PERSONNEL 1	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer				
	V	ISITORS				
TIME NAME	REP	RESENTING REMARKS				
Non-Conforming Materials or Work:						
Follow-Up of Previously Reported Deficien	cies:					
Field Problems Which Could Result in Dela	ay, Change Order or Clain	1:				
Tests Performed, Observations, Results, F	Retests: Observed pushir	ng clay down South slope and spreading to dry. Took Gas well readings.				
CONSTRUCTION ACTIVITIES: On Site at 08:00hrs to continue the gas well readings. Clay was being pushed down the slope on the East side of closure area to dry. The roadway around the site was being wrecked out for trench rebuilding. Labor crews were picking trash from South slope. I took readings until 16:30 and left site to get flat fixed.						
8 ks \$6	fal					
4 hrs to 600 Monitoring -005.054						
WERE PHOTOS TAKEN: No						
FIELD REPRESENTATIVE		DATE				
REVIEWED BY		DATE				



DAILY CONSTRUCTION REPORT						
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 7/14/98				
PROJECT NO.: 40202-005.061		DAY S M T W TH F S				
REPORT NO.: 10						
CLIENT: LRI		WEATHER TEMP.(°F)				
CONTRACTOR: LRI		Overcast, Lt. Wind 83				
REPORT BY:Glenn Heath		TIME ARRIVED: 08:00 TIME DEPARTED: 16;30				
	AVERAGI	E FIELD FORCE				
CONTRACTOR LRI	PERSONNEL 1	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer				
	VI	ISITORS				
TIME NAME	REPI	PRESENTING REMARKS				
Non-Conforming Materials or Work:	,					
Follow-Up of Previously Reported Deficienc	es:					
Field Problems Which Could Result in Delay	r, Change Order or Claim	n:				
Tests Performed, Observations, Results, Re	etests: Observed pushir	ng clay down South slope and spreading to dry_				
CONSTRUCTION ACTIVITIES: On site at 08:00 to continue the gas well readings. The contractor was pushing the clay down the East slope to dry it out. The labor crews were on site picking trash on the South Slope. More labor crew members were clearing the North slope and removing plastic and tires in prep for liner construction. I completed the gas readings this date.						
8 Ws f						
4 ws to Gas Monitoring -005,054						
WERE PHOTOS TAKEN: No						
FIELD REPRESENTATIVE		DATE				
REVIEWED BY		DATE				



	DAILY CONST	RUCTION REPORT		
PROJECT: Hidden Valley Landfill, East Li	ned Area Partial Closure	DATE: 7/15/98		
PROJECT NO.: 40202-005.061		DAY S M	T W TH F S	
REPORT NO.: 11				
CLIENT: LRI		WEATHER	TEMP.(°F)	
CONTRACTOR: LRI		Overcast, Rain, Lt. Wind	83	
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30	TIME DEPARTED: 16:00	
	AVERAG	E FIELD FORCE		
CONTRACTOR PERSONNEL LRI 10		EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer		
		SITORS		
TIME NAME	REP	RESENTING	REMARKS	
Non-Conforming Materials or Work:				
Follow-Up of Previously Reported Deficien	cies:			
Field Problems Which Could Result in Dela				
Tests Performed, Observations, Results, I South slpoe in prep for construction.	Retests:Attended the Pred	construction meeting for the lir	ner. Labor crews were picking trash from the	
CONSTRUCTION ACTIVITIES: Attended to present. Kent Wiken was present at this meeting and the site tour was performed.	eeting along with myself to	represent EMCON. All the po	pints of the project were disscussed at the	
WERE PHOTOS TAKEN: No				
FIELD REPRESENTATIVE		DATE		
REVIEWED BY		DATE		



DAILY CONSTRUCTION REPORT						
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 7/16/98	DATE: 7/16/98			
PROJECT NO.: 40202-005.061		DAY S	М	T W TH F S		
REPORT NO.: 12						
CLIENT: LRI			WEATHER	3	TEMP.(°F)	
CONTRACTOR: L	-RI		Clear, Lt Wi		85	
REPORT BY:Glen	n Heath		TIME ARRIVED: 07	:30	TIME DEPARTED: 16:00	
		AVERAGI	FIELD FORCE			
CONTRACTOR PERSONNEL LRI 10		EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer				
(VI	SITORS			
TIME 13:00 13:00 13:00	TIME NAME REPR 13:00 Kelly Susewind 13:00 Garin Schrieve		RESENTING DOE DOE y Health Dept.		REMARKS Site Visit Site Visit Site Visit	
Non-Conforming M						
Follow-Up of Previ	ously Reported Deficiencie	es:				
	nich Could Result in Delay,			ost Slop	es, Met with DOE and County Health Dept	
Personel about the						
CONSTRUCTION ACTIVITIES: On site at 07:30 to observe the spreading of Corliss soil on the South slope, and trash removal on the East slope. At 13:00hrs, David Bosch, Kelly Susewind, and Garin Schrieve arrived on site to look at the project and the progress. Jim Crandall and I met with them, and discussed the specifications. The problems they mentioned were as follows; 1) No compaction testing on the subgrade. 2) Rocks and debris in the subgrade. 3) Slopes > 3:1. Jim had to leave to tend to business so I stayed to answer questions about the specs. I got the specbook out and we looked at it. The specs were clear on the materials and the subgrade. Kelly explaned to Garin the requirements as he saw them and they left concerned with the slope grade and the top 6" not having any rocks larger than 1" and less than 10% rock. Icalled Kent Wiken and informed him of the results and talked with Harvey and Jim about it. Off site at 16:30hrs.						
WERE PHOTOS T	AKEN: No					
FIELD REPRESEN	NTATIVE		DATE			
REVIEWED BY		-	DATE			



	DAILY CONSTI	RUCTION REPORT				
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 7/17/98				
PROJECT NO.: 40202-005.061 REPORT NO.: 13		DAY S M	T W TH F S			
CLIENT: LRI		WEATHER	TEMP.(°F)			
CONTRACTOR: LRI		Overcast, Rain, Lt. Wind	83			
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30	TIME DEPARTED: 16:00			
	AVERAGE	FIELD FORCE				
CONTRACTOR PERSONNEL LRI 10		EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer				
		SITORS				
TIME NAME	TIME NAME REP		REMARKS			
Non-Conforming Materials or Work:						
Follow-Up of Previously Reported Deficiencie	es:					
Field Problems Which Could Result in Delay,						
Tests Performed, Observations, Results, Re was found to be within the zone of acceptable	e compaction. The East	slope was too dry to meet the	specification on the far north end at the top.			
CONSTRUCTION ACTIVITIES: After a phone discussion with Kent Wiken, I took Field density tests on the Slopes to determin if the compaction is within the specified limits of the zone of acceptable compaction. The upper section of the North end of the East slope was too dry and over compacted the balance of the tests reflected passing results. (Some locations on the East slope could not be tested due to old stockpiles of Corlis soil.) I was informed that a meeting with Kelly Susewind will be held Mon. Morning at 07:30Off site at 16:00hrs						
WERE PHOTOS TAKEN: No						
FIELD REPRESENTATIVE		DATE				
REVIEWED BY		DATE				



DAILY CONSTRUCTION REPORT					
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 7/18/98			
PROJECT NO.: 40202-005.061		DAY S M T W TH F S			
REPORT NO.: 14					
CLIENT: LRI		WEATHER TEMP.(°F)			
CONTRACTOR: LRI		Sunny, Lt. Wind 80			
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30 TIME DEPARTED: 13:30			
	AVERAGE	FIELD FORCE			
CONTRACTOR PL	ERSONNEL 10	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer			
	VI	SITORS			
TIME NAME	REPI	RESENTING REMARKS			
Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies:					
Pollow-op of Previously Reported Deficiencies.					
Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Worked on the East slope getting trash picked up Jim took some shots on the Slopes to see how bad they exceeded the 3:1 requirement. CONSTRUCTION ACTIVITIES: Observed the trash removal on the East slope and the plastic removal on the North slope. Temporary piping was laid out to reactivate the gas wells on the East slopes as they have been out of use for a week. Jim took shots on the slopes to see just					
how bad they were and how far out of 3:1 they were. We worked thru lunch and I left at 13:30hrs.					
1 ws to East Gas System Const					
WERE PHOTOS TAKEN: No					
FIELD REPRESENTATIVE		DATE			
REVIEWED BY		DATE			



		DAILY CONSTI	RUCTION RE	PORT		
PROJECT: Hidde	n Valley Landfill, East Line	ed Area Partial Closure	DATE: 7/20/98			
PROJECT NO.: 4			DAY S	M T W TH F S		
REPORT NO.: 15						
CLIENT: LRI			WEATHE	R TEMP.(°F)		
CONTRACTOR: I	LRI		Overcast, Lt	t wind 77		
REPORT BY:Glen	ın Heath		TIME ARRIVED: 0	07:00 TIME DEPARTED: 16:00		
		AVERAGE	FIELD FORCE			
COI	CONTRACTOR PERSONNEL 10		EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer			
		VI	SITORS			
TIME	NAME	REPI	RESENTING	REMARKS		
07:30 07:30 07:30	Lee fortier Kent Wiken Kelly Susewind		EMCON EMCON DOE	Meeting Meeting Meeting		
Non-Conforming N	//aterials or Work:					
Follow-Up of Prev	iously Reported Deficienci	es:				
	hich Could Result in Delay					
Tests Performed, begin.	Observations, Results, R	Retests:Attended meeting	g pertaining to the o	criteria which has to be met before the clay liner can		
more toward EMC Crandall will assur Susewind, Kent W trash and the slop Kent would have t	County officials approval. TON. This meens that EMC me the roll of the contractoristic and I went over the segrades. After this Kent and he surveyors reprofile the	The Project at Harvey's r CON, as the QA group, w or. The EMCON rep will be site problems as well as w and I went over the proble slopes, recalculate the s	equest was also stru rill be responsable fo be the main contact v walking the site to dis ems with Jim to be si lope stability and info	scuss the criteria for this project as a whole in order to actuered away from Jim Crandall's responsability and or the acceptance and rejection of all work and Jim with the County and State officials as well. Kelly scuss the problems in whole. Mainly the still exisiting ure we are on the same track. It was determined that form all whether the slopes could exceed the 3:1 mark to other work was performed this date		
WERE PHOTOS	TAKEN: No					
FIELD REPRESE	NTATIVE		DATE			
REVIEWED BY			DATE			



	DAILY CONSTI	RUCTION REPORT				
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 7/21/98				
PROJECT NO.: 40202-005.061		DAY S M	T W TH F S			
REPORT NO.: 16						
CLIENT: LRI		WEATHER	TEMP.(°F)			
CONTRACTOR: LRI		Overcast, Lt wind	77			
REPORT BY:Glenn Heath		TIME ARRIVED: 07:00	TIME DEPARTED: 16:00			
	AVERAGE	FIELD FORCE				
CONTRACTOR LRI	PERSONNEL 10	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer				
	VI	SITORS				
TIME NAME		RESENTING	REMARKS			
Non-Conforming Materials or Work:						
Follow-Up of Previously Reported Deficier	ncies:					
Field Problems Which Could Result in Del	ay, Change Order or Claim	:				
Tests Performed, Observations, Results, of the site.	Retests: Jim CrandallTool	k more shots on the slopes, a	and subgrade fill was placed on the SE corner			
CONSTRUCTION ACTIVITIES: Jim Crandall took more shots on the SE corner of the slope to find out how it fit in the slope problem area. I took the shots and plotted them to see, and found it too was out at the bottom 1/3 of the slope. Jim canceled the concrete construction at the drainage ditch until we could find out what needed to be done. Off site at 16:00hrs.						
WERE PHOTOS TAKEN: No						
FIELD REPRESENTATIVE		DATE				
REVIEWED BY		DATE				



	DAILY CONST	RUCTION REPORT				
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 7/22/98				
PROJECT NO.: 40202-005.061		DAY S M T W TH F S				
REPORT NO.: 17						
CLIENT: LRI		WEATHER TEMP.(°F)				
CONTRACTOR: LRI		Morning Fog, Lt wind 73				
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30 TIME DEPARTED: 16:00				
	AVERAG	E FIELD FORCE				
CONTRACTOR LRI	PERSONNEL 10	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer				
	V	ISITORS				
TIME NAME	REF	RESENTING REMARKS				
Non-Conforming Materials or Work:						
Follow-Up of Previously Reported Deficienc	cies:					
Field Problems Which Could Result in Dela	y, Change Order or Clair	n:				
Tests Performed, Observations, Results, R over the bottom 1/3 of the slopes to try and	letests: The soil stockp balance the grades.	iles on the East slope were moved down to the toe of the slope and spread				
CONSTRUCTION ACTIVITIES: The soil stockpiles on the East slope were spread out over the bottom 1/3 of the slopes to help balance the grade on the slopes. Trash was ppicked up on the Southern half of the East slope as a second scan to see if anything was missed. Off site 16:00hrs.						
WERE PHOTOS TAKEN: No						
FIELD REPRESENTATIVE		DATE				
REVIEWED BY		DATE				



	DAILY CONST	RUCTION REPORT			
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 7/23/98			
PROJECT NO.: 40202-005.061		DAY S M	T W TH F S		
REPORT NO.: 18					
CLIENT: LRI		WEATHER	TEMP.(°F)		
CONTRACTOR: LRI		Morning Fog, Lt wind	78		
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30	TIME DEPARTED: 16:00		
	AVERAGE	E FIELD FORCE			
CONTRACTOR LRI	LRI 1		NT IN OPERATION Deere D650 Dozer		
		SITORS RESENTING	REMARKS		
TIME NAME	REPI	RESENTING	REWARKS		
Non-Conforming Materials or Work:	-				
Follow-Up of Previously Reported De	īciencies:				
Field Problems Which Could Result in	Delay, Change Order or Claim	1:			
Tests Performed, Observations, Resi tomorrow to profile the slopes asa the ready to push down and fill the toe are	y exsist. I notified Jim (as did I	d said the 3:1 mark could not Kent by phone) Ji m began bri	be exceeded and that the surveyors will out nging Corlis clay to the top of the slope to be		
CONSTRUCTION ACTIVITIES: K	ent Wiken called me and stated hump. He said he will notify Ji	m Crandall of this also. Jim aft	e exceeded and the slope will be adjusted by er hearing this, began bringing in material to site 16:00hrs.		
WERE PHOTOS TAKEN: No					
FIELD REPRESENTATIVE		DATE			
REVIEWED BY		DATE			



		DAILY CONST	RUCTIO	N REPO	RT			
PROJECT: Hidden V	alley Landfill, East Line	d Area Partial Closure	DATE: 7/2	24/98				
PROJECT NO.: 40202-005.061			S M	T	W TH	F	S	
REPORT NO.: 19		DAY						
CLIENT: LRI			W	/EATHER	1-1-1		TEMP.(°F)
CONTRACTOR: LRI				ear, Lt wind			75	
REPORT BY:Glenn H			TIME ARRI	VED: 07:30	TIM	E DEPARTI	ED: 16:00)
THE OTHER DISCOUNT		AVERAG	E FIELD FOR	RCE				
CONTRACTOR PERSONNEL LRI 1		EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer						
		l v	ISITORS					
TIME	NAME	REF	RESENTING			REM	MARKS	
Non-Conforming Mate	erials or Work							
, ton comonning man								
Tests Performed, Ob to give him an idea of CONSTRUCTION AC		tests: East slope fill v	vas pushed do e East slope t					
WERE PHOTOS TAP			DATE					
			DATE					
REVIEWED BY			DATE					



	DAILY CONST	RUCTION REPORT				
PROJECT: Hidden Valley Landfill, East Line	ed Area Partial Closure	DATE: 7/25/98				
PROJECT NO.: 40202-005.061		DAY S M	T W TH F S			
REPORT NO.: 20						
CLIENT: LRI		WEATHER	TEMP.(°F)			
CONTRACTOR: LRI		Clear, Lt wind	75			
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30	TIME DEPARTED: 09:30			
	AVERAG	E FIELD FORCE				
CONTRACTOR LRI	PERSONNEL 2	,	ENT IN OPERATION Deere D650 Dozer s			
	V	VISITORS				
TIME NAME	REF	PRESENTING	REMARKS			
Non-Conforming Materials or Work:						
Follow-Up of Previously Reported Deficiencie	es:					
Field Problems Which Could Result in Delay	, Change Order or Clair	n:				
Tests Performed, Observations, Results, Re he shot and found that 6' of fill was needed a slipping. The import was shifted to the stocks	at the Western section	of the South slope. The fill bei	ere the fill must go. I plotted the last two rows ing brought in was so wet that the dozers were			
CONSTRUCTION ACTIVITIES: The fill was	slipping. The import was shifted to the stockpiles in the back of the site. CONSTRUCTION ACTIVITIES: The fill was brought in to the top of the south slope for about 30min. but was so wet that dozers were sliding out of contiol. Jim shut the process down and had the material brought to the stockpiles in the back of the site. Jim also had the asphalt saw cut out 6 more feet from the North edge of the South road, to allow moving the toe out 6 more feet. I plotted the last two rows he shot today and left at 09:30hrs.					
WERE PHOTOS TAKEN: No						
FIELD REPRESENTATIVE		DATE				
REVIEWED BY		DATE				



	DAILY CONST	RUCTION REPORT				
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 7/27/98				
PROJECT NO.: 40202-005.061		DAY S M T W TH F S				
REPORT NO.: 21						
CLIENT: LRI		WEATHER TEMP.(°F)				
CONTRACTOR: LRI		Clear, Lt wind 95				
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30 TIME DEPARTED: 16:00				
		E FIELD FORCE				
CONTRACTOR LRI	PERSONNEL 1	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer				
	٧	SITORS				
TIME NAME	REP	RESENTING REMARKS				
Non-Conforming Materials or Work:						
Follow-Up of Previously Reported Deficiencie	s:					
Field Problems Which Could Result in Delay,						
slopes		te meeting with Kent, Dan Berg, the surveyorsyors shot new profiles on the				
construction of the trenches, and filling some	of the 6' of fill using pit	ent Wiken, Harvey, Jim Crandall and Dan Berg. We discussed the run on the 1st 4' of fill as it was not in the testing area. The surveyors shot outh section of the ring road was demoed and removed. No other work was				
WEDS BUSTON TAKEN						
WERE PHOTOS TAKEN: No						
FIELD REPRESENTATIVE		DATE				
REVIEWED BY		DATE				



		DAILY CONS	TRUCTIO	N R	EPOR	T						
PROJECT: Hidde	en Valley Landfill, East Line	d Area Partial Closure	DATE: 7	DATE: 7/28/98								
PROJECT NO.: 4			DAY	S	М	Т	W	TH	F		S	
REPORT NO.: 22	2		DAT			\boxtimes						
CLIENT: LRI				WEATH	ER				TEMP.	.(°F	-)	
CONTRACTOR:	LRI			lear, Lt	wind				95	5		
REPORT BY:Gler	n Heath		TIME ARE	RIVED:	07:30	TI	ME DEI	PARTE	D: 16:0	00		
		AVERA	GE FIELD FO	RCE								
CONTRACTOR PERSONNEL LRI 1				EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer, 1 Smooth drum roller								
			VISITORS									
TIME	NAME		PRESENTIN		1				ARKS			
16:30	Dave Bosch	Сои	nty Health De	ept				Site	Visit			
Non-Conforming N	Materials or Work:								====			
Follow-Up of Prev	iously Reported Deficiencie	es:										
	hich Could Result in Delay											
Tests Performed, run was rolled in v	Observations, Results, Re vith a large smooth drum ro	tests: Moved the tre oller borrowed from the	nch at toe of compost fac	South s ility con	lope, an struction	d begai i site.	n bringi	ng up g	rade us	sing	g pit ru	un. The pit
roller. Dave Bosch cancelled. He said will be leaving tom he would be busy South slope and e suprise later. He le	large dump trucks from the n called me and checked or if he would be out tomorrow norrow at noon. I thought I shall but could get with me toda explained what we were do left site at 16:30hrs. I left site	n the progress. I told here to look at the construction of the con	terial was spr im what has i ction. I check h back and le n. I met him a	esd using been do ed with t him kr t approx	ng a sma ne (basi Jim Cra now so h c. 15:30h	all doze cally no ndall ar e could irs and	r and ro thing) a nd decid meet v showed	olled us and that ded to g with me d him th	ing a la the G(o home in the r e fill at	arge CL e e fo moi the	e smoo crew or a feo rning. e toe o	oth drum was w days. I He said of the
WERE PHOTOS	TAKEN: No											
FIELD REPRESE	NTATIVE		DATE									
REVIEWED BY			DATE									



		DAILY CONSTI	RUCTION REPORT			
PROJECT: Hide	den Valley Landfill, East Lined	d Area Partial Closure	DATE: 7/29/98			
PROJECT NO.: 40202-005.061 REPORT NO.: 23		DAY S M T W TH F S				
CONTRACTOR:	LRI		Clear, Lt wind	95		
REPORT BY:Gle	enn Heath		TIME ARRIVED: 07:30	TIME DEPARTED: 12:00		
		AVERAGI	FIELD FORCE			
Co	ONTRACTOR LRI	PERSONNEL 1	1 Jonn Deere D650	NT IN OPERATION Dozer, 1 Smooth drum roller		
			SITORS			
TIME 09:00	NAME Kelly Suswind	REP	RESENTING DOE	REMARKS Site Visit		
Follow-Up of Pre Field Problems V Tests Performed CONSTRUCTIO dumps and spre to observe the confield change. I to	ON ACTIVITIES: The build ad using a small dozer. The r onstruction and I explaned th old him I would get with Kent	Change Order or Claim ests: Continued bring -up at the toe of the sou material was then rolled e fill at the toe of the sk Wiken about it. Kelly off	up the low area at toe of the S oth slope was continued this do with a smooth drum roller. Ke ope Kelly asked if there was a	outh slope. Doe rep on site this date. ate. the pit run was delivered using the Cat elly Suswind arrived on site at approx. 09:00 drawing on this. I told him no as this was a that I will be off site until Mon. 8/3/98 and that on.		
WERE PHOTOS FIELD REPRES REVIEWED BY			DATE DATE			



	DAILY CONSTI	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East Line	d Area Partial Closure	DATE: 8/3/98
PROJECT NO.: 40202-005.061		DAY S M T W TH F S
REPORT NO.: 24		
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		Clear, Lt wind 88
REPORT BY:Glenn Heath		TIME ARRIVED: 08:00 TIME DEPARTED: 11:00
	AVERAGE	FIELD FORCE
CONTRACTOR LRI	PERSONNEL 1	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer, 1 Smooth drum roller
		SITORS
TIME NAME	REPI	RESENTING REMARKS
Non-Conforming Materials or Work:		
Follow-Up of Previously Reported Deficiencie	95.	
Field Problems Which Could Result in Delay,	Change Order or Claim	1:
Tests Performed, Observations, Results, Reunloading and storage. I also attended the M	on. morning meeting.	rolls of 60ml textured HDPE this date I logged the rolls in and observed
extraction system. Kent set the sample appa	ratous and container de panels placed longwise I arrived on site and I lo	I was informed that more samples need to to be taken on the gas livery up for tomorrow. We also discussed the shop drawings from Serrot along the trench West of the main cell. I was to call Serrot and ask them gged it in. I observed the unloading and storage of the materials to assure
WERE PHOTOS TAKEN: No		
FIELD REPRESENTATIVE		DATE
REVIEWED BY		DATE



		DAILY CONSTI	RUCTIO	N RI	EPOF	RT						
PROJECT: Hidden V	alley Landfill, East Lin	ed Area Partial Closure	DATE: 8/	4/98								
PROJECT NO.: 4020			DAY	S	М	Т	W	TH	F		S	
REPORT NO.: 25			DAT		П		П			IE		
CLIENT: LRI			v	VEATH	IER				TEMP.	(°F)		
CONTRACTOR: LRI			CI	ear, Lt	wind				95			
REPORT BY:Glenn F	leath		TIME ARR	IVED:	07:30	TI	ME DE	PARTE	D: 16:0	00		
		AVERAGE	FIELD FO	RCE								
	RACTOR RI	PERSONNEL 1	1	Jonn L	EQUIP Deere D		IN OPE zer, 1 S			ller		
		VI	SITORS									
TIME	NAME	REPI	RESENTING)				REM	ARKS			
Non-Conforming Mate	erials or Work:											
Follow-Up of Previous	sly Reported Deficienc	ies:										
Tests Performed. Ob	servations, Results, F	y, Change Order or Claim Retests: 18" of clay f	ill was begu	n on t	ne top o	of the c	osure a	area th	is date	. The	e material	was
placed and tested in tomorrow.	6" lifts. 2 lifts were c	ompleted this date. The	sampling of	the g	as at th	e flare	was no	t succe	essful a	nd re	escheduled	d for
placed in 6" lifts and I exception of the SE of moiture content and of date. However, the place of the sucked up into the flat. They also told us to the sample as if there is and oxygen content in	to go ahead with the part took compaction tests corner, all tests were for compaction could not be ump had a dead batter in. We called Air Toxic ake the samples from even a small leak in the pas. It would be set took took to the pass. It would be set took took took took took took took to	the stockpile in the working lacement of 18" on the top on each of the 2 lifts play and within the Zone of Argue obtained. The 2nd lift by and as we placed the notation Laboratories and they are the pressure side of the e intake side of one of the still low enough not to affices as it would cause too	op of the closiced this date companies of the companies o	sure ar e. The ompacted in that atainers ore me ore me could lapperation	ea instermaterialition. The his area. In line, thanol aressed in the his one than one than one than one than one than one than one the his one than one that one than one that one than one than one than one than one than one than one that one than one than one than one than one than one than one thad one than one that one than one than one than one than one than	ad of real was at a SE co. The gather the lace and a comy oping free told me	locating an idea rner, 1s samp k of vaconverter into that he called	g the pil al moist it lift wa iling was aum ca to run to to the lifed Serro	e. The ure con s found s to be aused the pure ay not be caused the	mate to be perfo ne me np off pe a r sing h	rial was and with excommed this ethanol to for 115V licepresentation it regions and they	ess be ine.
WERE PHOTOS TAR	KEN: No											
FIELD REPRESENTA	ATIVE		DATE									
REVIEWED BY			DATE									



	DAILY CONSTI	RUCTION REPORT				
PROJECT: Hidden Valley Landfill, East Line	ed Area Partial Closure	DATE: 8/5/98				
PROJECT NO.: 40202-005.061		DAY S M T W TH F S				
REPORT NO.: 26						
CLIENT: LRI		WEATHER TEMP.(°F)				
CONTRACTOR: LRI		Clear, Lt wind 80				
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30 TIME DEPARTED: 17:00				
	AVERAGE	E FIELD FORCE				
CONTRACTOR LRI	PERSONNEL 1	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer, 1 Smooth drum roller				
		ISITORS				
TIME NAME	TIME NAME REPRESENTING REMARKS					
Non-Conforming Materials or Work:						
Follow-Up of Previously Reported Deficiencing	es:					
Field Problems Which Could Result in Delay	, Change Order or Claim	1:				
Tests Performed, Observations, Results, Re gas samples as prescribed by ATL.	tests: Obtained the b	palance of tests on the clay fill on top of the closure area. Also obtained the				
date. More of the material was placed on the using the new supply of methanol and a con-	East slope but not in it's verter sent to us. WE sa	the SE corner of the cell the top of the closure area was completed this s final location. The gas from the extraction system was sampled this date impled from the pressure side of the blowers and obtained a canister 17:00hrs this date, and placed on the East slope. Off site at 17:00hrs.				
WERE PHOTOS TAKEN: No						
FIELD REPRESENTATIVE		DATE				
REVIEWED BY		DATE				



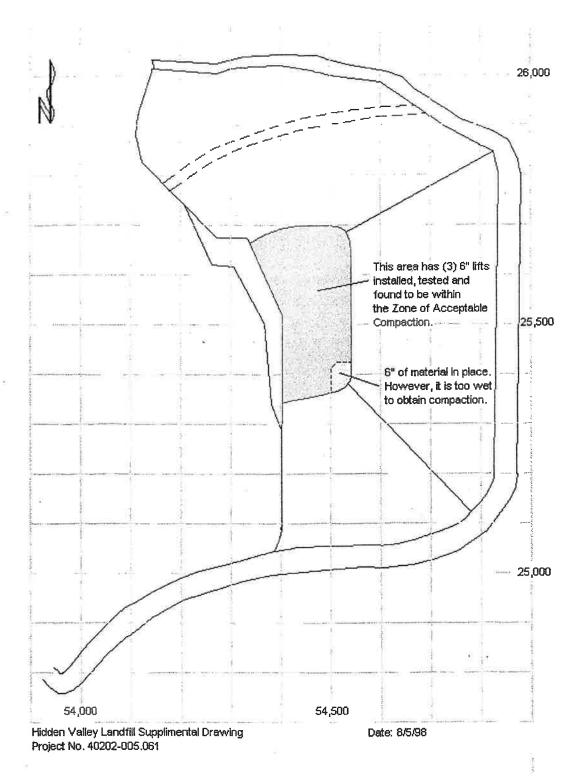
DAILY CHECKLIST FORM FOR EARTHWORK

PROJECT NAME: Hidden Valley Landfill

PROJECT LOCATION: Puyallup, Washington

DATE: 8/5/98	JOB NO: 40202-005.061:
REPORT NO: \$226.	PAGE: 1 OF 1

EMCON FIELD REP (INITIAL) REVIEWED BY (INITIAL)							
WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?							
YES INO IF YES, ATTACH NON-CONFORMANCE REPORT FORM.							
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?							
igtigtigtigtigtigtigtigtigtigt							
25							
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?							
None							
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED?							
☐ YES ⊠ NO							
TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None							
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)							
Silty Clay, Brown							
BORROW AREA NO. USED TODAY Stockpile in trash area							
PORTION OF BORROW AREA BEING MINED TODAY							
None							
AREA BEING FILLED TODAY Stockpiling on side slopes.							
AREA BEING CONDITIONED TODAY							
None							
AREA BEING COMPACTED TODAY							
3rd Lift on the top of the closure area.							
DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?							
⊠ YES □ NO							
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?							
☐ YES ⊠ NO IF YES, DESCRIBE AREA							
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?							
☐ YES ☑ NO IF YES, DESCRIBE AREA							
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?							
☐ YES ☐ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN							



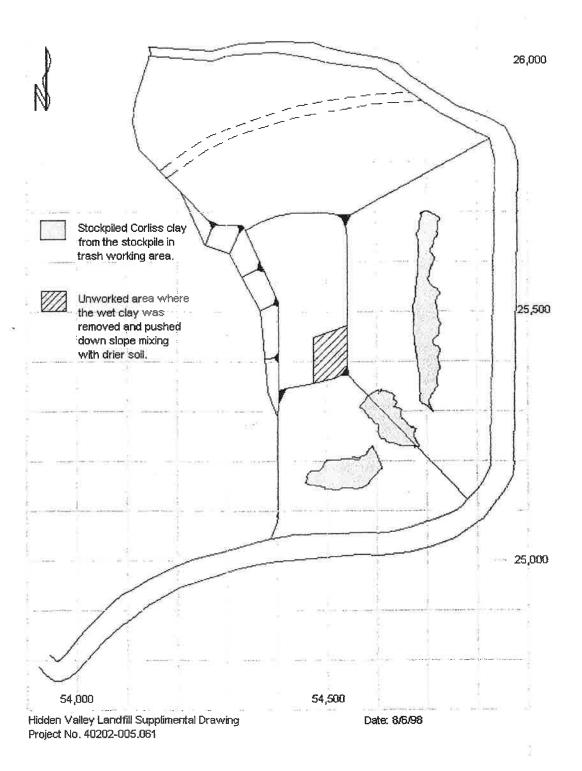


DAILY CHECKLIST FORM FOR EARTHWORK

PROJECT NAME: Hidden Valley Landfill
PROJECT LOCATION: Puyallup, Washington

DATE: 8/6/98	JOB NO: 40202-005.061:
REPORT NO: 27,	PAGE: 1 OF 1

EMCON FIELD REP (INITIAL) REVIEWED BY (INITIAL)
WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?
YES NO IF YES, ATTACH NON-CONFORMANCE REPORT FORM.
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?
YES INO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
25 26
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?
Soft wet clay from SE corner removed.
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED?
☐ YES ⋈ NO
TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)
Silty Clay, Brown
BORROW AREA NO. USED TODAY Stockpile in trash area
PORTION OF BORROW AREA BEING MINED TODAY
None AREA BEING FILLED TODAY
Stockpiling on side slopes.
AREA BEING CONDITIONED TODAY
None
AREA BEING COMPACTED TODAY None
DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?
☐ YES ☑ NO IF YES, DESCRIBE AREA
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?
☐ YES ☑ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN





	DAILY CONST	RUCTION REPORT					
PROJECT: Hidden Valley Landfill, East Line	d Area Partial Closure	DATE: 8/7/98					
PROJECT NO.: 40202-005.061		DAY S M	T W TH F S				
REPORT NO.: 28							
CLIENT: LRI		WEATHER	TEMP.(°F)				
CONTRACTOR: LRI		Clear, Lt wind	75				
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30	TIME DEPARTED: 16:30				
	AVERAGE	FIELD FORCE					
CONTRACTOR LRI	PERSONNEL 5	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe					
	VI	SITORS					
TIME NAME	TIME NAME REPRESENTING REMARKS						
Non-Conforming Materials or Work:							
Follow-Up of Previously Reported Deficiencie Field Problems Which Could Result in Delay.	Y .	1.					
Tests Performed, Observations, Results, Reand found to be within the Zone of Acceptable		ear the toe of the South slope	was fill 6" for the 1st lift this date. I took tests				
CONSTRUCTION ACTIVITIES: On site 07 material and found tpo be within the limits red storage unit at top of the cell. Ricardo Leon within we could start earlier but Wed. It realist	quired. The crew from Sovas on site and wanted t	errot arrived today with their ed o meet me at 09:00hrs Sunda	quipt.They unloaded it and placed in the y to confirm Wednesday start date. Jim told				
WERE PHOTOS TAKEN: No							
			1				
FIELD REPRESENTATIVE		DATE					
REVIEWED BY		DATE					



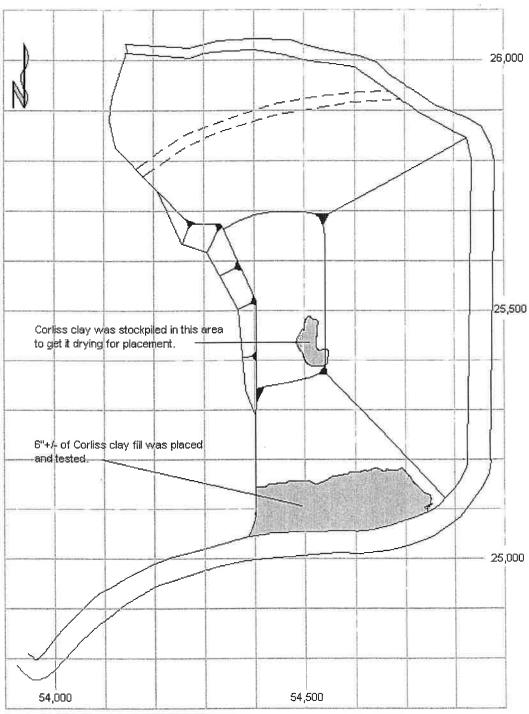
DAILY CHECKLIST FORM FOR EARTHWORK

PROJECT NAME: Hidden Valley Landfill

PROJECT LOCATION: Puyallup, Washington

DATE: 8/7/98	JOB NO: 40202-005,061;
REPORT NO: 28.	PAGE; 1 OF 1

EMCON FIELD REP (INITIAL)
WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?
☐ YES ☑ NO IF YES, ATTACH NON-CONFORMANCE REPORT FORM.
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?
\square YES \square NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
WHICH DESIGNATIONS IF ANY EDOM DESTINATED AND WERE CORDECTED TODAY?
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?
Soft wet clay from SE corner removed.
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED?
☐ YES ☑ NO
TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)
Silty Clay, Brown
BORROW AREA NO. USED TODAY Stockpile in trash area
PORTION OF BORROW AREA BEING MINED TODAY None
AREA BEING FILLED TODAY
Lower area of the South slope
AREA BEING CONDITIONED TODAY
None
AREA BEING COMPACTED TODAY
Lower area of the South slope. DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?
✓ YES □ NO
⊠ iss □ NO
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?
☐ YES ☑ NO IF YES, DESCRIBE AREA
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?
☐ YES ☑ NO IF YES, DESCRIBE AREA
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?
☐ YES ☑ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN



Hidden Valley Landfill Supplimental Drawing Project No. 40202-005.061

Date: 8/7/98



	DAILY CONST	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East Lin	ed Area Partial Closure	DATE: 8/8/98
PROJECT NO.: 40202-005.061		DAY S M T W TH F S
REPORT NO.: 29		
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		Clear, Lt wind 75
REPORT BY:Glenn Heath		TIME ARRIVED: 08:00 TIME DEPARTED: 15:00
	AVERAGI	E FIELD FORCE
CONTRACTOR LRI	PERSONNEL 5	EQUIPMENT IN OPERATION 1 Trackhoe, 2 Dozers, and 1 Track Loader
		ISITORS
TIME NAME	REPI	RESENTING REMARKS
Non-Conforming Materials or Work:		
Follow-Up of Previously Reported Deficienc	ies;	
Field Problems Which Could Result in Delay	y, Change Order or Claim	n:
Tests Performed, Observations, Results, Rethis date and no tests were taken.	etests: Fill on the lower	r section of the South slope continued this date. The soil was not processed
area and spread out but was not processed	nor rolled this date. Jim the chorage of the edge of the	le of the cell for placement. Soil was pushed down the slope to the lower fill Crandall told me he was going to dig along the side of the roadway at the ne liner materials. I told him I will be on site as Ricardo Leon wanted to
WERE PHOTOS TAKEN: No		
FIELD REPRESENTATIVE		DATE
REVIEWED BY	-	DATE



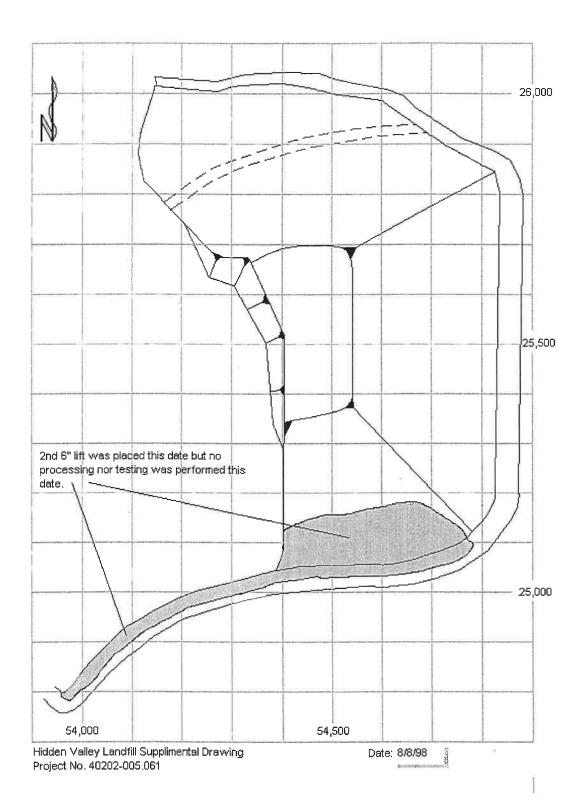
PROJECT NAME: Hidden Valley Landfill PROJECT LOCATION: Puyallup, Washington DATE: 8/8/98 JOB NO: 40202-005.061: REPORT NO: 29. PAGE: 1 OF 1 EMCON FIELD REP (INITIAL) REVIEWED BY (INITIAL)_ WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT? YES NO 🖂 IF YES, ATTACH NON-CONFORMANCE REPORT FORM. ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED? ⊠ NO ☐ YES IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES). WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY? HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED? YES ⋈ NO TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID) Silty Clay, Brown BORROW AREA NO. USED TODAY Stockpile in trash area PORTION OF BORROW AREA BEING MINED TODAY None AREA BEING FILLED TODAY Lower area of the South slope AREA BEING CONDITIONED TODAY None AREA BEING COMPACTED TODAY None DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS? ⊠ YES □ NO WAS ANY SUBGRADE CHECKED FOR CLAY LINER? ☐ YES NO 🏻 IF YES, DESCRIBE AREA WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER? ☐ YES ⊠ NO IF YES, DESCRIBE AREA

IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN

ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?

YES

⊠ NO





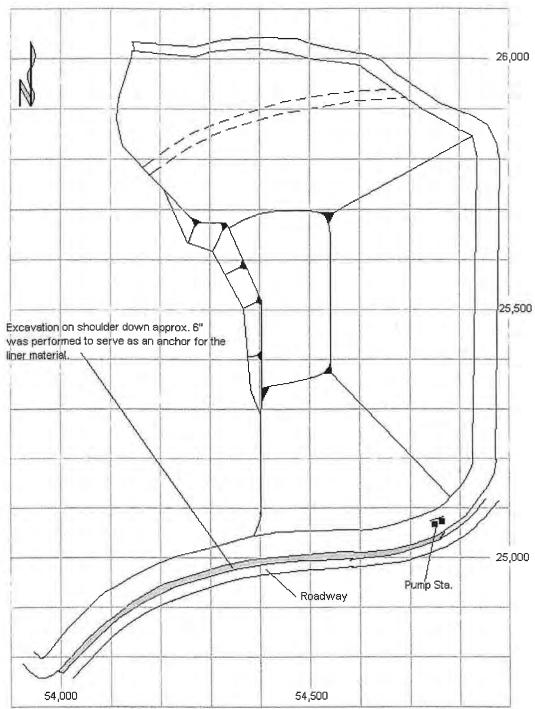
	DAILY CONST	RUCTION REPORT	
PROJECT: Hidden Valley Landfill, East	Lined Area Partial Closure	DATE: 8/9/98	
PROJECT NO.: 40202-005.061		DAY S M T W	TH F S
REPORT NO.: 30			
CLIENT: LRI		WEATHER	TEMP.(°F)
CONTRACTOR: LRI		Clear, Lt wind	80
REPORT BY:Glenn Heath		TIME ARRIVED: 09:00 TIME DEPAI	RTED: 12:00
	AVERAGI	E FIELD FORCE	
CONTRACTOR LRI	PERSONNEL 3	EQUIPMENT IN OPERA 1 Trackhoe	TION
	VI	SITORS	
TIME NAME	REP	RESENTING F	REMARKS
Non-Conforming Materials or Work:			
Follow-Up of Previously Reported Deficie	encies:		
Field Problems Which Could Result in De	elay, Change Order or Claim	1:	
Tests Performed, Observations, Results, Ricardo Leon did not come on site this d		ay was excavated down approx. 6" to allow f	or anchoring the liner material.
		Ricardo Leon with Serrot and observe the s rking on the excavation and I left site at 12:0	
WERE PHOTOS TAKEN: No			
FIELD REPRESENTATIVE	-	DATE	
REVIEWED BY		DATE	



PROJECT NAME: Hidden Valley Landfill

DATE: 8/9/98	JOB NO: 40202-005,061:
REPORT NO: 30.	PAGE: 1 OF 1

EMCON	FIELD REP	(INITIAL)_	REVIEWED BY (INITIAL)	
WERE A	NY DEFICIE	ENCIES NOT	ED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?	
	☐ YES	⊠ NO	IF YES, ATTACH NON-CONFORMANCE REPORT FORM.	
ARE AN	Y DEFICIEN	ICIES FROM	PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?	
	☐ YES	⊠ NO	IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
WHICH I	DEFICIENC	ES, IF ANY,	FROM PREVIOUS DAYS WERE CORRECTED TODAY?	
HAVE Y	OU ATTAC	HED THE FI	ELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHE) ?
TOTAL	YARDS PLA	CED THIS S	HIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None	
DESCRI	PTION OF M	IATERIALS	PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)	
None				
BORROV	W AREA NO	O. USED TO	AY None	
PORTIO	N OF BORR	OW AREA I	EING MINED TODAY	
None				
	EING FILLE	D TODAY		
None AREA B	EING CONT	DITIONED TO	DAY	
None	2110 00112			
AREA B	EING COME	PACTED TO	DAY	
None				
DOES D			DDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?	
		☐ NO		
WAS AN	IY SUBGRA	DE CHECKI	ED FOR CLAY LINER?	
	☐ YES	⊠ NO	IF YES, DESCRIBE AREA	
WAS AN	TY SUBGRA	DE CHECKI	D FOR MEMBRANE LINER?	
	YES	⊠ NO	IF YES, DESCRIBE AREA	
ARE TH	ERE ANY M	EMBRANE	SUBSURFACE AREAS WITH SEVERE CRACKING?	
	☐ YES	⊠ NO	IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN	



Hidden Valley Landfill Supplimental Drawing Project No. 40202-005.061

Date: 8/9/98



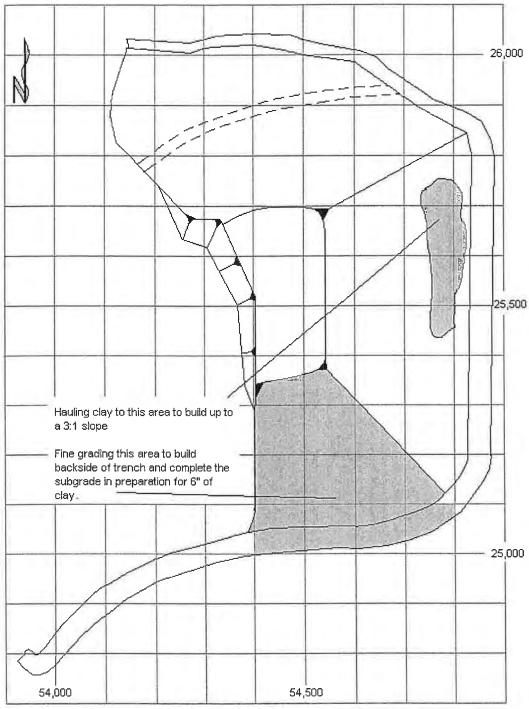
	DAILY CONST	RUCTION REPORT	
PROJECT: Hidden Valley Landfill, East L	ined Area Partial Closure	DATE: 8/10/98	
PROJECT NO.: 40202-005.061		DAY S M	T W TH F S
REPORT NO.: 31			
CLIENT: LRI		WEATHER	TEMP.(°F)
CONTRACTOR: LRI		Clear, Lt wind	86
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30	TIME DEPARTED: 17:00
	AVERAG	E FIELD FORCE	
CONTRACTOR LRI	PERSONNEL 7	•	NT IN OPERATION 1650 Dozers, 1 Trackhoe
	V	SITORS	
TIME NAME	REP	RESENTING	REMARKS
Non-Conforming Materials or Work:			
Follow-Up of Previously Reported Deficien	ncies:		
Field Problems Which Could Result in De			
Tests Performed, Observations, Results, the final adjusment lift on the South slope by the specifications.	Retests: Attended weekly and the West finger area.	meeting, obserbved the place The area off the cell to the we	ment of clay on the SE corner of cell. Tested st was found to be out of the parameters set
was rolled well and found to be within the not meet specified requirements. I told Jir	specified parameters on m n Crandall the east end of t e of acceptable compaction aid he would have the crew but we did not have time t	oisture content. The area west the finger was too wet and low n. I told him that in my opinion, start on it tomorrow am. We w	the disc would be the only fast way to dry vere supposed to locate some "Type B"
WERE PHOTOS TAKEN: Yes FIELD REPRESENTATIVE		DATE	
REVIEWED BY		DATE	
11211212001			



PROJECT NAME: Hidden Valley Landfill

DATE: 8/10/98	JOB NO: 40202-005.061:
REPORT NO: 31.	PAGE: I OF 1

WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT? YES NO IF YES, ATTACH NON-CONFORMANCE REPORT FORM. ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED? YES NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED? YES NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
☐ YES ☑ NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
9
WHICH DESIGNATION IS ANY EDOM DESIGNATION DAVIS WEDE CORRECTED TODAYS
MANGE DESIGNATION OF A LIVE PROPERTY OF DAYS WERE CORRECTED TO DAYS
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED?
☐ YES NO TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)
None
BORROW AREA NO. USED TODAY None
PORTION OF BORROW AREA BEING MINED TODAY
None
AREA BEING FILLED TODAY
None
AREA BEING CONDITIONED TODAY None
AREA BEING COMPACTED TODAY
None
DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?
⊠ YES □ NO
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?
☐ YES ☒ NO IF YES, DESCRIBE AREA
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?
☐ YES ☒ NO IF YES, DESCRIBE AREA
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?
☐ YES ☑ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN



Hidden Valley Landfill Supplimental Drawing Project No. 40202-005.061

Date: 8/10/98



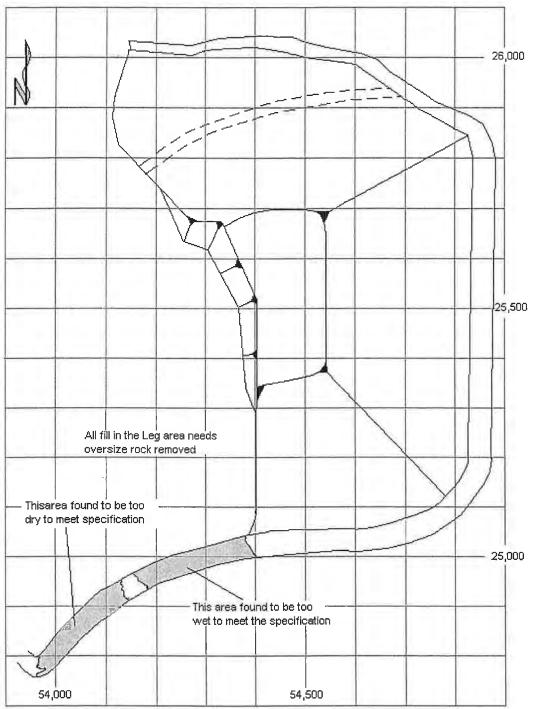
	DAILY CONST	RUCTION REPORT								
PROJECT: Hidden Valley Landfill, East Line	ed Area Partial Closure	DATE: 8/11/98								
PROJECT NO.: 40202-005.061		DAY S M T W TH F S								
REPORT NO.: 32										
CLIENT: LRI		WEATHER TEMP.(°F)								
CONTRACTOR: LRI		Clear, Lt wind 86								
REPORT BY:Glenn Heath		TIME ARRIVED: 07:30 TIME DEPARTED: 17:00								
	AVERAGE	E FIELD FORCE								
CONTRACTOR LRI	PERSONNEL 7	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe								
	VI	ISITORS								
TIME NAME 10:00 David Bosch & Ron No 11:00 Garren	rton County	RESENTING REMARKS y Health Dept. Site Visit D.O.E. Site Visit								
Non-Conforming Materials or Work:										
Follow-Up of Previously Reported Deficiencing		7'								
Tests Performed, Observations, Results, R Obtained soil samples for Topsoil and Type		of geocomposite, Met with David Bosch W/ county & Garren with DOE								
Evergreen Technologies had just arrived on how it was to be used. David walked the site Garren with the D.O.E arrived. I showed him slope. I told him it had just been installed and Crandall and I went to the Back area and set appeared to be fat enough to pass the Type proctor, etc. at the same time the same local Jim I found out that he had already placed the been told in the past. I told him that the survives decided to take shelby tubes on the 100 areas that the slopes had been reworked or in place. I will also have to take 24" tubes in	site and I logged it in. Date and looked at the soil, the the Geocomposite as hed had not been processe arched for some Type B B criteria. I obtained a sations were sampled for feater top 6" of clay soil on meyors needed to shoot the official to dtermine the clay added to will have to be a more areas for permission.	e placement of soil on the South slope. 30 rolls of geocomposite from avid Bosch & Ron Norton were on site and I showed them the material and then took Ron Norton to the Compost Building const. site. At 11:00hrs had not seen it before and he looked at the soil on the SE corner of the ed yet. He left and went to the Compost Bldg. Const. site. After lunch Jim material. We found some that had been screened thru a 1' screen ands ample. Later I returned to the same area and sampled some topsoil for tertility and bacteria tests to see if it was suitable for grass. While I was with the soil of the East and all of the South slopes. This is contrary to what I had ne slopes prior to the installation of the top 6". We called Kent Winken and lay depth and make sure that 6" of corliss caly has been placed on top. An checked 24" down to prove that there is 18" of type B and 6" of Type A so samples where they used Corliss clay for Type B material. Serrot filled same on the leg area on the Western area. I sent the Type b and topsoil samples								
WERE PHOTOS TAKEN: Yes										
FIELD REPRESENTATIVE		DATE								
REVIEWED BY	-	DATE								



PROJECT NAME: Hidden Valley Landfill

DATE: 8/11/98	JOB NO: 40202-005.061;
REPORT NO: 32.	PAGE: 1 OF 1

EMCON FIELD REP (INITIAL) REVIEWED BY (INITIAL)
WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?
☐ YES ☐ NO IF YES, ATTACH NON-CONFORMANCE REPORT FORM.
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?
YES NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED?
☐ YES NO
TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)
None
BORROW AREA NO. USED TODAY None
PORTION OF BORROW AREA BEING MINED TODAY
None
AREA BEING FILLED TODAY
None
AREA BEING CONDITIONED TODAY
None AREA BEING COMPACTED TODAY
None
DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?
☐ YES ☒ NO IF YES, DESCRIBE AREA
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?
☐ YES ☑ NO IF YES, DESCRIBE AREA
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?
☐ YES ☑ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN



Hidden Valley Landfill Supplimental Drawing Project No. 40202-005.061

Date: 8/11/98



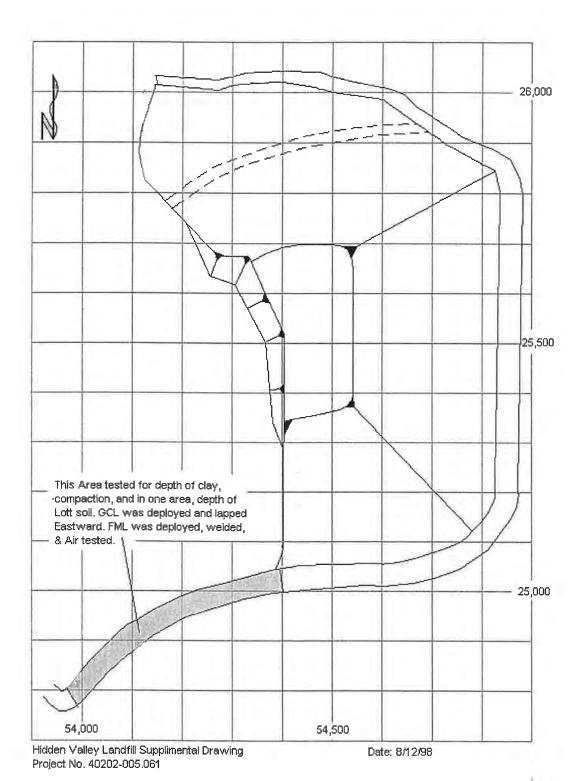
					DAIL	Y CO	NST	RUCTI	ON R	ΕP	OR	Т									
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure					DATE: 8/12/98																
PROJECT NO.: 40202-005.061					DAY	S	1	M	T	W	T	TH	F			S					
REPORT NO.: 33					DAT								10								
CLIENT: LRI									WEAT	HER						TEM	1P.(°F)			
CONTRACTOR:	LRI								Clear, L	t wind	d					(94				
REPORT BY:Gler	nn Heath							TIME AF	RIVED	07:	30	T	ME DI	EP/	ARTE	D: 18	8:0	0			
						A۱	/ERAGI	FIELD F	ORCE												
CONTRACTOR PERSONNEL LRI 7						2 J	11.00			IN OP 0 Doze				е							
							V	SITORS													
TIME			AME					RESENTII	IG	7						ARKS					
12:00 14:00			Wiken Susewind	d			ı	EMCON D.O.E								Visit. Visit.					
Follow-Up of Previous Previous Performed, down 24" to provisione area of the CONSTRUCTION was still being proto see if the Lott's 7" thick. The Rolle area and 2ftmin. It west end of trenct was tacked in placame on site and that we could not to let it dry back e some safety on the and the thickness thickness requires preventing me fro	Nhich County, Observative the dep West leg N ACTIVI ocessed. soil had be der could represent the this data are and well looked at the could represent the GCL as of the clements the	ations, Foth of the this dar TIES: I took I been thic not get we to assume the them are the thing of the thin	Results, ne Lott ste. Serrot F/D tests ckened a within 2. ure a goo boots are boots are a do the Go rom hyd aid that atisfy the ave all a	Rete soilex ' was s and as it v 5 to 3 ound obleted and c CL ov rating would be speed greet	Change sts:Tet cceeds on site found was fou Sit of the coduct. If the Le d tomor observe ver. I sh g the G ld be gg coificati d on.I a	sed the 18" and in compund to be trencion to be trencion to be trencion to be trencion to be declared to be dec	a top 6" of 0 d 6" of 0 d 6" of 0 d 6" of 0 d 30 this of of 0 le less the sit work of the sit	ate to lay then took on an 18" be ras trying the FML we ats and the ing on the the moisture want he balan also carresses of the getting sor	iner on top depth fore. It vos slide of pumps panel so hem. He as high noce of the te to the te soil line	the V tests was following byed sta. we eams e was enoughe pro esite ner he testir	Vest on to ounce the and was correct to dia as no oject to dia as no as	leg of the clay to be trench welded instant complete make we wiscuss to tolers the F	the province of the province of the letter o	ojecone cessidecide the more this the coose of the coose of the coose of the coore over the coor	ct. The of the of 18 ded to main row. date roug e maine sand the imid has sfast	e slope loca B' thico lay to a cell terial terial to at and t	IL of the soft over the learning the soft over the soft ov	was I made of the straight of	the T took the course	ready a 24 clay wer the e on t e We wind trenci er we rovide surve the	and "test as he st in had e ying
WERE PHOTOS	TAKFN		Yes																		
										_	_					_					
FIELD REPRESE	ENTATIV	 E					7	DATE													



PROJECT NAME: Hidden Valley Landfill

DATE: 8/12/98	JOB NO: 40202-005,061:
REPORT NO: 33.	PAGE: 1 OF 1

EMCON FIELD REP (INITIAL) REVIEWED BY (INITIAL)
WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?
☐ YES ☑ NO IF YES, ATTACH NON-CONFORMANCE REPORT FORM.
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?
\square YES \boxtimes NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED? ☐ YES ☑ NO
TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)
None
BORROW AREA NO. USED TODAY None
PORTION OF BORROW AREA BEING MINED TODAY
None
AREA BEING FILLED TODAY None
AREA BEING CONDITIONED TODAY
None
AREA BEING COMPACTED TODAY
None DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?
⊠ YES □ NO
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?
☐ YES ☐ NO IF YES, DESCRIBE AREA
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?
☐ YES ☑ NO IF YES, DESCRIBE AREA
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?
☐ YES ☑ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN





DAILY CHECKLIST FOR GEOMEMBRANE LINER INSTALLATION

PROJECT: Hidden Valley Landfill DATE: :						
CQA OBSERVER: Glenn Heath			PROJECT	NUMBER: 40202-005.061		
INSTALLER'S SUPERINTENDENT:	Ricardo Leor	1				
Are the following forms, prepared by the	e liner installer	, accurate an	d current through the la	st applicable date?		
	10			Missing How Many		
	Yes	No	Current Through	Days?		
Panel Placement/Production, Seaming, Welding, Testing			8/12/98	0		
Earthwork Acceptance			8/12/98	0		
Liner Acceptance			8/12/98	0		
Panel Placement Plan	\boxtimes		8/12/98	0		
Panel Numbers: P1-P24 Seam Numbers: S1-2 thru S2 Most recent set of panels accepted: Destruct Sample Submitted Today: 0 Destruct Sample Results Received Tod Sample Numbers: 0 Failing Samples: 0	ay: 0	- Panel Num	bers: None	Date Accepted:		
Destruct samples submitted but not yet						
Panels passing field inspection and des	tructs (ready f	for textile):				
Samples provided to third party observ	er today:					
Seam reconstructed from DS:	through DS:					
Are any deficiencies outstanding?	_(If yes, ex	(plain)				
Comments, Weather, Deficiencies, and	Resolutions (attach addit	ional pages as necessar	y):		

Signature ___



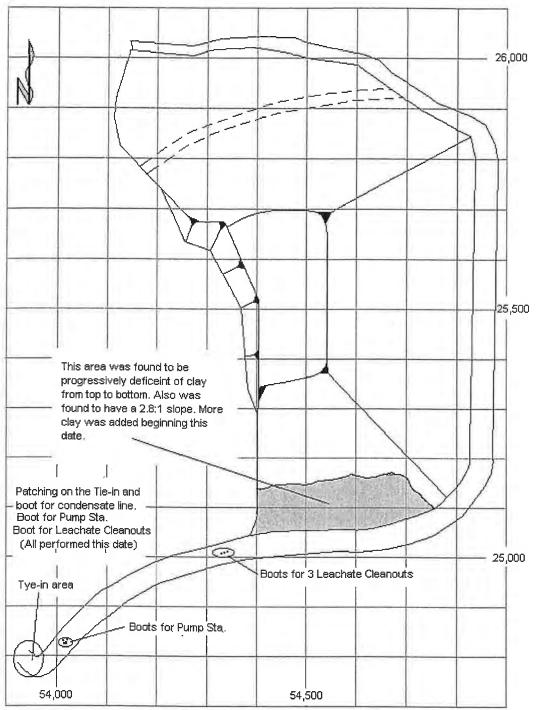
				DAIL	(CON	NSTR	UCTIO	N RI	EPOF	۲۲							
PROJECT: Hidder	n Valley La	andfill, Ea	st Line	d Area Pa	artial Clo	sure	DATE: 8/13/98										
PROJECT NO.: 40	0202-005.	061					DAY	S	М	Т	T N	/	TH	F	T	S	
REPORT NO.: 34							DAY				I	٦					
CLIENT: LRI								WEATH	IER			_		TEM	P.(°F	=)	
CONTRACTOR: L	.RI						C	lear, Lt	wind					9	4		
REPORT BY:Gleni	n Heath						TIME ARE	RIVED:	07:30		TIME D	EF	ARTE	D: 17	:00		
					AVE	RAGE	FIELD FO	RCE									
CONTRACTOR PERSONNEL 17						2 Jo	EQUIP nn Dee										
				-		Vis	ITORS					-	-	-	-	_	
TIME		NAME				REPRI	ESENTIN	3					REM	ARKS	_		
14:00 08:00		David Bos Dani Port			(County	Health De PSI	ot.			Н	lelp		Visit. Testing	Soi	ils	
Tests Performed, C work in the Ty-in and CONSTRUCTION of the pump sta. at the not be used without PSI watch the repair and completing deep over the Pit rus ame area. I notifie them blanket the loshut down the consilocation of where the covered. He left and Kent and see if the 16:45hrs.	Dbservation real and the ACTIVITIE ne west end to complete ir work and Tuesday and the liner and at approper and Jim of the weer half of the GCL was message v	ns, Resulted placements. The dof the learner and morning. The second placement is and he fithe South of the diverses stopped with Kelly	ne Serro eg and of the particular that the control on in the began this slope of and soon the control on the control of the co	ests: Toots around to crew was 3) The coumpost ago of the recompose e trench a hauling a with shoerm this caid he woolce ma	ook deptund the tild vorked or ondensation and cutte pairs so site was area, I to The surclay to tild tots so we tate. Day anted to ill and lef	th tests he three in the thirte lines ting the oit would deploy cook dep veyors the area e could wid Boso get with the site at	e penetrative ee penetrin the Ty-condensation of this date the tests or cold me the to build it get the grach came on Kelly Sugapprox. 1	ation area. te lines ted. I tole so the the So at they v up. The ides res n site an sewind a 5:00hrs	eas 1) The late Due to d her th Rip-Ra uth slop were fin Survey shot afte about it . I later	The there 2 has a considerat Samp couple and ding the correct fillinged at the constant of talked	rree piped to be tant inturday ld be peropere coming and the proglid not level with kernel	pes e cu eru lac min- pe v min the gres	on the ustom ptions sight need, thu ed that vas too 3:1 pr ss He k to hir	E East built a built a built a built a bed he as place the costeep k out to oblem question that I told h	end s the Dar r he ing lay voor at 2 cours on a cours o	of the boom of the boom of the boom of the will	ne Leg, 2 ots could rter with at will not do n the only 18" in the , so I had right. The the a area wa
WERE PHOTOS T	AKEN:	Yes	3														
FIELD REPRESEN	ITATIVE						DATE										
REVIEWED BY							DATE										



PROJECT NAME: Hidden Valley Landfill

DATE: 8/13/98	JOB NO: 40202-005,061:
REPORT NO: 34,	PAGE: I OF I

EMCON FIELD REP (INITIAL) REVIEWED BY (INITIAL)
WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?
☑ YES ☐ NO IF YES, ATTACH NON-CONFORMANCE REPORT FORM.
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?
\square YES \boxtimes NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED?
T YES NO
TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)
None
BORROW AREA NO. USED TODAY None
PORTION OF BORROW AREA BEING MINED TODAY
None
AREA BEING FILLED TODAY
None
AREA BEING CONDITIONED TODAY None
AREA BEING COMPACTED TODAY
None
DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?
⊠ YES □ NO
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?
☐ YES ☒ NO IF YES, DESCRIBE AREA
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?
☐ YES ☒ NO IF YES, DESCRIBE AREA
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?
☐ YES ☑ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN



Hidden Valley Landfill Supplimental Drawing Project No. 40202-005.061

Date: 8/13/98



DAILY CHECKLIST FOR GEOMEMBRANE LINER INSTALLATION

PROJECT: Hidden Valley Landfi	11		DATE: :						
CQA OBSERVER: Glenn Heath		PROJECT NUMBER							
INSTALLER'S SUPERINTEND	ENT: Ricardo Le	on							
Are the following forms, prepared	by the liner install	er, accurate an	d current through the la	st applicable date?					
	Yes	No	Current Through	Missing How Many Days?					
Panel Placement/Production Seaming, Welding, Testing	l, 🛛		8/13/98	0					
Earthwork Acceptance			8/13/98	0					
Liner Acceptance	\boxtimes		8/13/98	0					
Panel Placement Plan			8/13/98	0					
Number of welding machines in a Were trial welds performed with Number of panels installed today	all machines? Ye	es							
Panel Numbers: Seam Numbers:		= 1							
Most recent set of panels accepted	i:	Panel Num	bers: P1-P24	Date Accepted: 8/12/98					
Destruct Sample Submitted Toda	y: 0								
Destruct Sample Results Receive	d Today: 0								
Sample Numbers: Failing Samples:									
Destruct samples submitted but n	ot yet tested: 0								
Panels passing field inspection ar	d destructs (ready	for textile):	All						

through DS:

Comments, Weather, Deficiencies, and Resolutions (attach additional pages as necessary): None

Samples provided to third party observer today: 0

Are any deficiencies outstanding? No _(If yes, explain)

Seam reconstructed from DS: 0



	DAIL	Y CONSTI	RUCTION REPOR	RT							
PROJECT: Hidden Valley Landf	ill, East Lined Area P	artial Closure	DATE: 8/14/98								
PROJECT NO.: 40202-005.061			DAY S M	T W TH F S							
REPORT NO.: 35											
CLIENT: LRI			WEATHER TEMP.(°F)								
CONTRACTOR: LRI			Clear, Lt wind	94							
REPORT BY:Glenn Heath			TIME ARRIVED: 07:30	TIME DEPARTED: 17:00							
		AVERAGE	FIELD FORCE								
CONTRACTOR PERSONNEL 17			2 Jonn Dee	MENT IN OPERATION re D650 Dozers, 1 Trackhoe							
			SITORS								
	IAME id Bosch		RESENTING / Health Dept.	REMARKS Site Visit.							
Non-Conforming Materials or Wo	rk;										
Follow-Up of Previously Reporte	d Deficiencies:										
Field Problems Which Could Res	sult in Delay, Change	Order or Claim	I:								
Tests Performed, Observations, pulled off site until Tuesday Morr		Took density te	sts on the South slope ber	m and observed watering of South slope. Serrot							
built the tie-in real well. The surv that would be the best idea. Due	sch on the phone an eyors were still on sit to technical problem	d he said the G te, so I told him s, the suveyors	CL at the Western tie-in wa I will have them shoot the did not get the lower half of	ested the installation of clay on the South slope as in the right location and that we need to as end of the GCL on the West end and he said of the South slope nor the GCL locations but watered all day to maintain the surface moisture							
WERE PHOTOS TAKEN:	Yes										
FIELD REPRESENTATIVE			DATE								
REVIEWED BY			DATE								



PROJECT NAME: Hidden Valley Landfill

CTOF I

EMCON FIELD REP (INITIAL) REVIEWED BY (INITIAL)
WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?
\square YES \boxtimes NO \square IF YES, ATTACH NON-CONFORMANCE REPORT FORM.
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?
\square YES \boxtimes NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED?
☐ YES ⋈ NO
TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)
None
BORROW AREA NO. USED TODAY None
PORTION OF BORROW AREA BEING MINED TODAY
None
AREA BEING FILLED TODAY
None AREA BEING CONDITIONED TODAY
None
AREA BEING COMPACTED TODAY
None
DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?
⊠ YES □ NO
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?
☐ YES ☐ NO IF YES, DESCRIBE AREA
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?
☐ YES ☑ NO IF YES, DESCRIBE AREA
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?
☐ YES ☑ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN



DAILY CHECKLIST FOR GEOMEMBRANE LINER INSTALLATION

PROJECT: Hidden Valley Landfill

DATE: :8/13/98

CQA OBSERVER: Glenn Heath

PROJECT NUMBER:

INSTALLER'S SUPERINTENDENT: Ricardo Leon

Are the following forms, prepared by the liner installer, accurate and current through the last applicable date?

	Yes	No	Current Through	Missing How Many Days?
Panel Placement/Production, Seaming, Welding, Testing			8/13/98	0
Earthwork Acceptance			8/13/98	0
Liner Acceptance			8/13/98	0
Panel Placement Plan			8/13/98	0

Number of welding machines in use today:	Split Wedge: 1	Extr.: 1
Were trial welds performed with all machines? Yes		
Number of panels installed today: 0		
Panel Numbers: Seam Numbers:	=	
Most recent set of panels accepted:	Panel Numbers: P1-P24	Date Accepted: 8/12/98
Destruct Sample Submitted Today: 0		
Destruct Sample Results Received Today: 0		
Sample Numbers: Failing Samples:		
Destruct samples submitted but not yet tested: 0		
Panels passing field inspection and destructs (ready for	or textile): All	
Samples provided to third party observer today: 0		
Seam reconstructed from DS: 0 through DS:		
Are any deficiencies outstanding? No _(If yes, expla	in)	
Comments, Weather, Deficiencies, and Resolutions (attach additional pages as necessary): None



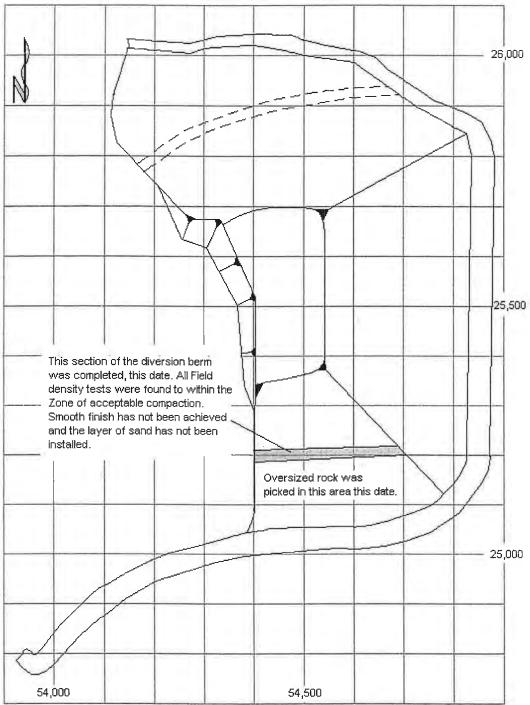
		DAILY CONST	RUCTION	N RE	PORT	•						
PROJECT: Hidden Valle	y Landfill, East Line	d Area Partial Closure	DATE: 8/1	5/98								
PROJECT NO.: 40202-0	05.061		DAY	S	М	T	W	TH	F		S	
REPORT NO.: 36												
CLIENT: LRI			WEATHER TEMP.(°F)									
CONTRACTOR: LRI			Clear, Lt wind 74									
REPORT BY:Glenn Heat	h		TIME ARRIV	/ED: 0	7:30	TIM	E DEP	ARTE	D: 17:	:30		
		AVERAGI	FIELD FOR	CE								
CONTRAC LRI	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe											
		VI	SITORS									
TIME	TIME NAME REP							REMA	ARKS			
Non-Conforming Materia Follow-Up of Previously R		es:										
Field Problems Which Co Tests Performed, Observed and	rations, Results, Re	tests: Took depth test	ts on the SE of		and East	slope	outh sl	ope to	dterm	nine tl	ne dept	h of the
CONSTRUCTION ACTIV 08:30hrs and I had her ta exceed 6" also. There wa keep the surface moiture	ke depth tests on th s no need to have h	er in the afternoon so s	rid while I got he left at 12:0	caught 0hrs. Ti	up on m ne South	y pape slope	rwork. was w	She fo	ound a	II of t	he dept	hs to
WERE PHOTOS TAKEN	: Yes											
FIELD REPRESENTATIV	/E		DATE									
REVIEWED BY			DATE									



 $PROJECT\ NAME:\ Hidden\ Valley\ Landfill$

DATE: 8/15/98	JOB NO: 40202-005.061:
REPORT NO: 36.	PAGE: TOF T

EMCON FIELD REP (INITIAL) REVIEWED BY (INITIAL)
WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?
☐ YES ☑ NO IF YES, ATTACH NON-CONFORMANCE REPORT FORM.
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?
☐ YES ☐ NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED?
☐ YES ⋈ NO
TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID)
None
BORROW AREA NO. USED TODAY None
PORTION OF BORROW AREA BEING MINED TODAY
None
AREA BEING FILLED TODAY
None AREA BEING CONDITIONED TODAY
None
AREA BEING COMPACTED TODAY
None
DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?
⊠ YES □ NO
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?
☐ YES ☑ NO IF YES, DESCRIBE AREA
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?
☐ YES ☒ NO IF YES, DESCRIBE AREA
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?
☐ YES ☑ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN



Hidden Valley Landfill Supplimental Drawing Project No. 40202-005.061

Date: 8/15/98



DAILY CHECKLIST FOR GEOMEMBRANE LINER INSTALLATION

PROJECT: Hidde	n Valley Landfill	DATE: :

CQA OBSERVER: Glenn Heath PROJECT NUMBER:

INSTALLER'S SUPERINTENDENT: Ricardo Leon

Are the following forms, prepared by the liner installer, accurate and current through the last applicable date?

	Yes	No	Current Through	Missing How Many Days?
Panel Placement/Production, Seaming, Welding, Testing	×		8/13/98	0
Earthwork Acceptance			8/13/98	0
Liner Acceptance	\boxtimes		8/13/98	0
Panel Placement Plan	\boxtimes		8/13/98	0

Number of welding machines in use to	day: Split Wedge: 1	F	Extr.: 1
Were trial welds performed with all ma	achines? Yes		
Number of panels installed today: 0			
Panel Numbers: Seam Numbers:			
Most recent set of panels accepted:	Panel Numbers:	P1-P24 I	Date Accepted: 8/12/98
Destruct Sample Submitted Today: 0			
Destruct Sample Results Received Tod	ay: 0		
Sample Numbers: Failing Samples:			
Destruct samples submitted but not yet	tested: 0		
Panels passing field inspection and des	tructs (ready for textile): All		
Samples provided to third party observ	er today: 0		
Seam reconstructed from DS: 0	through DS:		
Are any deficiencies outstanding? No	(If yes, explain)		
Comments, Weather, Deficiencies, and	Resolutions (attach additional p	ages as necessary):	None

Signature _



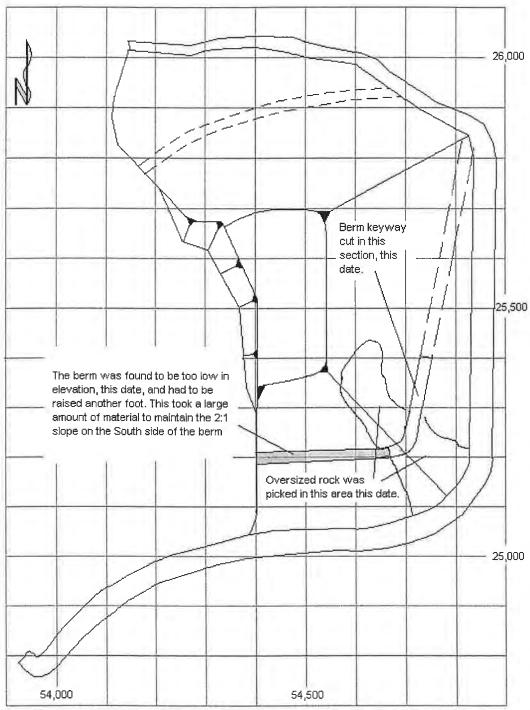
	DAILY CONST	RUCTION REPORT					
PROJECT: Hidden Valley Landfill, East Line	d Area Partial Closure	DATE: 8/16/98					
PROJECT NO.: 40202-005.061		DAY S M T W TH F S					
REPORT NO.: 37							
CLIENT: LRI		WEATHER TEMP.(°F)					
CONTRACTOR: LRI		Overcast, Rain 68					
REPORT BY:Glenn Heath		TIME ARRIVED: 8:00 TIME DEPARTED: 12:00					
	AVERAGI	E FIELD FORCE					
CONTRACTOR LRI	PERSONNEL 2	EQUIPMENT IN OPERATION 1 Jonn Deere D650 Dozer, 1 Trackhoe					
		ISITORS					
TIME NAME	REPI	RESENTING REMARKS					
Non-Conforming Materials or Work:	*						
Follow-Up of Previously Reported Deficiencie	es:						
Field Problems Which Could Result in Delay,	Change Order or Claim	1:					
Tests Performed, Observations, Results, Re section of the South slope.	tests: Observed clear	ning out and shaping of drainage trench at roadway. Also tested the lower					
removed and the trackhoe was then brought	in to reshape the trench	aping of the trench along the roadway at toe of South slope. Rocks were 1. I took Field density tests on the lower section of the South slope and rain began to fall approx. 10:30hrs and was not steady until 11:00. I left site					
WERE PHOTOS TAKEN: Yes							
FIELD REPRESENTATIVE		DATE					
REVIEWED BY		DATE					



	DAILY CONST	RUCTIC	N RI	EPOF	RT					
PROJECT: Hidden Valley Landfill, East Li	DATE: 8/17/98									
PROJECT NO.: 40202-005.061		DAY	S	M	Т	W	TH	F	S	
REPORT NO.: 38		DAT								
CLIENT: LRI		1	NEATH	IER				TEMP.	(°F)	
CONTRACTOR: LRI		Ove	ercast,	_t wind				74		
REPORT BY:Glenn Heath		TIME ARE	RIVED:	0700	TIT	ME DE	PARTE	D: 16:3	0	
	AVERAGE	FIELD FO	RCE							
CONTRACTOR LRI	PERSONNEL 7		2 Jo	EQUIP nn Deei			RATIOI s, 1 Trad			
	VI	SITORS								
TIME NAME 07:30 Kent Wiken		RESENTING EMCON	3				REMA Site			
Follow-Up of Previously Reported Deficien Field Problems Which Could Result in Dela Tests Performed, Observations, Results, Fiberm on the South slope. CONSTRUCTION ACTIVITIES: Attenda preparing the slope for tomorrow. The survice checked by the surveyors this date. It was slope myself and see what could be done found the berm needed to be 2.1' above the We then, after reshooting, found that the to reshaped the trench and cut the back side and are not expecting them tomorrow as the left site at 16:30hrs.	Retests: Attended site n ed the site meeting with Jir eyors wre on site and shot found to have 1.6:1 on m I found that the top of the bottom of the trench. Mo op of the berm was too far of the berm down to flatter	m Crandall at the GCL are ost of the lor berm was core material South and the slope to the slope	and Ker nd the I wer side only 1.1 was br he face	nt Wiken ower So e. I talke above ought in of the b	. We die uth slop ed to Jin the bott and pla eerm (So o 2:1. V	scussed be. The m and b om of t aced on buth sid	d the sc berm a borrowe he trend the ber le of the	hedule t the So d a leve th. Afte m to ra trench from S	and the puth slopel to shoot realculation it and was too errot this	plan for be was ot the ating, I other foot. o flat, We s date,
WERE PHOTOS TAKEN: Yes										
FIELD REPRESENTATIVE		DATE								
REVIEWED BY		DATE								



	DAILY CONST	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East Line	d Area Partial Closure	DATE: 8/18/98
PROJECT NO.: 40202-005.061		DAY S M T W TH F S
REPORT NO.: 39		
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		Overcast, Lt wind 68
REPORT BY:Glenn Heath		TIME ARRIVED: 0700 TIME DEPARTED: 16:30
	AVERAGE	FIELD FORCE
CONTRACTOR LRI	PERSONNEL 7	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe
	VI	SITORS
TIME NAME	REPI	RESENTING REMARKS
Non-Conforming Materials or Work:		
Follow-Up of Previously Reported Deficiencie	es:	
Field Problems Which Could Result in Delay,	Change Order or Claim	
Tests Performed, Observations, Results, Ret to Seatle. Also observed smooth rolling of so		er sample of material to use for Type B soil on the drainage berm and took
over a 3" sieve. The soil seamed to have a be berm size to meet the requirements of the dra testing again for Perm and proctors and it is a	etter clay content and pa awings, we used all the l urgent to get the sample If. I returned at approx.	ple of what he calls Hard Pan material which Harry Corliss has screened tacks easier. I called Kent Wiken and told him due to the increase of the perm material up and would like to use a new material. This will require into the lab. He said he did not have a way to get to the lab, so after 14:30hrs and found outy from Jim that Daveid Bosch had paid a site visit smooth drum rilling on the South slope
WERE PHOTOS TAKEN: Yes		
FIELD REPRESENTATIVE		DATE
REVIEWED BY		DATE



Hidden Valley Landfill Supplimental Drawing

Date: 8/18/98

Project No. 40202-005.061



	DAILY CONSTI	RUCTION REPORT						
PROJECT: Hidden Valley Landfill, East Li	ned Area Partial Closure	DATE: 8/19/98						
PROJECT NO.: 40202-005.061		DAY S M T W TH F S						
REPORT NO.: 40								
CLIENT: LRI		WEATHER TEMP.(°F)						
CONTRACTOR: LRI		PCt, Lt wind 74						
REPORT BY:Glenn Heath		TIME ARRIVED: 0700 TIME DEPARTED: 17:30						
	AVERAGE	E FIELD FORCE						
CONTRACTOR LRI	PERSONNEL 7	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe						
	VI	SITORS						
TIME NAME	REPI	RESENTING REMARKS						
Non-Conforming Materials or Work:	1							
Follow-Up of Previously Reported Deficien	cies:							
Field Problems Which Could Result in Dela Tests Performed, Observations, Results, I	Retests: Observed Smo	n: both drum rolling thre south slope and hand filling blemished areas on the a of the slope. The berm was also under construction in this area. Took gas						
Crandall and I have made. I looked at the Stobe rerolled, but only in a few small isolate	e at 07:30 to see if Serrot v South slope surface and for red situations. The berm co	system. was on site but found they have not arrived nor returned any calls Jim bund to be in good overall condition. I did find some soft spots that will have construction continued this date on the SE corner of the slope and rock ich is now built from the new material. I spent most of the day taking gas						
WERE PHOTOS TAKEN: Yes								
FIELD REPRESENTATIVE		DATE						
REVIEWED BY		DATE						



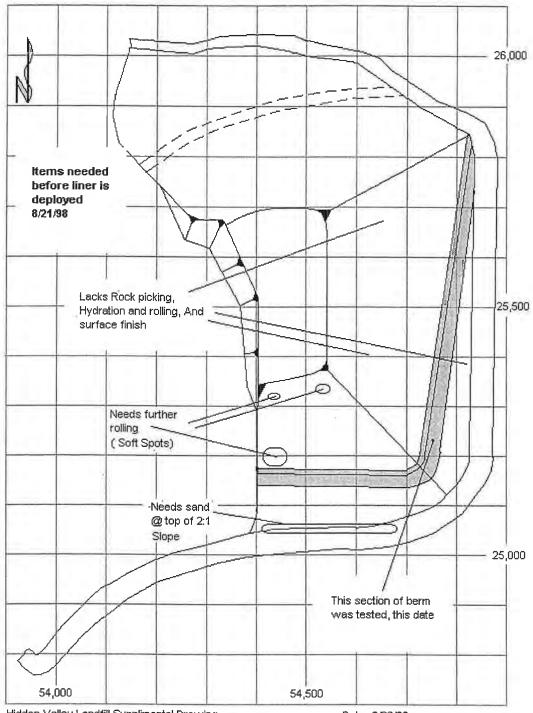
			DAILY CO	ONSTR	RUCTIO	N RI	EPOR	RT					
DDO IFOT 1"	1												
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure					DATE: 8/20/98 S M T W TH F S								
PROJECT NO.:					DAY	S	M		W	TH	F		5
REPORT NO.: 4	1 1					WEATH	IED.				TEMP.	(°E)	
CLIENT: LRI	1 DI					VVEATF PCt, Lt v					74	(1)	
CONTRACTOR:					TIME ARI			Tu	VIE DEI	PARTE		0	
REPORT BY:GI	enn Heath			\/ED 4 OF			07.50		VIL DEI	ANTEL	J. 17.5		
					FIELD FO	RCE							
Co	ONTRACTOR LRI		PERSONNE 7	EL		2 Jo	EQUIP. onn Deer						
				VI	SITORS								
TIME 14:30		AME ch and Garre	en		RESENTIN Dept & DC					REMA Site			
	Materials or W th Type B materia viously Reported	al due to spi	llage from trac				slope, r	ough s	pots a	bove b	erm, S	oil on	East slope
Tests Performed Serrot in prep. for CONSTRUCTIO on site at 11:00h Ricardo Leon w/s rocks removed, t some of the bern lunch. The soft p	N ACTIVITIES: rs and mobilized Serrot walked the there was some in	Results, Renorrow, and On site a this date. De South slop solated soft rough place olled prior to	etests: Observed of the observ	erved corne SE corne erve the E /PSI on si the repair. down sid nd of the I	estruction of r slope Berm constite at 13:00 s required le of the beorm was red. M. David E.	ruction of hrs to as pefore of rm need epaired Bosch w	on East s ssume to onstruct ded som right aw /Pierce (slope ar aking Frion. We e smoo ay and County	nd surfa /D tests e noted th rollin the roo	ace prep on the the upp g at the ks were Dept. ar	on Sor berm co er side west e remove	uth slo onstru neede nd wh ed righ	ction. ed some ere Jim had ht after DOE were
toe of the South will be placed tor however, by the the rough places	slope and some morrow as the Go end of the day, it which will be reported to the day it which will be reported to the control of the control	rough spots CL is placed : needs it ag	on the upper s . The moisture ain. Garren co	side of the was in go mplained	e berm, I to bod shape about this Am. I left s	ld him th this moi also. I n	ne upper rning as otified Ji	side of we wat im Crar	f the be ered ea	rm will t ich day	e reroli at the e	led an end of	d the sand the day,
FIELD REPRES	ENTATIVE				DATE								



PROJECT NAME: Hidden Valley Landfill

DATE: 8/20/98	JOB NO: 40202-005.061;
REPORT NO: 41.	PAGE: 1 OF 1

EMCON FIELD REP (INITIAL) REVIEWED BY (INITIAL)
WERE ANY DEFICIENCIES NOTED THAT WERE NOT REMEDIED BEFORE THE END OF THE SHIFT?
☑ YES ☐ NO IF YES, ATTACH NON-CONFORMANCE REPORT FORM.
ARE ANY DEFICIENCIES FROM PREVIOUS DAILY FIELD REPORTS STILL UNRESOLVED?
\square YES \boxtimes NO IF YES, LIST DAILY FIELD REPORT NUMBER(S) CORRESPONDING TO THE DEFICIENCY(IES).
WHICH DEFICIENCIES, IF ANY, FROM PREVIOUS DAYS WERE CORRECTED TODAY?
HAVE YOU ATTACHED THE FIELD DENSITY/MOISTURE CURVE WITH ALL OF TODAY'S FIELD DENSITY TESTS ATTACHED?
☐ YES NO
TOTAL YARDS PLACED THIS SHIFT? Not counted TOTAL YARDS COMPACTED THIS SHIFT ? None
DESCRIPTION OF MATERIALS PLACED FROM SHIFT? (COLOR, GRADATION BASED ON VISUAL ID) None
BORROW AREA NO. USED TODAY Corliss Yard
PORTION OF BORROW AREA BEING MINED TODAY
Hard Pan Stockpile
AREA BEING FILLED TODAY
East Berm
AREA BEING CONDITIONED TODAY Maint, on South slope
AREA BEING COMPACTED TODAY
East berm
DOES DAILY FIELD REPORT ADDRESS ALL QUALITY-RELATED EARTHWORK INSPECTIONS PER CQC PLANS?
⊠ YES □ NO
WAS ANY SUBGRADE CHECKED FOR CLAY LINER?
☐ YES ☑ NO IF YES, DESCRIBE AREA
WAS ANY SUBGRADE CHECKED FOR MEMBRANE LINER?
☐ YES ☑ NO IF YES, DESCRIBE AREA
ARE THERE ANY MEMBRANE SUBSURFACE AREAS WITH SEVERE CRACKING?
☐ YES ☑ NO IF YES, DESCRIBE AREA AND CORRECTIVE ACTION TAKEN



Hidden Valley Landfill Supplimental Drawing Project No. 40202-005.061

Date: 8/20/98



		DAILY CONST	RUCTION REPORT	
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 8/21/98	
PROJECT NO.: 40202-005.061 REPORT NO.: 42		DAY S M	THE S	
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR:			PCt, Lt wind TIME ARRIVED: 07:00	TIME DEPARTED: 18:00
REPORT BT.GIEII	III I I Caul	AVERAG	E FIELD FORCE	THE BEI THIED. 10.00
CONTRACTOR PERSONNEL LRI 9 Serrot 15		EQUIPME 2 Jonn Deere L	NT IN OPERATION D650 Dozers, 1 Trackhoe en. & Forklifts	
		ν	ISITORS	
TIME 09:00 & 13:00	NAME David Bosch		PRESENTING dealth Dep	REMARKS Site Visit
Non-Conforming M	laterials or Work:			
area above the bei on the Berm.	m was reshaped and smoo	thed using a vibraplate	compactor and the contamination	nform with the project agreements, The rough on was dozed off of the East slope and placed
	nich Could Result in Delay, C			CCI and plants were deplaced as the Court
slope. More berm	was constructed on the SE	sis: After the above of corner and the Eas slop	e in prep for tomorrow.	GCL and plastic were deployed on the South
South slope (Panel and they were cut returned at 13:00hi the well and a piec if he is not here to repairs were perfor	were corrected the GCL was is No.25 thru 32). The tie-in and patched, however we di is and observed the contruct of GCL to assure the seaf see it. Tests were taken on the see it.	is placed on the lower to was completed to the Vident get them tested. It tion. He was concerned I told him we will have the the Berm by Dani Porte the Air tests. The SE co	rench and the berm for 132ft. Pi Vest leg and all was welded. I m David Bosch was on site approx I with the Gas well penetrations more than enough scraps to per r w! PSI and myself and were fo	resturday. (See yesturday's report). After the astic was then deployed to cover the entire asked the 1st 4 destruct locations this date. 09:00hrs and stayed until 11:00hrs. He then and requested that we put bentonite around form this and told him I will take pictures of it bund to be within specified limits. Most of the d heavily hydrated, this date, to soak
WERE PHOTOS 1	AKEN: Yes			
FIELD REPRESEN	NTATIVE		DATE	
REVIEWED BY		-	DATE	



		DAILY CONST	RUCTION REPORT	
PROJECT: Hidden V	alley Landfill, East Line	d Area Partial Closure	DATE: 8/22/98	
PROJECT NO.: 4020	02-005.061		DAY S M	T WE TH F S
REPORT NO.: 43				
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR: LRI			PCt, Lt wind	74
REPORT BY:Glenn H	eath		TIME ARRIVED: 07:00	TIME DEPARTED: (18:00/
		AVERAG	E FIELD FORCE	
L	RACTOR RI urrot	PERSONNEL 9 15	2 Jonn Deere I	ENT IN OPERATION D650 Dozers, 1 Trackhoe en. & Forklifts
		ν	ISITORS	
TIME	NAME	REF	RESENTING	REMARKS
Non-Conforming Mate	rials or Work			
Tion Comoning mate	. Ido of Profit			
Tests Performed, Ob Destructive tests were CONSTRUCTION AC was the Southern half HDPE liner. Repairs w test them on site for co	servations, Results, Retaken on the work performer. TIVITIES: On site of the SE corner (Pane performed on the nonformance. The placer	ormed to date and tester 07;00hrs to observe the Is No33 thru 45). The Go naterial placed yesturday ment ran late this date as	CL and plastic continued on to deployment of GCL and Plastic was placed on the Berm and to but were not tested this date.	the South slope and half of the SE corner. The streat covered this date the Toe trench prior to deployment of the Me did however cut 4 destructive tests and that 19:30hrs. No testing nor repairs were date. Off site at 19:30hrs.
WERE PHOTOS TAK	EN: Yes			
FIELD REPRESENTA	TIVE		DATE	
REVIEWED BY			DATE	



		DAILY CONST	RUCTION REPOR	T
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 8/23/98	
PROJECT NO.: 40202-005.061 REPORT NO.: 44		DAY S M	T W TH F S	
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR: LRI			PCt, Lt wind	74
REPORT BY:Glenn Heath			TIME ARRIVED: 07:00	TIME DEPARTED: 13:30
		AVERAG	E FIELD FORCE	
CONTRACTO LRI Serrot	OR .	PERSONNEL 9 15	2 Jonn Deer	MENT IN OPERATION e D650 Dozers, 1 Trackhoe Gen. & Forklifts
				PENASI/0
TIME	NAME	REF	PRESENTING	REMARKS
Non-Conforming Materials o	r Work:			
CONSTRUCTION ACTIVITY progress. The Berm was wo temporarily seal all unpatche arrive on Frday and pick up	ons, Results, Reter arily sealed any pa ES: On site 0 rked on and soil pr d areas then leave where this crew lea	sts: LRI built some be toth areas, that were no 17;00hrs to observe rep rocessing was underwa e until Wednesday where	rm at Mid point of the East sl of completed and left site for a airs and testing on the plastic y at the South end of the Eas	deployed yesturday and the earth contruction in st slope. Serrot told me they were going to and continue work. Ricardo's crew would then
WERE PHOTOS TAKEN;	Yes			
FIELD REPRESENTATIVE			DATE	
REVIEWED BY	REVIEWED BY		DATE	



		DAILY CONST	RUCTION REPORT	
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 8/24/98	
PROJECT NO.: 40202-005.061 REPORT NO.: 45			DAY S M	T W TH F S TEMP.(°F)
CLIENT: LRI	LDI		WEATHER PCt, Lt wind	74
CONTRACTOR			TIME ARRIVED: 07:00	TIME DEPARTED: 16:30
REPORT BT.G	eili neaui	AVEDAC	E FIELD FORCE	THE DEL ASSED. 70.30
	CONTRACTOR			ENT IN OPERATION
	CONTRACTOR LRI Serrot	PERSONNEL 9 15	2 Jonn Deere 2 G	D650 Dozers, 1 Trackhoe Gen. & Forklifts
		V	ISITORS	
TIME 09:00 & 13:00	NAME David Bosch		PRESENTING dealth Dep	REMARKS Site Visit
4	g Materials or Work: eviously Reported Deficiencies	:		
Tests Performer South half of the CONSTRUCTIO site and the Drai Balance of the do corner where the	ON ACTIVITIES: On site at 6 inage structure at the NE come lay I took gas readings and wa	ests: Attended the M 07:00 hrs to attend the er of site. The berm app tiched the placement of tity of gravel. There wa	Ion morning site meeting and of the morning site meeting t Afficient to fall to the structure at the proof the soil proof	observed the finishing of the berm surface on ter the meeting, Kent wiken and I looked at the a proper slope. Kent off site at 09:30. The cessing on the top of the slope at the SE ed on the slope just below this area also so I
WERE PHOTOS	ENTATIVE		DATE	
REVIEWED BY			DATE	



		DAILY CONST	RUCTION REPORT	
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 8/25/98	
PROJECT NO.: 40			S M	T W TH F S
REPORT NO.: 46		DAY		
CLIENT: LRI			WEATHER	TEMP (°F)
CONTRACTOR: LF	₹		PCt, Lt wind	74
REPORT BY:Glenn	Heath		TIME ARRIVED: 07:00	TIME DEPARTED: 17:00
		AVERAG	E FIELD FORCE	
CON	TRACTOR LRI	PERSONNEL 9		ENT IN OPERATION D650 Dozers, 1 Trackhoe
		v	ISITORS	
TIME 13:00hrs	NAME David Bosch		RESENTING lealth Dep	REMARKS Site Visit
Field Problems Which Tests Performed, Of the mid point on the CONSTRUCTION A full of gravel. David I crew fix it. The berm lower portion of the I roller pulled by the tr	bservations, Results, Re East slope. ACTIVITIES: On site (Bosch was on site at app was also under constru- East slope, and the bern rack loader using a long	tests: Observed the proposition on the East slope. It is tested within the zone of cable. As the roller was placed	cessing of the soil on the SE cessing of the soil on the top of it also. I notified Jim Crandall a took tests on it and found it low if compation. The berm was so	corner, at the top and the berm construction at the SE corner. The soil still looked rocky and and he looked at it and said he will have the you moisture. The soil was wet up, as was the neoth rolled this date using the smooth drum e cut into the top of the slope requiring some her taking some gas readings.
WERE PHOTOS TA	AKEN: Yes			
FIELD REPRESEN	TATIVE		DATE	
REVIEWED BY			DATE	



		DAILY CONST	RUCTION REPOR	RT
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 8/26/98	
PROJECT NO.: 44			DAY S M	T W TH F S
CLIENT: LRI		WEATHER		
CONTRACTOR: L	DI		PCt, Lt wind	74
REPORT BY:Gleni			TIME ARRIVED: 07:00	TIME DEPARTED: 17:00
REPORT BT. GIGH	ii i icauj	AVERAG	E FIELD FORCE	TIME BEL FACTED. THOS
CO4	NTRACTOR	PERSONNEL		MENT IN OPERATION
COI	LRI	9	2 Jonn Dee	re D650 Dozers, 1 Trackhoe
		1	risitors	
TIME 09:30 09:30	NAME David Bosch Garren		PRESENTING Health Dep DOE	REMARKS Site Visit Site Visit
Non-Conforming M	laterials or Work:			
Tests Performed, Constructed on t	Discriptions, Results, Retelle East slope this date. ACTIVITIES: On site 0	ests: Rolled the soil o	n the SE corner of the site a	nd part of the East slope. Berm was continued to comer of the cell. The soil was smooth drum
sand on the berm b Wiken and talk to h Kent returned the cany liner materials. Bosch and his boss	pefore placing GCL. I told had a had	im no. He expressed it s ke that kind of change v o have a meeting on sit d at 14:30hrs. Kent call ft at 15:00hrs and Garre	should be done and I could no vithout going thru channels. I se with Garren as Garren wan ed and said he will be late, Ji	ox. 09:30. Garren asked if we were going to place of convince him otherwise. I told him to call Kent called Kent's voice mail and left a message. ted to have this cleared up before deployment of m Crandall had to leave to go out of town, David ived at 15:45hrs and we looked at the berm. apactor. Off site at 17:00hrs.
WERE PHOTOS T	TAKEN: Yes			
FIELD REPRESEN	NTATIVE		DATE	
REVIEWED BY		DATE		



	DAILY CONST	RUCTION REPORT	
PROJECT: Hidden Valley Landfill, E	ast Lined Area Partial Closure	DATE: 8/27/98	
PROJECT NO.: 40202-005.061 REPORT NO.: 48		DAY S M	T W TH F S
CLIENT: LRI		WEATHER	TEMP.(°F)
CONTRACTOR: LRI		PCt, Lt wind	74
REPORT BY:Glenn Heath		TIME ARRIVED: 07:00	TIME DEPARTED: 17:30
	AVERAG	SE FIELD FORCE	
CONTRACTOR LRI	PERSONNEL 9		ENT IN OPERATION D650 Dozers, 1 Trackhoe
	1	/ISITORS	
TIME NAM	E REF	PRESENTING	REMARKS
Non-Conforming Materials or Work:			
Follow-Up of Previously Reported De	ficiencies:		
Field Problems Which Could Result in	n Delay, Change Order or Claim		
Tests Performed, Observations, Resonance North end of East slope.	ults, Retests: Serrot not on sit	te this date. Maintained moistur	e on slopes and berm, patched berm and built
and did not call. I showed the crew ho tests on the slope from center of the Acceptable Compaction. I also took a	ow we wanted the berm to be pa SE corner to the half way point on Shelby sample which will be sh perrow or Saturday. I also obtain	atched and the slopes were wate on the East slope heading North ipped tomorrow . The berm was ed a sample of the stone to be a	rner of the cell. Serrot did not arrive this date, ered to maintain moisture. I took field density . all tests were found within the Zone of s constructed on Northern end of the East used for the drainage layer, for gradation, and
WERE PHOTOS TAKEN: Y	es		
FIELD REPRESENTATIVE		DATE	
REVIEWED BY		DATE	



	DAILY CONST	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East	Lined Area Partial Closure	DATE: 8/28/98
PROJECT NO.: 40202-005.061		DAY S M T W TH F S
REPORT NO.: 49		
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		PCt, Lt wind 74
REPORT BY:Glenn Heath		TIME ARRIVED: 07:00 TIME DEPARTED: 17:30
	AVERAG	E FIELD FORCE
CONTRACTOR LRI Serrot	PERSONNEL 9 4	EQUIPMENT IN OPERATION 2 John Deere D650 Dozers, 1 Trackhoe
	V	risitors
TIME NAME	REF	PRESENTING REMARKS
Non-Conforming Materials or Work:		
Follow-Up of Previously Reported Defici Field Problems Which Could Result in D Tests Performed, Observations, Results	elay, Change Order or Claim	: is date. Maintained moisture on slopes and berm, and built more North end of
East slope.	, Relests. Senot on site in	is trate. Indilitaried moistile on siopes and bethi. and but more storal one
called them at the request of one of the begin work tomorrow then Sun. the rest shipped a perm sample to Mark Lankfor 17:30hrs	crew. Graden w/Serrot told m	loyment of plastic on the SE corner of the cell. Serrot did not arrive this date. I le a small crew under a leader named Espacio would arrive late today and told Criss w/LRI the story and she scheduled her labor crew accordingly. I its on the Berm this date and found to be within the specified limits. Off site at
WERE PHOTOS TAKEN: Yes		
FIELD REPRESENTATIVE		DATE
REVIEWED BY	-	DATE



	DAILY CONST	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East Lined	Area Partial Closure	DATE: 8/29/98
PROJECT NO.: 40202-005.061		DAY S M T W TH F S
REPORT NO.: 50		
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		PCt, Lt wind 74
REPORT BY:Glenn Heath		TIME ARRIVED: 07:00 TIME DEPARTED: 15:00
	AVERAG	FIELD FORCE
CONTRACTOR LRI Serrot	PERSONNEL 4 4	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe
	V	SITORS
TIME NAME	REP	RESENTING REMARKS
Non-Conforming Materials or Work:		
Then containing materials of trenk		
crew members and performed repairs only on	Change Order or Claim: ests: Serrot performe 7:00 to observe the depl the SE comer that was site on Monday. Criss to	d repairs and tested patches this date. Maintained moisture on slopes and oyment of plastic on the SE comer of the cell. Serrot arrived thes date with 4 deployed on 8/22/98. They told us they will are leaving for California old her labor crew not to come in tomorrow and only two people will be in
WERE PHOTOS TAKEN: Yes FIELD REPRESENTATIVE		DATE
REVIEWED BY		DATE



	DAILY CONST	RUCTION REPORT		
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 8/30/98		
PROJECT NO.: 40202-005.061 REPORT NO.: 51		DAY S M	DAY X D D D D D	
CLIENT: LRI		WEATHER	TEMP.(°F)	
CONTRACTOR: LRI		PCt, Lt wind	74	
REPORT BY:Glenn Heath		TIME ARRIVED: 11:00	TIME DEPARTED: 11:30	
	AVERAG	SE FIELD FORCE		
CONTRACTOR LRI	PERSONNEL 2		ENT IN OPERATION D650 Dozers, 1 Trackhoe	
	1	/ISITORS		
TIME NAME	REI	PRESENTING	REMARKS	
Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficience Field Problems Which Could Result in Delay Tests Performed, Observations, Results, Re	r, Change Order or Claim		n Eastern end of North slope this date.	
CONSTRUCTION ACTIVITIES: Only was slope No other work performed this date. O	tered the East slopes and Off site at 11:30	the SE corner of cell. Also pus	hed Type B soil down the East end of th North	
WERE PHOTOS TAKEN: No				
FIELD REPRESENTATIVE		DATE		
REVIEWED BY		DATE		



		DAILY CONST	RUCTION RE	PORT
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure		DATE: 8/31/98		
PROJECT NO.: 40202-005.061 REPORT NO.: 52		DAY S	M T W TH F S	
CLIENT: LRI	2		WEATHE	
CONTRACTOR:	I RI		PCt, Lt wi	
REPORT BY:Gler			TIME ARRIVED: 0	6:30 TIME DEPARTED: 17:30
		AVERAG	E FIELD FORCE	
CC	NTRACTOR LRI Serrot	PERSONNEL 5 15	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe, & 1 Trackhoader 2 generators, 2 forklifts, welding equipt.	
		1	ASITORS	
TIME 07:30 08:30	NAME Kent Wiken Andy Comstock		PRESENTING EMCON lealth Dept.	REMARKS Site Visit Site Visit
Non-Conforming I	Materials or Work:			1-
Follow-Up of Prev	viously Reported Deficiencies	:		
Field Problems W	/hich Could Result in Delay, (Change Order or Claim		
	Observations, Results, Rete completed the Berm at North		ite and deployed FML	on East side of SE corner. LRI pushed soil down the
the cell. The meet the clay finished b on the North slope set it up and make After running the t	ting was held at 07:30hrs and by 11/2 weeks and the liner in e so he could keep from usin e a trial run on the drain rock	t the schedule was disc istalled. He also wanted g clay on it. Kent said h . Andy Comstock w/ Pi er const. Panels 46 thru	cussed for the week. Ji d to know if they could be would get with the H erce County Health De	nd to observe deployment of plastic on the SE corner of im Crandall said he was confident that we would have get the design changed to using GCL on the roadway lealth Dept. Kent brought a Washdot Permeometer to ept. was present and observed the proceedure, Also. date. I testsed the day this date on the Northern end of
WERE PHOTOS	TAKEN: yes			
FIELD REPRESE	ENTATIVE		DATE	
REVIEWED BY		DATE		



		DAILY CONST	RUCTION RE	PORT
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 9/1/98	
PROJECT NO.: 40202-005.061 REPORT NO.: 53		DAY S	DAY S M T W TH F S	
CLIENT: LRI			WEATH	ER TEMP.(°F)
CONTRACTOR:	LRI		PCt, Lt w	ind 86
REPORT BY:Gle	nn Heath		TIME ARRIVED: 0	6:30 TIME DEPARTED: 17:30
		AVERAG	E FIELD FORCE	
CC	NTRACTOR LRI Serrot	PERSONNEL 5 15	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe, & 1 Trackloader 2 generators, 2 forklifts, welding equipt	
		\ \	ISITORS	
TIME	NAME	REF	PRESENTING	REMARKS
13:00	Andy Comstock	Н	lealth Dept.	Site Visit
Non-Conforming	Materials or Work:			
Tests Performed, North end at storr CONSTRUCTION encountered but to more deployment	n inlet. NACTIVITIES: On site at the area was cleaned up with	ests: Serrot crew on s 06:00 hrs, to observe the out much delay. LRI we sws were picking rocks	ite and deployed FMI ne placement of panel orked on the Mid section on the North slope an	on mid section of the East slope. Lri building berm on s no 54 thru 60. Some trouble with the berm rocks was on of the East slope getting the Clay smooth rolled for d getting it ready for more clay placement.
WERE PHOTOS	TAKEN: yes			
FIELD REPRESE	NTATIVE		DATE	
REVIEWED BY		DATE		



	i	DAILY CONS	TRUCTION REPORT
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 9/2/98
PROJECT NO.: 40202-005.061			DAY S M T W TH F S
REPORT NO.: 54			
CLIENT: LRI			WEATHER TEMP.(°F)
CONTRACTOR: LRI			PCt, Lt wind 86
REPORT BY:Glenn Heath			TIME ARRIVED: 06:30 TIME DEPARTED: 17:30
		AVERA	GE FIELD FORCE
CONTRACTO LRI Serrot	OR	PERSONNEL 5 15	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe, & 1 Trackloader 2 generators, 2 forklifts, welding equipt.
			VISITORS
TIME	NAME	RE	PRESENTING REMARKS
13:00	Andy Comstock	,	Health Dept. Site Visit
Non-Conforming Materials of	or Work:		
Follow-Up of Previously Rep	onted Deficiencies		
Lollow-ob of Lievingsià izet	orted Deliciencies.		
Field Problems Which Could	d Result in Delay, C	hange Order or Clain	n;
Tests Performed, Observation the North slope.	ons, Results, Rete	sts: Serrot crew on s	site and deployed FML on mid section of the East slope and on top. Lri working
and the project was held up the Mid section of the East s on the North slope and getti material I took F/D tests on	approx. 1hr picking slope getting the Clang it ready for more it as they brought it	gup the loose rocks fr ay smooth rolled for n e clay placement. The up to grade. Clay pla	of panels no 61 thru 66. Some trouble with the berm rocks was encountered from the berm construction and from deployment of GCL panels. LRI worked on more deployment of FML tomorrow. Labor crews were picking rocks and trash towarea where the access road to a gas well was filled this date using type B accement on the North slope was begun this date on the East end of the North outh slope. Off site at 17:00hrs.
WERE PHOTOS TAKEN:	yes		
FIELD REPRESENTATIVE			DATE
REVIEWED BY			DATE



	DAILY CONST	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East Line	ed Area Partial Closure	DATE: 9/3/98
PROJECT NO.: 40202-005.061 REPORT NO.: 55		DAY S M T W TH F S
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		PCt, Lt wind 84
REPORT BY:Glenn Heath		TIME ARRIVED: 06:00 TIME DEPARTED: 17:30
	AVERAG	E FIELD FORCE
CONTRACTOR LRI Serrot	PERSONNEL 5 15	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe, & 1 Trackhoader 2 generators, 2 forklifts, welding equipt
•		VISITORS
TIME NAME	REF	PRESENTING REMARKS
Non-Conforming Materials or Work:		
causing problems with deployment. LRI place	r, Change Order or Claim etests: Serrot crew on ing clay on the North slop	site deploying FML on the East slope this date. Berm material was rocky e.
fell back and began performing repairs and time so Serrot used the time to play catchup day was spent on repairs, air testsing, and v	testing on the liner laid in . The clay placement on t	ope rolling and berm repair for FML deployment tomorrow. The Serrot crew the last few days. The subgrade was not ready for anymore deployment at this the North slope continued this date and was spread out to dry. Balance of the 7:00hrs.
WERE PHOTOS TAKEN: yes		
FIELD REPRESENTATIVE		DATE
REVIEWED BY		DATE



12	DAILY CONST	TRUCTION REPORT			
PROJECT: Hidden Valley Landfill, E	ast Lined Area Partial Closure	DATE: 9/4/98			
PROJECT NO.: 40202-005.061		DAY S M T W TH F S			
REPORT NO.: 56					
CLIENT: LRI		WEATHER TEMP.(°F)			
CONTRACTOR: LRI		PCt, Lt wind 84			
REPORT BY:Glenn Heath		TIME ARRIVED: 06:00 TIME DEPARTED: 17:30			
	AVERAG	BE FIELD FORCE			
CONTRACTOR LRI Serrot	PERSONNEL 5 15	EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe, & 1 Trackloader 2 generators, 2 forklifts, welding equipt.			
		VISITORS			
TIME NAM	E REF	PRESENTING REMARKS			
10:00 Dave Bo	osch H	dealth Dept. Site Visit			
Non-Conforming Materials or Work:					
,g					
Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Serrot crew on site deploying FML on the East slope this date. Berm material was rocky causing problems with deployment. LRI placing clay on the North slope. CONSTRUCTION ACTIVITIES: On site 06:00hrs to observe the deployment of GCL and FML on the East slope. The soil in the berm was rocky and was washed from watering to keep moisture content to an acceptable level. I had them patch the berm yesturday and they watered it late in the evening so we could deploy today. As the GCL was dragged across the down slope, it dislodged the rocks and we had to shut the GCL deployment down until the Rocks could be removed. The area precluding, was in good shape so Serrot began FML deployment on it until Jim's crew could remove the rocks and patch the deformations in grade. David Bosch arrived on site at approx. 10:00 hrs and saw the work on the berm. 3 panels were removed and subgrade was reworked by LRI crew plus approx. 1/2 of Serrot's crew. The GCL was replaced and the lining continued. Panels 67 thru 73 were installed this date. The Gas wells on the South slope are beginning to lay over it has been discussed whether the FML is pulling the wells down or if the FML is holding in heat causing the PVC pipe to loose it's yield strength or both. Criss w/ LRI has propped the well heads up using sand bags and 2X4's but this does not appear to be working. Off site at 17:00hrs.					
WERE PHOTOS TAKEN: y	es				
FIELD REPRESENTATIVE		DATE			
REVIEWED BY		DATE			



		DAILY CONST	RUCTION REP	ORT
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 9/5/98	
PROJECT NO.:	40202-005.061 57		DAY S	M T W TH F S
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR	: LRI		PCt, Lt wind	74
REPORT BY:GI	lenn Heath		TIME ARRIVED: 06:	00 TIME DEPARTED: 17:30
		AVERAG	E FIELD FORCE	
C	CONTRACTOR LRI Serrot	PERSONNEL 5 12	2 Jonn Deere D	QUIPMENT IN OPERATION 650 Dozers, 1 Trackhoe, & 1 Trackloader rators, 2 forklifts, welding equipt.
		V	ISITORS	
TIME 07:30 11:45	NAME Kent Wiken Dave Bosch		PRESENTING EMCON ealth Dept.	REMARKS Site Visit Site Visit
Non Conforming	g Materials or Work:			
Tests Performer on the lower slope CONSTRUCTION area. The berm them down and was placed past slope this date.	DN ACTIVITIES: On site 06: material was rocky toward the had Jim get his crew over to re the crown of the corner so the	sts: Serrot crew on sithis date. Others to observe the definition of the slope all of the rocks as FML would "shingle" in of the North slope and	e deploying FML on the eployment of GCL and F e was almost 2:1 from t and we added somemore acase rain should hit. The found to be passing as se	East side of the NE corner of the site. LRI placed clay ML on the East side of the NE corner of the Closure op to bottom causing the rocks to dislodge. I shut e sand to the suface to help pad the GCL. The FML he Fml was placed and welded to cover all of the East some of this area was to be covered up this date. The case rain hit. Off site at 17:30hrs.
WERE PHOTO	S TAKEN: yes			
FIELD REPRES	SENTATIVE		DATE	
REVIEWED BY		DATE		



		DAILY CONS	TRUCTION REF	PORT		
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 9/6/98	DATE: 9/6/98		
PROJECT NO.:			DAY s	M T W TH F	S	
	REPORT NO.: 58					
CLIENT: LRI			WEATHE	R TEMP.((°F)	
CONTRACTOR:	LRI		PCt, Lt wir			
REPORT BY:Gle			TIME ARRIVED:	TIME DEPARTED:		
		AVERA	GE FIELD FORCE			
CONTRACTOR PERSONNEL LRI 1		The state of the s	E	EQUIPMENT IN OPERATION 1 John Deere 650g Dozer		
			VISITORS			
TIME	NAME	RE	PRESENTING	REMARKS		
					*	
Tests Performed,		ests: 1 Dozer backdr	agging clay and shaping mainly shaping the clay	g trenches along the upper road on No		
WERE PHOTOS	TAKEN: no					
FIELD REPRESE	ENTATIVE	7	DATE			
REVIEWED BY			DATE			



		DAILY CONS	TRUCTION RE	PORT
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 9/8/98	
PROJECT NO.: 40202-005.061 REPORT NO.: 59		DAY S WEATHE	M T W TH F S TEMP.(°F)	
CLIENT: LRI	I PI		PCt, Lt w	
REPORT BY:Gle			TIME ARRIVED: 0	
REFORT BILOR	ANT FOCAL	AVERA	GE FIELD FORCE	
CONTRACTOR PERSONNEL LRI 5 Serrot 12		EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe, & 1 Trackloader 2 generators, 2 forklifts, welding equipt.		
			VISITORS	
TIME 07:30 11:45	NAME Kent Wiken Dave Bosch		PRESENTING EMCON Health Dept.	REMARKS Site Visit Site Visit
Non-Conforming	Materials or Work:			
Tests Performed meeting was held construction and repairs then tomorrow and will obtained approvalso shipped DS-observed the atte	I and LRI working North slope N ACTIVITIES: On site 06: attended the weekly site mee Il be pushing with a small wide al this date from the Health De 26 thru DS-35 this date alone	ests: Serrot crew or Ohrs to observe the pting. At the meeting, Ji a pad dozer. He told K apt. I shipped 2 Perm to with Ds-11A and DS-10 on the culvert at NE of the sets.	a site Performing repair atching and Airtesting im Crandall discussed the ent he would like to sking ests on the type A subjusted in the 11B. These were also corner of closure. This corner of closure.	of the liner placed on Saterday 9/5/98. Weekly site of the liner placed on Saterday. I logged in all air tests the schedule and stated he will begin the rock placement p the clay and use GCL on the roadway and Kent grade and 1 perm from the soil on the North slope. We patched this date. Dave Bosch was on site and did not work and was abandoned this date. Rain was in d up.
WERE PHOTOS	S TAKEN: yes			
FIELD REPRES	ENTATIVE		DATE	
REVIEWED BY		DATE		



		DAILY CONST	RUCTION REPO	RT
PROJECT: Hide	den Valley Landfill, East Lined	Area Partial Closure	DATE: 9/9/98	
PROJECT NO.: 40202-005.061 REPORT NO.: 60		DAY S M T W TH F S		
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR	: LRI		PCt, Lt wind	74
REPORT BY:GI	enn Heath		TIME ARRIVED: 06:00	TIME DEPARTED: 17:30
		AVERAG	E FIELD FORCE	
С	ONTRACTOR LRI Serrot	PERSONNEL 5 12	2 Jonn Deere D65	IPMENT IN OPERATION 0 Dozers, 1 Trackhoe, & 1 Trackloader tors, 2 forklifts, welding equipt.
		V	ISITORS	
TIME	NAME	REF	PRESENTING	REMARKS
11:45	Dave Bosch	H	lealth Dept.	Site Visit
Non-Conforming	Materials or Work:			
Tests Performed and Booted several B	eral Gas wells. LRI processed ent. ON ACTIVITIES: On site 06:0 mentary tests were sampled, 1 orn the original test, in the direct. We sampled again, 35ft from ap the whole seam and it was was performed late in the day, se A side. and appeared to cleate to the begining of the seam. Tom FML. A layer of FML was	ests: Serrot crew on sold clay on Northwest slot of the control of	pairs and Vacuum testing and labled 11A and 11B suited in test 11A passing plobing the sample no. 11B2 sted this date. This was the imperature. The area we to the trench. Fearing the wo at the NE comer of the cloof the trench then a layer of 3.5' was doubled over me	on Northeast corner, SE comer (destruct no. 11), in along the upper and perimeter roads in prep for on them. Detruct no. 11 Failed the 3rd party testing (Test A being the up side of the weld and B being over specifications and 11B failing with three out of 5 and sent it in this date. Ricardo w/Serrot decided a last seam weded on 8/22/98 by this machine and ested between DS-11B and 11B2 every 5ft. had a rst, it was decided to cap all the way thru the trench sure was completed this date and was banded with a fGCL was then placed then the FML and Boot aking it 3" wide and slipped over the pipe trimming it off.
WERE PHOTOS	S TAKEN: yes			
FIELD REPRES	ENTATIVE	_	DATE	
REVIEWED BY		DATE		



		DAILY CONST	RUCTION REI	PORT
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 9/10/98	
PROJECT NO.: 40202-005.061 REPORT NO.: 61			DAY s	M T W TH F S
CLIENT: LRI			WEATHE	
CONTRACTOR: L			PCt, Lt wir	
REPORT BY:Glenn	Heath		TIME ARRIVED: 06	6:00 TIME DEPARTED: 17:30
		AVERAC	SE FIELD FORCE	
	TRACTOR LRI Serrot	PERSONNEL 5 12	2 Jonn Deere I	QUIPMENT IN OPERATION D650 Dozers, 1 Trackhoe, & 1 Trackloader erators, 2 forklifts, welding equipt.
		1	/ISITORS	
TIME	NAME	REI	PRESENTING	REMARKS
11:45	Dave Bosch	<i>+</i>	dealth Dept.	Site Visit
Tests Performed, Cand Booted severa plastic deployment. CONSTRUCTION on 9/4/98. Suplimer the down side from failing to be FTB. Wat this point, to cap technician. and was failing weld on the Aand from DS-11 to work. A flap, at my part of the Rip-Rap Drain rock continue.	ACTIVITIES: On site 06 stary tests were sampled, the original test, in the direct esampled again, 35ft from the whole seam and it was performed late in the day a side, and appeared to detect the begining of the seam. Trequest, was installed about a real and will have only it's	ests: Serrot crew on d clay on Northwest si coohrs to observe the rest of ft each side on 9/8/9 ection welded.). They remark the original sample, is performed and Vac. to with a lower ambient to ear up just as it reaches on the pump over and on each side of sown run-off, as it is flat at West of the conveyor	site and performed repope and sanded the trepairs and Vacuum test 8 and labled 11A and 1 sulted in test 11A passiabling the sample no. 1 seted this date. This was emperature. The area we the trench. Fearing the station at SE corner of the station to prevent at and there is only mininthis date. by the end of	rairs on Northeast corner, SE corner (destruct no. 11), ench along the upper and perimeter roads in prep for ing on them. Detruct no. 11 Failed the 3rd party testing 1B (Test A being the up side of the weld and B being 1B (Test A being the up side of the weld and B being 1B per specifications and 11B failing with three out of 5 1B2 and sent it in this date. Ricardo w/Serrot decided is the last seam weded on 8/22/98 by this machine and we tested between DS-11B and 11B2 every 5ft. had a reworst, it was decided to cap all the way thru the trench site was installed this date, also. I took pictures of the any run-off from entering this area. This will become a nat clearance between the pump controls and the liner. It the day there was enough to warrant being pushed by iff site at 17:00hrs.
WERE PHOTOS T	,		DATE	
REVIEWED BY			DATE	



		DAILY CONST	RUCTION REPORT	
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 9/11/98	
PROJECT NO.: 40202-005.061			DAY S M T W TH F S	
REPORT NO.: 62				
CLIENT: LRI			WEATHER TEMP.(°F)	
CONTRACTOR:	LRI		PCt, Lt wind 74	
REPORT BY:Gler	n Heath		TIME ARRIVED: 06:00 TIME DEPARTED: 17:30	
		AVERAG	E FIELD FORCE	
CO	CONTRACTOR PERSONNEL LRI 5 Serrot 12		EQUIPMENT IN OPERATION 2 Jonn Deere D650 Dozers, 1 Trackhoe, & 1 Trackloader 2 generators, 2 forklifts, welding equipt.	
		V	risitors	
TIME 07:30 14:00	TIME NAME REF 07:30 Kent Wtken		PRESENTING REMARKS EMCON Site Visit ealth Dept. Site Visit	
Non-Conforming N	Naterials or Work:			
·	iously Reported Deficiencie			
	hich Could Result in Delay,			
Tests Performed, Northwest slope as	Observations, Results, Retendence of the sanded the trench along	ests: Serrot crew on sit the upper and perimete	te and deployed FML on Northeast corner of area. LRI pushed soil dow r roads in prep for plastic deployment.	n the
area. the inlet and was placed around smaller than the in to answer several of the roadway on at the specification on the liner without then push the ston way across, and k some stability to it, looked at the sand	surrounding berm were sard all of the gas wells and the let then slid down the inlet a questions that came up, an the North slope to allow rens, Kent said he saw no prot going down the slope. We e down, over the 1ft of aire eep the stone from being pig but Kent said it will depend used on the road under the	nded for the GCL deploy e condensate collection s as a tight seal. Bentonite d to make decisions on t direction of the panels to blem with doing it that we decided to start on the ady installed stone, to bu ushed downward on top d on the perm test results e GCL and how it perform	al make ready for plastic deployment on the lower NE comer of the closurment as was the low water crossing and the trenches. GCL and Bentonit sump riser. The first piece of GCL was placed around the inlet and cut slig was then placed around the edges approx 1/2" thick. Kent Wiken was or them. 1) Serrot wanted to have a seam separating the panels at the centralign with the lower slope. After observing the area and the idea and looi ay. 2) We got with Jim Crandall and worked out a way to place the drain West edge of the South slope and push across horizontally as far as pracuild up a 3ft road to deploy stone horizonally again. This could be done all of the FML. 3) We discussed the mixing of sand with the stone to help present it was critical that they exceed the specified requirements. Kent also med after compaction. He said he was satisfied as long as it did not rut were. No stone was placed this date. I left site at 17:30hrs.	e ghtly site erline king rock stical, the ovide
WERE PHOTOS	TAKEN: yes			
FIELD REPRESE	NTATIVE		DATE	
REVIEWED BY			DATE	



	DAILY CONST	RUCTION REPORT	•		
PROJECT: Hidden Valley Landfill, East Line	d Area Partial Closure	DATE: 9/12/98			
PROJECT NO.: 40202-005.061		DAY S M	T W TH F S		
REPORT NO.: 63					
CLIENT: LRI		WEATHER	TEMP.(°F)		
CONTRACTOR: LRI		PCt, Lt wind	75		
REPORT BY:Glenn Heath		TIME ARRIVED: 06:00	TIME DEPARTED: 17:30		
	AVERA	SE FIELD FORCE			
CONTRACTOR LRI Serrot	PERSONNEL 5 12	2 Jonn Deere D650 Do	ENT IN OPERATION vzers, 1 Trackhoe, & 1 Trackloader 2 forklifts, welding equipt.		
		/ISITORS			
TIME NAME	RE	PRESENTING	REMARKS		
Non-Conforming Materials or Work:		1			
Follow-Up of Previously Reported Deficiencie	oc.				
, concern of our restriction, respective Demandance					
Field Problems Which Could Result in Delay	Change Order or Claim				
Tield Troblems willon Sould Result in Delay	onlinge Order of Oldin	<u>.</u>			
Tests Performed, Observations, Results, Reat the west end of site.	ests: Serrot crew on si	te and deployed FML on Northe	east corner of area. LRI pushed rock on the leg		
CONSTRUCTION ACTIVITIES: On site at 06:00 to observe the deployment of FML on the East side of the North slope. The GCL was placed on the trenches and the FML was deployed. Panels 97 thru 105 were placed this date. The subgrade was reworked on the upper slope as it seemed to hydrate itself until it was pumping under foot traffic. I had the dirt crew rip it up to let it dry out some and it can be rerolled tomorrow or Monday. Some rock was pushed on the leg at the west edge of site at south end. Gas built up under the liner at the top of the cell by the end of the day. Recardo noticed also and I told him we will have to do something about it as it will become a problem. Off site at 17:30hrs.					
WERE PHOTOS TAKEN: yes					
FIELD REPRESENTATIVE		DATE			
REVIEWED BY		DATE			



		DAILY CONST	RUCTION REPORT	
PROJECT: Hidden	Valley Landfill, East Line	ed Area Partial Closure	DATE: 9/13/98	
PROJECT NO.: 40			SM	T W TH F S
REPORT NO.: 64			DAY	
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR: LI	RI		PCt, Lt wind	75
REPORT BY:Glenn	Heath		TIME ARRIVED: 06:00	TIME DEPARTED: 17:30
		AVERAG	E FIELD FORCE	
	TRACTOR LRI Serrot	PERSONNEL 5 12	2 Jonn Deere D650 Do	ENT IN OPERATION ozers, 1 Trackhoe, & 1 Trackloader 2 forklifts, welding equipt.
		ν	ISITORS	
TIME	NAME	REP	RESENTING	REMARKS
14:00	Dave Bosch	H	ealth Dept.	Site Visit
Tests Performed, O at the west end of si CONSTRUCTION A the trenches and the seemed too wet, I hedge of site at south and Jim Crandall bu	ite. ACTIVITIES: On site at EML was deployed. Par ad the dirt crew leave it to n end. At 15:00 hrs Ricaro	tests: Serrot crew on situation of the dependent of the serve the dependent of the serve that the serve the dependent of the serve that the serve the serve the serve that	e and deployed FML on North oloyment of FML on the East s aced this date. The subgrade of it can be rerolled tomorrow. So d me that we only had 2.5 rolks	east comer of area. LRI pushed rock on the legicle of the North slope. The GCL was placed or was not reworked on the upper slope as it tome rock was pushed on the leg at the west of FML left on site. I started to call Kent Wike k some F/D tests on the lower section of the
WERE PHOTOS TA			DATE	
REVIEWED BY			DATE	



		DAILY CONST	RUCTION REPORT	•
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure			DATE: 9/14/98	100
PROJECT NO.: 40202-005.061 REPORT NO.: 65		DAY S M	T W TH F S	
CLIENT: LRI	1.50		WEATHER	TEMP.(°F)
CONTRACTOR:			PCt, Lt wind	75 TIME DEPARTED: 17:30
REPORT BY:Gler	nn rieath	A) (EDAO		TIME DEPARTED. 17:30
			E FIELD FORCE	
CO	NTRACTOR LRI Serrot	PERSONNEL 5 12	2 Jonn Deere D650 Do	ENT IN OPERATION zers, 1 Trackhoe, & 1 Trackloader 2 forklifts, welding equipt.
		V	ISITORS	
TIME 07:30 14:00	NAME Kent WikenN Dave Bosch		RESENTING EMCON ealth Dept.	REMARKS Site Visit Site Visit
Non-Conforming N	Materials or Work			
Tests Performed, at the west end of CONSTRUCTION informed Jim Cran the shortage and it placement. We dishorizontally across from the West edg sand subgrade. La Bosch was on site the direction of the pocket at the top o suction line from the	ACTIVITIES: On site at dall that the FML was running was disscussed in the measurement of root the berm then upward. The le. Kent and I looked at the ter in the day, Jim told me to and looked at the GCL. pla flow. I, in the presence of the slope at NE corner was le flair under the liner to pull	ests: Serrot crew on site 06:00 to observe the dep ng short and he said he eting. I also asked Kent i ock and told Jim Crandal en a new road could be p rock operation on the leg they were having trouble ced in the lower trench of David told Ricardo wSe as getting too large and v	e and deployed FML on Norther ployment of FML on the North secould get more. When Kent Wi if I could get some help on the p I that the rock can be brought d laced over the foot of stone and g at SW section of the site, and getting the FML and checking in the north end The material was beginning to creep down sle	ast corner of area. LRI pushed rock on the leg slope and the reworking of subgrades. I ken Arrived for the weekly site, I told him of project as I do not have time to watch the rock own the outside of the SW slope and placed d bought across and up as they moved away the plastic installation, as well as the roadway into getting plastic from other suppliers. Dave was shingled backwards due to the change in the would 1st thing in the morning. The gas ope. I told Jim that maybe we could place a
WERE PHOTOS	TAKEN: yes			
FIELD REPRESE	NTATIVE		DATE	
REVIEWED BY			DATE	



		DAILY CONST	RUCTION REPO	RT
PROJECT: Hide	den Valley Landfill, East Lined	Area Partial Closure	DATE: 9/15/98	
PROJECT NO.:	40202-005.061		DAY S M	T W TH F S
CLIENT: LRI			WEATHER	TEMP_(°F)
CONTRACTOR:	LRI		PCt, Lt wind	75
REPORT BY:Gle	enn Heath		TIME ARRIVED: 06:00	TIME DEPARTED: 17:30
		AVERAG	E FIELD FORCE	
Co	ONTRACTOR LRI Serrot	PERSONNEL 5 12	2 Jonn Deere D65	PMENT IN OPERATION Dozers, 1 Trackhoe, & 1 Trackloader ors, 2 forklifts, welding equipt.
		V	ISITORS	
TIME	NAME	REF	RESENTING	REMARKS
11:00	Dave Bosch	н	ealth Dept.	Site Visit
N. O. f.	Materials or Work:			
CONSTRUCTIO will be getting the it could be rework operator and he of fix it that way. It r Bosch arrived an He also said the and showed Dav saw the laborer v material as we di not deployed on it and told me he w readings on the of	N ACTIVITIES: On site at 0 e 7 rolls of plastic we need to fiked. He notified me and I told said it would be better to have needed to be excavated out and found the soft spot and poin GCL was still lapped backward. He wanted it changed. I we working on the subgrade and to did not have time to work it by hit this date. Panels 126 thru 13 will have help here in the mornings under the liner and around ethane. I told Jim that the suct	e had formed and had 6:00 to observe the de- inish on Thursday. Rec- Jim Crandall about it al- it done by hand. I told it dreplaced. He put one ted it out to me. I told h ds and Serrot had alrea- ent down and performe- told Tim to get the track and. It was dipped out the were placed, this dat ng from the Portland of the top of the cell. It ar	ployment of FML on the No ardo noticed the subgrade and he said to get with the daim it was all the way down all laborer with a shovel on it im I was aware of it and way ady deployed on it. I looked do the task, with the help of loader over there and remand replaced with drier mander. LRI was pushing rock or fice, I asked him if I could go fived this date and I took re	ower section of the north slope, only a few panels trock on the North slope. In slope, lower section. Jim Crandall told me they had become soft and stopped the deployment until ozer operator about it. I told Tim, the dozer to the original subgrade and it would take days to While I was trying to discuss this with him, David is trying to get it fixed. I don't think he believed me, in the specs and nothing was mentioned about it one of the Serrot employees. Jim drove by and ove the wet clay and replace it with some dry terial this date and I took F/D tests on it. FML was the Leg at the SW section of the cell. Kent called let the Lanteck gas meter on the site to check adings finding the area safe and the gas under the tof the gas and help feed the flare at the same
WERE PHOTOS	S TAKEN: yes	-11-3-		
FIELD REPRES	ENTATIVE		DATE	
REVIEWED BY			DATE	



		DAILY CONST	RUCTION REPORT	
PROJECT: Hidde	en Valley Landfill, East Lined	Area Partial Closure	DATE: 9/16/98	
PROJECT NO.: 4	10202-005.061		DAY S M	T W TH F S
REPORT NO.: 67	7			
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR: I	LRI		PCt, Lt wind	75
REPORT BY:Glen	n Heath		TIME ARRIVED: 06:00	TIME DEPARTED: 17:30
		AVERAG	E FIELD FORCE	
COI	NTRACTOR LRI Serrot	PERSONNEL 5 12	2 Jonn Deere D650 Do	ENT IN OPERATION zzers, 1 Trackhoe, & 1 Trackloader 2 forklifts, welding equipt.
		,	/ISITORS	137-12-7
TIME	NAME	REF	PRESENTING	REMARKS
11:00	Dave Bosch	þ.	leafth Dept.	Site Visit
Non-Conforming M	Naterials or Mork:			
14011 Comorning iv	raterials of work.			
Tests Performed, and the South slop CONSTRUCTION FML. A hole was conticed that there was down ward from at site to do it yet. (The to the FML work are with the rock to maperm results and it	ACTIVITIES: On site at 0 aut in the liner At NE comer a was no LRI employee walkin bove. I told Jim this was not nis was at approx. 6:30hrs.) area and marked the Destructure ake it more stable. Kent confictivas nowhere near the requirement.	sts: Serrot crew on s 16:00 to observe the re at the top to place a var- ig the wrinkles on the F what we agreed on an He also said he was ju- ts so we could test the tacted me and told me itred 2cm/sec. Degan S	pairs and the testing of the work cours have from the flair to colle ML around the rock placement. If the needed somebody walking ist getting rock over to the bern m today and get them to the lab the was concerned with the perishort was on site and he began	airtests this date. Lri Placing rock on the Leg of performed on previous days installation of ext the built up gas. This appeared to work. I and the rock was being placed at an angle wrinkles. He said he did not have anyone on and would talk to his guys about it. I returned by Jim informed me that he was mixing sand metest results. I told him I am getting very low working on the problem as well as the pushing look at it also. WE left site at 18:00hrs.
WERE PHOTOS	TAKEN: yes			
FIELD REPRESE	NTATIVE		DATE	
REVIEWED BY			DATE	



		DAILY CONST	RUCTION REPORT			
PROJECT: Hidd	en Valley Landfill, East Lined	Area Partial Closure	DATE: 9/17/98			
PROJECT NO.:	40202-005.061		DAY S M	T W TH F S		
REPORT NO.: 6	8					
CLIENT: LRt			WEATHER	TEMP.(°F)		
CONTRACTOR:	LRI		Cloudy, Rain	65		
REPORT BY:Gle	nn Heath		TIME ARRIVED: 06:30	TIME DEPARTED: 17:30		
		AVERAG	E FIELD FORCE			
CC	ONTRACTOR LRI Serrot	PERSONNEL 5 15	2 Jonn Deere D650 Do	ENT IN OPERATION zers, 1 Trackhoe, & 1 Trackloader 2 forklifts, welding equipt.		
		ν	ISITORS			
TIME	NAME	REP	PRESENTING	REMARKS		
09:00 15;15	David Bosch David Bosch		ealth Dept. ealth Dept.	Site Visit Site Visit		
Non-Conforming I	Materials or Work:					
Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Rec'd 8 rolls of FML. Serrot deployed liner, LRI placed rock on the South slope. CONSTRUCTION ACTIVITIES: On site at 06:00 hrs to observed the deployment of FML on the North slope. The upper panels were placed and welded then the lower slopes began. Serrot had 1 panel deployed and ready to weld and was in the motion of deploying another when a storm came thru blowing the panel out of their control. It picked up the NW corner of the plastic at the top of the cell and got air under if almost flipping a generator over. Serrot anchored the plastic where it was and straightened the panel blown from them as they were deploying it and left if as it was too welt to walk on and they would destroy the subgrade surface. No more work could be performed as it was too slippery to walk on the clay. Serrot left site at 15:30 hrs. Degan Short and i worked on the rock for the balance of the day to try and get the perm tests to reach a consistancy. Off site at 17:00hrs.						
WERE PHOTOS	TAKEN: yes					
FIELD REPRESE	NTATIVE		DATE			
REVIEWED BY			DATE			



		DAILY CONST	RUCTION REPO	RT
PROJECT: Hidde	n Valley Landfill, East Line	d Area Partial Closure	DATE: 9/18/98	
PROJECT NO.: 4	0202-005.061		DAY S M	T W TH F S
REPORT NO.: 69				
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR: L	LRI		Cloudy, Lt. Wind	64
REPORT BY:Glen	n Heath		TIME ARRIVED: 06:30	TIME DEPARTED: 17:30
		AVERAG	E FIELD FORCE	
COI	NTRACTOR LRI Serrot	PERSONNEL 5 15	2 Jonn Deere D650	PMENT IN OPERATION Dozers, 1 Trackhoe, & 1 Trackloader ors, 2 forklifts, welding equipt.
		v	ISITORS	
TIME	NAME		RESENTING	REMARKS
08:00 11:00	Kent Wiken David Bosch		EMCON ealth Dept.	Drainage Design Change Site Visit
Non-Conforming M	Naterials or Work			
Tests Performed, repairs. LRI pushed CONSTRUCTION of the cell. This was alone to permit dry testing. I observed plan. Once again were not being han pulled the FML bac min. I spent most ocame up with a design with Daenough to displace	ACTIVITIES: On site as s performed by pulling the ring of the surface and no comost of the day and watch we talked with Jim Crandall added properly. David Boscok into place earlier. I agree of the afternoon standing grising using drainage pipe exaud Bosch while he was standing grands because of the property. It appeared to have almost	tests: Serrot straitened worked on the t 06:00 hrs to observed the plastic back up the slope listurbance of the surface about the delivery and phe was on site and also obed as we all thought it wo ward and watching the opyery 100ft to help carry of ill there. A wrinkle was for the been covered up before	d out the wind blown mate ne re-placement of the disp by hand, and needed no se finish on the subgrade. Se s Kent and Degan worked of ushing of the rock as it was poserved this at the same time uld be a big task to perform eration, leaving only to ship ff the water and Kent made	rial on top of the cell and performed airtests and laced FML at the NW corner of the cell at the top pecial equipt to pull it. The lower slope was left root spent the balance of the day patching and on testing the rock and redesigning the drainage not being installed as per agreement and wrinkles ne. David made a comment on how easily Serrot in this and it was done quickly and easilyin about 20 more destructs out to the lab. Kent and Degan a drawing to lay out the pipe by. He discussed the it above the berm that was too tall and not wide up for approx. 10ft and it only got worse. I told the at 17:30hrs.
WERE PHOTOS 1	TAKEN: yes			
FIELD REPRESENTATIVE			DATE	
REVIEWED BY				



		DAILY CONST	RUCTION REF	PORT	
PROJECT: Hidde	PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure				
PROJECT NO.: 4	0202-005.061		DAY S	М	T W TH F S
REPORT NO.: 70					X
CLIENT: LRI			WEATHE	R	TEMP.(°F)
CONTRACTOR: I	-RI		PCt, Lt win	nd	77
REPORT BY:Glen	n Heath		TIME ARRIVED: 06	5:30	TIME DEPARTED: 17:30
		AVERA	SE FIELD FORCE		
CONTRACTOR PERSONNEL LRI 2			E		ENT IN OPERATION 1 Trackhoe
			/ISITORS		
TIME 13:30 13:30	NAME Dave Bosch Garren		PRESENTING Health Dept. DOE		REMARKS Site Visit Site Visit
Non-Conforming M	aterials or Work:				
	ously Reported Deficiencies				
Tests Performed, C	Observations, Results, Rete	sts:Placing Drain rock o	n East Slope below berr	m, And or	n the North slope @ perimeter roadway
was on site when I the day. The rig was placed in windrows the wrinkles upward person walking the on site and looked a comments. The doz working hours are 0	arrived and setting up. They setup at the NW corner of running up and down the sd. This made the grade hardwrinkles and told him to let at the operation. We were a er operation on the East slc 16;00 to 12;00hrs in this and	y began placement at ap the lower slope where a lope. I told the operator if to see from his view po the operator see it as t the time moving to the ope was moving slowly a ea and should be completed.	prox. 07:30. The placen a stockpile was placed yet to change and place the piint so I fasioned a gaug was pushing the wrinkl NE corner and they just and shut down at 12:hrs eted tomorrow. This will	nent was esturday. material le stick wi les. At ap looked al due to wr complete	slope using a concrete conveyor truck. The rig slow in the beginning but picked up throughout The materia; I was belted over the trench and from the bottom up in an arc fasion to push ith orange pain on a lathe and gave it to the prox. 13:30hrs Dave Bosch and Garren arrived the placed material and left.with no inkles which can not be displaced. The normal the rock placement below the berm. I worked ampled yesturday.Off site at 17:00hrs.
WERE PHOTOS	TAKEN: Yes				
FIELD REPRESEN	NTATIVE	-	DATE		
REVIEWED BY			DATE		



	DAILY CONST	RUCTION REPORT		
PROJECT: Hidden Valley Landfill, East Lined	Area Partial Closure	DATE: 9/30/98		
PROJECT NO.: 40202-005.061		DAY S M T W TH F S		
REPORT NO.: 71				
CLIENT: LRI		WEATHER TEMP.(°F)		
CONTRACTOR: LRI		PCt, Lt wind 75		
REPORT BY:Glenn Heath		TIME ARRIVED: 06:30 TIME DEPARTED: 16:30		
	AVERAG	GE FIELD FORCE		
CONTRACTOR LRI Serrot	PERSONNEL 2 5	EQUIPMENT IN OPERATION 1 Trackhoe None		
		/ISITORS		
TIME NAME	REI	PRESENTING REMARKS		
Non-Conforming Materials or Work:		1		
Follow-Up of Previously Reported Deficiencies Field Problems Which Could Result in Delay,				
Tests Performed, Observations, Results, Rete the North slope from West end of access road	ests:Completed Drain Ro lway upward to almost h	ock placement on East slope below berm. Concrete conver truck placing rock on alf way up		
truck was on the access roadway on West end berm was completed this date and fine grading arrived at approx. 08:00hrs this morning but di and no sewing machine was on site. They recome I need to document the installation of the n	d and placed rock up the g was performed on all o d not have any equipt or eived a forklift and a gen ine as it is crutial that it i	ement of drain rock on the North slope using a concrete conveyor truck. The slope not quite half way. The drain rock placement on the East slope below the fithe previously installed rock above and below the berm. Part of a Serrot crew is site and was not able to perform any work as they will have to sew the fabric erator from the rental place this date. Kent Wiken contacted me and informed fall at a 5% slope. He also told me the wrinkle problem, on the East slope center as it may not be that bad. I ran gradations on the drain rock and a perm test		
WERE PHOTOS TAKEN: No				
FIELD REPRESENTATIVE		DATE		
REVIEWED BY		DATE		



	DAILY CONST	RUCTION REPORT
PROJECT: Hidden Valley pandiii East Lii	ned Area Partial Closure	DATE: 10/1/98
PROJECT NO.: 40202-005.061		DAY S M T W TH F S
REPORT NO.: 72		
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		PCt, Lt wind 75
REPORT BY:Glenn Heath		TIME ARRIVED: 06:30 TIME DEPARTED: 16:30
	AVERAG	SE FIELD FORCE
CONTRACTOR LRI Serrot	PERSONNEL 2 5	EQUIPMENT IN OPERATION 1 Trackhoe None
		/ISITORS
TIME NAME	REF	PRESENTING REMARKS
Non-Conforming Materials or Work:		
Follow-Up of Previously Reported Deficience	oies:	
Field Problems Which Could Result in Dela	ay, Change Order or Claim:	
Tests Performed, Observations, Results, R the North slope from West end of access re	tetests:Completed Drain Ro padway upward to almost ha	ick placement on East slope below berm. Concrete conver truck placing rock on alf way up
truck was on the access roadway on East e	end and placed rock up the s t slope below the berm was	ement of drain rock on the North slope using the concrete conveyor truck. The slope above the berm to the access roadway. The hole in the liner cut at the repaired this date. Part of a Serrot crew installed geotextile over the South t some this date.
WERE PHOTOS TAKEN: No		
FIELD REPRESENTATIVE		DATE
REVIEWED BY		DATE



PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure PROJECT NO.: 40202-005.061 REPORT NO.: 73 CLIENT: LRI CONTRACTOR: LRI REPORT BY:Glenn Heath AVERAGE FIELD FORCE CONTRACTOR LRI Serrot VISITORS Name Name Name Non-Conforming Materials or Work:	P.(°F) 75 :30
PROJECT NO.: 40202-005.061 REPORT NO.: 73	P.(°F) 75 :30
CLIENT: LRI CONTRACTOR: LRI REPORT BY:Glenn Heath CONTRACTOR LRI Serrot VISITORS REPORT NO.: 73 WEATHER PCt, Lt wind TEMP PCt, Lt wind TIME ARRIVED: 06:30 TIME DEPARTED: 16:3 AVERAGE FIELD FORCE EQUIPMENT IN OPERATION 1 Trackhoe None VISITORS TIME NAME REPRESENTING REMARKS	P.(°F) 75 :30
CLIENT: LRI CONTRACTOR: LRI PCt, Lt wind TS REPORT BY:Glenn Heath TIME ARRIVED: 06:30 TIME DEPARTED: 16:3 AVERAGE FIELD FORCE CONTRACTOR LRI Serrot PERSONNEL 2 1 Trackhoe None VISITORS TIME NAME REPRESENTING REMARKS	P.(°F) 75 :30
REPORT BY:Glenn Heath TIME ARRIVED: 06:30 TIME DEPARTED: 16:3 AVERAGE FIELD FORCE CONTRACTOR LRI Serrot VISITORS TIME NAME REPRESENTING TIME ARRIVED: 06:30 TIME DEPARTED: 16:3 EQUIPMENT IN OPERATION 1 Trackhoe None REMARKS	:30
AVERAGE FIELD FORCE CONTRACTOR PERSONNEL 2 1 Trackhoe None VISITORS TIME NAME REPRESENTING REMARKS	
CONTRACTOR LRI Serrot VISITORS TIME NAME PERSONNEL 2 5 VISITORS REPRESENTING REMARKS	
LRI 2 1 Trackhoe None VISITORS TIME NAME REPRESENTING REMARKS	
TIME NAME REPRESENTING REMARKS	
Non-Conforming Materials or Work:	
Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim:	
Tests Performed, Observations, Results, Retests: Serrot installing geotextile and Lri installing drainrock on the North slope.	
CONSTRUCTION ACTIVITIES: On Site at 06:30 to Observe the placement of drain rock on the North slope using the concrete of truck was on the access roadway on West end and placed rock up the slope above the roadway. Serrot crew installed geotextile ov this date and seamed by sewing all joints. I worked on liner report some this date. Off site at 16:30hrs.	conveyor truck. The over the East slope
WERE PHOTOS TAKEN: No	
FIELD REPRESENTATIVE DATE	
REVIEWED BY DATE	



	DAILY CONST	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East Li	ned Area Partial Closure	DATE: 10/3/98
PROJECT NO.: 40202-005.061		DAY S M T W TH F S
REPORT NO.: 74		
CLIENT: LRI		WEATHER TEMP.(°F)
CONTRACTOR: LRI		Cloudy, Drizzle 58
REPORT BY:Glenn Heath		TIME ARRIVED: 06:30 TIME DEPARTED: 16:30
	AVERAG	GE FIELD FORCE
CONTRACTOR PERSONNEL LRI 2 Serrot 5		EQUIPMENT IN OPERATION 1 Trackhoe None
		VISITORS
TIME NAME	REI	PRESENTING REMARKS
Non-Conforming Materials or Work:		
CONSTRUCTION ACTIVITIES: On Site a truck was on the access roadway on West center section this date and seamed by sev topsoil would get under the material. I work	ay, Change Order or Claim: Letests:Serrot installing geo t 06:30 to Observe the place end and placed rock up the ving all joints. I had them se	textile on East slope and LRI placing drain rock on the North slope. erment of drain rock on the North slope using the concrete conveyor truck. The slope above the roadway. Serrot crew installed geotextile over the East slope, all the textile to the bottom of the berm using the Leister as I was afraid the
WERE PHOTOS TAKEN: No		
FIELD REPRESENTATIVE		DATE
REVIEWED BY	-	DATE



		DAILY CONST	RUCTION REP	PORT
PROJECT: Hidden Vall	ey Landfill, East Lined	Area Partial Closure	DATE: 10/4/98	
PROJECT NO.: 40202-			DAY s	M T W TH F S
REPORT NO.: 75				
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR: LRI			PCt, Lt win	
REPORT BY:Glenn Hea	ith		TIME ARRIVED:	TIME DEPARTED:
		AVERAG	SE FIELD FORCE	
CONTRACTOR PERSONNEL LRI 0 Serrot 0			QUIPMENT IN OPERATION None None	
			/ISITORS	
TIME	NAME	REI	PRESENTING	REMARKS
Non-Conforming Materia	lls or Work:			
Field Problems Which C Tests Performed, Obser CONSTRUCTION ACT	vations, Results, Rete	sts:No Work performed		
WERE PHOTOS TAKE	N: No			
FIELD REPRESENTAT	TVE		DATE	
REVIEWED BY			DATE	



PROJECT: Hildden Vailley Landfill, East Lined Area Partial Closure PROJECT NO.: 40202-095.061 REPORT NO: 76 CLIENT: LRI CONTRACTOR: LRI CONTRACTOR: LRI CONTRACTOR PERSONNEL AVERAGE FIELD FORCE CONTRACTOR PERSONNEL TIME ARRIVED: 06:30 TIME DEPARTION: 16:30 AVERAGE FIELD FORCE CONTRACTOR PERSONNEL TIME NAME REPORT BY:Glenn Health AVERAGE FIELD FORCE CONTRACTOR PERSONNEL TIME NAME REPORT BY:Glenn Health AVERAGE FIELD FORCE CONTRACTOR PERSONNEL TIME NON-Conforming Materials or Work: Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete converyor truck placing rock on the North slope. Placement of Topsoll on South slope. Kent Wilder arrived on side to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoil must be under the to support it moves up on top of the cell. We looked at the winkle on the Bast slope and the Southwest Closure Repair above Bosch and at 15:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes FIELD REPRESENTATIVE DATE DATE			DAILY CONS	TRUCTION REPOR	RT
PROJECT NO.: 726 CLIENT: LRI CONTRACTOR: LRI REPORT BY:Glenn Health TIME ARWING: 05:30 AVERAGE FIELD FORCE CONTRACTOR LRI AVERAGE FIELD FORCE VISITORS TIME NAME REPORT SENTING Ste Meeting 13:00 Rent Wilsen Dave Bosch Health Dept. Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoil must be under the to support it moves up on top of the cell. We looked at the winkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: WERE PHOTOS TAKEN: yes FIELD REPRESENTATIVE DATE	PROJECT: Hide	ien Valley Landfill, East Lined	Area Partial Closure	DATE: 10/5/98	
REPORT NO.: 76 CLIENT: LRI CONTRACTOR: LRI REPORT BY:Gienn Heath TIME ARRIVED: 06:30 TIME DEPARTED: 16:30 AVERAGE FIELD FORCE CONTRACTOR LRI PERSONNEL 1 SISTORS TIME NAME REPRESENTING EMCON Site Meeting 9:00 13:00 Kont Wiken Dave Bosch Health Dept. Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope work on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoil must be under thet to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle, I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: WERE PHOTOS TAKEN: WERE PHOTOS TAKEN: yes	PROJECT NO.:	40202-005.061			T W TH F S
CONTRACTOR: LRI REPORT BY:Glenn Heath TIME ARRIVED: 06:30 TIME DEPARTED: 16:30 AVERAGE FIELD FORCE CONTRACTOR PERSONNEL VISITORS VISITORS TIME NAME REPRESENTING REMARKS Site Meeting 13:00 Kent Wiken Dave Bosch Health Dept. NOn-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoli on South slope and the topsol on the South slope. Kent Wike arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsol must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: WERE PHOTOS TAKEN: yes DATE	REPORT NO.: 7	76			
REPORT BY:Glenn Health TIME ARRIVED: 06:30 TIME DEPARTED: 16:30 AVERAGE FIELD FORCE CONTRACTOR LRI PERSONNEL VISITORS TIME O9:00 Kent Wilken Dave Bosch Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope and the topsoil on the South slope is surped on site to look at the rock placement operation and to get some date on the conveyor truck to see how thick the topsoil must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area, Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle, I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes DATE	CLIENT: LRI			WEATHER	TEMP.(°F)
AVERAGE FIELD FORCE CONTRACTOR LRI PERSONNEL VISITORS VISITORS TIME NAME OBJOO NEED Wishen Dave Bosch Health Dept. NOn-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoli on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsol on the South slope. Kent Wike arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsol must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes FIELD REPRESENTATIVE DATE	CONTRACTOR:	: LRI		PCt, Lt wind	65
VISITORS TIME ORYON Representing Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Releasts: Concrete conveyor truck placing rock on the North slope. Placement of Topsoli on South slope on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoli must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes DATE	REPORT BY:Gle	enn Heath		TIME ARRIVED: 06:30	TIME DEPARTED: 16:30
VISITORS TIME NAME REPRESENTING REMARKS 09;00 Kent Wiken EMCON Ste Meeting 13:00 Dave Basch Health Dept. Site Visit Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoil must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes FIELD REPRESENTATIVE DATE			AVER	AGE FIELD FORCE	
TIME 03:00 NAME Kent Wiken Dave Bosch Rent Wiken Dave Bosch Rent Wiken Dave Bosch Rent Wiken Dave Bosch Rent Wiken Dave Bosch Realth Dept. Non-Conforming Materials or Work: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. Kent Wike arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the sposil must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes PIELD REPRESENTATIVE DATE	Co		PERSONNEL 4		
OB:00 Site Meeting Site Visit Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. Kent Wike arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoil must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes FIELD REPRESENTATIVE DATE				VISITORS	
O3:00 Site Meeting Site Visit Non-Cenforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. Kent Wike arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoil must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes DATE	TIME	NAME	l R		
Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoli on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoli on the South slope. Kent Wike arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoli must be under the to support it moves up on top of the cell. We looked at the winkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes FIELD REPRESENTATIVE DATE					
Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoli on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoli on the South slope. Kent Wike arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoli must be under the to support it moves up on top of the cell. We looked at the winkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes FIELD REPRESENTATIVE DATE	Non-Conformina	Materials or Work:			
Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. Kent Wike arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoil must be under the fit to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes DATE					
CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. Kent Wike arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoil must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes DATE			hange Order or Clair	n:	
arrived on site to look at the rock placement operation and to get some data on the conveyor truck to see how thick the topsoil must be under the to support it moves up on top of the cell. We looked at the wrinkle on the East slope and the Southwest Closure Repair area. Dave Bosch was on at 13:00hrs to look at the progress and take pictures of the wrinkle. I watched the Southwest Closure excavation and worked on the liner report. WERE PHOTOS TAKEN: yes DATE	Tests Performed	, Observations, Results, Retes	sts: Concrete convey	or truck placing rock on the Nor	th slope. Placement of Topsoil on South slope.
FIELD REPRESENTATIVE DATE	arrived on site to	look at the rock placement ope es up on top of the cell. We loo	eration and to get son oked at the wrinkle on	ne data on the conveyor truck to the East slope and the Southwe	see how thick the topsoil must be under the truck est Closure Repair area. Dave Bosch was on site
	WERE PHOTOS	S TAKEN: yes			
DATE:	FIELD REPRES	ENTATIVE		DATE	
KENIEMED RA DATE	REVIEWED BY			DATE	



		DAILY CONS	TRUCTION R	EPORT
PROJECT: Hidder	n Valley Landfill, East Lined	Area Partial Closure	DATE: 10/6/98	
PROJECT NO.: 40202-005,061 REPORT NO.: 77			DAY S	M T W TH F S
CLIENT: LRI			WEAT	HER TEMP.(°F)
CONTRACTOR: L	.RI		PCt, Lt	wind 75
REPORT BY:Glenr	n Heath		TIME ARRIVED:	06:30 TIME DEPARTED: 16:30
		AVER	AGE FIELD FORCE	
CONTRACTOR PERSONNEL LRI 4			EQUIPMENT IN OPERATION 2 Dozers, 2 conver machines	
			VISITORS	
TIME	NAME	R	EPRESENTING	REMARKS
13:00	Dave Bosch		Health Dept.	Site Visit
Non-Conforming Ma	aterials or Work:			
	usly Reported Deficiencies: ich Could Result in Delay, (n:	
V-				
Tests Performed, C	bservations, Results, Rete	sts: Concrete convey	or truck placing rock o	n the North slope. Placement of Topsoil on South slope.
Southwest Closure	Repair area was sanded ar	id made ready for the	Serrot crew. Jim Cran the project in Jim's at	orth slope and the topsoil on the South slope. The dall got with me and told me he will be out for the rest of the bsence. We talked about the repair to the trench on the SW was here. I worked on the report and left site at 16:30hrs.
WERE PHOTOS T	「AKEN: yes			
	·			
FIELD REPRESEN	ITATIVE		DATE	
REVIEWED BY			DATE	



		DAILY CONS	TRUCTION REPO	RT
PROJECT: Hidde	en Valley Landfill, East Lined	Area Partial Closure	DATE: 10/7/98	
PROJECT NO.:	40202-005.061		DAY S M	T W TH F S
REPORT NO.: 78	8			
CLIENT: LRI			WEATHER	TEMP.(°F)
CONTRACTOR:	LRI		PCt, Lt wind	65
REPORT BY:Gler	nn Heath		TIME ARRIVED: 06:30	TIME DEPARTED: 17:00
		AVER	AGE FIELD FORCE	
cc	ONTRACTOR LRI Serrot	PERSONNEL 4 7	2 Do 2	PMENT IN OPERATION zers, 2 conver machines Generators, 1 Forklift
			VISITORS	
TIME	NAME	R	EPRESENTING	REMARKS
13:00	Dave Bosch		Health Dept.	Site Visit
Non-Conforming N	Vaterials or Work:			
Tests Performed, Southwest Closure CONSTRUCTION Southwest Closure	e Repair liner replacement N ACTIVITIES: On site 07:00 Repair was relined this date m work on this first as the w rea covered and welded. The	sts: Concrete convey to observe the place The crew did not have	or truck placing rock on the No ment of rock on the North slop we a wedge welder with them s oles on site will hold up to a ra	e and the topsoil on the South slope. The to they had to extrusion weld the whole thing. I in storm which is in the forecast. They got as far as the end of the day. I worked on the liner report and
WERE PHOTOS	TAKEN: yes			
FIELD REPRESE	NTATIVE		DATE	
REVIEWED BY			DATE	



PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure PROJECT NO: 40202-005.061 REPORT NO: 78 CULENT: LRI CONTRACTOR: LRI CONTRACTOR: LRI CONTRACTOR LPI Serrot AVERAGE FIELD FORCE VISITORS TIME NAME REPRESENTING REMARKS 11:00 Dave Bosch Health Dept. Sile Visit Non-Conforming Materials or Work: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. The Southwest Closure Repair was rained out and could not be completed this date. Criss wit.R lisced temporary plastic over the tranch section of the area to help guard if from the run-of-Gregg wit.RI gold temporary plastic over the tranch section of the area to help guard if from the run-of-Gregg wit.RI gold with Serrot and stopped them from leaving town as we need them to stay until they can get the repairs finished and then install the geotextile when it arrives, next week. I worked on paperwork most of the day. WERE PHOTOS TAKEN: No DATE DATE			DAILY CONS	TRUCTION RI	EPORT
PROJECT NO.: 40202-005.061 REPORT NO.: 78 CLIENT: LRI CONTRACTOR: LRI CONTRACTOR: LRI REPORT BY:Glenn Heath AVERAGE FIELD FORCE CONTRACTOR LRI Serrot AVERAGE FIELD FORCE CONTRACTOR LRI Serrot VISITORS TIME NAME REPRESENTING REPRESENTING REPRESENTING REPRESENTING REPRESENTING REMARKS 11:00 Dave Bosch Health Dept. Site Visit Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. CONSTRUCT	PROJECT: Hidde	en Valley Landfill, East Lined	Area Partial Closure	DATE: 10/8/98	
REPORT NO.: 78 CULENT: LRI CONTRACTOR: LRI REPORT BY:Glann Heath AVERAGE FIELD FORCE CONTRACTOR LRI Serrol CONTRACTOR LRI Serrol PERSONNEL 4 7 CONTRACTOR LRI Serrol VISITORS TIME NAME REPRESENTING REMARKS 11:00 Dave Bosch Health Dept. Site Visit Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claims: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. The Southwest Closure Repair was raised out and could not be completed this date. Criss wil.RI laced temporary plastic over the trench section of the area to help guard if from the run-off, Gregg wil.RI joy twith Seront and sloped them from leaving town as we need them to stay until they can get the repairs finished and then install the geotextile when it arrives, next week. I worked on paperwork most of the day. WERE PHOTOS TAKEN: No DATE					M T W TH F S
CLIENT: LRI Cloudy, Heavy Rain 55 CONTRACTOR: LRI Cloudy, Heavy Rain 55 REPORT BY:Glenn Heath TIME ARRIVED: 07:00 TIME DEPARTED: 17:00 AVERAGE FIELD FORCE CONTRACTOR PERSONNEL 1 2 Dozers, 2 conver machines 2 Generators, 1 Forkitt VISITORS TIME NAME REPRESENTING REMARKS 11:00 Dave Bosch Health Dept. Site Visit Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South seeks to lead great if from the run-off. Gregg w.RLP got with Seron add slopped them from leaving town are we need them to stay until they can get the repairs finished and then install the geotextile when it arrives, next week. I worked on paperwork most of the day. WERE PHOTOS TAKEN: No DATE					
REPORT BY:Glenn Health REPORE	CLIENT: LRI			WEATH	
AVERAGE FIELD FORCE CONTRACTOR LR	CONTRACTOR:	LRI		Cloudy, Hea	vy Rain 55
CONTRACTOR LRI Serrot Time NAME NAME REPRESENTING 11:00 Dave Bosch Health Dept. Site Visit Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. The Southwest Closure Repair was rained out and could not be completed this date. Criss wiLRI laced temporary plastic over the trench section of the area to help guard it from the run-off. Gregg wiLRI got with Serrot and stopped them from leaving town as we need them to stay until they can get the repairs finished and then install the geotextile when it arrives, next week. I worked on paperwork most of the day. WERE PHOTOS TAKEN: No DATE	REPORT BY:Gler	nn Heath		TIME ARRIVED:	07:00 TIME DEPARTED: 17:00
VISITORS TIME NAME REPRESENTING REMARKS 11:00 Dave Bosch Health Dept. Site Visit Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoil on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the Southwest Closure Repair was rained out and could not be completed this date. Criss wiLRI laced temporary plastic over the trench section of the area to help quard it from the run-off. Gregg with 18 gld with Servict and stopped them from leaving town as we need them to stay until they can get the repairs finished and then install the geotextile when it arrives, next week. I worked on paperwork most of the day. WERE PHOTOS TAKEN: No DATE			AVERA	GE FIELD FORCE	
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11:00 Dave Bosch Health Dept. Site Visit Non-Conforming Materials or Work: Follow-Up of Previously Reported Deficiencies: Field Problems Which Could Result in Delay, Change Order or Claim: Tests Performed, Observations, Results, Retests: Concrete conveyor truck placing rock on the North slope. Placement of Topsoli on South slope. CONSTRUCTION ACTIVITIES: On site 07:00 to observe the placement of rock on the North slope and the topsoil on the South slope. The Southwest Closure Repair was rained out and could not be completed this date. Criss w/LRI laced temporary plastic over the trench section of the area to help guard it from the run-off. Gregg w/LRI got with Serrot and stopped them from leaving town as we need them to stay until they can get the repairs finished and then install the geotextile when it arrives, next week. I worked on paperwork most of the day. WERE PHOTOS TAKEN: No DATE				VISITORS	*
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FIELD REPRESENTATIVE DATE	Tests Performed, CONSTRUCTION Southwest Closur, area to help quard	Observations, Results, Reternal NACTIVITIES: On site 07:00 e Repair was rained out and it from the run-off. Gregg w/	sts: Concrete conveyor to observe the placen could not be completed LRI got with Serrot and	or truck placing rock on ment of rock on the Nor d this date. Criss W/LF d stopped them from le	th slope and the topsoil on the South slope. The RI laced temporary plastic over the trench section of the eaving town as we need them to stay until they can get the
REVIEWED BY DATE				DATE	
	REVIEWED BY		-	DATE	

DAILY CONST	RUCTION REPORT
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure	DATE: 10/9/98
PROJECT NO.: 40202-005,061	3 / W T W TH F S
REPORT NO.: 79	
CLIENT: LRI	WEATHER TEMP.(°F)
CONTRACTOR: LRI	OVERCAST/RAIN 50-60
REPORT BY:Dagan Short	TIME ARRIVED: 8AM TIME DEPARTED: 6PM
AVERAG	E FIELD FORCE
36701	EQUIPMENT IN OPERATION 2-BULL DOZERS 1-FORE LIFT 2-OFFROAD DUMP TRUCKS 1-CONVEYOR BELT SYSTEM (TRUCK) MISITORS
The state of the s	PRESENTING REMARKS
8:40 Am DAVID BOSCH T-AC	
Non-Conforming Materials or Work:	
Follow-Up of Previously Reported Deficiencies:	
NONE	
Field Problems Which Could Result In <u>Delay</u> , Change Order or Claim: RAINY DEATHER	
Tests Performed, Observations, Results, Retests:	/ .
OBSERVED VACUUM TESTS ON SC	OUTHWEST CLOSURE AREA/ ALC DASSED
CONSTRUCTION ACTIVITIES:	
BY THE END OF THE DAY, PROS	HE DRAINAGE ROCK BY MEANS OF
WERE PHOTOS TAKEN: YES DAGAN SHORT FIELD REPRESENTATIVE	10/9/98. DATE
REVIEWED BY	DATE

DAI	LY CONSTRUCTION RE	PORT
PROJECT: Hidden Valley Landfill, East Lined Area	Partial Closure DATE: /O/	10/98
PROJECT NO.: 40202-005,061	DAY	M T W TH F S
REPORT NO.: 80		
CLIENT: LRI	WEATHER	
CONTRACTOR: LRI	OVERCAST	
REPORT BY: Dagan Short		AM TIME DEPARTED: 5PM
	AVERAGE FIELD FORCE	
CONTRACTOR PE	3 2-0FF ROM	QUIPMENT IN OPERATION ERS I-FORK LIFT S DUMPTRUCKS R BELT TRUCK
TIME NAME		
- NONE	REPRESENTING	REMARKS
13326	_	
Non-Conforming Materials or Work; Non∈		
Follow-Up of Previously Reported Deficiencies:	W	VI. The special specia
NONE		
Field Problems Which Could Result in Delay, Change	Order or Claim:	
RAINY WEATHER		
Tests Performed, Observations, Results, Retests:	T-1000	
	TAN SOUTHWEST C	LOSURE ADEA / ALL PASSED
CONSTRUCTION ACTIVITIES:		
-SERROT FINISHEN	CALTHURT CLOSE D	5 REPAIR PROJ # 40002-005.063
3	SUMITABLES! CLOSUR!	REPAIR PIZOS " 4000 2 - 001, 005
- LRI WORKED ON COD	FAMILY DOWNALL -	ROCK BY MEANS OF THE
Carrier D. T.	MINE NICHINGE	YOUR ISY "IT AND OF THE
CONVEYOR BELT TRUC	K AND 2 BULL DO	ZERS ARMIT 85%
COMPLETE BY THE	PAIN OF NEW	0, 110001 0026
, , ,	ZIVIS OF BAY.	
WERE PHOTOS TAKEN: NONE		1
DAGAN SHORT	10/10	198
FIELD REPRESENTATIVE	DATE	/ 10
REVIEWED BY	DATE	

	DAILY	CONSTRUCTION RI	EPORT
PROJECT: HI	idden Valley Landfill, East Lined Area Partial	Closure DATE: 10/1	2/98
PROJECT NO	D.: 40202-005,061	DAY 3	'M T W TH F S
REPORT NO.	: 8/	"	
CLIENT: LRI		WEATH	
CONTRACTO			ST/RAIN 50-60
REPORT BY:	Dagan Short		6 Am TIME DEPARTED: 5PM
	100	AVERAGE FIELD FORCE	
14 (14 (14 (14 (14 (14 (14 (14 (14 (14 (CONTRACTOR PERSON 8-11 Serrol C	2-OFF ROAM	EQUIPMENT IN OPERATION LORS 1-FORK LIFT ROUMP TRUCKS RELIT TRUCK
TIME	NAME	REPRESENTING	REMARKS
10:00	DAVID BOSCH	TACHD	NAS CARLOUS IF SORROT WAS
			DO NE WITH SW CLOSUR PEPAR
Non-Conformir	ng Materials or Work;		The same of the sa
Non	7.		
Follow-Up of P	reviously Reported Deficiencies:	*** **********************************	
Non	100	11 - N - N - N - N - N - N - N - N - N -	
	Which Could Result in Delay, Change Order	ror Claim;	, , , , , , , , , , , , , , , , , , ,
777	INY WEATHER		The state of the s
	ed, Observations, Results, Retests:		
CONSTRUCT	ION ACTIVITIES:	7.00	
- Ser	ROT DID NOT WORK	TODAY DUE TO	RAID.
- 10-			
be Ital	HINISHED SPREADING	- DRAINAGE RO	SCK AT AROUT 10:30 Am
75-	- NOZEIES CONTINU	EU WITH GKANI	NG UNTIL ABOUT 3:30 Pm
LIKI	WORKED ON SPRE	ADING TOP SOIL	BY MEANS OF THE
	VEVOR BELT TRUCK		1.
	, and the second	,	
WERE PHOTO	DS TAKEN: NO		
DAGA	N SHORT	10/12	2/98
FIELD REPRE	SENTATIVE	DATE	/
		YEAR TO THE REAL PROPERTY OF THE PERTY OF TH	
REVIEWED BY	Y	DATE	

DAILY CONST	TRUCTION REPORT
PROJECT: Hidden Valley Landfill, East Lined Area Partial Closure	DATE: 10/13/96
PROJECT NO.: 40202-005,061	DAY S M T W TH F S
REPORT NO.: 82	
CLIENT: LRI	WEATHER TEMP.(%F)
CONTRACTOR: LRI	OVER CAST 50-60
REPORT BY:Dagan Short	TIME ARRIVED: 6Am TIME DEPARTED: 5PM
AVERAG	BE FIELD FORCE
Serrot 3	EQUIPMENT IN OPERATION 2-BULL DOZERS 1-FORK LIFT 3-OFF ROAD DUMP TRUCKS 1-SMALL BACKHOE 1-CONVEYOR BELT TRUCK VISITORS
The state of the s	
None	PRESENTING REMARKS
Non-Conforming Materials or Work:	
Follow-Up of Previously Reported Deficiencies:	
Field Problems Which Could Result In Delay, Change Order or Claim:	
Tests Performed, Observations, Results, Retests: OBSERVED REPAIRS AND VALLUM CONSTRUCTION ACTIVITIES:	TEST ON GEDMEMBRANE/ ALL PASSED
	NORTH EAST SLOPE, INCLUDING
- LRI WORKED ON SPREADING TO	OP SOIL BY MEANS OF THE CONVEYOR
BELT TRUCK, THEY ALSO WOR	RKED ON DIGGING TRENCHS FOR
DIRANDAGE PIPE BY USING A SMA A HAND SHOUEL.	HLL BACKHOE AND ONE LABORER WITH
WERE PHOTOS TAKEN: NO	The state of the s
DAGAN SHORT FIELD REPRESENTATIVE	DATE 10/13/98
REVIEWED BY	DATE

DAILY	CONSTRUCTION RE	DORT
PROJECT: Hidden Valley Landfill, East Lined Area Partie	10//	4/98
PROJECT NO.: 40202-005.061	DAY S'	M T W TH F S
REPORT NO.: 83		
CLIENT: LRI	WEATHE	
CONTRACTOR: LRI	OVERCA	
REPORT BY:Dagan Short		6 Am TIME DEPARTED: 5PM
u	AVERAGE FIELD FORCE	
CONTRACTOR PERSO LRI Serrol 3	2-OFF ROAD 1-CONVEYOR	EQUIPMENT IN OPERATION TO I - FORK LIFT DUMPTRUCKS I - SMALL BACK HOE BELT TRUCK
	VISITORS	
TIME NAME	REPRESENTING	REMARKS
- NONE	_	
Non-Conforming Materials or Work: VONE	*	
Follow-Up of Previously Reported Deficiencies:		
Field Problems Which Could Result In Delay, Change Ord	er or Claim:	
Tests Performed, Observations, Results, Retests:		1
OBSERVED REPAIRS AND VALUE CONSTRUCTION ACTIVITIES:	um tert on Geom	EMBRANE / ALL PASSED
		SLOPE NEAR ROAD, STARTED
TOMORROW.	E, LEFT AT 3P	M. NEW CREW TO ARRIVE
LRI FINISHED DIGGING DEPLOYING DRAINAGE P CONTINUED SPREADING T	THE WITH GCL M	RAINAGE PIPE, CONTINUED AT UNDORNEATH. ALSO.
WERE PHOTOS TAKEN: N &	(**************************************	* ************************************
DAGAN SHORT	inter	198
FIELD REPRESENTATIVE	DATE	/10
REVIEWED BY	DATE	



	DAIL	Y CONSTRI	ICTION D	Char	
PROJECT: Hidden Valley Landfill	East Lined Area De	at a si		EPORT	
PROJECT NO.: 40202-005,061	, Toned Alea Pa	rual Closure	DATE: 10/	15/98	
REPORT NO .: 84		1	DAY 3	M T W TH	FS
CLIENT: LRI	* **				
CONTRACTOR: LRI			WEATH	IER	TEMP.(°F)
REPORT BY: Dagan Short			OVERCA	ST/RAIN 5	
	784	111	ME ARRIVED:	6Am TIME DEPARTED	0.1100
CONTRACTOR	1 222		ELD FORCE	The Contract of the Contract o	730 FM
LRI.	PERS	ONNEL 2-B		EQUIPMENT IN OPERATION	-
Serrot	8	2-05			SRK LIFT
		1-66	- 100AG D		NE E E E
TIME		VISITO	BE BONE AND B	ELT TRUCK	
I IVAI	ME	REPRESE		T	
10:30m Tom DIERC	·E	DAVE BOS	and a	REMAI	iks
	1	TACHO	CIT OF	QUESTIONS P	EGARDING
on-Conforming Materials or Work;		1 10000		PROGRESS	
NONE			##		
ollow-Up of Previously Reported Def	The state of the s				
A)	clencies:	" " " " " " " " " " " " " " " " " " " "	-		
NONE					

eld Problems Which Could Result In	Delay O	The state of the s			***
eld Problems Which Could Result In	Delay, Change Orde	r or Claim:			***
PAINY WEATHER		r or Claim;		102	
PAINY WEATHERS	. Venda				
PAINY WEATHERS	. Venda		o speri		
PAINY WEATHERS	. Venda		o spread	only of Topsoil	on izern
eld Problems Which Could Result In RAINY WEATHER ets Performed, Observations, Result DISCIPUE SEWING ONSTRUCTION ACTIVITIES:	ts, Retests:	XTILE AN	o Spread	ING OF TOPSOIL	ON BERN
PRAINY WEATHERS SETTROT SHOWED RAINY WEATHERS DISCRIVED SEWING ONSTRUCTION ACTIVITIES: SETTROT SHOWED	OF GEDTE	XTILE AN	D SPREAL	ING OF TOPSOIL	ON 13672 N
PRAINY WEATHERS SETURN SEWINE SETURN SEWINE SETURN SEWINE SETURN SHOWED	OF GEDTE	XTILE AN	EW 70	DEPLOY GEOTE	ON BERM
PAINY WEATHERS	OF GEDTE	XTILE AN	IN SPREAM	DEPLOY GEOTE	ON BERN
PRAINY WEATHER PAINY WEATHER PETER BY PETER BY PROTECTION ACTIVITIES: SETTROT SHOWED	OF GEDTE	XTILE AN	lo spread	DEPLOY GEOTE	ON BERN
PRAINY WEATHERS SETTROT SHOWED RAINY WEATHERS DISCRIVED SEWING ONSTRUCTION ACTIVITIES: SETTROT SHOWED	OF GEDTE	XTILE AN	EW 70	DEPLOY GEOTE	ON BERN
ETTROT SHOWER NORTHERN SLOPE	UP WITH	NEW CR	EW 70	DEPLOY GEOTE	XTILEON
ETTROT SHOWER NORTHERN SLOPE	UP WITH	NEW CR	EW 70	DEPLOY GEOTE	XTILEON
PRAINY WEATHER BETTER SEWING SETTROT SHOWED NORTHERN SLOPE IRI CONTINUED	UP WITH	NEW CR	EW 70	DEPLOY GEOTE	XTILEON
PRAINY WEATHER SETTON ACTIVITIES: SETTROT SHOWED NORTHERN SLOPE IRI CONTINUED TWO DOZERS WORK	OF GEDTE UP WITH TO SOREAD	NEW CR	EW 70	DEPLOY GEOTE	XTILEON
PRAINY WEATHER SETTON ACTIVITIES: SETTROT SHOWED NORTHERN SLOPE IRI CONTINUED TWO DOZERS WORK	OF GEDTE UP WITH TO SOREAD	NEW CR	EW 70	DEPLOY GEOTE	XTILEON
PIDE /NSTALLATO	OF GEDTE UP WITH TO SOREAD	NEW CR	EW 70	DEPLOY GEOTE	XTILEON
PIDE /NSTALLATO	OF GEDTE UP WITH TO SOREAD	NEW CR	EW 70	DEPLOY GEOTE	XTILEON
EPHOTOS TAKEN: NO	OF GEDTE UP WITH TO SOREAD	NEW CR	EW TO	DEPLOY GEOTE	XTILEON
PIDE /NSTALLATO	OF GEDTE UP WITH TO SOREAD	NEW CR TOP SOI PEADING T PLETED.	EW 70	DEPLOY GEOTE	XTILEON
EPHOTOS TAKEN: NO	OF GEDTE UP WITH TO SOREAD	NEW CR	EW TO	DEPLOY GEOTE	XTILEON