

NM1 -35

Engineering

Certification Report -

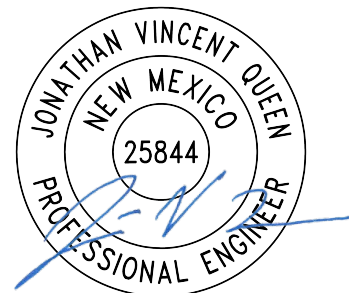
Unit IIB-C

Approval

May 15, 2025

**LEA LAND LANDFILL
LEA COUNTY, NEW MEXICO
OCD FACILITY PERMIT NO. NM-1-0035
ENGINEERING CERTIFICATION REPORT
UNIT IIB-C CONSTRUCTION**

Prepared for
Lea Land, LLC
February 2025



02/17/2025

Prepared by
Weaver Consultants Group, LLC
6420 Southwest Blvd., Suite 206
Fort Worth, Texas 76109
817-735-9770

WCG Project No. 6041-001-17-00



February 13, 2025
Project No. 6041-001-17-01

Ms. Leigh Barr
Permitting Supervisor
Oil Conservation Division (OCD)
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Engineering Certification Report – Unit IIB-C Construction
Lea Land Landfill, LLC
OCD Facility Permit No. NM-1-35
Lea County, New Mexico

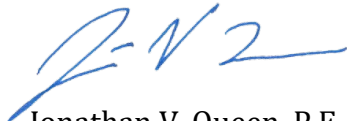
Dear Ms. Barr:

On behalf of Lea Land, LLC, please find attached the above-referenced Engineering Certification Report prepared under New Mexico Administrative Code (NMAC) 19.15.36. This report has been developed consistent with the currently approved liner Construction Quality Assurance (CQA) Plan as well as applicable New Mexico Energy, Minerals, and Natural Resources Department, Oil Conservation Division (OCD) rules for surface waste management facilities (19.15.36 NMAC). More specifically, this Engineering Certification Report addresses the standards identified in the Permit Modification Approval dated June 22, 2020 (i.e., Permit Conditions No. 6.B.). The currently approved CQA plan was prepared by Gordon Environmental/PSC in June 2019.

One original copy of this submittal is provided for your review, and the following link [Master Submittal](#) provides access to this Certification Report. This document has been signed and sealed by a qualified NM Professional Engineer in accordance with applicable OCD Rules for surface waste management facilities (19.15.36 NMAC). A copy of this submittal was placed in the Facility Operating Record for this facility.

Please contact us with your questions and comments.

Sincerely,
Weaver Consultants Group, LLC



Jonathan V. Queen, P.E.
Project Director

Attachments: Engineering Certification Report – Unit IIB-C (three hard copies)

cc: Ms. Stephanie Grantham, Lea Land, LLC, lealand.sgrantham@gmail.com
Mr. I. Keith Gordon, P.E., IKG, LLC, wbcsw@aol.com
Mr. Joe Ontiveros, Lea Land, LLC (Facility Operating Record)

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Jonathan V. Queen, P.E.	M-1
Austin Brazell	M-3
Trais Walley	M-8
Brad Lipsey	M-11

**UNIT IIB-C CONSTRUCTION
ENGINEERING CERTIFICATION REPORT
LEA LAND LANDFILL
LEA COUNTY, NEW MEXICO
OCD FACILITY PERMIT NO. NM-1-0035**

1.0 Introduction

This Engineering Certification Report presents field and laboratory test results for the construction of Unit IIB-C at the Lea Land Landfill. The landfill is owned and operated by Lea Land, LLC. The frequency of tests conducted for this evaluation meets or exceeds the testing frequency requirements included in the Construction Quality Assurance (CQA) Plan prepared by Gordon Environmental/PSC in June 2019.

Unit IIB-C encompasses approximately 378,972 square feet (8.7 acres). Unit IIB-C is located in the southern portion of Unit II, north of the existing landfill, as shown on Drawing A1 in Appendix A. The limits of Unit IIB-C are shown in Appendix A on Drawings A2 and A3. The following parties were responsible for construction of the liner:

- Owner/Operator – Lea Land, LLC
- Construction Quality Assurance – Weaver Consultants Group, LLC (WCG)
- Earthwork Contractor – Enviroworks LLC
- Surveyor – S3 Surveying
- Geosynthetic Installation – Southwest Liner Systems (SLS)
- Geosynthetics CQA Testing – TRI/Environmental, Inc. (TRI)

2.0 Subgrade Excavation/Preparation

The subgrade for GCL placement is a minimum of 6 inches of compacted subgrade soil. Subgrade preparation was performed by Enviroworks prior to installation of the GCL. The subgrade material was excavated from an onsite borrow area and hauled to the Unit IIB-C area. The subgrade material was compacted in a single lift to 90 percent of the maximum dry density as determined by standard Proctor (ASTM D 698) for the borrow soil prior to construction (refer to Appendix B for soil testing results). The subgrade was approved by SLS, WCG, and Lea Land prior to

GCL placement. The subgrade was prepared to meet the requirements of the CQA Plan.

Subgrade elevations for the new liner area were verified by the surveyor at a minimum frequency of one measurement for each 10,000 square feet. Surveying data is included on Drawing A12 Subgrade As-built Exhibit in Appendix A.

Material used for construction of the perimeter berm at the west end of Unit IIB-C was excavated from an onsite borrow area and compacted in 9-inch lifts to a maximum of 90 percent of the maximum dry density as determined by Standard Proctor (ASTM D 698) for the borrow soil prior to construction (refer to Appendix B for soil testing results).

3.0 Geosynthetic Clay Liner (GCL)

3.1 Material Information

The GCL consists of sodium bentonite encased by two geotextiles. The GCL used was manufactured by Solmax. Pertinent information about the GCL is summarized in Table 2, GCL Documentation. The GCL was inventoried at the site prior to the beginning of installation by the CQA Monitor. The inventory is listed on the GCL Inventory in Appendix D.

Table 2
GCL Documentation

GCL Material	Installation Location	Roll Width/Length	Area Received sq. ft.	No. Conformance Samples	QA/QC Documentation	
					Appendix	Pages
Bentomat ST	Floor and sideslopes	15.5 ft / 150 ft	481,275	5	D	D-1 through D-68

Based on the number of material lots and square footage of the GCL, five conformance samples were required by the CQA Plan. The samples were shipped to TRI by Solmax, where they were tested for the following properties:

- Clay Mass/Unit Area, ASTM D 5993
- Index Flux/Hydraulic Conductivity, ASTM D 5887
- Geotextile Mass/Unit Area, ASTM D 5261
- Free Swell, ASTM D 5890
- Fluid Loss, ASTM D 5891

- Tensile Stress (Machine Direction), ASTM D 6768
- Peel Strength, ASTM D 6496
- Shear Strength, ASTM D 6243
- Percent Strength Retained, ASTM D 6768

Conformance test results indicate the GCL meets the requirements of the specifications. Results of the conformance testing are in Appendix D. In addition to the third party CQA testing, the GCL manufacturer was required to perform manufacturer's quality control (MQC) testing. WCG reviewed the MQC test results (see Appendix D) prior to accepting the GCL.

3.2 GCL Installation

Bottom liner GCL installation commenced in the southwest portion of the cell. GCL placement proceeded north and then east. Bottom liner GCL overlaps were oriented parallel to the line of maximum slope and shingled in the direction of positive slope to prevent potential runoff from entering the overlap zone. Each bottom liner GCL seam was overlapped a minimum of 12 inches in the longitudinal direction and end-of-roll overlaps were a minimum of 24 inches.

The location of the installation documentation is summarized in the following table.

Table 3
GCL Installation Documentation

Document	Appendix	Pages
GCL Panel Layout Drawing	A	Drawing A8
GCL Deployment Log	E	E-1 through E-9

Details of the installation procedure are discussed in the following paragraphs.

3.2.1 GCL Panel Placement

The GCL panels were arranged as shown in Appendix A on Drawing A9. Each roll of GCL was suspended from a rubber-tired loader and hauled to the location where deployment was to begin. The end of the roll was held in place by several members of the installation crew, while the loader backed up deploying the GCL. The GCL placement log in Appendix E lists dimensions of each of the panels. The CQA monitor visually monitored the GCL during installation.

3.2.2 GCL Seams

Panels were overlapped as discussed earlier for the bottom liner and side slope liner seams for the GCL. Bentonite-enhanced seams were constructed by overlapping adjacent panels to the manufacturer-designed line on each panel. Supplemental bentonite was added at a rate of 0.25 lbs/lf to end-of-roll seams and longitudinal seams per manufacturer recommendations.

4.0 Geomembrane

4.1 Material Information

The GM consists of 60-mil-thick textured HDPE on the sideslopes and smooth HDPE on the floor. Pertinent information about the GM is summarized in Table 4, Geomembrane Documentation. The GM was inventoried at the site prior to the beginning of installation, by the CQA Monitor. The inventory is listed on the Geomembrane Inventory in Appendix F.

Table 4
Geomembrane Documentation

Roll Width/Length	Area Received sq. ft.	No. Conformance Samples	QA/QC Documentation	
			Appendix	Pages
23.5 ft / 510 ft (smooth)	692,070	9	F	F-1 through F-36
23.5 ft / 510 ft (textured)	375,360	4	F	

Based on the number of material lots and square footage of the GM, nine (smooth) and four (textured) conformance samples were required by the CQA Plan on each material. The samples were tested by TRI for the following properties:

- Thickness, ASTM D 5199 for smooth and ASTM D 5994 for textured
- Density, ASTM D 1505
- Carbon black content, ASTM D 4218
- Carbon black dispersion, ASTM D 5596
- Tensile properties, ASTM D 6693, type IV
- Tear Resistance, ASTM D 1004
- Puncture Resistance, ASTM D 4833
- Stress Crack Resistance, ASTM D 5397

- Standard Oxidation Time and Oven Aging at 85°C, ASTM D 3895
- UV Resistance High Pressure Oxidation Induction Time, ASTM D 5885
- Asperity Height, ASTM D 7446 for textured

Conformance test results indicate the GM meets the requirements of the specifications. Results of the conformance testing are in Appendix F. In addition to the third party CQA testing, the GM manufacturer was required to perform manufacturer's quality control (MQC) testing. WCG reviewed the MQC test results (see Appendix F) prior to accepting the GM. All manufacturer test data met the requirements of the CQA Plan prepared by Gordon Environmental/PSC in June 2019.

4.2 Primary and Secondary CQA Plan Geomembrane Installation

Geomembrane placement began in the southwest portion of the cell and proceeded north and then east.

The location of the installation documentation is summarized in the following table.

Table 5
Primary and Secondary Geomembrane Installation Documentation

Document	Appendix	Pages
Trial Welds	G	G-1 through G-24
Tensiometer Calibration Certificate	G	G-25 through G-26
Welders' Résumés	G	G-27 through G-30
Geomembrane Deployment Log	H	H-1 through H-10
Seaming Log	H	H-11 through H-32
Nondestructive Seam Testing	H	H-33 through H-54
Destructive Seam Test Log	I	I-1 through I-8
Destructive Seam Test Laboratory Data	I	I-9 through I-58
Repair Log	J	J-1 through J-25

Details of the installation procedure are discussed in the following paragraphs.

4.2.1 Geomembrane Panel Placement

The HDPE GM panels were arranged as shown in Appendix A on Drawings A10 and A11. GM was placed by a loader suspending the roll and a four-wheeler (with assistance from the liner crew) pulled the panels into place. Panel placement was completed carefully to not damage the underlying GCL. Sandbags were then placed

on the panel to hold it in place until it could be seamed. The GM placement log in Appendix H lists dimensions of each of the panels. The CQA monitor visually monitored the GM during installation. Any suspected defects in the GM panels or seams were marked, evaluated, and repaired where defective. Repairs are documented in Appendix J.

4.2.2 Geomembrane Seams

Panels were joined together by dual hot wedge fusion welding and extrusion welding. A GM Seaming Log is included in Appendix H. Trial seams were made by the GM installer's personnel to test the operators and seaming apparatus under the prevailing site conditions. Each day that seaming operations were conducted, trial seams were made at the beginning of the day and after the midday break.

Destructive testing of welded geomembrane seams was performed onsite by SLS under the observation of WCG and offsite at TRI. Welded seam testing included shear and peel strengths of the welded seams. A minimum of one destructive sample was taken for approximately 500 linear feet of welded geomembrane seam. Each seam sample was approximately 16 inches long by 12 inches wide and was cut into three separate samples. One sample was tested by TRI, one sample was tested by the installer as part of the Contractor's construction quality control (CQC) requirements, and one sample was archived by Lea Land at the site for possible future use.

Destructive seam test sample locations are shown in Appendix A, on Drawings A10 and A11. The test criteria is summarized in Table 6, Destructive Seam Testing Criteria. Test results for field and laboratory destructive testing are included in Appendix I.

The installer conducted nondestructive air pressure tests on fusion welded seams. Air pressure tests were conducted in accordance with the CQA Plan. Any leaks detected were located and isolated, repairs were performed on the seam, and the seam was then retested. The CQA Monitor observed and documented the non-destructive on all air seams testing.

All extrusion welded repairs were vacuum-tested by the installer. The vacuum testing equipment and operating techniques were monitored by the CQA Monitor. Leaks detected by vacuum testing were marked and recorded for repair. After a leak was repaired, the extrusion weld was retested with the vacuum box.

Repairs were performed at all seam intersections, destructive seam tests, air pressure tests, and all other locations where the CQA monitors determined that some form of repair was required. Repair locations are shown in Appendix A, on Drawings A10 and A11.

Table 6
Destructive Seam Testing Criteria

	Fusion	Extrusion
Shear		
Minimum Yield Strength, ppi ¹	120	120
Failure Mechanism	FTB	FTB
Peel		
Minimum Yield Strength, ppi ¹	78	78
Failure Mechanism	FTB	FTB

¹ 4 of 5 must meet the minimum strength criteria (the 5th specimen can be as low as 80 percent of the listed values), and the average of all 5 specimens must meet the strength criteria.

• FTB – film tear bond

5.0 Leak Detection System

The leak detection system for this unit consists of a 200-mil geonet on the floor and sideslopes that is installed between the primary and secondary GM. MQC documentation for the geonet is included in Appendix K and meets the requirements of the CQA Plan. Details of the geonet leak detection system are shown in Appendix A, Drawings A6 through A8.

6.0 Leachate Collection System

The LCS installed for this cell consists of:

- 2 foot of protective cover
- Drainage Geocomposite
- Leachate collection trench (pipe, aggregate, and geotextile) that drains into the Unit II LCS.

The leachate collection pipe in Unit IIB-C runs west to east at a 2.5 percent slope. The pipe location is shown on Drawing A2 in Appendix A. The leachate collection pipe intercepts leachate in the protective cover and conveys it to the Unit II LCS.

The leachate collection layer is a geocomposite drainage material, which consists of a HDPE geonet with geotextile bonded to both sides (double-sided GC). Double-sided GC was rolled out over the entire cell.

At longitudinal seams, the net is butted up to the adjacent net and tied with plastic ties every five feet. End seams were overlapped and tied every 12 inches with the plastic ties. The top geotextile was sewn or heat bonded at all seams and cap strips were heat bonded over butt-end seams. MQC documentation for the geotextile and geocomposite is included in Appendix K and meets the requirements of the CQA Plan.

The LCS trenches consist of 6-inch-diameter HDPE SDR-13.5 perforated piping surrounded by aggregate. The aggregate is protected by a 10-ounce per square yard geotextile (see QC data in Appendix L). The aggregate material is free of organics, foreign objects, and other deleterious materials and was tested for gradation (See Appendix L for testing results). Details of the LCS pipe, aggregate, and geotextile are shown in Appendix A, on Drawings A6 through A8.

Table 7
Geocomposite Documentation

Type	Area Received sq ft	Transmissivity Conformance Tests	QA/QC Documentation	
			Appendix	Pages
200-mil Double Sided	481,275	5	K	K-1 through K-45

7.0 Protective Cover

The geosynthetics are covered by a minimum of 2 feet of protective select soil cover. The depth of the soil protective cover was determined by the surveyor prior to placement of protective cover and after the placement of the protective cover. Results of the survey are contained in Appendix A, Drawings A12 and A13.

As a result of limited material availability, two different materials were used as protective cover. Material #1 (a red/brown sand purchased from a third party) meets the permeability, gradation, and uniformity coefficient specification as required by the CQA Plan and was installed on the floor of Unit IIB-C.

Protective cover soil was advanced from the northern edge of Unit IIB-C. Material was advanced to the south, west and east using a header bank procedure. Dump trucks would drop their load of soil near the edge of the protective cover. Dozers would then advance the soils using a method that causes the soils to roll onto rather than slide across the geocomposite. With assistance from laborers positioned on the liner, this method minimized wrinkles in the geosynthetics.

At least three feet of soil was maintained in areas where trucks were traveling. After enough soil was in place and no more truck traffic was needed in an area, the dozers would thin the protective cover to a minimum of 24 inches.

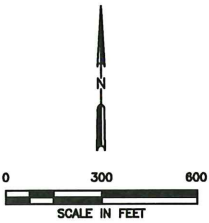
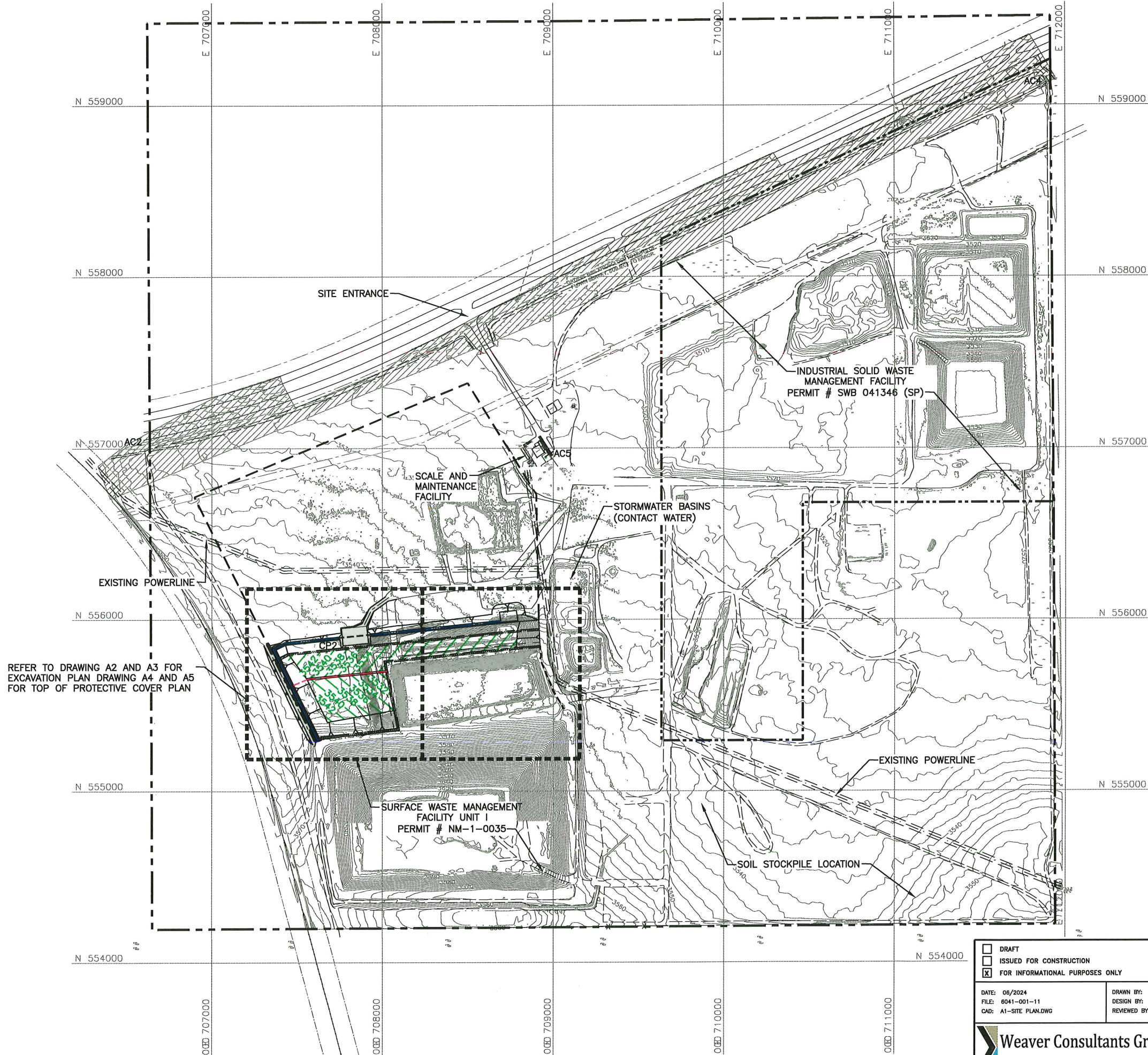
Integrity and minimum thickness of the protective cover may be verified prior to advancing the fill face over new sections of the liner. The tested area will include the footprint where the next lift of waste will be placed plus a buffer from at least 50 feet ahead of the advancing fill face. Thickness will be verified with a blunt instrument on a grid not to exceed 100 feet. Areas that do not meet the minimum require thickness will be supplemented with select protective cover material from the designated stockpile. Records regarding the protective cover layer will be maintained onsite.

8.0 Summary

Observations at the site and results of field and laboratory testing (as discussed above and documented herein) support the following conclusions:

- Unit IIB-C consists of 6 inches of prepared subgrade soil (Appendix B) overlain by a GCL.
- The GCL is overlain by the secondary 60-mil HDPE geomembrane. The geomembrane is overlain by the leak detection system geonet (200 mil). The leak detection system geonet drains into the leak detection sump in the eastern portion of Unit IIA.
- The leak detection system geonet is overlain by the primary 60-mil HDPE membrane.
- The leachate collection system consists of a geocomposite (200-mil geonet with 10oz/sy geotextile mat bonded to both sides) installed on top of the primary geomembrane.
- The leachate collection system drains into the leachate collection pipe (6-inch perforated HDPE SDR-13.5 pipe).
- The perforated 6-inch HDPE SDR-13.5 pipe drains into the leachate collection system of existing of Unit IIA. The sump is connected to extraction and clean out risers for the leachate collection system and an extraction riser for the leak detection system.
- A minimum of 2 feet of protective cover material was placed over the liner.
- The subgrade preparation GCL, primary/secondary geomembrane, leak detection system, LCS, and protective cover construction were performed in accordance with the requirements of the CQA Plan prepared by Gordon Environmental/PSC in June 2019 or those discussed in Section 7.0 – Protective Cover.

APPENDIX A
AS-BUILT DRAWINGS



LEGEND

- PROPERTY BOUNDARY
- PERMIT #SWB 041346 BOUNDARY
- PERMITTED LIMITS OF WASTE
- CONSTRUCTED LIMITS OF WASTE
- EXISTING POWERLINE/EASEMENT
- EXISTING CONTOUR
- STATE PLANE COORDINATE
- EXCAVATION CONTOUR
- CHANNEL CENTERLINE
- LEACHATE CENTERLINE
- TIE-IN ZONE
- ACCESS/PERIMETER ROAD SURFACING

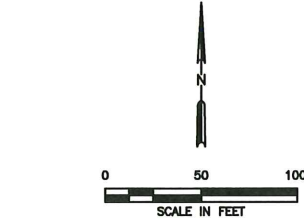
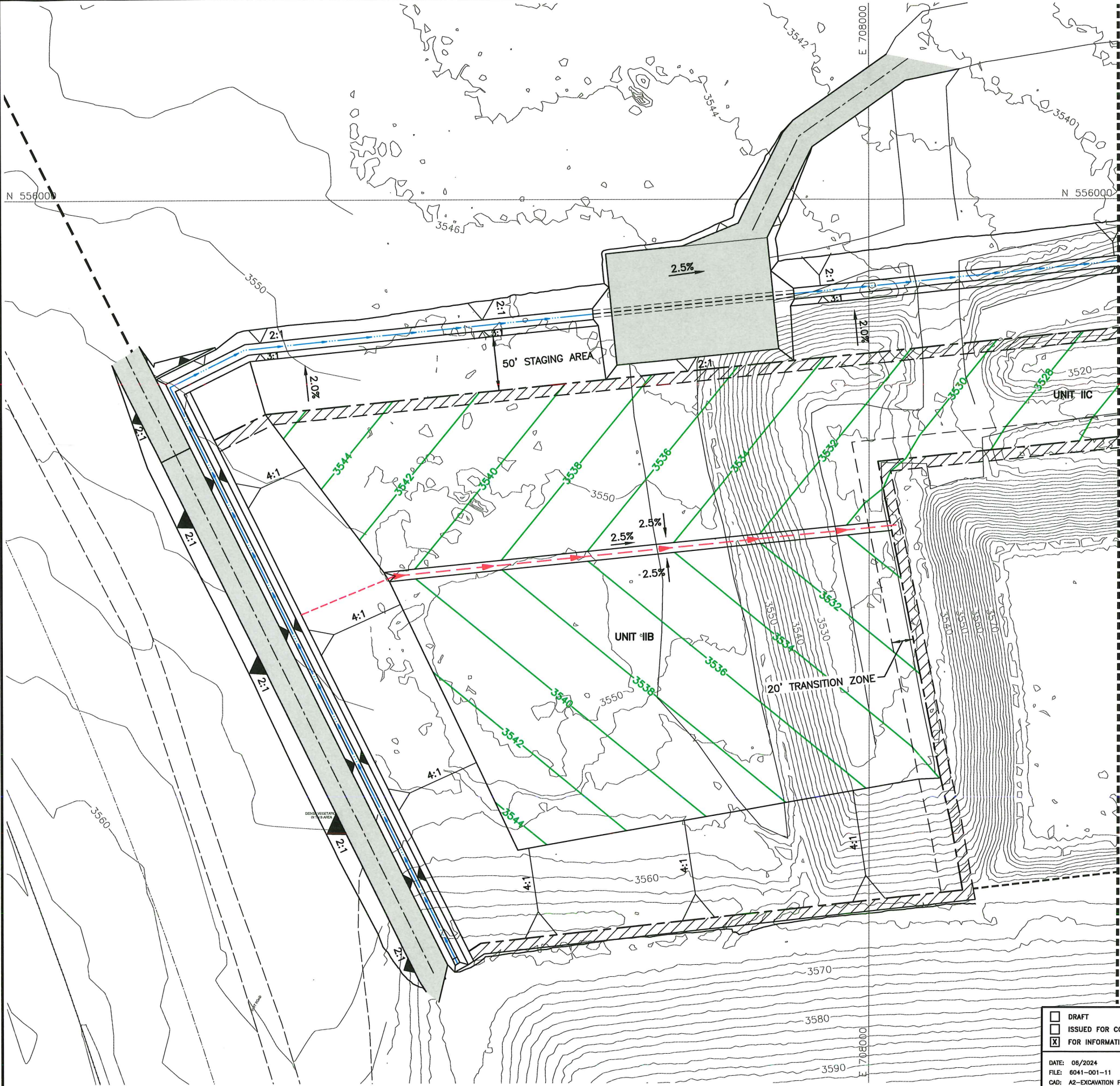
NOTES:

- EXISTING CONTOURS AND ELEVATIONS PROVIDED BY PETTIGREW & ASSOCIATES P.A. FROM AERIAL PHOTOGRAPHY, DATED 12-06-2023. REMAINING CONTOURS OUTSIDE THE PROJECT AREA WERE PROVIDED BY PARKHILL, SMITH & COOPER (PSC) COMPILED FROM AERIAL PHOTOGRAPHY FLOWN APRIL 2018.



02/17/2025

☐ DRAFT ☐ ISSUED FOR CONSTRUCTION ☒ FOR INFORMATIONAL PURPOSES ONLY		PREPARED FOR		UNIT IIB-C ENGINEERING CERTIFICATION REPORT SITE PLAN	
		LEA LAND, LLC			
DATE: 06/2024 FILE: 6041-001-11 CAD: A1-SITE PLAN.DWG		DRAWN BY: RAA DESIGN BY: TRW REVIEWED BY: KDG		REVISIONS	
		NO. DATE DESCRIPTION		LEA LAND LANDFILL LEA COUNTY, NEW MEXICO	
 Weaver Consultants Group				www.wcgrp.com	
				DRAWING A1	



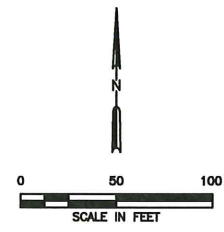
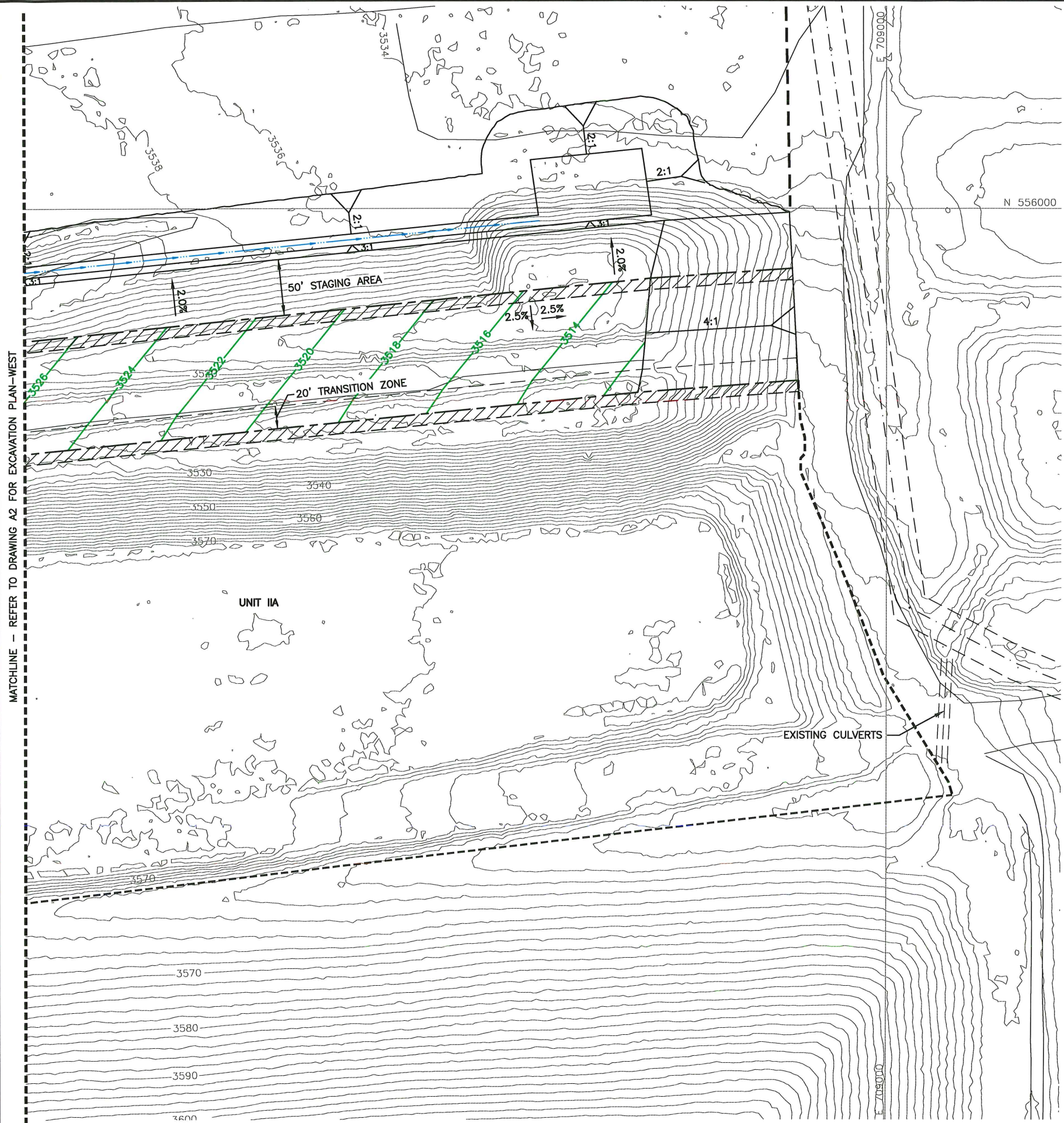
- LEGEND**
- PERMITTED LIMITS OF WASTE
 - CONSTRUCTED LIMITS OF WASTE
 - 3560 --- EXISTING CONTOUR
 - N 556000 STATE PLANE COORDINATE
 - 3540 --- EXCAVATION CONTOUR
 - CHANNEL CENTERLINE
 - LEACHATE CENTERLINE
 - TIE-IN ZONE

- NOTES:**
- EXISTING CONTOURS AND ELEVATIONS PROVIDED BY PETTIGREW & ASSOCIATES P.A. FROM AERIAL PHOTOGRAPHY, DATED 12-06-2023. REMAINING CONTOURS OUTSIDE THE PROJECT AREA WERE PROVIDED BY PARKHILL, SMITH & COOPER (PSC) COMPILED FROM AERIAL PHOTOGRAPHY FLOWN APRIL 2018.



02/17/2025

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Weaver Consultants Group		WWW.WCGRP.COM	
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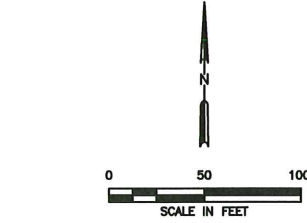
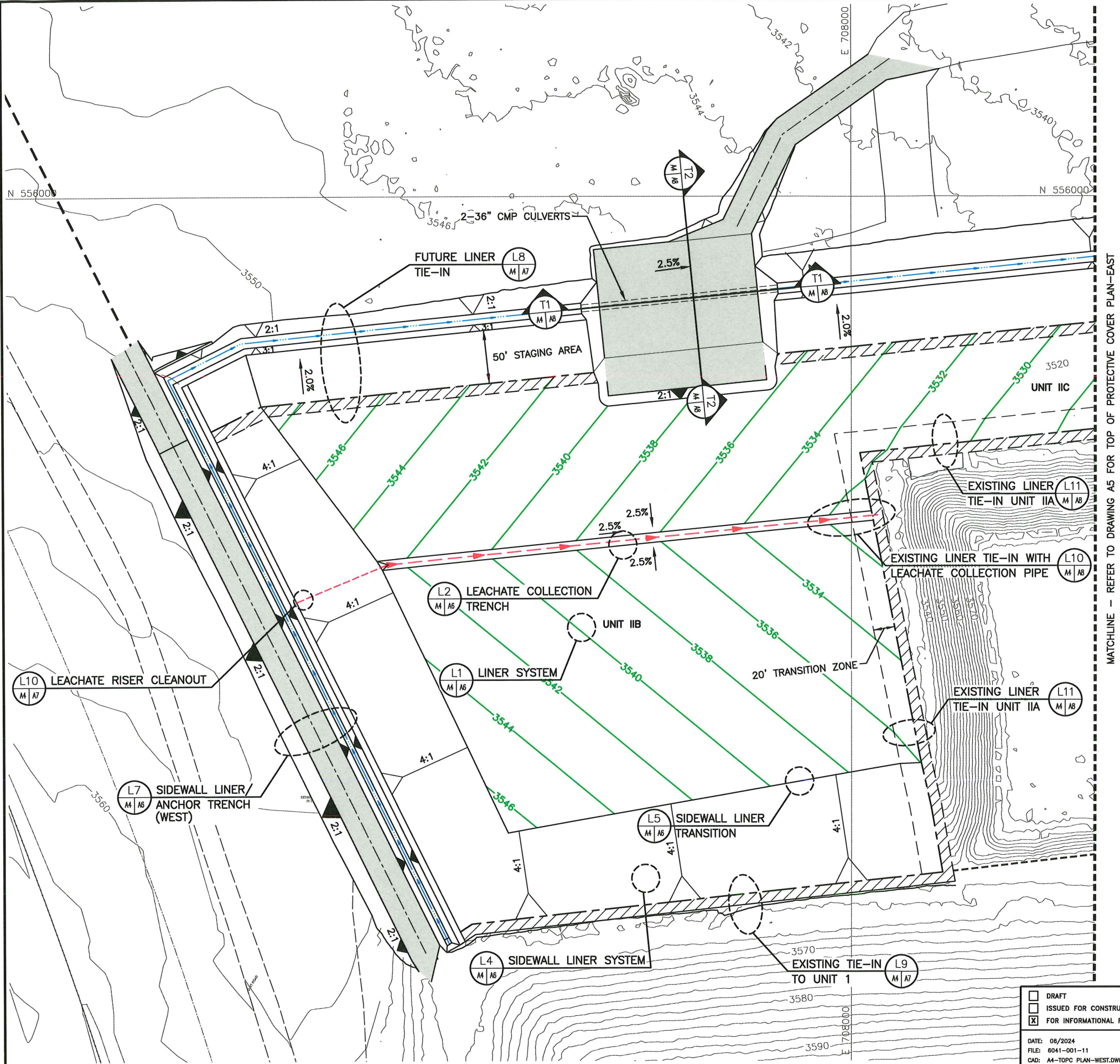
- LEGEND**
- PERMITTED LIMITS OF WASTE
 - - - CONSTRUCTED LIMITS OF WASTE
 - - - EXISTING POWERLINE/EASEMENT
 - 3560--- EXISTING CONTOUR
 - N 556000 STATE PLANE COORDINATE
 - 3540--- EXCAVATION CONTOUR
 - CHANNEL CENTERLINE
 - LEACHATE CENTERLINE
 - /// TIE-IN ZONE

- NOTES:**
1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY PETTIGREW & ASSOCIATES P.A. FROM AERIAL PHOTOGRAPHY, DATED 12-06-2023. REMAINING CONTOURS OUTSIDE THE PROJECT AREA WERE PROVIDED BY PARKHILL, SMITH & COOPER (PSC) COMPILED FROM AERIAL PHOTOGRAPHY FLOWN APRIL 2018.



02/17/2025

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Weaver Consultants Group		REVISIONS											
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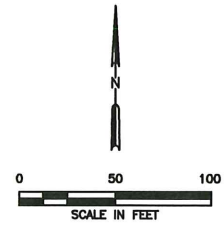
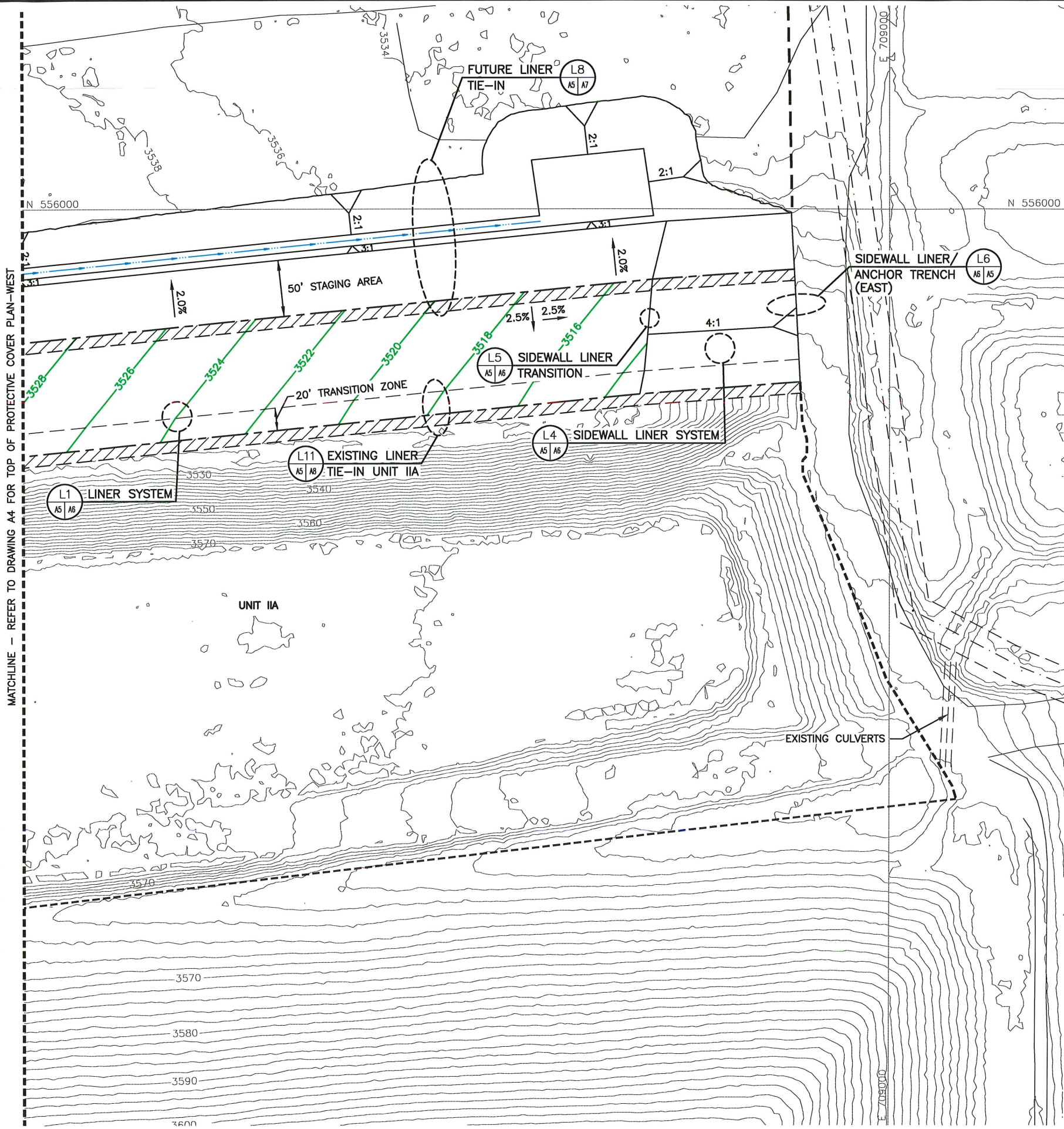


- LEGEND**
- PERMITTED LIMITS OF WASTE
 - CONSTRUCTED LIMITS OF WASTE
 - 3560--- EXISTING CONTOUR
 - N 556000 STATE PLANE COORDINATE
 - 3542--- TOP OF PROTECTIVE COVER CONTOUR
 - CHANNEL CENTERLINE
 - LEACHATE CENTERLINE
 - TIE-IN ZONE

- NOTES:**
- EXISTING CONTOURS AND ELEVATIONS PROVIDED BY PETTIGREW & ASSOCIATES P.A. FROM AERIAL PHOTOGRAPHY, DATED 12-06-2023. REMAINING CONTOURS OUTSIDE THE PROJECT AREA WERE PROVIDED BY PARKHILL, SMITH & COOPER (PSC) COMPILED FROM AERIAL PHOTOGRAPHY FLOWN APRIL 2018.

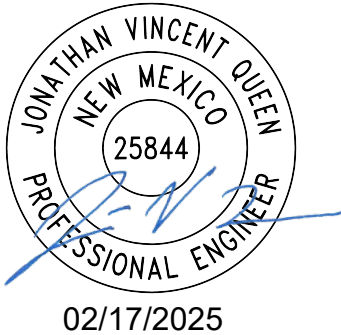
JONATHAN VINCENT QUEEN
NEW MEXICO
25844
PROFESSIONAL ENGINEER
02/17/2025

☐ DRAFT ☐ ISSUED FOR CONSTRUCTION ☒ FOR INFORMATIONAL PURPOSES ONLY		PREPARED FOR		UNIT IIB-C ENGINEERING	
		LEA LAND, LLC		CERTIFICATION REPORT	
				TOP OF PROTECTIVE COVER PLAN-WEST	
DATE: 08/2024		DRAWN BY: RAA		LEA LAND LANDFILL	
FILE: 6041-001-11		DESIGN BY: TRW		LEA COUNTY, NEW MEXICO	
CAD: A4-TOPC PLAN-WEST.DWG		REVIEWED BY: KOG			
 Weaver Consultants Group		REVISIONS			
		NO.	DATE	DESCRIPTION	
				WWW.WCGRP.COM	DRAWING A4

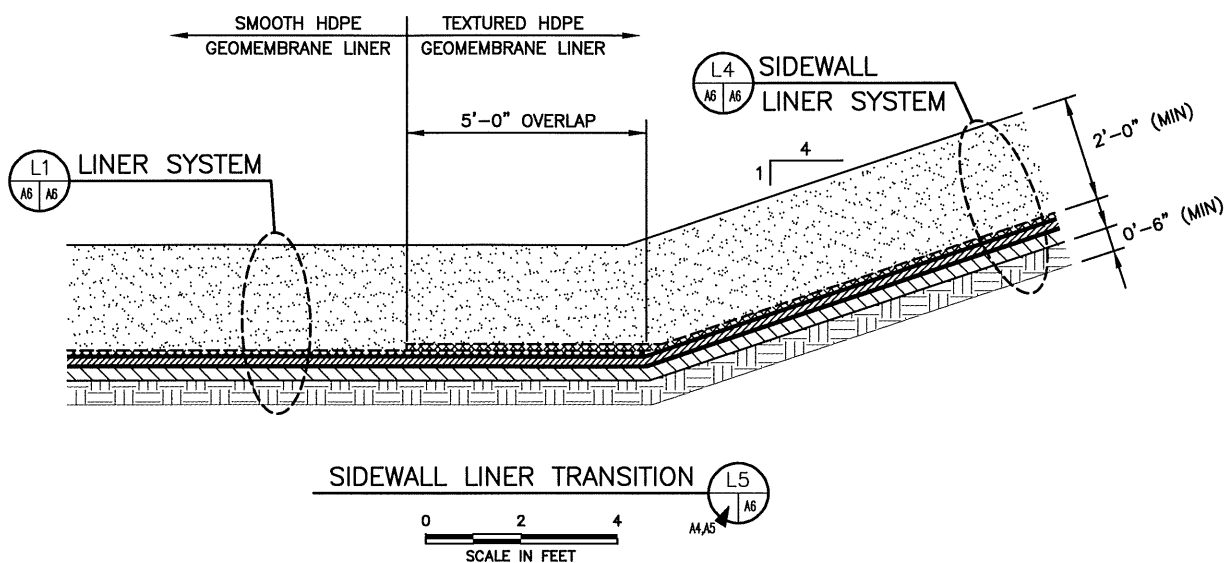
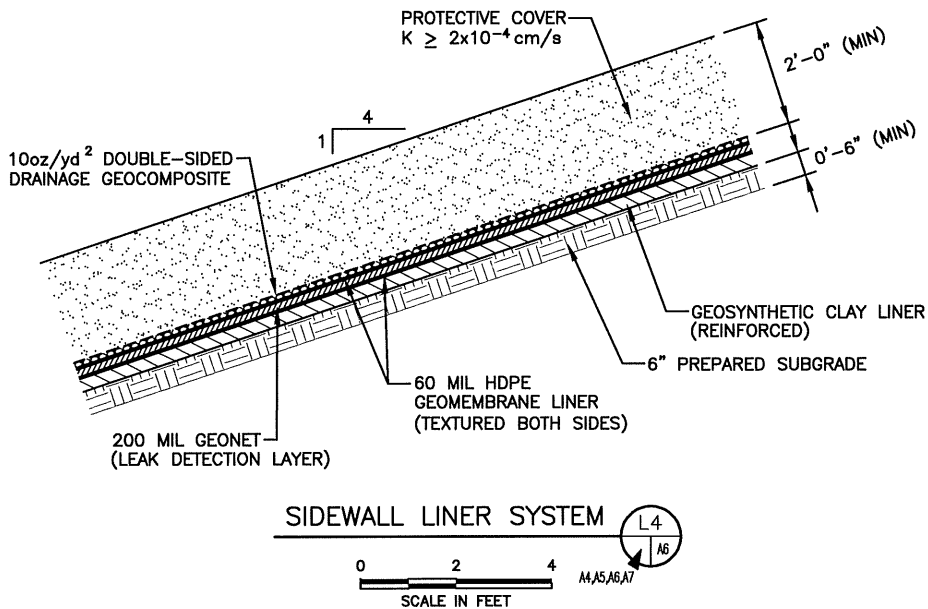
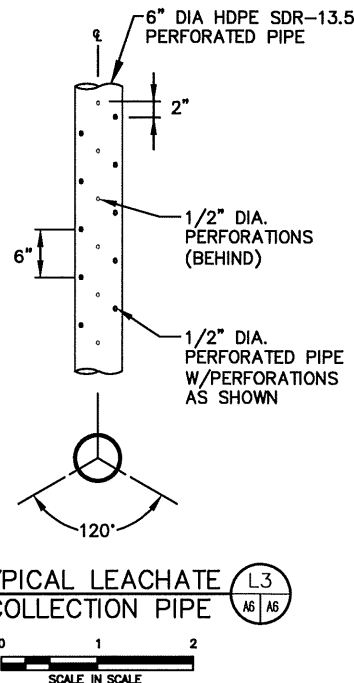
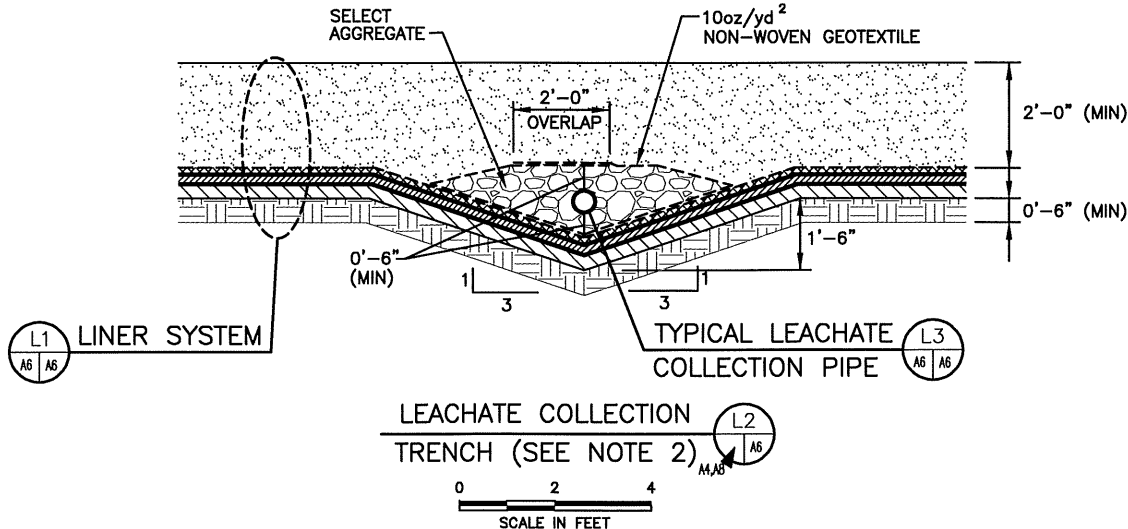
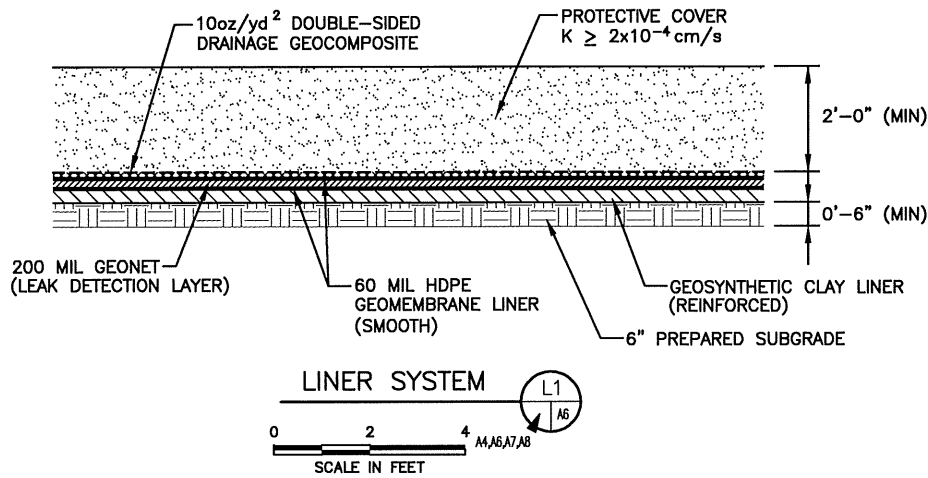


- LEGEND**
- PERMITTED LIMITS OF WASTE
 - CONSTRUCTED LIMITS OF WASTE
 - EXISTING POWERLINE/EASEMENT
 - 3560 EXISTING CONTOUR
 - N 556000 STATE PLANE COORDINATE
 - 3520 TOP OF PROTECTIVE COVER CONTOUR
 - CHANNEL CENTERLINE
 - LEACHATE CENTERLINE
 - TIE-IN ZONE

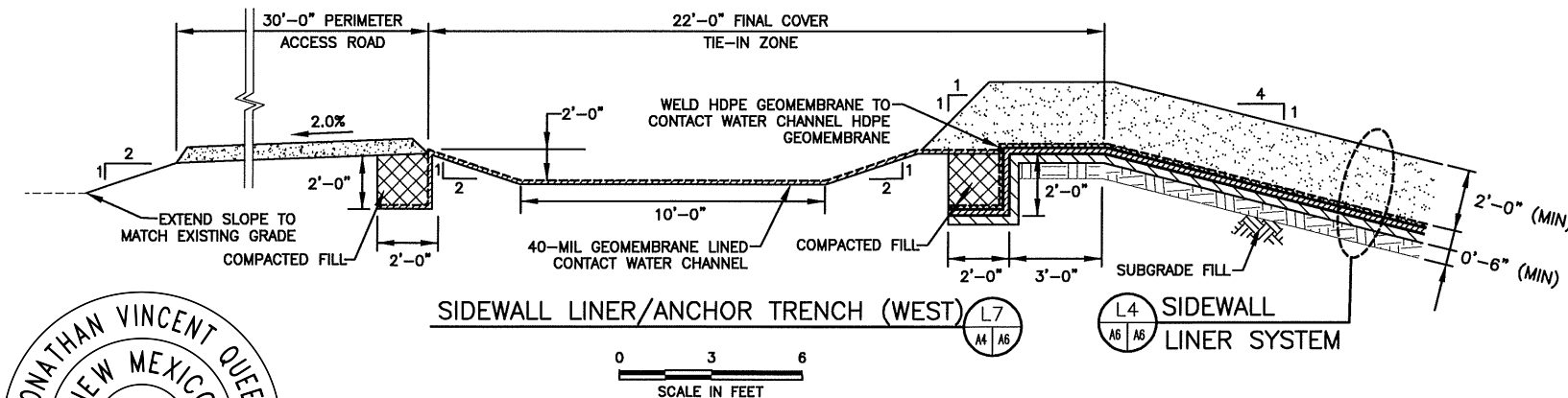
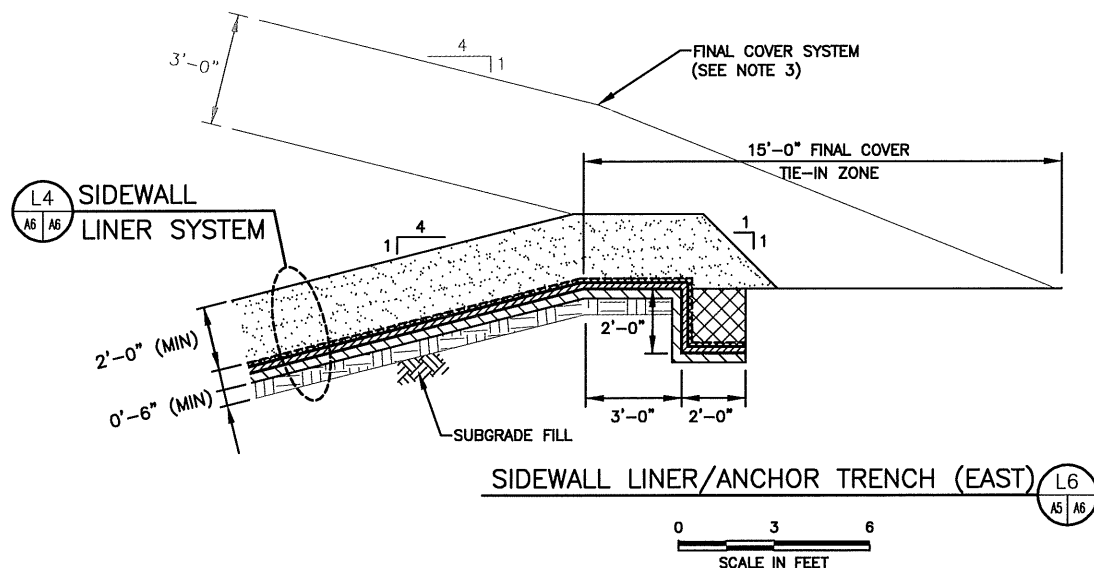
- NOTES:**
1. EXISTING CONTOURS AND ELEVATIONS PROVIDED BY PETTIGREW & ASSOCIATES P.A. FROM AERIAL PHOTOGRAPHY, DATED 12-06-2023. REMAINING CONTOURS OUTSIDE THE PROJECT AREA WERE PROVIDED BY PARKHILL, SMITH & COOPER (PSC) COMPILED FROM AERIAL PHOTOGRAPHY FLOWN APRIL 2018.



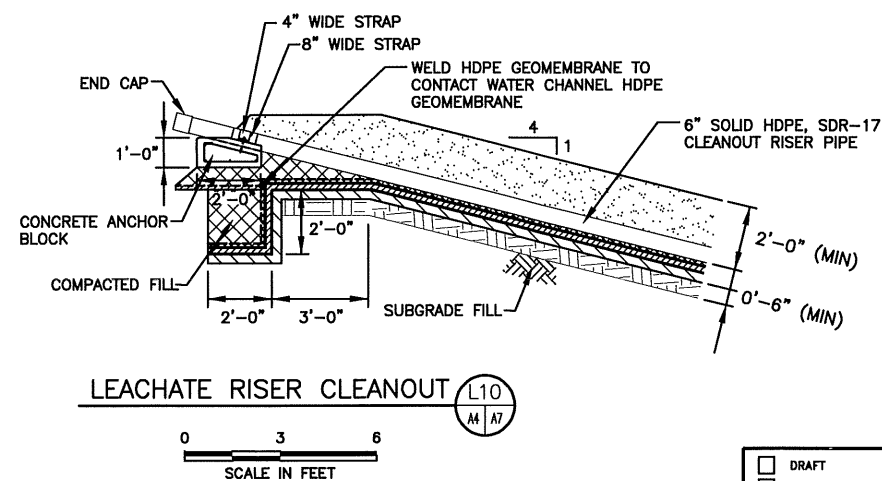
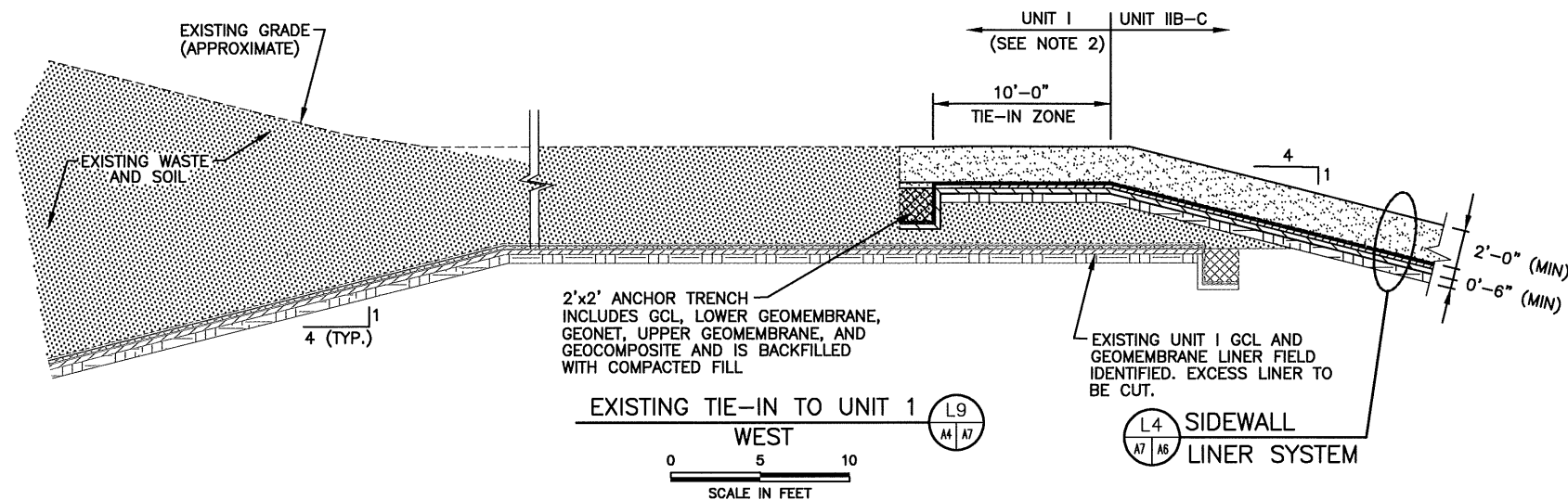
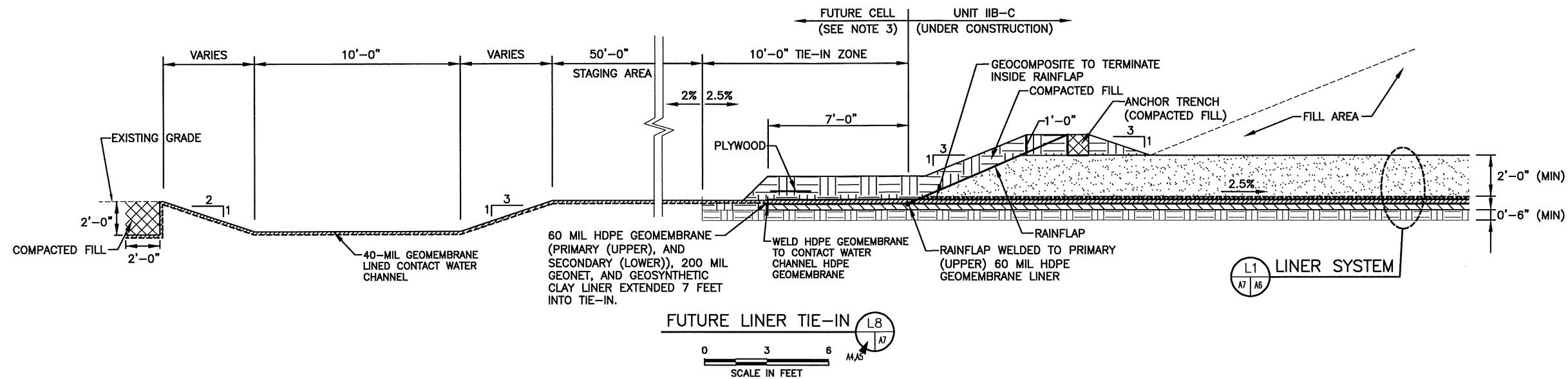
☐ DRAFT ☐ ISSUED FOR CONSTRUCTION ☒ FOR INFORMATIONAL PURPOSES ONLY		PREPARED FOR		UNIT IIB-C ENGINEERING CERTIFICATION REPORT TOP OF PROTECTIVE COVER PLAN-EAST		
		LEA LAND, LLC				
DATE: 06/2024		DRAWN BY: RAA		LEA LAND LANDFILL LEA COUNTY, NEW MEXICO		
FILE: 6041-001-11		DESIGN BY: TRW				
CAD: A5-TOPC PLAN-EAST.DWG		REVIEWED BY: KDG				
 Weaver Consultants Group		REVISIONS		WWW.WCGRP.COM		
		NO.	DATE			DESCRIPTION
				DRAWING A5		



- NOTES:
1. REFER TO THE CQA PLAN FOR GEOMEMBRANE, GEOCOMPOSITE, GEOTEXTILE WRAP, AND DRAINAGE AGGREGATE MATERIAL REQUIREMENTS.
 2. LEACHATE COLLECTION TRENCH DIMENSIONS REVISED TO ACCOMMODATE INDUSTRY STANDARD 15-FOOT WIDE GEOTEXTILE.
 3. FINAL COVER SYSTEM IS SHOWN FOR VISUAL PURPOSES ONLY.



☐ DRAFT ☐ ISSUED FOR CONSTRUCTION ☒ FOR INFORMATIONAL PURPOSES ONLY		PREPARED FOR		UNIT IIB-C ENGINEERING CONSTRUCTION REPORT LINER, LEACHATE COLLECTION SYSTEM, AND LEAK DETECTION DETAILS	
		LEA LAND, LLC			
DATE: 08/2024		DRAWN BY: RAA		LEA LAND LANDFILL LEA COUNTY, NEW MEXICO	
FILE: 6041-01-11		DESIGN BY: TRW			
CAD: A6-LINER SYSTEM DETAILS.DWG		REVIEWED BY: KDG			
 Weaver Consultants Group		REVISIONS			
		NO.	DATE	DESCRIPTION	
				www.wcgrp.com	
				DRAWING A6	

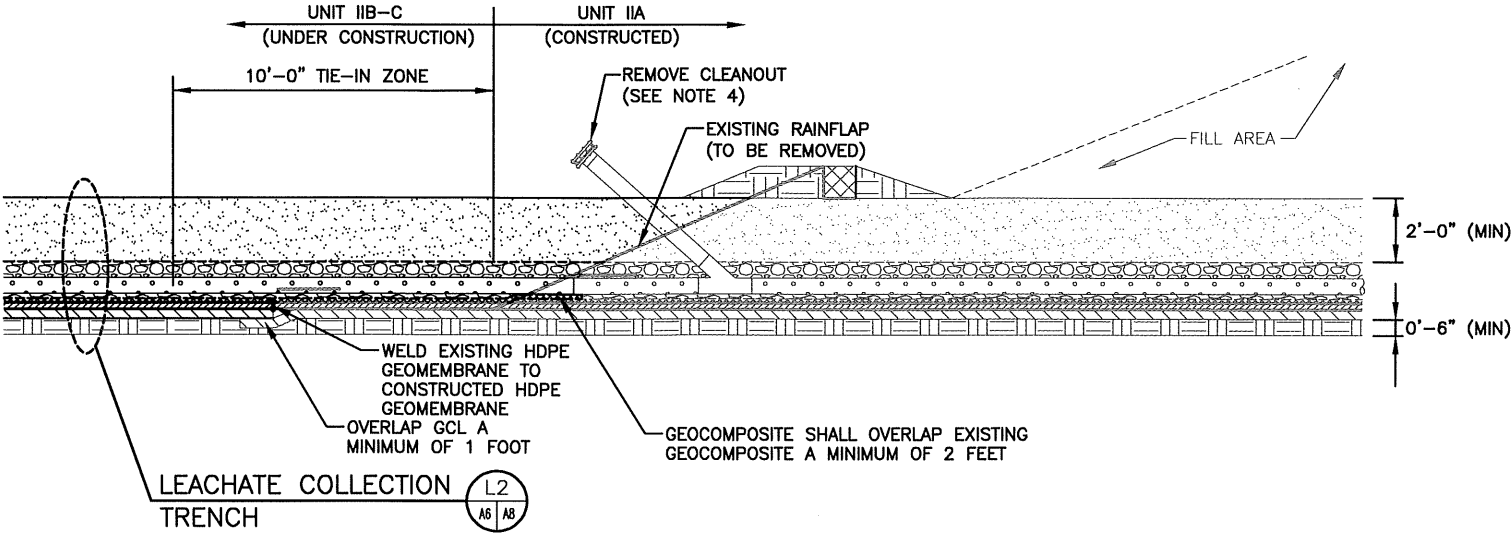


NOTES:

1. REFER TO THE CQA PLAN FOR GEOMEMBRANE, GEOCOMPOSITE, GEOTEXTILE WRAP, AND DRAINAGE MATERIAL REQUIREMENTS.
2. CONTRACTOR TO IDENTIFY THE TIE-IN SO THAT THE CONTRACTOR'S SURVEYOR CAN TAKE THE NECESSARY SURVEY SHOTS TO CONFIRM THE CURRENT LOCATION OF THE TIE-IN. IDENTIFYING THE EDGE OF CLAY OR GEOSYNTHETIC LINER IS NOT REQUIRED. THE CONTRACTOR SHALL WORK WITH THE OWNER AND CQA REPRESENTATIVE TO IDENTIFY THE EDGE OF WASTE IN THE AREA SHOWN ON THE DETAIL. THE TIE-IN SHOULD OVERLAP/SHINGLE THE EDGE OF WASTE TO THE SOUTH. THE TIE-IN AREA SHOULD BE A MINIMUM OF 10 FEET IN WIDTH AND MUST BE MAINTAINED AND DRY FOR GEOSYNTHETIC INSTALLATION.

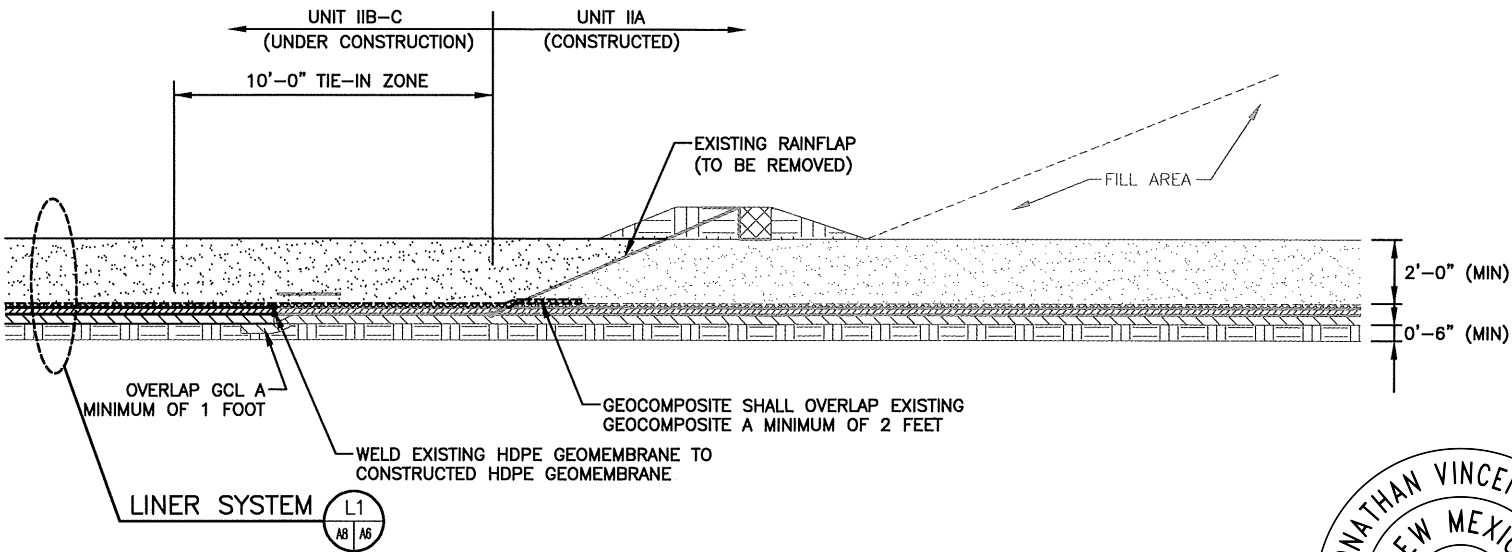


☐ DRAFT ☐ ISSUED FOR CONSTRUCTION ☒ FOR INFORMATIONAL PURPOSES ONLY		PREPARED FOR		UNIT IIB-C ENGINEERING CONSTRUCTION REPORT LINER, LEACHATE COLLECTION SYSTEM, AND LEAK DETECTION DETAILS	
		LEA LAND, LLC			
DATE: 06/2024		DRAWN BY: RAA		LEA LAND LANDFILL LEA COUNTY, NEW MEXICO	
FILE: 6041-01-11		DESIGN BY: TRW			
CAD: A7-LINER SYSTEM DETAILS.DWG		REVIEWED BY: KDG			
 Weaver Consultants Group		REVISIONS			
		NO.	DATE	DESCRIPTION	
				WWW.WCGRP.COM	
				DRAWING A7	



EXISTING LINER TIE-IN WITH
LEACHATE COLLECTION PIPE

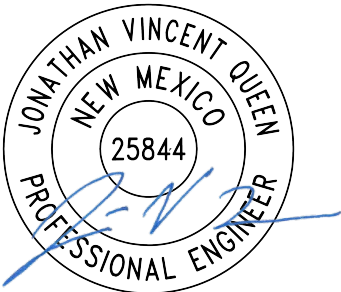
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SCALE IN FEET



EXISTING LINER TIE-IN

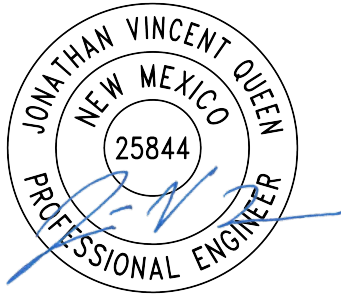
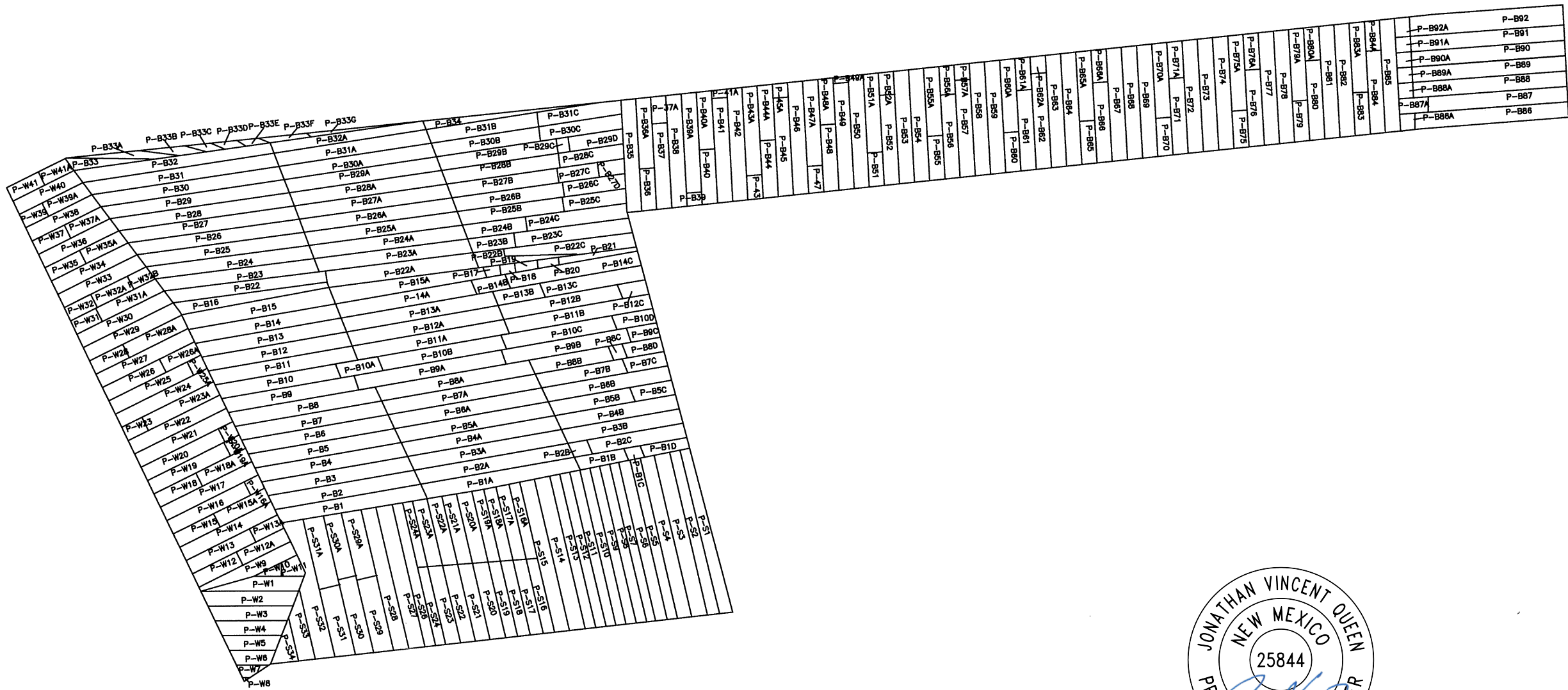
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SCALE IN FEET

- NOTES:
1. REFER TO THE CQA PLAN FOR GEOMEMBRANE, GEOCOMPOSITE, GEOTEXTILE WRAP, AND DRAINAGE AGGREGATE MATERIAL REQUIREMENTS.
 2. LEACHATE COLLECTION TRENCH DIMENSIONS REVISED TO ACCOMMODATE INDUSTRY STANDARD 15-FOOT WIDE GEOTEXTILE.
 3. PROTECTIVE COVER FOR FUTURE CELLS WILL NEED TO BE CERTIFIED PAST THE EDGE OF THE 10-FOOT TIE-IN ZONE TO THE LIMITS OF UNIT IIA.
 4. CLEANOUT RISER TO BE SAWED OFF AT THE BASE OF THE 45 DEGREE CONNECTION.



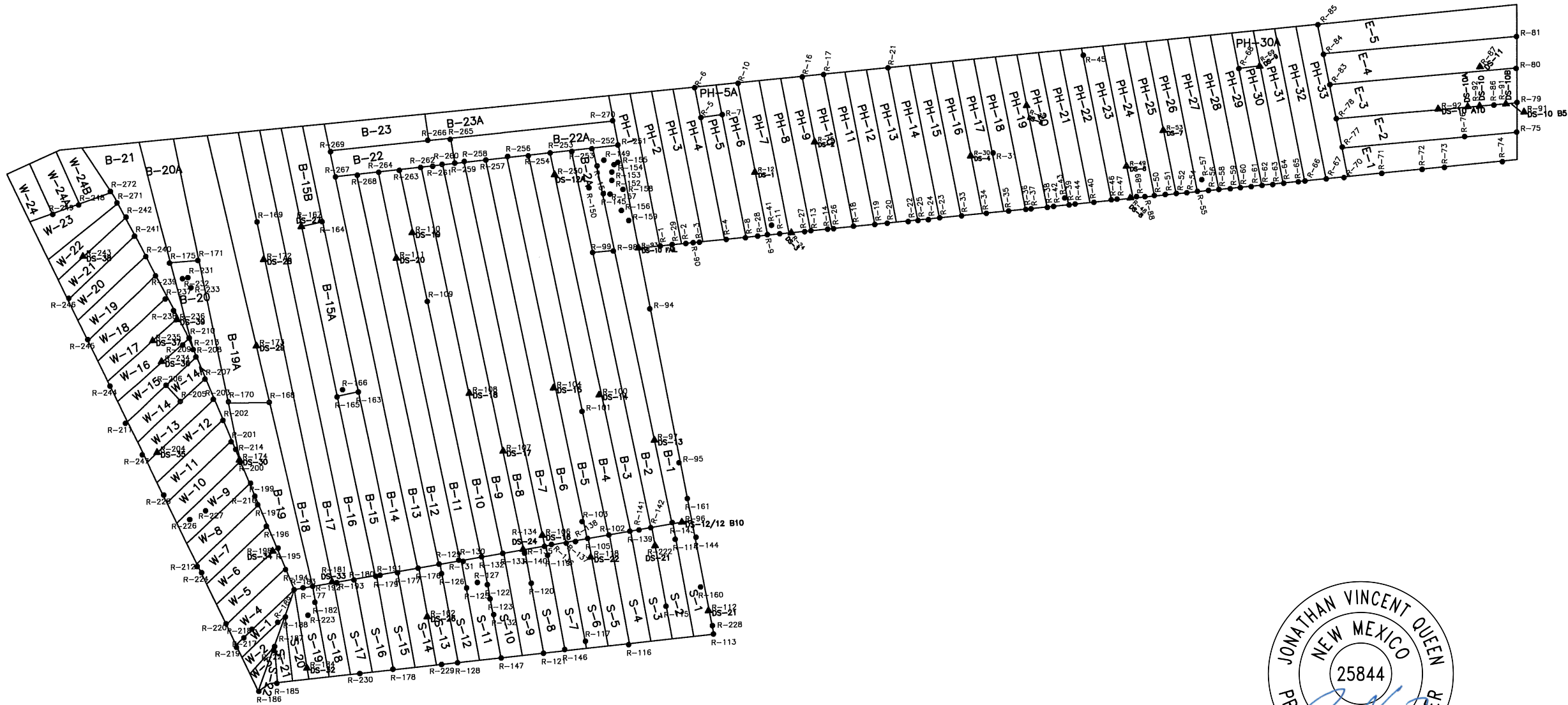
02/17/2025

☐ DRAFT ☐ ISSUED FOR CONSTRUCTION ☒ FOR INFORMATIONAL PURPOSES ONLY		PREPARED FOR LEA LAND, LLC		UNIT IIB-C ENGINEERING CONSTRUCTION REPORT LINER, LEACHATE COLLECTION SYSTEM, AND LEAK DETECTION DETAILS LEA LAND LANDFILL LEA COUNTY, NEW MEXICO			
DATE: 06/2024 FILE: 6041-01-11 CAD: A8-LINER SYSTEM DETAILS.DWG		DRAWN BY: RAA DESIGN BY: TRW REVIEWED BY: KDG					
REVISIONS							
NO.		DATE				DESCRIPTION	
 Weaver Consultants Group							
				WWW.WCGRP.COM			
				DRAWING A8			



02/17/2025

☐ DRAFT ☐ ISSUED FOR CONSTRUCTION ☒ FOR INFORMATIONAL PURPOSES ONLY	PREPARED FOR LEA LAND, LLC	UNIT IIB-C ENGINEERING CERTIFICATION REPORT GCL PANEL LAYOUT	
DATE: 12/2024 FILE: 6041-002-11 CAD: A9-GCL PANEL LAYOUT.DWG	DRAWN BY: RAA DESIGN BY: TW REVIEWED BY: KDG	LEA LAND LANDFILL LEA COUNTY, NEW MEXICO	
Weaver Consultants Group		WWW.WCGRP.COM	DRAWING A9



N.T.S.

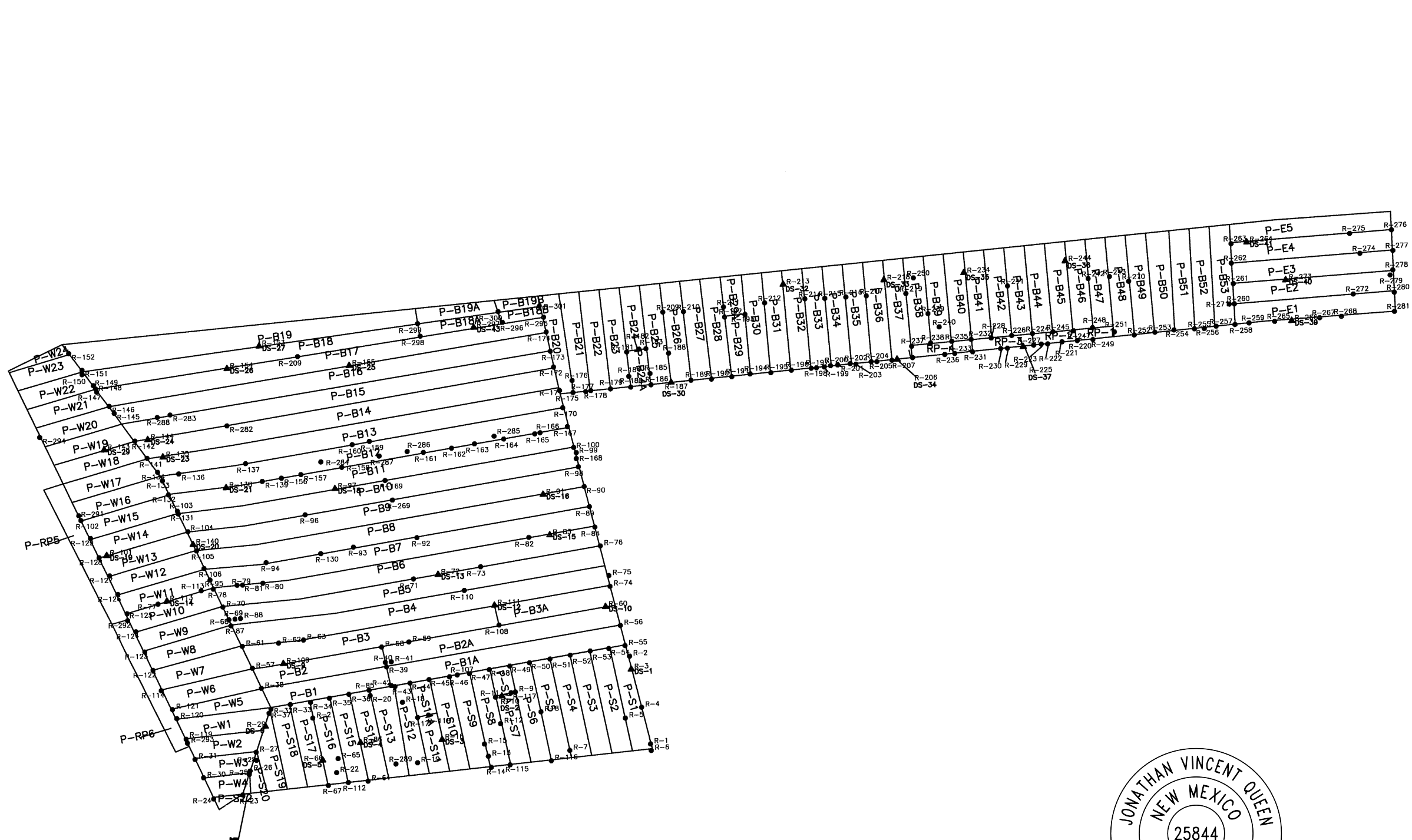
LEGEND

- PH-27 PANEL NUMBER
● R-45 REPAIR LOCATION/NUMBER
▲ R-87 DESTRUCTIVE SEAM TEST
DS-11 LOCATION WITH REPAIR NUMBER



02/17/2025

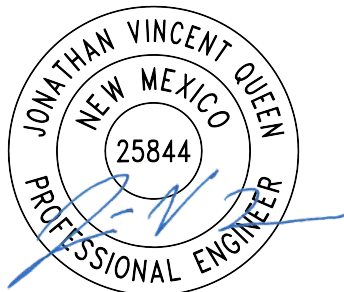
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DATE: 12/2024 FILE: 6041--002--11 CAD: A10--PRIMARY PANEL LAYOUT.DWG		DRAWN BY: RAA DESIGN BY: TW REVIEWED BY: KDG			
 Weaver Consultants Group		REVISIONS			
		NO.	DATE	DESCRIPTION	
				WWW.WCGRP.COM	DRAWING A10



N.T.S.

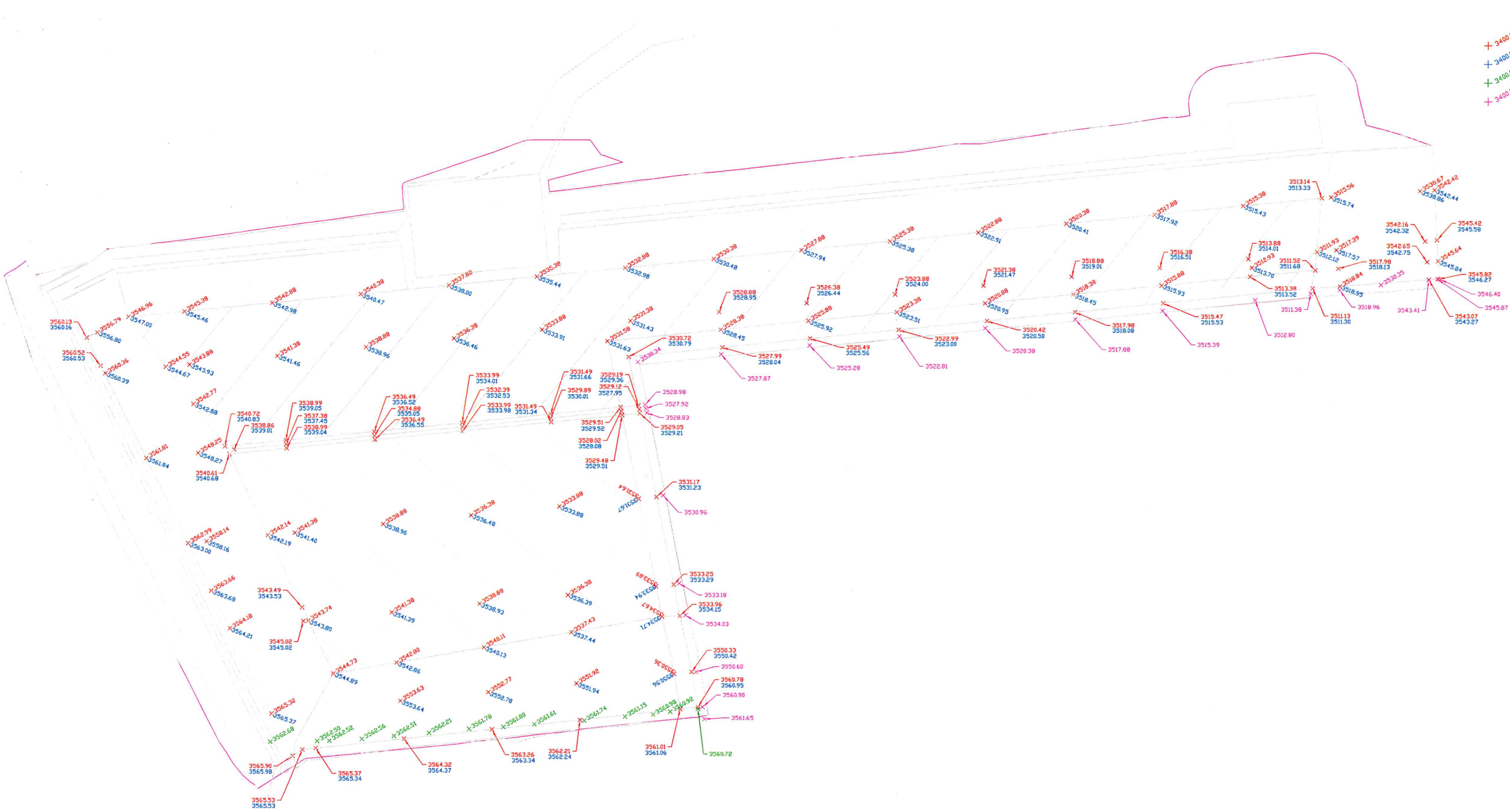
LEGEND

PH-27	PANEL NUMBER
R-275	REPAIR LOCATION/NUMBER
▲R-154 BS-28	DESTRUCTIVE SEAM TEST LOCATION WITH REPAIR NUMBER

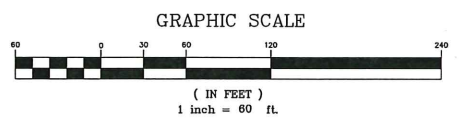


02/17/2025

☐ DRAFT ☐ ISSUED FOR CONSTRUCTION ☒ FOR INFORMATIONAL PURPOSES ONLY		PREPARED FOR LEA LAND, LLC		UNIT IIB-C ENGINEERING CERTIFICATION REPORT SECONDARY PANEL AND REPAIRS LAYOUT	
DATE: 12/2024 FILE: 6041-002-11 CAD: A11-SECONDARY PANEL LAYOUT.DWG		DRAWN BY: RAA DESIGN BY: TW REVIEWED BY: KDG		LEA LAND FILLFILL LEA COUNTY, NEW MEXICO	
REVISIONS					
NO.	DATE	DESCRIPTION			
 Weaver Consultants Group		www.wcgrp.com		DRAWING A11	



- LEGEND
- + 3400.00 = DESIGN LAYER
 - + 3400.00 = AS-BUILT LAYER
 - + 3400.00 = CELL 1 LINER
 - + 3400.00 = EDGE OF LINER

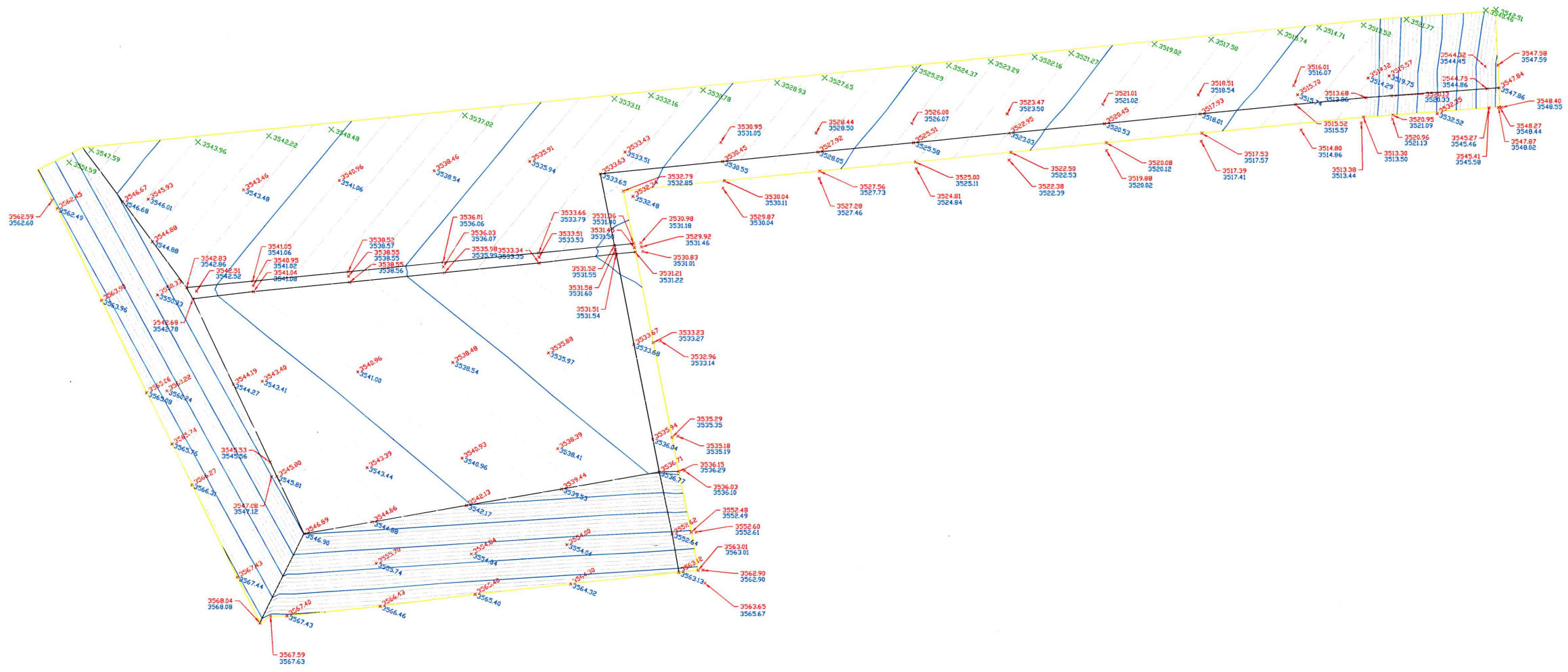


18213 E WARNER ROAD
BLDG A SUITE 5
GILBERT, AZ 85296
PHONE: (480) 414-4121
FAX: (480) 870-0203
EMAIL: sburney@gs-az.com

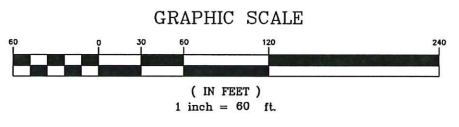


LEA LAND CELL 2B 2C	DRAWN: CH	PROJECT NO. 24_053ENV
HOBBS, NEW MEXICO	CHECKED: -	SHEET NUMBER 1
SUBGRADE EXHIBIT	DATE: 06/12/2024	1 OF 1
	DWG: -	

REV.	DATE	BY



LEGEND
+ 3400.00 = DESIGN LAYER
+ 3400.00 = AS-BUILT LAYER
+ 3400.00 = EDGE OF LINER



18213 E WARNER ROAD
BLDG A SUITE 5
GILBERT, AZ 85296
PHONE (480) 414-4121
EMAIL: s3survey@cs-sz.com



DRAWN: CH
CHECKED: -
DATE: 11/11/2024
DWG: -

LEA LAND CELL 2B 2C
HOBBS, NEW MEXICO
OPS EXHIBIT

PROJECT NO.
24_053ENV
SHEET NUMBER
1
OF 1

APPENDIX B

**WEST BERM AND COMPACTED SUBGRADE
SOIL TESTING INFORMATION**

Includes pages B-1 through B-8

CONTENTS

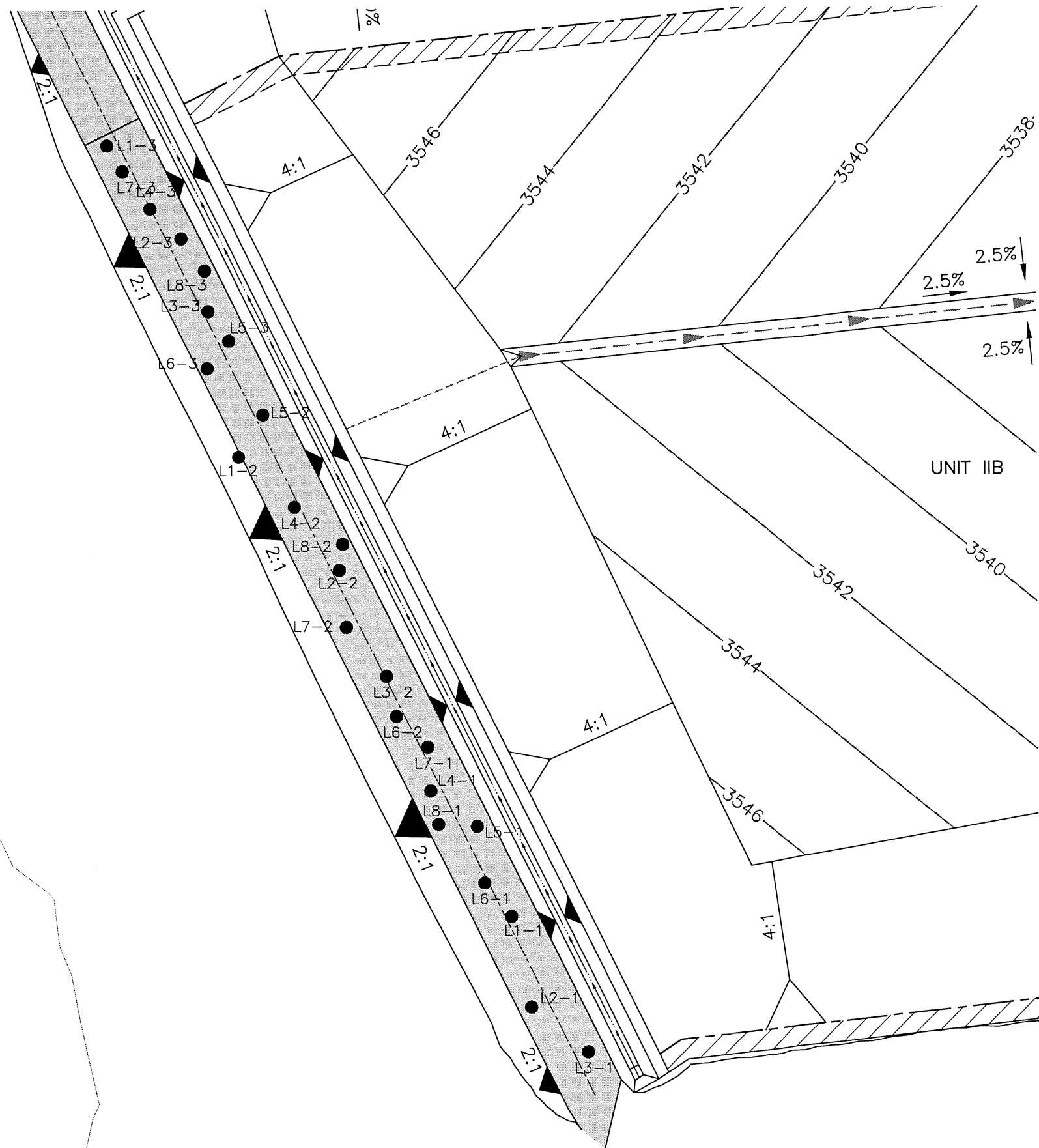
Nuclear Density Test Summary	B-1
Borrow Sample Information	B-6

**LEA LAND LANDFILL
WEST BERM CONSTRUCTION
NUCLEAR DENSITY TEST SUMMARY
LIFTS 1-8**

TEST NO. ²	TEST DATE	PROCTOR ID ¹	MOISTURE CONTENT, %	DRY DENSITY, PCF	COMPACTION, %	PASS/ FAIL
L1-1	04/29/24	CL-6	7.8	106.7	94.9%	Pass
L1-2	04/29/24	CL-6	9.7	110.7	98.5%	Pass
L1-3	04/29/24	CL-6	13.4	107.3	95.5%	Pass
L2-1	04/29/24	CL-6	7.8	104.5	93.0%	Pass
L2-2	04/29/24	CL-6	8.1	104.9	93.3%	Pass
L2-3	04/29/24	CL-6	8.2	105.2	93.6%	Pass
L3-1	04/30/24	CL-6	8.3	105.3	93.7%	Pass
L3-2	04/30/24	CL-6	8.5	107.7	95.8%	Pass
L3-3	04/30/24	CL-6	8.5	106.0	94.3%	Pass
L4-1	04/30/24	CL-6	8.9	103.8	92.3%	Pass
L4-2	04/30/24	CL-6	8.1	102.1	90.8%	Pass
L4-3	04/30/24	CL-6	8.5	103.6	92.2%	Pass
L5-1	04/30/24	CL-6	9.8	102.8	91.5%	Pass
L5-2	04/30/24	CL-6	8.7	103.2	91.8%	Pass
L5-3	04/30/24	CL-6	9.2	103.5	92.1%	Pass
L6-1	05/01/24	CL-6	10.9	101.7	90.5%	Pass
L6-2	05/01/24	CL-6	8.2	102.7	91.4%	Pass
L6-3	05/01/24	CL-6	9.4	101.3	90.1%	Pass
L7-1	05/02/24	CL-6	7.9	111.5	99.2%	Pass
L7-2	05/02/24	CL-6	9.9	104.0	92.5%	Pass
L7-3	05/02/24	CL-6	8.7	106.8	95.0%	Pass
L8-1	05/02/24	CL-6	10.5	103.5	92.1%	Pass
L8-2	05/02/24	CL-6	10.8	104.8	93.2%	Pass
L8-3	05/02/24	CL-6	11.1	104.1	92.6%	Pass

¹ Proctor CL-6: Maximum Dry Density = 112.4 pcf; Optimum Moisture Content = 16.3%

² See Sheet B2 for test locations.



- LEGEND**
- PERMITTED LIMITS OF WASTE
 - CONSTRUCTED LIMITS OF WASTE
 - EXISTING POWERLINE/EASEMENT
 - 3560 --- EXISTING CONTOUR
 - N 556000 STATE PLANE COORDINATE
 - 3540 --- EXCAVATION CONTOUR
 - CHANNEL CENTERLINE
 - LEACHATE CENTERLINE
 - /// TIE-IN ZONE
 - L1-1 NDT LOCATION



☐ DRAFT ☒ FOR INFORMATIONAL PURPOSES ONLY ☐ ISSUED FOR CONSTRUCTION	PREPARED FOR LEA LAND, LLC	UNIT IIB-C ENGINEERING CERTIFICATION REPORT WEST BERM NUCLEAR DENSITY TEST (NDT) LOCATIONS LEA LAND LANDFILL LEA COUNTY, NEW MEXICO				
DATE: 01/2025 FILE: 6041-001-11 CAD: B2-EAST BERM NDT LOCATIONS.DWG	DRAWN BY: RAA DESIGN BY: AWB REVIEWED BY: AWB			REVISIONS		
				NO.	DATE	DESCRIPTION
Weaver Consultants Group				WWW.WCGRP.COM	DRAWING B-2	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
NUCLEAR DENSITY TEST SUMMARY
SUBGRADE**

TEST NO. ²	TEST DATE	PROCTOR ID ¹	MOISTURE CONTENT, %	DRY DENSITY, PCF	COMPACTION, %	PASS/ FAIL
L1-1	06/11/24	CL-1	3.3	106.8	91.1%	Pass
L1-2	06/11/24	CL-1	3.5	106.4	90.7%	Pass
L1-3	06/11/24	CL-1	3.6	106.2	90.5%	Pass
L1-4	06/11/24	CL-1	3.3	106.4	90.7%	Pass
L1-5	06/11/24	CL-1	3.8	106.0	90.3%	Pass
L1-6	06/11/24	CL-1	3.5	105.8	90.2%	Pass
L1-7	06/11/24	CL-1	3.0	105.7	90.0%	Pass
L1-8	06/11/24	CL-1	3.4	105.8	90.2%	Pass
L1-9	06/11/24	CL-1	3.1	107.3	91.5%	Pass
L1-10	06/11/24	CL-1	3.3	106.8	91.0%	Pass
L1-11	06/11/24	CL-1	3.3	105.6	90.0%	Pass
L1-12	06/11/24	CL-1	2.9	106.7	91.0%	Pass
L1-13	06/11/24	CL-1	3.6	105.6	90.0%	Pass
L1-14	06/11/24	CL-1	3.3	105.5	90.0%	Pass
L1-15	06/11/24	CL-1	3.1	105.8	90.2%	Pass
L1-16	06/11/24	CL-1	2.9	105.5	90.0%	Pass
L1-17	06/11/24	CL-1	3.4	107.4	91.6%	Pass
L1-18	06/11/24	CL-1	3.5	108.4	92.4%	Pass
L1-19	06/11/24	CL-1	4.5	107.4	91.5%	Pass
L1-20	06/11/24	CL-1	3.2	106.8	91.1%	Pass
L1-21	06/11/24	CL-1	3.0	108.0	92.0%	Pass
L1-22	06/11/24	CL-1	3.7	105.6	90.0%	Pass
L1-23	06/11/24	CL-1	2.8	90.2	105.8%	Pass
L1-24	06/11/24	CL-1	4.1	106.0	90.4%	Pass
L1-25	06/11/24	CL-1	3.2	105.5	90.0%	Pass

¹ Proctor CL-1: Maximum Dry Density = 117.3 pcf; Optimum Moisture Content = 12.5%

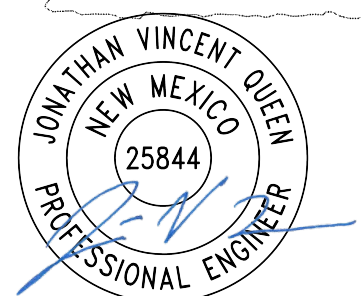
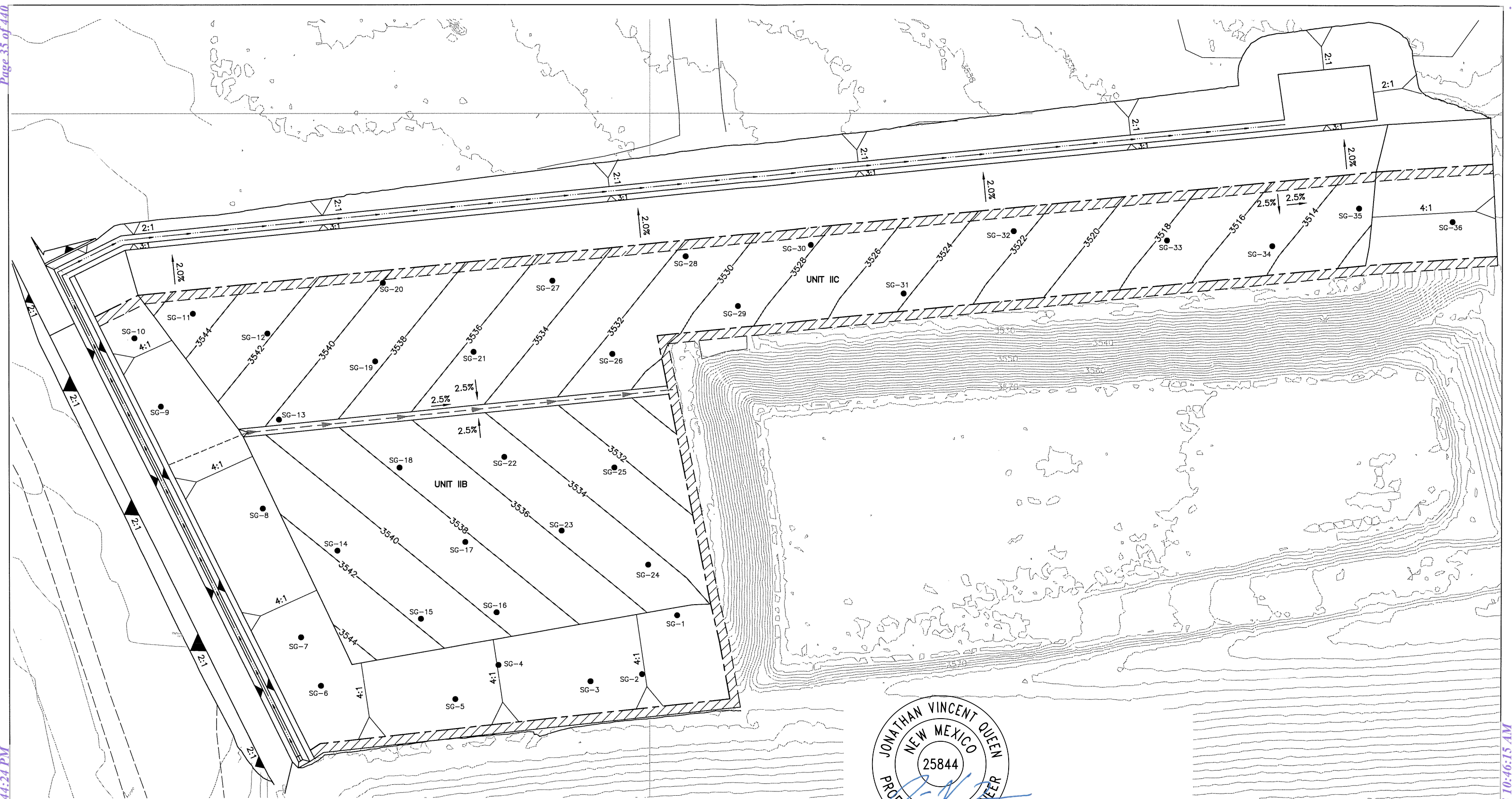
² See Sheet B5 for test locations.

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
NUCLEAR DENSITY TEST SUMMARY
SUBGRADE**

TEST NO. ²	TEST DATE	PROCTOR ID ¹	MOISTURE CONTENT, %	DRY DENSITY, PCF	COMPACTION, %	PASS/ FAIL
L1-26	6/11/2024	CL-1	3.8	110.2	93.90%	PASS
L1-27	6/11/2024	CL-1	2.6	108	92.10%	PASS
L1-28	6/11/2024	CL-1	3.5	107	91.20%	PASS
L1-29	6/11/2024	CL-1	2.5	107.3	91.50%	PASS
L1-30	6/11/2024	CL-1	3.4	105.6	90.10%	PASS
L1-31	6/11/2024	CL-1	3.1	105.9	90.30%	PASS
L1-32	6/11/2024	CL-1	3.9	110.1	93.90%	PASS
L1-33	6/11/2024	CL-1	4	110.8	94.50%	PASS
L1-34	6/11/2024	CL-1	3.5	110.4	94.10%	PASS
L1-35	6/11/2024	CL-1	4	110.5	94.20%	PASS
L1-36	6/11/2024	CL-1	3.9	110.5	94.20%	PASS

¹ Proctor CL-1: Maximum Dry Density = 117.3 pcf; Optimum Moisture Content = 12.5%

² See Sheet B5 for test locations.



02/17/2025

☐ DRAFT ☒ FOR INFORMATIONAL PURPOSES ONLY ☐ ISSUED FOR CONSTRUCTION		PREPARED FOR LEA LAND, LLC		UNIT IIB-C ENGINEERING CERTIFICATION REPORT SUBGRADE NUCLEAR DENSITY TEST (NDT) LOCATIONS LEA LAND LANDFILL LEA COUNTY, NEW MEXICO	
DATE: 01/2025 FILE: 6041-001-11 CAD: B5-SUBGRADE NDT LOCATIONS.DWG		DRAWN BY: RAA DESIGN BY: AWB REVIEWED BY: AWB		 Weaver Consultants Group	
REVISIONS					
NO.	DATE	DESCRIPTION			
 Weaver Consultants Group		www.wcgrp.com		DRAWING B-5	

BORROW SAMPLE INFORMATION

MOISTURE/DENSITY RELATIONSHIP

ASTM D 698 A

Lea Land Landfill Unit IIB Construction

Texas

PROJECT NO.

Rammer Type: Manual
Sampled By: Enviroworks
Sample Location: Cut #1

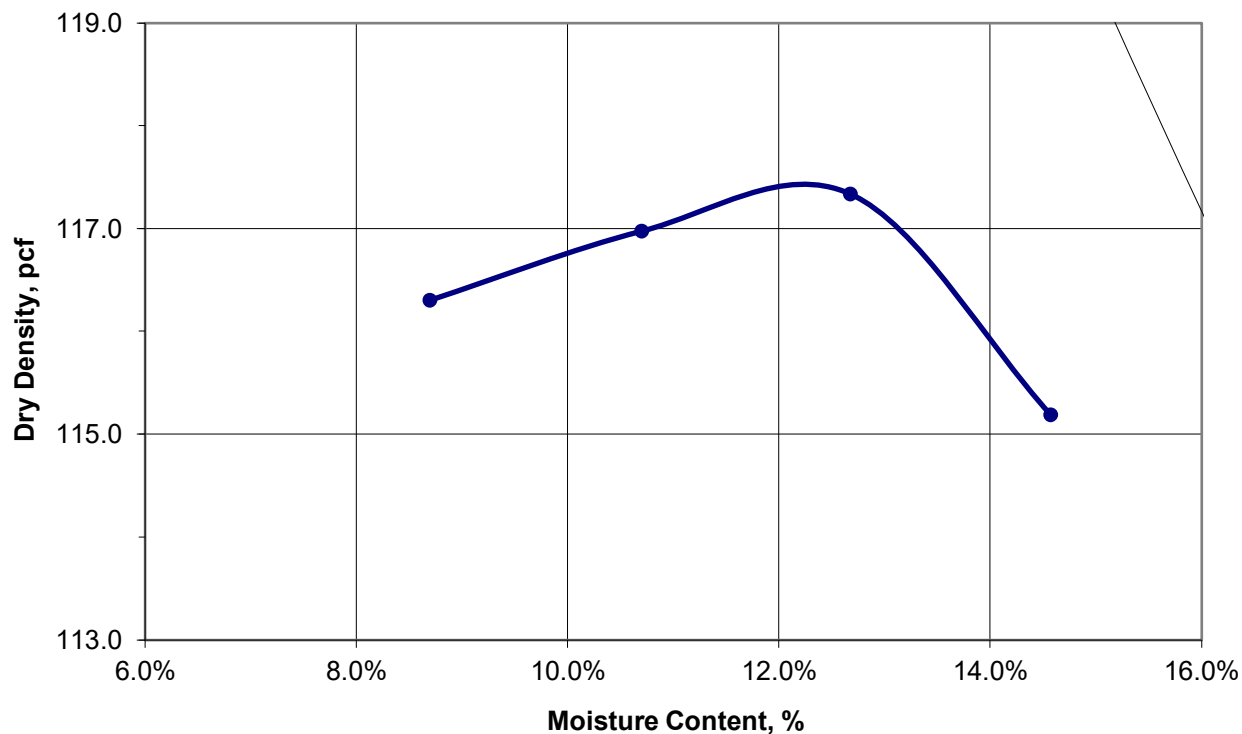
Sample Prep: Dry
Sample Date: 04/19/24

Description: Caliche, tan
Liquid Limit: 22
Plastic Limit: 22
Plastic Index: 0

(-) # 200 Mesh Sieve: 21%
Classification (USCS): SC

PROCTOR NO. CL-1

Maximum Dry Density, pcf: 117.3
Optimum Moisture Content, %: 12.5



OUR LETTERS AND REPORTS ARE FOR THE EXCLUSIVE USE OF THE CLIENT TO WHOM THEY ARE ADDRESSED, AND APPLY ONLY TO THE SAMPLES TESTED.

MOISTURE/DENSITY RELATIONSHIP

ASTM D 698 A

Lea Land Landfill Unit IIB Construction
Texas

PROJECT NO.

Rammer Type: Manual
Sampled By: Enviroworks
Sample Location: North Borrow #2

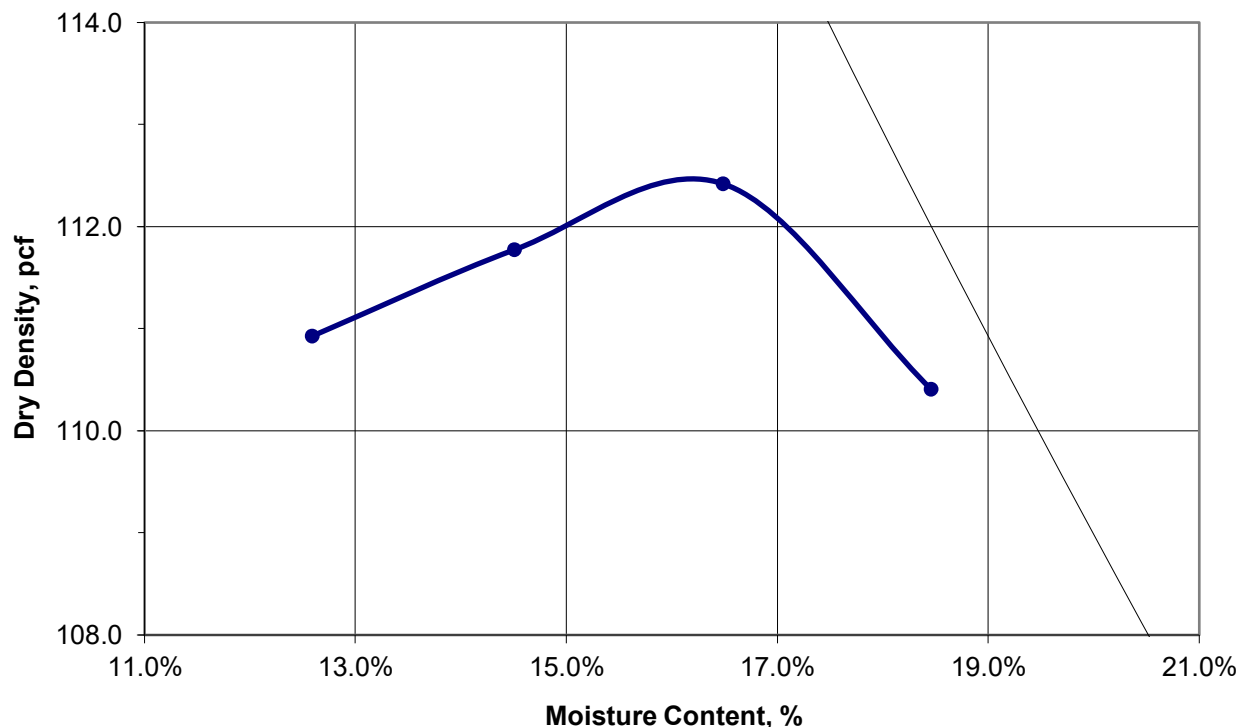
Sample Prep: Dry
Sample Date: 04/19/24

Description: Sandy clay-caliche, tan
Liquid Limit: 32
Plastic Limit: 19
Plastic Index: 13

(-) # 200 Mesh Sieve: 29%
Classification (USCS): SC

PROCTOR NO. CL-6

Maximum Dry Density, pcf: 112.4
Optimum Moisture Content, %: 16.3



OUR LETTERS AND REPORTS ARE FOR THE EXCLUSIVE USE OF THE CLIENT TO WHOM THEY ARE ADDRESSED, AND APPLY ONLY TO THE SAMPLES TESTED.
TEST RESULTS ARE NOT NECESSARILY INDICATIVE OF THE QUALITY OF APPARENTLY IDENTICAL OR SIMILAR SAMPLES.

APPENDIX C

SUBGRADE ACCEPTANCE FORMS

Includes pages C-1 through C-5

Certificate of Acceptance of Soil Subgrade**Geosynthetic Installer Information:**

Name: Southwest Liner Systems
Address: 301 Calle Industrial,
Bernalillo, NM

Facility Information:

Name: **Lea Land Landfill**
Location: **Lea County, New Mexico**
Owner/Operator: Lea Land

I, the Undersigned, the duly authorized representative of SLS do hereby accept the soil subgrade surface bounded by Enviroworks as an acceptable surface on which to install and shall be responsible for maintaining its integrity and suitability in accordance with the project specifications from this date to the completion of the installation. (Bound in Blue; dated 6-12-24)

Gabriel Lopez
Name

[Signature]
Signature

Project manager
Title

6/12/24
Date

Certificate Accepted by QA/QC Manager:

Bradley Lipsey
Name

[Signature]
Signature

CQA
Title

6-12-24
Date

Certificate Accepted by Facility Owner/Operator:

Name

Signature

Title

Date

Certificate of Acceptance of Soil Subgrade

Geosynthetic Installer Information:

Name: Southwest Liner Systems
Address: 301 Calle Industrial,
Bernalillo, NM

Facility Information:

Name: **Lea Land Landfill**
Location: **Lea County, New Mexico**
Owner/Operator: Lea Land

I, the Undersigned, the duly authorized representative of SLS do hereby accept the soil subgrade surface bounded by Enviroworks as an acceptable surface on which to install and shall be responsible for maintaining its integrity and suitability in accordance with the project specifications from this date to the completion of the installation. (Bounded IN YELLOW: 6.15.24)

Gabriel Zappe

Name

[Signature]

Signature

project manager

Title

6.15.24

Date

Certificate Accepted by QA/QC Manager:

BRADLEY LIPSEY

Name

[Signature]

Signature

CQA

Title

6.15.24

Date

Certificate Accepted by Facility Owner/Operator:

Name

Signature

Title

Date

Certificate of Acceptance of Soil Subgrade

Geosynthetic Installer Information:

Name: Southwest Liner Systems
Address: 301 Calle Industrial,
Bernalillo, NM

Facility Information:

Name: **Lea Land Landfill**
Location: **Lea County, New Mexico**
Owner/Operator: Lea Land

I, the Undersigned, the duly authorized representative of SLS do hereby accept the soil subgrade surface bounded by Enviroworks as an acceptable surface on which to install and shall be responsible for maintaining its integrity and suitability in accordance with the project specifications from this date to the completion of the installation. (Bound IN GREEN; 6.19.24)

Richard Tazpe [Signature] Project manager 6.19.24
Name Signature Title Date

Certificate Accepted by QA/QC Manager:

BRADLEY LIBBY [Signature] CQA 6.19.24
Name Signature Title Date

Certificate Accepted by Facility Owner/Operator:

Name Signature Title Date

Certificate of Acceptance of Soil Subgrade**Geosynthetic Installer Information:**

Name: Southwest Liner Systems
Address: 301 Calle Industrial,
Bernalillo, NM

Facility Information:

Name: **Lea Land Landfill**
Location: **Lea County, New Mexico**
Owner/Operator: Lea Land

I, the Undersigned, the duly authorized representative of SLS do hereby accept the soil subgrade surface bounded by Enviroworks as an acceptable surface on which to install and shall be responsible for maintaining its integrity and suitability in accordance with the project specifications from this date to the completion of the installation. (Bound in BLUE; 6-24-24)

Patricio Lopez
Name

[Signature]
Signature

Project Manager
Title

6-24-24
Date

Certificate Accepted by QA/QC Manager:

BRADLEY LIPSEY
Name

[Signature]
Signature

CQA
Title

6-24-24
Date

Certificate Accepted by Facility Owner/Operator:

Name

Signature

Title

Date

Certificate of Acceptance of Soil Subgrade**Geosynthetic Installer Information:**

Name: Southwest Liner Systems
Address: 301 Calle Industrial,
Bernalillo, NM

Facility Information:

Name: **Lea Land Landfill**
Location: **Lea County, New Mexico**
Owner/Operator: Lea Land

I, the Undersigned, the duly authorized representative of SLS do hereby accept the soil subgrade surface bounded by Enviroworks as an acceptable surface on which to install and shall be responsible for maintaining its integrity and suitability in accordance with the project specifications from this date to the completion of the installation. (7-2-24; Bound In Yellow)

Abe Fozge
Name

[Signature]
Signature

Project Manager
Title

7/2
Date

Certificate Accepted by QA/QC Manager:

BRADLEY Lipsey
Name

[Signature]
Signature

CQA
Title

7-2-24
Date

Certificate Accepted by Facility Owner/Operator:

Name

Signature

Title

Date

APPENDIX D

GCL INFORMATION

Includes pages D-1 through D-68

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-405102	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405103	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405104	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405105	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405106	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405107	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405108	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405109	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405110	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405111	1101823B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405112	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405113	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405114	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405115	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405116	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405117	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405118	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405119	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405120	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405121	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405122	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405123	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405124	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405125	1101823C	Reinforced	15.5	150	2,325	10/24/2023			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-405126	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405127	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405128	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405129	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405130	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405131	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405132	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405133	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405134	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405135	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405136	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405137	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405138	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405139	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405140	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405141	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405142	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405143	1101823C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405144	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405145	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405146	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405147	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405148	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405149	1101823D	Reinforced	15.5	150	2,325	10/24/2023			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-405150	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405151	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405152	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405153	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405154	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405155	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405156	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405157	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405158	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405159	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405160	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405161	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405162	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405163	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405164	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405165	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405166	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405167	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405168	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405169	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405170	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405171	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405172	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405173	1101823D	Reinforced	15.5	150	2,325	10/24/2023			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-405174	1101823D	Reinforced	15.5	150	2,325	10/24/2023			
0242-405175	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405176	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405177	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405178	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405179	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405180	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405181	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405182	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405183	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405184	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405185	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405186	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405187	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405188	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405189	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405190	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405191	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405192	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405193	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405194	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405195	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405196	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405197	1101923A	Reinforced	15.5	150	2,325	10/24/2023			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-405198	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405199	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405200	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405201	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405202	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405203	1101923A	Reinforced	15.5	150	2,325	10/24/2023			
0242-405204	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405205	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405206	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405207	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405208	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405209	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405210	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405211	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405212	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405213	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405214	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405215	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405216	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405217	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405218	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405219	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405220	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405221	1101923B	Reinforced	15.5	150	2,325	10/24/2023			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-405222	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405223	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405224	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405225	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405226	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405227	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405228	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405229	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405230	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405231	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405232	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405233	1101923B	Reinforced	15.5	150	2,325	10/24/2023			
0242-405234	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405235	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405236	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405237	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405238	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405239	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405240	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405241	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405242	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405243	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405244	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405245	1101923C	Reinforced	15.5	150	2,325	10/24/2023			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-405246	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-405247	1101923C	Reinforced	15.5	150	2,325	10/24/2023			
0242-409551	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409552	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409553	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409554	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409555	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409556	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409557	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409558	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409559	1011024A	Reinforced	15.5	150	2,325	1/23/2024	2/21/2024	Pass	
0242-409560	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409561	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409562	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409563	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409564	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409565	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409566	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409567	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409568	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409569	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409570	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409571	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409572	1011024A	Reinforced	15.5	150	2,325	1/23/2024			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-409573	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409574	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409575	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409576	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409577	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409578	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409579	1011024A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409580	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409581	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409582	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409583	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409584	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409585	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409586	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409587	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409588	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409589	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409590	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409591	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409592	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409593	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409594	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409595	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409596	1011024B	Reinforced	15.5	150	2,325	1/23/2024			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-409597	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409598	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409599	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409600	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409601	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409602	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409603	1011024B	Reinforced	15.5	150	2,325	1/23/2024	2/21/2024	Pass	
0242-409604	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409605	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409606	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409607	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409608	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409609	1011024B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409610	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409611	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409612	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409613	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409614	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409615	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409616	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409617	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409618	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409619	1011024C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409626	1011024D	Reinforced	15.5	150	2,325	1/23/2024			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-409627	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409628	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409629	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409630	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409631	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409632	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409633	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409634	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409635	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409636	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409637	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409638	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409639	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409640	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409641	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409642	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409643	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409644	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409645	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409646	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409647	1011024D	Reinforced	15.5	150	2,325	1/23/2024	2/21/2024	Pass	
0242-409648	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409649	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409650	1011024D	Reinforced	15.5	150	2,325	1/23/2024			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-409651	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409652	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409653	1011024D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409654	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409655	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409656	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409657	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409658	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409659	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409660	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409661	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409662	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409663	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409664	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409665	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409666	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409667	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409668	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409669	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409670	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409671	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409672	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409673	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409674	1012224A	Reinforced	15.5	150	2,325	1/23/2024			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-409675	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409676	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409677	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409678	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409679	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409680	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409681	1012224A	Reinforced	15.5	150	2,325	1/23/2024			
0242-409682	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409683	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409684	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409685	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409686	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409687	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409688	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409689	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409690	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409691	1012224B	Reinforced	15.5	150	2,325	1/23/2024	2/21/2024	Pass	
0242-409692	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409693	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409694	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409695	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409696	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409697	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409698	1012224B	Reinforced	15.5	150	2,325	1/23/2024			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-409699	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409700	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409701	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409702	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409703	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409704	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409705	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409706	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409707	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409708	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409709	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409710	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409711	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409712	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409713	1012224B	Reinforced	15.5	150	2,325	1/23/2024			
0242-409714	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409715	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409716	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409717	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409718	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409719	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409720	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409721	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409722	1012224C	Reinforced	15.5	150	2,325	1/23/2024			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-409723	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409724	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409725	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409726	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409727	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409728	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409729	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409730	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409731	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409732	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409733	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409734	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409735	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409736	1012224C	Reinforced	15.5	150	2,325	1/23/2024	2/21/2024	Pass	
0242-409737	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409738	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409739	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409740	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409741	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409742	1012224C	Reinforced	15.5	150	2,325	1/23/2024			
0242-409743	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409744	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409745	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409746	1012224D	Reinforced	15.5	150	2,325	1/23/2024			

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GCL INVENTORY**

Roll Number	Bentonite Lot Number	Material Type	Roll Dimensions			QC Date	Conformance Sample		Comments
			Width, ft	Length, ft	Area, sf		Date	Pass/Fail	
0242-409747	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409748	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409749	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409750	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409751	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409752	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409753	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409754	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409755	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409756	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409757	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409758	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409759	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409760	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409761	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409762	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409763	1012224D	Reinforced	15.5	150	2,325	1/23/2024			
0242-409764	1012224D	Reinforced	15.5	150	2,325	1/23/2024			



SOLMAX

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: SW2321

SALES ORDER: SO-095731

PACKING SLIP NUMBER: Pre-SO-095731-1

PROJECT NAME: LEALAND LF

ROLL NUMBER	MANUFACT. DATE	BENTONITE LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1101129-45906-1 Bentoliner 0.75 lbs/ft² - 3.66 kg/m², NS TRI Austin Pickup - Aerttrail Robinson 1 ft x RW, 1/100,000 sf, min 1/Lot 1 bag (500 gr) of loose bentonite				
0242-405102	2023-10-21	1101823B	2027602203	F3WE03214-017
0242-405103	2023-10-21	1101823B	2027602203	F3WE03214-017
0242-405104	2023-10-21	1101823B	2027602203	F3WE03214-017
0242-405105	2023-10-21	1101823B	2027602203	F3WE03214-017
0242-405106	2023-10-21	1101823B	2027602203	F3WE03214-017
0242-405107	2023-10-21	1101823B	2027602203	F3WE03214-017
0242-405108	2023-10-21	1101823B	2027602203	F3WE03214-017
0242-405109	2023-10-21	1101823B	2027602203	F3WE03214-017
0242-405110	2023-10-21	1101823B	2027602203	F3WE03214-017
0242-405111	2023-10-21	1101823B	2027636884	F3WE03214-017
0242-405112	2023-10-21	1101823C	2027636884	F3WE03214-017
0242-405113	2023-10-21	1101823C	2027636884	F3WE03214-017
0242-405114	2023-10-21	1101823C	2027636884	F3WE03214-017
0242-405115	2023-10-21	1101823C	2027636884	F3WE03214-017
0242-405116	2023-10-21	1101823C	2027636884	F3WE03214-017
0242-405117	2023-10-21	1101823C	2027636884	F3WE03214-017
0242-405118	2023-10-21	1101823C	2027636884	F3WE03214-017
0242-405119	2023-10-21	1101823C	2027636884	F3WE03214-017
0242-405120	2023-10-23	1101823C	2027636884	F3WE03214-017

500 g. bentonite

1' conformance

The GCL supplied to this project has been continuously inspected for the presence of needles and is certified to be needle free.

Solmax is not a design professional and has not performed any design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

Solmax Geosynthetics LLC

19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

SOLMAX.COM

24 Oct 2023



SOLMAX

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:

SW2321

SALES ORDER:

SO-095731

PACKING SLIP NUMBER:

Pre-SO-095731-1

PROJECT NAME: LEALAND LF

0242-405121	2023-10-23	1101823C	2027602208	F3WE03214-017
0242-405122	2023-10-23	1101823C	2027602208	F3WE03214-017
0242-405123	2023-10-23	1101823C	2027602208	F3WE02785-008
0242-405124	2023-10-23	1101823C	2027602208	F3WE02785-008
0242-405125	2023-10-23	1101823C	2027602208	F3WE02785-008
0242-405126	2023-10-23	1101823C	2027602208	F3WE02785-008
0242-405127	2023-10-23	1101823C	2027602208	F3WE02785-008
0242-405128	2023-10-23	1101823C	2027602208	F3WE02785-008
0242-405129	2023-10-23	1101823C	2027602208	F3WE02785-008
0242-405130	2023-10-23	1101823C	2027602208	F3WE02785-008
0242-405131	2023-10-23	1101823C	2027636855	F3WE02785-008
0242-405132	2023-10-23	1101823C	2027636855	F3WE02785-008
0242-405133	2023-10-23	1101823C	2027636855	F3WE02785-008
0242-405134	2023-10-23	1101823C	2027636855	F3WE02785-008
0242-405135	2023-10-23	1101823C	2027636855	F3WE02785-008
0242-405136	2023-10-23	1101823C	2027636855	F3WE02785-008
0242-405137	2023-10-23	1101823C	2027636855	F3WE02785-008
0242-405138	2023-10-23	1101823C	2027636855	F3WE03291-009
0242-405139	2023-10-23	1101823C	2027636855	F3WE03291-009
0242-405140	2023-10-23	1101823C	2027636855	F3WE03291-009
0242-405141	2023-10-23	1101823C	2027636855	F3WE03291-009
0242-405142	2023-10-23	1101823C	2027595951	F3WE03291-009
0242-405143	2023-10-23	1101823C	2027595951	F3WE03291-009
0242-405144	2023-10-23	1101823D	2027595951	F3WE03291-009
0242-405145	2023-10-23	1101823D	2027595951	F3WE03291-009
0242-405146	2023-10-23	1101823D	2027595951	F3WE03291-009
0242-405147	2023-10-23	1101823D	2027595951	F3WE03291-009
0242-405148	2023-10-23	1101823D	2027595951	F3WE03291-009

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Solmax Geosynthetics LLC

19103 GUNDLE RD., HOUSTON, TX, UNITED STATES, 77073

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24 Oct 2023



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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: SW2321

SALES ORDER: SO-095731

PACKING SLIP NUMBER: Pre-SO-095731-1

PROJECT NAME: LEALAND LF

0242-405149	2023-10-23	1101823D	2027595951	F3WE03291-009	
0242-405150	2023-10-23	1101823D	2027595951	F3WE03291-009	
0242-405151	2023-10-23	1101823D	2027595951	F3WE03291-009	
0242-405152	2023-10-23	1101823D	2027602194	F3WE03291-009	
0242-405153	2023-10-23	1101823D	2027602194	F3WE03291-009	
0242-405154	2023-10-23	1101823D	2027602194	F3WE03291-009	1' conformance
0242-405155	2023-10-23	1101823D	2027602194	F3WE03291-009	
0242-405156	2023-10-23	1101823D	2027602194	F3WE03291-009	
0242-405157	2023-10-23	1101823D	2027602194	F3WE03291-009	
0242-405158	2023-10-23	1101823D	2027602194	F3WE03291-009	
0242-405159	2023-10-23	1101823D	2027602194	F3WE03291-009	
0242-405160	2023-10-23	1101823D	2027602194	F3WE03291-009	
0242-405161	2023-10-23	1101823D	2027602194	F3WE03291-009	
0242-405162	2023-10-23	1101823D	2027636853	F3WE03291-009	
0242-405163	2023-10-23	1101823D	2027636853	F3WE03268-007	
0242-405164	2023-10-23	1101823D	2027636853	F3WE03268-007	
0242-405165	2023-10-23	1101823D	2027636853	F3WE03268-007	
0242-405166	2023-10-23	1101823D	2027636853	F3WE03268-007	
0242-405167	2023-10-23	1101823D	2027636853	F3WE03268-007	
0242-405168	2023-10-23	1101823D	2027636853	F3WE03268-007	
0242-405169	2023-10-23	1101823D	2027636853	F3WE03268-007	
0242-405170	2023-10-23	1101823D	2027636853	F3WE03268-007	
0242-405171	2023-10-23	1101823D	2027636853	F3WE03268-007	
0242-405172	2023-10-23	1101823D	2027636049	F3WE03268-007	
0242-405173	2023-10-23	1101823D	2027636049	F3WE03268-007	
0242-405174	2023-10-23	1101823D	2027636049	F3WE03268-007	
0242-405175	2023-10-23	1101923A	2027636049	F3WE03268-007	
0242-405176	2023-10-23	1101923A	2027636049	F3WE03268-007	

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: SW2321

SALES ORDER: SO-095731

PACKING SLIP NUMBER: Pre-SO-095731-1

PROJECT NAME: LEALAND LF

0242-405177	2023-10-23	1101923A	2027636049	F3WE03268-007	
0242-405178	2023-10-23	1101923A	2027636049	F3WE03268-007	
0242-405179	2023-10-23	1101923A	2027636049	F3WE03268-007	
0242-405180	2023-10-23	1101923A	2027636049	F3WE03268-007	
0242-405181	2023-10-23	1101923A	2027636049	F3WE03268-007	
0242-405182	2023-10-23	1101923A	2027636049	F3WE03268-007	
0242-405183	2023-10-23	1101923A	2027636852	F3WE03268-007	
0242-405184	2023-10-23	1101923A	2027636852	F3WE03268-007	
0242-405185	2023-10-23	1101923A	2027636852	F3WE03268-007	
0242-405186	2023-10-23	1101923A	2027636852	F3WE03268-007	
0242-405187	2023-10-23	1101923A	2027636852	F3WE03268-007	
0242-405188	2023-10-23	1101923A	2027636852	F3WE03209-019	
0242-405189	2023-10-23	1101923A	2027636852	F3WE03209-019	
0242-405190	2023-10-23	1101923A	2027636852	F3WE03209-019	
0242-405191	2023-10-23	1101923A	2027636852	F3WE03209-019	
0242-405192	2023-10-23	1101923A	2027636852	F3WE03209-019	
0242-405193	2023-10-23	1101923A	2027636043	F3WE03209-019	
0242-405194	2023-10-23	1101923A	2027636043	F3WE03209-019	
0242-405195	2023-10-23	1101923A	2027636043	F3WE03209-019	
0242-405196	2023-10-24	1101923A	2027636043	F3WE03209-019	
0242-405197	2023-10-24	1101923A	2027636043	F3WE03209-019	
0242-405198	2023-10-24	1101923A	2027636043	F3WE03209-019	1' conformance
0242-405199	2023-10-24	1101923A	2027636043	F3WE03209-019	
0242-405200	2023-10-24	1101923A	2027636043	F3WE03209-019	
0242-405201	2023-10-24	1101923A	2027636043	F3WE03209-019	
0242-405202	2023-10-24	1101923A	2027636043	F3WE03209-019	
0242-405203	2023-10-24	1101923A	2027636885	F3WE03209-019	
0242-405204	2023-10-24	1101923B	2027636885	F3WE03209-019	

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:

SW2321

SALES ORDER:

SO-095731

PACKING SLIP NUMBER:

Pre-SO-095731-1

PROJECT NAME: LEALAND LF

0242-405205	2023-10-24	1101923B	2027636885	F3WE03209-019
0242-405206	2023-10-24	1101923B	2027636885	F3WE03209-019
0242-405207	2023-10-24	1101923B	2027636885	F3WE03209-019
0242-405208	2023-10-24	1101923B	2027636885	F3WE03209-019
0242-405209	2023-10-24	1101923B	2027636885	F3WE03209-019
0242-405210	2023-10-24	1101923B	2027636885	F3WE03209-019
0242-405211	2023-10-24	1101923B	2027636885	F3WE03209-019
0242-405212	2023-10-24	1101923B	2027636885	F3WE03209-019
0242-405213	2023-10-24	1101923B	2027636885	F3WE03209-005
0242-405214	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405215	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405216	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405217	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405218	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405219	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405220	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405221	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405222	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405223	2023-10-24	1101923B	2027636850	F3WE03209-005
0242-405224	2023-10-24	1101923B	2027636886	F3WE03209-005
0242-405225	2023-10-24	1101923B	2027636886	F3WE03209-005
0242-405226	2023-10-24	1101923B	2027636886	F3WE03209-005
0242-405227	2023-10-24	1101923B	2027636886	F3WE03209-005
0242-405228	2023-10-24	1101923B	2027636886	F3WE03209-005
0242-405229	2023-10-24	1101923B	2027636886	F3WE03209-005
0242-405230	2023-10-24	1101923B	2027636886	F3WE03209-005
0242-405231	2023-10-24	1101923B	2027636886	F3WE03209-005
0242-405232	2023-10-24	1101923B	2027636886	F3WE03209-005

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24 Oct 2023

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2321

SALES ORDER:SO-095731

PACKING SLIP NUMBER:Pre-SO-095731-1

PROJECT NAME: LEALAND LF

0242-405233	2023-10-24	1101923B	2027636886	F3WE03209-005	1' conformance
0242-405234	2023-10-24	1101923C	2027636883	F3WE03209-005	
0242-405235	2023-10-24	1101923C	2027636883	F3WE03209-005	
0242-405236	2023-10-24	1101923C	2027636883	F3WE03209-005	
0242-405237	2023-10-24	1101923C	2027636883	F3WE03209-005	
0242-405238	2023-10-24	1101923C	2027636883	F3WE03209-005	
0242-405239	2023-10-24	1101923C	2027636883	F3WE03214-004	
0242-405240	2023-10-24	1101923C	2027636883	F3WE03214-004	
0242-405241	2023-10-24	1101923C	2027636883	F3WE03214-004	
0242-405242	2023-10-24	1101923C	2027636883	F3WE03214-004	
0242-405243	2023-10-24	1101923C	2027636883	F3WE03214-004	
0242-405244	2023-10-24	1101923C	2027636045	F3WE03214-004	
0242-405245	2023-10-24	1101923C	2027636045	F3WE03214-004	
0242-405246	2023-10-24	1101923C	2027636045	F3WE03214-004	
0242-405247	2023-10-24	1101923C	2027636045	F3WE03214-004	

QUANTITY (ROLLS): 146

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24 Oct 2023



MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER:SW2321

SALES ORDER:SO-095731

PACKING SLIP NUMBER:Pre-SO-095731-1

PROJECT NAME : LEALAND LF

PRODUCT: 1101129-45906-1
Bentoliner 0.75 lbs/ft² - 3.66 kg/m², NS

						Rolls
Test	Property		Direction	Test Method	Frequency	Unit
	1 Bentonite Mass (0% moisture)			ASTM D5993	40,000 ft²	lbs/ft²
	2 Peel Strength (min. avg.)		MD	ASTM D4632	40,000 ft²	lbf
	3 Peel Strength (min.avg.)		MD	ASTM D6496	40,000 ft²	lbf/in
	4 Tensile Strength MD (min. avg.)		MD	ASTM D6768	40,000 ft²	lbf/in
	5 Finished Good Mass (0% moisture)			ASTM D5993	40,000 ft²	lbs/ft²

Test	1	2	3	4	5
SPECIFICATIONS	0.75	21	3.5	30	0.81
0242-405102	0.82	51.0	9.9	54	0.89
0242-405103	0.82	51.0	9.9	54	0.89
0242-405104	0.82	51.0	9.9	54	0.89
0242-405105	0.82	51.0	9.9	54	0.89
0242-405106	0.82	51.0	9.9	54	0.89
0242-405107	0.82	51.0	9.9	54	0.89
0242-405108	0.82	51.0	9.9	54	0.89
0242-405109	0.82	51.0	9.9	54	0.89
0242-405110	0.82	51.0	9.9	54	0.89
0242-405111	0.82	51.0	9.9	54	0.89
0242-405112	0.82	51.0	9.9	54	0.89
0242-405113	0.82	51.0	9.9	54	0.89
0242-405114	0.82	51.0	9.9	54	0.89
0242-405115	0.82	51.0	9.9	54	0.89
0242-405116	0.82	51.0	9.9	54	0.89
0242-405117	0.82	51.0	9.9	54	0.89
0242-405118	0.81	39.0	8.0	48	0.89
0242-405119	0.81	39.0	8.0	48	0.89
0242-405120	0.81	39.0	8.0	48	0.89
0242-405121	0.81	39.0	8.0	48	0.89
0242-405122	0.81	39.0	8.0	48	0.89

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER:

SW2321

SALES ORDER:

SO-095731

PACKING SLIP NUMBER:

Pre-SO-095731-1

PROJECT NAME : LEALAND LF

Test	1	2	3	4	5
0242-405123	0.81	39.0	8.0	48	0.89
0242-405124	0.81	39.0	8.0	48	0.89
0242-405125	0.81	39.0	8.0	48	0.89
0242-405126	0.81	39.0	8.0	48	0.89
0242-405127	0.81	39.0	8.0	48	0.89
0242-405128	0.81	39.0	8.0	48	0.89
0242-405129	0.81	39.0	8.0	48	0.89
0242-405130	0.81	39.0	8.0	48	0.89
0242-405131	0.81	39.0	8.0	48	0.89
0242-405132	0.81	39.0	8.0	48	0.89
0242-405133	0.81	39.0	8.0	48	0.89
0242-405134	0.81	36.0	7.5	57	0.88
0242-405135	0.81	36.0	7.5	57	0.88
0242-405136	0.81	36.0	7.5	57	0.88
0242-405137	0.81	36.0	7.5	57	0.88
0242-405138	0.81	36.0	7.5	57	0.88
0242-405139	0.81	36.0	7.5	57	0.88
0242-405140	0.81	36.0	7.5	57	0.88
0242-405141	0.81	36.0	7.5	57	0.88
0242-405142	0.81	36.0	7.5	57	0.88
0242-405143	0.81	36.0	7.5	57	0.88
0242-405144	0.81	36.0	7.5	57	0.88
0242-405145	0.81	36.0	7.5	57	0.88
0242-405146	0.81	36.0	7.5	57	0.88
0242-405147	0.81	36.0	7.5	57	0.88
0242-405148	0.81	36.0	7.5	57	0.88
0242-405149	0.81	36.0	7.5	57	0.88
0242-405150	0.82	37.0	7.6	54	0.90
0242-405151	0.82	37.0	7.6	54	0.90
0242-405152	0.82	37.0	7.6	54	0.90
0242-405153	0.82	37.0	7.6	54	0.90
0242-405154	0.82	37.0	7.6	54	0.90
0242-405155	0.82	37.0	7.6	54	0.90

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Solmax Geosynthetics LLC

19103 GUNDLE RD., HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2321
SALES ORDER: SO-095731
PACKING SLIP NUMBER: Pre-SO-095731-1

PROJECT NAME : LEALAND LF

Test	1	2	3	4	5
0242-405156	0.82	37.0	7.6	54	0.90
0242-405157	0.82	37.0	7.6	54	0.90
0242-405158	0.82	37.0	7.6	54	0.90
0242-405159	0.82	37.0	7.6	54	0.90
0242-405160	0.82	37.0	7.6	54	0.90
0242-405161	0.82	37.0	7.6	54	0.90
0242-405162	0.82	37.0	7.6	54	0.90
0242-405163	0.82	37.0	7.6	54	0.90
0242-405164	0.82	37.0	7.6	54	0.90
0242-405165	0.82	37.0	7.6	54	0.90
0242-405166	0.82	33.0	6.4	57	0.89
0242-405167	0.82	33.0	6.4	57	0.89
0242-405168	0.82	33.0	6.4	57	0.89
0242-405169	0.82	33.0	6.4	57	0.89
0242-405170	0.82	33.0	6.4	57	0.89
0242-405171	0.82	33.0	6.4	57	0.89
0242-405172	0.82	33.0	6.4	57	0.89
0242-405173	0.82	33.0	6.4	57	0.89
0242-405174	0.82	33.0	6.4	57	0.89
0242-405175	0.82	33.0	6.4	57	0.89
0242-405176	0.82	33.0	6.4	57	0.89
0242-405177	0.82	33.0	6.4	57	0.89
0242-405178	0.82	33.0	6.4	57	0.89
0242-405179	0.82	33.0	6.4	57	0.89
0242-405180	0.82	33.0	6.4	57	0.89
0242-405181	0.82	33.0	6.4	57	0.89
0242-405182	0.83	43.0	9.0	51	0.91
0242-405183	0.83	43.0	9.0	51	0.91
0242-405184	0.83	43.0	9.0	51	0.91
0242-405185	0.83	43.0	9.0	51	0.91
0242-405186	0.83	43.0	9.0	51	0.91
0242-405187	0.83	43.0	9.0	51	0.91
0242-405188	0.83	43.0	9.0	51	0.91

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER:

SW2321

SALES ORDER:

SO-095731

PACKING SLIP NUMBER:

Pre-SO-095731-1

PROJECT NAME : LEALAND LF

Test	1	2	3	4	5
0242-405189	0.83	43.0	9.0	51	0.91
0242-405190	0.83	43.0	9.0	51	0.91
0242-405191	0.83	43.0	9.0	51	0.91
0242-405192	0.83	43.0	9.0	51	0.91
0242-405193	0.83	43.0	9.0	51	0.91
0242-405194	0.83	43.0	9.0	51	0.91
0242-405195	0.83	43.0	9.0	51	0.91
0242-405196	0.83	43.0	9.0	51	0.91
0242-405197	0.83	43.0	9.0	51	0.91
0242-405198	0.88	46.0	8.8	50	0.95
0242-405199	0.88	46.0	8.8	50	0.95
0242-405200	0.88	46.0	8.8	50	0.95
0242-405201	0.88	46.0	8.8	50	0.95
0242-405202	0.88	46.0	8.8	50	0.95
0242-405203	0.88	46.0	8.8	50	0.95
0242-405204	0.88	46.0	8.8	50	0.95
0242-405205	0.88	46.0	8.8	50	0.95
0242-405206	0.88	46.0	8.8	50	0.95
0242-405207	0.88	46.0	8.8	50	0.95
0242-405208	0.88	46.0	8.8	50	0.95
0242-405209	0.88	46.0	8.8	50	0.95
0242-405210	0.88	46.0	8.8	50	0.95
0242-405211	0.88	46.0	8.8	50	0.95
0242-405212	0.88	46.0	8.8	50	0.95
0242-405213	0.88	46.0	8.8	50	0.95
0242-405214	0.85	35.0	7.0	56	0.92
0242-405215	0.85	35.0	7.0	56	0.92
0242-405216	0.85	35.0	7.0	56	0.92
0242-405217	0.85	35.0	7.0	56	0.92
0242-405218	0.85	35.0	7.0	56	0.92
0242-405219	0.85	35.0	7.0	56	0.92
0242-405220	0.85	35.0	7.0	56	0.92
0242-405221	0.85	35.0	7.0	56	0.92

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Solmax Geosynthetics LLC

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D-25



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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2321
 SALES ORDER: SO-095731
 PACKING SLIP NUMBER: Pre-SO-095731-1

PROJECT NAME : LEALAND LF

Test	1	2	3	4	5
0242-405222	0.85	35.0	7.0	56	0.92
0242-405223	0.85	35.0	7.0	56	0.92
0242-405224	0.85	35.0	7.0	56	0.92
0242-405225	0.85	35.0	7.0	56	0.92
0242-405226	0.85	35.0	7.0	56	0.92
0242-405227	0.85	35.0	7.0	56	0.92
0242-405228	0.85	35.0	7.0	56	0.92
0242-405229	0.85	35.0	7.0	56	0.92
0242-405230	0.85	29.0	5.8	53	0.93
0242-405231	0.85	29.0	5.8	53	0.93
0242-405232	0.85	29.0	5.8	53	0.93
0242-405233	0.85	29.0	5.8	53	0.93
0242-405234	0.85	29.0	5.8	53	0.93
0242-405235	0.85	29.0	5.8	53	0.93
0242-405236	0.85	29.0	5.8	53	0.93
0242-405237	0.85	29.0	5.8	53	0.93
0242-405238	0.85	29.0	5.8	53	0.93
0242-405239	0.85	29.0	5.8	53	0.93
0242-405240	0.85	29.0	5.8	53	0.93
0242-405241	0.85	29.0	5.8	53	0.93
0242-405242	0.85	29.0	5.8	53	0.93
0242-405243	0.85	29.0	5.8	53	0.93
0242-405244	0.85	29.0	5.8	53	0.93
0242-405245	0.85	29.0	5.8	53	0.93
0242-405246	0.78	36.0	6.8	52	0.85
0242-405247	0.78	36.0	6.8	52	0.85

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TEST RESULTS

PROJECT NUMBER: SW2321
SALES ORDER: SO-095731
PACKING SLIP NUMBER: Pre-SO-095731-1

PROJECT NAME : LEALAND LF

PRODUCT: 1101129-45906-1
Bentoliner 0.75 lbs/ft² - 3.66 kg/m², NS

Test	Property	Direction	Test Method	Frequency	Unit
1	Swell Index (min.)		ASTM D5890	100,000 lb	ml/2 g
2	Moisture Content (max.)		ASTM D4643	100,000 lb	%
3	Fluid Loss (max.)		ASTM D5891	100,000 lb	ml

Test	1	2	3
Specification	24	12	18
1101823B	28.0	9.8	13
1101823C	25.0	9.6	14
1101823D	31.0	10.8	12
1101923A	29.0	10.5	12
1101923B	27.0	11.3	12
1101923C	29.0	11.0	13

Solmax is not responsible for any results obtained from testing performed by a third party to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.



TEST RESULTS

PROJECT NUMBER: SW2321
 SALES ORDER: SO-095731
 PACKING SLIP NUMBER: Pre-SO-095731-1

PROJECT NAME : LEALAND LF

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	200,000 ft ²	oz/yd ²
2	Strength (MD)				lbf
3	Strength (CMD)				lbf
4	Elongation (MD)				%
5	Elongation (CMD)				%

Test	1	2	3	4	5
Specification	6	22	22	100	100
2027595951	7.4	69	121	158	128
2027602194	7.1	62	157	154	123
2027602203	6.9	66	145	188	148
2027602208	7.3	65	144	184	148
2027636043	7.1	55	119	155	118
2027636045	7.1	55	119	155	118
2027636049	7.6	60	119	141	103
2027636850	7.6	60	119	141	103
2027636852	7.4	63	123	184	120
2027636853	7.4	63	123	184	120
2027636855	7.3	65	135	158	108
2027636883	7.1	55	146	200	124
2027636884	7.1	55	146	200	124
2027636885	7.4	86	141	190	133
2027636886	7.4	86	141	190	133

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TEST RESULTS

PROJECT NUMBER: SW2321
SALES ORDER: SO-095731
PACKING SLIP NUMBER: Pre-SO-095731-1

PROJECT NAME : LEALAND LF

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	200,000 ft ²	oz/yd ²
	Grab Tensile Properties (min. avg)		ASTM D4632	200,000 ft ²	
2	Strength (MD)				lbf
3	Strength (CMD)				lbf
4	Elongation (MD)				%
5	Elongation (CMD)				%

Test	1	2	3	4	5
Specification	3	135	100	10	10
F3WE02785-008	3.2	167	114	18	13
F3WE03209-005	3.1	174	116	18	13
F3WE03209-019	3.2	172	117	17	13
F3WE03214-004	3.2	179	123	19	13
F3WE03214-017	3.2	175	128	18	14
F3WE03268-007	3.2	178	118	18	13
F3WE03291-009	3.2	167	122	17	13

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SOLMAX BENTOLINER

CERTIFICATE OF ANALYSIS 2023
PRODUCT : NATIONAL® 30

SHIPPED FROM BENTONITE PERFORMANCE MINERALS LLC
554 US HWY 212
COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
B0004934923	10-18-23	1101823B	8.8	0.09	6.45	14.6	114	30	857

OCTOBER		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
No. of CARS	M AVG	9.39	0.08	4.12	14.69	113.60	30.07	860.04
41	STD DEV	0.57	0.10	1.40	0.68	3.17	1.08	49.89

DATE 10-*

YTD		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
No. of CARS	M AVG	9.62	0.18	3.77	14.04	113.19	30.68	880.99
587	STD DEV	0.60	0.77	1.58	1.13	3.04	1.65	49.61

SOLD TO: Solmax
19103 Gundle RD
Houston, TX 77073

For any questions contact.
Q.A. SUPERVISOR
Tucker Goodvin

Attn: rstadler@solmax.com
chofer@solmax.com
ctaylor@solmax.com

SHIPPED TO: Solmax
3150 FIRST AVENUE
SPEARFISH, SD 57783

Prepared by: TO
10/19/23

CC: File

SOLMAX BENTOLINER

CERTIFICATE OF ANALYSIS 2023
PRODUCT : NATIONAL® 30

SHIPPED FROM BENTONITE PERFORMANCE MINERALS LLC
554 US HWY 212
COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
B0004934925	10-19-23	1101823C	8.9	0.02	2.75	16.0	118	31	846

		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	DATE 10 - *
OCTOBER									
No. of CARS	M AVG	9.38	0.08	4.09	14.72	113.70	30.09	859.74	
42	STD DEV	0.57	0.10	1.40	0.69	3.20	1.08	49.38	
YTD									
No. of CARS	M AVG	9.62	0.18	3.76	14.04	113.20	30.68	880.93	
588	STD DEV	0.60	0.77	1.58	1.13	3.04	1.65	49.59	

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SHIPPED TO: Solmax
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PRODUCT : NATIONAL® 30

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554 US HWY 212
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BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
B0004934927	10-19-23	1101823D	9.8	0.12	3.69	15.4	110	29	812

		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
OCTOBER								
No. of CARS								
43								
M AVG		9.39	0.08	4.08	14.74	113.62	30.06	858.72
STD DEV		0.57	0.10	1.38	0.69	3.21	1.08	49.34
YTD								
No. of CARS								
589								
M AVG		9.62	0.18	3.76	14.04	113.20	30.68	880.82
STD DEV		0.60	0.77	1.58	1.13	3.04	1.65	49.63

DATE 10-*

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Houston, TX 77073

Attn: rstadler@solmax.com
chofer@solmax.com
ctaylor@solmax.com

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Q.A. SUPERVISOR
Tucker Goodvin

SHIPPED TO: Solmax
3150 FIRST AVENUE
SPEARFISH, SD 57783

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COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
B0004934928	10-19-23	1101923A	9.6	0.10	2.74	14.8	116	30	886

OCTOBER		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	DATE 10 - *
No. of CARS 44	M AVG STD DEV	9.40 0.56	0.08 0.10	4.05 1.38	14.74 0.69	113.67 3.20	30.06 1.07	859.29 48.98	

YTD		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
No. of CARS 590	M AVG STD DEV	9.62 0.60	0.18 0.77	3.76 1.58	14.05 1.13	113.20 3.04	30.67 1.64	880.82 49.59

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Q.A. SUPERVISOR
Tucker Goodvin

Attn: rstadler@solmax.com
chofer@solmax.com
ctaylor@solmax.com

SHIPPED TO: Solmax
3150 FIRST AVENUE
SPEARFISH, SD 57783

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BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
B0004934929	10-19-23	1101923B	10.1	0.08	4.84	15.0	112	30	826

OCTOBER		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
No. of CARS 45	M AVG STD DEV	9.41 0.57	0.08 0.10	4.07 1.37	14.74 0.68	113.63 3.17	30.06 1.06	858.61 48.70

DATE
10-*

YTD		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
No. of CARS 591	M AVG STD DEV	9.62 0.60	0.18 0.77	3.76 1.58	14.05 1.13	113.20 3.04	30.67 1.64	880.73 49.59

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chofer@solmax.com
ctaylor@solmax.com

SHIPPED TO: Solmax
3150 FIRST AVENUE
SPEARFISH, SD 57783

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10/20/23

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PRODUCT : NATIONAL® 30

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COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
B0004934930	10-20-23	1101923C	10.5	0.08	5.12	15.6	112	31	817

		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
OCTOBER								
No. of CARS								
46								
M AVG		9.43	0.08	4.09	14.76	113.60	30.08	857.78
STD DEV		0.58	0.10	1.36	0.68	3.15	1.06	48.56
YTD								
No. of CARS								
592								
M AVG		9.62	0.18	3.77	14.05	113.20	30.67	880.63
STD DEV		0.60	0.77	1.58	1.13	3.03	1.64	49.62

DATE
10 - *

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SPEARFISH, SD 57783

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10/20/23

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-4

PROJECT NAME: LEALAND LF CELL 11B & C

ROLL NUMBER	MANUFACT. DATE	BENTONITE LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1109263-50814-2 <u>Bentoliner 0.75 lbs/ft² - 3.66 kg/m², NS, Peel 35</u> TRI Austin Pickup - Kendall Villarreal 1/100,000 sf, min 1/Lot - GCL: 1 ft x RW - Geotextile (top & bottom): 1 ft x RW One bag (500 gr) of loose bentonite Roll List to be emailed to <sampling@tri-env.com> and <klvillarreal@tri-env.com>				
0242-409551	2024-01-23	1011024A	2027712404	2012831754
0242-409552	2024-01-23	1011024A	2027712404	2012831754
0242-409553	2024-01-23	1011024A	2027712404	2012831754
0242-409554	2024-01-23	1011024A	2027712404	2012831754
0242-409555	2024-01-23	1011024A	2027712404	2012831754
0242-409556	2024-01-23	1011024A	2027712404	2012831754
0242-409557	2024-01-23	1011024A	2027712404	2012831754
0242-409558	2024-01-23	1011024A	2027711548	2012831754
0242-409559	2024-01-23	1011024A	2027711548	2012831754
0242-409560	2024-01-23	1011024A	2027711548	2012831754
0242-409561	2024-01-23	1011024A	2027711548	2012831754
0242-409562	2024-01-23	1011024A	2027711548	2012831754
0242-409563	2024-01-23	1011024A	2027711548	2012831754
0242-409564	2024-01-23	1011024A	2027711548	2012831754
0242-409565	2024-01-23	1011024A	2027711548	2012831754

500 g. bentonite

1' GCL, Top, Base

The GCL supplied to this project has been continuously inspected for the presence of needles and is certified to be needle free.

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25 Jan 2024

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: SW2401

SALES ORDER: SO-096486

PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME: LEALAND LF CELL 11B & C

0242-409566	2024-01-23	1011024A	2027711548	2012831754
0242-409567	2024-01-23	1011024A	2027711548	2012831754
0242-409568	2024-01-23	1011024A	2027711549	2012831754
0242-409569	2024-01-23	1011024A	2027711549	2012831754
0242-409570	2024-01-23	1011024A	2027711549	2012831754
0242-409571	2024-01-23	1011024A	2027711549	2012831767
0242-409572	2024-01-23	1011024A	2027711549	2012831767
0242-409573	2024-01-23	1011024A	2027711549	2012831767
0242-409574	2024-01-23	1011024A	2027711549	2012831767
0242-409575	2024-01-23	1011024A	2027711549	2012831767
0242-409576	2024-01-23	1011024A	2027711549	2012831767
0242-409577	2024-01-23	1011024A	2027711549	2012831767
0242-409578	2024-01-23	1011024A	2027711549	2012831767
0242-409579	2024-01-24	1011024A	2027712406	2012831767
0242-409580	2024-01-24	1011024B	2027712406	2012831767
0242-409581	2024-01-24	1011024B	2027712406	2012831767
0242-409582	2024-01-24	1011024B	2027712406	2012831767
0242-409583	2024-01-24	1011024B	2027712406	2012831767
0242-409584	2024-01-24	1011024B	2027712406	2012831767
0242-409585	2024-01-24	1011024B	2027712406	2012831767
0242-409586	2024-01-24	1011024B	2027712406	2012831767
0242-409587	2024-01-24	1011024B	2027712406	2012831767
0242-409588	2024-01-24	1011024B	2027712406	2012831767
0242-409589	2024-01-24	1011024B	2027712405	2012831767
0242-409590	2024-01-24	1011024B	2027712405	2012831767
0242-409591	2024-01-24	1011024B	2027712405	2012831767
0242-409592	2024-01-24	1011024B	2027712405	2012831767
0242-409593	2024-01-24	1011024B	2027712405	2012831767

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19103 GUNDLE RD., HOUSTON, TX, UNITED STATES, 77073

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25 Jan 2024



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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-4

PROJECT NAME: LEALAND LF CELL 11B & C

0242-409594	2024-01-24	1011024B	2027712405	2012831767	1' GCL, Top, Base
0242-409595	2024-01-24	1011024B	2027712405	2012831767	
0242-409596	2024-01-24	1011024B	2027712405	2012831767	
0242-409597	2024-01-24	1011024B	2027712405	2012831767	
0242-409598	2024-01-24	1011024B	2027712405	2012831767	
0242-409599	2024-01-24	1011024B	2027712403	2012831744	
0242-409600	2024-01-24	1011024B	2027712403	2012831744	
0242-409601	2024-01-24	1011024B	2027712403	2012831744	
0242-409602	2024-01-24	1011024B	2027712403	2012831744	
0242-409603	2024-01-24	1011024B	2027712403	2012831744	
0242-409604	2024-01-24	1011024B	2027712403	2012831744	
0242-409605	2024-01-24	1011024B	2027712403	2012831744	
0242-409606	2024-01-24	1011024B	2027712403	2012831744	
0242-409607	2024-01-24	1011024B	2027712403	2012831744	
0242-409608	2024-01-24	1011024B	2027712403	2012831744	
0242-409609	2024-01-24	1011024B	2027712401	2012831744	
0242-409610	2024-01-24	1011024C	2027712401	2012831744	
0242-409611	2024-01-24	1011024C	2027712401	2012831744	
0242-409612	2024-01-24	1011024C	2027712401	2012831744	
0242-409613	2024-01-24	1011024C	2027712401	2012831744	
0242-409614	2024-01-24	1011024C	2027712401	2012831744	
0242-409615	2024-01-24	1011024C	2027712401	2012831744	
0242-409616	2024-01-24	1011024C	2027712401	2012831736	
0242-409617	2024-01-24	1011024C	2027712401	2012831736	
0242-409618	2024-01-24	1011024C	2027712401	2012831736	
0242-409619	2024-01-24	1011024C	2027712401	2012831736	
0242-409626	2024-01-24	1011024D	2027719656	2012831736	
0242-409627	2024-01-24	1011024D	2027719656	2012831736	

Solmax is not a design professional and has not performed any design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.



SOLMAX

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-4

PROJECT NAME: LEALAND LF CELL 11B & C

0242-409628	2024-01-24	1011024D	2027719656	2012831736
0242-409629	2024-01-24	1011024D	2027719621	2012831736
0242-409630	2024-01-24	1011024D	2027719621	2012831736
0242-409631	2024-01-24	1011024D	2027719621	2012831736
0242-409632	2024-01-24	1011024D	2027719621	2012831736
0242-409633	2024-01-24	1011024D	2027719621	2012831781
0242-409634	2024-01-24	1011024D	2027719621	2012831781
0242-409635	2024-01-24	1011024D	2027719621	2012831781
0242-409636	2024-01-24	1011024D	2027719621	2012831781
0242-409637	2024-01-24	1011024D	2027719621	2012831781
0242-409638	2024-01-24	1011024D	2027719621	2012831781
0242-409639	2024-01-24	1011024D	2027719620	2012831781
0242-409640	2024-01-24	1011024D	2027719620	2012831781
0242-409641	2024-01-24	1011024D	2027719620	2012831781
0242-409642	2024-01-24	1011024D	2027719620	2012831781
0242-409643	2024-01-24	1011024D	2027719620	2012831781
0242-409644	2024-01-24	1011024D	2027719620	2012831781
0242-409645	2024-01-24	1011024D	2027719620	2012831781
0242-409646	2024-01-24	1011024D	2027719620	2012831781
0242-409647	2024-01-24	1011024D	2027719620	2012831781
0242-409648	2024-01-24	1011024D	2027719620	2012831768
0242-409649	2024-01-24	1011024D	2027719624	2012831768
0242-409650	2024-01-24	1011024D	2027719624	2012831768
0242-409651	2024-01-24	1011024D	2027719624	2012831768
0242-409652	2024-01-24	1011024D	2027719624	2012831768
0242-409653	2024-01-24	1011024D	2027719624	2012831768
0242-409654	2024-01-24	1012224A	2027719624	2012831768
0242-409655	2024-01-24	1012224A	2027719624	2012831768

1' GCL, Top, Base

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Solmax Geosynthetics LLC
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25 Jan 2024

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: SW2401

SALES ORDER: SO-096486

PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME: LEALAND LF CELL 11B & C

0242-409656	2024-01-24	1012224A	2027719624	2012831768
0242-409657	2024-01-24	1012224A	2027719624	2012831768
0242-409658	2024-01-24	1012224A	2027719624	2012831768
0242-409659	2024-01-24	1012224A	2027719672	2012831768
0242-409660	2024-01-24	1012224A	2027719672	2012831768
0242-409661	2024-01-24	1012224A	2027719672	2012831768
0242-409662	2024-01-24	1012224A	2027719672	2012831768
0242-409663	2024-01-24	1012224A	2027719672	2012831768
0242-409664	2024-01-24	1012224A	2027719672	2012831768
0242-409665	2024-01-24	1012224A	2027719672	2012831768
0242-409666	2024-01-24	1012224A	2027719672	2012831768
0242-409667	2024-01-24	1012224A	2027719672	2012831768
0242-409668	2024-01-24	1012224A	2027719672	2012831768
0242-409669	2024-01-24	1012224A	2027719672	2012831768
0242-409670	2024-01-24	1012224A	2027719622	2012831768
0242-409671	2024-01-24	1012224A	2027719622	2012831768
0242-409672	2024-01-24	1012224A	2027719622	2012831768
0242-409673	2024-01-24	1012224A	2027719622	2012831768
0242-409674	2024-01-24	1012224A	2027719622	2012831768
0242-409675	2024-01-24	1012224A	2027719622	2012831749
0242-409676	2024-01-25	1012224A	2027719622	2012831749
0242-409677	2024-01-25	1012224A	2027719622	2012831749
0242-409678	2024-01-25	1012224A	2027719622	2012831749
0242-409679	2024-01-25	1012224A	2027719622	2012831749
0242-409680	2024-01-25	1012224A	2027719625	2012831749
0242-409681	2024-01-25	1012224A	2027719625	2012831749
0242-409682	2024-01-25	1012224B	2027719625	2012831749
0242-409683	2024-01-25	1012224B	2027719625	2012831749

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Solmax Geosynthetics LLC
19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

25 Jan 2024

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-4

PROJECT NAME: LEALAND LF CELL 11B & C

0242-409684	2024-01-25	1012224B	2027719625	2012831749	1' GCL, Top, Base
0242-409685	2024-01-25	1012224B	2027719625	2012831749	
0242-409686	2024-01-25	1012224B	2027719625	2012831749	
0242-409687	2024-01-25	1012224B	2027719625	2012831749	
0242-409688	2024-01-25	1012224B	2027719625	2012831749	
0242-409689	2024-01-25	1012224B	2027719625	2012831749	
0242-409690	2024-01-25	1012224B	2027719611	2012831749	
0242-409691	2024-01-25	1012224B	2027719611	2012831749	
0242-409692	2024-01-25	1012224B	2027719611	2012831749	
0242-409693	2024-01-25	1012224B	2027719611	2012831749	
0242-409694	2024-01-25	1012224B	2027719611	2012831749	
0242-409695	2024-01-25	1012224B	2027719611	2012831749	
0242-409696	2024-01-25	1012224B	2027719611	2012831749	
0242-409697	2024-01-25	1012224B	2027719611	2012831749	
0242-409698	2024-01-25	1012224B	2027719611	2012831749	
0242-409699	2024-01-25	1012224B	2027719611	2012831749	
0242-409700	2024-01-25	1012224B	2027719623	2012831749	
0242-409701	2024-01-25	1012224B	2027719623	2012831749	
0242-409702	2024-01-25	1012224B	2027719623	2012831749	
0242-409703	2024-01-25	1012224B	2027719623	2012831766	
0242-409704	2024-01-25	1012224B	2027719623	2012831766	
0242-409705	2024-01-25	1012224B	2027719623	2012831766	
0242-409706	2024-01-25	1012224B	2027719623	2012831766	
0242-409707	2024-01-25	1012224B	2027719623	2012831766	
0242-409708	2024-01-25	1012224B	2027719623	2012831766	
0242-409709	2024-01-25	1012224B	2027719623	2012831766	
0242-409710	2024-01-25	1012224B	2027719612	2012831766	
0242-409711	2024-01-25	1012224B	2027719612	2012831766	

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:
SALES ORDER:
PACKING SLIP NUMBER:

SW2401
SO-096486
Pre-SO-096486-4

PROJECT NAME: LEALAND LF CELL 11B & C

0242-409712	2024-01-25	1012224B	2027719612	2012831766	1' GCL, Top, Base
0242-409713	2024-01-25	1012224B	2027719612	2012831766	
0242-409714	2024-01-25	1012224C	2027719612	2012831766	
0242-409715	2024-01-25	1012224C	2027719612	2012831766	
0242-409716	2024-01-25	1012224C	2027719612	2012831766	
0242-409717	2024-01-25	1012224C	2027719612	2012831766	
0242-409718	2024-01-25	1012224C	2027719612	2012831766	
0242-409719	2024-01-25	1012224C	2027719612	2012831766	
0242-409720	2024-01-25	1012224C	2027719612	2012831766	
0242-409721	2024-01-25	1012224C	2027719610	2012831766	
0242-409722	2024-01-25	1012224C	2027719610	2012831766	
0242-409723	2024-01-25	1012224C	2027719610	2012831766	
0242-409724	2024-01-25	1012224C	2027719610	2012831766	
0242-409725	2024-01-25	1012224C	2027719610	2012831766	
0242-409726	2024-01-25	1012224C	2027719610	2012831766	
0242-409727	2024-01-25	1012224C	2027719610	2012831766	
0242-409728	2024-01-25	1012224C	2027719610	2012831766	
0242-409729	2024-01-25	1012224C	2027719610	2012831766	
0242-409730	2024-01-25	1012224C	2027719613	2012831766	
0242-409732	2024-01-25	1012224C	2027719613	2012831766	
0242-409733	2024-01-25	1012224C	2027719613	2012831766	
0242-409734	2024-01-25	1012224C	2027719613	2012831741	
0242-409735	2024-01-25	1012224C	2027719613	2012831741	
0242-409736	2024-01-25	1012224C	2027719613	2012831741	
0242-409737	2024-01-25	1012224C	2027719613	2012831741	
0242-409738	2024-01-25	1012224C	2027719613	2012831741	
0242-409739	2024-01-25	1012224C	2027719613	2012831741	
0242-409740	2024-01-25	1012224C	2027719613	2012831741	

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SOLMAX

MANUFACTURING QUALITY CONTROL



PROJECT NUMBER: SW2401

SALES ORDER: SO-096486

PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME: LEALAND LF CELL 11B & C

0242-409741	2024-01-25	1012224C	2027719627	2012831741
0242-409742	2024-01-25	1012224C	2027719627	2012831741
0242-409743	2024-01-25	1012224D	2027719627	2012831741
0242-409744	2024-01-25	1012224D	2027719627	2012831741
0242-409745	2024-01-25	1012224D	2027719627	2012831741
0242-409746	2024-01-25	1012224D	2027719627	2012831741
0242-409747	2024-01-25	1012224D	2027719627	2012831741
0242-409748	2024-01-25	1012224D	2027719627	2012831741
0242-409749	2024-01-25	1012224D	2027719627	2012831741
0242-409750	2024-01-25	1012224D	2027719627	2012831741
0242-409751	2024-01-25	1012224D	2027719614	2012831741
0242-409752	2024-01-25	1012224D	2027719614	2012831741
0242-409753	2024-01-25	1012224D	2027719614	2012831741
0242-409754	2024-01-25	1012224D	2027719614	2012831741
0242-409755	2024-01-25	1012224D	2027719614	2012831741
0242-409756	2024-01-25	1012224D	2027719614	2012831741
0242-409757	2024-01-25	1012224D	2027719614	2012831756
0242-409758	2024-01-25	1012224D	2027719614	2012831756
0242-409759	2024-01-25	1012224D	2027719614	2012831756
0242-409760	2024-01-25	1012224D	2027719614	2012831756
0242-409761	2024-01-25	1012224D	2027719614	2012831756
0242-409762	2024-01-25	1012224D	2027719668	2012831756
0242-409763	2024-01-25	1012224D	2027719668	2012831756
0242-409764	2024-01-25	1012224D	2027719668	2012831756

QUANTITY (ROLLS): 207

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Solmax Geosynthetics LLC

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25 Jan 2024



TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

PRODUCT: 1109263-50814-2

Bentoliner 0.75 lbs/ft² - 3.66 kg/m², NS, Peel 35

						Rolls
Test	Property		Direction	Test Method	Frequency	Unit
	1 Bentonite Mass (0% moisture)			ASTM D5993	40,000 ft ²	lbs/ft ²
	2 Peel Strength (min. avg.)		MD	ASTM D4632	40,000 ft ²	lbf
	3 Peel Strength (min.avg.)		MD	ASTM D6496	40,000 ft ²	lbf/in
	4 Tensile Strength MD (min. avg.)		MD	ASTM D6768	40,000 ft ²	lbf/in
	5 Grab Strength (min. avg)		MD	ASTM D4632	40,000 ft ²	lbf
	6 Finished Good Mass (0% moisture)			ASTM D5993	40,000 ft ²	lbs/ft ²
Test	1	2	3	4	5	6
SPECIFICATIONS	0.75	35	5.3	30	90	0.81
0242-409551	0.80	58.0	11.1	40	157	0.87
0242-409552	0.80	58.0	11.1	40	157	0.87
0242-409553	0.80	58.0	11.1	40	157	0.87
0242-409554	0.80	58.0	11.1	40	157	0.87
0242-409555	0.80	58.0	11.1	40	157	0.87
0242-409556	0.80	58.0	11.1	40	157	0.87
0242-409557	0.80	58.0	11.1	40	157	0.87
0242-409558	0.80	58.0	11.1	40	157	0.87
0242-409559	0.80	58.0	11.1	40	157	0.87
0242-409560	0.80	58.0	11.1	40	157	0.87
0242-409561	0.80	58.0	11.1	40	157	0.87
0242-409562	0.80	58.0	11.1	40	157	0.87
0242-409563	0.80	58.0	11.1	40	157	0.87
0242-409564	0.80	58.0	11.1	40	157	0.87
0242-409565	0.80	58.0	11.1	40	157	0.87
0242-409566	0.80	58.0	11.1	40	157	0.87
0242-409567	0.82	87.0	17.4	43	149	0.89
0242-409568	0.82	87.0	17.4	43	149	0.89
0242-409569	0.82	87.0	17.4	43	149	0.89
0242-409570	0.82	87.0	17.4	43	149	0.89

Solmax is not responsible for the use of its goods for any purpose other than that intended by Solmax. It is the responsibility of the user to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

Solmax Geosynthetics LLC

19103 GUNDLE RD., HOUSTON, TX, UNITED STATES, 77073

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TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6
0242-409571	0.82	87.0	17.4	43	149	0.89
0242-409572	0.82	87.0	17.4	43	149	0.89
0242-409573	0.82	87.0	17.4	43	149	0.89
0242-409574	0.82	87.0	17.4	43	149	0.89
0242-409575	0.82	87.0	17.4	43	149	0.89
0242-409576	0.82	87.0	17.4	43	149	0.89
0242-409577	0.82	87.0	17.4	43	149	0.89
0242-409578	0.82	87.0	17.4	43	149	0.89
0242-409579	0.82	87.0	17.4	43	149	0.89
0242-409580	0.82	87.0	17.4	43	149	0.89
0242-409581	0.82	87.0	17.4	43	149	0.89
0242-409582	0.82	87.0	17.4	43	149	0.89
0242-409583	0.81	69.0	9.5	43	157	0.89
0242-409584	0.81	69.0	9.5	43	157	0.89
0242-409585	0.81	69.0	9.5	43	157	0.89
0242-409586	0.81	69.0	9.5	43	157	0.89
0242-409587	0.81	69.0	9.5	43	157	0.89
0242-409588	0.81	69.0	9.5	43	157	0.89
0242-409589	0.81	69.0	9.5	43	157	0.89
0242-409590	0.81	69.0	9.5	43	157	0.89
0242-409591	0.81	69.0	9.5	43	157	0.89
0242-409592	0.81	69.0	9.5	43	157	0.89
0242-409593	0.81	69.0	9.5	43	157	0.89
0242-409594	0.81	69.0	9.5	43	157	0.89
0242-409595	0.81	69.0	9.5	43	157	0.89
0242-409596	0.81	69.0	9.5	43	157	0.89
0242-409597	0.81	69.0	9.5	43	157	0.89
0242-409598	0.81	69.0	9.5	43	157	0.89
0242-409599	0.93	69.0	12.0	45	150	1.00
0242-409600	0.93	69.0	12.0	45	150	1.00
0242-409601	0.93	69.0	12.0	45	150	1.00
0242-409602	0.93	69.0	12.0	45	150	1.00
0242-409603	0.93	69.0	12.0	45	150	1.00

Solmax warrants that the goods tested are intended to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

Solmax Geosynthetics LLC

19103 GUNDLE RD., HOUSTON, TX, UNITED STATES, 77073

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TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6
0242-409604	0.93	69.0	12.0	45	150	1.00
0242-409605	0.93	69.0	12.0	45	150	1.00
0242-409606	0.93	69.0	12.0	45	150	1.00
0242-409607	0.93	69.0	12.0	45	150	1.00
0242-409608	0.93	69.0	12.0	45	150	1.00
0242-409609	0.93	69.0	12.0	45	150	1.00
0242-409610	0.93	69.0	12.0	45	150	1.00
0242-409611	0.93	69.0	12.0	45	150	1.00
0242-409612	0.93	69.0	12.0	45	150	1.00
0242-409613	0.93	69.0	12.0	45	150	1.00
0242-409614	0.93	69.0	12.0	45	150	1.00
0242-409615	0.77	56.0	11.5	49	153	0.84
0242-409616	0.77	56.0	11.5	49	153	0.84
0242-409617	0.77	56.0	11.5	49	153	0.84
0242-409618	0.77	56.0	11.5	49	153	0.84
0242-409619	0.77	56.0	11.5	49	153	0.84
0242-409626	0.77	56.0	11.5	49	153	0.84
0242-409627	0.77	56.0	11.5	49	153	0.84
0242-409628	0.77	56.0	11.5	49	153	0.84
0242-409629	0.77	56.0	11.5	49	153	0.84
0242-409630	0.77	56.0	11.5	49	153	0.84
0242-409631	0.81	64.0	10.7	41	134	0.88
0242-409632	0.81	64.0	10.7	41	134	0.88
0242-409633	0.81	64.0	10.7	41	134	0.88
0242-409634	0.81	64.0	10.7	41	134	0.88
0242-409635	0.81	64.0	10.7	41	134	0.88
0242-409636	0.81	64.0	10.7	41	134	0.88
0242-409637	0.81	64.0	10.7	41	134	0.88
0242-409638	0.81	64.0	10.7	41	134	0.88
0242-409639	0.81	64.0	10.7	41	134	0.88
0242-409640	0.81	64.0	10.7	41	134	0.88
0242-409641	0.81	64.0	10.7	41	134	0.88
0242-409642	0.81	64.0	10.7	41	134	0.88

Solmax Geosynthetics LLC hereby certifies that the goods tested are intended to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

Solmax Geosynthetics LLC
19103 GUNDLE RD., HOUSTON, TX, UNITED STATES, 77073

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6
0242-409643	0.81	64.0	10.7	41	134	0.88
0242-409644	0.81	64.0	10.7	41	134	0.88
0242-409645	0.81	64.0	10.7	41	134	0.88
0242-409646	0.81	64.0	10.7	41	134	0.88
0242-409647	0.86	59.0	12.0	38	144	0.93
0242-409648	0.86	59.0	12.0	38	144	0.93
0242-409649	0.86	59.0	12.0	38	144	0.93
0242-409650	0.86	59.0	12.0	38	144	0.93
0242-409651	0.86	59.0	12.0	38	144	0.93
0242-409652	0.86	59.0	12.0	38	144	0.93
0242-409653	0.86	59.0	12.0	38	144	0.93
0242-409654	0.86	59.0	12.0	38	144	0.93
0242-409655	0.86	59.0	12.0	38	144	0.93
0242-409656	0.86	59.0	12.0	38	144	0.93
0242-409657	0.86	59.0	12.0	38	144	0.93
0242-409658	0.86	59.0	12.0	38	144	0.93
0242-409659	0.86	59.0	12.0	38	144	0.93
0242-409660	0.86	59.0	12.0	38	144	0.93
0242-409661	0.86	59.0	12.0	38	144	0.93
0242-409662	0.86	59.0	12.0	38	144	0.93
0242-409663	0.81	68.0	13.1	41	160	0.89
0242-409664	0.81	68.0	13.1	41	160	0.89
0242-409665	0.81	68.0	13.1	41	160	0.89
0242-409666	0.81	68.0	13.1	41	160	0.89
0242-409667	0.81	68.0	13.1	41	160	0.89
0242-409668	0.81	68.0	13.1	41	160	0.89
0242-409669	0.81	68.0	13.1	41	160	0.89
0242-409670	0.81	68.0	13.1	41	160	0.89
0242-409671	0.81	68.0	13.1	41	160	0.89
0242-409672	0.81	68.0	13.1	41	160	0.89
0242-409673	0.81	68.0	13.1	41	160	0.89
0242-409674	0.81	68.0	13.1	41	160	0.89
0242-409675	0.81	68.0	13.1	41	160	0.89

Solmax Geosynthetics LLC hereby certifies that the goods tested were inspected to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

Solmax Geosynthetics LLC
19103 GUNDLE RD., HOUSTON, TX, UNITED STATES, 77073

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TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6
0242-409676	0.81	68.0	13.1	41	160	0.89
0242-409677	0.81	68.0	13.1	41	160	0.89
0242-409678	0.81	68.0	13.1	41	160	0.89
0242-409679	0.84	71.0	17.1	37	132	0.91
0242-409680	0.84	71.0	17.1	37	132	0.91
0242-409681	0.84	71.0	17.1	37	132	0.91
0242-409682	0.84	71.0	17.1	37	132	0.91
0242-409683	0.84	71.0	17.1	37	132	0.91
0242-409684	0.84	71.0	17.1	37	132	0.91
0242-409685	0.84	71.0	17.1	37	132	0.91
0242-409686	0.84	71.0	17.1	37	132	0.91
0242-409687	0.84	71.0	17.1	37	132	0.91
0242-409688	0.84	71.0	17.1	37	132	0.91
0242-409689	0.84	71.0	17.1	37	132	0.91
0242-409690	0.84	71.0	17.1	37	132	0.91
0242-409691	0.84	71.0	17.1	37	132	0.91
0242-409692	0.84	71.0	17.1	37	132	0.91
0242-409693	0.84	71.0	17.1	37	132	0.91
0242-409694	0.84	71.0	17.1	37	132	0.91
0242-409695	0.77	63.0	13.0	48	176	0.84
0242-409696	0.77	63.0	13.0	48	176	0.84
0242-409697	0.77	63.0	13.0	48	176	0.84
0242-409698	0.77	63.0	13.0	48	176	0.84
0242-409699	0.77	63.0	13.0	48	176	0.84
0242-409700	0.77	63.0	13.0	48	176	0.84
0242-409701	0.77	63.0	13.0	48	176	0.84
0242-409702	0.77	63.0	13.0	48	176	0.84
0242-409703	0.77	63.0	13.0	48	176	0.84
0242-409704	0.77	63.0	13.0	48	176	0.84
0242-409705	0.77	63.0	13.0	48	176	0.84
0242-409706	0.77	63.0	13.0	48	176	0.84
0242-409707	0.77	63.0	13.0	48	176	0.84
0242-409708	0.77	63.0	13.0	48	176	0.84

Solmax warrants that the goods tested are intended to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

Solmax Geosynthetics LLC

19103 GUNDLE RD., HOUSTON, TX, UNITED STATES, 77073



TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6
0242-409709	0.77	63.0	13.0	48	176	0.84
0242-409710	0.77	63.0	13.0	48	176	0.84
0242-409711	0.84	70.0	10.3	38	120	0.91
0242-409712	0.84	70.0	10.3	38	120	0.91
0242-409713	0.84	70.0	10.3	38	120	0.91
0242-409714	0.84	70.0	10.3	38	120	0.91
0242-409715	0.84	70.0	10.3	38	120	0.91
0242-409716	0.84	70.0	10.3	38	120	0.91
0242-409717	0.84	70.0	10.3	38	120	0.91
0242-409718	0.84	70.0	10.3	38	120	0.91
0242-409719	0.84	70.0	10.3	38	120	0.91
0242-409720	0.84	70.0	10.3	38	120	0.91
0242-409721	0.84	70.0	10.3	38	120	0.91
0242-409722	0.84	70.0	10.3	38	120	0.91
0242-409723	0.84	70.0	10.3	38	120	0.91
0242-409724	0.84	70.0	10.3	38	120	0.91
0242-409725	0.84	70.0	10.3	38	120	0.91
0242-409726	0.84	70.0	10.3	38	120	0.91
0242-409727	0.86	64.0	12.5	44	140	0.94
0242-409728	0.86	64.0	12.5	44	140	0.94
0242-409729	0.86	64.0	12.5	44	140	0.94
0242-409730	0.86	64.0	12.5	44	140	0.94
0242-409732	0.86	64.0	12.5	44	140	0.94
0242-409733	0.86	64.0	12.5	44	140	0.94
0242-409734	0.86	64.0	12.5	44	140	0.94
0242-409735	0.86	64.0	12.5	44	140	0.94
0242-409736	0.86	64.0	12.5	44	140	0.94
0242-409737	0.86	64.0	12.5	44	140	0.94
0242-409738	0.86	64.0	12.5	44	140	0.94
0242-409739	0.86	64.0	12.5	44	140	0.94
0242-409740	0.86	64.0	12.5	44	140	0.94
0242-409741	0.86	64.0	12.5	44	140	0.94
0242-409742	0.86	64.0	12.5	44	140	0.94

Solmax Geosynthetics LLC hereby certifies that the goods tested were inspected to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

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TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6
0242-409743	0.86	64.0	12.5	44	140	0.94
0242-409744	0.88	51.0	9.2	35	128	0.95
0242-409745	0.88	51.0	9.2	35	128	0.95
0242-409746	0.88	51.0	9.2	35	128	0.95
0242-409747	0.88	51.0	9.2	35	128	0.95
0242-409748	0.88	51.0	9.2	35	128	0.95
0242-409749	0.88	51.0	9.2	35	128	0.95
0242-409750	0.88	51.0	9.2	35	128	0.95
0242-409751	0.88	51.0	9.2	35	128	0.95
0242-409752	0.88	51.0	9.2	35	128	0.95
0242-409753	0.88	51.0	9.2	35	128	0.95
0242-409754	0.88	51.0	9.2	35	128	0.95
0242-409755	0.88	51.0	9.2	35	128	0.95
0242-409756	0.88	51.0	9.2	35	128	0.95
0242-409757	0.88	51.0	9.2	35	128	0.95
0242-409758	0.88	51.0	9.2	35	128	0.95
0242-409759	0.88	51.0	9.2	35	128	0.95
0242-409760	0.81	76.0	14.8	44	146	0.88
0242-409761	0.81	76.0	14.8	44	146	0.88
0242-409762	0.81	76.0	14.8	44	146	0.88
0242-409763	0.81	76.0	14.8	44	146	0.88
0242-409764	0.81	76.0	14.8	44	146	0.88

Solmax hereby certifies that the foregoing test results were obtained in accordance with the procedures used to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.



TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

PRODUCT: 1109263-50814-2
Bentoliner 0.75 lbs/ft² - 3.66 kg/m², NS, Peel 35

Test	Property	Direction	Test Method	Frequency	Unit
1	Swell Index (min.)		ASTM D5890	100,000 lb	ml/2 g
2	Moisture Content (max.)		ASTM D4643	100,000 lb	%
3	Fluid Loss (max.)		ASTM D5891	100,000 lb	ml

Test	1	2	3
Specification	24	12	18
1011024A	30.0	10.0	15
1011024B	34.0	9.7	14
1011024C	32.0	10.5	13
1011024D	30.0	11.1	13
1012224A	30.0	10.4	12
1012224B	29.0	10.6	13
1012224C	32.0	8.2	13
1012224D	28.0	8.3	13

Solmax is not responsible for the results of any test performed by a third party to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.



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TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	200,000 ft ²	oz/yd ²
2	Strength (MD)				lbf
3	Strength (CMD)				lbf
4	Elongation (MD)				%
5	Elongation (CMD)				%

Solmax is not responsible for any claims or damages resulting from the use of its goods. It is the responsibility of the user to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

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TEST RESULTS

PROJECT NUMBER: SW2401
 SALES ORDER: SO-096486
 PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5
Specification	6	22	22	100	100
2027711548	6.5	63	119	185	131
2027711549	6.5	63	119	185	131
2027712401	6.8	60	122	181	138
2027712403	6.8	60	122	181	138
2027712404	7.0	70	140	161	127
2027712405	7.0	70	140	161	127
2027712406	7.0	70	140	161	127
2027719610	7.4	70	124	164	114
2027719611	7.4	70	124	164	114
2027719612	7.1	75	102	161	117
2027719613	7.1	75	102	161	117
2027719614	7.1	75	102	161	117
2027719620	6.7	80	124	156	116
2027719621	6.7	85	134	163	121
2027719622	6.7	85	134	163	121
2027719623	6.7	85	134	163	121
2027719624	6.6	70	128	179	120
2027719625	6.6	70	128	179	120
2027719627	7.3	88	157	162	137
2027719656	6.7	88	144	172	135
2027719668	6.6	51	102	149	110
2027719672	7.3	78	127	159	125

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TEST RESULTS

PROJECT NUMBER: SW2401
 SALES ORDER: SO-096486
 PACKING SLIP NUMBER: Pre-SO-096486-4

PROJECT NAME : LEALAND LF CELL 11B & C

Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	200,000 ft ²	oz/yd ²
	Grab Tensile Properties (min. avg)		ASTM D4632	200,000 ft ²	
2	Strength (MD)				lbf
3	Strength (CMD)				lbf
4	Elongation (MD)				%
5	Elongation (CMD)				%

Test	1	2	3	4	5
Specification	3	135	135	15	15
2012831736	3.4	205	171	26	23
2012831741	3.2	191	185	24	25
2012831744	3.5	209	179	27	20
2012831749	3.6	202	170	26	20
2012831754	3.5	191	167	22	18
2012831756	3.3	197	181	25	24
2012831766	3.5	197	177	26	22
2012831767	3.4	201	193	25	22
2012831768	3.5	209	179	27	20
2012831781	3.5	206	171	28	19

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Solmax Geosynthetics LLC

19103 GUNDLE RD., HOUSTON, TX, UNITED STATES, 77073

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SOLMAX BENTOLINER

CERTIFICATE OF ANALYSIS 2024
PRODUCT : NATIONAL® 30

SHIPPED FROM BENTONITE PERFORMANCE MINERALS LLC
554 US HWY 212
COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	JANUARY No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	DATE 01 - *
B0004966454	01-09-24	1010924D	9.1	0.06	7.79	14.8	114	31	816	24		9.00	0.09	4.81	15.03	112.96	31.60	882.12	
B0004966455	01-10-24	1011024A	9.1	0.05	4.05	14.6	116	32	832		STD DEV	0.42	0.05	1.52	0.44	2.95	1.81	44.09	

YTD No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
24		9.00	0.09	4.81	15.03	112.96	31.60	882.12
	STD DEV	0.42	0.05	1.52	0.44	2.95	1.81	44.09

SOLD TO: Solmax
19103 Gundle RD
Houston, TX 77073

Attn: rstadler@solmax.com
chofer@solmax.com
ctaylor@solmax.com

For any questions contact.
Q.A. SUPERVISOR
Tucker Goodvin

SHIPPED TO: Solmax
3150 FIRST AVENUE
SPEARFISH, SD 57783

Prepared by: TO
01/10/24

CC:
File

SOLMAX BENTOLINER

CERTIFICATE OF ANALYSIS 2024
PRODUCT : NATIONAL® 30

SHIPPED FROM BENTONITE PERFORMANCE MINERALS LLC
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COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	JANUARY No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	DATE
B0004966457	01-10-24	1011024B	9.2	0.05	3.70	14.4	114	30	854	25	STD DEV	9.00	0.09	4.76	15.01	113.00	31.54	881.04	01-*
												0.41	0.05	1.50	0.45	2.90	1.80	43.57	
										YTD No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	
										25	STD DEV	9.00	0.09	4.76	15.01	113.00	31.54	881.04	
												0.41	0.05	1.50	0.45	2.90	1.80	43.57	

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BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	JANUARY No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	DATE
B0004966458	01-10-24	1011024C	9.7	0.03	2.86	14.8	116	32	826	26	STD DEV	0.42	0.05	1.52	0.44	2.90	1.77	44.00	01-*
										YTD No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	
										26	STD DEV	0.42	0.05	1.52	0.44	2.90	1.77	44.00	

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01/11/24

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COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	JANUARY No. of CARS 28	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	DATE 01 - *
B0004966459	01-22-24	1011024D	10.0	0.13	3.77	13.4	114	33	902			9.08	0.09	4.68	14.97	113.17	31.66	880.28	
											STD DEV	0.45	0.05	1.48	0.53	2.80	1.75	42.73	
										YTD No. of CARS 28	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	
											STD DEV	9.08	0.09	4.68	14.97	113.17	31.66	880.28	
												0.45	0.05	1.48	0.53	2.80	1.75	42.73	

SOLD TO: Solmax
19103 Gundle RD
Houston, TX 77073

Attn: rstadler@solmax.com
chofer@solmax.com
ctaylor@solmax.com

For any questions contact.
Q.A. SUPERVISOR
Tucker Goodvin

SHIPPED TO: Solmax
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SPEARFISH, SD 57783

Prepared by: TO
01/23/24

CC: File

SOLMAX BENTOLINER

CERTIFICATE OF ANALYSIS 2024
PRODUCT : NATIONAL® 30

SHIPPED FROM BENTONITE PERFORMANCE MINERALS LLC
554 US HWY 212
COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	JANUARY No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	DATE
B0004966461	01-23-24	1012224A	9.1	0.09	5.51	14.0	116	32	914	29	STD DEV	0.45	0.05	1.46	0.55	2.80	1.72	881.40	01-*
										YTD No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	
										29	STD DEV	0.45	0.05	1.46	0.55	2.80	1.72	881.40	

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COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	JANUARY No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	DATE
B0004966463	01-23-24	1012224B	9.4	0.07	9.86	14.4	118	32	898	30	STD DEV	0.44	0.05	1.70	0.55	2.88	1.69	881.94	01-*
										YTD No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	
										30	STD DEV	0.44	0.05	1.70	0.55	2.88	1.69	881.94	

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SOLMAX BENTOLINER

CERTIFICATE OF ANALYSIS 2024
PRODUCT : NATIONAL® 30

SHIPPED FROM BENTONITE PERFORMANCE MINERALS LLC
554 US HWY 212
COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
B0004968783	01-23-24	1012224C	7.5	0.05	3.76	13.2	110	35	976

		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
JANUARY	No. of CARS							
	M AVG	9.05	0.09	4.83	14.88	113.29	31.85	883.06
	STD DEV	0.52	0.05	1.64	0.61	2.82	1.73	44.63

DATE
01-*

		% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN
YTD	No. of CARS							
	M AVG	9.05	0.09	4.83	14.88	113.29	31.85	883.06
	STD DEV	0.52	0.05	1.64	0.61	2.82	1.73	44.63

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SPEARFISH, SD 57783

Prepared by: TO
01/24/24

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SOLMAX BENTOLINER

CERTIFICATE OF ANALYSIS 2024
PRODUCT : NATIONAL® 30

SHIPPED FROM BENTONITE PERFORMANCE MINERALS LLC
554 US HWY 212
COLONY PLANT
BELLE FOURCHE, S.D. 57717

BOL #	LOAD DATE	LOT CODE	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	FL 18 MAX	MBC MEQ 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	JANUARY No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	DATE
B0004968785	01-24-24	1012224D	7.9	0.09	4.40	13.6	114	35	946	33	STD DEV	0.54	0.05	1.62	0.64	2.79	1.79	884.86	01-*
										YTD No. of CARS	M AVG	% MOIST 12 MAX	Mesh % + 20 15 MAX	Mesh % - 200 10 MAX	0 FL 18 MAX	MBC meq 70 MIN	SWELL INDEX 25 MIN	PWA 750 MIN	
										33	STD DEV	0.54	0.05	1.62	0.64	2.79	1.79	884.86	

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Report Date
2/2/2024

Quality Assurance Laboratory Test Results

Index Flux - Hydraulic Conductivity report

MF-LAB-52

Revision:01

Date: 2021-09-09

Project: LEALAND LF CELL 11B & C
Sales Order: SO-096486
Product: Bentoliner 0.75 lbs/ft² - 3.66 kg/m², NS, Peel 35

Required Testing: ASTM D5887 - Standard Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter

Frequency: 1/270,000 sf

Effective Stress: 5 psi

Roll Number	Production Date	Index Flux	Hydraulic Conductivity
		(m ³ /m ² /sec)	(cm/sec)
0242-409551	1/23/2024	5.79E-09	2.24E-09
0242-409675	1/24/2024	2.74E-09	1.12E-09

Approved By: Chuck Taylor
Date Approved: 02/02/24



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GCL TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill

Material: Cetco Bentomat ST GCL
Sample Identification: GCL-SOLMAX R# 0242-409559
TRI Log #: 24-000351

PARAMETER	TEST REPLICATE NUMBER					MEAN	STD. DEV.
	1	2	3	4	5		
Bentonite - Mass/Unit Area (ASTM D5993, result @ 0% M.C.)							
Mass/unit area (lbs/ft ²)							
GCL (ω = 0%)	0.81	0.89	0.92	0.79	0.87	0.86	0.05
Non-Bentonite Components	0.063	(Assumed Material-Specific Value)					
Bentonite (ω = 0%)	0.75	0.82	0.86	0.73	0.81	0.79	0.05
Moisture Content (%)	10.9	10.9	11.0	10.8	10.9	10.9	0.1
Bentonite - Fluid Loss (ASTM D5891)							
Slurry temperature at test initiation:	22.9	° C		Slurry temperature at test completion:	19.6	° C	
Fluid Loss (mL)	13.6					13.6	
Note: Bentonite sample tested is taken from finished GCL product.							
Bentonite - Swell Index (ASTM D5890)							
Swell index (mL/2g)	36					36	
Note: Bentonite sample tested is taken from finished GCL product.							
Index Flux (ASTM D5887)							
Index Flux (m ³ /m ² /sec)	2.8E-09					2.8E-09	
Hydraulic Conductivity (cm/sec)	1.1E-09					1.1E-09	
MD Machine Direction							

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page 2 of 4

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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GCL TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill

Material: GCL

Sample Identification: GCL-SOLMAX R# 0242-409603

TRI Log #: 24-000351

PARAMETER	TEST REPLICATE NUMBER					MEAN	STD. DEV.
	1	2	3	4	5		
Bentonite - Mass/Unit Area (ASTM D5993, result @ 0% M.C.)							
Mass/unit area (lbs/ft ²)							
GCL (ω = 0%)	1.05	0.94	0.94	0.99	0.91	0.97	0.05
Non-Bentonite Components	0.063	(Assumed Material-Specific Value)					
Bentonite (ω = 0%)	0.99	0.88	0.88	0.93	0.85	0.90	0.05
Moisture Content (%)	11.0	11.2	11.0	11.1	11.0	11.1	0.1
Bentonite - Fluid Loss (ASTM D5891)							
Slurry temperature at test initiation:	22.3	° C		Slurry temperature at test completion:	21.9	° C	
Fluid Loss (mL)	13.2					13.2	
Note: Bentonite sample tested is taken from finished GCL product.							
Bentonite - Swell Index (ASTM D5890)							
Swell index (mL/2g)	25					25	
Note: Bentonite sample tested is taken from finished GCL product.							
Index Flux (ASTM D5887)							
Index Flux (m ³ /m ² /sec)	3.7E-09					3.7E-09	
Hydraulic Conductivity (cm/sec)	1.5E-09					1.5E-09	
MD Machine Direction							

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page 3 of 4

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GCL TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill

Material: GCL

Sample Identification: GCL-SOLMAX R# 0242-409647

TRI Log #: 24-000351

PARAMETER	TEST REPLICATE NUMBER					MEAN	STD. DEV.
	1	2	3	4	5		
Bentonite - Mass/Unit Area (ASTM D5993, result @ 0% M.C.)							
Mass/unit area (lbs/ft ²)							
GCL (ω = 0%)	0.95	0.94	0.83	0.91	0.88	0.90	0.05
Non-Bentonite Components	0.063	(Assumed Material-Specific Value)					
Bentonite (ω = 0%)	0.89	0.88	0.77	0.85	0.82	0.84	0.05
Moisture Content (%)	8.3	12.5	8.7	8.6	8.3	9.3	1.8
Bentonite - Fluid Loss (ASTM D5891)							
Slurry temperature at test initiation:	22.3	° C		Slurry temperature at test completion:	21.9	° C	
Fluid Loss (mL)	13.6					13.6	
Note: Bentonite sample tested is taken from finished GCL product.							
Bentonite - Swell Index (ASTM D5890)							
Swell index (mL/2g)	30					30	
Note: Bentonite sample tested is taken from finished GCL product.							
Index Flux (ASTM D5887)							
Index Flux (m ³ /m ² /sec)	3.1E-09					3.1E-09	
Hydraulic Conductivity (cm/sec)	9.8E-10					9.8E-10	
MD Machine Direction							

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page 4 of 4

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GCL TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill

Material: Cetco Bentomat ST GCL
Sample Identification: GCL-SOLMAX R# 0242-409691
TRI Log #: 24-000354

PARAMETER	TEST REPLICATE NUMBER					MEAN	STD. DEV.
	1	2	3	4	5		
Bentonite - Mass/Unit Area (ASTM D5993, result @ 0% M.C.)							
Mass/unit area (lbs/ft ²)							
GCL (ω = 0%)	0.84	0.80	0.87	0.89	0.89	0.86	0.04
Non-Bentonite Components	0.063	(Assumed Material-Specific Value)					
Bentonite (ω = 0%)	0.77	0.73	0.81	0.83	0.83	0.79	0.04
Moisture Content (%)	8.7	9.0	8.9	8.8	8.8	8.8	0.1
Bentonite - Fluid Loss (ASTM D5891)							
Slurry temperature at test initiation:	21.8	° C		Slurry temperature at test completion:	21.2	° C	
Fluid Loss (mL)	9.2					9.2	
Note: Bentonite sample tested is taken from finished GCL product.							
Bentonite - Swell Index (ASTM D5890)							
Swell index (mL/2g)	34					34	
Note: Bentonite sample tested is taken from finished GCL product.							
Index Flux (ASTM D5887)							
Index Flux (m ³ /m ² /sec)	3.1E-09					3.1E-09	
Hydraulic Conductivity (cm/sec)	1.4E-09					1.4E-09	
MD Machine Direction							

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page 2 of 3

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GCL TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill

Material: GCL

Sample Identification: GCL-SOLMAX R# 0242-409736

TRI Log #: 24-000354

PARAMETER	TEST REPLICATE NUMBER					MEAN	STD. DEV.
	1	2	3	4	5		
Bentonite - Mass/Unit Area (ASTM D5993, result @ 0% M.C.)							
Mass/unit area (lbs/ft ²)							
GCL (ω = 0%)	0.87	0.96	0.85	0.92	0.81	0.88	0.06
Non-Bentonite Components	0.063	(Assumed Material-Specific Value)					
Bentonite (ω = 0%)	0.81	0.90	0.78	0.86	0.75	0.82	0.06
Moisture Content (%)	10.0	10.1	10.1	10.3	10.2	10.1	0.1
Bentonite - Fluid Loss (ASTM D5891)							
Slurry temperature at test initiation:	21.8	° C		Slurry temperature at test completion:	21.2	° C	
Fluid Loss (mL)	9.6						9.6
Note: Bentonite sample tested is taken from finished GCL product.							
Bentonite - Swell Index (ASTM D5890)							
Swell index (mL/2g)	36						36
Note: Bentonite sample tested is taken from finished GCL product.							
Index Flux (ASTM D5887)							
Index Flux (m ³ /m ² /sec)	2.4E-09						2.4E-09
Hydraulic Conductivity (cm/sec)	1.1E-09						1.1E-09
MD Machine Direction							

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page 3 of 3

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APPENDIX E
GCL PLACEMENT

Includes pages E-1 through E-9

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GCL PANEL PLACEMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
S1	9677	GCL	6/12/2024	BDL	150	14	2,100	
S2	9703	GCL	6/12/2024	BDL	151	14	2,114	
S3	9569	GCL	6/12/2024	BDL	150	14	2,100	
S4	9702	GCL	6/12/2024	BDL	150	14	2,100	
S5	9571	GCL	6/12/2024	BDL	150	14	2,100	
S6	9693	GCL	6/12/2024	BDL	149	14	2,086	
S7	9570	GCL	6/12/2024	BDL	150	14	2,100	
S8	9691	GCL	6/12/2024	BDL	150	14	2,100	
S9	9667	GCL	6/12/2024	BDL	149	14	2,086	
S10	9758	GCL	6/12/2024	BDL	149	14	2,086	
S11	9641	GCL	6/12/2024	BDL	149	14	2,086	
S12	9640	GCL	6/12/2024	BDL	149	14	2,086	
S13	9678	GCL	6/12/2024	BDL	149	14	2,086	
S14	9567	GCL	6/12/2024	BDL	149	14	2,086	
S15	9679	GCL	6/13/2024	BDL	141	13	1,833	
S16	9679	GCL	6/13/2024	BDL	9	13	117	
S16A	9582	GCL	6/13/2024	BDL	132	13	1,716	
S17	9582	GCL	6/13/2024	BDL	18	13	234	
S17A	9581	GCL	6/13/2024	BDL	120	13	1,560	
S18	9581	GCL	6/13/2024	BDL	28	13	364	
S18A	9759	GCL	6/13/2024	BDL	109	13	1,417	
S19	9759	GCL	6/13/2024	BDL	35	13	455	
S19A	9576	GCL	6/13/2024	BDL	99	13	1,287	
S20	9576	GCL	6/13/2024	BDL	42	13	546	
S20A	9670	GCL	6/13/2024	BDL	88	13	1,144	
S21	9670	GCL	6/13/2024	BDL	54	13	702	
S21A	9763	GCL	6/13/2024	BDL	78	13	1,014	
S22	9763	GCL	6/13/2024	BDL	67	13	871	
S22A	9701	GCL	6/13/2024	BDL	62	13	806	
S23	9701	GCL	6/13/2024	BDL	81	13	1,053	
S23A	9700	GCL	6/13/2024	BDL	48	13	624	
S24	9700	GCL	6/13/2024	BDL	96	13	1,248	
S24A	9697	GCL	6/13/2024	BDL	33	13	429	
S25	9697	GCL	6/13/2024	BDL	113	13	1,469	
S25A	9696	GCL	6/13/2024	BDL	17	13	221	
S26	9696	GCL	6/13/2024	BDL	130	13	1,690	
S27	9694	GCL	6/13/2024	BDL	129	13	1,677	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GCL PANEL PLACEMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
S28	9699	GCL	6/13/2024	BDL	126	13	1,638	
S29	9699	GCL	6/13/2024	BDL	24	13	312	
S29A	9698	GCL	6/13/2024	BDL	86	13	1,118	
S30	9698	GCL	6/13/2024	BDL	55	13	715	
S30A	9645	GCL	6/13/2024	BDL	37	13	481	
S31	9645	GCL	6/13/2024	BDL	72	13	936	
S32	9645	GCL	6/13/2024	BDL	23	13	299	
S32A	9695	GCL	6/13/2024	BDL	29	13	377	
S33	9695	GCL	6/13/2024	BDL	34	13	442	
S34	9695	GCL	6/13/2024	BDL	20	4	80	
W1	9722	GCL	6/14/2024	BDL	115	13	1,495	
W2	9665	GCL	6/14/2024	BDL	99	13	1,287	
W3	9665	GCL	6/14/2024	BDL	35	13	455	
W3A	9695	GCL	6/14/2024	BDL	50	13	650	
W4	9666	GCL	6/14/2024	BDL	70	13	910	
W5	9666	GCL	6/14/2024	BDL	54	13	702	
W6	9666	GCL	6/14/2024	BDL	40	13	520	
W7	9721	GCL	6/14/2024	BDL	22	13	286	
W8	9721	GCL	6/14/2024	BDL	12	8	96	
W9	9651	GCL	6/15/2024	BDL	76	13	988	
W10	9651	GCL	6/15/2024	BDL	37	7	259	
W11	9651	GCL	6/15/2024	BDL	14	13	182	
W12	9651	GCL	6/15/2024	BDL	35	13	455	
W12A	9707	GCL	6/15/2024	BDL	67	13	871	
W13	9707	GCL	6/15/2024	BDL	81	13	1,053	
W13A	9746	GCL	6/15/2024	BDL	20	13	260	
B1	9706	GCL	6/15/2024	BDL	148	14	2,072	
B2	9632	GCL	6/15/2024	BDL	145	14	2,030	
B3	9705	GCL	6/15/2024	BDL	148	14	2,072	
W14	9615	GCL	6/17/2024	BDL	102	13	1,326	
W15	9615	GCL	6/17/2024	BDL	51	13	663	
W15A	9636	GCL	6/17/2024	BDL	51	13	663	
W16	9636	GCL	6/17/2024	BDL	95	13	1,235	
W16A	9635	GCL	6/17/2024	BDL	7	13	91	
B4	9638	GCL	6/17/2024	BDL	148	14	2,072	
B4A	9634	GCL	6/17/2024	BDL	147	14	2,058	
B4B	9747	GCL	6/17/2024	BDL	120	14	1,680	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GCL PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
B5	9637	GCL	6/17/2024	BDL	147	14	2,058	
B5A	9633	GCL	6/17/2024	BDL	148	14	2,072	
B5B	9749	GCL	6/17/2024	BDL	98	14	1,372	
B5C	9747	GCL	6/17/2024	BDL	25	14	350	
B1A	9727	GCL	6/17/2024	BDL	149	14	2,086	
B1B	9727	GCL	6/17/2024	BDL	23	14	322	
B1C	9746	GCL	6/17/2024	BDL	9	14	126	
B1D	9721	GCL	6/17/2024	BDL	74	14	1,036	
B2A	9704	GCL	6/17/2024	BDL	149	14	2,086	
B2B	9643	GCL	6/17/2024	BDL	3	14	42	
B2C	9746	GCL	6/17/2024	BDL	112	14	1,568	
B3A	9748	GCL	6/17/2024	BDL	149	14	2,086	
B3B	9643	GCL	6/17/2024	BDL	118	14	1,652	
W17	9738	GCL	6/18/2024	BDL	102	13	1,326	
W18	9738	GCL	6/18/2024	BDL	51	13	663	
W18A	9737	GCL	6/18/2024	BDL	51	13	663	
W19	9737	GCL	6/18/2024	BDL	96	13	1,248	
W19A	9643	GCL	6/18/2024	BDL	7	13	91	
W20	9674	GCL	6/18/2024	BDL	93	13	1,209	
W20A	9643	GCL	6/18/2024	BDL	10	13	130	
W21	9674	GCL	6/18/2024	BDL	103	13	1,339	
B6	9763	GCL	6/18/2024	BDL	147	14	2,058	
B6A	9676	GCL	6/18/2024	BDL	147	14	2,058	
B6B	9557	GCL	6/18/2024	BDL	128	14	1,792	
B7	9680	GCL	6/18/2024	BDL	147	14	2,058	
B7A	9687	GCL	6/18/2024	BDL	146	14	2,044	
B7B	9669	GCL	6/18/2024	BDL	118	14	1,652	
B7C	9557	GCL	6/18/2024	BDL	18	14	252	
B8	9681	GCL	6/18/2024	BDL	147	14	2,058	
B8A	9585	GCL	6/18/2024	BDL	148	14	2,072	
B8B	9757	GCL	6/18/2024	BDL	67	14	938	
B8C	9749	GCL	6/18/2024	BDL	45	14	630	
B8D	9669	GCL	6/18/2024	BDL	26	14	364	
B9	9635	GCL	6/18/2024	BDL	135	14	1,890	
B9A	9668	GCL	6/18/2024	BDL	146	14	2,044	
B9B	9662	GCL	6/18/2024	BDL	145	14	2,030	
B9C	9565	GCL	6/18/2024	BDL	4	14	56	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GCL PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
B10	9563	GCL	6/18/2024	BDL	41	14	574	
B10A	9674	GCL	6/18/2024	BDL	54	14	756	
B10B	9757	GCL	6/18/2024	BDL	75	14	1,050	
B10C	9580	GCL	6/18/2024	BDL	143	14	2,002	
B10D	9565	GCL	6/18/2024	BDL	117	14	1,638	
B11	9739	GCL	6/19/2024	BDL	147	14	2,058	
B11A	9653	GCL	6/19/2024	BDL	148	14	2,072	
B11B	9599	GCL	6/19/2024	BDL	147	14	2,058	
B12	9559	GCL	6/19/2024	BDL	148	14	2,072	
B12A	9602	GCL	6/19/2024	BDL	146	14	2,044	
B12B	9626	GCL	6/19/2024	BDL	134	14	1,876	
B12C	9565	GCL	6/19/2024	BDL	19	14	266	
B13	9566	GCL	6/19/2024	BDL	147	14	2,058	
B13A	9603	GCL	6/19/2024	BDL	146	14	2,044	
B13B	9626	GCL	6/19/2024	BDL	9	14	126	
B13C	9717	GCL	6/19/2024	BDL	147	14	2,058	
B14	9709	GCL	6/19/2024	BDL	149	14	2,086	
B14A	9708	GCL	6/19/2024	BDL	145	14	2,030	
B14B	9664	GCL	6/19/2024	BDL	14	14	196	
B14C	9671	GCL	6/19/2024	BDL	146	14	2,044	
B15	9655	GCL	6/19/2024	BDL	146	14	2,044	
B15A	9661	GCL	6/19/2024	BDL	145	10	1,450	
B15B	9661	GCL	6/19/2024	BDL	135	3	405	
B16	9656	GCL	6/19/2024	BDL	149	7	1,043	
B17	9664	GCL	6/19/2024	BDL	7	14	98	
B18	9664	GCL	6/19/2024	BDL	6	14	84	
B19	9664	GCL	6/19/2024	BDL	5	14	70	
B20	9664	GCL	6/19/2024	BDL	4	14	56	
B21	9664	GCL	6/19/2024	BDL	3	14	42	
W22	9555	GCL	6/21/2024	BDL	105	13	1,365	
W23	9574	GCL	6/21/2024	BDL	67	13	871	
W23A	9555	GCL	6/21/2024	BDL	40	13	520	
W24	9553	GCL	6/21/2024	BDL	30	13	390	
W24A	9574	GCL	6/21/2024	BDL	76	13	988	
W25	9553	GCL	6/21/2024	BDL	106	13	1,378	
W26	9561	GCL	6/21/2024	BDL	107	13	1,391	
W26A	9553	GCL	6/21/2024	BDL	3	13	39	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GCL PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
W27	9551	GCL	6/21/2024	BDL	74	13	962	
W27A	9561	GCL	6/21/2024	BDL	37	13	481	
W28	9601	GCL	6/21/2024	BDL	38	13	494	
W28A	9551	GCL	6/21/2024	BDL	74	13	962	
W29	9601	GCL	6/21/2024	BDL	111	13	1,443	
W30	9631	GCL	6/24/2024	BDL	95	13	1,235	
W31	9631	GCL	6/24/2024	BDL	50	13	650	
W31A	9664	GCL	6/24/2024	BDL	41	13	533	
W32	9664	GCL	6/24/2024	BDL	48	13	624	
W32A	9618	GCL	6/24/2024	BDL	42	13	546	
W32B	9618	GCL	6/24/2024	BDL	3	13	39	
W33	9618	GCL	6/24/2024	BDL	92	13	1,196	
B22	9692	GCL	6/24/2024	BDL	148	14	2,072	
B22A	9698	GCL	6/24/2024	BDL	149	14	2,086	
B22B	9664	GCL	6/24/2024	BDL	16	14	224	
B22C	9724	GCL	6/24/2024	BDL	148	14	2,072	
B23	9673	GCL	6/24/2024	BDL	142	14	1,988	
B23A	9614	GCL	6/24/2024	BDL	145	14	2,030	
B23B	9723	GCL	6/24/2024	BDL	43	14	602	
B23C	9558	GCL	6/24/2024	BDL	132	14	1,848	
B24	9630	GCL	6/24/2024	BDL	144	14	2,016	
B24A	9725	GCL	6/24/2024	BDL	146	14	2,044	
B24B	9659	GCL	6/24/2024	BDL	89	14	1,246	
B24C	9723	GCL	6/24/2024	BDL	102	14	1,428	
B25	9616	GCL	6/24/2024	BDL	145	14	2,030	
B25A	9564	GCL	6/24/2024	BDL	145	14	2,030	
B25B	9554	GCL	6/24/2024	BDL	141	14	1,974	
B25C	9659	GCL	6/24/2024	BDL	55	14	770	
W34	9597	GCL	6/25/2024	BDL	86	13	1,118	
W35	9597	GCL	6/25/2024	BDL	64	13	832	
W35	9720	GCL	6/25/2024	BDL	18	13	234	
W36	9720	GCL	6/25/2024	BDL	83	13	1,079	
W37	9720	GCL	6/25/2024	BDL	49	13	637	
W37A	9613	GCL	6/25/2024	BDL	34	13	442	
W38	9613	GCL	6/25/2024	BDL	81	13	1,053	
W39	9613	GCL	6/25/2024	BDL	35	13	455	
W39A	9617	GCL	6/25/2024	BDL	45	13	585	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GCL PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
W40	9617	GCL	6/25/2024	BDL	78	13	1,014	
W41	9617	GCL	6/25/2024	BDL	27	8	216	
W41A	9719	GCL	6/25/2024	BDL	50	8	400	
B26	9718	GCL	6/25/2024	BDL	147	14	2,058	
B26A	9710	GCL	6/25/2024	BDL	148	14	2,072	
B26B	9629	GCL	6/25/2024	BDL	148	14	2,072	
B26C	9719	GCL	6/25/2024	BDL	53	14	742	
B27	9652	GCL	6/25/2024	BDL	146	14	2,044	
B27A	9585	GCL	6/25/2024	BDL	145	14	2,030	
B27B	9644	GCL	6/25/2024	BDL	144	14	2,016	
B27C	9719	GCL	6/25/2024	BDL	37	14	518	
B27D	9745	GCL	6/25/2024	BDL	44	14	616	
B28	9587	GCL	6/25/2024	BDL	144	14	2,016	
B28A	9726	GCL	6/25/2024	BDL	145	14	2,030	
B28B	9628	GCL	6/25/2024	BDL	147	14	2,058	
B28C	9745	GCL	6/25/2024	BDL	74	14	1,036	
B29	9744	GCL	6/26/2024	BDL	144	14	2,016	
B29A	9650	GCL	6/26/2024	BDL	148	14	2,072	
B29B	9568	GCL	6/26/2024	BDL	148	14	2,072	
B29C	9745	GCL	6/26/2024	BDL	25	14	350	
B29D	9575	GCL	6/26/2024	BDL	53	14	742	
B30	9742	GCL	6/26/2024	BDL	146	14	2,044	
B30A	9672	GCL	6/26/2024	BDL	147	14	2,058	
B30B	9579	GCL	6/26/2024	BDL	148	14	2,072	
B30C	9575	GCL	6/26/2024	BDL	84	14	1,176	
B31	9663	GCL	6/26/2024	BDL	144	14	2,016	
B31A	9577	GCL	6/26/2024	BDL	147	14	2,058	
B31B	9762	GCL	6/26/2024	BDL	149	14	2,086	
B31C	9575	GCL	6/26/2024	BDL	7	14	98	
B31D	9583	GCL	6/26/2024	BDL	84	14	1,176	
B32	9764	GCL	6/26/2024	BDL	148	14	2,072	
B32A	9687	GCL	6/26/2024	BDL	134	14	1,876	
B33	9670	GCL	6/26/2024	BDL	142	7	994	
B33A	9670	GCL	6/26/2024	BDL	58	8	464	
B33B	9670	GCL	6/26/2024	BDL	15	7	105	
B33C	9670	GCL	6/26/2024	BDL	15	7	105	
B33D	9670	GCL	6/26/2024	BDL	15	6	90	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GCL PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
B33E	9690	GCL	6/26/2024	BDL	15	6	90	
B33F	9690	GCL	6/26/2024	BDL	15	6	90	
B33G	9690	GCL	6/26/2024	BDL	9	7	63	
B34	9670	GCL	6/26/2024	BDL	19	3	57	
B35	9689	GCL	7/2/2024	BDL	106	14	1,484	
B36	9689	GCL	7/2/2024	BDL	41	14	574	
B36A	9761	GCL	7/2/2024	BDL	67	14	938	
B37	9761	GCL	7/2/2024	BDL	83	14	1,162	
B37A	9675	GCL	7/2/2024	BDL	26	14	364	
B38	9765	GCL	7/2/2024	BDL	108	14	1,512	
B39	9765	GCL	7/2/2024	BDL	12	14	168	
B39A	9685	GCL	7/2/2024	BDL	96	14	1,344	
B40	9685	GCL	7/2/2024	BDL	53	14	742	
B40A	9596	GCL	7/2/2024	BDL	57	14	798	
B41	9596	GCL	7/2/2024	BDL	92	14	1,288	
B41A	9711	GCL	7/2/2024	BDL	17	14	238	
B42	9711	GCL	7/2/2024	BDL	109	14	1,526	
B43	9711	GCL	7/2/2024	BDL	22	14	308	
B43A	9578	GCL	7/2/2024	BDL	87	14	1,218	
B44	9578	GCL	7/2/2024	BDL	56	14	784	
B44A	9619	GCL	7/2/2024	BDL	53	14	742	
B45	9619	GCL	7/2/2024	BDL	95	14	1,330	
B45A	9552	GCL	7/2/2024	BDL	14	14	196	
B46	9552	GCL	7/2/2024	BDL	109	14	1,526	
B47	9552	GCL	7/2/2024	BDL	26	14	364	
B47A	9734	GCL	7/2/2024	BDL	83	14	1,162	
B48	9734	GCL	7/2/2024	BDL	65	14	910	
B48A	9713	GCL	7/2/2024	BDL	43	14	602	
B49	9713	GCL	7/2/2024	BDL	104	14	1,456	
B49A	9562	GCL	7/2/2024	BDL	6	14	84	
B50	9619	GCL	7/3/2024	BDL	108	14	1,512	
B51	9619	GCL	7/3/2024	BDL	32	14	448	
B51A	9654	GCL	7/3/2024	BDL	76	14	1,064	
B52	9654	GCL	7/3/2024	BDL	77	14	1,078	
B52A	9560	GCL	7/3/2024	BDL	37	14	518	
B53	9560	GCL	7/3/2024	BDL	109	14	1,526	
B54	9716	GCL	7/3/2024	BDL	108	14	1,512	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GCL PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
B55	9716	GCL	7/3/2024	BDL	41	14	574	
B55A	9743	GCL	7/3/2024	BDL	67	14	938	
B56	9743	GCL	7/3/2024	BDL	80	14	1,120	
B56A	9712	GCL	7/3/2024	BDL	28	14	392	
B57	9712	GCL	7/3/2024	BDL	92	14	1,288	
B57A	9588	GCL	7/3/2024	BDL	16	14	224	
B58	9588	GCL	7/3/2024	BDL	109	14	1,526	
B59	9714	GCL	7/3/2024	BDL	109	14	1,526	
B60	9714	GCL	7/3/2024	BDL	38	14	532	
B60A	9715	GCL	7/3/2024	BDL	70	14	980	
B61	9715	GLC	7/3/2024	BDL	75	14	1,050	
B61A	9690	GLC	7/3/2024	BDL	32	14	448	
B62	9690	GLC	7/3/2024	BDL	95	14	1,330	
B62A	9556	GLC	7/3/2024	BDL	16	14	224	
B63	9556	GLC	7/3/2024	BDL	110	14	1,540	
B64	9732	GLC	7//10/24	BDL	109	14	1,526	
B65	9732	GLC	7//10/24	BDL	41	14	574	
B65A	9733	GLC	7//10/24	BDL	69	14	966	
B66	9733	GLC	7//10/24	BDL	80	14	1,120	
B66A	9627	GLC	7//10/24	BDL	32	14	448	
B67	9627	GLC	7//10/24	BDL	110	14	1,540	
B68	9648	GLC	7//10/24	BDL	110	14	1,540	
B69	9646	GLC	7//10/24	BDL	110	14	1,540	
B70	9646	GLC	7//10/24	BDL	37	14	518	
B70A	9586	GLC	7//10/24	BDL	71	14	994	
B71	9586	GLC	7//10/24	BDL	76	14	1,064	
B71A	9684	GLC	7//10/24	BDL	36	14	504	
B72	9684	GLC	7//10/24	BDL	115	14	1,610	
B73	9594	GLC	7//10/24	BDL	111	14	1,554	
B74	9688	GLC	7//10/24	BDL	110	14	1,540	
B75	9688	GLC	7//10/24	BDL	36	14	504	
B75A	9727	GLC	7//10/24	BDL	74	14	1,036	
B76	9727	GLC	7//10/24	BDL	73	14	1,022	
B76A	9648	GLC	7//10/24	BDL	35	14	490	
B77	9735	GLC	7//10/24	BDL	112	14	1,568	
B78	9728	GLC	7/17/2024	BDL	110	14	1,540	
B79	9728	GLC	7/17/2024	BDL	39	14	546	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GCL PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
B79A	9730	GLC	7/17/2024	BDL	69	14	966	
B80	9730	GLC	7/17/2024	BDL	77	14	1,078	
B80A	9598	GLC	7/17/2024	BDL	32	14	448	
B81	9598	GLC	7/17/2024	BDL	108	14	1,512	
B82	9729	GLC	7/17/2024	BDL	107	14	1,498	
B83	9729	GLC	7/17/2024	BDL	40	14	560	
B83A	5228	GLC	7/17/2024	BDL	68	14	952	
B84	5228	GLC	7/17/2024	BDL	78	14	1,092	
B84A	5214	GLC	7/17/2024	BDL	29	14	406	
B85	5214	GLC	7/17/2024	BDL	107	14	1,498	
B86	5220	GLC	7/17/2024	BDL	150	14	2,100	
B86A	5213	GLC	7/17/2024	BDL	5	14	70	
B87	5213	GLC	7/17/2024	BDL	137	14	1,918	
B87A	9754	GLC	7/17/2024	BDL	22	14	308	
B88	5243	GLC	7/17/2024	BDL	150	13	1,950	
B88A	9754	GLC	7/17/2024	BDL	10	13	130	
B89	9740	GLC	7/17/2024	BDL	150	13	1,950	
B89A	9754	GLC	7/17/2024	BDL	11	13	143	
B90	9741	GLC	7/17/2024	BDL	150	13	1,950	
B90A	9754	GLC	7/17/2024	BDL	13	13	169	
B91	9752	GLC	7/17/2024	BDL	150	13	1,950	
B91A	9754	GLC	7/17/2024	BDL	14	13	182	
B92	9755	GLC	7/17/2024	BDL	150	13	1,950	
B92A	9754	GLC	7/17/2024	BDL	15	13	195	

APPENDIX F
GEOMEMBRANE INFORMATION

Includes pages F-1 through F-36

**LEA LAND LANDFILL
UNIT IIB & C CONSTRUCTION
6041-001-17-01
GEOMEMBRANE INVENTORY**

Resin Lot	Roll No.	Textured / Smooth	Roll Dimensions			QC Date	Conformance Sample		Comments
			Length, ft	Width, ft	Area, sf		Date	Pass/Fail	
23K1098	0101-211345	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211346	60-mil Smooth	520	23.0	11,960	2/1/2024	2/21/2024	Pass	
23K1098	0101-211347	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211348	60-mil Smooth	520	23.0	11,960	2/1/2024	2/9/2024	Pass	
23K1098	0101-211349	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211350	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211351	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211352	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211353	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211354	60-mil Smooth	520	23.0	11,960	2/1/2024	2/21/2024	Pass	
23K1098	0101-211355	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211356	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211357	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211358	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211360	60-mil Smooth	520	23.0	11,960	2/1/2024	2/21/2024	Pass	
23K1098	0101-211361	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211362	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211363	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211364	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211365	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211367	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211368	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211369	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1098	0101-211370	60-mil Smooth	520	23.0	11,960	2/1/2024	2/21/2024	Pass	
23K1098	0101-211371	60-mil Smooth	520	23.0	11,960	2/1/2024			

**LEA LAND LANDFILL
UNIT IIB & C CONSTRUCTION
6041-001-17-01
GEOMEMBRANE INVENTORY**

Resin Lot	Roll No.	Textured / Smooth	Roll Dimensions			QC Date	Conformance Sample		Comments
			Length, ft	Width, ft	Area, sf		Date	Pass/Fail	
23K1098	0101-211372	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1094	0104-211347	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1094	0104-211348	60-mil Smooth	520	23.0	11,960	2/1/2024			
23K1094	0104-211349	60-mil Smooth	520	23.0	11,960	2/1/2024			
PRA821050	0104-211841	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211842	60-mil Smooth	520	23.0	11,960	3/8/2024	3/28/2024	Pass	
PRA821050	0104-211843	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211844	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211845	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211846	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211847	60-mil Smooth	520	23.0	11,960	3/8/2024	3/28/2024	Pass	
PRA821050	0104-211848	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211849	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211850	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211851	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211852	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211853	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211854	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211855	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211856	60-mil Smooth	520	23.0	11,960	3/8/2024	3/28/2024	Pass	
PRA821050	0104-211857	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211858	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211859	60-mil Smooth	520	23.0	11,960	3/8/2024			
PRA821050	0104-211860	60-mil Smooth	520	23.0	11,960	3/8/2024			
23K1092	0104-211330	60-mil Textured	520	23.0	11,960	1/30/2024			

**LEA LAND LANDFILL
UNIT IIB & C CONSTRUCTION
6041-001-17-01
GEOMEMBRANE INVENTORY**

Resin Lot	Roll No.	Textured / Smooth	Roll Dimensions			QC Date	Conformance Sample		Comments
			Length, ft	Width, ft	Area, sf		Date	Pass/Fail	
23K1092	0104-211332	60-mil Textured	520	23.0	11,960	1/30/2024	2/9/2024	Pass	
23K1092	0104-211333	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211336	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211337	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211338	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211339	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211340	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211341	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211342	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211343	60-mil Textured	520	23.0	11,960	1/30/2024	2/9/2024	Pass	
23K1094	0104-211354	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211355	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211356	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211357	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211359	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1094	0104-211360	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211361	60-mil Textured	520	23.0	11,960	1/30/2024	2/8/2024	Pass	
23K1098	0104-211364	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211366	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211367	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211368	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211369	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211370	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211371	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211372	60-mil Textured	520	23.0	11,960	1/30/2024			

**LEA LAND LANDFILL
UNIT IIB & C CONSTRUCTION
6041-001-17-01
GEOMEMBRANE INVENTORY**

Resin Lot	Roll No.	Textured / Smooth	Roll Dimensions			QC Date	Conformance Sample		Comments
			Length, ft	Width, ft	Area, sf		Date	Pass/Fail	
23K1098	0104-211373	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211374	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211375	60-mil Textured	520	23.0	11,960	1/30/2024	2/8/2024	Pass	
23K1098	0104-211377	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211378	60-mil Textured	520	23.0	11,960	1/30/2024			
23K1098	0104-211379	60-mil Textured	520	23.0	11,960	1/30/2024			



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LIST OF GEOMEMBRANE ROLLS



PROJECT NUMBER: SW2401

SALES ORDER: SO-096486

PACKING SLIP NUMBER: Pre-SO-096486-9

PROJECT NAME : LEALAND LF CELL 11B & C

ROLL NUMBER	RESIN LOT NUMBER	MANUFACT. DATE	RESIN MELT INDEX 190/2.16 g/10 min D1238	RESIN DENSITY g/cc D1505	OIT min D8117	HPOIT min D5885	ESCR SP-NCTL hours D5397
Product Code : 1101438-50814-5							
HDPE 60 mils / 1.50 mm Black Smooth			1.0	> 0.932	100		500
0101-211345	23K1098	2024-01-19	0.07	0.938	120		>500 Certified 0101-211338
0101-211346	23K1098	2024-01-19	0.07	0.938	120		>500 Certified 0101-211338
0101-211347	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211348	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211349	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211350	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211351	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211352	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211353	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211354	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211355	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211356	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211357	23K1098	2024-01-20	0.07	0.938	120		>500 Certified 0101-211338
0101-211358	23K1098	2024-01-22	0.07	0.938	120		>500 Certified 0101-211338

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1 Feb 2024

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LIST OF GEOMEMBRANE ROLLS



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-9

PROJECT NAME : LEALAND LF CELL 11B & C

0101-211360	23K1098	2024-01-22	0.07	0.938	120	>500 Certified 0101-211338
0101-211361	23K1098	2024-01-22	0.07	0.938	120	>500 Certified 0101-211338
0101-211362	23K1098	2024-01-22	0.07	0.938	120	>500 Certified 0101-211338
0101-211363	23K1098	2024-01-22	0.07	0.938	120	>500 Certified 0101-211338
0101-211364	23K1098	2024-01-22	0.07	0.938	120	>500 Certified 0101-211338
0101-211365	23K1089	2024-01-22	0.07	0.937	120	>500 Certified 0104-211430
0101-211367	23K1089	2024-01-22	0.07	0.937	120	>500 Certified 0104-211430
0101-211368	23K1089	2024-01-22	0.07	0.937	120	>500 Certified 0104-211430
0101-211369	23K1089	2024-01-22	0.07	0.937	120	>500 Certified 0104-211430
0101-211370	23K1089	2024-01-22	0.07	0.937	120	>500 Certified 0104-211430
0101-211371	23K1089	2024-01-23	0.07	0.937	120	>500 Certified 0104-211430
0101-211372	23K1089	2024-01-23	0.07	0.937	120	>500 Certified 0104-211430
0104-211347	23K1094	2024-01-15	0.07	0.938	120	>500 Certified 0101-211304
0104-211348	23K1094	2024-01-15	0.07	0.938	120	>500 Certified 0101-211304
0104-211349	23K1094	2024-01-15	0.07	0.938	120	>500 Certified 0101-211304

QUANTITY (ROLLS): 29

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER:

SW2401

SALES ORDER:

SO-096486

PACKING SLIP NUMBER:

Pre-SO-096486-9

PROJECT NAME : LEALAND LF CELL 11B & C

PRODUCT: 1101438-50814-5
HDPE 60 mils / 1.50 mm Black Smooth

Properties	Thickness ave/min.	GeoM Density	Carbon Black Content	Carbon Black Dispersion	Tensile				Tear Resist.	Puncture Resist.	Dimension Stability	Asperity Height In/Out
Unit	mils	g/cc	%	Cat 1 and 2	Yield Strength	Elong.	Break Strength	Elong.	lbs	lbs	%	mils
Test Method	D5199	D792	D4218	D5596	D6693				D1004	D4833	D1204	
Frequency	Each roll	Every 8 rolls	Every 2 rolls	Every 5 rolls	Every 2 rolls				Every 5 rolls	Every 5 rolls		
Specification	60.0 / 54.0	≥ 0.940	2.0 - 3.0	Cat. 1 & Cat. 2	132	13	243	700	42	120		
0101-211345 MD XD	62.2 / 58.0	0.942	2.84	10/10 views	152.5 152.9	19.2 17.4	308 290	790 774	50 54	140		
0101-211346 MD XD	62.1 / 58.5	0.942	2.84	10/10 views	152.5 152.9	19.2 17.4	308 290	790 774	50 54	140		
0101-211347 MD XD	62.1 / 59.0	0.942	2.71	10/10 views	141.4 149.7	19.0 17.6	284 317	765 882	50 54	140		
0101-211348 MD XD	63.4 / 60.0	0.942	2.71	10/10 views	141.4 149.7	19.0 17.6	284 317	765 882	50 54	140		
0101-211349 MD XD	61.3 / 59.0	0.942	2.48	10/10 views	143.1 145.9	19.0 17.6	307 303	813 841	50 54	140		
0101-211350 MD XD	62.3 / 58.5	0.942	2.48	10/10 views	143.1 145.9	19.0 17.6	307 303	813 841	50 48	142		
0101-211351 MD XD	62.2 / 58.5	0.942	2.56	10/10 views	146.3 144.2	18.6 17.2	294 302	767 848	50 48	142		
0101-211352 MD XD	61.5 / 57.5	0.942	2.56	10/10 views	146.3 144.2	18.6 17.2	294 302	767 848	50 48	142		
0101-211353 MD XD	61.7 / 54.0	0.942	2.58	10/10 views	140.6 144.7	19.0 17.5	311 294	821 824	50 48	142		
0101-211354 MD XD	63.2 / 54.5	0.942	2.58	10/10 views	140.6 144.7	19.0 17.5	311 294	821 824	50 48	142		
0101-211355 MD XD	64.1 / 58.0	0.946	2.66	10/10 views	146.6 152.6	19.3 17.0	308 280	777 750	49 54	143		
0101-211356 MD XD	62.3 / 54.0	0.946	2.66	10/10 views	146.6 152.6	19.3 17.0	308 280	777 750	49 54	143		
0101-211357 MD XD	63.5 / 58.5	0.946	2.64	10/10 views	139.4 155.8	19.4 16.9	293 296	763 797	49 54	143		

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TEST RESULTS

PROJECT NUMBER: SW2401

SALES ORDER: SO-096486

PACKING SLIP NUMBER: Pre-SO-096486-9

PROJECT NAME : LEALAND LF CELL 11B & C

0101-211358 MD	63.4 / 60.0	0.944	2.65	10/10 views	142.4	18.5	310	804	52	146		
XD					156.5	17.1	277	735	53			
0101-211360 MD	63.1 / 58.0	0.944	2.65	10/10 views	142.4	18.5	310	804	52	146		
XD					156.5	17.1	277	735	53			
0101-211361 MD	63.2 / 58.0	0.944	2.71	10/10 views	136.3	19.7	282	736	52	146		
XD					142.9	16.4	315	869	53			
0101-211362 MD	61.4 / 60.0	0.944	2.71	10/10 views	136.3	19.7	282	736	52	146		
XD					142.9	16.4	315	869	53			
0101-211363 MD	62.6 / 57.5	0.944	2.63	10/10 views	134.6	18.6	307	797	52	146		
XD					148.4	17.0	305	841	53			
0101-211364 MD	62.7 / 57.0	0.944	2.63	10/10 views	134.6	18.6	307	797	49	141		
XD					148.4	17.0	305	841	46			
0101-211365 MD	63.2 / 58.5	0.944	2.47	10/10 views	151.3	19.6	271	710	49	141		
XD					156.4	29.4	290	786	46			
0101-211367 MD	62.9 / 57.0	0.943	2.57	10/10 views	145.7	20.1	292	759	47	135		
XD					150.9	17.7	280	767	46			
0101-211368 MD	63.2 / 57.5	0.943	2.57	10/10 views	145.7	20.1	292	759	47	135		
XD					150.9	17.7	280	767	46			
0101-211369 MD	63.5 / 60.5	0.943	2.66	10/10 views	133.4	20.3	286	784	47	135		
XD					140.3	18.4	282	795	46			
0101-211370 MD	62.7 / 57.0	0.943	2.66	10/10 views	133.4	20.3	286	784	47	135		
XD					140.3	18.4	282	795	46			
0101-211371 MD	62.6 / 58.0	0.943	2.25	10/10 views	135.2	19.0	295	806	47	135		
XD					137.0	17.6	284	792	46			
0101-211372 MD	61.4 / 57.5	0.943	2.25	10/10 views	135.2	19.0	295	806	47	135		
XD					137.0	17.6	284	792	46			
0104-211347 MD	63.3 / 57.0	0.953	2.51	10/10 views	142.5	19.5	384	794	51	138		
XD					154.7	17.5	291	768	50			
0104-211348 MD	61.9 / 55.0	0.953	2.51	10/10 views	142.5	19.5	384	794	51	138		
XD					154.7	17.5	291	768	50			
0104-211349 MD	60.1 / 57.0	0.953	2.21	10/10 views	134.6	19.4	279	776	51	138		
XD					176.6	18.4	320	904	50			

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**Formosa Plastics**

FORMOSA PLASTICS CORPORATION, TEXAS

201 FORMOSA DRIVE
PO BOX 700
POINT COMFORT

TX 77978

PHONE: (888) FPCUSA3

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER: SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD

HOUSTON

TX 77073

PRODUCT : HL3812

RAILCAR FPAX940124

CLEANING/INSPECTION NO: 940124111023

S/O NO : E3CB089

CUSTOMER PO : PO-609737

DATE SHIPPED: 1/02/24

LOT NO : 23K1098

WEIGHT (LB) : 183,300.00

CUSTID: FT05970 SPIDS5

TEST ITEM

REFERENCE METHOD

TEST VALUE

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.069
HLMI, g/10 min.	ASTM D1238	11.1
Density, g/cm3	ASTM D1505	.9376

Notes:

Additive levels were tested and meet the min specification for this lot. As a result Standard OIT (by ASTM D3895) is greater than 120 mins (nominal values not tested on every lot). As a result, High Pressure OIT (by ASTM D5885) is greater than 1000 mins.

QC SUPERVISOR: LINDA KAO

**Formosa Plastics**

FORMOSA PLASTICS CORPORATION, TEXAS

201 FORMOSA DRIVE
PO BOX 700
POINT COMFORT

TX 77978

PHONE: (888) FPCUSA3

Certificate of Analysis
(CONFIDENTIAL)CUSTOMER: SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD

HOUSTON

TX 77073

PRODUCT : HL3812

RAILCAR FPAX970365

CLEANING/INSPECTION NO: 970365110923

S/O NO : E3BA511

CUSTOMER PO : PO-609455

DATE SHIPPED: 12/31/23

LOT NO : 23K1089

WEIGHT (LB) : 192,750.00

CUSTID: FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
-----	-----	-----
Melt Index, g/10min	ASTM D1238	.073
HLMI, g/10 min.	ASTM D1238	10.5
Density, g/cm3	ASTM D1505	.9369

Notes:

Additive levels were tested and meet the min specification for this lot. As a result Standard OIT (by ASTM D3895) is greater than 120 mins (nominal values not tested on every lot). As a result, High Pressure OIT (by ASTM D5885) is greater than 1000 mins.

QC SUPERVISOR: LINDA KAO

**Formosa Plastics**

FORMOSA PLASTICS CORPORATION, TEXAS

201 FORMOSA DRIVE
PO BOX 700
POINT COMFORT

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PHONE: (888) FPCUSA3

Certificate of Analysis
(CONFIDENTIAL)CUSTOMER: SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD

HOUSTON

TX 77073

PRODUCT : HL3812

RAILCAR FPAX970322

CLEANING/INSPECTION NO: 970322110923

S/O NO : E3BA510

CUSTOMER PO : PO-609455

DATE SHIPPED: 12/30/23

LOT NO : 23K1094

WEIGHT (LB) : 191,500.00

CUSTID: FT05970 SPIDM6

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.065
HLMI, g/10 min.	ASTM D1238	11.3
Density, g/cm3	ASTM D1505	.9378

Notes:

Additive levels were tested and meet the min specification for this lot. As a result Standard OIT (by ASTM D3895) is greater than 120 mins (nominal values not tested on every lot). As a result, High Pressure OIT (by ASTM D5885) is greater than 1000 mins.

QC SUPERVISOR: LINDA KAO



LIST OF GEOMEMBRANE ROLLS



PROJECT NUMBER: SW2401-REV.3
SALES ORDER: SO-096773
PACKING SLIP NUMBER: Pre-SO-096773-2

PROJECT NAME : LEALAND LF UNIT 2B & C-ADD ON

ROLL NUMBER	RESIN LOT NUMBER	MANUFACT. DATE	RESIN MELT INDEX 190/2.16 g/10 min D1238	RESIN DENSITY g/cc D1505	OIT min D8117	HPOIT min D5885	ESCR SP-NCTL hours D5397
Product Code : 1101438-54786-1							
HDPE 60 mils / 1.50 mm Black Smooth			1.0	> 0.932	100		500
0104-211841	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211842	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211843	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211844	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211845	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211846	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211847	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211848	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211849	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211850	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211851	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211852	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211853	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830
0104-211854	PRA821050	2024-03-05	0.10	0.936	120		>500 Certified 0104-211830

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

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LIST OF GEOMEMBRANE ROLLS



PROJECT NUMBER:

SW2401-REV.3

SALES ORDER:

SO-096773

PACKING SLIP NUMBER:

Pre-SO-096773-2

PROJECT NAME : LEALAND LF UNIT 2B & C-ADD ON

0104-211855	PRA821050	2024-03-06	0.10	0.936	120	>500 Certified 0104-211830
0104-211856	PRA821050	2024-03-06	0.10	0.936	120	>500 Certified 0104-211830
0104-211857	PRA821050	2024-03-06	0.10	0.936	120	>500 Certified 0104-211830
0104-211858	PRA821050	2024-03-06	0.10	0.936	120	>500 Certified 0104-211830
0104-211859	PRA821050	2024-03-06	0.10	0.936	120	>500 Certified 0104-211830
0104-211860	PRA821050	2024-03-06	0.10	0.936	120	>500 Certified 0104-211830

QUANTITY (ROLLS): 20

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19103 GUNDLE RD,, HOUSTON, TX, UNITED STATES, 77073

8 Mar 2024

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2401-REV.3

SALES ORDER: SO-096773

PACKING SLIP NUMBER: Pre-SO-096773-2

PROJECT NAME : LEALAND LF UNIT 2B & C-ADD ON

PRODUCT: 1101438-54786-1
HDPE 60 mils / 1.50 mm Black Smooth

Properties	Thickness ave/min.	GeoM Density	Carbon Black Content	Carbon Black Dispersion	Tensile				Tear Resist.	Puncture Resist.	Dimension Stability	Asperity Height In/Out mils
					Yield Strength	Elong.	Break Strength	Elong.				
Unit	mils	g/cc	%	Cat 1 and 2	ppi	%	ppi	%	lbs	lbs	%	
Test Method	D5199	D792	D4218	D5596	D6693				D1004	D4833	D1204	
Frequency	Each roll	Every 8 rolls	Every 2 rolls	Every 5 rolls	Every 2 rolls				Every 5 rolls	Every 5 rolls		
Specification	60.0 / 54.0	≥ 0.940	2.0 - 3.0	Cat. 1 & Cat. 2	132	13	243	700	42	120		
0104-211841 MD XD	64.4 / 60.5	0.941	2.48	10/10 views	137.5 152.8	20.6 17.8	340 243	909 700	52 54	139		
0104-211842 MD XD	61.4 / 59.0	0.941	2.48	10/10 views	137.5 152.8	20.6 17.8	340 243	909 700	52 54	139		
0104-211843 MD XD	60.0 / 58.0	0.941	2.55	10/10 views	134.0 134.9	20.4 18.9	276 251	765 729	52 54	139		
0104-211844 MD XD	61.6 / 59.0	0.941	2.55	10/10 views	134.0 134.9	20.4 18.9	276 251	765 729	52 54	139		
0104-211845 MD XD	62.4 / 59.5	0.941	2.53	10/10 views	139.4 151.8	19.4 17.7	302 307	823 842	52 54	139		
0104-211846 MD XD	61.2 / 58.5	0.941	2.53	10/10 views	139.4 151.8	19.4 17.7	302 307	823 842	49 46	132		
0104-211847 MD XD	62.5 / 60.0	0.941	2.55	10/10 views	133.2 150.0	19.7 18.5	308 322	828 855	49 46	132		
0104-211848 MD XD	61.6 / 59.5	0.941	2.55	10/10 views	133.2 150.0	19.7 18.5	308 322	828 855	49 46	132		
0104-211849 MD XD	61.3 / 58.0	0.941	2.44	10/10 views	145.8 150.6	20.0 17.4	313 319	817 873	49 46	132		
0104-211850 MD XD	61.4 / 59.0	0.941	2.44	10/10 views	145.8 150.6	20.0 17.4	313 319	817 873	49 46	132		
0104-211851 MD XD	61.2 / 58.0	0.945	2.47	10/10 views	138.2 145.8	19.7 18.8	289 267	783 753	45 49	132		
0104-211852 MD XD	61.5 / 58.5	0.945	2.47	10/10 views	138.2 145.8	19.7 18.8	289 267	783 753	45 49	132		
0104-211853 MD XD	60.5 / 57.0	0.945	2.14	10/10 views	138.1 141.2	19.9 18.3	295 311	794 897	45 49	132		

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TEST RESULTS

PROJECT NUMBER: SW2401-REV.3
SALES ORDER: SO-096773
PACKING SLIP NUMBER: Pre-SO-096773-2

PROJECT NAME : LEALAND LF UNIT 2B & C-ADD ON

0104-211854 MD	61.2 / 59.5	0.945	2.14	10/10 views	138.1	19.9	295	794	45	132		
XD					141.2	18.3	311	897	49			
0104-211855 MD	60.9 / 58.5	0.945	2.51	10/10 views	133.5	21.0	296	802	45	132		
XD					140.9	18.4	312	895	49			
0104-211856 MD	61.3 / 59.0	0.945	2.51	10/10 views	133.5	21.0	296	802	49	137		
XD					140.9	18.4	312	895	48			
0104-211857 MD	60.9 / 59.0	0.945	2.53	10/10 views	134.3	20.8	293	807	49	137		
XD					138.2	18.6	310	800	48			
0104-211858 MD	60.1 / 59.0	0.945	2.53	10/10 views	134.3	20.8	293	807	49	137		
XD					138.2	18.6	310	800	48			
0104-211859 MD	62.2 / 60.5	0.944	2.39	10/10 views	136.2	20.7	292	783	49	137		
XD					141.8	17.9	334	898	48			
0104-211860 MD	63.6 / 60.0	0.944	2.39	10/10 views	136.2	20.7	292	783	49	137		
XD					141.8	17.9	334	898	48			

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CoA Date: 02/03/2024

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC:HOUSTON
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Delivery #: 81077960
PO #: 609933
Weight: 186400.000 LB
Ship Date: 02/03/2024
Package: BULK
Mode: Hopper Car
Car #: CPCX814167
Seal No: 371381

Recipient: LabqualityUSA
Fax:

Product:
MARLEX K306 POLYETHYLENE in Bulk
Additive levels have been tested and meet minimum the specification for this lot.
As a result, Standard OIT (by ASTM D 3895) is greater than 120 minutes (nominal value, not tested on every lot).
As a result, High Pressure OIT (by ASTM D 5885) is greater than 1000 minutes (nominal value, not tested on every lot).

Lot Number: PRA821050

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.1	g/10min
HLMI Flow Rate	ASTM D1238	12.0	g/10min
Density	D1505 or D4883	0.936	g/cm3
Production Date		01/20/2024	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPChem).
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.

Steven Beck

Steven Beck
Quality Systems Coordinator

For CoA questions contact Leslie Dziamara at +1-832-813-4806



LIST OF GEOMEMBRANE ROLLS



PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-5

PROJECT NAME : LEALAND LF CELL 11B & C

ROLL NUMBER	RESIN LOT NUMBER	MANUFACT. DATE	RESIN MELT INDEX 190/2.16 g/10 min D1238	RESIN DENSITY g/cc D1505	OIT min D8117	HPOIT min D5885	ESCR SP-NCTL hours D5397
Product Code : 1101477-50814-1							
HDPE 60 mil Black Textured RT			1.0	> 0.932	100		500
0104-211330	23K1092	2024-01-14	0.07	0.937	120		>500 Certified 0101-211287
0104-211332	23K1092	2024-01-14	0.07	0.937	120		>500 Certified 0101-211287
0104-211333	23K1092	2024-01-14	0.07	0.937	120		>500 Certified 0101-211287
0104-211336	23K1094	2024-01-14	0.07	0.938	120		>500 Certified 0101-211304
0104-211337	23K1094	2024-01-14	0.07	0.938	120		>500 Certified 0101-211304
0104-211338	23K1094	2024-01-14	0.07	0.938	120		>500 Certified 0101-211304
0104-211339	23K1094	2024-01-14	0.07	0.938	120		>500 Certified 0101-211304
0104-211340	23K1094	2024-01-14	0.07	0.938	120		>500 Certified 0101-211304
0104-211341	23K1094	2024-01-14	0.07	0.938	120		>500 Certified 0101-211304
0104-211342	23K1094	2024-01-15	0.07	0.938	120		>500 Certified 0101-211304
0104-211343	23K1094	2024-01-15	0.07	0.938	120		>500 Certified 0101-211304
0104-211354	23K1094	2024-01-18	0.07	0.938	120		>500 Certified 0101-211304
0104-211355	23K1094	2024-01-18	0.07	0.938	120		>500 Certified 0101-211304
0104-211356	23K1094	2024-01-18	0.07	0.938	120		>500 Certified 0101-211304

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LIST OF GEOMEMBRANE ROLLS



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-5

PROJECT NAME : LEALAND LF CELL 11B & C

0104-211357	23K1094	2024-01-18	0.07	0.938	120	>500 Certified 0101-211304
0104-211359	23K1094	2024-01-18	0.07	0.938	120	>500 Certified 0101-211304
0104-211360	23K1094	2024-01-18	0.07	0.938	120	>500 Certified 0101-211304
0104-211361	23K1094	2024-01-18	0.07	0.938	120	>500 Certified 0101-211304
0104-211364	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211366	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211367	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211368	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211369	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211370	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211371	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211372	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211373	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211374	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211375	23K1098	2024-01-19	0.07	0.938	120	>500 Certified 0101-211338
0104-211377	23K1098	2024-01-20	0.07	0.938	120	>500 Certified 0101-211338
0104-211378	23K1098	2024-01-20	0.07	0.938	120	>500 Certified 0101-211338
0104-211379	23K1098	2024-01-20	0.07	0.938	120	>500 Certified 0101-211338

QUANTITY (ROLLS): 32

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TEST RESULTS

PROJECT NUMBER:

SW2401

SALES ORDER:

SO-096486

PACKING SLIP NUMBER:

Pre-SO-096486-5

PROJECT NAME : LEALAND LF CELL 11B & C

PRODUCT: 1101477-50814-1
HDPE 60 mil Black Textured RT

Properties	Thickness ave/min.	GeoM Density	Carbon Black Content	Carbon Black Dispersion	Tensile				Tear Resist.	Puncture Resist.	Dimension Stability	Asperity Height In/Out
Unit	mils	g/cc	%	Cat 1 and 2	Yield Strength	Elong.	Break Strength	Elong.	lbs	lbs	%	mils
Test Method	D5994	D792	D4218	D5596	D6693				D1004	D4833	D1204	D7466
Frequency	Each roll	Every 9 rolls	Every 2 rolls	Every 5 rolls	Every 2 rolls				Every 5 rolls	Every 5 rolls		Every roll
Specification	60.0 / 54.0	≥ 0.940	2.0 - 3.0	Cat. 1 & Cat. 2	132	13	132	150	45	120		20 / 20
0104-211330 MD XD	61.0 / 56.5	0.943	2.25	10/10 views	153.3 159.3	18.2 16.6	195 183	491 492	54 51	145		28.8 / 27.1
0104-211332 MD XD	62.9 / 57.5	0.943	2.25	10/10 views	153.3 159.3	18.2 16.6	195 183	491 492	54 51	145		23.7 / 21.1
0104-211333 MD XD	61.1 / 55.0	0.943	2.25	10/10 views	152.5 158.3	18.2 17.4	222 197	568 517	54 51	145		22.3 / 21.1
0104-211336 MD XD	64.0 / 60.5	0.943	2.41	10/10 views	152.5 158.3	18.2 17.4	222 197	568 517	54 51	145		22.4 / 22.1
0104-211337 MD XD	62.0 / 60.0	0.943	2.40	10/10 views	167.5 168.7	18.3 17.3	216 218	522 570	54 51	145		21.2 / 21.0
0104-211338 MD XD	61.8 / 59.0	0.943	2.40	10/10 views	167.5 168.7	18.3 17.3	216 218	522 570	57 55	152		21.3 / 21.2
0104-211339 MD XD	61.9 / 58.0	0.943	2.44	10/10 views	160.3 166.7	17.8 16.8	205 197	507 515	57 55	152		21.6 / 22.4
0104-211340 MD XD	61.8 / 59.5	0.943	2.44	10/10 views	160.3 166.7	17.8 16.8	205 197	507 515	57 55	152		22.1 / 21.2
0104-211341 MD XD	61.7 / 59.0	0.943	2.43	10/10 views	165.2 169.3	17.3 16.7	215 196	521 499	57 55	152		21.9 / 22.0
0104-211342 MD XD	64.9 / 60.0	0.943	2.43	10/10 views	165.2 169.3	17.3 16.7	215 196	521 499	57 55	152		21.5 / 21.0
0104-211343 MD XD	66.0 / 62.0	0.943	2.42	10/10 views	168.5 175.4	18.0 16.7	227 204	550 513	57 55	153		21.8 / 21.0
0104-211354 MD XD	62.6 / 58.5	0.940	2.47	10/10 views	145.6 161.4	18.5 15.4	203 189	513 461	54 52	147		24.3 / 23.8
0104-211355 MD XD	62.9 / 59.0	0.940	2.30	10/10 views	147.5 160.1	17.6 15.7	219 195	559 520	54 52	147		23.8 / 25.0

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TEST RESULTS

PROJECT NUMBER: SW2401

SALES ORDER: SO-096486

PACKING SLIP NUMBER: Pre-SO-096486-5

PROJECT NAME : LEALAND LF CELL 11B & C

0104-211356 MD XD	63.1 / 57.0	0.940	2.30	10/10 views	147.5 160.1	17.6 15.7	219 195	559 520	54 52	147		22.9 / 23.4
0104-211357 MD XD	62.6 / 58.5	0.940	2.39	10/10 views	144.0 153.7	17.8 16.9	208 173	522 461	54 52	147		22.6 / 23.2
0104-211359 MD XD	62.6 / 57.5	0.940	2.39	10/10 views	144.0 153.7	17.8 16.9	208 173	522 461	55 53	149		24.9 / 26.0
0104-211360 MD XD	61.3 / 57.0	0.940	2.37	10/10 views	166.0 171.5	17.5 16.7	219 192	547 497	55 53	149		23.0 / 23.3
0104-211361 MD XD	60.6 / 58.5	0.940	2.37	10/10 views	166.0 171.5	17.5 16.7	219 192	547 497	55 53	149		22.1 / 24.4
0104-211364 MD XD	64.3 / 57.5	0.942	2.51	10/10 views	156.2 159.8	18.5 16.9	228 190	580 560	54 52	149		22.2 / 23.2
0104-211366 MD XD	61.8 / 58.0	0.942	2.51	10/10 views	156.2 159.8	18.5 16.9	228 190	580 560	54 52	149		22.8 / 22.8
0104-211367 MD XD	63.5 / 60.0	0.942	2.23	10/10 views	155.5 156.7	17.7 17.5	211 188	538 508	54 52	149		22.2 / 21.8
0104-211368 MD XD	62.2 / 57.5	0.942	2.23	10/10 views	155.5 156.7	17.7 17.5	211 188	538 508	54 52	149		24.4 / 22.3
0104-211369 MD XD	61.2 / 56.0	0.942	2.51	10/10 views	157.0 161.3	17.7 17.3	220 194	548 516	54 52	149		23.2 / 22.7
0104-211370 MD XD	62.8 / 58.5	0.942	2.51	10/10 views	157.0 161.3	17.7 17.3	220 194	548 516	54 56	150		23.0 / 25.2
0104-211371 MD XD	60.5 / 58.0	0.942	2.51	10/10 views	157.3 160.7	16.9 20.8	197 202	512 550	54 56	150		22.6 / 24.0
0104-211372 MD XD	62.8 / 59.5	0.942	2.51	10/10 views	157.3 160.7	16.9 20.8	197 202	512 550	54 56	150		23.7 / 22.7
0104-211373 MD XD	62.6 / 60.5	0.942	2.47	10/10 views	167.5 171.6	17.3 16.7	232 208	570 531	54 56	150		22.8 / 22.9
0104-211374 MD XD	61.9 / 55.5	0.942	2.47	10/10 views	167.5 171.6	17.3 16.7	232 208	570 531	54 56	150		23.8 / 22.9
0104-211375 MD XD	61.4 / 57.0	0.942	2.56	10/10 views	166.1 167.4	17.2 17.0	221 198	556 515	57 58	145		22.0 / 23.7
0104-211377 MD XD	61.7 / 57.5	0.942	2.56	10/10 views	166.1 167.4	17.2 17.0	221 198	556 515	57 58	145		22.3 / 24.2
0104-211378 MD XD	62.1 / 55.5	0.942	2.58	10/10 views	161.5 159.2	18.5 17.2	234 190	574 502	57 58	145		23.6 / 23.3
0104-211379 MD XD	63.3 / 59.5	0.942	2.58	10/10 views	161.5 159.2	18.5 17.2	234 190	574 502	57 58	145		25.7 / 24.7

Solmax is not a design professional and has not performed any design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

Solmax Geosynthetics LLC

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30 Jan 2024

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER:	SW2401
SALES ORDER:	SO-096486
PACKING SLIP NUMBER:	Pre-SO-096486-5

PROJECT NAME : LEALAND LF CELL 11B & C

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**Formosa Plastics**

FORMOSA PLASTICS CORPORATION, TEXAS

201 FORMOSA DRIVE
PO BOX 700
POINT COMFORT

TX 77978

PHONE: (888) FPCUSA3

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER: SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD

HOUSTON

TX 77073

PRODUCT : HL3812

RAILCAR FPAX970017

CLEANING/INSPECTION NO: 970017110923

S/O NO : E3BA509

CUSTOMER PO : PO-609455

DATE SHIPPED: 12/26/23

LOT NO : 23K1092

WEIGHT (LB) : 192,650.00

CUSTID: FT05970 SPIDM6

TEST ITEM

REFERENCE METHOD

TEST VALUE

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.066
HLMI, g/10 min.	ASTM D1238	10.4
Density, g/cm3	ASTM D1505	.9373

Notes:

Additive levels were tested and meet the min specification for this lot. As a result Standard OIT (by ASTM D3895) is greater than 120 mins (nominal values not tested on every lot). As a result, High Pressure OIT (by ASTM D5885) is greater than 1000 mins.

QC SUPERVISOR: LINDA KAO

**Formosa Plastics**

FORMOSA PLASTICS CORPORATION, TEXAS

201 FORMOSA DRIVE
PO BOX 700
POINT COMFORT

TX 77978

PHONE: (888) FPCUSA3

Certificate of Analysis

(CONFIDENTIAL)

CUSTOMER: SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD

HOUSTON

TX 77073

PRODUCT : HL3812

RAILCAR FPAX970322

CLEANING/INSPECTION NO: 970322110923

S/O NO : E3BA510

CUSTOMER PO : PO-609455

DATE SHIPPED: 12/30/23

LOT NO : 23K1094

WEIGHT (LB) : 191,500.00

CUSTID: FT05970 SPIDM6

TEST ITEM

REFERENCE METHOD

TEST VALUE

TEST ITEM	REFERENCE METHOD	TEST VALUE
Melt Index, g/10min	ASTM D1238	.065
HLMI, g/10 min.	ASTM D1238	11.3
Density, g/cm3	ASTM D1505	.9378

Notes:

Additive levels were tested and meet the min specification for this lot. As a result Standard OIT (by ASTM D3895) is greater than 120 mins (nominal values not tested on every lot). As a result, High Pressure OIT (by ASTM D5885) is greater than 1000 mins.

QC SUPERVISOR: LINDA KAO

**Formosa Plastics**

FORMOSA PLASTICS CORPORATION, TEXAS

201 FORMOSA DRIVE
PO BOX 700
POINT COMFORT

TX 77978

PHONE: (888) FPCUSA3

Certificate of Analysis
(CONFIDENTIAL)CUSTOMER: SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD

HOUSTON

TX 77073

PRODUCT : HL3812

RAILCAR FPAX940124

CLEANING/INSPECTION NO: 940124111023

S/O NO : E3CB089

CUSTOMER PO : PO-609737

DATE SHIPPED: 1/02/24

LOT NO : 23K1098

WEIGHT (LB) : 183,300.00

CUSTID: FT05970 SPIDS5

TEST ITEM	REFERENCE METHOD	TEST VALUE
-----	-----	-----
Melt Index, g/10min	ASTM D1238	.069
HLMI, g/10 min.	ASTM D1238	11.1
Density, g/cm3	ASTM D1505	.9376

Notes:

Additive levels were tested and meet the min specification for this lot. As a result Standard OIT (by ASTM D3895) is greater than 120 mins (nominal values not tested on every lot). As a result, High Pressure OIT (by ASTM D5885) is greater than 1000 mins.

QC SUPERVISOR: LINDA KAO



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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 60 mil Smooth HDPE Geomembrane

Sample Identification: 0104-211348

TRI Log #: 24-000276

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5199)													
Thickness (mils)	59	58	62	66	63	65	65	63	64	66	63 58	2.8 << min	60 min ave 54, 8 of 10 51 min ind
Density (ASTM D1505)													
Density (g/cm3)	0.943	0.943	0.943								0.943	0.000	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.39	2.41									2.40	0.01	2.0 - 3.0
Carbon Black Dispersion (ASTM D5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1 or 2 1 Cat 3
Rating - 2nd field view	1	2	1	2	1								
Tensile Properties (ASTM D6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	144	156	156	158	130						149	12	126 min
TD Yield Strength (ppi)	153	137	145	143	139						143	6	126 min
MD Break Strength (ppi)	286	282	319	327	280						299	22	228 min
TD Break Strength (ppi)	294	245	268	265	311						277	26	228 min
MD Yield Elongation (%)	19	21	17	20	19						19	1	12 min
TD Yield Elongation (%)	23	22	20	23	21						22	1	12 min
MD Break Elongation (%)	825	774	862	872	877						842	43	700 min
TD Break Elongation (%)	735	674	708	716	826						732	57	700 min
Puncture Resistance (ASTM D4833)													
Puncture Strength (lbs)	129	126	125	123	122						125	3	108 min
Tear Resistance (ASTM D1004)													
MD Tear Strength (lbs)	47	48	52	49	44	40	49	53	48	45	48	4	42 min
TD Tear Strength (lbs)	50	52	53	51	47	43	52	56	49	49	50	4	42 min
MD Machine Direction	TD Transverse Direction												

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell IIB and C

Material: Solmax 60 mil Smooth HDPE Geomembrane

Sample Identification: 0101-211346

TRI Log #: 24-000379

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5199)													
Thickness (mils)	65	62	64	67	63	67	58	63	64	61	63 58	2.6 << min	60 min ave 54, 8 of 10 51 min ind
Density (ASTM D1505)													
Density (g/cm3)	0.945	0.945	0.945								0.945	0.000	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.65	2.63									2.64	0.01	2.0 - 3.0
Carbon Black Dispersion (ASTM D5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1 or 2 1 Cat 3
Rating - 2nd field view	1	1	1	1	1								
Tensile Properties (ASTM D6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	166	161	153	137	142						152	12	126 min
TD Yield Strength (ppi)	147	148	153	175	162						157	12	126 min
MD Break Strength (ppi)	353	343	311	275	309						318	31	228 min
TD Break Strength (ppi)	329	295	309	363	322						324	26	228 min
MD Yield Elongation (%)	23	23	23	21	21						22	1	12 min
TD Yield Elongation (%)	19	20	19	19	19						19	0	12 min
MD Break Elongation (%)	859	862	819	791	847						836	30	700 min
TD Break Elongation (%)	896	806	861	892	844						860	37	700 min
Puncture Resistance (ASTM D4833)													
Puncture Strength (lbs)	138	141	143	142	138						141	2	108 min
Tear Resistance (ASTM D1004)													
MD Tear Strength (lbs)	45	50	49	49	48	47	47	46	46	46	47	2	42 min
TD Tear Strength (lbs)	50	49	48	56	54	49	50	50	48	48	50	3	42 min
MD Machine Direction	TD Transverse Direction												

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell IIB and C

Material: Solmax 60 mil Smooth HDPE Geomembrane

Sample Identification: 0101-211354

TRI Log #: 24-000379

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5199)													
Thickness (mils)	57	63	62	64	63	67	63	61	65	64	63 57	2.5 << min	60 min ave 54, 8 of 10 51 min ind
Density (ASTM D1505)													
Density (g/cm3)	0.943	0.943	0.943								0.943	0.000	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.62	2.62									2.62	0.00	2.0 - 3.0
Carbon Black Dispersion (ASTM D5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1 or 2 1 Cat 3
Rating - 2nd field view	1	2	1	1	1								
Tensile Properties (ASTM D6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	155	146	150	149	138						148	6	126 min
TD Yield Strength (ppi)	140	160	152	159	153						153	8	126 min
MD Break Strength (ppi)	323	304	315	307	298						309	10	228 min
TD Break Strength (ppi)	271	308	282	316	308						297	19	228 min
MD Yield Elongation (%)	19	21	20	21	22						21	1	12 min
TD Yield Elongation (%)	19	20	19	21	20						20	1	12 min
MD Break Elongation (%)	840	825	835	804	837						828	15	700 min
TD Break Elongation (%)	813	832	796	865	840						829	26	700 min
Puncture Resistance (ASTM D4833)													
Puncture Strength (lbs)	139	137	136	135	134						136	2	108 min
Tear Resistance (ASTM D1004)													
MD Tear Strength (lbs)	47	50	50	48	48	48	48	44	45	47	48	2	42 min
TD Tear Strength (lbs)	50	51	53	51	50	52	52	46	48	49	50	2	42 min
MD Machine Direction	TD Transverse Direction												

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell IIB and C

Material: Solmax 60 mil Smooth HDPE Geomembrane

Sample Identification: 0101-211360

TRI Log #: 24-000379

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5199)													
Thickness (mils)	68	65	61	63	63	64	64	60	64	59	63 59	2.7 << min	60 min ave 54, 8 of 10 51 min ind
Density (ASTM D1505)													
Density (g/cm3)	0.945	0.945	0.945								0.945	0.000	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.68	2.66									2.67	0.01	2.0 - 3.0
Carbon Black Dispersion (ASTM D5596)													
Rating - 1st field view	2	1	1	1	1								9 Cat 1 or 2 1 Cat 3
Rating - 2nd field view	2	1	1	1	1								
Tensile Properties (ASTM D6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	165	177	159	148	154						161	11	126 min
TD Yield Strength (ppi)	173	169	170	150	153						163	11	126 min
MD Break Strength (ppi)	309	350	320	293	321						319	21	228 min
TD Break Strength (ppi)	297	360	343	271	268						308	42	228 min
MD Yield Elongation (%)	21	23	23	20	23						22	1	12 min
TD Yield Elongation (%)	22	22	21	20	21						21	1	12 min
MD Break Elongation (%)	769	824	834	792	841						812	30	700 min
TD Break Elongation (%)	747	940	893	760	730						814	96	700 min
Puncture Resistance (ASTM D4833)													
Puncture Strength (lbs)	136	137	136	136	134						136	1	108 min
Tear Resistance (ASTM D1004)													
MD Tear Strength (lbs)	47	47	50	50	44	53	53	52	52	44	49	3	42 min
TD Tear Strength (lbs)	54	49	47	50	51	55	53	56	56	53	52	3	42 min
MD Machine Direction	TD Transverse Direction												

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell IIB and C

Material: Solmax 60 mil Smooth HDPE Geomembrane

Sample Identification: 0101-211370

TRI Log #: 24-000379

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5199)													
Thickness (mils)	62	67	61	63	62	57	63	59	65	64	63 57	2.8 << min	60 min ave 54, 8 of 10 51 min ind
Density (ASTM D1505)													
Density (g/cm3)	0.944	0.944	0.944								0.944	0.000	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.61	2.64									2.63	0.02	2.0 - 3.0
Carbon Black Dispersion (ASTM D5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1 or 2 1 Cat 3
Rating - 2nd field view	1	1	1	1	1								
Tensile Properties (ASTM D6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	160	163	162	158	140						157	9	126 min
TD Yield Strength (ppi)	166	167	157	150	151						158	8	126 min
MD Break Strength (ppi)	325	305	321	297	292						308	15	228 min
TD Break Strength (ppi)	300	300	302	317	283						300	12	228 min
MD Yield Elongation (%)	20	23	22	20	20						21	1	12 min
TD Yield Elongation (%)	22	22	20	19	20						21	1	12 min
MD Break Elongation (%)	824	779	824	756	823						801	32	700 min
TD Break Elongation (%)	800	795	841	910	793						828	50	700 min
Puncture Resistance (ASTM D4833)													
Puncture Strength (lbs)	133	131	130	128	129						130	2	108 min
Tear Resistance (ASTM D1004)													
MD Tear Strength (lbs)	46	48	48	46	46	50	51	50	51	47	48	2	42 min
TD Tear Strength (lbs)	52	52	49	47	52	51	49	53	52	52	51	2	42 min
MD Machine Direction	TD Transverse Direction												

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 60 mil Smooth HDPE Geomembrane

Sample Identification: 0104211842

TRI Log #: 24-001122

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.
	1	2	3	4	5	6	7	8	9	10		
Thickness (ASTM D5199)												
Thickness (mils)	62	60	59	61	61	62	61	61	62	60	61 59	1.0 << min
Density (ASTM D1505)												
Density (g/cm3)	0.944	0.944	0.945								0.944	0.000
Carbon Black Content (ASTM D4218)												
% Carbon Black	2.70	2.66									2.68	0.03
Carbon Black Dispersion (ASTM D5596)												
Rating - 1st field view	1	1	1	1	1							
Rating - 2nd field view	2	2	1	1	1							
Tensile Properties (ASTM D6693, 2 ipm strain rate)												
MD Yield Strength (ppi)	143	141	145	139	136						141	3
TD Yield Strength (ppi)	147	148	143	145	143						145	2
MD Break Strength (ppi)	283	292	304	302	313						299	12
TD Break Strength (ppi)	243	313	299	309	309						295	29
MD Yield Elongation (%)	19	23	22	22	22						22	2
TD Yield Elongation (%)	19	18	18	20	19						19	1
MD Break Elongation (%)	766	809	824	849	877						825	42
TD Break Elongation (%)	691	885	875	886	899						847	88
Puncture Resistance (ASTM D4833)												
Puncture Strength (lbs)	133	135	136	134	133						134	1
Tear Resistance (ASTM D1004)												
MD Tear Strength (lbs)	48	49	53	49	51	49	49	56	49	48	50	3
TD Tear Strength (lbs)	48	46	51	48	47	48	47	53	46	46	48	2
MD Machine Direction	TD Transverse Direction											

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 60 mil Smooth HDPE Geomembrane

Sample Identification: 0104211847

TRI Log #: 24-001122

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.
	1	2	3	4	5	6	7	8	9	10		
Thickness (ASTM D5199)												
Thickness (mils)	65	66	58	59	58	59	61	60	61	62	6158	2.6 << min
Density (ASTM D1505)												
Density (g/cm3)	0.943	0.943	0.943								0.943	0.000
Carbon Black Content (ASTM D4218)												
% Carbon Black	2.70	2.72									2.71	0.01
Carbon Black Dispersion (ASTM D5596)												
Rating - 1st field view	1	1	2	2	1							
Rating - 2nd field view	1	1	1	1	1							
Tensile Properties (ASTM D6693, 2 ipm strain rate)												
MD Yield Strength (ppi)	137	143	140	138	132						138	4
TD Yield Strength (ppi)	145	150	143	139	144						144	4
MD Break Strength (ppi)	282	267	300	304	302						291	16
TD Break Strength (ppi)	222	318	253	296	285						275	38
MD Yield Elongation (%)	18	22	22	22	221						61	89
TD Yield Elongation (%)	20	19	19	19	19						19	0
MD Break Elongation (%)	776	726	809	830	857						800	51
TD Break Elongation (%)	653	851	719	858	804						777	89
Puncture Resistance (ASTM D4833)												
Puncture Strength (lbs)	138	138	137	136	135						137	1
Tear Resistance (ASTM D1004)												
MD Tear Strength (lbs)	48	48	56	48	48	48	48	52	52	47	49	3
TD Tear Strength (lbs)	46	46	51	45	45	46	50	55	46	46	48	3
MD Machine Direction	TD Transverse Direction											

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 60 mil Smooth HDPE Geomembrane

Sample Identification: 0104211856

TRI Log #: 24-001122

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.
	1	2	3	4	5	6	7	8	9	10		
Thickness (ASTM D5199)												
Thickness (mils)	62	64	64	65	62	59	58	61	61	62	62 58	2.3 << min
Density (ASTM D1505)												
Density (g/cm3)	0.945	0.946	0.946								0.946	0.001
Carbon Black Content (ASTM D4218)												
% Carbon Black	2.78	2.67									2.73	0.08
Carbon Black Dispersion (ASTM D5596)												
Rating - 1st field view	1	1	1	1	1							
Rating - 2nd field view	1	1	2	2	1							
Tensile Properties (ASTM D6693, 2 ipm strain rate)												
MD Yield Strength (ppi)	144	156	151	149	144						149 153	5 4
TD Yield Strength (ppi)	149	159	151	156	152							
MD Break Strength (ppi)	246	254	303	269	292						273 299	24 6
TD Break Strength (ppi)	290	297	300	306	304							
MD Yield Elongation (%)	19	21	20	21	23						21 19	1 1
TD Yield Elongation (%)	17	19	19	19	19							
MD Break Elongation (%)	702	690	830	748	809						756 852	62 22
TD Break Elongation (%)	843	818	869	862	868							
Puncture Resistance (ASTM D4833)												
Puncture Strength (lbs)	137	136	136	136	136						136	1
Tear Resistance (ASTM D1004)												
MD Tear Strength (lbs)	49	48	56	52	52	52	53	53	49	51	51 49	2 4
TD Tear Strength (lbs)	47	46	55	48	47	50	47	56	47	49		
MD Machine Direction	TD Transverse Direction											

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 60 mil Textured HDPE Geomembrane

Sample Identification: 0104-211332

TRI Log #: 24-000275

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5994)													
Thickness (mils)	65	64	72	66	63	67	70	68	63	63	66 63	3 << min	60 min ave 54, 8 of 10 51 min ind
Density (ASTM D1505)													
Density (g/cm3)	0.942	0.942	0.943								0.942	0.001	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.43	2.54									2.49	0.08	2.0 - 3.0
Carbon Black Dispersion (ASTM D5596)													
Rating - 1st field view	1	2	1	1	1								9 Cat 1 or 2 1 Cat 3
Rating - 2nd field view	1	2	1	1	1								
Tensile Properties (ASTM D6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	186	175	174	193	163						178	12	126 min
TD Yield Strength (ppi)	182	168	179	195	174						180	10	126 min
MD Break Strength (ppi)	248	249	229	263	230						244	14	228 min
TD Break Strength (ppi)	154	198	194	215	217						196	25	228 min
MD Yield Elongation (%)	22	21	21	21	22						21	1	12 min
TD Yield Elongation (%)	19	19	19	19	19						19	0	12 min
MD Break Elongation (%)	592	603	556	602	594						589	19	700 min
TD Break Elongation (%)	401	535	510	533	575						511	66	700 min
Puncture Resistance (ASTM D4833)													
Puncture Strength (lbs)	141	139	143	142	138						141	2	108 min
Tear Resistance (ASTM D1004)													
MD Tear Strength (lbs)	56	58	64	64	55	55	53	69	58	55	58	5	42 min
TD Tear Strength (lbs)	58	53	60	58	53	52	52	63	55	56	56	4	42 min
MD Machine Direction	TD Transverse Direction												

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 60 mil Textured HDPE Geomembrane

Sample Identification: 0104-211343

TRI Log #: 24-000275

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5994)													
Thickness (mils)	63	66	70	69	68	63	63	66	62	70	66 62	3 << min	60 min ave 54, 8 of 10 51 min ind
Density (ASTM D1505)													
Density (g/cm3)	0.942	0.942	0.942								0.942	0.000	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.34	2.37									2.36	0.02	2.0 - 3.0
Carbon Black Dispersion (ASTM D5596)													
Rating - 1st field view	1	1	1	2	1								9 Cat 1 or 2 1 Cat 3
Rating - 2nd field view	1	1	1	1	1								
Tensile Properties (ASTM D6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	175	179	191	181	161						177	11	126 min
TD Yield Strength (ppi)	168	172	194	184	187						181	11	126 min
MD Break Strength (ppi)	255	258	238	238	210						240	19	228 min
TD Break Strength (ppi)	226	126	224	224	210						202	43	228 min
MD Yield Elongation (%)	18	20	20	20	20						20	1	12 min
TD Yield Elongation (%)	21	21	21	19	21						21	1	12 min
MD Break Elongation (%)	601	607	529	548	526						562	39	700 min
TD Break Elongation (%)	622	170	568	589	533						496	185	700 min
Puncture Resistance (ASTM D4833)													
Puncture Strength (lbs)	142	143	143	139	140						141	2	108 min
Tear Resistance (ASTM D1004)													
MD Tear Strength (lbs)	53	57	70	56	55	60	61	67	55	57	59	6	42 min
TD Tear Strength (lbs)	48	52	65	54	58	54	55	60	52	55	55	5	42 min
MD Machine Direction	TD Transverse Direction												

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell IIB and C

Material: Solmax 60 mil Textured HDPE Geomembrane

Sample Identification: 0104-211361

TRI Log #: 24-000378

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5994)													
Thickness (mils)	62	62	65	69	67	59	67	66	64	68	65 59	3.0 << min	60 min ave 54, 8 of 10 51 min ind
Density (ASTM D1505)													
Density (g/cm3)	0.942	0.942	0.942								0.942	0.000	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.33	2.30									2.32	0.02	2.0 - 3.0
Carbon Black Dispersion (ASTM D5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1 or 2 1 Cat 3
Rating - 2nd field view	2	1	1	1	1								
Tensile Properties (ASTM D6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	156	171	183	162	155						165	12	126 min
TD Yield Strength (ppi)	162	180	176	159	152						166	12	126 min
MD Break Strength (ppi)	232	233	219	242	198						225	17	228 min
TD Break Strength (ppi)	211	186	196	194	181						194	11	228 min
MD Yield Elongation (%)	21	21	20	21	24						21	2	12 min
TD Yield Elongation (%)	20	20	16	19	17						18	2	12 min
MD Break Elongation (%)	619	590	532	625	548						583	42	700 min
TD Break Elongation (%)	574	456	485	540	516						514	46	700 min
Puncture Resistance (ASTM D4833)													
Puncture Strength (lbs)	138	138	134	132	134						135	3	108 min
Tear Resistance (ASTM D1004)													
MD Tear Strength (lbs)	54	62	68	53	51	54	53	62	57	59	57	5	42 min ave
TD Tear Strength (lbs)	52	54	66	48	48	52	51	60	55	55	54	5	42 min ave
MD Machine Direction	TD Transverse Direction												

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GEOMEMBRANE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell IIB and C

Material: Solmax 60 mil Textured HDPE Geomembrane

Sample Identification: 0104-211375

TRI Log #: 24-000378

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5994)													
Thickness (mils)	65	67	67	65	70	65	64	67	71	64	6664	2.4 << min	60 min ave 54, 8 of 10 51 min ind
Density (ASTM D1505)													
Density (g/cm3)	0.944	0.944	0.944								0.944	0.000	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.55	2.55									2.55	0.00	2.0 - 3.0
Carbon Black Dispersion (ASTM D5596)													
Rating - 1st field view	1	1	1	1	1								9 Cat 1 or 2 1 Cat 3
Rating - 2nd field view	1	1	1	1	1								
Tensile Properties (ASTM D6693, 2 ipm strain rate)													
MD Yield Strength (ppi)	157	169	167	171	178						168	8	126 min
TD Yield Strength (ppi)	166	168	166	178	179						171	7	126 min
MD Break Strength (ppi)	225	196	235	225	213						219	15	228 min
TD Break Strength (ppi)	208	200	190	218	220						207	13	228 min
MD Yield Elongation (%)	20	23	19	19	22						21	2	12 min
TD Yield Elongation (%)	17	19	17	20	17						18	1	12 min
MD Break Elongation (%)	594	463	569	534	489						530	54	700 min
TD Break Elongation (%)	561	531	497	572	552						543	30	700 min
Puncture Resistance (ASTM D4833)													
Puncture Strength (lbs)	144	147	140	141	145						144	3	108 min
Tear Resistance (ASTM D1004)													
MD Tear Strength (lbs)	53	56	62	57	60	59	61	70	57	53	59	5	42 min ave
TD Tear Strength (lbs)	50	55	57	58	58	57	57	65	53	52	56	4	42 min ave
MD Machine Direction	TD Transverse Direction												

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APPENDIX G
TRIAL SEAM LOG
AND
SLS RÉSUMÉS

Includes pages G-1 through G-30

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TRIAL SEAM LOG FOR PRIMARY GEOMEMBRANE

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
PRIMARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
7/11/24	7:36	TH	5	74	S/S	EXTRUSION	480	380.0	111	-	145	PASS	BPL
									106	-	143	PASS	
									102	-	141	PASS	
7/16/24	8:33	IB	5	75	S/S	EXTRUSION	495	395.0	111	-	128	PASS	BPL
									122	-	129	PASS	
									124	-	131	PASS	
7/16/24	10:34	IB	69	80	S/S	FUSION	750	7.5	102	117	122	PASS	BPL
									125	125	121	PASS	
									122	127	127	PASS	
7/16/24	10:44	TH	22	80	S/S	FUSION	750	7.5	126	126	127	PASS	BPL
									127	126	132	PASS	
									123	124	127	PASS	
7/16/24	11:57	MJ	5	90	S/S	EXTRUSION	595	495.0	114	-	121	PASS	BPL
									122	-	123	PASS	
									119	-	124	PASS	
7/19/24	6:57	JS	5	70	S/S	EXTRUSION	515	415.0	116	-	130	PASS	BPL
									119	-	129	PASS	
									124	-	123	PASS	
7/19/24	9:44	TH	22	70	S/S	FUSION	750	7.5	122	125	135	PASS	BPL
									129	128	138	PASS	
									123	127	140	PASS	
7/19/24	9:51	IB	69	70	S/S	FUSION	750	7.5	122	128	134	PASS	BPL
									125	135	146	PASS	
									120	124	151	PASS	
7/19/24	10:00	IB	69	70	S/S	FUSION	750	7.5	114	115	125	PASS	BPL
									114	114	130	PASS	
									117	129	136	PASS	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
PRIMARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
7/19/24	13:14	HS	5	70	S/S	EXTRUSION	500	400.0	125	-	123	PASS	BPL
									125	-	123	PASS	
									121	-	125	PASS	
7/20/24	6:52	HS	5	70	S/S	EXTRUSION	500	400.0	118	-	143	PASS	BPL
									118	-	146	PASS	
									125	-	138	PASS	
7/20/24	6:56	TH	5	70	S/S	EXTRUSION	500	400.0	126	-	129	PASS	BPL
									130	-	149	PASS	
									141	-	152	PASS	
7/21/24	7:57	TH	69	70	S/S	FUSION	750	7.5	125	131	146	PASS	BPL
									134	136	157	PASS	
									125	127	157	PASS	
7/21/24	10:10	IB	5	70	S/S	EXTRUSION	510	410.0	122	-	125	PASS	BPL
									122	-	126	PASS	
									117	-	131	PASS	
7/24/24	6:42	TH	22	70	S/S	FUSION	750	7.0	131	133	144	PASS	BPL
									126	135	147	PASS	
									125	133	147	PASS	
7/24/24	6:48	IB	69	70	S/S	FUSION	750	7.0	119	120	125	PASS	BPL
									125	130	139	PASS	
									122	125	142	PASS	
7/24/24	8:48	TH	5	70	S/S	EXTRUSION	520	420.0	118	-	133	PASS	BPL
									110	-	138	PASS	
									115	-	139	PASS	
7/24/24	8:54	MJ	5	70	S/S	EXTRUSION	505	405.0	113	-	137	PASS	BPL
									121	-	142	PASS	
									125	-	142	PASS	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
PRIMARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
7/26/24	12:56	HS	5	70	S/S	EXTRUSION	500	400.0	125	-	131	PASS	BPL
									128	-	135	PASS	
									129	-	135	PASS	
7/27/24	8:36	SN	5	70	S/S	EXTRUSION	520	420.0	117	-	155	PASS	BPL
									133	-	158	PASS	
									131	-	163	PASS	
7/30/24	7:11	SN	5	70	S/S	EXTRUSION	520	420.0	101	-	125	PASS	BPL
									102	-	126	PASS	
									106	-	129	PASS	
7/30/24	7:18	TH	22	70	S/S	FUSION	750	7.0	118	122	132	PASS	BPL
									122	128	137	PASS	
									124	125	137	PASS	
8/1/24	8:45	TH	5	70	S/S	EXTRUSION	500	400.0	112	-	122	PASS	BPL
									113	-	125	PASS	
									117	-	127	PASS	
8/2/24	9:03	TH	22	70	S/S	FUSION	750	7.5	114	116	124	PASS	BPL
									121	124	130	PASS	
									116	119	130	PASS	
8/2/24	9:11	MJ	69	70	S/S	FUSION	750	7.0	124	132	130	PASS	BPL
									133	134	126	PASS	
									126	134	134	PASS	
8/2/24	10:29	HS	5	70	S/S	EXTRUSION	525	425.0	19	-	122	PASS	BPL
									111	-	121	PASS	
									114	-	123	PASS	
8/3/24	6:52	TH	22	70	S/S	FUSION	750	7.0	114	121	135	PASS	BPL
									121	121	136	PASS	
									118	122	138	PASS	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
PRIMARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
8/3/24	6:59	SN	5	70	S/S	EXTRUSION	500	400.0	121	-	137	PASS	BPL
									132	-	142	PASS	
									139	-	146	PASS	
8/3/24	7:40	MJ	69	70	S/S	FUSION	750	7.0	108	123	131	PASS	BPL
									107	121	133	PASS	
									110	118	138	PASS	
8/5/24	6:46	IB	69	70	S/S	FUSION	750	7.0	123	136	141	PASS	BPL
									118	129	141	PASS	
									121	131	142	PASS	
8/5/24	6:52	TH	22	70	S/S	FUSION	750	7.0	118	133	138	PASS	BPL
									131	132	139	PASS	
									128	129	142	PASS	
8/5/24	9:17	MS	5	70	S/S	EXTRUSION	500	400.0	131	-	130	PASS	BPL
									135	-	130	PASS	
									129	-	137	PASS	
8/5/24	12:06	TH	22	70	S/S	FUSION	750	7.5	109	110	134	PASS	BPL
									99	118	134	PASS	
									106	113	135	PASS	
8/5/24	12:13	IB	69	70	S/S	FUSION	750	7.5	103	118	136	PASS	BPL
									118	126	138	PASS	
									107	114	136	PASS	
8/6/24	7:03	TH	22	70	S/S	FUSION	750	7.0	102	104	154	PASS	BPL
									98	106	155	PASS	
									99	106	156	PASS	
8/6/24	7:13	IB	69	70	S/S	FUSION	750	7.0	118	137	169	PASS	BPL
									132	145	172	PASS	
									127	151	170	PASS	
8/6/24	12:00	IB	69	70	S/S	FUSION	750	7.5	112	115	121	PASS	BPL
									114	117	122	PASS	
									114	120	123	PASS	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
PRIMARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
8/6/24	12:08	TH	22	70	S/S	FUSION	750	7.5	114	114	121	PASS	BPL
									117	118	122	PASS	
									114	114	123	PASS	
8/6/24	13:41	HS	5	70	S/S	EXTRUSION	525	425.0	131	-	144	PASS	BPL
									128	-	142	PASS	
									132	-	132	PASS	
8/6/24	20:26	TH	5	70	S/S	EXTRUSION	500	400.0	129	-	146	PASS	BPL
									133	-	157	PASS	
									138	-	156	PASS	
8/7/24	6:43	TH	5	70	S/S	EXTRUSION	500	400.0	107	-	121	PASS	BPL
									115	-	122	PASS	
									126	-	126	PASS	
8/7/24	6:47	TD	5	70	S/S	EXTRUSION	500	400.0	119	-	150	PASS	BPL
									121	-	154	PASS	
									127	-	158	PASS	
8/8/24	8:57	MJ	5	70	S/S	EXTRUSION	495	395.0	121	-	144	PASS	BPL
									122	-	154	PASS	
									106	-	155	PASS	
8/8/24	9:24	IB	5	70	S/S	EXTRUSION	495	395.0	142	-	161	PASS	BPL
									154	-	161	PASS	
									156	-	161	PASS	
8/9/24	9:34	IB	69	70	S/S	FUSION	750	7.0	108	125	135	PASS	BPL
									110	123	141	PASS	
									112	120	143	PASS	
8/9/24	9:43	TH	5	70	S/S	EXTRUSION	495	395.0	135	-	128	PASS	BPL
									140	-	135	PASS	
									115	-	140	PASS	
8/10/24	6:55	IB	69	70	S/S	FUSION	750	7.0	127	119	132	PASS	BPL
									124	124	134	PASS	
									122	124	135	PASS	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
PRIMARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
8/10/24	7:06	TH	22	70	S/S	FUSION	750	7.0	113	120	138	PASS	BPL
									120	125	133	PASS	
									112	120	138	PASS	
8/12/24	6:55	MJ	69	70	S/S	FUSION	750	7.0	121	125	138	PASS	BPL
									130	141	139	PASS	
									127	136	140	PASS	
8/12/24	7:02	TH	22	70	S/S	FUSION	750	7.0	124	125	134	PASS	BPL
									122	129	138	PASS	
									118	121	140	PASS	
8/12/24	10:50	TH	5	70	S/S	EXTRUSION	495	395.0	128	-	144	PASS	BPL
									128	-	147	PASS	
									127	-	147	PASS	
8/12/24	10:58	TH	5	70	S/S	EXTRUSION	495	395.0	122	-	147	PASS	BPL
									124	-	146	PASS	
									126	-	147	PASS	
8/13/24	6:50	TH	22	70	S/S	FUSION	750	7.0	139	130	162	PASS	BPL
									137	138	124	PASS	
									130	138	163	PASS	
8/13/24	7:00	IB	69	70	S/S	FUSION	750	7.0	110	127	145	PASS	BPL
									109	130	146	PASS	
									122	126	145	PASS	
8/13/24	7:11	TH	22	70	S/S	FUSION	750	7.0	121	133	142	PASS	BPL
									123	127	141	PASS	
									124	133	146	PASS	
8/13/24	12:47	TH	5	70	S/S	EXTRUSION	495	395.0	130	-	151	PASS	BPL
									134	-	153	PASS	
									142	-	155	PASS	
8/13/24	12:54	HS	5	70	S/S	EXTRUSION	495	395.0	130	-	139	PASS	BPL
									127	-	141	PASS	
									125	-	137	PASS	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
PRIMARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
8/14/24	6:50	TH	22	70	S/S	FUSION	750	7.0	129	129	165	PASS	BPL
									137	140	164	PASS	
									129	137	165	PASS	
8/14/24	6:57	MJ	69	70	S/S	FUSION	750	7.0	106	137	154	PASS	BPL
									127	134	156	PASS	
									139	140	158	PASS	
8/14/24	12:55	TH	5	70	S/S	EXTRUSION	495	395.0	126	-	128	PASS	BPL
									129	-	132	PASS	
									133	-	141	PASS	
8/14/24	12:58	MJ	5	70	S/S	EXTRUSION	495	395.0	132	-	140	PASS	BPL
									139	-	139	PASS	
									142	-	132	PASS	
8/15/24	7:00	TD	5	70	S/S	EXTRUSION	500	400.0	99	-	150	PASS	BPL
									105	-	153	PASS	
									103	-	160	PASS	
8/15/24	7:08	SN	5	70	S/S	EXTRUSION	495	395.0	104	-	159	PASS	BPL
									123	-	160	PASS	
									130	-	161	PASS	
8/15/24	12:55	TH	5	70	S/S	EXTRUSION	500	400.0	132	-	142	PASS	BPL
									133	-	144	PASS	
									130	-	144	PASS	
8/19/24	13:28	SN	5	70	S/S	EXTRUSION	495	395.0	119	-	146	PASS	BPL
									131	-	146	PASS	
									121	-	150	PASS	
8/20/24	7:50	TH	5	70	S/S	EXTRUSION	495	395.0	109	-	138	PASS	BPL
									117	-	141	PASS	
									126	-	142	PASS	
8/23/24	9:02	TD	5	70	S/S	EXTRUSION	495	395.0	121	-	147	PASS	BPL
									117	-	150	PASS	
									109	-	149	PASS	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
PRIMARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
8/23/24	9:06	SN	5	70	S/S	EXTRUSION	495	395.0	115	-	143	PASS	BPL
									102	-	142	PASS	
									114	-	135	PASS	
8/25/24	6:40	IB	69	70	S/S	FUSION	750	6.0	143	143	161	PASS	BPL
									127	141	163	PASS	
									107	144	162	PASS	
8/25/24	6:57	TH	5	70	S/S	EXTRUSION	495	395.0	116	-	167	PASS	BPL
									111	-	169	PASS	
									110	-	169	PASS	
8/25/24	7:09	TH	22	70	S/S	FUSION	750	6.0	127	130	162	PASS	BPL
									127	139	165	PASS	
									131	136	167	PASS	
8/25/24	7:02	IB	0:00	70	S/S	EXTRUSION	495	395.0	99	-	165	PASS	BPL
									113	-	169	PASS	
									107	-	172	PASS	
8/25/24	12:10	TH	5	70	S/S	EXTRUSION	495	395.0	132	-	149	PASS	BPL
									143	-	163	PASS	
									121	-	150	PASS	
8/25/24	12:17	IB	5	70	S/S	EXTRUSION	495	395.0	128	-	129	PASS	BPL
									126	-	130	PASS	
									130	-	129	PASS	
8/26/24	9:10	TH	5	70	S/S	EXTRUSION	495	395.0	153	-	157	PASS	BPL
									124	-	159	PASS	
									153	-	161	PASS	
8/26/24	9:16	MJ	5	70	S/S	EXTRUSION	495	395.0	109	-	166	PASS	BPL
									113	-	159	PASS	
									112	-	166	PASS	
8/29/24	7:40	TH	22	70	S/S	FUSION	750	7.5	112	121	151	PASS	BPL
									100	109	151	PASS	
									116	118	155	PASS	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
PRIMARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
8/29/24	8:49	IB	5	70	S/S	EXTRUSION	495	395.0	108	-	158	PASS	BPL
									101	-	157	PASS	
									102	-	160	PASS	
9/11/24	9:15	IB	22	70	S/S	FUSION	750	7.5	126	121	166	PASS	BPL
									134	123	168	PASS	
									118	137	176	PASS	
9/11/24	9:24	SN	5	70	S/S	EXTRUSION	495	395.0	128	-	141	PASS	BPL
									133	-	148	PASS	
									133	-	156	PASS	
9/11/24	12:30	IB	22	70	S/S	FUSION	750	7.5	121	139	149	PASS	BPL
									119	128	150	PASS	
									130	135	161	PASS	
9/11/24	12:41	SN	5	70	S/S	EXTRUSION	495	395.0	131	-	146	PASS	BPL
									129	-	150	PASS	
									135	-	141	PASS	
9/12/24	7:04	TD	0:00	70	S/S	EXTRUSION	485	385.0	128	-	137	PASS	BPL
									134	-	144	PASS	
									142	-	144	PASS	
9/12/24	7:10	MJ	0:00	70	S/S	EXTRUSION	475	375.0	133	-	153	PASS	BPL
									132	-	151	PASS	
									139	-	160	PASS	
9/12/24	7:13	IB	22	70	S/S	FUSION	750	6.5	133	135	160	PASS	BPL
									139	138	154	PASS	
									131	134	156	PASS	
9/12/24	8:32	IB	5	70	S/S	EXTRUSION	480	380.0	112	-	150	PASS	BPL
									114	-	151	PASS	
									122	-	150	PASS	

TRIAL SEAM LOG FOR SECONDARY GEOMEMBRANE

**LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
6/12/24	6:15	MJ	69	69	S/S	FUSION	805	6.5	129	130	NA	FAIL	BPL
									115	128	NA	FAIL	
									103	176	NA	FAIL	
6/12/24	7:05	TH	2	69	S/S	FUSION	805	6.5	122	130	163	PASS	BPL
									128	123	160	PASS	
									127	121	163	PASS	
6/12/24	7:20	IB	2	69	S/S	FUSION	750	6.5	146	118	161	PASS	BPL
									139	141	168	PASS	
									142	137	165	PASS	
6/12/24	7:13	JL	5	69	S/S	EXTRUSION	505	405.0	160	154	NA	FAIL	BPL
									NA	NA	NA	FAIL	
									NA	NA	NA	FAIL	
6/12/24	7:15	MJ	69	70	S/S	FUSION	805	6.5	129	128	156	PASS	BPL
									125	126	155	PASS	
									138	136	158	PASS	
6/12/24	7:25	JL	5	70	S/S	EXTRUSION	505	405.0	106	-	167	PASS	BPL
									106	-	167	PASS	
									105	-	166	PASS	
6/12/24	12:57	IB	2	90	S/S	FUSION	750	7.5	134	135	142	PASS	BPL
									130	133	144	PASS	
									132	121	140	PASS	
6/12/24	13:06	MJ	69	90	S/S	FUSION	805	7.5	123	132	142	PASS	BPL
									135	136	143	PASS	
									132	135	137	PASS	
6/12/24	13:14	JL	5	90	S/S	EXTRUSION	500	400.0	131	-	146	PASS	BPL
									130	-	145	PASS	
									113	-	147	PASS	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
6/12/24	13:00	IB	7	90	S/S	EXTRUSION	405	405.0	121	-	148	PASS	BPL
									136	-	156	PASS	
									115	-	130	PASS	
6/13/24	6:30	IB	2	74	T/T	FUSION	750	6.5	123	122	143	PASS	BPL
									124	126	146	PASS	
									130	124	149	PASS	
6/13/24	6:43	MJ	69	74	S/S	FUSION	805	6.5	133	146	147	PASS	BPL
									132	127	147	PASS	
									131	132	151	PASS	
6/13/24	6:50	TH	2	74	S/S	FUSION	805	6.5	135	118	147	PASS	BPL
									125	108	140	PASS	
									140	131	148	PASS	
6/13/24	6:58	JL	5	74	S/S	EXTRUSION	510	405.0	115	-	154	PASS	BPL
									106	-	153	PASS	
									110	-	154	PASS	
6/13/24	12:56	IB	2	96	S/S	FUSION	750	8.0	126	124	124	PASS	BPL
									120	127	121	PASS	
									118	122	126	PASS	
6/13/24	13:04	TH	2	96	S/S	FUSION	805	7.5	142	132	128	PASS	BPL
									150	127	144	PASS	
									109	133	149	PASS	
6/13/24	13:11	MJ	69	96	S/S	FUSION	805	7.5	128	136	138	PASS	BPL
									128	127	137	PASS	
									126	128	138	PASS	
6/13/24	13:17	JL	5	96	S/S	EXTRUSION	500	400.0	119	-	133	PASS	BPL
									127	-	127	PASS	
									125	-	130	PASS	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
6/13/24	13:30	IB	5	96	S/S	EXTRUSION	500	400.0	123	-	140	PASS	BPL
									121	-	135	PASS	
									131	-	137	PASS	
6/14/24	6:39	IB	2	67	T/T	FUSION	750	6.5	129	158	148	PASS	BPL
									124	136	155	PASS	
									123	131	154	PASS	
6/14/24	7:01	JL	5	67	S/S	EXTRUSION	510	405.0	115	-	147	PASS	BPL
									104	-	149	PASS	
									109	-	149	PASS	
6/14/24	7:10	TH	2	67	S/S	FUSION	805	6.5	147	133	148	PASS	BPL
									145	136	147	PASS	
									151	137	148	PASS	
6/14/24	7:16	MJ	69	67	S/S	FUSION	805	6.5	136	140	146	PASS	BPL
									136	147	148	PASS	
									130	134	151	PASS	
6/14/24	12:48	IB	2	90	S/S	FUSION	750	7.5	126	136	133	PASS	BPL
									130	135	136	PASS	
									131	132	143	PASS	
6/14/24	13:00	JL	5	90	S/S	EXTRUSION	500	400.0	132	-	155	PASS	BPL
									136	-	152	PASS	
									132	-	146	PASS	
6/15/24	6:45	TH	2	73	S/S	FUSION	805	6.5	133	137	152	PASS	BPL
									123	140	157	PASS	
									130	138	159	PASS	
6/15/24	6:56	IB	2	73	S/S	FUSION	750	6.5	137	142	154	PASS	BPL
									142	148	156	PASS	
									143	137	157	PASS	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
6/15/24	7:02	JL	5	73	S/S	EXTRUSION	510	405.0	139	-	149	PASS	BPL
									123	-	155	PASS	
									127	-	157	PASS	
6/17/24	6:40	TH	2	70	S/S	FUSION	805	6.5	117	129	150	PASS	BPL
									111	129	148	PASS	
									118	122	150	PASS	
6/17/24	6:50	MJ	59	70	S/S	FUSION	805	6.5	132	137	157	PASS	BPL
									136	149	153	PASS	
									133	135	151	PASS	
6/17/24	6:55	IB	2	70	S/S	FUSION	750	6.5	136	138	151	PASS	BPL
									131	134	152	PASS	
									130	135	152	PASS	
6/17/24	7:01	JL	5	70	S/S	EXTRUSION	510	405.0	132	-	168	PASS	BPL
									116	-	154	PASS	
									127	-	168	PASS	
6/17/24	12:56	IB	2	96	S/S	FUSION	750	6.5	112	110	112	FAIL	BPL
									110	115	112	FAIL	
									107	112	112	FAIL	
6/17/24	13:00	MJ	69	96	S/S	FUSION	805	6.5	NA	NA	120	FAIL	BPL
									NA	NA	117	FAIL	
									NA	NA	120	FAIL	
6/17/24	13:20	JL	5	100	S/S	EXTRUSION	500	400.0	108	-	105	FAIL	BPL
									102	-	106	FAIL	
									101	-	114	FAIL	
6/17/24	13:30	IB	2	100	S/S	FUSION	750	6.5	NA	NA	110	FAIL	BPL
									NA	NA	112	FAIL	
									NA	NA	NA	FAIL	
6/17/24	13:34	MJ	69	100	S/S	FUSION	805	6.5	NA	NA	116	FAIL	BPL
									NA	NA	111	FAIL	
									NA	NA	NA	FAIL	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
6/17/24	13:38	IB	21	100	S/S	FUSION	750	8.0	115	111	125	PASS	BPL
									144	114	122	PASS	
									111	111	129	PASS	
6/17/24	13:34	IH	69	100	S/S	FUSION	805	8.0	NA	NA	113	FAIL	BPL
									NA	NA	118	FAIL	
									NA	NA	115	FAIL	
6/17/24	14:00	JL	5	100	S/S	EXTRUSION	500	400.0	NA	-	110	FAIL	BPL
									NA	-	113	FAIL	
									NA	-	NA	FAIL	
6/17/24	14:26	JL	5	100	S/S	EXTRUSION	375	415.0	112	-	129	PASS	BPL
									108	-	136	PASS	
									119	-	127	PASS	
6/18/24	7:15	TH	22	70	S/T	FUSION	705	7.5	127	128	131	PASS	BPL
									125	128	132	PASS	
									118	123	135	PASS	
6/18/24	7:23	JB	21	70	S/S	FUSION	750	6.5	126	129	137	PASS	BPL
									120	133	139	PASS	
									120	128	142	PASS	
6/18/24	8:23	JL	5	76	S/S	EXTRUSION	500	400.0	106	-	130	PASS	BPL
									103	-	135	PASS	
									118	-	135	PASS	
6/18/24	9:06	TH	22	76	S/S	FUSION	705	6.5	118	120	126	PASS	BPL
									117	124	127	PASS	
									113	114	126	PASS	
6/18/24	9:13	IB	21	76	S/S	FUSION	705	6.5	126	130	128	PASS	BPL
									129	124	130	PASS	
									124	124	131	PASS	
6/18/24	12:05	JL	5	90	S/S	EXTRUSION	480	380.0	132	-	142	PASS	BPL
									131	-	143	PASS	
									127	-	143	PASS	

**LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
6/18/24	12:10	IB	21	90	S/S	FUSION	750	7.5	129	122	143	PASS	BPL
									128	134	146	PASS	
									129	133	153	PASS	
6/18/24	12:16	TH	22	90	S/S	FUSION	750	7.5	111	103	147	PASS	BPL
									109	111	147	PASS	
									112	114	148	PASS	
6/19/24	8:37	IB	21	70	S/S	FUSION	750	6.5	116	118	130	PASS	BPL
									118	133	139	PASS	
									116	118	141	PASS	
6/19/24	8:45	TH	22	70	S/S	FUSION	750	7.5	117	126	134	PASS	BPL
									122	130	130	PASS	
									117	119	140	PASS	
6/19/24	12:45	IB	21	94	S/T	FUSION	750	6.5	117	114	122	PASS	BPL
									118	122	125	PASS	
									112	117	127	PASS	
6/19/24	12:59	IB	21	94	S/S	FUSION	750	7.0	106	108	121	PASS	BPL
									106	112	122	PASS	
									111	114	123	PASS	
6/19/24	13:52	JL	5	94	S/S	EXTRUSION	490	390.0	130	-	129	PASS	BPL
									128	-	131	PASS	
									131	-	131	PASS	
6/19/24	14:05	TH	22	94	S/S	FUSION	708	7.5	112	114	134	PASS	BPL
									112	115	138	PASS	
									121	123	137	PASS	
6/20/24	7:11	TH	5	70	S/S	EXTRUSION	800	400.0	107	-	148	PASS	BPL
									104	-	151	PASS	
									110	-	154	PASS	
6/20/24	7:52	IB	5	70	S/S	EXTRUSION	450	390.0	116	-	145	PASS	BPL
									119	-	148	PASS	
									111	-	144	PASS	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
6/20/24	7:59	JL	5	70	S/S	EXTRUSION	500	400.0	119	-	145	PASS	BPL
									121	-	149	PASS	
									123	-	145	PASS	
6/21/24	6:48	TH	22	70	S/S	FUSION	750	7.5	123	101	174	PASS	BPL
									118	116	172	PASS	
									137	106	177	PASS	
6/21/24	6:54	IB	21	70	S/S	FUSION	750	6.5	42	153	164	PASS	BPL
									134	135	165	PASS	
									135	135	165	PASS	
6/21/24	12:30	JL	5	70	S/S	EXTRUSION	500	400.0	112	-	138	PASS	BPL
									112	-	150	PASS	
									122	-	157	PASS	
6/21/24	12:34	TH	22	89	S/S	FUSION	750	7.0	112	113	122	PASS	BPL
									109	113	129	PASS	
									115	115	134	PASS	
6/21/24	12:45	IB	2	70	S/S	EXTRUSION	500	400.0	118	-	143	PASS	BPL
									125	-	134	PASS	
									114	-	135	PASS	
6/21/24	13:27	TH	5	91	S/S	EXTRUSION	500	400.0	112	-	124	PASS	BPL
									113	-	127	PASS	
									100	-	131	PASS	
6/22/24	6:33	TH	5	72	S/S	EXTRUSION	500	400.0	103	-	161	PASS	BPL
									103	-	165	PASS	
									123	-	167	PASS	
6/22/24	6:39	IB	5	72	S/S	EXTRUSION	500	400.0	103	-	157	PASS	BPL
									103	-	158	PASS	
									121	-	154	PASS	
6/22/24	6:45	JL	5	72	S/S	EXTRUSION	500	400.0	117	-	152	PASS	BPL
									118	-	169	PASS	
									118	-	172	PASS	

**LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG**

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
6/24/24	7:02	IB	21	72	S/S	FUSION	750	7.0	128	112	155	PASS	BPL
									121	137	157	PASS	
									123	136	156	PASS	
6/24/24	7:14	TH	22	72	S/S	FUSION	750	7.0	107	117	159	PASS	BPL
									105	137	163	PASS	
									125	139	168	PASS	
6/24/24	13:00	TH	22	90	S/S	FUSION	750	7.5	118	122	123	PASS	BPL
									116	122	129	PASS	
									118	122	131	PASS	
6/24/24	13:09	IB	21	90	S/S	FUSION	750	7.5	125	128	128	PASS	BPL
									129	1387	137	PASS	
									127	129	142	PASS	
6/24/24	14:11	MJ	69	90	S/S	FUSION	750	7.5	114	117	122	PASS	BPL
									100	124	123	PASS	
									112	114	125	PASS	
6/25/24	7:04	MJ	69	73	S/S	FUSION	750	6.5	113	133	157	PASS	BPL
									114	141	159	PASS	
									134	140	161	PASS	
6/25/24	7:16	TH	22	73	S/S	FUSION	750	7.5	125	121	152	PASS	BPL
									126	124	153	PASS	
									124	124	155	PASS	
6/25/24	7:23	IB	21	73	S/S	FUSION	750	6.5	119	126	149	PASS	BPL
									117	132	145	PASS	
									122	130	153	PASS	
6/25/24	11:11	JL	5	82	S/S	EXTRUSION	480	385.0	120	-	145	PASS	BPL
									125	-	144	PASS	
									131	-	148	PASS	
6/25/24	12:35	TH	22	93	S/S	FUSION	750	7.0	103	109	125	PASS	BPL
									118	122	123	PASS	
									103	117	123	PASS	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
6/25/24	12:45	IB	69	93	S/S	FUSION	750	7.5	124	126	137	PASS	BPL
									131	133	140	PASS	
									121	128	140	PASS	
6/25/24	13:30	TD	5	93	S/S	EXTRUSION	500	400.0	140	-	128	PASS	BPL
									125	-	124	PASS	
									124	-	125	PASS	
6/26/24	6:47	IB	69	73	S/S	FUSION	750	6.5	115	125	132	PASS	BPL
									125	131	132	PASS	
									119	125	138	PASS	
6/26/24	6:57	TH	22	73	S/S	FUSION	750	6.5	117	117	131	PASS	BPL
									119	121	136	PASS	
									123	129	137	PASS	
6/26/24	12:35	IB	69	90	S/S	FUSION	750	8.0	120	127	124	PASS	BPL
									126	129	126	PASS	
									122	123	129	PASS	
6/26/24	12:44	TH	0:00	90	S/S	FUSION	750	7.5	117	118	122	PASS	BPL
									122	127	123	PASS	
									119	120	123	PASS	
6/26/24	13:19	JL	0:00	90	S/S	EXTRUSION	485	385.0	118	-	145	PASS	BPL
									122	-	149	PASS	
									132	-	151	PASS	
7/1/24	13:05	TH	5	92	S/S	EXTRUSION	475	375.0	117	-	136	PASS	BPL
									119	-	138	PASS	
									131	-	147	PASS	
7/1/24	13:09	MJ	5	92	S/S	EXTRUSION	475	375.0	111	-	129	PASS	BPL
									119	-	131	PASS	
									127	-	138	PASS	
7/2/24	6:47	TH	22	73	S/S	FUSION	750	7.0	119	122	131	PASS	BPL
									121	122	143	PASS	
									116	120	144	PASS	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
7/2/24	6:55	IB	69	73	S/S	FUSION	750	7.0	112	126	124	PASS	BPL
									109	117	136	PASS	
									119	123	139	PASS	
7/2/24	12:20	IB	69	92	S/S	FUSION	750	7.0	99	109	126	PASS	BPL
									110	112	131	PASS	
									101	104	138	PASS	
7/2/24	12:39	TH	5	92	S/S	EXTRUSION	475	375.0	120	-	123	PASS	BPL
									123	-	124	PASS	
									123	-	131	PASS	
7/3/24	6:20	IB	69	74	S/S	FUSION	750	7.0	121	129	141	PASS	BPL
									112	125	147	PASS	
									113	120	155	PASS	
7/3/24	6:22	TH	22	74	S/S	FUSION	750	7.0	109	114	126	PASS	BPL
									112	116	122	PASS	
									106	114	128	PASS	
7/3/24	10:35	MJ	3	82	S/S	EXTRUSION	495	395.0	104	-	121	PASS	BPL
									107	-	126	PASS	
									119	-	134	PASS	
7/3/24	12:15	IB	69	90	S/S	FUSION	750	7.5	114	117	138	PASS	BPL
									116	121	142	PASS	
									114	118	147	PASS	
7/3/24	12:30	HS	5	90	S/S	EXTRUSION	460	360.0	126	-	149	PASS	BPL
									122	-	152	PASS	
									131	-	151	PASS	
7/5/24	6:43	TH	5	70	S/S	EXTRUSION	495	395.0	110	-	155	PASS	BPL
									108	-	155	PASS	
									128	-	160	PASS	
7/5/24	6:52	MJ	5	70	S/S	EXTRUSION	495	395.0	117	-	134	PASS	BPL
									118	-	134	PASS	
									127	-	138	PASS	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
7/6/24	7:10	TD	5	71	S/S	EXTRUSION	495	395.0	110	-	156	PASS	BPL
									107	-	155	PASS	
									106	-	140	PASS	
7/6/24	6:58	TH	22	70	S/S	FUSION	750	7.0	112	121	141	PASS	BPL
									122	127	145	PASS	
									112	119	140	PASS	
7/6/24	7:25	MJ	3	71	S/S	EXTRUSION	495	395.0	112	-	152	PASS	BPL
									115	-	156	PASS	
									112	-	150	PASS	
7/8/24	11:00	TH	5	83	S/S	EXTRUSION	495	395.0	121	-	154	PASS	BPL
									118	-	155	PASS	
									119	-	149	PASS	
7/9/24	6:49	TH	22	70	S/S	FUSION	750	7.0	130	135	141	PASS	BPL
									124	125	148	PASS	
									130	142	138	PASS	
7/9/24	6:59	IB	69	70	S/S	FUSION	750	6.0	139	139	154	PASS	BPL
									140	153	164	PASS	
									140	147	157	PASS	
7/9/24	12:22	IB	69	84	S/S	FUSION	750	7.5	107	110	121	PASS	BPL
									110	111	123	PASS	
									109	114	123	PASS	
7/9/24	12:31	TH	22	84	S/S	FUSION	750	7.0	114	110	124	PASS	BPL
									16	113	125	PASS	
									117	123	136	PASS	
7/10/24	7:10	TH	22	71	S/S	FUSION	750	7.0	112	120	126	PASS	BPL
									121	125	136	PASS	
									125	126	137	PASS	
7/10/24	7:25	IB	0:00	71	S/S	FUSION	750	7.0	105	120	133	PASS	BPL
									122	125	138	PASS	
									126	126	136	PASS	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
7/10/24	12:40	TH	0:00	85	S/S	FUSION	750	7.5	104	120	123	PASS	BPL
									112	124	130	PASS	
									108	125	129	PASS	
7/10/24	12:47	IB	69	85	S/S	FUSION	750	7.5	115	111	123	PASS	BPL
									104	112	127	PASS	
									113	108	127	PASS	
7/10/24	12:58	HS	5	85	S/S	EXTRUSION	495	395.0	121	-	122	PASS	BPL
									124	-	122	PASS	
									125	-	127	PASS	
7/11/24	7:24	HS	5	73	S/S	EXTRUSION	480	380.0	115	-	152	PASS	BPL
									128	-	152	PASS	
									115	-	158	PASS	
7/15/24	6:40	IB	5	70	S/S	FUSION	750	7.0	113	110	125	PASS	BPL
									117	111	127	PASS	
									114	118	128	PASS	
7/15/24	6:50	TH	69	70	S/S	EXTRUSION	495	395.0	105	-	130	PASS	BPL
									108	-	126	PASS	
									103	-	128	PASS	
7/15/24	7:12	HS	5	74	S/S	EXTRUSION	500	400.0	101	-	125	PASS	BPL
									100	-	134	PASS	
									114	-	137	PASS	
7/15/24	7:55	TH	5	76	S/S	FUSION	750	7.0	108	114	131	PASS	BPL
									109	121	129	PASS	
									115	115	131	PASS	
7/15/24	12:37	IB	22	88	S/S	EXTRUSION	560	460.0	108	-	121	PASS	BPL
									111	-	122	PASS	
									112	-	121	PASS	
7/15/24	12:47	TH	5	88	S/S	EXTRUSION	560	460.0	115	-	137	PASS	BPL
									116	-	140	PASS	
									113	-	137	PASS	

LEA LAND LANDFILL
UNIT IIB-C
6041-001-17-01
SECONDARY TRIAL SEAM LOG

Date	Time	Welder ID	Machine Number	Amb. Temp (F)	Materials Type	Weld Type	Set Temp (F)	Set Speed or Pre-Heat	Field Test Results				QA Monitor
									Peel (ppi)		Shear (ppi)	Pass/Fail	
									in	out			
7/17/24	6:53	TH	22	68	S/S	FUSION	750	7.0	116	120	130	PASS	BPL
									113	121	129	PASS	
									122	126	134	PASS	
7/17/24	7:00	IB	69	68	S/S	FUSION	750	7.0	122	134	134	PASS	BPL
									126	131	135	PASS	
									130	131	149	PASS	
7/17/24	12:49	IB	69	78	S/S	FUSION	750	7.5	117	129	121	PASS	BPL
									132	130	123	PASS	
									119	124	125	PASS	
7/17/24	12:56	TH	22	78	S/S	FUSION	750	7.5	120	127	121	PASS	BPL
									120	122	123	PASS	
									120	123	123	PASS	
7/17/24	13:40	CZ	5	85	S/S	EXTRUSION	505	405.0	111	-	127	PASS	BPL
									107	-	130	PASS	
									118	-	133	PASS	
7/17/24	13:47	IB	5	85	S/S	EXTRUSION	505	405.0	104	-	136	PASS	BPL
									110	-	137	PASS	
									114	-	136	PASS	
7/18/24	7:05	IB	5	70	S/S	EXTRUSION	500	400.0	100	-	123	PASS	BPL
									104	-	130	PASS	
									109	-	134	PASS	
7/18/24	7:13	TH	5	70	S/S	EXTRUSION	500	400.0	121	-	140	PASS	BPL
									123	-	141	PASS	
									121	-	153	PASS	
7/19/24	6:57	JS	5	70	S/S	EXTRUSION	515	415.0	116	-	130	PASS	BPL
									119	-	129	PASS	
									124	-	123	PASS	

TENSIOMETER CALIBRATION CERTIFICATE

Demtech Services, Inc.
Placerville, California, USA

CALIBRATION CERTIFICATE

Tensiometer Model: Pro-Tester T-0100

Device Calibrated: S-Type load cell Calibration Apparatus: Pro-Cal unit, model TC-0100/A

Range: 0 - 750 lbs. Tension

Model No: XTS2-750

Serial No: 265870

A/D Module Model No: T-029

A/D Module Serial No: 2022265870

Channel No: N/A

Indicator reading with no load: 0

Dead Weight: W1 2 W2 152 W3 302

Reference Cell: R1 2 R2 152 R3 302

Offset: -2.088196 Scale: 3.330452

Applied Force lbs.	Cell Response:	Deviation Error:
2	2	0.00
52	52	0.00
102	102	0.00
152	152	0.00
202	202	0.00
252	252	0.00
302	302	0.00

Total Deviation Error (%): 0.00%

Temperature at time of calibration: 73 degrees F

Excitation Voltage: 5 V DC

This calibration conforms to the standards set by ASTM E4 and is traceable to NIST standards

Note: A/D Module and load cell above have been systems calibrated and are considered a matched pair. In general, calibrated A/D Modules and load cells are not interchangeable.

Calibration Technician: Marc Scott

Date: 10/19/23

Signature: _____

SLS RÉSUMÉS

SOUTHWEST LINER SYSTEMS, INC. ALBUQUERQUE, NEW MEXICO

505-345-0043 505-345-0315 fax

Installation Personnel Qualifications

Project Supervisor/Quality Control- The QC/General Supervisor for this project may be Lorenzo Zazpe Jr. Mr. Zazpe was employed by SLT/GSE from 1990 until 1994. Mr. Zazpe started with SLT as a laborer, and was promoted successively to Liner Technician, Master Seamer, and then to Quality Control Technician. During his tenure with SLT/GSE, Mr. Zazpe worked on projects that totaled over (25) million square feet. Mr. Zazpe joined The Snow Company, Inc. in 1995, since that time he has worked on over (50) FML projects that total more than (30) million square feet of liner material. Mr. Zazpe has been working as the "General Supervisor" since the beginning of 2007. Mr. Zazpe came to Southwest Liner Systems, Inc. in 2008. Since that time Mr. Zazpe has installed over (20) million square feet of liner materials for Southwest Liner Systems, Inc.

Project Supervisor/Quality Control- The QC/General Supervisor for this project may be Juan Zazpe. Mr. Zazpe was employed by The Snow Company, Inc. from 2000 until 2008. Mr. Zazpe started with The Snow Company, Inc. as a laborer, and was successively promoted to Liner Technician, Master Seamer, Quality Control Technician, and Project Foreman. While with The Snow Company, Inc. Mr. Zazpe has worked on over (30) FML projects that total more than (20) million square feet of HDPE materials and other liner materials. Mr. Zazpe came to Southwest Liner Systems, Inc. in 2008. Since that time Mr. Zazpe has installed over (20) million square feet of liner materials for Southwest Liner Systems, Inc.

Project Supervisor/Quality Control- Keith Stewart; (9 +) years of seaming experience; over (20) million square feet of HDPE liner material installed. Mr. Stewart started with Southwest Liner Systems, Inc. in November of 2008. Since that time he has been a valuable asset to the company. He currently is an experienced welding technician and can perform all aspects of liner installations.

Project Supervisor/Quality Control- Gabriel Zazpe; (5 +) years of seaming experience; over (20) million square feet of HDPE liner material installed. Mr. Zazpe started with Southwest Liner Systems, Inc. in May of 2016. Since that time he has been a valuable asset to the company. He currently is working as our Project on site supervisor. Managing the crew and supplies needed on site. He has worked his way up thru the ranks and has learned all aspects of the project from installation to QA/QC. He is a valuable asset to the company.

Welding Technician III Master Seamer- Garrison Baloo, (9 +) years of seaming experience; over (20) million square feet of HDPE liner and other liner material installed. Mr. Baloo started with Southwest

SOUTHWEST LINER SYSTEMS, INC. ALBUQUERQUE, NEW MEXICO

505-345-0043 505-345-0315 fax

Liner Systems, Inc. in November of 2008. Since that time he has been a valuable asset to the company. He currently is an experienced welding technician and can perform all aspects of liner installations..

Welding Technician III Master Seamer- Ubaldo Mondragon, (9 +) years plus of experience; over (20) million square feet of HDPE and other liner materials installed. Mr. Mondragon started with Southwest Liner Systems, Inc. in 2008. Prior to coming to work for SLS Mr. Saltwater had worked for the Snow Company of Albuquerque, New Mexico. He has extensive training and knowledge of the installation and testing of geomembrane liners.

Welding Technician II- Chris Zazpe, (3 +) Year of experience; about (10) million square feet of HDPE and other geomembrane liner experience. Mr. Zazpe has worked on several projects and continues to learn how to install and weld geomembrane liners. We believe that he will continue to learn and grow with the company and we believe that he will be an asset. He is currently working as the site foreman and it is our hope that he will excel in this position.

Welding Technician II- Tommy Dupree, (3+) Years of experience; about (10) million square feet of HDPE and other geomembrane liner experience. Mr. Dupree has worked on several projects and continues to learn how to install and weld geomembrane liners. Mr. Dupree came back to work with us after an extended leave of absence and has been quite a asset. We believe that he will continue to learn and grow with the company and believe that he will be an asset.

Welding Technician II- Nathaniel Rubio Hamilton, (1) Year of experience; about (1) million square feet of HDPE and other geomembrane liner experience. Mr. Rubio has worked on several projects and continues to learn how to install and weld geomembrane liners. He has been a valuable asset to the company. Mr. Rubio is also enlisted in the NM National Guard and serves and protects us all.

Welding Technician II- Mykal Jones, (1+) Years of experience; about (5) million square feet of HDPE and other geomembrane liner experience. Mr. Jones has worked on several projects and continues to learn how to install and weld geomembrane liners. Mr. Jones has been quite a asset and is learning quickly. We believe that he will continue to learn and grow with the company and believe that he will be an asset.

Welding Technician I- Xavier Crawford, (1) Year of experience: about (1) million square feet of HDPE and other geomembrane liner experience. Mr. Crawford has worked on several projects and continues to learn how to install and weld geomembrane liners. We believe that he will continue to learn and grow with the company and believe that he will be an asset.

Welding Technician I- Keanu Perez, (1) Year of experience; about (1) million square feet of HDPE and other geomembrane liner experience. Mr. Perez has worked on several projects and continues to learn how to install and weld geomembrane liners. We believe that he will continue to learn and grow with the company and believe that he will be an asset.

SOUTHWEST LINER SYSTEMS, INC. 3860 HAWKINS ST. NE ALBUQUERQUE, NEW MEXICO 87109 2

SOUTHWEST LINER SYSTEMS, INC. ALBUQUERQUE, NEW MEXICO
505-345-0043 505-345-0315 fax

Welding Technician I- Daniel Hagherty, (1) Year of experience; about (1) million square feet of HDPE and other geomembrane liner experience. Mr. Hagherty has worked on several projects and continues to learn how to install and weld geomembrane liners. We believe that he will continue to learn and grow with the company and believe that he will be an asset.

Welding Technician III Master Seamer- Bruno Saltwater, (10 +) years plus of experience; over (50) million square feet of HDPE and other liner materials installed. Mr. Saltwater started with Southwest Liner Systems, Inc. in 2008 and has left and returned several times since then. Prior to coming to work for SLS Mr. Saltwater had worked for the Snow Company of Albuquerque, New Mexico. He has extensive training and knowledge of the installation and testing of geomembrane liners. He is quite an asset to the team.

SOUTHWEST LINER SYSTEMS, INC. 3860 HAWKINS ST. NE ALBUQUERQUE, NEW MEXICO 87109 3

APPENDIX H

GEOMEMBRANE PLACEMENT

Includes pages H-1 through H-54

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DEPLOYMENT LOG FOR PRIMARY GEOMEMBRANE

H-1

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE DEPLOYMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Thickness						Panel Dimensions			Comments
					T1	T2	T3	T4	T5	Avg.	Length, ft	Width, ft	Area, sf	
PH1	1360	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH2	1360	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
PH3	1360	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	112	22.5	2,520	
PH4	1360	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
PH5	1360	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	81	22.5	1,823	
PH5A	1346	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	33	22.5	743	
PH6	1346	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH7	1346	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH8	1346	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH9	1357	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH10	1357	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
PH11	1357	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
PH12	1357	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
PH13	1364	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH14	1364	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
PH15	1364	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	112	22.5	2,520	
PH16	1364	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
PH17	1364	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH18	1364	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	115	22.5	2,588	
PH19	1350	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	115	22.5	2,588	
PH20	1350	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH21	1350	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH22	1350	60 smooth	7/9/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH23	1350	60/smooth	7/19/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH24	1350	60 smooth	7/19/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH25	1350	60 smooth	7/19/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH26	1345	60 smooth	7/19/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH27	1345	60 smooth	7/19/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
PH28	1345	60 smooth	7/19/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH29	1345	60 smooth	7/19/2024	BDL	60	60	60	60	60	60	116	22.5	2,610	
PH30	1345	60 smooth	7/19/2024	BDL	60	60	60	60	60	60	88	22.5	1,980	
PH30A	1347	60 Smooth	7/19/2024	BDL	60	60	60	60	60	60	28	22.5	630	
PH31	1348	60 smooth	7/22/2024	BDL	60	60	60	60	60	60	112	22.5	2,520	

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE DEPLOYMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Thickness						Panel Dimensions			Comments
					T1	T2	T3	T4	T5	Avg.	Length, ft	Width, ft	Area, sf	
PH32	1348	60 smooth	7/22/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
PH33	1348	60 smooth	7/22/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
E1	1343	60 Textured	7/24/2024	BDL	60	60	60	60	60	60	191	22.5	4,298	
E2	1343	60 Textured	7/24/2024	BDL	60	60	60	60	60	60	194	22.5	4,365	
E3	1375	60 Textured	7/24/2024	BDL	60	60	60	60	60	60	195	22.5	4,388	
E4	1375	60 Textured	7/24/2024	BDL	60	60	60	60	60	60	195	22.5	4,388	
E5	1359	60 Textured	7/24/2024	BDL	60	60	60	60	60	60	197	22.5	4,433	
B1	1352	60 smooth	8/2/2024	BDL	60	60	60	60	60	60	367	22.5	8,258	
B2	1352	60 smooth	8/2/2024	BDL	60	60	60	60	60	60	192	22.5	4,320	
B2A	1347	60 smooth	8/2/2024	BDL	60	60	60	60	60	60	177	22.5	3,983	
B3	1347	60 smooth	8/2/2024	BDL	60	60	60	60	60	60	372	22.5	8,370	
B4	1841	60 smooth	8/2/2024	BDL	60	60	60	60	60	60	371	22.5	8,348	
B5	1850	60 smooth	8/3/2024	BDL	60	60	60	60	60	60	371	22.5	8,348	
B6	1857	60 smooth	8/3/2024	BDL	60	60	60	60	60	60	373	22.5	8,393	
B7	1851	60 smooth	8/5/2024	BDL	60	60	60	60	60	60	373	22.5	8,393	
B8	1842	60 smooth	8/5/2024	BDL	60	60	60	60	60	60	373	22.5	8,393	
B9	1855	60 smooth	8/5/2024	BDL	60	60	60	60	60	60	374	22.5	8,415	
B10	1860	60 smooth	8/5/2024	BDL	60	60	60	60	60	60	373	22.5	8,393	
B11	1849	60 smooth	8/5/2024	BDL	60	60	60	60	60	60	372	22.5	8,370	
B12	1846	60 smooth	8/5/2024	BDL	60	60	60	60	60	60	370	22.5	8,325	
B13	1854	60 smooth	8/5/2024	BDL	60	60	60	60	60	60	411	22.5	9,248	
S1	1332	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	152	22.5	3,420	
S2	1332	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	151	22.5	3,398	
S3	1361	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	148	22.5	3,330	
S4	1361	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	144	22.5	3,240	
S5	1378	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	141	22.5	3,173	
S6	1378	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	139	22.5	3,128	
S7	1367	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	135	22.5	3,038	
S8	1367	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	130	22.5	2,925	
S9	1367	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	132	22.5	2,970	
S10	1355	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	133	22.5	2,993	
S11	1355	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	129	22.5	2,903	
S12	1355	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	130	22.5	2,925	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
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PRIMARY GEOMEMBRANE DEPLOYMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Thickness						Panel Dimensions			Comments
					T1	T2	T3	T4	T5	Avg.	Length, ft	Width, ft	Area, sf	
S13	1330	60 Textured	8/6/2024	BDL	60	60	60	60	60	60	132	22.5	2,970	
B14	1848	60 smooth	8/10/2024	BDL	60	60	60	60	60	60	407	22.5	9,158	
B15	1848	60 smooth	8/10/2024	BDL	60	60	60	60	60	60	141	22.5	3,173	
B15A	1850	60 smooth	8/10/2024	BDL	60	60	60	60	60	60	189	22.5	4,253	
B15B	1860	60 smooth	8/10/2024	BDL	60	60	60	60	60	60	88	22.5	1,980	
B16	1356	60 smooth	8/12/2024	BDL	60	60	60	60	60	60	430	22.5	9,675	
B17	1370	60 smooth	8/12/2024	BDL	60	60	60	60	60	60	430	22.5	9,675	
B18	1363	60 smooth	8/12/2024	BDL	60	60	60	60	60	60	430	22.5	9,675	
B19	1356	60 smooth	8/12/2024	BDL	60	60	60	60	60	60	131	22.5	2,948	
B19A	1848	60 smooth	8/12/2024	BDL	60	60	60	60	60	60	179	22.5	4,028	
B20	1854	60 smooth	8/12/2024	BDL	60	60	60	60	60	60	102	22.5	2,295	
B20A	1854	60 smooth	8/12/2024	BDL	60	60	60	60	60	60	90	22.5	2,025	
B21	1841	60 smooth	8/12/2024	BDL	60	60	60	60	60	60	172	22.5	3,870	
S14	1377	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	130	22.5	2,925	
S15	1377	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	127	22.5	2,858	
S16	1377	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	122	22.5	2,745	
S17	0001	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	118	22.5	2,655	
S18	0001	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	115	22.5	2,588	
S19	0001	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	99	22.5	2,228	
S20	1340	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	72	22.5	1,620	
S21	1340	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	42	22.5	945	
S22	1340	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	25	7.0	175	
W1	1340	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	95	22.5	2,138	
W2	1340	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	62	22.5	1,395	
W3	1340	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	25	22.5	563	
W4	1370	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	111	22.5	2,498	
W5	1370	60 Textured	8/13/2024	BDL	60	60	60	60	60	60	115	22.5	2,588	
W6	1370	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	123	22.5	2,768	
W7	1339	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	130	22.5	2,925	
W8	1339	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	128	22.5	2,880	
W9	1339	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	125	22.5	2,813	
W10	1341	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	122	22.5	2,745	
W11	1341	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
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PRIMARY GEOMEMBRANE DEPLOYMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Thickness						Panel Dimensions			Comments
					T1	T2	T3	T4	T5	Avg.	Length, ft	Width, ft	Area, sf	
W12	1341	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	116	22.5	2,610	
W13	1332	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
W14	1377	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	111	22.5	2,498	
W14A	1330	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	23	22.5	518	
W15	1330	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	133	22.5	2,993	
W16	1330	60 Textured	8/14/2024	BDL	60	60	60	60	60	60	130	22.5	2,925	
W17	1371	60 Textured	8/26/2024	BDL	60	60	60	60	60	60	128	22.5	2,880	
W18	1371	60 Textured	8/26/2024	BDL	60	60	60	60	60	60	128	22.5	2,880	
W19	1369	60 Textured	8/26/2024	BDL	60	60	60	60	60	60	138	22.5	3,105	
W20	1369	60 Textured	8/26/2024	BDL	60	60	60	60	60	60	145	22.5	3,263	
W21	7741	60 Textured	8/26/2024	BDL	60	60	60	60	60	60	152	22.5	3,420	
W22	7741	60 Textured	8/26/2024	BDL	60	60	60	60	60	60	151	22.5	3,398	
W23	1332	60 Textured	8/29/2024	BDL	60	60	60	60	60	60	216	22.5	4,860	
W24	1370	60 Textured	8/29/2024	BDL	60	60	60	60	60	60	29	5	145	
W24A	1370	60 Textured	8/29/2024	BDL	60	60	60	60	60	60	29	5	145	
W24B	1370	60 Textured	8/29/2024	BDL	60	60	60	60	60	60	29	5	145	

DEPLOYMENT LOG FOR SECONDARY GEOMEMBRANE

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE DEPLOYMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Thickness						Panel Dimensions			Comments
					T1	T2	T3	T4	T5	Avg.	Length, ft	Width, ft	Area, sf	
S1	1379	60 Textured	6/12/2024	BDL	60	60	60	60	60	60	136	22.5	3,060	
S2	1379	60 Textured	6/12/2024	BDL	60	60	60	60	60	60	138	22.5	3,105	
S3	1379	60 Textured	6/12/2024	BDL	60	60	60	60	60	60	138	22.5	3,105	
S4	1360	60 Textured	6/12/2024	BDL	60	60	60	60	60	60	137	22.5	3,083	
S5	1360	60 Textured	6/12/2024	BDL	60	60	60	60	60	60	135	22.5	3,038	
S6	1360	60 Textured	6/12/2024	BDL	60	60	60	60	60	60	133	22.5	2,993	
S7-A	1357	60 Textured	6/12/2024	BDL	60	60	60	60	60	60	92	22.5	2,070	
S8	1357	60 Textured	6/12/2024	BDL	60	60	60	60	60	60	40	22.5	900	
S9	1357	60 Textured	6/12/2024	BDL	60	60	60	60	60	60	130	22.5	2,925	
S10	1357	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	130	22.5	2,925	
S11	1357	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	124	22.5	2,790	
S11A	1371	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	65	22.5	1,463	
S12	1371	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	58	22.5	1,305	
S13	1371	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	123	22.5	2,768	
S14	1336	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	119	22.5	2,678	
S15	1336	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	117	22.5	2,633	
S16	1336	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	116	22.5	2,610	
S17	1336	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	115	22.5	2,588	
S18	1336	60 Textured	6/13/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
S19	1336	60 Textured	6/14/2024	BDL	60	60	60	60	60	60	100	22.5	2,250	
S20	1336	60 Textured	6/14/2024	BDL	60	60	60	60	60	60	70	22.5	1,575	
S21	1369	60 Textured	6/14/2024	BDL	60	60	60	60	60	60	40	22.5	900	
S22	1369	60 Textured	6/14/2024	BDL	60	60	60	60	60	60	26	12.0	312	
W1	1369	60 Textured	6/14/2024	BDL	60	60	60	60	60	60	94	22.5	2,115	
W2	1369	60 Textured	6/14/2024	BDL	60	60	60	60	60	60	71	22.5	1,598	
W3	1369	60 Textured	6/14/2024	BDL	60	60	60	60	60	60	46	22.5	1,035	
W4	1369	60 Textured	6/14/2024	BDL	60	60	60	60	60	60	20	22.5	450	
W5	1371	60 Textured	6/15/2024	BDL	60	60	60	60	60	60	103	22.5	2,318	
W6	1369	60 Textured	6/15/2024	BDL	60	60	60	60	60	60	104	22.5	2,340	
B1	1853	60 Smooth	6/15/2024	BDL	60	60	60	60	60	60	136	22.5	3,060	
B2	1853	60 Smooth	6/15/2024	BDL	60	60	60	60	60	60	138	22.5	3,105	
B1A	1853	60 Smooth	6/17/2024	BDL	60	60	60	60	60	60	274	22.5	6,165	
B2A	1852	60 Smooth	6/17/2024	BDL	60	60	60	60	60	60	273	22.5	6,143	

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
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SECONDARY GEOMEMBRANE DEPLOYMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Thickness						Panel Dimensions			Comments
					T1	T2	T3	T4	T5	Avg.	Length, ft	Width, ft	Area, sf	
B3	1852	60 Smooth	6/17/2024	BDL	60	60	60	60	60	60	289	22.5	6,503	
B3A	1847	60 Smooth	6/17/2024	BDL	60	60	60	60	60	60	130	22.5	2,925	
B4	1847	60 Smooth	6/17/2024	BDL	60	60	60	60	60	60	401	22.5	9,023	
W7	1373	60 Textured	6/17/2024	BDL	60	60	60	60	60	60	104	22.5	2,340	
W8	1373	60 Textured	6/17/2024	BDL	60	60	60	60	60	60	105	22.5	2,363	
W9	1366	60 Smooth	6/18/2024	BDL	60	60	60	60	60	60	107	22.5	2,408	
W10	1366	60 Smooth	6/18/2024	BDL	60	60	60	60	60	60	108	22.5	2,430	
W11	1366	60 Smooth	6/18/2024	BDL	60	60	60	60	60	60	108	22.5	2,430	
B5	1856	60 Textured	6/18/2024	BDL	60	60	60	60	60	60	407	22.5	9,158	
B6	1358	60 Textured	6/18/2024	BDL	60	60	60	60	60	60	436	22.5	9,810	
B7	1366	60 Textured	6/18/2024	BDL	60	60	60	60	60	60	437	22.5	9,833	
B8	1362	60 Smooth	6/19/2024	BDL	60	60	60	60	60	60	441	22.5	9,923	
B9	1372	60 Smooth	6/19/2024	BDL	60	60	60	60	60	60	447	22.5	10,058	
B10	1367	60 Smooth	6/19/2024	BDL	60	60	60	60	60	60	452	22.5	10,170	
B11	1368	60 Smooth	6/19/2024	BDL	60	60	60	60	60	60	456	22.5	10,260	
W12	1354	60 Textured	6/21/2024	BDL	60	60	60	60	60	60	110	22.5	2,475	
W13	1354	60 Textured	6/21/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
W14	1354	60 Textured	6/21/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
W15	1364	60 Textured	6/21/2024	BDL	60	60	60	60	60	60	115	22.5	2,588	
W16	1364	60 Textured	6/21/2024	BDL	60	60	60	60	60	60	115	22.5	2,588	
W17	1337	60 Textured	6/24/2024	BDL	60	60	60	60	60	60	111	22.5	2,498	
W18	1377	60 Textured	6/24/2024	BDL	60	60	60	60	60	60	105	22.5	2,363	
B12	1369	60 Smooth	6/24/2024	BDL	60	60	60	60	60	60	465	22.5	10,463	
B13	1369	60 Smooth	6/24/2024	BDL	60	60	60	60	60	60	479	22.5	10,778	
W19	1337	60 Textured	6/24/2024	BDL	60	60	60	60	60	60	98	22.5	2,205	
W20	1337	60 Textured	6/25/2024	BDL	60	60	60	60	60	60	96	22.5	2,160	
W21	1331	60 Textured	6/25/2024	BDL	60	60	60	60	60	60	92	22.5	2,070	
W22	1333	60 Textured	6/25/2024	BDL	60	60	60	60	60	60	87	22.5	1,958	
W23	1333	60 Textured	6/25/2024	BDL	60	60	60	60	60	60	79	22.5	1,778	
W24	1333	60 Textured	6/25/2024	BDL	60	60	60	60	60	60	72	11.0	792	
B14	1858	60 Smooth	6/25/2024	BDL	60	60	60	60	60	60	493	22.5	11,093	
B15	1349	60 Smooth	6/25/2024	BDL	60	60	60	60	60	60	504	22.5	11,340	
B16	1843	60 Smooth	6/26/2024	BDL	60	60	60	60	60	60	509	22.5	11,453	

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
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SECONDARY GEOMEMBRANE DEPLOYMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Thickness						Panel Dimensions			Comments
					T1	T2	T3	T4	T5	Avg.	Length, ft	Width, ft	Area, sf	
B17	1844	60 Smooth	6/26/2024	BDL	60	60	60	60	60	60	512	22.5	11,520	
B18	1845	60 Smooth	6/26/2024	BDL	60	60	60	60	60	60	278	22.5	6,255	
B19	1845	60 Smooth	6/26/2024	BDL	60	60	60	60	60	60	280	22.5	6,300	
B20	1475	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B21	1475	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B22	1475	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B23	1475	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B24	1475	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	93	22.5	2,093	
B24A	1355	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	23	22.5	518	
B25	1355	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B26	1355	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B27	1355	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B28	1355	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B29	1355	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	64	22.5	1,440	
B29A	1350	60 Smooth	7/2/2024	BDL	60	60	60	60	60	60	49	22.5	1,103	
B30	1350	60 Smooth	7/3/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B31	1350	60 Smooth	7/3/2024	BDL	60	60	60	60	60	60	115	22.5	2,588	
B32	1350	60 Smooth	7/3/2024	BDL	60	60	60	60	60	60	115	22.5	2,588	
B33	1350	60 Smooth	7/3/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B34	1353	60 Smooth	7/3/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B35	1353	60 Smooth	7/3/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B36	1353	60 Smooth	7/3/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B37	1353	60 Smooth	7/3/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B38	1353	60 Smooth	7/3/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B39	1346	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B40	1354	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B41	1354	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B42	1354	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B43	1354	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	114	22.5	2,565	
B44	1371	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B45	1371	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B46	1371	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B47	1371	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE DEPLOYMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Thickness						Panel Dimensions			Comments
					T1	T2	T3	T4	T5	Avg.	Length, ft	Width, ft	Area, sf	
B48	1371	60 Smooth	7/10/2024	BDL	60	60	60	60	60	60	112	22.5	2,520	
RP1	1361	60 Smooth	7/15/2024	BDL	60	60	60	60	60	60	32	5.0	160	
RP2	1361	60 Smooth	7/15/2024	BDL	60	60	60	60	60	60	62	5.0	310	
RP3	1361	60 Smooth	7/15/2024	BDL	60	60	60	60	60	60	63	5.0	315	
RP4	1361	60 Smooth	7/15/2024	BDL	60	60	60	60	60	60	63	5.0	315	
B49	1351	60 Smooth	7/17/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B50	1351	60 Smooth	7/17/2024	BDL	60	60	60	60	60	60	112	22.5	2,520	
B51	1351	60 Smooth	7/17/2024	BDL	60	60	60	60	60	60	113	22.5	2,543	
B52	1351	60 Smooth	7/17/2024	BDL	60	60	60	60	60	60	112	22.5	2,520	
B53	1348	60 Smooth	7/17/2024	BDL	60	60	60	60	60	60	112	22.5	2,520	
E1	1342	60 Textured	7/17/2024	BDL	60	60	60	60	60	60	173	22.5	3,893	
E2	1342	60 Textured	7/17/2024	BDL	60	60	60	60	60	60	175	22.5	3,938	
E3	1374	60 Textured	7/17/2024	BDL	60	60	60	60	60	60	177	22.5	3,983	
E4	1374	60 Textured	7/17/2024	BDL	60	60	60	60	60	60	177	22.5	3,983	
E5	1374	60 Textured	7/17/2024	BDL	60	60	60	60	60	60	178	22.5	4,005	

SEAMING LOG FOR PRIMARY GEOMEMBRANE

H-11

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
PH2 - PH3	7/9/2024	7:16	F	BDL	69	IB	70	112	
PH5 - PH5A	7/9/2024	7:50	F	BDL	69	IB	71	23	
PH5A - PH6	7/9/2024	8:01	F	BDL	69	IB	73	33	
PH5 - PH6	7/9/2024	8:06	F	BDL	69	IB	73	82	
PH7 - PH8	7/9/2024	8:23	F	BDL	69	IB	75	114	
PH9 - PH10	7/9/2024	8:58	F	BDL	69	IB	76	114	DS 2 at 45' S of N EOS
PH11 - PH12	7/9/2024	10:06	F	BDL	69	IB	80	113	
PH13 - PH14	7/9/2024	10:46	F	BDL	69	IB	81	114	
PH15-Existing	7/9/2024	12:58	F	BDL	69	IB	88	23	
PH14-Existing	7/9/2024	13:01	F	BDL	69	IB	88	22	
PH13-Existing	7/9/2024	13:04	F	BDL	69	IB	88	23	
PH12-Existing	7/9/2024	13:07	F	BDL	69	IB	88	22	
PH11-Existing	7/9/2024	13:10	F	BDL	69	IB	89	23	
PH10-Existing	7/9/2024	13:13	F	BDL	69	IB	89	22	
PH9-Existing	7/9/2024	13:16	F	BDL	69	IB	89	23	
PH8-Existing	7/9/2024	13:19	F	BDL	69	IB	90	22	DS 3 at 11' E of W EOS
PH7-Existing	7/9/2024	13:22	F	BDL	69	IB	90	23	
PH6-Existing	7/9/2024	13:25	F	BDL	69	IB	90	22	
PH5-Existing	7/9/2024	13:28	F	BDL	69	IB	90	23	
PH4-Existing	7/9/2024	13:31	F	BDL	69	IB	91	22	
PH3-Existing	7/9/2024	13:34	F	BDL	69	IB	91	23	
PH2-Existing	7/9/2024	13:37	F	BDL	69	IB	91	22	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
PH1-Existing	7/9/2024	13:40	F	BDL	69	IB	91	18	
PH1 - PH2	7/9/2024	7:15	F	BDL	22	TH	70	114	
PH3 - PH4	7/9/2024	7:27	F	BDL	22	TH	71	112	
PH4 - PH5A	7/9/2024	7:55	F	BDL	22	TH	71	33	
PH6 - PH7	7/9/2024	8:00	F	BDL	22	TH	75	81	
PH8 - PH9	7/9/2024	8:10	F	BDL	22	TH	75	114	DS 1 at 50' N of S EOS
PH10 - PH11	7/9/2024	8:45	F	BDL	22	TH	78	114	
PH12 - PH13	7/9/2024	9:53	F	BDL	22	TH	80	113	
PH14 - PH15	7/9/2024	10:34	F	BDL	22	TH	82	113	
PH16 - PH17	7/16/2024	10:54	F	BDL	22	TH	89	112	
PH18 - PH19	7/16/2024	10:55	F	BDL	22	TH	93	114	DS 4 at 60' N of S EOS
PH20 - PH21	7/16/2024	12:25	F	BDL	22	TH	95	115	
PH15 - PH16	7/16/2024	10:42	F	BDL	69	IB	89	14	
PH17 - PH18	7/16/2024	12:12	F	BDL	69	IB	93	114	
PH19 - PH20	7/16/2024	12:36	F	BDL	69	IB	95	115	DS 5 at 35' S of N EOS
PH21 - PH22	7/16/2024	12:57	F	BDL	69	IB	95	114	
PH22 -Existing	7/16/2024	13:35	F	BDL	69	IB	96	23	
PH21 - Existing	7/16/2024	13:38	F	BDL	69	IB	96	22	
PH20 - Existing	7/16/2024	13:41	F	BDL	69	IB	96	23	
PH19 - Existing	7/16/2024	13:44	F	BDL	69	IB	96	22	
PH18 - Existing	7/16/2024	13:47	F	BDL	69	IB	96	23	
PH17 - Existing	7/16/2024	13:50	F	BDL	69	IB	96	22	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
PH16 - Existing	7/16/2024	13:53	F	BDL	69	IB	96	23	
PH23 - PH24	7/19/2024	12:46	F	BDL	22	TH	80	114	
PH24 - PH25	7/19/2024	8:54	F	BDL	22	TH	82	115	DS 6 at 27' N of S EOS
PH26 - PH27	7/19/2024	10:13	F	BDL	22	TH	83	114	
PH28 - PH29	7/19/2024	10:36	F	BDL	22	TH	84	114	
PH29 - PH30A	7/19/2024	10:57	F	BDL	22	TH	85	116	
PH29 - PH30	7/19/2024	11:29	F	BDL	22	TH	85	28	
PH30 - Existing	7/19/2024	11:38	F	BDL	22	TH	91	88	
PH29 - Existing	7/19/2024	13:11	F	BDL	22	TH	91	23	
PH28 - Existing	7/19/2024	13:14	F	BDL	22	TH	91	22	
PH27 - Existing	7/19/2024	13:17	F	BDL	22	TH	91	23	
PH22 - PH23	7/19/2024	9:44	F	BDL	69	IB	80	113	
PH25 - PH26	7/19/2024	10:30	F	BDL	69	IB	82	114	DS 7 at 35' N of S EOS
PH27 - PH28	7/19/2024	10:51	F	BDL	69	IB	83	112	
PH30 - PH30A	7/19/2024	11:25	F	BDL	69	IB	85	23	
PH26-Existing	7/19/2024	13:23	F	BDL	22	TH	92	23	
PH25-Existing	7/19/2024	13:26	F	BDL	22	TH	92	22	
PH24-Existing	7/19/2024	13:29	F	BDL	22	TH	92	23	
PH23-Existing	7/19/2024	13:32	F	BDL	22	TH	92	22	DS 8 at E EOS
PH30A - PH31	7/22/2024	7:55	F	BDL	69	TH	70	28	
PH30 - PH31	7/22/2024	8:00	F	BDL	69	TH	70	83	DS 9 at N EOS
PH31 - PH32	7/22/2024	8:13	F	BDL	69	TH	71	114	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
PH32 - PH33	7/22/2024	8:30	F	BDL	69	TH	71	113	
PH33 - Existing	7/22/2024	9:01	F	BDL	69	TH	72	22	
PH32 - Existing	7/22/2024	9:05	F	BDL	69	TH	72	23	
PH31 - Existing	7/22/2024	9:09	F	BDL	69	TH	72	22	
E1-Existing	7/24/2024	6:52	F	BDL	69	IB	69	189	
E3-E4	7/24/2024	7:35	F	BDL	69	IB	71	194	DS 11 at 80' W of E EOS
PH33-E5	7/24/2024	8:11	F	BDL	69	IB	73	23	
PH33-E4	7/24/2024	8:14	F	BDL	69	IB	73	22	
PH33-E3	7/24/2024	8:17	F	BDL	69	IB	73	23	
PH33-E2	7/24/2024	8:20	F	BDL	69	IB	73	22	
PH33-E1	7/24/2024	8:24	F	BDL	69	IB	73	23	
E1-E2	7/24/2024	6:54	F	BDL	22	TH	69	193	
E2-E3	7/24/2024	7:25	F	BDL	22	TH	70	196	DS 10 at 15' W of E EOS
E4-E5	7/24/2024	7:57	F	BDL	22	TH	72	197	
PH1-B1	8/2/2024	10:10	F	BDL	69	MJ	85	97	
B1-Existing	8/2/2024	10:25	F	BDL	69	MJ	85	272	DS 12 at S EOS
B3-B4	8/2/2024	13:40	F	BDL	69	MJ	97	226	
B1-B2A	8/2/2024	10:07	F	BDL	22	TH	85	177	
B1-B2	8/2/2024	10:30	F	BDL	22	TH	87	189	DS 13 at 100' N of S EOS
B2-B2A	8/2/2024	9:56	F	BDL	22	TH	84	23	
B2A-B3	8/2/2024	13:07	F	BDL	22	TH	95	177	
B2-B3	8/2/2024	13:35	F	BDL	22	TH	96	195	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
B3-B4	8/2/2024	14:05	F	BDL	22	TH	97	147	DS 14 at 147' N of S EOS
B5-B6	8/3/2024	7:45	F	BDL	69	MJ	76	373	DS 15 at 250' N of S EOS
B4-B5	8/3/2024	7:00	F	BDL	22	TH	74	369	
B6-B7	8/5/2024	7:00	F	BDL	69	MJ	71	374	
B8-B9	8/5/2024	8:00	F	BDL	69	IB	74	373	DS 17 at 80' N of S EOS
B10-B11	8/5/2024	9:29	F	BDL	69	IB	79	373	DS 19 at 300' N of S EOS
B12-B13	8/5/2024	12:54	F	BDL	69	IB	90	367	
B7-B8	8/5/2024	7:20	F	BDL	22	TH	70	373	DS 16 at 5' S of N EOS
B9-B10	8/5/2024	8:30	F	BDL	22	TH	76	374	DS 18 at 150' S of N EOS
B11-B12	8/5/2024	10:06	F	BDL	22	TH	80	370	DS 20 at 275' S of N EOS
S1-Existing	8/6/2024	7:26	F	BDL	69	IB	74	151	DS 21 at 40' S of N EOS
S2-S3	8/6/2024	7:58	F	BDL	69	IB	77	150	
S4-S5	8/6/2024	8:26	F	BDL	69	IB	79	142	
S6-S7	8/6/2024	8:53	F	BDL	69	IB	81	138	
S8-S9	8/6/2024	9:22	F	BDL	69	IB	82	129	DS 23 at 95' S of N EOS
S10-S11	8/6/2024	9:47	F	BDL	69	IB	84	130	
S12-S13	8/6/2024	10:20	F	BDL	69	IB	88	132	
S7-B7	8/6/2024	12:07	F	BDL	69	IB	91	22	
S6-B6	8/6/2024	12:11	F	BDL	69	IB	91	22	
S5-B5	8/6/2024	12:14	F	BDL	69	IB	91	22	
S4-B4	8/6/2024	12:17	F	BDL	69	IB	91	22	DS 25 at E EOS
S3-B3	8/6/2024	12:20	F	BDL	69	IB	91	22	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
S2-B2	8/6/2024	12:23	F	BDL	69	IB	91	22	
S1-B1	8/6/2024	12:26	F	BDL	69	IB	91	22	
S1-S2	8/6/2024	7:30	F	BDL	22	TH	74	153	
S3-S4	8/6/2024	7:58	F	BDL	22	TH	77	146	
S5-S6	8/6/2024	8:28	F	BDL	22	TH	79	140	DS 22 at 10' S of N EOS
S7-S8	8/6/2024	8:57	F	BDL	22	TH	81	132	
S9-S10	8/6/2024	9:25	F	BDL	22	TH	82	135	
S11-S12	8/6/2024	9:50	F	BDL	22	TH	84	128	
S13-B13	8/6/2024	10:33	F	BDL	22	TH	89	22	
S12-B12	8/6/2024	10:37	F	BDL	22	TH	89	22	
S12-B11	8/6/2024	10:40	F	BDL	22	TH	89	2	
S11-B11	8/6/2024	12:05	F	BDL	22	TH	89	20	
B10-S10	8/6/2024	12:08	F	BDL	22	TH	89	20	
S9-B9	8/6/2024	12:11	F	BDL	22	TH	89	20	
S8-B8	8/6/2024	12:14	F	BDL	22	TH	89	20	DS 24 at W EOS
B13-B14	8/10/2024	7:10	F	BDL	69	IB	74	404	DS 26 at 315' S of N EOS
B15-B15A	8/10/2024	7:50	F	BDL	22	TH	76	22	
B15A-B15B	8/10/2024	8:05	F	BDL	22	TH	76	22	
B14-B15B	8/10/2024	8:08	F	BDL	22	TH	76	88	
B14-B15A	8/10/2024	8:30	F	BDL	22	TH	77	189	
B14-B15	8/10/2024	9:00	F	BDL	22	TH	78	141	
B16-B17	8/12/2024	7:31	F	BDL	69	IB	76	430	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
B19-B19A	8/12/2024	8:55	F	BDL	69	IB	80	23	
B18-B19	8/12/2024	9:30	F	BDL	69	IB	82	131	
B18-B19A	8/12/2024	9:00	F	BDL	69	IB	82	180	DS 29 at 150' N of S EOS
B20-B21	8/12/2024	10:10	F	BDL	69	IB	86	89	
B20A-B21	8/12/2024	9:51	F	BDL	69	IB	86	90	
B16-B15B	8/12/2024	7:12	F	BDL	22	TH	76	91	
B16-B15A	8/12/2024	7:35	F	BDL	22	TH	77	189	DS 27 at N EOS
B16-B15	8/12/2024	8:00	F	BDL	22	TH	78	143	
B17-B18	8/12/2024	8:16	F	BDL	22	TH	80	430	DS 28 at 200' S of N EOS
B19A-B20A	8/12/2024	9:26	F	BDL	22	TH	85	90	
B19A-B20A	8/12/2024	9:40	F	BDL	22	TH	86	89	
B19-B20	8/12/2024	9:55	F	BDL	22	TH	86	93	DS 30 at S EOS
B20-B20A	8/12/2024	9:21	F	BDL	22	TH	84	23	
S14-S15	8/13/2024	7:14	F	BDL	69	MJ	75	129	DS 31 at N EOS
S16-S17	8/13/2024	7:41	F	BDL	69	MJ	76	119	
S18-S19	8/13/2024	8:08	F	BDL	69	MJ	78	113	
S20-S21	8/13/2024	8:50	F	BDL	69	MJ	80	57	
W1-W2	8/13/2024	9:21	F	BDL	69	MJ	81	81	
S18-B18	8/13/2024	9:56	F	BDL	69	MJ	84	23	
S17-B17	8/13/2024	10:00	F	BDL	69	MJ	84	23	DS33 at W EOS
S16-B16	8/13/2024	10:04	F	BDL	69	MJ	84	23	
S15-B15	8/13/2024	10:08	F	BDL	69	MJ	85	23	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
S14-B15	8/13/2024	10:12	F	BDL	69	MJ	85	23	
W4-W5	8/13/2024	10:42	F	BDL	69	MJ	86	113	
B18-W5	8/13/2024	11:10	F	BDL	69	MJ	87	23	
B18-W4	8/13/2024	11:14	F	BDL	69	MJ	87	23	
S13-S14	8/13/2024	7:06	F	BDL	22	TH	75	131	
S15-S16	8/13/2024	7:29	F	BDL	22	TH	76	125	
S17-S18	8/13/2024	7:52	F	BDL	22	TH	78	117	
S19-S20	8/13/2024	8:20	F	BDL	22	TH	79	85	DS 32 at 5' N of S EOS
S21-S22	8/13/2024	8:50	F	BDL	22	TH	81	27	
W2-W3	8/13/2024	9:22	F	BDL	22	TH	82	43	
S22-W3	8/13/2024	9:45	F	BDL	22	TH	83	18	
S21-W3	8/13/2024	9:50	F	BDL	22	TH	83	27	
S21-W2	8/13/2024	9:59	F	BDL	22	TH	83	7	
S20-W2	8/13/2024	10:01	F	BDL	22	TH	84	36	
S19-W3	8/13/2024	10:10	F	BDL	22	TH	84	34	
W1-W4	8/13/2024	10:29	F	BDL	22	TH	86	109	
W6-W7	8/14/2024	7:00	F	BDL	69	MJ	70	128	
W8-W9	8/14/2024	7:40	F	BDL	69	MJ	73	122	
W10-W11	8/14/2024	8:16	F	BDL	69	MJ	75	115	
W12-W13	8/14/2024	8:38	F	BDL	69	MJ	78	118	DS 35 at 25' E of W EOS
W14-W15	8/14/2024	9:38	F	BDL	69	MJ	82	111	
W14A-W15	8/14/2024	9:55	F	BDL	69	MJ	84	22	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
W13-B20	8/14/2024	10:15	F	BDL	69	MJ	86	23	
W12-B20	8/14/2024	10:19	F	BDL	69	MJ	86	23	
W11-B20	8/14/2024	10:23	F	BDL	69	MJ	86	23	
W10-B20	8/14/2024	10:27	F	BDL	69	MJ	86	9	
W5-W6	8/14/2024	6:49	F	BDL	22	TH	70	118	DS 34 at 10' W of E EOS
W7-W8	8/14/2024	7:12	F	BDL	22	TH	71	133	
W9-W10	8/14/2024	7:54	F	BDL	22	TH	74	129	
W11-W12	8/14/2024	8:22	F	BDL	22	TH	76	114	
W13-W14	8/14/2024	8:57	F	BDL	22	TH	78	111	
W14-W14A	8/14/2024	9:25	F	BDL	22	TH	80	23	
W13-W14A	8/14/2024	9:30	F	BDL	22	TH	81	14	
W15-W16	8/14/2024	9:50	F	BDL	22	TH	85	132	DS 36 at 16' E of W EOS
W16-B21	8/14/2024	10:48	F	BDL	22	TH	86	23	
W15-B21	8/14/2024	10:52	F	BDL	22	TH	86	11	
W15-B20	8/14/2024	10:54	F	BDL	22	TH	86	12	
W14A-B20	8/14/2024	10:58	F	BDL	22	TH	86	23	

SEAMING LOG FOR SECONDARY GEOMEMBRANE

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
S2-S3	6/12/2024	9:30	F	BDL	69	MJ	80	138	
S6-S7	6/12/2024	11:45	F	BDL	69	MJ	90	94	
S6-S7A	6/12/2024	15:40	F	BDL	69	MJ	90	39	
S7-S7A	6/12/2024	11:22	F	BDL	69	MJ	90	23	SDS-2 at E EOS
S8-S9	6/12/2024	13:45	F	BDL	69	MJ	94	130	
Existing-S1	6/12/2024	9:08	F	BDL	2	IB	75	133	SDS 1 at 15' S of N EOS
S3-S4	6/12/2024	10:20	F	BDL	2	IB	80	137	
S5-S6	6/12/2024	10:50	F	BDL	2	IB	90	132	
S7A-8	6/12/2024	13:30	F	BDL	2	IB	94	40	
S7-8	6/12/2024	13:40	F	BDL	2	IB	94	90	
S9-S10	6/13/2024	7:54	F	BDL	2	IB	80	122	
S11-S11A	6/13/2024	8:30	F	BDL	2	IB	80	23	
S11A-S12	6/13/2024	8:41	F	BDL	2	IB	83	59	
S11-S12	6/13/2024	8:50	F	BDL	2	IB	83	64	
S13-14	6/13/2024	9:38	F	BDL	2	IB	84	119	
S14-15	6/13/2024	10:00	F	BDL	2	IB	85	116	SDS 4 at 12' N of S EOS
S17-18	6/13/2024	14:20	F	BDL	2	IB	102	114	
S18-19	6/14/2024	10:00	F	BDL	2	IB	88	114	
S20-21	6/14/2024	10:20	F	BDL	2	IB	90	55	
W1-W2	6/14/2024	11:09	F	BDL	2	IB	94	85	
W3-W4	6/14/2024	11:25	F	BDL	2	IB	95	33	
S22-W4	6/14/2024	13:11	F	BDL	2	IB	98	15	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
S21-W4	6/14/2024	13:15	F	BDL	2	IB	98	15	
S21-W3	6/14/2024	13:19	F	BDL	2	IB	98	20	
S20-W3	6/14/2024	13:23	F	BDL	2	IB	98	12	
S20-W2	6/14/2024	13:27	F	BDL	2	IB	98	24	
W2-S19	6/14/2024	13:31	F	BDL	2	IB	98	8	
W1-S19	6/14/2024	13:35	F	BDL	2	IB	98	30	SDS 6 at SW EOS
W1-W5	6/15/2024	8:10	F	BDL	2	IB	78	103	
B1-W1	6/15/2024	8:59	F	BDL	2	IB	82	3	
S19-B1	6/15/2024	9:00	F	BDL	2	IB	82	1	
S18-B1	6/15/2024	9:01	F	BDL	2	IB	82	23	
S17-B1	6/15/2024	9:10	F	BDL	2	IB	82	22	
S16-B1	6/15/2024	9:15	F	BDL	2	IB	82	23	
S15-B1	6/15/2024	9:20	F	BDL	2	IB	82	22	
S14-B1	6/15/2024	9:25	F	BDL	2	IB	82	23	
S13-B1	6/15/2024	9:30	F	BDL	2	IB	82	16	
W6-B2	6/15/2024	9:40	F	BDL	2	IB	82	23	
W5-B1	6/15/2024	9:42	F	BDL	2	IB	82	23	
B3-B3A	6/17/2024	11:30	F	BDL	69	MJ	97	23	
B2A-B3A	6/17/2024	11:45	F	BDL	69	MJ	97	122	SDS 10 at 10' W of E EOS
B3-B4	6/17/2024	13:11	F	BDL	69	TH	100	95	SDS 11 at W EOS
S13-B1A	6/17/2024	7:30	F	BDL	2	IB	79	7	
S12-B1A	6/17/2024	7:31	F	BDL	2	IB	79	22	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
S11A-B1A	6/17/2024	7:34	F	BDL	2	IB	79	23	
S10-B1A	6/17/2024	7:38	F	BDL	2	IB	79	22	
S9-B1A	6/17/2024	7:42	F	BDL	2	IB	79	23	
S8-B1A	6/17/2024	7:46	F	BDL	2	IB	79	22	
S7A-B1A	6/17/2024	7:50	F	BDL	2	IB	79	23	
S6-B1A	6/17/2024	7:54	F	BDL	2	IB	79	22	SDS 7 W EOS
S5-B1A	6/17/2024	7:58	F	BDL	2	IB	79	23	
S4-B1A	6/17/2024	8:02	F	BDL	2	IB	79	22	
S3-B1A	6/17/2024	8:06	F	BDL	2	IB	79	23	
S2-B1A	6/17/2024	8:10	F	BDL	2	IB	79	22	
S1-B1A	6/17/2024	8:14	F	BDL	2	IB	79	23	
B4-W4	6/17/2024	14:01	F	BDL	21	IB	103	23	
B3-W3	6/17/2024	14:05	F	BDL	21	IB	103	23	
B3-B4	6/17/2024	14:20	F	BDL	21	IB	103	199	
B4-B3A	6/17/2024	14:50	F	BDL	21	IB	103	129	SDS 12 W EOS
W8-W9	6/18/2024	7:30	F	BDL	21	IB	73	106	
B4-B5	6/18/2024	9:07	F	BDL	21	IB	84	379	
W10-W11	6/18/2024	12:24	F	BDL	21	IB	96	109	SDS 14 at 11' W of E EOS
B6-B7	6/18/2024	12:56	F	BDL	21	IB	96	429	SDS 15 at 57' W of E EOS
W9-W10	6/18/2024	7:43	F	BDL	22	TH	74	108	
B5-B6	6/18/2024	9:43	F	BDL	22	TH	86	435	SDS 13 at 180' W of E EOS
W11-B7	6/18/2024	13:34	F	BDL	22	TH	96	6	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
W10-B6	6/18/2024	13:36	F	BDL	22	TH	96	23	
W9-B5	6/18/2024	13:36	F	BDL	22	TH	96	23	
B6-Existing	6/18/2024	12:42	F	BDL	22	TH	96	23	
B5-Existing	6/18/2024	12:45	F	BDL	22	TH	96	23	
B3A-Existing	6/18/2024	12:50	F	BDL	22	TH	96	20	
B2A-Existing	6/18/2024	12:52	F	BDL	22	TH	96	20	
B1A-Existing	6/18/2024	12:55	F	BDL	22	TH	96	23	
B7-B8	6/19/2024	8:35	F	BDL	21	IB	74	438	
B9-B10	6/19/2024	10:38	F	BDL	21	IB	80	448	SDS 17 at 30' W of E EOS
B10-B11	6/19/2024	12:40	F	BDL	21	IB	80	456	SDS 18 at 260' W of E EOS
B8-B9	6/19/2024	8:55	F	BDL	22	TH	70	445	SDS 16 at E EOS
B10-Existing	6/19/2024	14:10	F	BDL	22	TH	80	23	
B9-Existing	6/19/2024	14:13	F	BDL	22	TH	80	23	
B8-Existing	6/19/2024	14:16	F	BDL	22	TH	80	23	
B7-Existing	6/19/2024	14:19	F	BDL	22	TH	80	23	
W12-W13	6/19/2024	8:09	F	BDL	22	TH	70	114	
W14-W15	6/19/2024	10:43	F	BDL	22	TH	78	114	
W15B11	6/19/2024	12:39	F	BDL	22	TH	84	20	
W15-B10	6/19/2024	12:42	F	BDL	22	TH	84	3	
W14-B10	6/19/2024	12:43	F	BDL	22	TH	84	20	
W14-B9	6/19/2024	12:46	F	BDL	22	TH	84	3	
W13-B9	6/19/2024	12:47	F	BDL	22	TH	84	20	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
B13-B8	6/19/2024	12:50	F	BDL	22	TH	84	3	
W12-B8	6/19/2024	12:51	F	BDL	22	TH	84	20	SDS 20 at N EOS
W11-W12	6/21/2024	8:06	F	BDL	21	IB	70	107	
W13-W14	6/21/2024	9:07	F	BDL	21	IB	72	115	SDS 19 at 10' E of W EOS
W15-16	6/21/2024	10:54	F	BDL	21	IB	78	115	
B12-B13	6/24/2024	14:17	F	BDL	69	MJ	96	223	W 1/2 ; DS C.O. RESET
W17-W18	6/24/2024	7:17	F	BDL	21	IB	73	103	
B11-B12	6/24/2024	13:26	F	BDL	21	IB	94	456	SDS 21 at 94' E of W EOS
B11-Existing	6/24/2024	14:30	F	BDL	21	IB	97	7	
B12-Existing	6/24/2024	14:31	F	BDL	21	IB	97	23	
B13-Existing	6/24/2024	14:36	F	BDL	21	IB	97	17	
W16-W17	6/24/2024	7:16	F	BDL	22	TH	73	107	
B12-B13	6/24/2024	14:04	F	BDL	22	TH	96	252	SDS 22 at 250' W of E
B13-B14	6/25/2024	10:39	F	BDL	69	MJ	90	242	W 1/2 ; SDS 23 at W EOS
B14-B15	6/25/2024	12:55	F	BDL	69	IB	99	502	SDS 24 at 30' E of W EOS
W21-W22	6/25/2024	8:18	F	BDL	69	IB	87	88	
W19-W20	6/25/2024	7:50	F	BDL	69	IB	85	96	
W21-B17	6/25/2024	14:04	F	BDL	69	IB	100	16	
W21-B16	6/25/2024	14:06	F	BDL	69	IB	100	7	
W20-B16	6/25/2024	14:08	F	BDL	69	IB	100	17	
W20-B15	6/25/2024	14:16	F	BDL	69	IB	100	5	
W19-B15	6/25/2024	14:12	F	BDL	69	IB	100	17	SDS 28 at S EOS

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
W19-B14	6/25/2024	14:14	F	BDL	69	IB	100	3	
W18-B14	6/25/2024	14:16	F	BDL	69	IB	100	20	
W21-W22	6/25/2024	8:18	F	BDL	21	IB	84	88	
W17-B13	6/25/2024	7:20	F	BDL	22	TH	75	19	
W17-B12	6/25/2024	7:25	F	BDL	22	TH	75	5	
W16-B12	6/25/2024	7:27	F	BDL	22	TH	75	26	
W23-W24	6/25/2024	8:35	F	BDL	22	TH	84	72	
W22-W23	6/25/2024	8:19	F	BDL	22	TH	83	86	
B13-B14	6/25/2024	10:28	F	BDL	22	TH	90	242	
W20-21	6/25/2024	8:00	F	BDL	22	TH	86	97	
W18-W19	6/25/2024	7:45	F	BDL	22	TH	84	100	SDS 29 at 40' W of E EOS
B15-B16	6/26/2024	8:31	F	BDL	69	IB	78	512	
B17-B18	6/26/2024	12:45	F	BDL	69	IB	98	275	SDS 26 at 116' E of W EOS
B16-B17	6/26/2024	9:12	F	BDL	22	TH	82	512	SDS 25 at 250' W of E EOS
B18-B19	6/26/2024	12:49	F	BDL	22	TH	99	280	SDS 27 at 180' W of E EOS
W24-B19	6/26/2024	14:00	F	BDL	22	TH	100	8	
W23-B19	6/26/2024	14:02	F	BDL	22	TH	100	15	
W23-B18	6/26/2024	14:04	F	BDL	22	TH	100	8	
W22-B18	6/26/2024	14:06	F	BDL	22	TH	100	15	
W22-B17	6/26/2024	14:08	F	BDL	22	TH	100	8	
B20-B21	7/2/2024	7:46	F	BDL	69	IB	75	114	
B21-B22	7/2/2024	8:07	F	BDL	69	IB	75	114	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
B24-B24A	7/2/2024	9:20	F	BDL	69	IB	75	23	
B23-B24A	7/2/2024	9:33	F	BDL	69	IB	80	23	
B23-B24	7/2/2024	9:38	F	BDL	69	IB	80	92	
B25-B26	7/2/2024	9:55	F	BDL	69	IB	5	113	SDS 30 at S EOS
B27-B28	7/2/2024	10:31	F	BDL	69	IB	90	116	
B29-Existing	7/2/2024	13:05	F	BDL	69	IB	98	23	
B28-Existing	7/2/2024	13:08	F	BDL	69	IB	98	23	
B27-Existing	7/2/2024	13:11	F	BDL	69	IB	98	23	
B26-Existing	7/2/2024	13:14	F	BDL	69	IB	98	23	
B25-Existing	7/2/2024	13:17	F	BDL	69	IB	98	23	
B24-Existing	7/2/2024	13:20	F	BDL	69	IB	98	23	
B23-Existing	7/2/2024	13:23	F	BDL	69	IB	98	23	
B22-Existing	7/2/2024	13:26	F	BDL	69	IB	98	23	
B21-Existing	7/2/2024	13:29	F	BDL	69	IB	98	23	
B17-B20	7/2/2024	7:51	F	BDL	22	TH	75	23	
B16-B20	7/2/2024	7:53	F	BDL	22	TH	75	22	
B15-B20	7/2/2024	7:55	F	BDL	22	TH	75	23	
B14-B20	7/2/2024	7:57	F	BDL	22	TH	75	22	
B13-B20	7/2/2024	7:59	F	BDL	22	TH	75	8	
B22-B23	7/2/2024	9:15	F	BDL	22	TH	75	114	
B24A-B25	7/2/2024	9:34	F	BDL	22	TH	82	23	
B24-B25	7/2/2024	9:38	F	BDL	22	TH	82	93	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
B26-B27	7/2/2024	10:18	F	BDL	22	TH	88	113	
B29-B29A	7/2/2024	10:45	F	BDL	22	TH	90	23	
B28-B29A	7/2/2024	10:54	F	BDL	22	TH	91	49	
B28-B29	7/2/2024	11:00	F	BDL	22	TH	91	64	SDS 31 at N EOS
B29A-B30	7/3/2024	7:50	F	BDL	69	IB	75	50	
B29-B30	7/3/2024	7:56	F	BDL	69	IB	75	63	
B31-B32	7/3/2024	8:11	F	BDL	69	IB	80	115	SDS 32 at 30' S of N EOS
B33-B34	7/3/2024	9:40	F	BDL	69	IB	82	113	
B35-B36	7/3/2024	10:05	F	BDL	69	IB	85	115	
B37-B38	7/3/2024	10:54	F	BDL	60	IB	85	114	
B38-Existing	7/3/2024	12:47	F	BDL	69	IB	94	23	
B37-Existing	7/3/2024	12:50	F	BDL	69	IB	94	23	
B36-Existing	7/3/2024	12:53	F	BDL	69	IB	94	23	SDS 34 at E EOS
B35-Existing	7/3/2024	12:56	F	BDL	69	IB	95	23	
B34-Existing	7/3/2024	12:59	F	BDL	69	IB	95	23	
B33-Existing	7/3/2024	13:02	F	BDL	69	IB	95	23	
B32-Existing	7/3/2024	13:05	F	BDL	69	IB	95	23	
B31-Existing	7/3/2024	13:08	F	BDL	69	IB	95	23	
B30-Existing	7/3/2024	13:11	F	BDL	69	IB	95	23	
B30-B31	7/3/2024	8:00	F	BDL	22	TH	78	115	
B32-B33	7/3/2024	8:13	F	BDL	22	TH	80	115	
B34-B35	7/3/2024	9:48	F	BDL	22	TH	85	113	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
B36-B37	7/3/2024	10:12	F	BDL	22	TH	90	114	SDS 33 at N EOS
B38-B39	7/10/2024	7:38	F	BDL	69	IB	74	111	SDS 35 at 25' S of N EOS (moved seam capped)
B40-B41	7/10/2024	7:59	F	BDL	69	IB	75	114	SDS 35 at 60' S of N EOS
B42-B43	7/10/2024	9:10	F	BDL	69	IB	80	115	
B44-B45	7/10/2024	9:32	F	BDL	69	IB	84	113	
B46-B47	7/10/2024	11:00	F	BDL	69	IB	86	113	
B47-Existing	7/10/2024	13:10	F	BDL	69	IB	90	23	
B46-Existing	7/10/2024	13:12	F	BDL	69	IB	91	22	
B45-Existing	7/10/2024	13:15	F	BDL	69	IB	92	23	
B44-Existing	7/10/2024	13:17	F	BDL	69	IB	93	22	
B43-Existing	7/10/2024	13:20	F	BDL	69	IB	93	23	37 at 12' E of W EOS (cap)
B42-Existing	7/10/2024	13:22	F	BDL	69	IB	93	22	
B41-Existing	7/10/2024	13:25	F	BDL	69	IB	93	23	
B40-Existing	7/10/2024	13:27	F	BDL	69	IB	93	22	
B39-Existing	7/10/2024	13:30	F	BDL	69	IB	93	23	
B39-B40	7/10/2024	7:48	F	BDL	22	TH	74	115	
B41-B42	7/10/2024	8:57	F	BDL	22	TH	78	113	
B43-B44	7/10/2024	9:21	F	BDL	22	TH	82	113	
B45-B46	7/10/2024	10:50	F	BDL	22	TH	86	113	SDS 36 at 65' S of N EOS
B47-B48	7/10/2024	12:30	F	BDL	22	TH	89	112	
RP1-RP2	7/15/2024	8:16	F	BDL	69	IB	76	5	
RP2-RP3	7/15/2024	8:13	F	BDL	69	IB	76	5	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
RP3-RP4	7/15/2024	8:10	F	BDL	69	IB	75	5	
RP1-Existing	7/15/2024	8:25	F	BDL	69	IB	77	31	
RP2-Existing	7/15/2024	8:30	F	BDL	69	IB	79	62	
RP3-Existing	7/15/2024	8:35	F	BDL	69	IB	81	63	SDS 37 at E EOS
RP4-Existing	7/15/2024	8:40	F	BDL	69	IB	83	63	
B38-RP4	7/15/2024	9:00	F	BDL	22	TH	85	18	
B39-RP4	7/15/2024	8:55	F	BDL	22	TH	84	22	
B40-RP4	7/15/2024	8:50	F	BDL	22	TH	83	23	
B41-RP3	7/15/2024	8:45	F	BDL	22	TH	82	22	
B42-RP3	7/15/2024	8:40	F	BDL	22	TH	81	23	
B43-RP3	7/15/2024	8:35	F	BDL	22	TH	80	18	SDS 38 at W EOS
B43-RP2	7/15/2024	8:32	F	BDL	22	TH	80	5	
B44-RP2	7/15/2024	8:30	F	BDL	22	TH	79	23	
B45-RP2	7/15/2024	8:25	F	BDL	22	TH	79	22	
B46-RP2	7/15/2024	8:23	F	BDL	22	TH	78	13	
B46-RP1	7/15/2024	8:20	F	BDL	22	TH	78	9	
B47-RP1	7/15/2024	8:15	F	BDL	22	TH	77	18	
B48-B49	7/17/2024	8:34	F	BDL	69	IB	80	114	
B50-B51	7/17/2024	8:54	F	BDL	69	IB	81	113	
E1-Existing	7/17/2024	13:30	F	BDL	69	IB	96	165	SDS 39 at 70' E of W EOS
E4-E5	7/17/2024	14:52	F	BDL	69	IB	98	178	SDS 43 at 7' E of W EOS
B53-Existing	7/17/2024	14:24	F	BDL	69	IB	97	23	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
B52-Existing	7/17/2024	14:27	F	BDL	69	IB	97	22	
B51-Existing	7/17/2024	14:30	F	BDL	69	IB	97	23	
B50-Existing	7/17/2024	14:33	F	BDL	69	IB	97	22	
B49-Existing	7/17/2024	14:37	F	BDL	69	IB	97	23	
B48-Existing	7/17/2024	14:40	F	BDL	69	IB	97	22	
B49-B50	7/17/2024	8:47	F	BDL	22	TH	80	112	
B51-B52	7/17/2024	9:00	F	BDL	22	TH	81	112	
B52-B53	7/17/2024	11:00	F	BDL	22	TH	83	112	
E1-E2	7/17/2024	13:18	F	BDL	22	TH	96	174	
E2-E3	7/17/2024	13:56	F	BDL	22	TH	97	174	SDS 40 at 131' E of W EOS
E3-E4	7/17/2024	14:20	F	BDL	22	TH	97	177	
E1-B53	7/17/2024	15:10	F	BDL	22	TH	99	23	
E2-B53	7/17/2024	15:13	F	BDL	22	TH	99	22	
E3-B53	7/17/2024	15:16	F	BDL	22	TH	99	23	
E4-B53	7/17/2024	15:19	F	BDL	22	TH	99	22	
E5-B53	7/17/2024	15:22	F	BDL	22	TH	99	23	
B2-B2A	6/17/2024	8:30	F	BDL	2	IB	81	22	
B1-B1A	6/17/2024	8:34	F	BDL	2	IB	81	23	
W7-W8	6/17/2024	9:12	F	BDL	2	IB	84	104	
B2-B3	6/17/2024	11:01	F	BDL	2	IB	94	141	SDS9
B2A-B3A	6/17/2024	11:30	F	BDL	2	IB	96	142	
B3A-B2A	6/17/2024	11:59	F	BDL	2	IB	98	8	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY GEOMEMBRANE SEAMING LOG**

Seam Description	Date Seamed	Seaming Start Time	Weld Type	QA Monitor	Equipment No.	Operator	Ambient Temp., °F	Seam Length	Destructive Seam Test
S1-S2	6/12/2024	9:24	F	BDL	2	TH	75	139	
S4-S5	6/12/2024	10:29	F	BDL	2	TH	85	137	
S10-S11A	6/13/2024	8:32	F	BDL	2	TH	80	58	
S10-S11	6/13/2024	8:38	F	BDL	2	TH	80	66	SDS3
S12-S13	6/13/2024	9:11	F	BDL	2	TH	84	124	
S15-S16	6/13/2024	10:45	F	BDL	2	TH	94	116	
S16-S17	6/13/2024	14:00	F	BDL	2	TH	100	116	
S19-S20	6/14/2024	10:10	F	BDL	2	TH	88	86	
S21-S22	6/14/2024	10:31	F	BDL	2	TH	90	26	
W2-W3	6/14/2024	11:17	F	BDL	2	TH	94	58	
W5-W6	6/15/2024	8:22	F	BDL	2	TH	78	104	
B1-B2	6/15/2024	9:25	F	BDL	2	TH	84	138	
B1A-B2A	6/17/2024	7:31	F	BDL	2	TH	80	274	SDS8
W6-W7	6/17/2024	8:55	F	BDL	2	TH	85	104	

**NON-DESTRUCTIVE SEAMING TESTING
LOG FOR PRIMARY GEOMEMBRANE**

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
PH1 - PH2	7/9/2024	7/9/2024	BDL	N EOS > 109' S of N EOS	39	37	2	7:33	7:38	5	Y	P		
PH1 - PH2	7/9/2024	7/9/2024	BDL	109' S of N EOS > S EOS	39	38	1	7:35	7:40	5	Y	P		
PH2 - PH3	7/9/2024	7/9/2024	BDL	E LOS	40	39	1	7:42	7:47	5	Y	P		
PH3 - PH4	7/9/2024	7/9/2024	BDL	E LOS	40	39	1	7:53	7:58	5	Y	P		
PH5 - PH6	7/9/2024	7/9/2024	BDL	E LOS	40	40	0	8:18	8:23	5	Y	P		
PH4-PH5>PH5A	7/9/2024	7/9/2024	BDL	E LOS	40	39	1	8:25	8:30	5	Y	P		
PH5>PH5A-PH6	7/9/2024	7/9/2024	BDL	E LOS	39	39	0	8:33	8:38	5	Y	P		
PH6 - PH7	7/9/2024	7/9/2024	BDL	E LOS	40	40	0	8:45	8:50	5	Y	P		
PH7 - PH8	7/9/2024	7/9/2024	BDL	E LOS	39	39	0	9:24	9:29	5	Y	P		
PH8 - PH9	7/9/2024	7/9/2024	BDL	E LOS	40	40	0	9:27	9:32	5	Y	P		
PH9 - PH10	7/9/2024	7/9/2024	BDL	E LOS	39	39	0	10:15	10:20	5	Y	P		
PH10 - PH11	7/9/2024	7/9/2024	BDL	E LOS	39	39	0	10:27	10:32	5	Y	P		
PH11 - PH12	7/9/2024	7/9/2024	BDL	E LOS	40	40	0	10:59	11:05	5	Y	P		
PH12 - PH13	7/9/2024	7/9/2024	BDL	E LOS	40	39	1	11:15	11:20	5	Y	P		
PH13 - PH14	7/9/2024	7/9/2024	BDL	E LOS	40	40	0	11:16	11:21	5	Y	P		
PH14 - Existing	7/9/2024	7/9/2024	BDL	E LOS	40	39	1	13:34	13:39	5	Y	P		
PH15 - Existing	7/9/2024	7/9/2024	BDL	E LOS	38	37	1	13:30	13:35	5	Y	P		
PH14 - Existing	7/9/2024	7/9/2024	BDL	E EOS > 5' E of W EOS	39	39	0	13:31	13:36	5	Y	P		
PH14>PH13-Existing	7/9/2024	7/9/2024	BDL	5' E of W > E LOS	39	38	1	13:40	13:45	5	Y	P		
PH12>PH19-Existing	7/9/2024	7/9/2024	BDL	E LOS > 5' W of E EOS	40	38	2	13:37	13:42	5	Y	P		
PH9 - Existing	7/9/2024	7/9/2024	BDL	5' W of E > W EOS	38	38	0	13:52	13:57	5	Y	P		
PH8 - Existing	7/9/2024	7/9/2024	BDL	E EOS > 5' W of E EOS	39	39	0	13:59	14:04	5	Y	P		
PH8 - Existing	7/9/2024	7/9/2024	BDL	5' W of E EOS > W EOS	39	38	1	13:59	14:04	5	Y	P		
PH7 - Existing	7/10/2024	7/10/2024	BDL	8' W of E EOS > W EOS	37	37	0	6:29	6:34	5	Y	P		
PH6 - Existing	7/10/2024	7/10/2024	BDL	E EOS > 8' W of E EOS	40	40	0	6:30	6:35	5	Y	P		
PH6>PH5-Existing	7/10/2024	7/10/2024	BDL	8' W of E EOS> PH5 8' W of E EOS	38	37	1	6:35	6:40	5	Y	P		

¹TI = Tie-in; LOS = Length of Seam; BOS = Beginning of Seam; FSL = Full Seam Length; N = North; S = South; W = West; E = East; P = Panel; R = Repair

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
PH5>PH4-Existing	7/10/2024	7/10/2024	BDL	PH5 8' W of E EOS > PH4 W EOS	40	38	2	6:37	6:42	5	Y	P		
PH2 - Existing	7/10/2024	7/10/2024	BDL	E LOS	39	39	0	6:45	6:50	5	Y	P		
PH1 - Existing	7/10/2024	7/10/2024	BDL	E LOS	40	38	2	6:50	6:55	5	Y	P		
PH15 - PH16	7/16/2024	7/16/2024	BDL	E LOS	39	39	0	11:03	11:08	5	Y	P		
PH16 - PH17	7/16/2024	7/16/2024	BDL	E LOS	40	40	0	12:11	12:16	5	Y	P		
PH17 - PH18	7/16/2024	7/16/2024	BDL	E LOS	39	39	0	12:34	12:39	5	Y	P		
PH18 - PH19	7/16/2024	7/16/2024	BDL	E LOS	40	40	0	12:49	12:54	5	Y	P		
PH19 - PH20	7/16/2024	7/16/2024	BDL	E LOS	39	39	0	12:55	13:00	5	Y	P		
PH20 - PH21	7/16/2024	7/16/2024	BDL	E LOS	40	40	0	13:08	13:13	5	Y	P		
PH21 - PH22	7/16/2024	7/16/2024	BDL	E LOS	40	40	0	13:14	13:19	5	Y	P		
PH16-Existing	7/16/2024	7/16/2024	BDL	E LOS	38	37	1	14:03	14:08	5	Y	P		
PH17-Existing	7/16/2024	7/16/2024	BDL	E LOS	38	38	0	14:07	14:12	5	Y	P		
PH18 - Existing	7/16/2024	7/16/2024	BDL	W EOS> 4' E of W EOS	39	39	0	14:09	14:14	5	Y	P		
PH18 - Existing	7/16/2024	7/16/2024	BDL	4' E of W EOS > E EOS	40	40	0	14:14	14:19	5	Y	P		
PH19 - Existing	7/16/2024	7/16/2024	BDL	E LOS	39	39	0	14:19	14:24	5	Y	P		
PH22 - Existing	7/16/2024	7/16/2024	BDL	15' W of E EOS > E EOS	40	40	0	14:24	14:29	5	Y	P		
PH22 - PH23	7/19/2024	7/19/2024	BDL	S EOS > 24' S of N EOS	38	37	1	10:32	10:37	5	Y	P		
PH23 - PH24	7/19/2024	7/19/2024	BDL	E LOS	38	38	0	10:18	10:23	5	Y	P		
PH24 - PH25	7/19/2024	7/19/2024	BDL	E LOS	38	38	0	10:42	10:47	5	Y	P		
PH25 - PH26	7/19/2024	7/19/2024	BDL	E LOS	38	38	0	10:50	10:55	5	Y	P		
Ph26 - PH27	7/19/2024	7/19/2024	BDL	E LOS	38	38	0	10:58	11:03	5	Y	P		
PH27 - PH28	7/19/2024	7/19/2024	BDL	E LOS	38	38	0	11:11	11:17	5	Y	P		
PH28 - PH29	7/19/2024	7/19/2024	BDL	E LOS	38	38	0	11:18	11:23	5	Y	P		
PH29 - PH30A	7/19/2024	7/19/2024	BDL	E LOS	38	38	0	11:40	11:45	5	Y	P		
PH30-PH30A	7/19/2024	7/19/2024	BDL	E LOS	38	38	0	11:30	11:35	5	Y	P		
PH29-PH30	7/19/2024	7/19/2024	BDL	E LOS	38	38	0	12:52	12:57	5	Y	P		

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration , s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
PH30 - Existing	7/19/2024	7/19/2024	BDL	E EOS > 7' W of E EOS	40	39	1	13:54	13:59	5	Y	P		
PH30 - Existing	7/19/2024	7/19/2024	BDL	7' W of E EOS > E EOS	45	42	3	14:00	14:05	5	Y	P		
PH29 - Existing	7/19/2024	7/19/2024	BDL	E EOS > 8' W of E EOS	40	40	0	14:08	14:13	5	Y	P		
PH29 - Existing	7/19/2024	7/19/2024	BDL	8' W of E EOS > W EOS	39	37	2	14:13	14:18	5	Y	P		
PH28 - Existing	7/19/2024	7/20/2024	BDL	E LOS	39	38	1	6:32	6:37	5	Y	P		
PH27 - Existing	7/19/2024	7/20/2024	BDL	E LOS	37	37	0	6:39	6:44	5	Y	P		
PH26 - Existing	7/19/2024	7/20/2024	BDL	E EOS > 10' W of E EOS	41	41	0	6:47	6:52	5	Y	P		
PH26>PH23-Existing	7/19/2024	7/20/2024	BDL	10' W of E EOS ; PH26 to W EOS PH23	35	35	0	6:50	6:55	5	Y	P		
PH30 - PH31	7/22/2024	7/22/2024	BDL	E LOS	38	38	0	8:24	8:29	5	Y	P		
PH30A - PH31	7/22/2024	7/22/2024	BDL	E LOS	38	38	0	8:28	8:33	5	Y	P		
PH31 - PH32	7/22/2024	7/22/2024	BDL	E LOS	38	38	0	8:36	8:41	5	Y	P		
PH32 - PH33	7/22/2024	7/22/2024	BDL	E LOS	38	38	0	8:50	8:55	5	Y	P		
PH33 - Existing	7/22/2024	7/22/2024	BDL	E LOS	38	37	1	9:48	9:53	5	Y	P		
PH32 - Existing	7/22/2024	7/22/2024	BDL	E LOS	38	38	0	9:55	10:00	5	Y	P		
PH31 - Existing	7/22/2024	7/22/2024	BDL	E LOS	39	39	0	9:59	10:04	5	Y	P		
E1 - Existing	7/24/2024	7/24/2024	BDL	42' E of W EOS > 90' E of W EOS	38	37	1	7:49	7:54	5	Y	P		
E1 - Existing	7/24/2024	7/24/2024	BDL	90' E of W EOS > 154' E of W EOS	38	36	2	7:26	7:31	5	Y	P		
E1 - Existing	7/24/2024	7/24/2024	BDL	154' E of W EOS > 171' E of W EOS	37	36	1	7:33	7:38	5	Y	P		
E1 - E2	7/24/2024	7/24/2024	BDL	E EOS > 89' W of EOS	38	38	0	7:50	7:55	5	Y	P		
E1 - E2	7/24/2024	7/24/2024	BDL	81' W of E EOS > W EOS	37	37	0	7:44	7:49	5	Y	P		
E2 - E3	7/24/2024	7/24/2024	BDL	E LOS	38	38	0	8:02	8:07	5	Y	P		
E3 - E4	7/24/2024	7/24/2024	BDL	E LOS	38	38	0	8:10	8:10	5	Y	P		
E4 - E5	7/24/2024	7/24/2024	BDL	E LOS	39	37	2	8:36	8:41	5	Y	P		
PH33 - E5	7/24/2024	7/24/2024	BDL	E LOS	37	37	0	8:16	8:21	5	Y	P		
PH33 - E4	7/24/2024	7/24/2024	BDL	E LOS	38	37	1	8:25	8:30	5	Y	P		
PH33-E3	7/24/2024	7/24/2024	BDL	CAPPED	-	-	-	-	-	-	-	-		

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
PH33-E2	7/24/2024	7/24/2024	BDL	E LOS	38	38	0	8:36	8:41	5	Y	P		
PH33-E1	7/24/2024	7/24/2024	BDL	CAPPED	-	-	-	-	-	-	-	-		
PH1-B1	8/2/2024	8/2/2024	BDL	E LOS	38	38	0	10:42	10:47	5	Y	P		
B1-Existing	8/2/2024	8/2/2024	BDL	N EOS > 45' S of N EOS	38	37	1	10:44	10:49	5	Y	P		
B1-Existing	8/2/2024	8/2/2024	BDL	62' S of N EOS > 256' S of N EOS	38	37	1	12:34	12:39	5	Y	P		
B1-Existing	8/2/2024	8/2/2024	BDL	256' S of N EOS > S EOS	38	37	1	12:37	12:43	5	Y	P		
B1-B2	8/2/2024	8/2/2024	BDL	E LOS	39	39	0	11:09	11:14	5	Y	P		
B2-B2A	8/2/2024	8/2/2024	BDL	E LOS	38	38	0	10:02	10:07	5	Y	P		
B1-B2A	8/2/2024	8/2/2024	BDL	E LOS	39	39	0	11:05	11:10	5	Y	P		
B2-B3	8/2/2024	8/2/2024	BDL	E LOS	38	36	2	14:18	14:23	5	Y	P		
B2A-B23	8/2/2024	8/2/2024	BDL	E LOS	38	38	0	14:08	14:13	5	Y	P		
B3-B4	8/2/2024	8/3/2024	BDL	N EOS > 147' N of S EOS	38	38	0	6:41	6:46	5	Y	P		
B3-B4	8/2/2024	8/3/2024	BDL	147' N of S EOS > S EOS	38	37	1	6:39	6:44	5	Y	P		
B4-B5	8/3/2024	8/3/2024	BDL	N EOS > 142' S of N EOS	39	38	1	7:35	7:40	5	Y	P		
B4-B5	8/3/2024	8/3/2024	BDL	142' S of N EOS > S EOS	39	38	1	8:12	8:17	5	Y	P		
B5-B6	8/3/2024	8/3/2024	BDL	E LOS	39	38	1	8:46	8:51	5	Y	P		
B6-B7	8/5/2024	8/5/2024	BDL	E LOS	39	38	1	7:57	8:02	5	Y	P		
B7-B8	8/5/2024	8/5/2024	BDL	E LOS	40	39	1	8:25	8:30	5	Y	P		
B8-B9	8/5/2024	8/5/2024	BDL	E LOS	40	38	2	9:34	9:39	5	Y	P		
B9-B10	8/5/2024	8/5/2024	BDL	E LOS	38	39	-1	9:35	9:40	5	Y	P		
B10-B11	8/5/2024	8/5/2024	BDL	E LOS	38	38	0	10:10	10:15	5	Y	P		
B11-B12	8/5/2024	8/5/2024	BDL	E LOS	38	38	0	11:00	11:05	5	Y	P		
B12-B13	8/5/2024	8/5/2024	BDL	E LOS	38	37	1	13:50	13:55	5	Y	P		
S1-Existing	8/6/2024	8/6/2024	BDL	39' S of N EOS > S EOS	45	44	1	8:00	8:05	5	Y	P		
S1-S2	8/6/2024	8/6/2024	BDL	N EOS > 127' N of S EOS	38	38	0	8:00	8:05	5	Y	P		
S1-S2	8/6/2024	8/6/2024	BDL	127' N of S EOS > S EOS	38	38	0	8:03	8:05	2	Y	P		

¹TI = Tie-in; LOS = Length of Seam; BOS = Beginning of Seam; FSL = Full Seam Length; N = North; S = South; W = West; E = East; P = Panel; R = Repair

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
S2-S3	8/6/2024	8/6/2024	BDL	N EOS > 47' S of N EOS	38	37	1	8:26	8:31	5	Y	P		
S2-S3	8/6/2024	8/6/2024	BDL	47' S of N EOS > S EOS	38	38	0	8:28	8:33	5	Y	P		
S3-S4	8/6/2024	8/6/2024	BDL	E LOS	39	38	1	8:31	8:36	5	Y	P		
S4-S5	8/6/2024	8/6/2024	BDL	E LOS	38	37	1	9:00	9:05	5	Y	P		
S5-S6	8/6/2024	8/6/2024	BDL	E LOS	38	38	0	9:01	9:06	5	Y	P		
S6-S7	8/6/2024	8/6/2024	BDL	N EOS > 17' S of N EOS	38	38	0	9:25	9:30	5	Y	P		
S6-S7	8/6/2024	8/6/2024	BDL	17' S of N EOS > S EOS	38	38	0	9:28	9:33	5	Y	P		
S7-S8	8/6/2024	8/6/2024	BDL	E LOS	38	37	1	9:38	9:42	5	Y	P		
S8-S9	8/6/2024	8/6/2024	BDL	E LOS	38	38	0	9:54	9:59	5	Y	P		
S9-S10	8/6/2024	8/6/2024	BDL	E LOS	38	38	0	9:57	10:02	5	Y	P		
S10-S11	8/6/2024	8/6/2024	BDL	N EOS > 56' S of N EOS	38	37	1	10:20	10:25	5	Y	P		
S10-S11	8/6/2024	8/6/2024	BDL	56' S of N EOS > 93' S of N EOS	40	40	0	10:22	10:27	5	Y	P		
S10-S11	8/6/2024	8/6/2024	BDL	93' S of N EOS > S EOS	38	37	1	10:26	10:31	5	Y	P		
S11-S12	8/6/2024	8/6/2024	BDL	S EOS > 110' N of S EOS	38	37	1	10:31	10:36	5	Y	P		
S11-S12	8/6/2024	8/6/2024	BDL	110' N of S EOS > N EOS	38	38	0	10:30	10:35	5	Y	P		
S12-S13	8/6/2024	8/6/2024	BDL	N EOS > 13' S of N EOS	37	36	1	10:37	10:42	5	Y	P		
S12-S13	8/6/2024	8/6/2024	BDL	13' S of N EOS > S EOS	38	38	0	10:46	10:51	5	Y	P		
B13-S13	8/6/2024	8/6/2024	BDL	E LOS	38	37	1	12:29	12:34	5	Y	P		
B12-S12	8/6/2024	8/6/2024	BDL	E LOS	38	38	0	12:15	12:20	5	Y	P		
B11-B9 & S11-S9	8/6/2024	8/6/2024	BDL	E LOS	38	38	0	12:36	12:41	5	Y	P		
B8-S8	8/6/2024	8/6/2024	BDL	E LOS	38	38	0	12:41	12:46	5	Y	P		
B7-S7	8/6/2024	8/6/2024	BDL	W EOS > 13' E of W EOS	38	38	0	12:45	12:50	5	Y	P		
B7-S7	8/6/2024	8/6/2024	BDL	13' E of W EOS > E EOS	38	38	0	12:48	12:53	5	Y	P		
B6-S6	8/6/2024	8/6/2024	BDL	W EOS > 8' E of W EOS	38	38	0	12:53	12:58	5	Y	P		
B6-S6	8/6/2024	8/6/2024	BDL	8' E of W EOS > E EOS	38	38	0	12:54	12:59	5	Y	P		
S5-B5	8/6/2024	8/6/2024	BDL	E LOS	38	38	0	12:59	13:04	5	Y	P		

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test							Vacuum Test		
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration , s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
S4-B4	8/6/2024	8/6/2024	BDL	E LOS	38	38	0	13:04	13:09	5	Y	P		
S3-B3	8/6/2024	8/6/2024	BDL	W EOS > 10' E of W EOS	38	38	0	13:08	13:13	5	Y	P		
S3-B3	8/6/2024	8/6/2024	BDL	10' E of W EOS > E EOS	38	37	1	13:13	13:18	5	Y	P		
S2-B2	8/6/2024	8/6/2024	BDL	W EOS > 15' E of W EOS	38	38	0	13:20	13:25	5	Y	P		
S2-B2	8/6/2024	8/6/2024	BDL	15' E of W EOS > E EOS	38	38	0	13:21	13:26	5	Y	P		
S1-B1	8/6/2024	8/6/2024	BDL	E LOS	38	37	1	13:25	13:30	5	Y	P		
B1-B1	8/9/2024	8/9/2024	BDL	Wrinkle; Rep 153 > R152	35	35	0	9:50	9:55	5	Y	P		
B1-B2A	8/9/2024	8/9/2024	BDL	Wrinkle; Rep 152> 151	35	34	1	9:50	9:55	5	Y	P		
B1-B2A	8/9/2024	8/9/2024	BDL	Wrinkle; Rep 151 > 150	38	37	1	9:52	9:57	5	Y	P		
B1-B1	8/9/2024	8/9/2024	BDL	Wrinke; Rep 155 > 156	38	37	1	10:02	10:07	5	Y	P		
B1-B1	8/9/2024	8/9/2024	BDL	Wrinkle; Rep 158> 159	38	38	0	10:00	10:05	5	Y	P		
B1-B1	8/9/2024	8/9/2024	BDL	Wrinkle; Rep 159> 160	38	38	0	10:20	10:25	5	Y	P		
B13-B14	8/10/2024	8/10/2024	BDL	E LOS	38	38	0	8:57	9:02	5	Y	P		
B14-B15	8/10/2024	8/10/2024	BDL	E LOS	38	37	1	9:08	9:13	5	Y	P		
B15-B15A	8/10/2024	8/10/2024	BDL	E LOS	38	37	1	8:50	8:55	5	Y	P		
B14-B15A	8/10/2024	8/10/2024	BDL	E LOS	38	38	0	9:10	9:15	5	Y	P		
B15A-B15B	8/10/2024	8/10/2024	BDL	E LOS	38	37	1	9:13	9:18	5	Y	P		
B15>B15B-B16	8/12/2024	8/12/2024	BDL	E LOS	38	37	1	8:17	8:22	5	Y	P		
B14-B15B	8/10/2024	8/10/2024	BDL	E LOS	39	38	1	9:19	9:24	5	Y	P		
B16-B17	8/12/2024	8/12/2024	BDL	E LOS	38	38	0	8:40	8:45	5	Y	P		
B17-B18	8/12/2024	8/12/2024	BDL	N EOS > 131' S of N EOS	38	38	0	8:58	9:03	5	Y	P		
B17-B18	8/12/2024	8/12/2024	BDL	131' S of N EOS > S EOS	38	38	0	9:19	9:24	5	Y	P		
B19-B19A	8/12/2024	8/12/2024	BDL	E LOS	38	38	0	8:55	9:00	5	Y	P		
B18-B19A	8/12/2024	8/12/2024	BDL	E LOS	38	38	0	9:38	9:43	5	Y	P		
B18-B19	8/12/2024	8/12/2024	BDL	E LOS	38	38	0	9:50	9:55	5	Y	P		
B20-B20A	8/12/2024	8/12/2024	BDL	E LOS	38	37	1	9:27	9:32	5	Y	P		

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
B19-B20	8/12/2024	8/12/2024	BDL	E LOS	40	40	0	10:15	10:20	5	Y	P		
B19A-B20>B20A	8/12/2024	8/12/2024	BDL	E LOS	40	39	1	10:11	10:16	5	Y	P		
B20>B20A-B21	8/12/2024	8/12/2024	BDL	E LOS	44	44	0	10:20	10:25	5	Y	P		
S13-S14	8/13/2024	8-13-214	BDL	E LOS	38	38	0	7:30	7:35	5	Y	P		
S14-S15	8-13-214	8-13-214	BDL	E LOS	38	38	0	7:39	7:44	5	Y	P		
S15-S16	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	7:55	8:00	5	Y	P		
S16-S17	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	8:02	8:06	5	Y	P		
S17-S18	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	8:15	8:20	5	Y	P		
S18-S19	8/13/2024	8/13/2024	BDL	N EOS > 46' S of N EOS	38	37	1	8:22	8:27	5	Y	P		
S18-S19	8/13/2024	8/13/2024	BDL	46' S of N EOS > S EOS	38	38	0	8:26	8:31	5	Y	P		
S19-S20	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	8:40	8:45	5	Y	P		
S20-S21	8/13/2024	8/13/2024	BDL	E LOS	45	45	0	9:10	9:15	5	Y	P		
S21-S22	8/13/2024	8/13/2024	BDL	E LOS	44	44	0	9:14	9:19	5	Y	P		
W1-W2	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	9:48	9:53	5	Y	P		
W2-W3	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	9:46	9:51	5	Y	P		
S22-W3	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	9:55	10:00	5	Y	P		
S21-W3	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	10:07	10:12	5	Y	P		
S21>S20-W2	8/13/2024	8/13/2024	BDL	E LOS	38	37	1	10:08	10:13	5	Y	P		
S19-W1	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	10:14	10:19	5	Y	P		
S18>S17-B18>B17	8/13/2024	8/13/2024	BDL	E LOS	38	37	1	10:25	10:30	5	Y	P		
S16-B16	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	10:29	10:34	5	Y	P		
S15-B15	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	10:33	10:38	5	Y	P		
S14-B14	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	10:38	10:43	5	Y	P		
B18-W5	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	12:38	12:43	5	Y	P		
B18-W4	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	13:34	12:39	5	Y	P		
W4-W5	8/13/2024	8/13/2024	BDL	E LOS	38	38	0	11:06	11:13	5	Y	P		

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration , s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
W4-W1	8/13/2024	8/13/2024	BDL	E EOS > 18' W of E EOS	37	37	0	13:35	13:40	5	Y	P		
W1-W4	8/13/2024	8/13/2024	BDL	18' W of E EOS > 16' E of W EOS	51	50	1	13:48	13:53	5	Y	P		
W4-W1	8/13/2024	8/13/2024	BDL	16' E of W EOS > W EOS	40	39	1	13:48	13:53	5	Y	P		
W5-W6	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	7:19	7:24	5	Y	P		
W6-W7	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	7:23	7:28	5	Y	P		
W7-W8	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	7:42	7:47	5	Y	P		
W8-W9	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	8:13	8:18	5	Y	P		
W9-W10	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	8:42	8:49	5	Y	P		
W10-W11	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	8:51	8:56	5	Y	P		
W11-W12	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	8:53	8:58	5	Y	P		
W12-W13	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	9:03	9:08	5	Y	P		
W13-W14	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	9:16	9:21	5	Y	P		
W14-W14A	8/14/2024	8/14/2024	BDL	E LOS	38	37	1	9:35	9:40	5	Y	P		
W13-W14A	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	9:36	9:41	5	Y	P		
W15-W16	8/14/2024	8/14/2024	BDL	W EOS > 16' E of W EOS	38	37	1	10:46	10:51	5	Y	P		
W15-W16	8/14/2024	8/14/2024	BDL	16' E of W EOS > 39' E of W EOS	38	37	1	12:04	12:09	5	Y	P		
W15-W16	8/14/2024	8/14/2024	BDL	39' E of W EOS > 51' E of W EOS	38	38	0	12:06	12:11	5	Y	P		
W15-W16	8/14/2024	8/14/2024	BDL	62' E of W EOS > 100' E of W EOS	38	38	0	12:10	12:15	5	Y	P		
W16-W15	8/14/2024	8/14/2024	BDL	115 > E EOS	38	37	1	12:12	12:17	5	Y	P		
W16-B21	8/14/2024	8/14/2024	BDL	E LOS	38	37	1	12:17	12:22	5	Y	P		
W14-W15	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	10:44	10:49	5	Y	P		
W14A-W15	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	10:41	10:46	5	Y	P		
W15>W14A-B20	8/14/2024	8/14/2024	BDL	E LOS	38	37	1	12:30	12:35	5	Y	P		
W13-B20	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	12:48	12:53	5	Y	P		
W12-B20	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	12:50	12:55	5	Y	P		
W10-B20>B19	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	12:59	13:04	5	Y	P		

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration , s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
W10-B19	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	13:01	13:06	5	Y	P		
W9-B19	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	13:02	13:07	5	Y	P		
W8-B19>B18 N1/2	8/14/2024	8/14/2024	BDL	E LOS	38	36	2	13:09	13:14	5	Y	P		
W6>W8-B18 (S1/2)	8/14/2024	8/14/2024	BDL	E LOS	38	37	1	13:10	13:15	5	Y	P		
B10	8/14/2024	8/14/2024	BDL	S of N & 8' W of E Edge TO 12' E of R2	44	42	2	6:59	7:04	5	Y	P		
W16-W17	8/14/2024	8/14/2024	BDL	31' W of E EOS > W EOS	38	36	2	8:01	8:06	5	Y	P		
W17-W18	8/14/2024	8/14/2024	BDL	CAPPED	-	-	-	-	-	-	-	-		
W18-W19	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	8:51	8:56	5	Y	P		
W19-W20	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	8:58	9:03	5	Y	P		
W20-W21	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	9:13	9:18	5	Y	P		
W21-W22	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	9:21	9:26	5	Y	P		
W21-B21	8/14/2024	8/14/2024	BDL	E LOS	38	36	2	9:42	9:47	5	Y	P		
W20-B21	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	9:48	9:53	5	Y	P		
W19-B21	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	9:48	9:53	5	Y	P		
W18-B21	8/14/2024	8/14/2024	BDL	E LOS	38	38	0	10:00	10:05	5	Y	P		
W17-B21	8/14/2024	8/14/2024	BDL	E LOS	38	37	1	10:01	10:06	5	Y	P		
W22-B21	8/14/2024	8/14/2024	BDL	8' N of S EOS > N EOS	37	36	1	9:53	9:58	5	Y	P		
W22-W23	8/29/2024	8/29/2024	BDL	E LOS	38	38	0	8:13	8:18	5	Y	P		
W23-W24>W24A>W24B	8/29/2024	8/29/2024	BDL	E LOS	38	38	0	8:39	8:44	5	Y	P		
W24A-W24B	8/29/2024	8/29/2024	BDL	E LOS	38	38	0	8:18	8:23	5	Y	P		
W24-W24A	8/29/2024	8/29/2024	BDL	E LOS	38	37	1	8:24	8:29	5	Y	P		

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**NON-DESTRUCTIVE SEAMING TESTING
LOG FOR SECONDARY GEOMEMBRANE**

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
EX-S1	6/12/2024	6/12/2024	BDL	N EOS > 13' S of N EOS	36	36	0	9:36	9:41	5 MIN	Y	P		
EX-S1	6/12/2024	6/12/2024	BDL	13' S of N > S EOS	38	38	0	9:39	9:44	5 MIN	Y	P		
S1-S2	6/12/2024	6/12/2024	BDL	S EOS > 86' N of S EOS	37	37	0	10:00	10:05	5 MIN	Y	P		
S1-S2	6/12/2024	6/12/2024	BDL	86' N of S EOS > 94' N of S	37	37	0	9:39	10:04	5 MIN	Y	P		
S1-S2	6/12/2024	6/12/2024	BDL	94' N of S EOS > N EOS	37	37	0	9:56	10:01	5 MIN	Y	P		
S2-S3	6/12/2024	6/12/2024	BDL	N EOS > S EOS	38	38	0	10:02	10:07	5 MIN	Y	P		
S3-S4	6/12/2024	6/12/2024	BDL	N EOS > S EOS	38	38	0	10:45	10:50	5 MIN	Y	P		
S4-S5	6/12/2024	6/12/2024	BDL	N EOS > S EOS	38	38	0	10:59	11:04	5 MIN	Y	P		
S4-S5	6/12/2024	6/12/2024	BDL	23' N of S EOS > S EOS	38	38	0	11:06	11:11	5 MIN	Y	P		
S5-S6	6/12/2024	6/12/2024	BDL	N EOS > 95' S of N EOS	39	39	0	11:23	11:28	5 MIN	Y	P		
S5-S6	6/12/2024	6/12/2024	BDL	95' S of N EOS > S EOS	37	37	0	11:22	11:27	5 MIN	Y	P		
S6-S7A	6/12/2024	6/12/2024	BDL	E LOS	38	38	0	11:53	11:58	5 MIN	Y	P		
S6-S7A	6/12/2024	6/12/2024	BDL	E LOS	38	38	0	11:53	11:58	5 MIN	Y	P		
S7-7A	6/12/2024	6/12/2024	BDL	E LOS	45	45	0	11:34	11:39	5 MIN	Y	P		
S7A-8	6/12/2024	6/12/2024	BDL	E LOS	38	38	0	13:57	14:03	5 MIN	Y	P		
S7-8	6/12/2024	6/12/2024	BDL	N EOS > 50' S of N	38	38	0	14:10	14:15	5 MIN	Y	P		
S7-8	6/12/2024	6/12/2024	BDL	50' S of N EOS > S EOS	38	38	0	14:22	14:27	5 MIN	Y	P		
S8-9	6/12/2024	6/12/2024	BDL	20' N of S > 34' N of S	37	37	0	14:31	14:36	5 MIN	Y	P		
S8-9	6/12/2024	6/12/2024	BDL	34' N of S > N EOS	38	38	0	14:25	14:30	5 MIN	Y	P		
S9-10	6/13/2024	6/13/2024	BDL	E LOS	37	37	0	8:20	8:25	5 MIN	Y	P		
S10-11	6/13/2024	6/13/2024	BDL	E LOS	38	38	0	9:01	9:06	5 MIN	Y	P		
S10-11A	6/13/2024	6/13/2024	BDL	E LOS	38	38	0	9:00	9:05	5 MIN	Y	P		
S11-11A	6/13/2024	6/13/2024	BDL	E LOS	40	40	0	8:44	8:49	5 MIN	Y	P		
S11A-12	6/13/2024	6/13/2024	BDL	E LOS	39	39	0	9:03	9:08	5 MIN	Y	P		
S11-S12	6/13/2024	6/13/2024	BDL	E LOS	39	39	0	9:12	9:17	5 MIN	Y	P		
S12-13	6/13/2024	6/13/2024	BDL	N EOS > 74' S of N EOS	38	38	0	9:42	9:47	5 MIN	Y	P		

¹TI = Tie-in; LOS = Length of Seam; BOS = Beginning of Seam; FSL = Full Seam Length; N = North; S = South; W = West; E = East; P = Panel; R = Repair

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration , s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
S12-13	6/13/2024	6/13/2024	BDL	74' S of N EOS > S EOS	37	37	0	9:41	9:46	5 MIN	Y	P		
S13-S14	6/13/2024	6/13/2024	BDL	N EOS > 57' S of N EOS	37	37	0	9:59	10:04	5 MIN	Y	P		
S13-S14	6/13/2024	6/13/2024	BDL	57' S of N EOS > S EOS	38	38	0	10:00	10:05	5 MIN	Y	P		
S14-15	6/13/2024	6/13/2024	BDL	E LOS	38	36	2	11:06	11:02	5 MIN	Y	P		
S15-16	6/13/2024	6/13/2024	BDL	E LOS	38	38	0	11:10	11:15	5 MIN	Y	P		
S16-17	6/13/2024	6/13/2024	BDL	E LOS	38	38	0	14:28	14:33	5 MIN	Y	P		
S17-18	6/13/2024	6/13/2024	BDL	E LOS	38	38	0	14:42	14:47	5 MIN	Y	P		
S18-19	6/14/2024	6/14/2024	BDL	E LOS	38	38	0	10:23	10:28	5 MIN	Y	P		
S19-20	6/14/2024	6/14/2024	BDL	E LOS	37	37	0	10:32	10:37	5 MIN	Y	P		
S20-21	6/14/2024	6/14/2024	BDL	E LOS	39	36	3	10:37	10:42	5 MIN	Y	P		
S21-22	6/14/2024	6/14/2024	BDL	E LOS	38	37	1	10:49	10:54	5 MIN	Y	P		
W1-W2	6/14/2024	6/14/2024	BDL	E LOS	38	38	0	11:27	11:32	5 MIN	Y	P		
W2-W3	6/14/2024	6/14/2024	BDL	E LOS	37	37	0	11:30	11:35	5 MIN	Y	P		
W3-W4	6/14/2024	6/14/2024	BDL	E LOS	38	38	0	11:35	11:40	5 MIN	Y	P		
S22-W4	6/14/2024	6/14/2024	BDL	E LOS	36	36	0	13:28	13:33	5 MIN	Y	P		
S21-W4	6/14/2024	6/14/2024	BDL	E LOS	39	37	2	13:31	13:36	5 MIN	Y	P		
S21-W3	6/14/2024	6/14/2024	BDL	E LOS	39	38	1	13:36	13:41	5 MIN	Y	P		
S20-W3	6/14/2024	6/14/2024	BDL	E LOS	38	38	0	13:43	13:47	5 MIN	Y	P		
S20-W2	6/14/2024	6/14/2024	BDL	E LOS	38	38	0	13:43	13:47	5 MIN	Y	P		
W1-W5	6/15/2024	6/15/2024	BDL	E LOS	38	37	1	8:26	8:31	5 MIN	Y	P		
W5-W6	6/15/2024	6/15/2024	BDL	E LOS	38	37	1	8:40	8:45	5 MIN	Y	P		
B1-W1	6/15/2024	6/15/2024	BDL	E LOS	38	38	0	9:25	9:30	5 MIN	Y	P		
B1-S14>S19	6/15/2024	6/15/2024	BDL	E LOS	38	38	0	9:25	9:30	5 MIN	Y	P		
B1-S13	6/15/2024	6/15/2024	BDL	E LOS	38	38	0	9:27	9:32	5 MIN	Y	P		
B1-B2	6/15/2024	6/15/2024	BDL	E LOS	38	38	0	9:54	9:59	5 MIN	Y	P		
B2>B1-W6>W5	6/15/2024	6/15/2024	BDL	E LOS	38	38	0	9:55	10:00	5 MIN	Y	P		

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					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
S13>S1-B1A	6/17/2024	6/17/2024	BDL	E LOS	39	39	0	8:21	8:26	5 MIN	Y	P		
B1A-B2A	6/17/2024	6/17/2024	BDL	E LOS	38	38	0	8:24	8:29	5 MIN	Y	P		
B2-B2A>B1-B1A	6/17/2024	6/17/2024	BDL	E LOS	38	38	0	8:44	8:49	5 MIN	Y	P		
W6-W7	6/17/2024	6/17/2024	BDL	E LOS	38	38	0	9:22	9:27	5 MIN	Y	P		
W7-W8	6/17/2024	6/17/2024	BDL	E LOS	38	38	0	9:34	9:39	5 MIN	Y	P		
B2-B3	6/17/2024	6/17/2024	BDL	E LOS	40	40	0	11:54	11:59	5 MIN	Y	P		
B2A-B3	6/17/2024	6/17/2024	BDL	W EOS > 92' E of W EOS	40	40	0	11:54	11:59	5 MIN	Y	P		
B2A-B3	6/17/2024	6/17/2024	BDL	92' E of W EOS > E EOS	40	40	0	11:54	11:59	5 MIN	Y	P		
B2A-B3A	6/17/2024	6/17/2024	BDL	W EOS > 8' E of W EOS CAPPED	-	-	-	-	-	-	-	-		
B3-B3A	6/17/2024	6/17/2024	BDL	E LOS	39	39	0:00	11:36	11:41	5 MIN	Y	P		
B2A-B3A	6/17/2024	6/17/2024	BDL	8' E of W EOS > E EOS	40	40	0:00	13:38	13:43	5 MIN	Y	P		
W4-B4	6/17/2024	6/17/2024	BDL	E LOS	40	40	0	14:38	14:43	5 MIN	Y	P		
W3-B3	6/17/2024	6/17/2024	BDL	E LOS	40	39	1	14:43	14:48	5 MIN	Y	P		
B3-B4	6/17/2024	6/17/2024	BDL	W EOS > 58' E of W EOS	40	40	0	14:28	14:33	5 MIN	Y	P		
B3-B4	6/17/2024	6/17/2024	BDL	58' E of W > 95' E of W EOS	38	38	0	14:26	14:31	5 MIN	Y	P		
B3-B4	6/17/2024	6/17/2024	BDL	95' E of W EOS > E EOS	40	40	0	15:01	15:06	5 MIN	Y	P		
W8-W9	6/18/2024	6/18/2024	BDL	E LOS	40	39	1	8:06	8:11	5 MIN	Y	P		
W9-10	6/18/2024	6/18/2024	BDL	E LOS	40	39	0	8:08	8:13	5 MIN	Y	P		
B4-B5	6/18/2024	6/18/2024	BDL	W EOS > 274' E of W EOS	39	39	0	10:18	10:23	5 MIN	Y	P		
B4-B5	6/18/2024	6/18/2024	BDL	274' E of W EOS > E EOS	39	39	0	10:24	10:29	5 MIN	Y	P		
B5-B6	6/18/2024	6/18/2024	BDL	E EOS > 183' W of E EOS	38	36	2	11:08	11:13	5 MIN	Y	P		
B5-B6	6/18/2024	6/18/2024	BDL	183' W of E > 273' W of E EOS	39	39	0	11:02	11:07	5 MIN	Y	P		
B5-B6	6/18/2024	6/18/2024	BDL	273' W of E EOS > W EOS	40	39	1	10:54	10:59	5 MIN	Y	P		
W10-W11	6/18/2024	6/18/2024	BDL	W EOS > 44' E of W EOS	38	37	1	12:40	12:45	5 MIN	Y	P		
W10-W11	6/18/2024	6/18/2024	BDL	88' E of W EOS > E EOS	39	36	3	12:53	12:58	5 MIN	Y	P		
W10-W11	6/18/2024	6/18/2024	BDL	44' TO 88 E of W EOS CAPPED	-	-	-	-	-	-	-	-		

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PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
B6-B7	6/18/2024	6/18/2024	BDL	W EOS > 23' E of W EOS	40	40	0	13:06	13:11	5 MIN	Y	P		
B6-B7	6/18/2024	6/18/2024	BDL	23' E of W EOS > 67' E of W	39	38	1	14:08	14:13	5 MIN	Y	P		
B6-B6	6/19/2024	6/18/2024	BDL	67' E of W EOS > 133' E of W EOS	40	38	2	14:04	14:09	5 MIN	Y	P		
B6-B7	6/19/2024	6/18/2024	BDL	123' E of W EOS > 326' E of W EOS	39	39	0	6:43	6:48	5 MIN	Y	P		
B6-B7	6/18/2024	6/18/2024	BDL	326' E of W EOS > E EOS	38	38	0	6:47	6:52	5 MIN	Y	P		
B6-Existing	6/18/2024	6/18/2024	BDL	E LOS	39	39	0	13:28	13:33	5 MIN	Y	P		
B5-Existing	6/18/2024	6/18/2024	BDL	E LOS	39	39	0	13:28	13:33	5 MIN	Y	P		
B4-Existing	6/18/2024	6/18/2024	BDL	CAPPED	-	-	-	-	-	-	-	-		
W11-B7	6/18/2024	6/18/2024	BDL	E LOS	39	39	0	14:10	14:21	5 MIN	Y	P		
W10-B6	6/18/2024	6/18/2024	BDL	E LOS	39	38	1	14:18	14:23	5 MIN	Y	P		
W9-B5	6/18/2024	6/18/2024	BDL	E LOS	40	40	0	14:21	14:26	5 MIN	Y	P		
B3A-Existing	6/19/2024	6/19/2024	BDL	E LOS	40	40	0	8:33	8:38	5 MIN	Y	P		
B1A>B2A-Existing	6/19/2024	6/19/2024	BDL	E LOS	37	35	2	8:34	8:39	5 MIN	Y	P		
B7-B8	6/19/2024	6/19/2024	BDL	W EOS > 60' E of W EOS	38	38	0	10:12	10:17	5 MIN	Y	P		
B7-B8	6/19/2024	6/19/2024	BDL	60' E of W EOS > 276' E of W EOS	39	39	0	10:08	10:13	5 MIN	Y	P		
B7-B8	6/19/2024	6/19/2024	BDL	276' E of W EOS > 355' E of W EOS	39	38	1	10:00	10:05	5 MIN	Y	P		
B7-B8	6/19/2024	6/19/2024	BDL	355' E of W EOS > E EOS	40	39	1	9:58	10:03	5 MIN	Y	P		
B8-B9	6/19/2024	6/19/2024	BDL	E LOS	40	40	0	10:20	10:25	5 MIN	Y	P		
B9-B10	6/19/2024	6/19/2024	BDL	W EOS > 116' E of W EOS	39	39	0	13:20	13:25	5 MIN	Y	P		
B9-B10	6/19/2024	6/19/2024	BDL	116' E of W EOS > E EOS	39	39	0	13:26	13:31	5 MIN	Y	P		
B10-B11	6/19/2024	6/19/2024	BDL	E LOS	39	37	2	14:33	14:38	5 MIN	Y	P		
B10>B9-Existing	6/19/2024	6/19/2024	BDL	E LOS	38	38	0	14:37	14:42	5 MIN	Y	P		
B8>Existing	6/19/2024	6/19/2024	BDL	E LOS	40	38	2	14:41	14:46	5 MIN	Y	P		
B7-Existing	6/19/2024	6/19/2024	BDL	E LOS	37	37	0	14:45	14:50	5 MIN	Y	P		
W11-W12	6/21/2024	6/21/2024	BDL	E LOS	39	39	0	8:41	8:46	5 MIN	Y	P		
W12-W13	6/21/2024	6/21/2024	BDL	E LOS	39	39	0	8:43	8:48	5 MIN	Y	P		

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Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
W13-14	6/21/2024	6/21/2024	BDL	E LOS	38	37	1	9:35	9:40	5 MIN	Y	P		
W14-15	6/21/2024	6/21/2024	BDL	E LOS	39	38	1	11:08	11:13	5 MIN	Y	P		
W15-16	6/21/2024	6/21/2024	BDL	E LOS	39	37	2	11:15	11:20	5 MIN	Y	P		
W15-B11	6/21/2024	6/21/2024	BDL	E LOS	38	36	2	13:11	13:16	5 MIN	Y	P		
W14>15-B10	6/21/2024	6/21/2024	BDL	E LOS	39	36	3	13:13	13:18	5 MIN	Y	P		
W14>13-B9	6/21/2024	6/21/2024	BDL	E LOS	38	36	2	13:46	13:51	5 MIN	Y	P		
W12-B8	6/21/2024	6/21/2024	BDL	E LOS	37	36	1	13:48	13:53	5 MIN	Y	P		
W16-W17	6/24/2024	6/24/2024	BDL	E LOS	39	39	0	8:05	8:10	5 MIN	Y	P		
W17-W18	6/24/2024	6/24/2024	BDL	E LOS	39	39	0	8:08	8:13	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	W EOS > 134' E of W EOS	37	37	0	6:55	7:00	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	136' E of W EOS > 156' E of W EOS	38	38	0	7:33	7:38	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	164' E of W EOS > 184 E of W EOS	38	37	1	7:44	7:49	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	184' E of W EOS > 215' E of W EOS	39	37	2	7:50	7:55	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	228' E of W EOS > 288 E of W EOS	39	38	1	7:54	7:59	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	288 E of W EOS > 316 E of W EOS	38	38	0	7:58	8:03	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	316' E of W EOS > 384' E of W EOS	40	39	1	8:02	8:07	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	384' E of W EOS > 7' W of E EOS	39	39	0	8:"05	8:10	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	7' W of E EOS > E EOS	40	40	0	8:13	8:18	5 MIN	Y	P		
B11-Existing	6/25/2024	6/25/2024	BDL	ELOS (7')	40	39	1	8:20	8:25	5 MIN	Y	P		
B12-Existing	6/25/2024	6/25/2024	BDL	ELOS (7')	39	38	1	8:23	8:28	5 MIN	Y	P		
B13-Existing	6/25/2024	6/25/2024	BDL	S EOS > 10' N of S EOS	38	37	1	8:26	8:31	5 MIN	Y	P		
B12-B13	6/25/2024	6/25/2024	BDL	Eastern 1/2 252' ; E LOS	40	40	0	8:32	8:37	5 MIN	Y	P		
B12-B13	6/25/2024	6/25/2024	BDL	Western 1/2 223' ; E EOS > 72' W of E EOS	40	39	1	8:44	8:49	5 MIN	Y	P		
W16>17-B11>12	6/25/2024	6/25/2024	BDL	E LOS	40	38	2	7:35	7:40	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	64' E of W EOS > 43' E of W EOS	39	39	0	8:55	9:00	5 MIN	Y	P		
B11-B12	6/25/2024	6/25/2024	BDL	43' E of W EOS > W EOS	39	37	2	8:58	9:03	5 MIN	Y	P		

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					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
W24-W23	6/25/2024	6/25/2024	BDL	E LOS	39	38	1	9:51	9:56	5 MIN	Y	P		
W22-W23	6/25/2024	6/25/2024	BDL	E LOS	39	39	0	9:48	9:53	5 MIN	Y	P		
W21-W22	6/25/2024	6/25/2024	BDL	E LOS	39	39	0	9:41	9:46	5 MIN	Y	P		
W20-W21	6/25/2024	6/25/2024	BDL	E LOS	39	38	0	9:37	9:42	5 MIN	Y	P		
W19-W20	6/25/2024	6/25/2024	BDL	E LOS	38	38	0	9:35	9:40	5 MIN	Y	P		
W18-W19	6/25/2024	6/25/2024	BDL	E LOS	38	37	1	9:26	9:31	5 MIN	Y	P		
B13-B14	6/25/2024	6/25/2024	BDL	E 1/2 ; E LOS	40	40	0	15:18	15:23	5 MIN	Y	P		
B13-14	6/25/2024	6/25/2024	BDL	W 1/2 ; E LOS	40	40	0	13:14	13:19	5 MIN	Y	P		
B14-15	6/25/2024	6/25/2024	BDL	E LOS	40	40	0	14:18	14:23	5 MIN	Y	P		
B15-B16	6/25/2024	6/25/2024	BDL	E LOS	40	40	0	10:10	10:15	5 MIN	Y	P		
B16-B17	6/25/2024	6/25/2024	BDL	E LOS	40	40	0	10:37	10:42	5 MIN	Y	P		
B17-B18	6/25/2024	6/25/2024	BDL	E LOS	40	40	0	13:32	13:37	5 MIN	Y	P		
B18-B19	6/25/2024	6/25/2024	BDL	E LOS	40	40	0	13:38	13:43	5 MIN	Y	P		
W24-B19	6/27/2024	6/27/2024	BDL	E LOS	39	38	1	6:56	7:01	5 MIN	Y	P		
W23-B18	6/27/2024	6/27/2024	BDL	E LOS	39	37	2	6:46	6:51	5 MIN	Y	P		
W22-B18	6/27/2024	6/27/2024	BDL	E LOS	39	39	0	6:43	6:48	5 MIN	Y	P		
W22-B17	6/27/2024	6/27/2024	BDL	E LOS	40	40	0	6:35	6:40	5 MIN	Y	P		
W21-B17	6/27/2024	6/27/2024	BDL	E LOS	40	38	2	6:36	6:41	5 MIN	Y	P		
W21-B16	6/27/2024	6/27/2024	BDL	E LOS	36	35	1	7:04	7:09	5 MIN	Y	P		
W19-B15-B14	6/27/2024	6/27/2024	BDL	E LOS	40	40	0	7:13	7:18	5 MIN	Y	P		
B14-W18	6/27/2024	6/27/2024	BDL	E LOS	38	37	1	7:15	7:20	5 MIN	Y	P		
B13>B17-B20	7/2/2024	7/2/2024	BDL	E LOS	40	37	3	9:50	9:55	5 MIN	Y	P		
B20-B21	7/2/2024	7/2/2024	BDL	S EOS > 10' N of S EOS	50	45	5	10:06	10:11	5 MIN	Y	P		
B20-B21	7/2/2024	7/2/2024	BDL	10' N of S EOS > N EOS	50	45	5	10:19	10:24	5 MIN	Y	P		
B21-B22	7/2/2024	7/2/2024	BDL	E LOS	50	50	0	10:08	10:13	5 MIN	Y	P		
B22-B23	7/2/2024	7/2/2024	BDL	E LOS	40	37	3	10:28	10:33	5 MIN	Y	P		

¹TI = Tie-in; LOS = Length of Seam; BOS = Beginning of Seam; FSL = Full Seam Length; N = North; S = South; W = West; E = East; P = Panel; R = Repair

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
B23-B24A	7/2/2024	7/2/2024	BDL	E LOS	55	54	1	10:55	11:00	5 MIN	Y	P		
B23-B24A	7/2/2024	7/2/2024	BDL	E LOS	45	41	4	10:55	11:00	5 MIN	Y	P		
B24>B24A-B25	7/2/2024	7/2/2024	BDL	E LOS	45	43	2	11:06	11:11	5 MIN	Y	P		
B25-B26	7/2/2024	7/2/2024	BDL	S EOS > 96' S of N EOS	45	45	0	11:07	11:12	5 MIN	Y	P		
B25-B26	7/2/2024	7/2/2024	BDL	96' S of N EOS > N EOS	45	42	3	11:09	11:14	5 MIN	Y	P		
B26-B27	7/2/2024	7/2/2024	BDL	E LOS	45	44	1	12:20	12:25	5 MIN	Y	P		
B27-B28	7/2/2024	7/2/2024	BDL	E LOS	40	38	2	12:21	12:26	5 MIN	Y	P		
B28-B29	7/2/2024	7/2/2024	BDL	E LOS	39	39	0	12:25	12:30	5 MIN	Y	P		
B28-B29A	7/2/2024	7/2/2024	BDL	E LOS	38	38	0	12:23	12:28	5 MIN	Y	P		
B24-B24A	7/3/2024	7/3/2024	BDL	E EOS > 6' W of E EOS	49	49	0	7:07	7:12	5 MIN	Y	P		
B29-B29A	7/3/2024	7/3/2024	BDL	E LOS	38	36	2	12:29	12:34	5 MIN	Y	P		
B20-Existing	7/3/2024	7/3/2024	BDL	CAPPED	-	-	-	-	-	-	-	-		
B21-Existing	7/3/2024	7/3/2024	BDL	W EOS > 5' W of E EOS	45	43	2	7:50	7:55	5 MIN	Y	P		
B21>B22-Existing	7/3/2024	7/3/2024	BDL	E LOS	45	43	2	7:52	7:57	5 MIN	Y	P		
B23-Existing	7/3/2024	7/3/2024	BDL	11' E of W EOS > E EOS	40	40	0	8:18	8:23	5 MIN	Y	P		
B24-Existing	7/3/2024	7/3/2024	BDL	E LOS	44	42	2	8:28	8:33	5 MIN	Y	P		
B37-B38	7/3/2024	7/3/2024	BDL	E LOS	48	47	1	12:30	12:35	5 MIN	Y	P		
B36-B37	7/3/2024	7/3/2024	BDL	E LOS	49	47	2	10:50	10:55	5 MIN	Y	P		
B35-B36	7/3/2024	7/3/2024	BDL	E LOS	49	47	2	10:48	10:53	5 MIN	Y	P		
B34-B35	7/3/2024	7/3/2024	BDL	E LOS	49	48	1	10:21	10:26	5 MIN	Y	P		
B24-B24A	7/3/2024	7/3/2024	BDL	6' W of E EOS > W EOS	48	45	3	7:05	7:10	5 MIN	Y	P		
B20-Existing	7/3/2024	7/3/2024	BDL	W EOS > 15' E of W EOS	57	56	1	7:33	7:38	5 MIN	Y	P		
B33-B34	7/3/2024	7/3/2024	BDL	E LOS	47	45	2	10:20	10:25	5 MIN	Y	P		
B32-B33	7/3/2024	7/3/2024	BDL	E LOS	49	47	2	9:37	9:42	5 MIN	Y	P		
B31-B32	7/3/2024	7/3/2024	BDL	E LOS	45	44	1	9:35	9:40	5 MIN	Y	P		
B30-B31	7/3/2024	7/3/2024	BDL	E LOS	45	44	1	9:30	9:35	5 MIN	Y	P		

¹TI = Tie-in; LOS = Length of Seam; BOS = Beginning of Seam; FSL = Full Seam Length; N = North; S = South; W = West; E = East; P = Panel; R = Repair

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG**

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
B29-B30	7/3/2024	7/3/2024	BDL	E LOS	37	35	2	9:11	9:16	5 MIN	Y	P		
B29A-B30	7/3/2024	7/3/2024	BDL	E LOS	37	35	2	9:11	9:16	5 MIN	Y	P		
B25-Existing	7/3/2024	7/3/2024	BDL	E LOS	40	37	3	8:40	8:45	5 MIN	Y	P		
B26-Existing	7/3/2024	7/3/2024	BDL	E LOS	48	47	1	8:47	8:52	5 MIN	Y	P		
B27-Existing	7/3/2024	7/3/2024	BDL	E LOS	49	47	2	8:53	8:58	5 MIN	Y	P		
B28-Existing	7/3/2024	7/3/2024	BDL	E LOS	40	40	0	9:08	9:13	5 MIN	Y	P		
B31->B29-Existing	7/5/2024	7/5/2024	BDL	E LOS	39	37	2	9:14	9:19	5 MIN	Y	P		
B33 W 1/2>B32-Existing	7/5/2024	7/5/2024	BDL	E LOS	38	36	2	9:09	9:14	5 MIN	Y	P		
B33-Existing	7/5/2024	7/5/2024	BDL	E EOS > 5' W of E EOS	40	39	1	9:01	9:06	5 MIN	Y	P		
B33-Existing	7/5/2024	7/5/2024	BDL	5' W of E EOS > 5' E of W EOS	40	39	1	9:07	9:13	6 MIN	Y	P		
B34-Existing	7/5/2024	7/5/2024	BDL	E LOS	38	35	3	8:53	8:58	5 MIN	Y	P		
B36>B35-Existing	7/5/2024	7/5/2024	BDL	E LOS	40	38	2	8:51	8:57	6 MIN	Y	P		
B37-Existing	7/5/2024	7/5/2024	BDL	E LOS	40	39	1	8:42	8:47	5 MIN	Y	P		
B38-Existing	7/5/2024	7/5/2024	BDL	E LOS	39	38	1	8:40	8:45	5 MIN	Y	P		
B47-B48	7/10/2024	7/11/2024	BDL	S EOS > 6' S of N EOS	40	39	1	13:22	13:27	5 MIN	Y	P		
B46-B47	7/10/2024	7/11/2024	BDL	E LOS	39	39	0	13:20	13:25	5 MIN	Y	P		
B47-Existing	7/10/2024	7/10/2024	BDL	E LOS	38	36	2	13:53	13:58	5 MIN	Y	P		
B46-Existing	7/10/2024	7/10/2024	BDL	5' W of E EOS > 12' W of E EOS	38	38	0	13:49	13:54	5 MIN	Y	P		
B45-B46	7/10/2024	7/10/2024	BDL	E LOS	38	37	1	13:28	13:32	5 MIN	Y	P		
B44-B45	7/10/2024	7/10/2024	BDL	E LOS	39	39	0	9:55	10:00	5 MIN	Y	P		
B45-Existing	7/10/2024	7/10/2024	BDL	6' W of E EOS > 8' E of W EOS	40	38	2	14:00	14:05	5 MIN	Y	P		
B43-B44	7/10/2024	7/10/2024	BDL	E LOS	39	39	0	9:47	9:52	5 MIN	Y	P		
B43>B45-Existing	7/10/2024	7/10/2024	BDL	6' W of E B43 > 8' E of W B45	38	37	1	14:03	14:08	5 MIN	Y	P		
B42-B43	7/10/2024	7/10/2024	BDL	E LOS	39	37	2	9:35	9:40	5 MIN	Y	P		
B42>B43-Existing	7/10/2024	7/11/2024	BDL	11' E of W B42 > 10' W of E B42	40	39	1	7:13	7:18	5 MIN	Y	P		
B42-Existing	7/10/2024	7/11/2024	BDL	W EOS > 10' W of E EOS	38	37	1	7:14	7:19	5 MIN	Y	P		

¹TI = Tie-in; LOS = Length of Seam; BOS = Beginning of Seam; FSL = Full Seam Length; N = North; S = South; W = West; E = East; P = Panel; R = Repair

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG**

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
B41-B42	7/10/2024	7/10/2024	BDL	E LOS	38	38	0	9:29	9:34	5 MIN	Y	P		
B41-Existing	7/10/2024	7/11/2024	BDL	E EOS > 8' E of W EOS	39	38	1	7:03	7:08	5 MIN	Y	P		
B41-Existing	7/10/2024	7/11/2024	BDL	8' W of E EOS > E EOS	38	36	2	7:02	7:07	5 MIN	Y	P		
B40-B41	7/10/2024	7/10/2024	BDL	E LOS	39	39	0	8:55	9:00	5 MIN	Y	P		
B40-Existing	7/10/2024	7/11/2024	BDL	8' W of E EOS > E EOS (CUT OUT)	-	-	-	-	-	-	-	-		
B40-B41	7/10/2024	7/10/2024	BDL	E LOS	39	38	1	8:53	8:58	5 MIN	Y	P		
B39-B40	7/10/2024	7/10/2024	BDL	E LOS	38	37	1	8:26	8:31	5 MIN	Y	P		
RP1-RP2	7/15/2024	7/15/2024	BDL	E LOS	37	36	1	8:12	8:17	5 MIN	Y	P		
RP2-RP3	7/15/2024	7/15/2024	BDL	E LOS	38	37	1	8:16	8:21	5 MIN	Y	P		
RP3-RP4	7/15/2024	7/15/2024	BDL	E LOS	38	37	1	8:18	8:23	5 MIN	Y	P		
RP1-Existing	7/15/2024	7/15/2024	BDL	E LOS	40	39	1	8:42	8:52	5 MIN	Y	P		
RP2-Existing	7/15/2024	7/15/2024	BDL	E EOS > 32' W of E EOS	38	37	1	8:53	8:58	5 MIN	Y	P		
RP2-Existing	7/15/2024	7/15/2024	BDL	32' W of E EOS > 42' W of E	40	40	0	8:56	9:01	5 MIN	Y	P		
RP2-Existing	7/15/2024	7/15/2024	BDL	42' W of E EOS > W EOS	40	40	0	9:04	9:09	5 MIN	Y	P		
RP3-Existing	7/15/2024	7/15/2024	BDL	E EOS > 26' W of E EOS	39	37	2	9:14	9:19	5 MIN	Y	P		
RP3-Existing	7/15/2024	7/15/2024	BDL	26' W of E EOS > 54' W of E EOS	40	38	2	9:22	9:27	5 MIN	Y	P		
RP3-Existing	7/15/2024	7/15/2024	BDL	54' W of E EOS > W EOS	40	39	1	9:28	9:33	5 MIN	Y	P		
RP4-Existing	7/15/2024	7/15/2024	BDL	E EOS > 10' W of E EOS	39	39	0	9:35	9:40	5 MIN	Y	P		
RP4-Existing	7/15/2024	7/15/2024	BDL	30' W of E EOS > 46' W of E EOS	39	38	1	9:42	9:47	5 MIN	Y	P		
RP4-Existing	7/15/2024	7/15/2024	BDL	46' W of E EOS > W EOS	39	38	1	9:53	9:58	5 MIN	Y	P		
B38-RP4	7/15/2024	7/15/2024	BDL	E LOS	39	39	0	9:58	10:03	5 MIN	Y	P		
B39-RP4	7/15/2024	7/15/2024	BDL	E LOS	40	40	0	10:08	10:13	5 MIN	Y	P		
B40-RP4	7/15/2024	7/15/2024	BDL	E LOS	40	40	0	10:14	10:19	5 MIN	Y	P		
B41-RP3	7/15/2024	7/15/2024	BDL	E LOS	40	40	0	10:24	10:29	5 MIN	Y	P		
B42-RP3	7/15/2024	7/15/2024	BDL	E LOS	40	40	0	10:31	10:36	5 MIN	Y	P		

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
B43-RP3	7/15/2024	7/15/2024	BDL	E LOS	40	40	0	10:36	10:41	5 MIN	Y	P		
B43-RP2	7/15/2024	7/15/2024	BDL	CAPPED										
B44-RP2	7/15/2024	7/15/2024	BDL	E LOS	39	39	0	10:45	10:50	5 MIN	Y	P		
B45-RP2	7/15/2024	7/15/2024	BDL	E LOS	39	39	0	10:49	10:54	5 MIN	Y	P		
B46-RP2	7/15/2024	7/15/2024	BDL	E LOS	39	39	0	10:59	11:04	5 MIN	Y	P		
B46-RP1	7/15/2024	7/15/2024	BDL	E LOS	40	40	0	11:04	11:09	5 MIN	Y	P		
B48-B49	7/17/2024	7/17/2024	BDL	E LOS	39	39	0	8:55	9:00	5 MIN	Y	P		
B49-B50	7/17/2024	7/17/2024	BDL	E LOS	40	40	0	9:01	9:06	5 MIN	Y	P		
B50-B51	7/17/2024	7/17/2024	BDL	E LOS	39	39	0	9:18	9:23	5 MIN	Y	P		
B51-B52	7/17/2024	7/17/2024	BDL	E LOS	40	40	0	9:24	9:29	5 MIN	Y	P		
B52-B53	7/17/2024	7/17/2024	BDL	E LOS	40	39	1	13:07	13:12	5 MIN	Y	P		
E1-Existing	7/17/2024	7/17/2024	BDL	W EOS > 12' E of W EOS	38	38	0	14:24	14:29	5 MIN	Y	P		
E1-Existing	7/17/2024	7/17/2024	BDL	12' E of W > 62' E of W EOS	38	38	0	14:41	14:46	5 MIN	Y	P		
E1-Existing	7/17/2024	7/17/2024	BDL	62' E of W > 93' E of W EOS	40	40	0	14:36	14:41	5 MIN	Y	P		
E1-Existing	7/17/2024	7/17/2024	BDL	129' E of W EOS > 144' E of W EOS	40	40	0	15:01	15:06	5 MIN	Y	P		
E1-Existing	7/17/2024	7/17/2024	BDL	144' E of W EOS > E EOS	40	40	0	15:03	15:08	5 MIN	Y	P		
B53-Existing	7/17/2024	7/17/2024	BDL	E LOS	39	39	0	15:17	15:22	5 MIN	Y	P		
B52-Existing	7/17/2024	7/17/2024	BDL	E EOS > 7' W of E EOS	37	36	1	15:21	15:26	5 MIN	Y	P		
B52-Existing	7/17/2024	7/17/2024	BDL	7' W of E EOS > W EOS	38	38	0	15:23	15:28	5 MIN	Y	P		
B51-Existing	7/17/2024	7/17/2024	BDL	E LOS	39	39	0	15:29	15:34	5 MIN	Y	P		
B50-Existing	7/17/2024	7/17/2024	BDL	E LOS	39	38	1	15:30	15:35	5 MIN	Y	P		
B49-Existing	7/17/2024	7/17/2024	BDL	E LOS	39	39	0	15:32	15:37	5 MIN	Y	P		
B48-Existing	7/17/2024	7/17/2024	BDL	E LOS	39	39	0	15:38	15:43	5 MIN	Y	P		
E1-B53	7/17/2024	7/17/2024	BDL	E LOS	39	39	0	15:40	22:36	5 MIN	Y	P		
E2-B53	7/17/2024	7/17/2024	BDL	E LOS	38	37	1	15:45	15:50	5 MIN	Y	P		

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY GEOMEMBRANE NON DESTRUCTIVE SEAM TESTING LOG

Seam Description ¹	Date Seamed	Date Tested	QA Monitor	Test Location ¹	Air Pressure Test								Vacuum Test	
					Test Pressure, psi			Test Time			Seam Complete Y/N	Pass/Fail	Duration, s	Pass/Fail
					Start	Final	Change	Start	Final	Duration				
E3-B53	7/17/2024	7/17/2024	BDL	E LOS	40	38	2	15:50	15:55	5 MIN	Y	P		
E4-B53	7/17/2024	7/17/2024	BDL	E LOS	40	39	1	15:57	16:02	5 MIN	Y	P		
E1-E2	7/18/2024	7/17/2024	BDL	W EOS > 86' W of E EOS	39	38	1	6:26	6:31	5 MIN	Y	P		
E1-E2	7/17/2024	7/17/2024	BDL	86' W of E EOS > E EOS	40	40	0	15:08	15:13	5 MIN	Y	P		
E2-3E	7/18/2024	7/17/2024	BDL	E EOS > 131' E of W EOS	39	38	1	6:40	6:45	5 MIN	Y	P		
E2-E3	7/18/2024	7/17/2024	BDL	119' E of W EOS > W EOS	40	40	0	6:46	6:51	5 MIN	Y	P		

¹TI = Tie-in; EOS = End of Seam; BOS = Beginning of Seam; FSL = Full Seam Length; N = North; S = South; W = West; E = East; P = Panel; R = Repair

APPENDIX I

**FIELD AND LABORATORY
DESTRUCTIVE SEAM TESTING**

Includes pages I-1 through I-58

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**DESTRUCTIVE SEAM TESTING LOG
FOR PRIMARY GEOMEMBRANE**

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY DESTRUCTIVE SEAM TESTING LOG

Sample Number	Date	Seam Number	Welder ID	Machine Number	Material Type	Weld Type	Repair No.	Field Test Results				Lab Test Results (avg.)			
								Peel (ppi)		Shear (ppi)	Pass/Fail	Peel (ppi)		Shear (ppi)	Pass/Fail
								in	out			in	out		
DS-1	7/9/24	PH8-PH9	TH	22	60-MIL	FUSION	R-12	108	101	131	Pass	119	110	155	Pass
								11	106	136					
								103	114	134					
DS-2	7/9/24	PH9-PH10	IB	69	60-MIL	FUSION	R-15	133	132	137	Pass	128	140	152	Pass
								122	127	138					
								128	130	137					
DS-3	7/9/24	PH8-TI	IB	69	60-MIL	FUSION	R-24	123	112	134	Pass	136	156	154	Pass
								107	112	131					
								98	122	134					
DS-4	7/16/24	PH18-PH19	TH	22	60-MIL	FUSION	R-30	118	120	132	Pass	122	126	154	Pass
								113	113	135					
								114	114	134					
DS-5	7/16/24	PH19-PH20	IB	69	60-MIL	FUSION	R-32	110	118	132	Pass	125	138	150	Pass
								107	106	132					
								108	106	132					
DS-6	7/19/24	PH24-PH25	TH	22	60-MIL	FUSION	R-49	110	114	137	Pass	116	125	149	Pass
								103	111	141					
								120	110	138					
DS-7	7/19/24	PH25-PH26	IB	69	60-MIL	FUSION	R-53	106	113	141	Pass	124	130	149	Pass
								106	110	137					
								108	117	139					
DS-8	7/19/24	PH23-TI	TH	22	60-MIL	FUSION	R-48	108	113	143	Pass	126	129	142	Pass
								106	105	143					
								104	106	141					
DS-9	7/22/24	PH30-PH31	TH	22	60-MIL	FUSION	R-69	121	106	141	Pass	118	122	157	Pass
								106	107	140					
								117	107	138					
DS-10	7/24/24	E2-E3	TH	22	60-MIL	FUSION	R-86	146	136	144	Pass	137	119	178	Pass
								118	130	146					
								136	132	141					
DS-10B5	7/24/24	E2-E3	TH	22	60-MIL	FUSION	R-91	118	120	139	Pass	148	144	184	Pass
								118	121	139					
								113	120	143					
DS-10A10	7/24/24	E2-E3	TH	22	60-MIL	FUSION	R-93	117	114	143	Pass	142	145	187	Pass
								116	118	141					
								123	127	143					
DS-11	7/24/24	E3-E4	IB	69	60-MIL	FUSION	R-87	133	130	141	Pass	141	136	174	Pass
								131	126	138					
								132	129	140					
DS-12	8/2/24	B1-TI	MJ	69	60-MIL	FUSION	R-96	114	106	138	Pass	92	124	151	Pass
								108	107	136					
								108	111	136					
DS-13	8/2/24	B1-B2	TH	22	60-MIL	FUSION	R-97	126	120	144	Pass	118	112	149	Pass
								127	118	146					
								131	117	143					

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Primary Destructive Testing Log

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY DESTRUCTIVE SEAM TESTING LOG

Sample Number	Date	Seam Number	Welder ID	Machine Number	Material Type	Weld Type	Repair No.	Field Test Results				Lab Test Results (avg.)			
								Peel (ppi)		Shear (ppi)	Pass/Fail	Peel (ppi)		Shear (ppi)	Pass/Fail
								in	out			in	out		
DS-12A	8/2/24	B1-TI	MJ	69	60-MIL	FUSION	R-96	126	118	146	Pass	119	121	163	Pass
								113	117	147					
								125	121	146					
DS-12B10	8/2/24	B1-TI	MJ	69	60-MIL	FUSION	R-96	109	110	140	Pass	101	121	155	Pass
								98	107	138					
								98	110	141					
DS-12B20	8/2/24	B1-TI	MJ	69	60-MIL	FUSION	R-161	106	110	140	Pass	122	128	158	Pass
								108	108	137					
								101	109	139					
DS-14	8/2/24	B3-B4	TH	22	60-MIL	FUSION	R-100	109	107	143	Pass	118	122	168	Pass
								108	107	143					
								105	109	141					
DS-15	8/3/24	B5-B6	MJ	69	60-MIL	FUSION	R-104	107	110	143	Pass	127	124	167	Pass
								103	104	141					
								108	110	143					
DS-16	8/5/24	B7-B8	TH	22	60-MIL	FUSION	R-106	113	112	141	Pass	131	133	165	Pass
								110	108	140					
								118	110	140					
DS-17	8/5/24	B8-B9	IB	69	60-MIL	FUSION	R-107	101	113	137	Pass	128	131	164	Pass
								106	109	141					
								106	117	140					
DS-18	8/5/24	B9-B10	TH	22	60-MIL	FUSION	R-108	119	128	145	Pass	142	141	169	Pass
								108	118	144					
								107	124	146					
DS-19	8/5/24	B10-B11	IB	69	60-MIL	FUSION	R-110	103	108	137	Pass	132	132	164	Pass
								98	103	137					
								109	110	134					
DS-20	8/5/24	B11-B12	TH	22	60-MIL	FUSION	R-111	103	112	141	Pass	135	151	163	Pass
								107	115	137					
								101	110	143					
DS-21	8/6/24	S1-TI	IB	69	60-MIL	FUSION	R-112	107	114	136	Pass	126	119	164	Pass
								98	101	136					
								103	99	134					
DS-21RE	8/6/24	S1-TI	IB	69	60-MIL	FUSION	R-222	112	118	148	Pass	135	137	171	Pass
								114	108	153					
								117	117	148					
DS-21A10	8/6/24	S1-TI	IB	69	60-MIL	FUSION	R-250	117	116	144	Pass	125	122	178	Pass
								111	110	147					
								116	123	146					
DS-22	8/6/24	S5-S6	TH	69	60-MIL	FUSION	R-118	109	108	137	Pass	136	136	175	Pass
								106	107	143					
								108	107	142					
DS-23	8/6/24	S8-S9	IB	69	60-MIL	FUSION	R-120	108	106	143	Pass	142	126	170	Pass
								106	107	140					
								108	109	140					

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Primary Destructive Testing Log

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY DESTRUCTIVE SEAM TESTING LOG

Sample Number	Date	Seam Number	Welder ID	Machine Number	Material Type	Weld Type	Repair No.	Field Test Results				Lab Test Results (avg.)			
								Peel (ppi)		Shear (ppi)	Pass/Fail	Peel (ppi)		Shear (ppi)	Pass/Fail
								in	out			in	out		
DS-24	8/6/24	S8-B8	TH	22	60-MIL	FUSION	R-134	110	114	148	Pass	131	121	141	Pass
								111	106	152					
								114	114	150					
DS-25	8/6/24	S4-B4	IB	69	60-MIL	FUSION	R-102	115	121	137	Pass	130	132	158	Pass
								116	126	140					
								118	118	139					
DS-26	8/10/24	B13-B14	IB	69	60-MIL	FUSION	R-162	109	114	136	Pass	145	126	164	Pass
								107	110	138					
								124	106	138					
DS-27	8/12/24	B16-B15A	TH	22	60-MIL	FUSION	R-167	106	127	136	Pass	135	132	153	Pass
								104	112	139					
								109	113	137					
DS-28	8/12/24	B17-B18	TH	22	60-MIL	FUSION	R-172	113	127	139	Pass	120	116	149	Pass
								106	113	141					
								111	118	140					
DS-29	8/12/24	B18-B19A	IB	69	60-MIL	FUSION	R-173	118	111	144	Pass	112	119	158	Pass
								106	113	141					
								110	112	140					
DS-30	8/12/24	B19-B20	TH	22	60-MIL	FUSION	R-174	116	116	143	Pass	135	120	153	Pass
								106	108	138					
								117	116	141					
DS-31	8/13/24	S14-S15	MJ	69	60-MIL	FUSION	R-177	117	122	143	Pass	138	138	176	Pass
								117	127	141					
								110	114	143					
DS-32	8/13/24	S19-S20	TH	22	60-MIL	FUSION	R-184	124	114	143	Pass	141	137	177	Pass
								112	111	140					
								114	114	136					
DS-33	8/13/24	S17-B17	MJ	69	60-MIL	FUSION	R-181	136	128	146	Pass	121	126	152	Pass
								122	129	144					
								140	136	147					
DS-34	8/14/24	W5-W6	TH	22	60-MIL	FUSION	R-198	106	113	141	Pass	135	128	176	Pass
								106	111	141					
								107	114	138					
DS-35	8/14/24	W12-W13	MJ	69	60-MIL	FUSION	R-204	114	112	140	Pass	141	137	174	Pass
								108	111	138					
								108	114	140					
DS-36	8/14/24	W15-W16	TH	22	60-MIL	FUSION	R-234	107	113	138	Pass	140	133	170	Pass
								109	107	137					
								110	118	134					

**DESTRUCTIVE SEAM TESTING LOG
FOR SECONDARY GEOMEMBRANE**

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY DESTRUCTIVE SEAM TESTING LOG

Sample Number	Date	Seam Number	Welder ID	Machine Number	Material Type	Weld Type	Repair No.	Field Test Results				Lab Test Results (avg.)			
								Peel (ppi)		Shear (ppi)	Pass/Fail	Peel (ppi)		Shear (ppi)	Pass/Fail
								in	out			in	out		
SDS-1	6/12/24	TI/S1	IB	2	60-MIL	FUSION	R-3	103	110	121	Pass	145	134	180	Pass
								106	111	124					
								109	107	123					
SDS-2	6/12/24	S7-S7A	MJ	69	60-MIL	FUSION	R-10	115	103	122	Pass	142	156	169	Pass
								110	117	128					
								116	108	129					
SDS-3	6/13/24	S10-S11	TH	2	60-MIL	FUSION	R-16	107	112	122	Pass	148	135	175	Pass
								106	111	125					
								114	113	124					
SDS-4	6/13/24	S14-S15	IB	21	60-MIL	FUSION	R-86	105	112	139	Pass	149	151	182	Pass
								104	111	137					
								106	113	138					
SDS-5	6/13/24	S16-S17	TH	2	60-MIL	FUSION	R-66	115	121	133	Pass	139	146	180	Pass
								118	122	138					
								116	126	137					
SDS-6	6/14/24	W1-S19	IB	21	60-MIL	FUSION	R-29	106	103	127	Pass	137	143	161	Pass
								116	111	139					
								114	111	141					
SDS-7	6/17/24	S6-B1A	IB	21	60-MIL	FUSION	R-49	113	115	126	Pass	148	143	165	Pass
								114	116	124					
								111	109	131					
SDS-8	6/18/24	B4-B5	IB	21	60-MIL	FUSION	R-110	128	116	152	Pass	137	132	166	Pass
								123	119	156					
								120	108	149					
SDS-9	6/17/24	B2-B3	IB	21	60-MIL	FUSION	R-109	116	113	126	Pass	138	124	164	Pass
								109	110	131					
								106	109	128					
SDS-10	6/17/24	B2A-B3A	MJ	69	60-MIL	FUSION	R-60	104	121	129	Pass	112	129	163	Pass
								113	132	132					
								110	115	137					
SDS-11	6/17/24	B3-B4	TH	69	60-MIL	FUSION	R-61	113	116	146	Pass	130	130	163	Pass
								115	121	139					
								119	123	140					
SDS-12	6/17/24	B4-B3A	IB	21	60-MIL	FUSION	R-111	119	123	132	Pass	130	130	161	Pass
								118	117	133					
								128	125	136					
SDS-13	6/18/24	B5-B6	TH	22	60-MIL	FUSION	R-72	125	138	127	Pass	119	131	154	Pass
								128	137	129					
								119	121	126					

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY DESTRUCTIVE SEAM TESTING LOG

Sample Number	Date	Seam Number	Welder ID	Machine Number	Material Type	Weld Type	Repair No.	Field Test Results				Lab Test Results (avg.)			
								Peel (ppi)		Shear (ppi)	Pass/Fail	Peel (ppi)		Shear (ppi)	Pass/Fail
								in	out			in	out		
SDS-14	6/18/24	W10-W11	IB	21	60-MIL	FUSION	R-113	118	123	143	Pass	149	146	174	Pass
								117	118	137					
								122	119	135					
SDS-15	6/18/24	B6-B7	IB	21	60-MIL	FUSION	R-83	116	115	129	Pass	124	113	147	Pass
								108	104	141					
								112	109	136					
SDS-16	6/19/24	B8-B9	TH	22	60-MIL	FUSION	R-91	114	112	132	Pass	120	122	150	Pass
								121	122	139					
								128	119	137					
SDS-17	6/19/24	B9-B10	IB	21	60-MIL	FUSION	R-99	110	110	136	Pass	123	116	153	Pass
								123	123	129					
								118	118	140					
SDS-18	6/19/24	B10-B11	IB	21	60-MIL	FUSION	R-97	123	99	126	Pass	125	111	150	Pass
								103	119	124					
								101	112	133					
SDS-19	6/21/24	W13-W14	IB	21	60-MIL	FUSION	R-101	128	116	152	Pass	155	137	176	Pass
								123	119	156					
								120	108	149					
SDS-20	6/19/24	W12-B8	TH	22	60-MIL	FUSION	R-140	116	113	126	Pass	139	126	144	Pass
								109	110	131					
								106	109	128					
SDS-21	6/24/24	B11-B12	IB	21	60-MIL	FUSION	R-138	104	121	129	Pass	123	114	153	Pass
								113	132	132					
								110	115	137					
SDS-22	6/24/24	B12-B13	TH	22	60-MIL	FUSION	R-159	106	109	141	Pass	113	136	154	Pass
								111	116	139					
								121	109	135					
SDS-23	6/25/24	B13-B14	MJ	69	60-MIL	FUSION	R-135	115	99	131	Pass	125	128	162	Pass
								125	116	136					
								117	121	142					
SDS-24	6/25/24	B14-B15	IB	69	60-MIL	FUSION	R-144	119	121	142	Pass	118	131	158	Pass
								126	120	131					
								116	114	136					
SDS-25	6/26/24	B16-B17	TH	22	60-MIL	FUSION	R-155	101	112	143	Pass	123	130	162	Pass
								111	116	151					
								103	109	148					
SDS-26	6/26/24	B17-B18	IB	69	60-MIL	FUSION	R-154	127	117	127	Pass	121	129	164	Pass
								108	116	130					
								120	105	136					

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY DESTRUCTIVE SEAM TESTING LOG

Sample Number	Date	Seam Number	Welder ID	Machine Number	Material Type	Weld Type	Repair No.	Field Test Results				Lab Test Results (avg.)			
								Peel (ppi)		Shear (ppi)	Pass/Fail	Peel (ppi)		Shear (ppi)	Pass/Fail
								in	out			in	out		
SDS-27	6/26/24	B18-B19	TH	22	60-MIL	FUSION	R-153	107	109	139	Pass	136	140	160	Pass
								110	113	142					
								116	112	144					
SDS-28	6/25/24	W19-B15	IB	69	60-MIL	FUSION	R-142	96	107	136	Pass	137	126	149	Pass
								98	109	132					
								101	112	135					
SDS-29	6/25/24	W18-W19	TH	22	60-MIL	FUSION	R-143	116	109	142	Pass	140	141	177	Pass
								112	120	143					
								117	108	139					
SDS-30	7/2/24	B25-B26	IB	69	60-MIL	FUSION	R-187	115	112	134	Pass	125	131	149	Pass
								108	118	139					
								99	106	142					
SDS-31	7/3/24	B28-B29	TH	22	60-MIL	FUSION	R-191	99	110	139	Pass	120	114	151	Pass
								112	116	137					
								126	125	135					
SDS-32	7/3/24	B31-B32	IB	69	60-MIL	FUSION	R-213	113	115	150	Pass	126	140	156	Pass
								126	123	149					
								129	131	147					
SDS-33	7/3/24	B36-B37	TH	22	60-MIL	FUSION	R-218	113	116	146	Pass	121	114	149	Pass
								115	121	139					
								119	123	140					
SDS-34	7/3/24	B36-TI	IB	69	60-MIL	FUSION	R-206	119	123	132	Pass	131	141	140	Pass
								118	117	133					
								128	125	136					
SDS-35	7/10/24	B40-B41	IB	69	60-MIL	FUSION	R-234	111	103	142	Pass	117	107	149	Pass
								116	109	138					
								108	111	137					
SDS-36	7/10/24	B45-B46	TH	22	60-MIL	FUSION	R-244	119	116	128	Pass	115	127	159	Pass
								107	110	129					
								119	122	132					
SDS-37	7/15/24	RP3-TI	IB	69	60-MIL	FUSION	R-225	117	106	139	Pass	123	135	151	Pass
								115	114	138					
								121	118	133					
SDS-38	7/15/24	B43-RP3	TH	22	60-MIL	FUSION	R-244	109	108	139	Pass	135	120	154	Pass
								112	123	141					
								119	116	140					
SDS-39	7/17/24	E1-TI	IB	69	60-MIL	FUSION	R-266	99	103	131	Pass	129	135	157	Pass
								109	112	136					
								104	108	133					
SDS-40	7/17/24	E2-E3	TH	22	60-MIL	FUSION	R-273	104	106	140	Pass	128	122	166	Pass
								107	111	137					
								114	109	138					
SDS-41	7/17/24	E4-E5	IB	69	60-MIL	FUSION	R-264	107	101	132	Pass	128	120	168	Pass
								99	105	136					
								111	108	131					

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Secondary Destructive Testing Log

**DESTRUCTIVE SEAM LABORATORY RESULTS
FOR PRIMARY GEOMEMBRANE**



TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

AUSTIN, TX - USA | ANAHEIM, CA - USA | ANDERSON, SC - USA | GOLD COAST - AUSTRALIA | SUZHOU - CHINA

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81066

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-1 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	117	118	120	115	124	119
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	109	110	109	111	112	110
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	153	159	155	154	154	155
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-2 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	143	121	118	140	117	128
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	139	138	138	143	144	140
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	151	151	152	154	151	152
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

TRI ENVIRONMENTAL, INC.

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

AUSTIN, TX - USA | ANAHEIM, CA - USA | ANDERSON, SC - USA | GOLD COAST - AUSTRALIA | SUZHOU - CHINA

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81066

PARAMETER	TEST REPLICATE NUMBER					MEAN
	1	2	3	4	5	
Sample ID: DS-3 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	141	133	137	133	138	136
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	156	152	156	155	161	156
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	149	152	152	155	160	154
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

AUSTIN, TX - USA | ANAHEIM, CA - USA | ANDERSON, SC - USA | GOLD COAST - AUSTRALIA | SUZHOU - CHINA

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81140

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DT-4 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	127	115	128	114	124	122
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	128	118	138	128	117	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	153	153	155	158	151	154
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DT-5 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	115	115	134	138	124	125
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	127	136	150	134	143	138
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	151	150	149	154	147	150
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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AUSTIN, TX - USA | ANAHEIM, CA - USA | ANDERSON, SC - USA | GOLD COAST - AUSTRALIA | SUZHOU - CHINA

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81162

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-6 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	117	116	115	118	116	116
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	130	124	125	120	128	125
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	149	150	148	149	148	149
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-7 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	125	122	126	122	127	124
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	127	131	133	127	132	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	147	152	149	151	148	149
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81178

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-8 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	133	130	124	121	124	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	128	128	132	133	126	129
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	141	144	138	146	143	142
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-9 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	120	118	118	118	115	118
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	126	123	121	117	124	122
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	157	157	157	156	158	157
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81197

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-10 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	135	113	147	149	143	137
Peel Incursion (%)	<5	100	<5	<5	<5	
Peel Locus Of Failure Code	SE	AD	SE	SE	SE	
Peel NSF Failure Code	FTB	NON-FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	142	70	94	152	137	119
Peel Incursion (%)	<5	100	70	<5	<5	
Peel Locus Of Failure Code	SE	AD	AD-BRK	SE	SE	
Peel NSF Failure Code	FTB	NON-FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	176	177	181	177	178	178
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-11 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	133	140	142	152	140	141
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	129	140	133	141	139	136
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	172	177	172	174	175	174
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81216

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-10B5 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	136	138	163	150	153	148
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	142	143	159	141	134	144
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	183	178	197	179	181	184
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-10A10 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	134	138	150	138	148	142
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	139	140	156	144	148	145
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	182	186	203	181	183	187
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81297

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-12 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	46	111	94	102	108	92
Peel Incursion (%)	100	20	40	<5	<5	
Peel Locus Of Failure Code	AD	AD-BRK	AD-BRK	SE	SE	
Peel NSF Failure Code	NON-FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	129	129	121	124	116	124
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	154	151	151	151	149	151
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-13 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	125	114	118	115	117	118
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	109	115	109	115	113	112
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	152	148	147	148	149	149
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81330

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-12A Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	118	122	119	116	121	119
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	117	123	121	118	126	121
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	163	162	162	164	165	163
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-12B10 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	119	115	66	89	117	101
Peel Incursion (%)	<5	<5	100	<5	<5	
Peel Locus Of Failure Code	SE	SE	AD	SE	SE	
Peel NSF Failure Code	FTB	FTB	NON-FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	125	122	121	117	120	121
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	155	153	154	157	154	155
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81357

PARAMETER	TEST REPLICATE NUMBER					MEAN
	1	2	3	4	5	
Sample ID: DS-12B20 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	121	123	126	118	122	122
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	125	128	125	130	132	128
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	161	158	156	158	159	158
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81323

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-14 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	118	119	118	118	119	118
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	122	122	121	122	124	122
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	167	167	168	168	169	168
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-15 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	127	125	126	125	131	127
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	130	123	120	127	119	124
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	167	165	167	165	169	167
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81323

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-16 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	120	120	121	141	151	131
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	137	131	135	136	126	133
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	168	165	164	162	166	165
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-17 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	131	126	125	126	131	128
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	128	123	142	146	118	131
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	166	165	165	158	165	164
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

AUSTIN, TX - USA | ANAHEIM, CA - USA | ANDERSON, SC - USA | GOLD COAST - AUSTRALIA | SUZHOU - CHINA

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81323

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-18 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	146	133	147	156	129	142
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	143	138	142	143	139	141
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	169	169	169	169	170	169
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-19 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	138	138	127	128	128	132
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	130	127	128	147	126	132
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	163	164	164	163	165	164
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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AUSTIN, TX - USA | ANAHEIM, CA - USA | ANDERSON, SC - USA | GOLD COAST - AUSTRALIA | SUZHOU - CHINA

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81323

PARAMETER	TEST REPLICATE NUMBER					MEAN
	1	2	3	4	5	
Sample ID: DS-20 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	133	132	137	141	130	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	152	155	153	147	146	151
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	163	163	163	162	164	163
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81342

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-21 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	123	113	118	148	128	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	124	114	130	101	125	119
Peel Incursion (%)	<5	60	20	100	<5	
Peel Locus Of Failure Code	SE	AD-BRK	AD-BRK	AD	SE	
Peel NSF Failure Code	FTB	FTB	FTB	NON-FTB	FTB	
Shear						Shear
Shear Strength (ppi)	157	162	157	173	169	164
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-23 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	140	152	144	125	150	142
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	126	127	122	127	128	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	168	170	171	171	170	170
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81434

PARAMETER	TEST REPLICATE NUMBER					MEAN
	1	2	3	4	5	
Sample ID: DS-21RE Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	138	135	130	135	137	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	136	140	143	136	131	137
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	171	170	170	170	173	171
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81391

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-21A10 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	130	112	142	143	97	125
Peel Incursion (%)	<5	100	<5	<5	20	
Peel Locus Of Failure Code	SE	AD	SE	SE	AD-BRK	
Peel NSF Failure Code	FTB	NON-FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	123	124	110	124	129	122
Peel Incursion (%)	<5	100	30	90	40	
Peel Locus Of Failure Code	SE	AD	AD-BRK	AD-BRK	AD-BRK	
Peel NSF Failure Code	FTB	NON-FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	176	182	175	178	177	178
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-26 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	148	152	139	143	143	145
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	125	127	125	127	125	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	164	166	163	167	162	164
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81330

PARAMETER	TEST REPLICATE NUMBER					MEAN
	1	2	3	4	5	
Sample ID: DS-22 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	143	137	136	130	133	136
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	130	143	134	136	137	136
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	174	175	175	174	176	175
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81342

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-24 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	131	134	133	136	121	131
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	121	120	121	122	122	121
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	142	142	139	143	141	141
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-25 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	133	127	120	140	128	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	131	135	126	139	127	132
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	159	161	157	159	155	158
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81391

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-27 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	140	134	131	135	133	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	141	136	130	131	123	132
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	155	149	153	155	153	153
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-28 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	123	121	119	120	117	120
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	118	129	111	112	112	116
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	150	148	148	151	149	149
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81391

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-29 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	111	112	111	112	114	112
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	116	122	118	118	119	119
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	158	160	155	160	159	158
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-30 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	142	137	144	113	139	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	141	118	116	111	112	120
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	153	157	150	153	152	153
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81404

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-31 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	134	137	135	146	138	138
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	142	139	135	140	133	138
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	174	175	179	176	178	176
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-32 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	141	140	140	143	143	141
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	139	137	137	136	135	137
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	175	179	177	175	178	177
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81404

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-33 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	127	117	117	116	126	121
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	122	128	130	129	122	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	151	155	148	155	150	152
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81423

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-34 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	131	140	131	136	137	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	120	124	126	133	139	128
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	176	178	175	175	177	176
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-35 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	141	145	132	138	147	141
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	139	131	142	134	139	137
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	174	174	172	174	176	174
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81423

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-36 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	136	144	135	144	140	140
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	129	138	130	139	130	133
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	169	169	169	171	172	170
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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**DESTRUCTIVE SEAM LABORATORY RESULTS
FOR SECONDARY GEOMEMBRANE**



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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80820

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-1 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	145	144	153	141	143	145
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	132	133	146	133	128	134
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	175	178	192	176	178	180
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-2 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	148	147	161	145	108	142
Peel Incursion (%)	<5	<5	<5	<5	40	
Peel Locus Of Failure Code	SE	SE	SE	SE	AD-BRK	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	154	156	161	156	153	156
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	162	167	183	167	168	169
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80820

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-3 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	142	145	158	145	150	148
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	134	134	153	124	131	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	171	173	187	172	172	175
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-4 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	142	149	162	146	145	149
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	149	146	161	146	151	151
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	177	176	198	179	179	182
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80820

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-5 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	147	140	147	118	141	139
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	143	140	157	143	145	146
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	168	176	196	178	180	180
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80942

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-6 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	140	142	134	143	127	137
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	150	150	136	132	147	143
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	162	162	161	161	161	161
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-7 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	148	146	151	142	155	148
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	139	142	143	145	145	143
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	164	163	164	163	169	165
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80942

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-8 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	140	135	134	137	140	137
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	129	132	130	138	132	132
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	166	166	165	166	168	166
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-9 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	127	146	140	136	139	138
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	122	125	128	123	123	124
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	165	163	163	164	167	164
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80942

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-10 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	109	102	113	108	129	112
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	147	127	125	123	125	129
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	163	163	161	162	166	163
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-11 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	127	127	140	129	126	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	126	127	140	133	125	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	158	159	176	159	161	163
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80942

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-12 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	128	135	138	126	123	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	130	128	140	135	118	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	158	152	177	160	160	161
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-13 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	113	114	129	120	117	119
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	130	130	152	129	112	131
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	150	150	171	151	149	154
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80942

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-14 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	144	148	162	144	145	149
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	137	150	155	146	144	146
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	169	169	190	170	172	174
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-15 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	127	136	120	116	120	124
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	113	111	112	113	114	113
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	146	145	147	147	150	147
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

AUSTIN, TX - USA | ANAHEIM, CA - USA | ANDERSON, SC - USA | GOLD COAST - AUSTRALIA | SUZHOU - CHINA

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80942

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-16 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	118	116	127	116	122	120
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	118	117	133	117	127	122
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	146	148	162	146	148	150
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-17 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	120	117	136	116	128	123
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	110	122	123	111	116	116
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	149	149	165	149	152	153
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80942

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-18 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	122	123	136	124	122	125
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	111	108	123	109	106	111
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	146	147	162	147	149	150
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80938

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-19 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	160	159	169	140	145	155
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	134	132	149	134	137	137
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	168	172	193	172	175	176
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-20 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	135	136	150	134	140	139
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	125	125	136	114	129	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	142	146	154	139	138	144
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80932

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-21 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	122	126	133	117	118	123
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	113	114	124	110	109	114
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	149	151	165	149	153	153
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-22 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	111	112	121	109	111	113
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	143	112	162	115	146	136
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	149	154	167	150	150	154
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80943

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-23 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	127	125	123	125	126	125
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	131	127	128	127	128	128
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	157	155	173	162	162	162
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-24 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	110	112	123	122	121	118
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	126	115	142	140	134	131
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	154	155	172	155	154	158
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80964

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-25 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	122	117	135	119	122	123
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	130	127	136	131	127	130
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	161	160	174	158	157	162
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-26 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	116	117	135	118	118	121
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	128	124	138	127	128	129
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	159	160	176	162	161	164
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80964

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-27 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	128	130	169	127	127	136
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	146	138	151	134	133	140
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	160	160	158	160	161	160
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-28 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	137	131	143	140	133	137
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	122	123	127	130	127	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	152	153	149	144	145	149
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 80964

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-29 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	140	141	137	141	142	140
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	145	142	139	139	140	141
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	178	176	175	176	181	177
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81004

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-30 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	120	122	135	124	124	125
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	128	128	137	131	129	131
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	147	146	159	147	148	149
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-31 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	114	119	131	123	113	120
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	114	115	119	110	110	114
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	148	148	163	148	149	151
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81045

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-32 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	121	119	131	129	128	126
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	143	143	140	139	135	140
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	155	156	156	158	156	156
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-33 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	117	119	120	119	128	121
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	114	115	113	114	114	114
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	148	149	148	149	151	149
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81045

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-34 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	135	134	120	132	132	131
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	137	145	141	142	139	141
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	142	148	138	137	134	140
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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**DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS****TRI Client: Weaver Consultants (seams)****Project: Lealand Landfill Unit IIB-C****Material: 60 mil. HDPE****SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)****TRI Log#: 81076**

PARAMETER	TEST REPLICATE NUMBER					MEAN
	1	2	3	4	5	
Sample ID: SDS-36 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	119	110	129	111	108	115
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	113	115	153	110	146	127
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	157	155	170	155	156	159
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81111

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-35 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	119	116	115	119	117	117
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	108	109	107	106	105	107
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	148	149	149	149	151	149
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: SDS-37 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	110	126	125	128	128	123
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	131	137	142	134	133	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	152	150	152	151	148	151
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

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DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81111

	TEST REPLICATE NUMBER					
PARAMETER	1	2	3	4	5	MEAN
Sample ID: SDS-38 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	131	136	133	141	135	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	114	126	124	127	107	120
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	152	154	156	156	151	154
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

AUSTIN, TX - USA | ANAHEIM, CA - USA | ANDERSON, SC - USA | GOLD COAST - AUSTRALIA | SUZHOU - CHINA

DESTRUCTIVE SEAM QUALITY ASSURANCE TEST RESULTS

TRI Client: Weaver Consultants (seams)

Project: Lealand Landfill Unit IIB-C

Material: 60 mil. HDPE

SAME DAY Peel and Shear (ASTM D 6392/GRI GM19/D 4437/NSF 54/882 mod.)

TRI Log#: 81709

TEST REPLICATE NUMBER						
PARAMETER	1	2	3	4	5	MEAN
Sample ID: DS-39 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	129	127	124	127	137	129
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	134	124	144	143	131	135
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	157	155	155	156	162	157
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	
Sample ID: DS-40 Weld: Heat Fusion						
Side: A						Peel A
Peel Strength (ppi)	128	130	128	128	127	128
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Side: B						Peel B
Peel Strength (ppi)	122	123	121	123	122	122
Peel Incursion (%)	<5	<5	<5	<5	<5	
Peel Locus Of Failure Code	SE	SE	SE	SE	SE	
Peel NSF Failure Code	FTB	FTB	FTB	FTB	FTB	
Shear						Shear
Shear Strength (ppi)	165	165	165	167	168	166
Shear Elongation @ Break (%)	>50	>50	>50	>50	>50	

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APPENDIX J

GEOMEMBRANE REPAIR LOG

Includes pages J-1 through J-25

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Repair Log for Primary Geomembrane	J-1
Repair Log for Secondary Geomembrane	J-13

REPAIR LOG FOR PRIMARY GEOMEMBRANE

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY REPAIR LOG

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-1	7/24/2024	BDL	EXTRUSION	5	HS	PH1-PH2-Existing; X SEAM	T	BDL	7/24/2024	P
R-2	7/24/2024	BDL	EXTRUSION	5	HS	PH1-PH2-Existing; X SEAM	CAP	BDL	7/24/2024	P
R-3	7/24/2024	BDL	EXTRUSION	5	HS	PH2 - PH3-Existing; E SIDE	T	BDL	7/24/2024	P
R-4	7/24/2024	BDL	EXTRUSION	5	HS	PH4 - PH5-Existing; X SEAM	T	BDL	7/24/2024	P
R-5	7/11/2024	BDL	EXTRUSION	5	HS	PH4 - PH5 - PH5A; X SEAM	T	BDL	7/24/2024	P
R-6	7/11/2024	BDL	EXTRUSION	5	HS	PH4 - PH5A; V Ditch	V - Ditch patch	-	-	P
R-7	7/11/2024	BDL	EXTRUSION	5	HS	PH5 - PH5A - PH6; X SEAM	T	BDL	7/24/2024	P
R-8	7/24/2024	BDL	EXTRUSION	5	HS	PH5 - PH6 Existing; X SEAM	T	BDL	7/24/2024	P
R-9	7/11/2024	BDL	EXTRUSION	5	HS	PH6 - PH7 Existing; X SEAM	T	BDL	7/24/2024	P
R-10	7/11/2024	BDL	EXTRUSION	5	HS	PH6 - PH7; V Ditch	V - Ditch patch	-	-	P
R-11	7/11/2024	BDL	EXTRUSION	5	HS	PH7 - PH8- Existing; CAP	CAP	BDL	7/24/2024	P
R-12	7/11/2024	BDL	EXTRUSION	5	HS	PH6-PH7; 50' N of S EOS	DS1	BDL	7/24/2024	P
R-13	7/11/2024	BDL	EXTRUSION	5	HS	PH8 - PH9 - EXISTING; X SEAM	T	BDL	7/24/2024	P
R-14	7/11/2024	BDL	EXTRUSION	5	HS	PH9 - Existing; 2' W of R26	Exist t	BDL	7/24/2024	P
R-15	7/11/2024	BDL	EXTRUSION	5	HS	PH9 - PH10; 45' S of N EOS	DS2	BDL	7/24/2024	P
R-16	7/11/2024	BDL	EXTRUSION	5	HS	PH9 - PH10; V Ditch	V - Ditch patch	-	-	P
R-17	7/11/2024	BDL	EXTRUSION	5	HS	PH10 - PH11; V Ditch	T	BDL	7/24/2024	P
R-18	7/11/2024	BDL	EXTRUSION	5	HS	PH10 - PH11 - EXISTING; X SEAM	T	BDL	7/24/2024	P
R-19	7/11/2024	BDL	EXTRUSION	5	HS	PH11 - PH12 - EXISTING; X SEAM	T	BDL	7/24/2024	P
R-20	7/11/2024	BDL	EXTRUSION	5	HS	PH12 - PH13: EXISTING; X SEAM	T	BDL	7/24/2024	P
R-21	7/11/2024	BDL	EXTRUSION	5	HS	PH13 - PH14 - EXISTING; X SEAM	V - ditch patch	-	-	P
R-22	7/11/2024	BDL	EXTRUSION	5	HS	PH13-PH14; S EOS > 3' N of S EOS	BO	BDL	7/24/2024	P
R-23	7/16/2024	BDL	EXTRUSION	5	MJ	PH14 -PH15 - EXISTING; X SEAM	T	BDL	7/24/2024	P
R-24	7/11/2024	BDL	EXTRUSION	5	HS	PH8-Existing; W EOS	DS3	BDL	7/24/2024	P
R-25	7/11/2024	BDL	EXTRUSION	5	HS	PH13 - PH14 - EXISTING : X SEAM	T	BDL	7/24/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY REPAIR LOG

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-26	7/11/2024	BDL	EXTRUSION	5	HS	PH9 - PH10 - exist; xseam	T	BDL	7/24/2024	P
R-27	7/11/2024	BDL	EXTRUSION	5	HS	PH8; 5' W of E EOS	EXISTING t	BDL	7/24/2024	P
R-28	7/11/2024	BDL	EXTRUSION	5	HS	PH6-Existing; 3' W of E EOS	BO	BDL	7/24/2024	P
R-29	7/24/2024	BDL	EXTRUSION	5	HS	PH2-Existing; 9' W of E EOS	Existing T	BDL	7/24/2024	P
R-30	7/16/2024	BDL	EXTRUSION	5	MJ	PH16-PH17; 60' N of S EOS	DS4	BDL	7/16/2024	P
R-31	7/16/2024	BDL	EXTRUSION	5	HS	PH17-PH18; 72' S of N EOS	BO	BDL	7/16/2024	P
R-32	7/16/2024	BDL	EXTRUSION	5	HS	PH19-PH20; 35' S of N EOS	DS5	BDL	7/16/2024	P
R-33	7/16/2024	BDL	EXTRUSION	5	HS	PH15 - PH16 - exist ; xseam	T	BDL	7/16/2024	P
R-34	7/16/2024	BDL	EXTRUSION	5	HS	PH16 - PH17 - Exist; xseam	T	BDL	7/16/2024	P
R-35	7/16/2024	BDL	EXTRUSION	5	HS	Ph17 - PH18 - exist; xseam	T	BDL	7/16/2024	P
R-36	7/16/2024	BDL	EXTRUSION	5	HS	PH18 - PH19 - exist; xseam	T	BDL	7/16/2024	P
R-37	7/16/2024	BDL	EXTRUSION	5	HS	PH19 - exist; xseam	Existing T	BDL	7/16/2024	P
R-38	7/16/2024	BDL	EXTRUSION	5	HS	PH19 - PH20 - exist; xseam	T	BDL	7/16/2024	P
R-39	7/16/2024	BDL	EXTRUSION	5	HS	PH20 - PH21 - exist; xseam	T	BDL	7/16/2024	P
R-40	7/16/2024	BDL	EXTRUSION	5	HS	PH21 - PH22; exist; xseam	T	BDL	7/16/2024	P
R-41	7/11/2024	BDL	EXTRUSION	5	HS	PH7; 6' NE of R9	Hole	BDL	7/24/2024	P
R-42	7/16/2024	BDL	EXTRUSION	5	MJ	PH20 - exist; xseam	Existing T	BDL	7/16/2024	P
R-43	7/16/2024	BDL	EXTRUSION	5	HS	PH20; 3' N W of R39	Hole	BDL	7/16/2024	P
R-44	7/16/2024	BDL	EXTRUSION	5	HS	PH21 - Exist; xseam	Existing T	BDL	7/16/2024	P
R-45	7/19/2024	BDL	EXTRUSION	5	HS	PH22 - PH23 ; CAP N EOS	CAP	BDL	7/20/2024	P
R-46	7/19/2024	BDL	EXTRUSION	5	HS	PH22 - PH23 - Exist; XSEAM	x seam	BDL	7/20/2024	P
R-47	7/19/2024	BDL	EXTRUSION	5	HS	PH23-Existing; 8' E of W EOS	Existing T	BDL	7/20/2024	P
R-48	7/19/2024	BDL	EXTRUSION	5	HS	PH23 - PH24 - exist; xseam	DS8	BDL	7/20/2024	P
R-49	7/19/2024	BDL	EXTRUSION	5	HS	PH23-PH24; 27' N of S EOS	DS6	BDL	7/20/2024	P
R-50	7/19/2024	BDL	EXTRUSION	5	HS	PH24 - PH25 - exist; xSEAM	T	BDL	7/20/2024	P

¹TI = Tie-in; EOS = End of Seam; BOS = Beginning of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY REPAIR LOG

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-51	7/19/2024	BDL	EXTRUSION	5	HS	PH25-Existing; X SEAM	Existing T	BDL	7/20/2024	P
R-52	7/19/2024	BDL	EXTRUSION	5	HS	PH25-PH26-Existing; X SEAM	T	BDL	7/20/2024	P
R-53	7/19/2024	BDL	EXTRUSION	5	HS	PH25-PH26; 35' N of S EOS	DS7	BDL	7/20/2024	P
R-54	7/19/2024	BDL	EXTRUSION	5	HS	PH26-Existing; 10' W of E EOS	Existing T	BDL	7/20/2024	P
R-55	7/19/2024	BDL	EXTRUSION	5	HS	PH26-PH27-Existing; X SEAM	T	BDL	7/20/2024	P
R-56	7/19/2024	BDL	EXTRUSION	5	HS	PH27-Existing; 10' W of E EOS	Existing T	BDL	7/20/2024	P
R-57	7/19/2024	BDL	EXTRUSION	5	HS	PH27; 8' N of R56	Role	BDL	7/20/2024	P
R-58	7/19/2024	BDL	EXTRUSION	5	HS	PH27-PH28-Existing; X SEAM	T	BDL	7/20/2024	P
R-59	7/20/2024	BDL	EXTRUSION	5	HS	PH28-Existing; 10' W of E EOS	Existing T	BDL	7/20/2024	P
R-60	7/20/2024	BDL	EXTRUSION	5	HS	PH28-PH29-Existing; X SEAM	T	BDL	7/20/2024	P
R-61	7/20/2024	BDL	EXTRUSION	5	HS	PH29-Existing; 9' W of E EOS	Existing T	BDL	7/20/2024	P
R-62	7/20/2024	BDL	EXTRUSION	5	HS	PH29-PH30-Existing; X SEAM	T	BDL	7/20/2024	P
R-63	7/20/2024	BDL	EXTRUSION	5	HS	PH30-Existing; 8' W of E EOS	Existing T	BDL	7/20/2024	P
R-64	7/20/2024	BDL	EXTRUSION	5	HS	PH30-PH31-Existing; X SEAM	T	BDL	7/20/2024	P
R-65	7/20/2024	BDL	EXTRUSION	5	HS	PH31-Existing; 9' W of E EOS	Existing T	BDL	7/24/2024	P
R-66	7/20/2024	BDL	EXTRUSION	5	HS	PH31-PH32-Existing; X SEAM	T	BDL	7/24/2024	P
R-67	7/20/2024	BDL	EXTRUSION	5	HS	PH32-PH33-Existing; X SEAM	T	BDL	7/24/2024	P
R-68	7/19/2024	BDL	EXTRUSION	5	HS	PH29-PH3.-PH30A; X SEAM	T	BDL	7/24/2024	P
R-69	7/19/2024	BDL	EXTRUSION	5	HS	PH30-PH30A-PH31; X SEAM	T DS9	BDL	7/24/2024	P
R-70	7/24/2024	BDL	EXTRUSION	5	HS	PH33-Existing;3' W of E EOS	Existing T	BDL	7/24/2024	P
R-71	7/24/2024	BDL	EXTRUSION	5	TH	E1-Existing; 58' CAP W EOS	CAP	BDL	7/25/2024	P
R-72	7/24/2024	BDL	EXTRUSION	5	TH	E1-Existing; 80' E of W EOS	BO	BDL	7/25/2024	P
R-73	7/24/2024	BDL	EXTRUSION	5	TH	E1-Existing; 154' E of W EOS	BO	BDL	7/24/2024	P
R-74	7/24/2024	BDL	EXTRUSION	5	TH	E1-Existing; E EOS	AIR	BDL	7/24/2024	P
R-75	7/24/2024	BDL	EXTRUSION	5	TH	E1-E2; Another Patch	ANCHOR	BDL	7/24/2024	P

¹TI = Tie-in; EOS = End of Seam; BOS = Beginning of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-76	7/24/2024	BDL	EXTRUSION	5	TH	E1-E2;89' W of E EOS	CUT	BDL	7/24/2024	P
R-77	7/24/2024	BDL	EXTRUSION	5	TH	PH33-E1-E2; E LOS	CAP	BDL	7/24/2024	P
R-78	7/24/2024	BDL	EXTRUSION	5	TH	PH33-E2-E3; SEAM CAP SEND	CAP	BDL	7/24/2024	P
R-79	7/24/2024	BDL	EXTRUSION	5	TH	E2-E3; ANCHOR PATCH	ANCHOR	BDL	7/24/2024	P
R-80	7/24/2024	BDL	EXTRUSION	5	TH	E3-E4; ANCHOR PATCH	ANCHOR	BDL	7/24/2024	P
R-81	7/27/2024	BDL	EXTRUSION	5	SN	E4-E5; Anchor Ditch Patch	ANCHOR	BDL	7/27/2024	P
R-82	7/24/2024	BDL	EXTRUSION	5	TH	E4; 51' W of E EOS & 1' N of S Edge	HOLE	BDL	7/24/2024	P
R-83	7/24/2024	BDL	EXTRUSION	5	TH	PH33-E3-E4; SEAM CAP N END	CAP	BDL	7/24/2024	P
R-84	7/24/2024	BDL	EXTRUSION	5	TH	PH33-E4-E5; X SEAM	AIR	BDL	7/24/2024	P
R-85	7/24/2024	BDL	EXTRUSION	5	TH	PH33-E5; V-Ditch Rep	V-DITCH	BDL	7/24/2024	P
R-86	7/24/2024	BDL	EXTRUSION	5	TH	E2-E3; 15' W of E EOS	DS10	BDL	7/24/2024	P
R-87	7/24/2024	BDL	EXTRUSION	5	TH	E3-E4; 80' W of E EOS	DS11	BDL	7/24/2024	P
R-88	7/19/2024	BDL	EXTRUSION	5	HS	PH24-Existing; 14' W of E EOS	Existing T	BDL	7/20/2024	P
R-89	7/24/2024	BDL	EXTRUSION	5	HS	PH24-Existing; X SEAM	Existing T	BDL	7/20/2024	P
R-90	7/24/2024	BDL	EXTRUSION	5	HS	PH3- Existing; 8' W of E EOS	Existing T	BDL	7/20/2024	P
R-91	7/25/2024	BDL	EXTRUSION	5	MJ	E2-E3; DS 10 B5	DS10 Fail	BDL	7/25/2024	P
R-92	7/25/2024	BDL	EXTRUSION	5	MJ	E2-E3; DS 10 A10	DS10 Fail	BDL	7/25/2024	P
R-93	8/3/2024	BDL	EXTRUSION	5	TD	PH1-B1-Existing; X SEAM	DS10 Fail	BDL	8/3/2024	P
R-94	8/3/2024	BDL	EXTRUSION	5	TD	B1-Existing; 45' S of N EOS	V-Ditch	BDL	8/7/2024	P
R-95	8/3/2024	BDL	EXTRUSION	5	TH	B1-Existing; 256' S of N EOS	BO	BDL	8/3/2024	P
R-96	8/7/2024	BDL	EXTRUSION	5	TH	S1-B1-Existing; X SEAM & CAP	DS12/DS12 B10	BDL	8/7/2024	P
R-97	8/3/2024	BDL	EXTRUSION	5	HS	B1-B2; 100 N of S EOS	DS13	BDL	8/7/2024	P
R-98	8/3/2024	BDL	EXTRUSION	5	TD	B1-B2-B2A; X SEAM	T	BDL	8/3/2024	P
R-99	8/3/2024	BDL	EXTRUSION	5	TD	B2-B2A-B3; X SEAM	T	BDL	8/3/2024	P
R-100	8/3/2024	BDL	EXTRUSION	5	TD	B3-B4; 147' N of S EOS	DS14	BDL	8/3/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-101	8/3/2024	BDL	EXTRUSION	5	TH	B4-B5; 142' S of N EOS	BO	BDL	8/3/2024	P
R-102	8/6/2024	BDL	EXTRUSION	5	TH	B4-B5-S4; X SEAM	T	BDL	8/7/2024	P
R-103	8/3/2024	BDL	EXTRUSION	5	HS	B5-B6; 20' N of S EOS	BO	BDL	8/3/2024	P
R-104	8/6/2024	BDL	EXTRUSION	5	HS	B5-B6; 250' N of S EOS	DS15	BDL	8/12/2024	P
R-105	8/6/2024	BDL	EXTRUSION	5	HS	S5-S6-B5-B6; X SEAM	X SEAM	BDL	8/7/2024	P
R-106	8/5/2024	BDL	EXTRUSION	5	HS	B7-B8; 5' S of N EOS	DS16	BDL	8/12/2024	P
R-107	8/5/2024	BDL	EXTRUSION	5	HS	B8-B9; 80' N of S EOS	DS17	BDL	8/12/2024	P
R-108	8/5/2024	BDL	EXTRUSION	5	HS	B9-B10; 150' S of N EOS	DS18	BDL	8/12/2024	P
R-109	8/5/2024	BDL	EXTRUSION	5	TH	B10-B11; 237' N of S EOS	BO	BDL	8/12/2024	P
R-110	8/5/2024	BDL	EXTRUSION	5	HS	B10-B11; 300' N of S EOS	DS19	BDL	8/12/2024	P
R-111	8/5/2024	BDL	EXTRUSION	5	HS	B11-B12; 275' S of N EOS	DS20	BDL	8/12/2024	P
R-112	8/7/2024	BDL	EXTRUSION	5	TH	S1-Existing; 40' S of N EOS	DS21	BDL	8/12/2024	P
R-113	8/7/2024	BDL	EXTRUSION	5	HS	S1-Existing; ANCHOR REP	ANCHOR	BDL	8/12/2024	P
R-114	8/7/2024	BDL	EXTRUSION	5	TH	S1-S2; 127' N of S EOS	BO	BDL	8/7/2024	P
R-115	8/7/2024	BDL	EXTRUSION	5	TH	S2-S3; 47' S of N EOS	BO	BDL	8/7/2024	P
R-116	8/7/2024	BDL	EXTRUSION	5	TH	S4-S5; ANCHOR REP	ANCHOR	BDL	8/7/2024	P
R-117	8/7/2024	BDL	EXTRUSION	5	HS	S6-S7; 17' S of N EOS	BO	BDL	8/10/2024	P
R-118	8/7/2024	BDL	EXTRUSION	5	HS	S5-S6; 10' S of N EOS	DS22	BDL	8/7/2024	P
R-119	8/7/2024	BDL	EXTRUSION	5	HS	S7-S8; 5' S of N EOS	BO	BDL	8/7/2024	P
R-120	8/7/2024	BDL	EXTRUSION	5	HS	S8-S9; 95' S of N EOS	DS23	BDL	8/7/2024	P
R-121	8/7/2024	BDL	EXTRUSION	5	HS	S8-S9; ANCHOR REP	ANCHOR	BDL	8/7/2024	P
R-122	8/7/2024	BDL	EXTRUSION	5	HS	S10-S11; 56' S of N EOS	BO	BDL	8/7/2024	P
R-123	8/7/2024	BDL	EXTRUSION	5	HS	S10-S11; 93' S of N EOS	BO	BDL	8/7/2024	P
R-124	8/6/2024	BDL	EXTRUSION	5	HS	S10; 6' E of R132	HOLE	BDL	8/7/2024	P
R-125	8/7/2024	BDL	EXTRUSION	5	HS	S11-S12; 110' N of S EOS	BO	BDL	8/7/2024	P

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**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
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PRIMARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-126	8/7/2024	BDL	EXTRUSION	5	HS	S12-S13; 13' S of N EOS	BO	BDL	8/7/2024	P
R-127	8/7/2024	BDL	EXTRUSION	5	HS	S12; 80' S of N EOS & 1' W of E EDGE	HOLE	BDL	8/12/2024	P
R-128	8/15/2024	BDL	EXTRUSION	5	HS	S12-S13; ANCHOR PATCH	ANCHOR	BDL	8/19/2024	P
R-129	8/6/2024	BDL	EXTRUSION	5	HS	S12-S13-B12-B13; X SEAM	X SEAM	BDL	8/7/2024	P
R-130	8/6/2024	BDL	EXTRUSION	5	HS	S11-B11-S12; X SEAM	T	BDL	8/7/2024	P
R-131	8/6/2024	BDL	EXTRUSION	5	HS	B11-B12-S12; X SEAM	T	BDL	8/7/2024	P
R-132	8/6/2024	BDL	EXTRUSION	5	HS	B10-B11-S10-S11; X SEAM	X SEAM	BDL	8/7/2024	P
R-133	8/6/2024	BDL	EXTRUSION	5	HS	S9-S10-B10-B9; X SEAM	X SEAM	BDL	8/7/2024	P
R-134	8/6/2024	BDL	EXTRUSION	5	HS	S8-S9-B8-B9; X SEAM	DS24	BDL	8/7/2024	P
R-135	8/6/2024	BDL	EXTRUSION	5	HS	S7-S8-B7-B8; X SEAM	X SEAM	BDL	8/7/2024	P
R-136	8/6/2024	BDL	EXTRUSION	5	HS	S7-B7; 13' E of W EOS	BO	BDL	8/7/2024	P
R-137	8/6/2024	BDL	EXTRUSION	5	HS	S6-S7-B6-B7; X SEAM	X SEAM	BDL	8/7/2024	P
R-138	8/6/2024	BDL	EXTRUSION	5	HS	S6-B6; 8' E of W EOS	BO	BDL	8/7/2024	P
R-139	8/6/2024	BDL	EXTRUSION	5	TH	S3-S4-B3-B4; X SEAM	X SEAM	BDL	8/7/2024	P
R-140	-	-	EXTRUSION	-	-	SAME AS R134 per QC records	DS24	-	-	-
R-141	8/7/2024	BDL	EXTRUSION	5	HS	S3-B3; 10' E of W EOS	BO	BDL	8/7/2024	P
R-142	8/7/2024	BDL	EXTRUSION	5	TH	S2-S3-B2-B3; X SEAM	X SEAM	BDL	8/7/2024	P
R-143	8/7/2024	BDL	EXTRUSION	5	TH	S1-S2-B1-B2; X SEAM	X SEAM	BDL	8/7/2024	P
R-144	8/7/2024	BDL	EXTRUSION	5	TH	S1-Existing; NORTH END 38'	CAP SEAM	BDL	8/7/2024	P
R-145	8/7/2024	BDL	EXTRUSION	5	TH	B1-B2A; 139' S of N EOS	HOLE	BDL	8/7/2024	P
R-146	8/7/2024	BDL	EXTRUSION	5	HS	S7-S8; ANCHOR REP	ANCHOR	BDL	8/7/2024	P
R-147	8/7/2024	BDL	EXTRUSION	5	HS	S10-S11; ANCHOR REP	ANCHOR	BDL	8/7/2024	P
R-148	8/9/2024	BDL	EXTRUSION	5	TH	B1-B2A; 139' S of N EOS	HOLE	BDL	8/9/2024	P
R-149	8/9/2024	BDL	EXTRUSION	5	IB	B1; 40' S of N EOS & 8' N of E EDGE to 109' S of N EOS & 17' W of E EDGE	WRINKLE	BDL	8/9/2024	P
R-150	8/9/2024	BDL	EXTRUSION	5	TH	B2A; 109' S of N EOS & 17' W of E Edge	WRINKLE	BDL	8/9/2024	P

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
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PRIMARY REPAIR LOG

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-151	8/9/2024	BDL	EXTRUSION	5	TH	B1-B2A; 70' S of N EOS	WRINKLE	BDL	8/9/2024	P
R-152	8/9/2024	BDL	EXTRUSION	5	TH	B1; 55' S of N EOS & 6' E of W EDGE	WRINKLE	BDL	8/9/2024	P
R-153	8/9/2024	BDL	EXTRUSION	5	TH	B1; 40' S of N EOS & 8' W of E EDGE	WRINKLE PATCH	BDL	8/9/2024	P
R-154	8/9/2024	BDL	EXTRUSION	5	IB	B1; 33' S of N EOS & 5' W of E EDGE	WRINKLE	BDL	8/9/2024	P
R-155	8/9/2024	BDL	EXTRUSION	5	TH	B1; 33' S of N EOS & 5' W of E EDGE	WRINKLE PATCH	BDL	8/9/2024	P
R-156	8/9/2024	BDL	EXTRUSION	5	TH	B1; 85' S of N EOS & 7' W of E EDGE	WRINKLE PATCH	BDL	8/9/2024	P
R-157	8/9/2024	BDL	EXTRUSION	5	IB	B1; 70' S of N EOS & 1' W of E EDGE	WRINKLE	BDL	8/9/2024	P
R-158	8/9/2024	BDL	EXTRUSION	5	TH	B1; 70' S of N EOS & 1' W of E EDGE	WRINKLE PATCH	BDL	8/9/2024	P
R-159	8/9/2024	BDL	EXTRUSION	5	TH	B1; 90' S of N EOS & 1' W of E EDGE	WRINKLE PATCH	BDL	8/9/2024	P
R-160	8/9/2024	BDL	EXTRUSION	5	TH	S1; 213' S of N EOS & 1' W of E EDGE	WRINKLE PATCH	BDL	8/9/2024	P
R-161	8/9/2024	BDL	EXTRUSION	5	TH	B1-Existing; 25' N of S EOS	DS12 B20	BDL	8/9/2024	P
R-162	8/12/2024	BDL	EXTRUSION	5	TH	B13-B14; 315' S of N EOS	DS26	BDL	8/12/2024	P
R-163	8/12/2024	BDL	EXTRUSION	5	IB	B14-B15-B15A; X SEAM	T	BDL	8/12/2024	P
R-164	8/12/2024	BDL	EXTRUSION	5	TD	B14-B15A-B15B; X SEAM	T	BDL	8/12/2024	P
R-165	8/12/2024	BDL	EXTRUSION	5	IB	B15-B15A-B16; X SEAM	T	BDL	8/12/2024	P
R-166	8/12/2024	BDL	EXTRUSION	5	IB	B15A; 4' NE of R165	HOLE	BDL	8/12/2024	P
R-167	8/12/2024	BDL	EXTRUSION	5	TD	B15A-B15B-B16; X SEAM	T; DS27	BDL	8/12/2024	P
R-168	8/12/2024	BDL	EXTRUSION	5	HS	B18-B19-B19A; X SEAM	T	BDL	8/12/2024	P
R-169	8/12/2024	BDL	EXTRUSION	5	HS	B17-B18; 131' S of N EOS	BO	BDL	8/12/2024	P
R-170	8/12/2024	BDL	EXTRUSION	5	HS	B19-B19A-B20; X SEAM	T	BDL	8/12/2024	P
R-171	8/12/2024	BDL	EXTRUSION	5	HS	B19A-B20-B20A; X SEAM	T	BDL	8/12/2024	P
R-172	8/12/2024	BDL	EXTRUSION	5	HS	B17-B18; 200' S of N EOS	DS28	BDL	8/12/2024	P
R-173	8/12/2024	BDL	EXTRUSION	5	TD	B18-B19A; 150' N of S EOS	DS29	BDL	8/22/2024	P
R-174	8/14/2024	BDL	EXTRUSION	5	MJ	B19-B20-W10; X SEAM	DS30	BDL	8/15/2024	P
R-175	8/12/2024	BDL	EXTRUSION	5	HS	B20-B20A-B21; X SEAM	T	BDL	8/12/2024	P

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LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY REPAIR LOG

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-176	8/13/2024	BDL	EXTRUSION	5	HS	B13-B14-S13-S14; X SEAM	X SEAM	BDL	8/19/2024	P
R-177	8/13/2024	BDL	EXTRUSION	5	HS	B14-B15-S14-S15; X SEAM	DS31	BDL	8/19/2024	P
R-178	8/15/2024	BDL	EXTRUSION	5	HS	S15-S16; ANCHOR REP	ANCHOR	BDL	8/19/2024	P
R-179	8/13/2024	BDL	EXTRUSION	5	HS	B15-B16-S15-S16; X SEAM	X SEAM	BDL	8/19/2024	P
R-180	8/13/2024	BDL	EXTRUSION	5	HS	B16-B17-S16-S17; X SEAM	X SEAM	BDL	8/19/2024	P
R-181	8/13/2024	BDL	EXTRUSION	5	HS	B17-B18-S17-S18; X SEAM	X SEAM; DS33	BDL	8/19/2024	P
R-182	8/13/2024	BDL	EXTRUSION	5	TH	S18-S19; 46' S of N EOS	BO	BDL	8/19/2024	P
R-183	8/13/2024	BDL	EXTRUSION	5	HS	B18-S18-S19-W1-W4; X SEAM	X	BDL	8/19/2024	P
R-184	8/13/2024	BDL	EXTRUSION	5	TH	S196-S20; DS32 5' N of S EOS	DS32	BDL	8/15/2024	P
R-185	8/14/2024	BDL	EXTRUSION	5	HS	S22-S21; ANCHOR PATCH	ANCHOR	BDL	8/19/2024	P
R-186	8/14/2024	BDL	EXTRUSION	5	HS	S22-W3; ANCHOR PATCH	ANCHOR	BDL	8/19/2024	P
R-187	8/13/2024	BDL	EXTRUSION	5	TH	S21-S22-W2-W3; X SEAM	X	BDL	8/19/2024	P
R-188	8/13/2024	BDL	EXTRUSION	5	TH	S20-S21-W1-W2; X SEAM	X	BDL	8/19/2024	P
R-189	8/13/2024	BDL	EXTRUSION	5	TH	W1-W2; E EOS	AIR	BDL	8/19/2024	P
R-190	8/13/2024	BDL	EXTRUSION	5	TH	S19-S20-W1-W4; X SEAM	CAP	BDL	8/19/2024	P
R-191	-	-	EXTRUSION	-	-	SAME AS R179 Per QC Documents	-	-	-	-
R-192	8/13/2024	BDL	EXTRUSION	5	HS	B18-B19-S18-S19; X SEAM	T	BDL	8/15/2024	P
R-193	-	-	EXTRUSION	-	-	SAME AS R181 per QC Documents	DS33	-	-	-
R-194	8/13/2024	BDL	EXTRUSION	5	HS	B19-W4-W5; X SEAM	T	BDL	8/15/2024	P
R-195	8/14/2024	BDL	EXTRUSION	5	MJ	B19-W5-W6; X SEAM	T	BDL	8/15/2024	P
R-196	8/14/2024	BDL	EXTRUSION	5	MJ	B19-W6-W7; X SEAM	T	BDL	8/15/2024	P
R-197	8/14/2024	BDL	EXTRUSION	5	MJ	B19-W7-W8; X SEAM	T	BDL	8/15/2024	P
R-198	8/14/2024	BDL	EXTRUSION	5	MJ	W5-W6; 10' W of E EOS	DS34	BDL	8/15/2024	P
R-199	8/14/2024	BDL	EXTRUSION	5	MJ	W8-W9-B19; X SEAM	T	BDL	8/15/2024	P
R-200	8/14/2024	BDL	EXTRUSION	5	MJ	W9-W10-B19; X SEAM	T	BDL	8/15/2024	P

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**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-201	8/15/2024	BDL	EXTRUSION	5	HS	B20-W10-W11; X SEAM	T	BDL	8/15/2024	P
R-202	8/15/2024	BDL	EXTRUSION	5	HS	B20-W11-W12; X SEAM	T	BDL	8/15/2024	P
R-203	8/15/2024	BDL	EXTRUSION	5	HS	B20-W12-W13; X SEAM	T	BDL	8/15/2024	P
R-204	8/15/2024	BDL	EXTRUSION	5	TH	W12-W13; 25' E of W EOS	DS35	BDL	8/15/2024	P
R-205	8/15/2024	BDL	EXTRUSION	5	SN	W13-W14-W14A; X SEAM	T	BDL	8/15/2024	P
R-206	8/15/2024	BDL	EXTRUSION	5	SN	W14-W14A-W15; X SEAM	T	BDL	8/15/2024	P
R-207	8/15/2024	BDL	EXTRUSION	5	SN	B20-W13-W14A; X SEAM	T	BDL	8/15/2024	P
R-208	8/15/2024	BDL	EXTRUSION	5	SN	W14A-B20-W15; X SEAM	T	BDL	8/15/2024	P
R-209	8/15/2024	BDL	EXTRUSION	5	TH	W15-W16; 16' W of E EOS	CAP	BDL	8/15/2024	P
R-210	8/15/2024	BDL	EXTRUSION	5	SN	W15-W16-B21; X SEAM	T	BDL	8/15/2024	P
R-211	8/15/2024	BDL	EXTRUSION	5	TH	W14-W15; ANCHOR REPAIR	ANCHOR	BDL	8/15/2024	P
R-212	-	-	EXTRUSION	-	-	Capped by R224	anchor rep	-	-	-
R-213	8/15/2024	BDL	EXTRUSION	5	TH	B20-B21-W15; X SEAM	T	BDL	8/15/2024	P
R-214	8/14/2024	BDL	EXTRUSION	5	MJ	B20-W10; 12' N of S EOS	AIR	BDL	8/15/2024	P
R-215	8/14/2024	BDL	EXTRUSION	5	MJ	B18-B19-W8; X SEAM	T	BDL	8/15/2024	P
R-216	8/14/2024	BDL	EXTRUSION	5	MJ	B19-W8; 10' N of S EOS	BO	BDL	8/15/2024	P
R-217	8/14/2024	BDL	EXTRUSION	5	HS	W1-W4; 16' E of W EOS	AIR	BDL	8/15/2024	P
R-218	8/14/2024	BDL	EXTRUSION	5	HS	W1-W4; 18' W of E EOS	AIR	BDL	8/15/2024	P
R-219	8/14/2024	BDL	EXTRUSION	5	MJ	W1-W4; ANCHOR REP	ANCHOR	BDL	8/15/2024	P
R-220	8/14/2024	BDL	EXTRUSION	5	MJ	W4-W5; ANCHOR REP	ANCHOR	BDL	8/15/2024	P
R-221	8/13/2024	BDL	EXTRUSION	5	TH	S21-S22-W3; X SEAM	X SEAM	BDL	8/19/2024	P
R-222	8/15/2024	BDL	EXTRUSION	5	HS	S2-S3; 20' S of N EOS	NEW DS21	BDL	8/15/2024	P
R-223	8/19/2024	BDL	EXTRUSION	5	SN	S19; 10' E of R188	ROCK REP	BDL	8/19/2024	P
R-224	8/23/2024	BDL	EXTRUSION	5	TH/HS	W5-W6-W7-W8-W9; ANCHOR FLAP	PANEL	BDL	8/23/2024	P
R-225	8/23/2024	BDL	EXTRUSION	5	SN/TD	W9-W10-W11-W12-W13-W14; ANCHOR FLAP	PANEL	BDL	8/23/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-226	8/14/2024	BDL	EXTRUSION	5	MJ	W9; 94' W of E EOS & 1' S of EDGE	HOLE	BDL	8/15/2024	P
R-227	8/14/2024	BDL	EXTRUSION	5	MJ	W9; 89' W of E EOS & 1' S of EDGE	HOLE	BDL	8/15/2024	P
R-228	8/15/2024	BDL	EXTRUSION	5	TD	S1-Existing; E LOS	SEAM CAP	BDL	8/15/2024	P
R-229	8/20/2024	BDL	EXTRUSION	5	TH	S13; ANCHOR REP E WOP	ANCHOR	BDL	8/20/2024	P
R-230	8/20/2024	BDL	EXTRUSION	5	SN	S17; ANCHOR REP E WOP	ANCHOR	BDL	8/20/2024	P
R-231	8/26/2024	BDL	EXTRUSION	69	IB	B20; 22' S of N EDGE PANEL; 8' W of E EDGE of PANEL; 12' E of R213	WRINKLE	BDL	Air Test Doc	P
R-232	8/26/2024	BDL	EXTRUSION	5	TH	B20; 22' S of N EDGE PANEL; 8' W of E EDGE of PANEL	HOLE	BDL	8/27/2024	P
R-233	8/26/2024	BDL	EXTRUSION	5	TH	B20; 12' E of R213	HOLE	BDL	8/27/2024	P
R-234	8/15/2024	BDL	EXTRUSION	5	TH	W15-W16; 68' W of E EOS > W EOS	DS36/CAP	BDL	8/15/2024	P
R-235	8/26/2024	BDL	EXTRUSION	5	IB	B21- W16-W17; E EOS > 35' W of E EOS	CAP	BDL	8/15/2024	P
R-236	8/26/2024	BDL	EXTRUSION	5	IB	B21-W17; N EOS	BO	BDL	8/15/2024	P
R-237	8/26/2024	BDL	EXTRUSION	5	IB/TH	W17-W18; E LOS	CAP	BDL	8/26/2024	P
R-238	8/26/2024	BDL	EXTRUSION	5	IB	W17-B21; 8' N of S EOS	CUT	BDL	8/26/2024	P
R-239	8/26/2024	BDL	EXTRUSION	5	IB	W18-W19-B21; X SEAM	T	BDL	8/26/2024	P
R-240	8/26/2024	BDL	EXTRUSION	5	IB	W19-W20-B21; X SEAM	T	BDL	8/26/2024	P
R-241	8/26/2024	BDL	EXTRUSION	5	IB	W20-W21-B21; X SEAM	T	BDL	8/26/2024	P
R-242	8/26/2024	BDL	EXTRUSION	5	IB	W21-W22-B21; X SEAM	T	BDL	8/26/2024	P
R-243	8/26/2024	BDL	EXTRUSION	5	TH	W21-W22; 85' E of W EOS	BO	BDL	8/26/2024	P
R-244	8/27/2024	BDL	EXTRUSION	5	MJ/TH	W14-W15-W16-W17; ANCVHOR REPAIR	ANCHOR	BDL	8/27/2024	P
R-245	8/27/2024	BDL	EXTRUSION	5	MJ	W18-W19; ANCHOR REP	ANCHOR	BDL	8/27/2024	P
R-246	8/27/2024	BDL	EXTRUSION	5	MJ	W20-W21; ANCHOR REP	ANCHOR	BDL	8/27/2024	P
R-247	8/27/2024	BDL	EXTRUSION	5	MJ	W12-W22; ANCHOR REP	ANCHOR	BDL	8/27/2024	P
R-248	8/29/2024	BDL	EXTRUSION	5	IB	W23-W24B-W24A; X SEAM	X SEAM	BDL	8/29/2024	P
R-249	8/29/2024	BDL	EXTRUSION	5	IB	W23-W24A-W24; X SEAM	X SEAM	BDL	8/29/2024	P
R-250	8/11/2024	BDL	EXTRUSION	5	IB	B3-B4; N EOS	DS12A	BDL	8/11/2024	P

¹T1 = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
PRIMARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-251	9/12/2024	BDL	EXTRUSION	5	MJ	PH1-B1-B22A; X SEAM	X SEAM	BDL	9/12/2024	P
R-252	9/12/2024	BDL	EXTRUSION	5	MJ	B1-B2A-B22A; XSEAM	X SEAM	BDL	9/12/2024	P
R-253	9/12/2024	BDL	EXTRUSION	5	MJ	B2A-B3-B22A;X SEAM	X SEAM	BDL	9/12/2024	P
R-254	9/12/2024	BDL	EXTRUSION	5	MJ	B3-B4-B22A; X SEAM	X SEAM	BDL	9/12/2024	P
R-255	9/12/2024	BDL	EXTRUSION	5	MJ	B4-B5-B22A; X SEAM	X SEAM	BDL	9/12/2024	P
R-256	9/12/2024	BDL	EXTRUSION	5	MJ	B5-B6-B22A; X SEAM	X SEAM	BDL	9/12/2024	P
R-257	9/12/2024	BDL	EXTRUSION	5	MJ	B6-B7-B22A; X SEAM	X SEAM	BDL	9/12/2024	P
R-258	9/12/2024	BDL	EXTRUSION	5	MJ	B7-B8-B22A; X SEAM	X SEAM	BDL	9/12/2024	P
R-259	9/12/2024	BDL	EXTRUSION	5	MJ	B8-B22-B22A; X SEAM	X SEAM	BDL	9/12/2024	P
R-260	9/12/2024	BDL	EXTRUSION	5	MJ	B8-B9-B22; X SEAM	X SEAM	BDL	9/12/2024	P
R-261	9/12/2024	BDL	EXTRUSION	5	MJ	B9-B22 7' W OF E EOS	BO	BDL	9/12/2024	P
R-262	9/12/2024	BDL	EXTRUSION	5	MJ	B9-B10-B22; X SEAM	X SEAM	BDL	9/12/2024	P
R-263	9/12/2024	BDL	EXTRUSION	5	MJ	B10-B11-B22	X SEAM	BDL	9/12/2024	P
R-264	9/12/2024	BDL	EXTRUSION	5	MJ	B11-B12-B22	X SEAM	BDL	9/12/2024	P
R-265	9/12/2024	BDL	EXTRUSION	5	MJ	B22-B22A-B23A; X SEAM	X SEAM	BDL	9/12/2024	P
R-266	9/12/2024	BDL	EXTRUSION	5	MJ	B22-B23-B23A; X SEAM	X SEAM	BDL	9/12/2024	P
R-267	9/12/2024	BDL	EXTRUSION	5	MJ	B13-B14-B22; X SEAM	X SEAM	BDL	9/12/2024	P
R-268	9/12/2024	BDL	EXTRUSION	5	MJ	B12-B13-B22; X SEAM	X SEAM	BDL	9/12/2024	P
R-269	9/12/2024	BDL	EXTRUSION	5	MJ	B14-B22-B23; X SEAM	X SEAM	BDL	9/12/2024	P
R-270	9/12/2024	BDL	EXTRUSION	5	MJ	PH1-B22A-B23A; X SEAM	X SEAM	BDL	9/12/2024	P
R-271	8/26/2024	BDL	EXTRUSION	5	MJ	B21-W22-W23; X SEAM	X SEAM	BDL	8/26/2024	P
R-272	8/26/2024	BDL	EXTRUSION	5	MJ	W23-B21-W24B; X SEAM	X SEAM	BDL	8/26/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

REPAIR LOG FOR SECONDARY GEOMEMBRANE

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-1	6/12/2024	BDL	X	5	JL	S1 Exist ; 1' S OF N EOS	BO	BDL	6/17/2024	P
R-2	6/12/2024	BDL	X	5	JL	13' S of N EOS ; S1 Exist	BO	BDL	6/17/2024	P
R-3	6/12/2024	BDL	X	5	JL	SDS 1 Location ; S1 Exist	DS	BDL	6/17/2024	P
R-4	6/12/2024	BDL	X	5	JL	94' N of S EOS ; S1 -S1	BO	BDL	6/17/2024	P
R-5	6/12/2024	BDL	X	5	JL	86' N of S EOS ; S1 - S2	BO	BDL	6/17/2024	P
R-6	6/12/2024	BDL	X	5	JL	Anchor REP ; S1 - Exisiting	ANCHOR REP	BDL	6/17/2024	P
R-7	6/12/2024	BDL	X	5	JL	23' N OF S EOS ; S4 - S5	BO	BDL	6/20/2024	P
R-8	6/12/2024	BDL	X	5	JL	95' S OF N EOS ; S5-S6	BO	BDL	6/20/2024	P
R-9	6/12/2024	BDL	X	5	JL	S6 - S7 - S7A; X SEAM	X SEAM	BDL	6/17/2024	P
R-10	6/12/2024	BDL	X	5	JL	SDS 2 Location ; S7 -S7A	DS	BDL	6/17/2024	P
R-11	6/12/2024	BDL	X	5	JL	S7 - S7A -S8; X Seam	X SEAM	BDL	6/17/2024	P
R-12	6/12/2024	BDL	X	5	JL	50' S of N EOS ; S7 - S8	BO	BDL	6/21/2024	P
R-13	6/12/2024	BDL	X	5	JL	20' N of S EOS ; S8 -S9	BO	BDL	6/21/2024	P
R-14	6/12/2024	BDL	X	5	JL	ANCHOR REP ; S8 - S9	BO	BDL	6/21/2024	P
R-15	6/12/2024	BDL	X	5	JL	34' N of S EOS; S8 - S9	BO	BDL	6/21/2024	P
R-16	6/12/2024	BDL	X	5	JL	SDS 3 Location ; S - S10 - S11	DS	BDL	6/17/2024	P
R-17	6/13/2024	BDL	X	5	JL	S11 - S11A - S12 ; X SEAM	X SEAM	BDL	6/17/2024	P
R-18	6/13/2024	BDL	X	5	JL	74' S of N EOS ; S12 - S13	BO	BDL	6/17/2024	P
R-19	6/13/2024	BDL	X	5	JL	24' N of S End of Panel ; S12	CUT	BDL	6/20/2024	P
R-20	6/13/2024	BDL	X	5	JL	7' S of N EOS ; S13- S14	BO	BDL	6/17/2024	P
R-21	6/13/2024	BDL	X	5	JL	35' S of N EOS ; S16 -S17	CUT	BDL	6/20/2024	P
R-22	6/13/2024	BDL	X	5	JL	30' N of S EOS ; S16	ROCK	BDL	6/15/2024	P
R-23	6/13/2024	BDL	X	5	JL	S21 - S22 - W4 ; X SEAM	X SEAM	BDL	6/15/2024	P
R-24	6/14/2024	BDL	X	5	JL	S22/W4 ; ANCHOR REP	HOLE	BDL	6/15/2024	P
R-25	6/14/2024	BDL	X	5	JL	S21 -W3 -W4 ; X SEAM	X SEAM	BDL	6/15/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-26	6/14/2024	BDL	X	5	JL	S20 - S21 - W3 ; X SEAM	X SEAM	BDL	6/15/2024	P
R-27	6/14/2024	BDL	X	5	JL	S20 - W2 - W3 ; X SEAM	X SEAM	BDL	6/15/2024	P
R-28	6/14/2024	BDL	X	5	JL	S20 ; ROCK REP 12' S of R29	ROCK	BDL	6/15/2024	P
R-29	6/14/2024	BDL	X	5	JL	S19 - S20 - W1 - W2 ; SDS6 X SEAM	X SEAM	BDL	6/15/2024	P
R-30	6/14/2024	BDL	X	5	JL	W3 - W4 ; ANCHOR REP	HOLE	BDL	6/15/2024	P
R-31	6/14/2024	BDL	X	5	JL	W3/W2 ; ANCHOR REP	HOLE	BDL	6/15/2024	P
R-32	6/14/2024	BDL	X	5	JL	S18 - S19 - B1 - W1 ; X SEAM	X SEAM	BDL	6/15/2024	P
R-33	6/15/2024	BDL	X	5	JL	S17 - S18 - B1 ; X SEAM	X SEAM	BDL	6/15/2024	P
R-34	6/15/2024	BDL	X	5	JL	S16 -S17 - B1 ; X SEAM	X SEAM	BDL	6/15/2024	P
R-35	6/15/2024	BDL	X	5	JL	S15 - S16 - B1 ; X SEAM	X SEAM	BDL	6/15/2024	P
R-36	6/15/2024	BDL	X	5	JL	S14 -S15 - B1 ; X SEAM	X SEAM	BDL	6/15/2024	P
R-37	6/15/2024	BDL	X	5	JL	W1-W2-B1; X-SEAM	X SEAM	BDL	6/20/2024	P
R-38	6/15/2024	BDL	X	5	JL	W5 - W6 - B1 - B2; X SEAM	X SEAM	BDL	6/15/2024	P
R-39	6/18/2024	BDL	X	5	JL	B1 -B2 -B1A -B2A ; X SEAM	X SEAM	BDL	6/21/2024	P
R-40	6/18/2024	BDL	X	5	JL	B2A ; 6' N of R-39	HOLE	BDL	6/21/2024	P
R-41	6/18/2024	BDL	X	5	JL	B2A ; 5' E of R-40	HOLE	BDL	6/21/2024	P
R-42	6/17/2024	BDL	X	5	JL	S13 - B1 - B1A ; X SEAM	X SEAM	BDL	6/20/2024	P
R-43	6/17/2024	BDL	X	5	JL	S12 - S13 - B1A ; X SEAM	X SEAM	BDL	6/20/2024	P
R-44	6/17/2024	BDL	X	5	JL	S11A -S12 - B1A; X SEAM	X SEAM	BDL	6/20/2024	P
R-45	6/17/2024	BDL	X	5	JL	S10 - S11A -B1A ; X SEAM	X SEAM	BDL	6/20/2024	P
R-46	6/17/2024	BDL	X	5	JL	S9 -S10 -B1A; X SEAM	X SEAM	BDL	6/20/2024	P
R-47	6/17/2024	BDL	X	5	JL	S8- S9 -B1A; X SEAM	X SEAM	BDL	6/20/2024	P
R-48	6/17/2024	BDL	X	5	JL	S7A -S8 - B1A ; X SEAM	X SEAM	BDL	6/20/2024	P
R-49	6/17/2024	BDL	X	5	JL	S6 -S7A - B1A ; X SEAM	X SEAM	BDL	6/20/2024	P
R-50	6/17/2024	BDL	X	5	JL	S5 -S6 -B1A ; X SEAM	X SEAM	BDL	6/20/2024	P

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**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-51	6/20/2024	BDL	X	5	TH	S4 - S5 -B1A ; X SEAM	X SEAM	BDL	6/20/2024	P
R-52	6/20/2024	BDL	X	5	TH	S3 -S4 -B1A ; X SEAM	X SEAM	BDL	6/20/2024	P
R-53	6/20/2024	BDL	X	5	TH	S2 -S3 -B1A ; X SEAM	X SEAM	BDL	6/20/2024	P
R-54	6/20/2024	BDL	X	5	TH	S1 -S2 - B1A ; X SEAM	X SEAM	BDL	6/20/2024	P
R-55	6/20/2024	BDL	X	5	TH	S1 -B1A - EXISTING ; X SEAM	X SEAM	BDL	6/20/2024	P
R-56	6/20/2024	BDL	X	5	TH	B1A - B2A - EXISTING ; X SEAM	X SEAM	BDL	6/22/2024	P
R-57	6/20/2024	BDL	X	5	IB	W6 - W7 -B2 -B3 ; X SEAM	X SEAM	BDL	6/22/2024	P
R-58	6/20/2024	BDL	X	5	JL	B2A - B2 -B3 ; X SEAM	X SEAM	BDL	6/20/2024	P
R-59	6/20/2024	BDL	X	5	JL	B2A -B3 ; 92' E of W EOS	BO	BDL	6/20/2024	P
R-60	6/20/2024	BDL	X	5	JL	B2A - B3A ; 11' W of E EOS	SDS 10	BDL	6/20/2024	P
R-61	6/20/2024	BDL	X	5	IB	W7 -W8 - B3 - B4 ; SDS 11 X SEAM	X SEAM	BDL	6/22/2024	P
R-62	6/20/2024	BDL	X	5	IB	B3 -B4 ; 58' E of W EOS	X SEAM	BDL	6/22/2024	P
R-63	6/20/2024	BDL	X	5	IB	B3 -B4; 95' E of W EOS	AIR	BDL	6/21/2024	P
R-64	6/14/2024	BDL	X	5	IB	ANCHOR REP ;L S14 - S15	BO	BDL	6/15/2024	P
R-65	6/13/2024	BDL	X	5	IB	12' E of R66 ; S16	ROCK REP	BDL	6/15/2024	P
R-66	6/13/2024	BDL	X	5	IB	SDS 5 LOCATION ; S16 -S17	PS	BDL	6/15/2024	P
R-67	6/14/2024	BDL	X	5	IB	S17 -S18 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-68	6/20/2024	BDL	X	5	IB	B5 ; 4' N of R87	ROCK	BDL	6/22/2024	P
R-69	6/20/2024	BDL	X	5	IB	B5 ; 4' E of R68	ROCK	BDL	6/22/2024	P
R-70	6/20/2024	BDL	X	5	TD	W9 - W10 - B5 - B6 ; X SEAM	X SEAM	BDL	6/22/2024	P
R-71	6/20/2024	BDL	X	5	JL	B5 -B6; 273' W of E EOS	AIR	BDL	6/22/2024	P
R-72	6/20/2024	BDL	X	5	JL	B5 -B6 ; 180' W of E EOS	SDS 13	BDL	6/21/2024	P
R-73	6/20/2024	BDL	X	5	JL	B5 -B6 ; 100' W of E EOS	BO	BDL	6/21/2024	P
R-74	6/20/2024	BDL	X	5	JL	B2A - B3A EXISTING; X SEAM	X SEAM	BDL	6/20/2024	P
R-75	6/20/2024	BDL	X	5	JL	B3A - B4 -B5 ; EXISITING X SEAM and CAP	X SEAM	BDL	6/20/2024	P

¹TI = Tie-in; EOS = End of Seam; BOS = Beginning of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-76	6/20/2024	BDL	X	5	JL	B5 - B6 EXISTING ; X SEAM	X SEAM	BDL	6/20/2024	P
R-77	6/21/2024	BDL	X	5	IB	W10 - W11 ; 88' to 44' E of W EOS	CAP	BDL	7/2/2024	P
R-78	6/20/2024	BDL	X	5	TD	W10 - W11 - B6 -B7 ; X SEAM	X SEAM	BDL	7/2/2024	P
R-79	6/20/2024	BDL	X	5	TD	B6 -B7 ; 23' E of W EOS	BO	BDL	6/22/2024	P
R-80	6/20/2024	BDL	X	5	JL	B6 -B7 ; 67' E of W EOS	AIR	BDL	6/22/2024	P
R-81	6/20/2024	BDL	X	5	JL	B6 -B7 ; 25' E of W EOS	AIR	BDL	6/21/2024	P
R-82	6/20/2024	BDL	X	5	JL	B6 -B7 ; 326' E of W EOS	BO	BDL	6/200/24	P
R-83	6/20/2024	BDL	X	5	JL	B6 -B7 ; SDS 15 Location	DS	BDL	6/20/2024	P
R-84	6/20/2024	BDL	X	5	JL	B6 -B7 - Existing ; X SEAM	X SEAM	BDL	6/20/2024	P
R-85	6/15/2024	BDL	X	5	JL	S13 - 14 - B1; X SEAM	X SEAM	BDL	6/15/2024	P
R-86	6/15/2024	BDL	X	5	JL	S14 -S15 ; SDS 4 Location	SDS4	BDL	6/20/2024	P
R-87	6/20/2024	BDL	X	5	IB	W8 -W9 - B4 - B5 ; X SEAM	X SEAM	BDL	6/22/2024	P
R-88	6/20/2024	BDL	X	5	IB	B5 ; 4' E of R69	ROCK	BDL	6/22/2024	P
R-89	6/20/2024	BDL	X	5	JL	B7 -B8 - Exisiting ; X SEAM	X SEAM	BDL	6/20/2024	P
R-90	6/20/2024	BDL	X	5	JL	B8 -B9 - Exisiting ; X SEAM	X SEAM	BDL	6/21/2024	P
R-91	6/20/2024	BDL	X	5	JL	B8 -B9; 2' W of EEOS	SDS16	BDL	6/21/2024	P
R-92	6/20/2024	BDL	X	5	JL	B7 -B8 ; 276' E of W EOS	AIR	BDL	6/21/2024	P
R-93	6/20/2024	BDL	X	5	JL	B7 -B8 ; 164' E of W EOS	AIR	BDL	6/21/2024	P
R-94	6/20/2024	BDL	X	5	JL	B7 -B8 ; 60' E of W EOS	AIR	BDL	6/22/2024	P
R-95	6/20/2024	BDL	X	5	TD	B7 - W11 ; Toe Slope / Panel	HOLE	BDL	7/2/2024	P
R-96	6/20/2024	BDL	X	5	JL	B9 -B10 ; 116' E of W EOS	AIR	BDL	6/21/2024	P
R-97	6/20/2024	BDL	X	5	JL	B10 -B11 ; 260' W of E EOS	SDS - 18	BDL	6/21/2024	P
R-98	6/20/2024	BDL	X	5	JL	B9 -B10 - Exisiting ; X SEAM	X SEAM	BDL	7/5/2024	P
R-99	6/20/2024	BDL	X	5	JL	B9 -B10 - Existing ; X SEAM	X SEAM	BDL	6/21/2024	P
R-100	6/20/2024	BDL	X	5	JL	B10 - B11 - Existing ; X SEAM	X SEAM	BDL	7/5/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-101	7/3/2024	BDL	X	5	HS	W13 -W14 ; 5' E of W EOS	SDS19	BDL	7/6/2024	P
R-102	6/22/2024	BDL	X	5	TH	W15 - W16 ; ANCHOR REP	ANCHOR REP	BDL	6/22/2024	P
R-103	6/22/2024	BDL	X	5	IB	W15 - B11 ; AIR S EOS	AIR	BDL	6/22/2024	P
R-104	6/22/2024	BDL	X	5	IB	W14 -W13 - B9 - B10 ; X SEAM	X SEAM	BDL	6/22/2024	P
R-105	6/22/2024	BDL	X	5	IB	W12 -W13 - B8 - B9 ; X SEAM	X SEAM	BDL	7/3/2024	P
R-106	6/21/2024	BDL	X	5	TH	W11 - W12 - B7 - B8 ; X SEAM	X SEAM	BDL	7/2/2024	P
R-107	6/17/2024	BDL	X	5	JL	S9 ; 4' E of R46	ROCK	BDL	6/20/2024	P
R-108	6/17/2024	BDL	X	5	JL	B3A -B2A - B3 ; X SEAM	X SEAM	BDL	6/21/2024	P
R-109	6/20/2024	BDL	X	5	JL	B2 -B3 ; 61' E of W EOS	SDS9	BDL	6/21/2024	P
R-110	6/20/2024	BDL	X	5	JL	B4 - B5 ; 274' E of W EOS	BO	BDL	6/20/2024	P
R-111	6/20/2024	BDL	X	5	JL	B3 -B3A - B4 ; X SEAM & SDS12	SDS12	BDL	6/20/2024	P
R-112	6/21/2024	BDL	X	5	JL	S15 - S16 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-113	6/22/2024	BDL	X	5	IB	W10 -W11 ; 11' W of E EOS	SDS14	BDL	7/2/2024	P
R-114	6/22/2024	BDL	X	5	JL	W6 -W7 ; ANCHOR REP & CAP	ANCHOR	BDL	6/22/2024	P
R-115	6/21/2024	BDL	X	5	JL	S7 - S8 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-116	6/21/2024	BDL	X	5	JL	S5 - S6 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-117	6/21/2024	BDL	X	5	JL	S7 - S7A ; HORIZONTAL SEAM	CAP	BDL	6/21/2024	P
R-118	6/22/2024	BDL	X	5	JL	S11 - S11A ; HORIZONTAL SEAM	CAP	BDL	7/1/2024	P
R-119	6/22/2024	BDL	X	5	JL	W1 -W2 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-120	6/22/2024	BDL	X	5	JL	W1 - W5 ; ' ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-121	6/22/2024	BDL	X	5	JL	W5 -W6 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-122	6/22/2024	BDL	X	5	JL	W7 -W8 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-123	6/22/2024	BDL	X	5	TH	W8 - W9 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-124	6/22/2024	BDL	X	5	TH	W9 - W10 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-125	6/22/2024	BDL	X	5	TH	W10 - W11 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-126	6/22/2024	BDL	X	5	TH	W11 -W12 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-127	6/22/2024	BDL	X	5	TH	W12 - W13 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-128	6/22/2024	BDL	X	5	TH	W13 -W14 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-129	6/22/2024	BDL	X	5	TH	W14 -W15 ; ANCHOR REP	ANCHOR	BDL	6/22/2024	P
R-130	6/21/2024	BDL	X	5	JL	B7 -B8 ; 355' E of W EOS	BO	BDL	6/20/2024	P
R-131	6/22/2024	BDL	X	5	IB	W14 - B10 - B11 ; X SEAM	X SEAM	BDL	6/22/2024	P
R-132	6/26/2024	BDL	X	5	JL	W15 - W16 - B11 - B12 ; X SEAM	X SEAM	BDL	7/1/2024	P
R-133	6/26/2024	BDL	X	5	JL	W16 -W17 - B12 ; X SEAM	X SEAM	BDL	7/1/2024	P
R-134	6/26/2024	BDL	X	5	JL	W17 -B12 -B13 ; X SEAM	X SEAM	BDL	7/1/2024	P
R-135	6/26/2024	BDL	X	5	JL	B13 -B14 ; 2' E of W EOS	SDS23	BDL	7/2/2024	P
R-136	7/1/2024	BDL	X	5	TH	B12 -B13 ; 43' E of W EOS	AIR	BDL	7/2/2024	P
R-137	6/25/2024	BDL	X	5	JL	B12 -B13 ; 61' E of W EOS to 75' W of E EOS	CAP	BDL	6/22/2024	P
R-138	7/1/2024	BDL	X	5	TH	B11 -B12 ; 94' E of W EOS	SDS21	BDL	7/5/2024	P
R-139	7/5/2024	BDL	X	5	IB	B11 - B12 ; 134' E of W EOS	AIR	BDL	7/5/2024	P
R-140	7/3/2024	BDL	X	5	HS	B8 -W12 - W13 ; X SEAM	X SEAM	BDL	7/3/2024	P
R-141	7/1/2024	BDL	X	5	TH	W17 -W18 -B13 - B14 ; X SEAM	X SEAM	BDL	7/2/2024	P
R-142	7/1/2024	BDL	X	5	TH	W18 -W19 - B14 - B15 ; X SEAM	X SEAM	BDL	7/2/2024	P
R-143	7/1/2024	BDL	X	5	TH	W18 -W19 ; 40' W of E EOS	SDS29	BDL	7/2/2024	P
R-144	7/1/2024	BDL	X	5	TH	B14 -B15 ; 30' E of W EOS	SDS24	BDL	7/2/2024	P
R-145	7/1/2024	BDL	X	5	TH	W19 -W20 -W21 - B15 -B16 ; X SEAM	CAP	BDL	7/1/2024	P
R-146	7/1/2024	BDL	X	5	TH	B16 -B17 - W21 ; X SEAM	X SEAM	BDL	7/2/2024	P
R-147	7/1/2024	BDL	X	5	TH	B17 -W21 - W22 ; X SEAM	X SEAM	BDL	7/2/2024	P
R-148	7/1/2024	BDL	X	5	TH	W22 - B17 ; 4' N of R147	BO	BDL	7/2/2024	P
R-149	7/1/2024	BDL	X	5	TH	W22 - B17 -B18 ; X SEAM	X SEAM	BDL	7/2/2024	P
R-150	7/1/2024	BDL	X	5	TH	W22 -W23 - B18 ; X SEAM	X SEAM	BDL	7/2/2024	P

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**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-151	7/1/2024	BDL	X	5	TH	W23 - B18 - B19 ; X SEAM	X SEAM	BDL	7/2/2024	P
R-152	7/1/2024	BDL	X	5	TH	W23 - W24 - B19 ; X SEAM	X SEAM	BDL	7/2/2024	P
R-153	7/1/2024	BDL	X	5	TH	B18 - B19 ; 180' W of E EOS	SDS27	BDL	7/2/2024	P
R-154	7/1/2024	BDL	X	5	TH	B17 - B18 ; 116' E of W EOS	SDS26	BDL	7/2/2024	P
R-155	7/1/2024	BDL	X	5	TH	B16 - B17 ; 250' E of W EOS	SDS25	BDL	7/5/2024	P
R-156	7/5/2024	BDL	X	5	IB	B11 - B12 ; 164' E of W EOS	BO	BDL	7/2/2024	P
R-157	7/5/2024	BDL	X	5	IB	B11 - B12 ; 184' E of W EOS	BO	BDL	7/2/2024	P
R-158	7/5/2024	BDL	X	5	IB	B11 - B12 ; 219' E of W EOS	BO	BDL	7/2/2024	P
R-159	7/1/2024	BDL	X	5	TH	B12 - B13 ; 252' W of E EOS	SDS22	BDL	7/2/2024	P
R-160	7/5/2024	BDL	X	5	IB	B13 - B14 ; 242' W of E EOS	BO/EOS	BDL	7/5/2024	P
R-161	7/5/2024	BDL	X	5	IB	B11 - B12 ; 290' E of W EOS	BO	BDL	7/5/2024	P
R-162	7/5/2024	BDL	X	5	IB	B11 - B12 ; 316' E of W EOS	BO	BDL	7/5/2024	P
R-163	7/5/2024	BDL	X	5	IB	B11 - B12 ; 361' E of W EOS	BO	BDL	7/5/2024	P
R-164	7/5/2024	BDL	X	5	IB	B11 - B12 ; 384' E of W EOS	BO	BDL	7/5/2024	P
R-165	7/5/2024	BDL	X	5	IB	B11 - B12 ; 451' E of W EOS	BO	BDL	7/5/2024	P
R-166	7/5/2024	BDL	X	5	IB	B11 ; 1' E of R165	ROCK	BDL	7/5/2024	P
R-167	7/5/2024	BDL	X	5	IB	B11 - B12 - Existing ; X SEAM	X SEAM	BDL	7/5/2024	P
R-168	7/5/2024	BDL	X	5	IB	B10 ; 15' N of R98	Rocks	BDL	7/29/2024	P
R-169	-	-	-	-	-	Capped By Repair # 269	-	-	-	-
R-170	7/5/2024	BDL	X	5	IB	B12 - B13 - Existing ; X SEAM	X SEAM	BDL	7/5/2024	P
R-171	7/3/2024	BDL	X	5	HS	B13 - B14 - B20 - Existing ; X SEAM	X SEAM	BDL	7/5/2024	P
R-172	7/3/2024	BDL	X	5	HS	B14 - B15 - B20; X SEAM	X SEAM	BDL	7/5/2024	P
R-173	7/3/2024	BDL	X	5	HS	B15 - B16 - B20 ; X SEAM	X SEAM	BDL	7/5/2024	P
R-174	7/3/2024	BDL	X	5	HS	B16 - B17 - B20 ; X SEAM	X SEAM	BDL	7/5/2024	P
R-175	7/5/2024	BDL	X	5	HS	B20 - B21 - Existing ; X SEAM	X SEAM	BDL	7/5/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-176	7/5/2024	BDL	X	5	HS	B20 - B21 ; 10' N of S EOS	BO	BDL	7/5/2024	P
R-177	7/5/2024	BDL	X	5	HS	B21 - Existing ; 3' W of E EOS	T-EXIST	BDL	7/5/2024	P
R-178	7/5/2024	BDL	X	5	HS	B21 - B22 - Exist ; X SEAM	X SEAM	BDL	7/5/2024	P
R-179	7/5/2024	BDL	X	5	HS	B22 - B23 - Existing ; X SEAM	X SEAM	BDL	7/5/2024	P
R-180	7/5/2024	BDL	X	5	HS	B23 - B24 - Exist ; X SEAM	X SEAM	BDL	7/5/2024	P
R-181	7/5/2024	BDL	X	5	HS	B23 - B24 - B24A ; X SEAM	X SEAM	BDL	7/5/2024	P
R-182	7/5/2024	BDL	X	5	HS	B24 - B24A ; 3' W of E EOS	BO	BDL	7/5/2024	P
R-183	7/5/2024	BDL	X	5	HS	B24 - B24A - B25 ; X SEAM	X SEAM	BDL	7/5/2024	P
R-184	7/5/2024	BDL	X	5	HS	B23 - B24A ; N U-DITCH	DITCH PATCH	BDL	7/5/2024	P
R-185	7/5/2024	BDL	X	5	HS	B24A - B25 ; N U-DITCH	DITCH PATCH	BDL	7/5/2024	P
R-186	7/5/2024	BDL	X	5	HS	B24A - B25 - Existing ; X SEAM	X SEAM	BDL	7/5/2024	P
R-187	7/5/2024	BDL	X	5	HS	B25 - B26 - Existing ; X SEAM	SDS30	BDL	7/5/2024	P
R-188	7/5/2024	BDL	X	5	HS	B25 - B26 ; 96' S of N U-DITCH	AIR	BDL	7/5/2024	P
R-189	7/5/2024	BDL	X	5	HS	B26 - B27 - Exist ; X SEAM	X SEAM	BDL	7/5/2024	P
R-190	7/5/2024	BDL	X	5	HS	B27 - B28 - Exist ; X SEAM	X SEAM	BDL	7/5/2024	P
R-191	7/5/2024	BDL	X	5	HS	B28 - B29 - Exist ; X SEAM	X SEAM	BDL	7/5/2024	P
R-192	7/5/2024	BDL	X	5	HS	B28 - B29 - B29A ; X SEAM	X SEAM	BDL	7/5/2024	P
R-193	7/5/2024	BDL	X	5	HS	B29 - B29A - B30 ; X SEAM	X SEAM	BDL	7/5/2024	P
R-194	7/5/2024	BDL	X	5	HS	B29 - B30 - Exist ; X SEAM	X SEAM	BDL	7/8/2024	P
R-195	7/5/2024	BDL	X	5	HS	B30 - B31 - Exist ; X SEAM	X SEAM	BDL	7/5/2024	P
R-196	7/5/2024	BDL	X	5	HS	B31 - B32 - Exist ; X SEAM	X SEAM	BDL	7/5/2024	P
R-197	7/5/2024	BDL	X	5	HS	B32 - B33 - Exist ; X SEAM	X SEAM	BDL	7/5/2024	P
R-198	7/5/2024	BDL	X	5	HS	B33 - Existing T ; X SEAM 5' E of R197	AIR	BDL	7/5/2024	P
R-199	7/5/2024	BDL	X	5	HS	B33 - Exist ; 5' W of R200	AIR	BDL	7/5/2024	P
R-200	7/5/2024	BDL	X	5	HS	B33 - B34 - Exist	AIR	BDL	7/5/2024	P

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**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-201	7/5/2024	BDL	X	5	HS	B34 - Existing T ; 6' E of R200	T-EXIST	BDL	7/5/2024	P
R-202	7/5/2024	BDL	X	5	HS	B34 -B35 - Existing ; X SEAM	X SEAM	BDL	7/5/2024	P
R-203	7/5/2024	BDL	X	5	HS	B35 - Exisitng T ; 7' E of R202	T-EXIST	BDL	7/5/2024	P
R-204	7/5/2024	BDL	X	5	HS	B35 - B36 - Existing ; X SEAM	X SEAM	BDL	7/5/2024	P
R-205	7/5/2024	BDL	X	5	HS	B36 - Existing T ; 8' E of R204	T-EXIST	BDL	7/5/2024	P
R-206	7/5/2024	BDL	X	5	HS	B36 - B37 - Existing ; X SEAM	SDDS 34 & T	BDL	7/5/2024	P
R-207	7/5/2024	BDL	X	5	HS	B37 - Existing T ; 8' E of R206	T-EXIST	BDL	7/5/2024	P
R-208	7/5/2024	BDL	X	5	HS	B37 - B38 - Existing; X SEAM	X SEAM	BDL	7/5/2024	P
R-209	7/5/2024	BDL	X	5	HS	B25 -B26 ; U DITCH N EOP	V-DITCH/ AIR	BDL	7/5/2024	P
R-210	7/5/2024	BDL	X	5	HS	B26 -B27 ; U-DITCH N EOP	V-DITCH/ AIR	BDL	7/5/2024	P
R-211	7/5/2024	BDL	X	5	HS	B29A - B30 ; U-DITCH N EOP	V-DITCH/ AIR	BDL	7/5/2024	P
R-212	7/5/2024	BDL	X	5	HS	B30 - B31 ; U-DITCH N EOP	V-DITCH/ AIR	BDL	7/5/2024	P
R-213	7/5/2024	BDL	X	5	HS	B31 - B32 ; 30 ' S of N EOS	SDS32	BDL	7/5/2024	P
R-214	7/5/2024	BDL	X	5	HS	B32 - B33 ; U-DITCH N EOP	V-DITCH/ AIR	BDL	7/5/2024	P
R-215	7/5/2024	BDL	X	5	HS	B33 - B34 ; U-DITCH N EOP	V-DITCH/ AIR	BDL	7/5/2024	P
R-216	7/5/2024	BDL	X	5	HS	B34 - B35 ; U-DITCH N EOP	V-DITCH/ AIR	BDL	7/5/2024	P
R-217	7/5/2024	BDL	X	5	HS	B35 - B36 ; U-DITCH N EOP	V-DITCH/ AIR	BDL	7/5/2024	P
R-218	7/5/2024	BDL	X	5	HS	B36 - B37 ; U-DITCH N EOP	SDS33	BDL	7/5/2024	P
R-219	7/5/2024	BDL	X	5	HS	B37 - B38 ; U-DITCH N EOP	V-DITCH/ AIR	BDL	7/5/2024	P
R-220	7/15/2024	BDL	X	5	IB	RP1 -RP2 - Existing ; AIR	AIR	BDL	7/5/2024	P
R-221	7/15/2024	BDL	X	5	IB	RP2 - Existing ; J ; 18' W of E EOS	T-EXIST	BDL	7/5/2024	P
R-222	7/15/2024	BDL	X	5	IB	RP2 - Existing ; AIR ; 32' W of E EOS	AIR	BDL	7/5/2024	P
R-223	7/15/2024	BDL	X	5	IB	RP2 - Existing ; 42' W of E EOS	T-EXIST	BDL	7/5/2024	P
R-224	7/15/2024	BDL	X	5	IB	B43 - B44 - RP2 - RP3 ; X SEAM	X SEAM	BDL	7/5/2024	P
R-225	7/15/2024	BDL	X	5	IB	RP2 - RP3 - Existing ; X SEAM	SDS37	BDL	7/16/2024	P

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EOP = END OF PAD

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-226	7/15/2024	BDL	X	5	IB	RP3 -B42 - B43 ; X SEAM	AIR	BDL	7/16/2024	P
R-227	7/15/2024	BDL	X	5	IB	RP3 - Existing ; 26' W of E EOS	T-EXIST	BDL	7/16/2024	P
R-228	7/15/2024	BDL	X	5	IB	RP3 -B41 - B42 ; X SEAM	AIR	BDL	7/16/2024	P
R-229	7/15/2024	BDL	X	5	IB	RP3 - Existing ; 50' W of E EOS	T-EXIST	BDL	7/16/2024	P
R-230	7/15/2024	BDL	X	5	IB	RP3 - Existing ; 54' W of E EOS	AIR	BDL	7/16/2024	P
R-231	7/15/2024	BDL	X	5	IB	RP3 C-RP4 - Existing ; X SEAM	X SEAM	BDL	7/16/2024	P
R-232	7/15/2024	BDL	X	5	IB	B40 -B41 - RP3 - RP4 ; X SEAM	X SEAM	BDL	7/16/2024	P
R-233	7/15/2024	BDL	X	5	IB	RP4 - Existing ; AIR CAP	AIR	BDL	7/16/2024	P
R-234	7/15/2024	BDL	X	5	IB	B40 - B41 ; 60' S of N EOS	SDS35	BDL	7/16/2024	P
R-235	7/15/2024	BDL	X	5	IB	B39 -B40 - RP4 ; X SEAM	AIR	BDL	7/16/2024	P
R-236	7/15/2024	BDL	X	5	HS	RP4 - Existing ; 46' W of E EOS	AIR	BDL	7/16/2024	P
R-237	7/15/2024	BDL	X	5	HS	RP4 - B38 - B37 ; W EOS	AIR/CAP	BDL	7/16/2024	P
R-238	7/15/2024	BDL	X	5	HS	RP4 - B38 - B39 ; X SEAM	AIR	BDL	7/16/2024	P
R-239	7/15/2024	BDL	X	5	TH	B38 -B39 ; ELOS CAP	CAP	BDL	7/16/2024	P
R-240	7/15/2024	BDL	X	5	HS	B38 ; 11' NW of R238	CUT	BDL	7/16/2024	P
R-241	7/15/2024	BDL	X	5	HS	B42 - B43 ; V-DITCH	V-DITCH REP	BDL	7/16/2024	P
R-242	7/15/2024	BDL	X	5	HS	B46 - B47 ; V-DITCH	V-DITCH REP	BDL	7/16/2024	P
R-243	7/15/2024	BDL	X	5	HS	B47 - B48 ; V-DITCH	V-DITCH REP	BDL	7/16/2024	P
R-244	7/15/2024	BDL	X	5	HS	B45 - B46 ; 65' S of N EOS	SDS36	BDL	7/16/2024	P
R-245	7/15/2024	BDL	X	5	TH	B44 - B45 -RP2 ; X SEAM	AIR	BDL	7/16/2024	P
R-246	7/15/2024	BDL	X	5	IB	B45 -B46 - RP2 ; X SEAM	AIR	BDL	7/16/2024	P
R-247	7/15/2024	BDL	X	5	IB	RP1 -RP2 - B46 ; X SEAM	AIR	BDL	7/16/2024	P
R-248	7/15/2024	BDL	X	5	IB	RP1 - B46 - B47 ; X SEAM	AIR	BDL	7/16/2024	P
R-249	7/15/2024	BDL	X	5	IB	RP1 - Existing ; X SEAM	T-EXIST	BDL	7/16/2024	P
R-250	7/16/2024	BDL	X	5	IB	B38 ; 20' S of N EOS & 8' W of R39	Leister Burn	BDL	7/16/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-251	7/18/2024	BDL	X	5	IB	RP1 - B47 - B48 - Existing ; X SEAM	X SEAM	BDL	7/18/2024	P
R-252	7/18/2024	BDL	X	5	IB	B48 - B49 - Existing ; X SEAM	X SEAM	BDL	7/18/2024	P
R-253	7/17/2024	BDL	X	5	IB	B49 - B50 - Existing ; X SEAM	X SEAM	BDL	7/18/2024	P
R-254	7/17/2024	BDL	X	5	IB	B50 - B51 - Existing ; X SEAM	X SEAM	BDL	7/18/2024	P
R-255	7/17/2024	BDL	X	5	IB	B51 - B52 - Existing ; X SEAM	X SEAM	BDL	7/18/2024	P
R-256	7/17/2024	BDL	X	5	IB	B52 - Existing ; X SEAM	EXISTING T	BDL	7/18/2024	P
R-257	7/17/2024	BDL	X	5	IB	B52 - B53 - Existing ; X SEAM	X SEAM	BDL	7/18/2024	P
R-258	7/17/2024	BDL	X	5	IB	B53 - E1 - Existing ; X SEAM	X SEAM	BDL	7/18/2024	P
R-259	7/17/2024	BDL	X	5	CZ	E1 - Existing ; 12' E of W EOS	BO	BDL	7/18/2024	P
R-260	7/18/2024	BDL	X	5	HS	B53 - E1 -E2 ; X SEAM	X SEAM	BDL	7/18/2024	P
R-261	7/18/2024	BDL	X	5	HS	B53 - E2 - E3 ; X SEAM	X SEAM	BDL	7/18/2024	P
R-262	7/18/2024	BDL	X	5	HS	B53 - E3 - E4 ; X SEAM	X SEAM	BDL	7/18/2024	P
R-263	7/18/2024	BDL	X	5	HS	E53 - E4 - E5 ; X SEAM	X SEAM	BDL	7/18/2024	P
R-264	7/18/2024	BDL	X	5	HS	E4 -E5 ; 7' E of W EOS	SDS41	BDL	7/18/2024	P
R-265	7/18/2024	BDL	X	5	HS	E1 - Exist ; 62' E of W EOS	BO	BDL	7/19/2024	P
R-266	7/18/2024	BDL	X	5	HS	E1 - Exist ; 70' E of W EOS	SDS39	BDL	7/19/2024	P
R-267	7/18/2024	BDL	X	5	HS	E1 - Exist ; 93 to 123 E of W EOS	CAP	BDL	7/19/2024	P
R-268	7/18/2024	BDL	X	5	HS	E1 - Exist ; 144' E of W EOS	BO	BDL	7/19/2024	P
R-269	7/18/2024	BDL	X	5	IB/TH	B9 - B10 - B11 -B12 - Existing	Leech Line, CAP	BDL	7/29/2024	P
R-270	7/18/2024	BDL	X	5	HS	B48 - B49 ; V-DITCH	V-DITCH Patch	BDL	7/18/2024	P
R-271	7/18/2024	BDL	X	5	HS	B53 ; 1' W of R260	CUT	BDL	7/18/2024	P
R-272	7/18/2024	BDL	X	5	HS	E1 - E2 ; 86' W of E EOS	BO	BDL	7/19/2024	P
R-273	7/19/2024	BDL	X	5	TH	E2 -E3 ; 119' > 131 E of W EOS CAP	SDS40	BDL	7/19/2024	P
R-274	7/18/2024	BDL	X	5	TH	E3 -E4 ; 39' W of E EOS to 59' W of E EOS	CAP	BDL	7/19/2024	P
R-275	7/18/2024	BDL	X	5	TH	E4 C-E5 ; 47' W of E EOS	CAP	BDL	7/19/2024	P

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**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
SECONDARY REPAIR LOG**

Repair No.	Date Repaired	QA Monitor	Weld Type	Equipment No.	Operator	Location ¹	Description	ND Test Data		
								QA Mon.	Date	Pass/Fail
R-276	7/19/2024	BDL	X	5	TH	E4 - E5 ; V-DITCH	V-DITCH Patch	BDL	7/19/2024	P
R-277	7/19/2024	BDL	X	5	TH	E3 - E4 ; V-DITCH	V-DITCH Patch	BDL	7/19/2024	P
R-278	7/19/2024	BDL	X	5	TH	E3 -E2 ; V-DITCH	V-DITCH Patch	BDL	7/19/2024	P
R-279	7/19/2024	BDL	X	5	TH	E2 ; 7' S of R278 & 1' W of ANCHOR Trench	ROCK	BDL	7/19/2024	P
R-280	7/19/2024	BDL	X	5	TH	E2 -E1 ; V-DITCH	V-DITCH REP	BDL	7/19/2024	P
R-281	7/19/2024	BDL	X	5	TH	E1 - Existing ; V-DITCH REP	V-DITCH REP	BDL	7/19/2024	P
R-282	7/19/2024	BDL	X	5	TH	B14 - B15 ; 414' W of E EOS	BO	BDL	7/30/2024	P
R-283	7/30/2024	BDL	X	5	TH/SN	B15 - B16 ; 92' E of W EOS	BO	BDL	7/30/2024	P
R-284	7/30/2024	BDL	X	5	TH	B12 ; 228' E of W EOS > 94' E of W EOS & 4' N of R157	Wrinkle rep	BDL	7/30/2024	P
R-285	7/30/2024	BDL	X	5	TH/SN	B12 ; 84' E of W EOS & 2' N of S EDGE	Wrinkle rep	BDL	7/30/2024	P
R-286	7/30/2024	BDL	X	5	TH/SN	B12 ; 184' E of W EOS & 4' N of S EDGE	Wrinkle rep	BDL	7/30/2024	P
R-287	7/30/2024	BDL	X	5	TH/SN	B12 ; 228' E of W EOS & 4' N of S EDGE	Wrinkle rep	BDL	7/30/2024	P
R-288	7/30/2024	BDL	X	5	TH	B15 - B16 ; 74' E of W EOS	HOLE	BDL	7/30/2024	P
R-289	8/1/2024	BDL	X	5	TH	S13 ; MID PANEL ; 30' N of ANCHOR	GCL ROLLUP REP	BDL	8/1/2024	P
R-290	8/1/2024	BDL	X	5	HS	B18-B17; 45' W of E end of panel 1' S of N edge	HOLE	BDL	8/1/2024	P
R-291	8/8/2024	BDL	X	5	HS	W16 -RP5 4' N of S EOS	HOLE	BDL	8/8/2024	P
R-292	7/6/2024	BDL	X	5	HS	W10-RP5-RP6	T-EXIST	BDL	7/6/2024	P
R-293	7/6/2024	BDL	X	5	HS	W2-RP6 1' SW of R119	BO	BDL	7/6/2024	P
R-294	8/8/2024	BDL	X	5	HS/IB	W16-W23 ANCHOR REPAIR	CAP	BDL	8/8/2024	P
R-295	9/11/2024	BDL	X	5	MJ	B18B-B17-B20; X SEAM	X SEAM	BDL	9/11/2024	P
R-296	9/11/2024	BDL	X	5	MJ	B18A-B18B-B17; X SEAM	X SEAM	BDL	9/11/2024	P
R-297	9/11/2024	BDL	X	5	MJ	B17-B18A; 27' W OF EOS	HOLE	BDL	9/11/2024	P
R-298	9/11/2024	BDL	X	5	MJ	B17-B18A-B18; X SEAM	HOLE	BDL	9/11/2024	P
R-299	9/11/2024	BDL	X	5	MJ	B18-B19-B18A-B19A; X SEAM	X SEAM	BDL	9/11/2024	P
R-300	9/11/2024	BDL	X	5	MJ	B18A-B19A-B19B-B18B	X SEAM	BDL	9/11/2024	P
R-301	9/11/2024	BDL	X	5	MJ	B19B-B18B-B20	X SEAM	BDL	9/11/2024	P

¹TI = Tie-in; EOS = End of Seam; INT = Intersection; N = North; S = South; W = West; E = East; P = Panel; AT = Anchor Trench

APPENDIX K

GEOCOMPOSITE AND GEONET INFORMATION

Includes pages K-1 through K-74

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DOUBLE-SIDED GEOCOMPOSITE INFORMATION

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE INVENTORY**

Roll Number	Batch or Lot No.	Date	Roll Dimensions		Thickness	Conformance Sample (Yes/No)	MQC Certificate (Yes/No)	Comments
			Length, ft	Width, ft				
0116-047652	DQK611442	1/17/2024	200	14.5	200-mil	2/14/2024	Yes	-
0116-047653	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047654	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047655	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047656	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047657	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047658	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047659	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047660	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047661	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047662	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047663	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047664	DQK611442	1/17/2024	200	14.5	200-mil		Yes	-
0116-047665	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047666	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047667	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047668	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047669	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047670	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047671	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047672	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047673	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047674	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047675	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047676	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047677	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047678	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047679	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047680	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047681	23J1200	1/17/2024	200	14.5	200-mil	2/14/2024	Yes	-
0116-047682	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047683	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047684	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047685	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047688	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047689	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047690	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047691	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047692	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047693	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047694	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047695	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047696	23J1200	1/17/2024	200	14.5	200-mil		Yes	-

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE INVENTORY**

Roll Number	Batch or Lot No.	Date	Roll Dimensions		Thickness	Conformance Sample (Yes/No)	MQC Certificate (Yes/No)	Comments
			Length, ft	Width, ft				
0116-047697	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047698	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047699	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047700	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047701	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047702	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047703	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047704	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047705	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047706	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047707	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047708	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047709	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047710	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047711	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047712	23J1200	1/17/2024	200	14.5	200-mil	2/14/2024	Yes	-
0116-047713	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047714	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047715	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047716	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047717	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047718	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047719	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047720	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047721	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047722	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047723	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047724	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047725	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047726	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047727	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047734	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047735	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047736	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047737	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047738	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047739	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047740	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047741	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047742	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047743	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047744	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047745	23J1200	1/17/2024	200	14.5	200-mil		Yes	-

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE INVENTORY**

Roll Number	Batch or Lot No.	Date	Roll Dimensions		Thickness	Conformance Sample (Yes/No)	MQC Certificate (Yes/No)	Comments
			Length, ft	Width, ft				
0116-047746	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047747	23J1200	1/17/2024	200	14.5	200-mil	2/14/2024	Yes	-
0116-047748	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047749	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047750	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047751	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047752	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047753	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047754	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047755	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047756	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047757	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047758	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047759	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047760	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047761	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047762	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047763	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047765	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047766	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047767	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047768	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047769	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047770	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047771	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047772	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047773	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047774	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047775	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047776	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047777	23J1200	1/17/2024	200	14.5	200-mil	2/14/2024	Yes	-
0116-047778	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047779	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047780	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047781	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047782	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047783	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047784	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047787	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047788	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047789	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047790	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047791	23J1200	1/17/2024	200	14.5	200-mil		Yes	-

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE INVENTORY**

Roll Number	Batch or Lot No.	Date	Roll Dimensions		Thickness	Conformance Sample (Yes/No)	MQC Certificate (Yes/No)	Comments
			Length, ft	Width, ft				
0116-047792	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047793	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047794	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047795	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047796	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047797	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047798	23J1200	1/17/2024	200	14.5	200-mil		Yes	-
0116-047799	23J1200	1/17/2024	200	14.5	200-mil		Yes	-



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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:

SW2401

SALES ORDER:

SO-096486

PACKING SLIP NUMBER:

Pre-SO-096486-2

PROJECT NAME: LEALAND LF CELL 11B & C

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER	TOP LAYER 1	BOTTOM LAYER 1
Product Code : 1106376 FabriNet 200 mil, Double Sided 10 oz/yd², Nonwoven Cal. TRI Pickup - Kendall Villarreal 1/100,000 sf, min 1/Lot - Geocomposite: 2 ft x RW - Geonet: 1 ft x RW - Geotextile: 3 ft x RW Roll List to be emailed to <sampling@tri-env.com> and <klvillarreal@tri-env.com>				
0116-047652	2023-12-24	DQK611442	2027649190	2027651092
0116-047653	2023-12-24	DQK611442	2027649190	2027651092
0116-047654	2023-12-24	DQK611442	2027649190	2027651092
0116-047655	2023-12-24	DQK611442	2027649190	2027651092
0116-047656	2023-12-24	DQK611442	2027649190	2027651092
0116-047657	2023-12-24	DQK611442	2027649190	2027651049
0116-047658	2023-12-24	DQK611442	2027649193	2027651049
0116-047659	2023-12-24	DQK611442	2027649193	2027651049
0116-047660	2023-12-24	DQK611442	2027649193	2027651049
0116-047661	2023-12-24	DQK611442	2027649193	2027651049
0116-047662	2023-12-24	DQK611442	2027649193	2027654293
0116-047663	2023-12-25	DQK611442	2027654296	2027654293
0116-047664	2023-12-25	DQK611442	2027654296	2027654293
0116-047665	2023-12-25	23J1200	2027654293	2027654296
0116-047666	2023-12-25	23J1200	2027654293	2027654296
0116-047667	2023-12-25	23J1200	2027654278	2027654296

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-2

PROJECT NAME: LEALAND LF CELL 11B & C

0116-047668	2023-12-25	23J1200	2027654278	2027654294
0116-047669	2023-12-25	23J1200	2027654278	2027654294
0116-047670	2023-12-25	23J1200	2027654278	2027654294
0116-047671	2023-12-25	23J1200	2027654278	2027654294
0116-047672	2023-12-25	23J1200	2027654295	2027654294
0116-047673	2023-12-25	23J1200	2027654295	2027654292
0116-047674	2023-12-25	23J1200	2027654295	2027654292
0116-047675	2023-12-25	23J1200	2027654295	2027654292
0116-047676	2023-12-25	23J1200	2027654295	2027654292
0116-047677	2023-12-25	23J1200	2027654279	2027654292
0116-047678	2023-12-25	23J1200	2027654279	2027651050
0116-047679	2023-12-25	23J1200	2027654279	2027651050
0116-047680	2023-12-25	23J1200	2027654279	2027651050
0116-047681	2023-12-25	23J1200	2027654279	2027651050
0116-047682	2023-12-25	23J1200	2027651101	2027651050
0116-047683	2023-12-25	23J1200	2027651101	2027654252
0116-047684	2023-12-25	23J1200	2027651101	2027654252
0116-047685	2023-12-25	23J1200	2027651101	2027654252
0116-047688	2023-12-28	23J1200	2027651101	2027654252
0116-047689	2023-12-28	23J1200	2027651101	2027654252
0116-047690	2023-12-28	23J1200	2027651069	2027654252
0116-047691	2023-12-28	23J1200	2027651069	2027654280
0116-047692	2023-12-28	23J1200	2027651069	2027654280
0116-047693	2023-12-28	23J1200	2027651069	2027654280
0116-047694	2023-12-28	23J1200	2027651069	2027654280
0116-047695	2023-12-28	23J1200	2027651099	2027654280
0116-047696	2023-12-28	23J1200	2027651099	2027654280
0116-047697	2023-12-28	23J1200	2027651099	2027653299

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-2

PROJECT NAME: LEALAND LF CELL 11B & C

0116-047698	2023-12-28	23J1200	2027651099	2027653299
0116-047699	2023-12-28	23J1200	2027651099	2027653299
0116-047700	2023-12-28	23J1200	2027651099	2027653299
0116-047701	2023-12-28	23J1200	2027651099	2027653299
0116-047702	2023-12-28	23J1200	2027651099	2027653298
0116-047703	2023-12-28	23J1200	2027654291	2027653298
0116-047704	2023-12-28	23J1200	2027654291	2027653298
0116-047705	2023-12-28	23J1200	2027654291	2027653298
0116-047706	2023-12-28	23J1200	2027654291	2027653298
0116-047707	2023-12-28	23J1200	2027654291	2027653298
0116-047708	2023-12-28	23J1200	2027654291	2027653298
0116-047709	2023-12-28	23J1200	2027651095	2027651098
0116-047710	2023-12-28	23J1200	2027651095	2027651098
0116-047711	2023-12-28	23J1200	2027651095	2027651098
0116-047712	2023-12-28	23J1200	2027651095	2027651098
0116-047713	2023-12-28	23J1200	2027651095	2027651098
0116-047714	2023-12-28	23J1200	2027651096	2027651100
0116-047715	2023-12-28	23J1200	2027651096	2027651100
0116-047716	2023-12-28	23J1200	2027651096	2027651100
0116-047717	2023-12-28	23J1200	2027651096	2027651100
0116-047718	2023-12-28	23J1200	2027651096	2027651100
0116-047719	2023-12-28	23J1200	2027651097	2027651046
0116-047720	2023-12-28	23J1200	2027651097	2027651046
0116-047721	2023-12-28	23J1200	2027651097	2027651046
0116-047722	2023-12-28	23J1200	2027651097	2027651046
0116-047723	2023-12-28	23J1200	2027651097	2027651046
0116-047724	2023-12-28	23J1200	2027651094	2027651045
0116-047725	2023-12-28	23J1200	2027651094	2027651045

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-2

PROJECT NAME: LEALAND LF CELL 11B & C

0116-047726	2023-12-28	23J1200	2027651094	2027651045
0116-047727	2023-12-28	23J1200	2027651094	2027651045
0116-047734	2023-12-28	23J1200	2027649094	2027651045
0116-047735	2023-12-28	23J1200	2027649094	2027654281
0116-047736	2023-12-28	23J1200	2027649094	2027654281
0116-047737	2023-12-28	23J1200	2027649094	2027654281
0116-047738	2023-12-28	23J1200	2027649094	2027654281
0116-047739	2023-12-28	23J1200	2027651047	2027654281
0116-047740	2023-12-28	23J1200	2027651047	2027649192
0116-047741	2023-12-29	23J1200	2027651047	2027649192
0116-047742	2023-12-29	23J1200	2027651047	2027649192
0116-047743	2023-12-29	23J1200	2027651047	2027649192
0116-047744	2023-12-29	23J1200	2027651048	2027649192
0116-047745	2023-12-29	23J1200	2027651048	2027654302
0116-047746	2023-12-29	23J1200	2027651048	2027654302
0116-047747	2023-12-29	23J1200	2027651048	2027654302
0116-047748	2023-12-29	23J1200	2027651048	2027654302
0116-047749	2023-12-29	23J1200	2027651048	2027654302
0116-047750	2023-12-29	23J1200	2027651048	2027654302
0116-047751	2023-12-29	23J1200	2027651093	2027649242
0116-047752	2023-12-29	23J1200	2027651093	2027649242
0116-047753	2023-12-29	23J1200	2027651093	2027649242
0116-047754	2023-12-29	23J1200	2027651093	2027649242
0116-047755	2023-12-29	23J1200	2027651093	2027649242
0116-047756	2023-12-29	23J1200	2027654290	2027651065
0116-047757	2023-12-29	23J1200	2027654290	2027651065
0116-047758	2023-12-29	23J1200	2027654290	2027651065
0116-047759	2023-12-29	23J1200	2027654290	2027651065

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17 Jan 2024

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-2

PROJECT NAME: LEALAND LF CELL 11B & C

0116-047760	2023-12-29	23J1200	2027654290	2027651065
0116-047761	2023-12-29	23J1200	2027654257	2027654287
0116-047762	2023-12-29	23J1200	2027654257	2027654287
0116-047763	2023-12-29	23J1200	2027654257	2027654287
0116-047765	2023-12-29	23J1200	2027654257	2027654287
0116-047766	2023-12-29	23J1200	2027654274	2027654300
0116-047767	2023-12-29	23J1200	2027654274	2027654300
0116-047768	2023-12-29	23J1200	2027654274	2027654300
0116-047769	2023-12-29	23J1200	2027654274	2027654300
0116-047770	2023-12-29	23J1200	2027654274	2027654300
0116-047771	2023-12-29	23J1200	2027649165	2027654258
0116-047772	2023-12-29	23J1200	2027649165	2027654258
0116-047773	2023-12-29	23J1200	2027649165	2027654258
0116-047774	2023-12-29	23J1200	2027649165	2027654258
0116-047775	2023-12-29	23J1200	2027649165	2027654258
0116-047776	2023-12-29	23J1200	2027535586	2027649160
0116-047777	2023-12-29	23J1200	2027535586	2027649160
0116-047778	2023-12-29	23J1200	2027535586	2027649160
0116-047779	2023-12-29	23J1200	2027535586	2027649160
0116-047780	2023-12-29	23J1200	2027535586	2027649160
0116-047781	2023-12-29	23J1200	2027535586	2027654305
0116-047782	2023-12-29	23J1200	2027535586	2027654305
0116-047783	2023-12-29	23J1200	2027654284	2027654305
0116-047784	2023-12-29	23J1200	2027654284	2027654305
0116-047787	2023-12-29	23J1200	2027654284	2027654301
0116-047788	2023-12-29	23J1200	2027654284	2027654301
0116-047789	2023-12-29	23J1200	2027654253	2027654301
0116-047790	2023-12-29	23J1200	2027654253	2027654301

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17 Jan 2024

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PROJECT NUMBER:

SW2401

SALES ORDER:

SO-096486

PACKING SLIP NUMBER:

Pre-SO-096486-2

PROJECT NAME: LEALAND LF CELL 11B & C

0116-047791	2023-12-29	23J1200	2027654253	2027654301
0116-047792	2023-12-29	23J1200	2027654253	2027651072
0116-047793	2023-12-29	23J1200	2027654253	2027651072
0116-047794	2023-12-29	23J1200	2027654286	2027651072
0116-047795	2023-12-29	23J1200	2027654286	2027651072
0116-047796	2023-12-29	23J1200	2027654286	2027651072
0116-047797	2023-12-29	23J1200	2027654286	2027651072
0116-047798	2023-12-29	23J1200	2027654286	2027651072
0116-047799	2023-12-29	23J1200	2027651067	2027654303

QUANTITY (ROLLS): 137

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-2

PROJECT NAME : LEALAND LF CELL 11B & C

PRODUCT: 1106376
FabriNet 200 mil, Double Sided 10 oz/yd², Nonwoven Cal.

					Rolls	
Test	Property	Direction	Test Method	Frequency	Unit	
	1 Thickness (min. avg.)		ASTM D5199	50,000 ft²	mils	
	2 Carbon Black Content		ASTM D4218	50,000 ft²	%	
	3 Density (min.)		ASTM D792	50,000 ft²	g/cm³	
	4 Tensile Strength (MD)	MD	ASTM D7179	50,000 ft²	lbf/in	
	5 Ply Adhesion Average (min. avg.)	Top	ASTM D7005	50,000 ft²	lbf/in	
	6 Ply Adhesion Average (min. avg.)	Bottom	ASTM D7005	50,000 ft²	lbf/in	
	7 Geocomposite Transmissivity (x10 ⁻³)		ASTM D4716	540,000 ft²	m²/sec	
	8 Geonet Transmissivity (x10 ⁻³)		ASTM D4716	Once per Shift	m²/sec	

Test	1	2	3	4	5	6	7	8
SPECIFICATIONS	200	2.0	0.94	45	1.0	1.0	0.09	2
0116-047652	218.80	2.38	0.953	68	4.3	4.72	0.116	3.922
0116-047653	218.80	2.38	0.953	68	4.3	4.72	0.116	3.922
0116-047654	218.80	2.38	0.953	68	4.3	4.72	0.116	3.922
0116-047655	218.80	2.38	0.953	68	4.3	4.72	0.116	3.922
0116-047656	218.80	2.38	0.953	68	4.3	4.72	0.116	3.922
0116-047657	219.80	2.33	0.953	68	4.3	4.72	0.116	3.922
0116-047658	219.80	2.33	0.953	68	4.3	4.72	0.116	3.922
0116-047659	219.80	2.33	0.953	68	4.3	4.72	0.116	3.922
0116-047660	219.80	2.33	0.953	68	4.3	4.72	0.116	3.922
0116-047661	219.80	2.33	0.953	68	4.3	4.72	0.116	3.922
0116-047662	216.50	2.28	0.951	64	4.1	4.52	0.116	3.922
0116-047663	216.50	2.28	0.951	64	4.1	4.52	0.116	3.922
0116-047664	216.50	2.28	0.951	64	4.1	4.52	0.116	3.922
0116-047665	216.50	2.28	0.951	64	4.1	4.52	0.116	3.922
0116-047666	216.50	2.28	0.951	64	4.1	4.52	0.116	3.922
0116-047667	217.40	2.21	0.958	64	4.1	4.52	0.232	4.772
0116-047668	217.40	2.21	0.958	64	4.1	4.52	0.232	4.772
0116-047669	217.40	2.21	0.958	64	4.1	4.52	0.232	4.772

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-2

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6	7	8
0116-047670	217.40	2.21	0.958	64	4.1	4.52	0.232	4.772
0116-047671	217.40	2.21	0.958	64	4.1	4.52	0.232	4.772
0116-047672	218.80	2.17	0.958	64	4.1	4.52	0.232	4.772
0116-047673	218.80	2.17	0.958	64	4.1	4.52	0.232	4.772
0116-047674	218.80	2.17	0.958	64	4.1	4.52	0.232	4.772
0116-047675	218.80	2.17	0.958	64	4.1	4.52	0.232	4.772
0116-047676	218.80	2.17	0.958	64	4.1	4.52	0.232	4.772
0116-047677	219.00	2.45	0.957	61	4.2	4.31	0.232	4.772
0116-047678	219.00	2.45	0.957	61	4.2	4.31	0.232	4.772
0116-047679	219.00	2.45	0.957	61	4.2	4.31	0.232	4.772
0116-047680	219.00	2.45	0.957	61	4.2	4.31	0.232	4.772
0116-047681	219.00	2.45	0.957	61	4.2	4.31	0.232	4.772
0116-047682	218.80	2.36	0.957	61	4.2	4.31	0.232	4.772
0116-047683	218.80	2.36	0.957	61	4.2	4.31	0.232	4.772
0116-047684	218.80	2.36	0.957	61	4.2	4.31	0.232	4.772
0116-047685	218.80	2.36	0.957	61	4.2	4.31	0.232	4.772
0116-047688	221.00	2.37	0.954	67	2.9	3	0.179	4.28
0116-047689	221.00	2.37	0.954	67	2.9	3	0.179	4.28
0116-047690	221.00	2.37	0.954	67	2.9	3	0.179	4.28
0116-047691	221.00	2.37	0.954	67	2.9	3	0.179	4.28
0116-047692	221.00	2.37	0.954	67	2.9	3	0.179	4.28
0116-047693	222.50	2.30	0.954	67	2.9	3	0.179	4.28
0116-047694	222.50	2.30	0.954	67	2.9	3	0.179	4.28
0116-047695	222.50	2.30	0.954	67	2.9	3	0.179	4.28
0116-047696	222.50	2.30	0.954	67	2.9	3	0.179	4.28
0116-047697	222.50	2.30	0.954	67	2.9	3	0.179	4.28
0116-047698	218.50	2.35	0.954	69	1.6	4.08	0.179	4.28
0116-047699	218.50	2.35	0.954	69	1.6	4.08	0.179	4.28
0116-047700	218.50	2.35	0.954	69	1.6	4.08	0.179	4.28
0116-047701	218.50	2.35	0.954	69	1.6	4.08	0.179	4.28
0116-047702	218.50	2.35	0.954	69	1.6	4.08	0.179	4.28
0116-047703	218.30	2.45	0.954	69	1.6	4.08	0.179	4.28
0116-047704	218.30	2.45	0.954	69	1.6	4.08	0.179	4.28

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-2

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6	7	8
0116-047705	218.30	2.45	0.954	69	1.6	4.08	0.179	4.28
0116-047706	218.30	2.45	0.954	69	1.6	4.08	0.179	4.28
0116-047707	218.30	2.45	0.954	69	1.6	4.08	0.179	4.28
0116-047708	216.00	2.36	0.953	69	3.5	3.08	0.179	4.28
0116-047709	216.00	2.36	0.953	69	3.5	3.08	0.179	4.28
0116-047710	216.00	2.36	0.953	69	3.5	3.08	0.179	4.28
0116-047711	216.00	2.36	0.953	69	3.5	3.08	0.179	4.28
0116-047712	216.00	2.36	0.953	69	3.5	3.08	0.179	4.28
0116-047713	223.30	2.36	0.953	69	3.5	3.08	0.214	4.673
0116-047714	223.30	2.36	0.953	69	3.5	3.08	0.214	4.673
0116-047715	223.30	2.36	0.953	69	3.5	3.08	0.214	4.673
0116-047716	223.30	2.36	0.953	69	3.5	3.08	0.214	4.673
0116-047717	223.30	2.36	0.953	69	3.5	3.08	0.214	4.673
0116-047718	220.30	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047719	220.30	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047720	220.30	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047721	220.30	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047722	220.30	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047723	227.40	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047724	227.40	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047725	227.40	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047726	227.40	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047727	227.40	2.49	0.952	67	4.2	1.6	0.214	4.673
0116-047734	215.50	2.34	0.952	64	2.2	4.16	0.214	4.673
0116-047735	215.50	2.34	0.952	64	2.2	4.16	0.214	4.673
0116-047736	215.50	2.34	0.952	64	2.2	4.16	0.214	4.673
0116-047737	215.50	2.34	0.952	64	2.2	4.16	0.214	4.673
0116-047738	215.50	2.34	0.952	64	2.2	4.16	0.214	4.673
0116-047739	217.80	2.34	0.952	64	2.2	4.16	0.214	4.673
0116-047740	217.80	2.34	0.952	64	2.2	4.16	0.214	4.673
0116-047741	217.80	2.34	0.952	64	2.2	4.16	0.214	4.673
0116-047742	217.80	2.34	0.952	64	2.2	4.16	0.214	4.673
0116-047743	217.80	2.34	0.952	64	2.2	4.16	0.214	4.673

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TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-2

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6	7	8
0116-047744	221.00	2.22	0.958	62	1.0	2.31	0.157	5.927
0116-047745	221.00	2.22	0.958	62	1.0	2.31	0.157	5.927
0116-047746	221.00	2.22	0.958	62	1.0	2.31	0.157	5.927
0116-047747	221.00	2.22	0.958	62	1.0	2.31	0.157	5.927
0116-047748	221.00	2.22	0.958	62	1.0	2.31	0.157	5.927
0116-047749	216.00	2.35	0.958	62	3.0	2.31	0.157	5.927
0116-047750	216.00	2.35	0.958	62	3.0	2.31	0.157	5.927
0116-047751	216.00	2.35	0.958	62	3.0	2.31	0.157	5.927
0116-047752	216.00	2.35	0.958	62	3.0	2.31	0.157	5.927
0116-047753	216.00	2.35	0.958	62	3.0	2.31	0.157	5.927
0116-047754	215.20	2.27	0.958	62	3.0	2.31	0.157	5.927
0116-047755	215.20	2.27	0.958	62	3.0	2.31	0.157	5.927
0116-047756	215.20	2.27	0.958	62	3.0	2.31	0.157	5.927
0116-047757	215.20	2.27	0.958	62	3.0	2.31	0.157	5.927
0116-047758	215.20	2.27	0.958	62	3.0	2.31	0.157	5.927
0116-047759	223.60	2.36	0.957	67	2.6	5.11	0.157	5.927
0116-047760	223.60	2.36	0.957	67	2.6	5.11	0.157	5.927
0116-047761	223.60	2.36	0.957	67	2.6	5.11	0.157	5.927
0116-047762	223.60	2.36	0.957	67	2.6	5.11	0.157	5.927
0116-047763	223.60	2.36	0.957	67	2.6	5.11	0.157	5.927
0116-047765	221.60	2.30	0.957	67	2.6	5.11	0.157	5.927
0116-047766	221.60	2.30	0.957	67	2.6	5.11	0.157	5.927
0116-047767	221.60	2.30	0.957	67	2.6	5.11	0.157	5.927
0116-047768	221.60	2.30	0.957	67	2.6	5.11	0.157	5.927
0116-047769	221.60	2.30	0.957	67	2.6	5.11	0.157	5.927
0116-047770	217.60	2.29	0.957	67	2.6	5.11	0.157	5.927
0116-047771	217.60	2.29	0.957	67	2.6	5.11	0.157	5.927
0116-047772	217.60	2.29	0.957	67	2.6	5.11	0.157	5.927
0116-047773	217.60	2.29	0.957	67	2.6	5.11	0.157	5.927
0116-047774	217.60	2.29	0.957	67	2.6	5.11	0.157	5.927
0116-047775	224.20	2.30	0.957	68	5.1	3.95	0.157	5.927
0116-047776	224.20	2.30	0.957	68	5.1	3.95	0.157	5.927
0116-047777	224.20	2.30	0.957	68	5.1	3.95	0.157	5.927

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MANUFACTURING QUALITY CONTROL

TEST RESULTS

PROJECT NUMBER:

SW2401

SALES ORDER:

SO-096486

PACKING SLIP NUMBER:

Pre-SO-096486-2

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6	7	8
0116-047778	224.20	2.30	0.957	68	5.1	3.95	0.157	5.927
0116-047779	224.20	2.30	0.957	68	5.1	3.95	0.157	5.927
0116-047780	219.10	2.30	0.957	68	5.1	3.95	0.174	5.243
0116-047781	219.10	2.30	0.957	68	5.1	3.95	0.174	5.243
0116-047782	219.10	2.30	0.957	68	5.1	3.95	0.174	5.243
0116-047783	219.10	2.30	0.957	68	5.1	3.95	0.174	5.243
0116-047784	219.10	2.30	0.957	68	5.1	3.95	0.174	5.243
0116-047787	220.60	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047788	220.60	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047789	220.60	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047790	220.60	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047791	220.60	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047792	226.50	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047793	226.50	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047794	226.50	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047795	226.50	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047796	226.50	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047797	226.50	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047798	226.50	2.33	0.953	67	3.0	5.35	0.174	5.243
0116-047799	226.50	2.33	0.953	67	3.0	5.35	0.174	5.243

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2401

SALES ORDER: SO-096486

PACKING SLIP NUMBER: Pre-SO-096486-2

PROJECT NAME : LEALAND LF CELL 11B & C

PRODUCT: 1106376
FabriNet 200 mil, Double Sided 10 oz/yd², Nonwoven Cal.

Carrier Geotextile					
Test	Property	Direction	Test Method	Frequency	Unit
1	Mass per Unit Area (min. avg.)		ASTM D5261	90,000 ft ²	oz/yd ²
	Grab Tensile Properties (min. avg)		ASTM D4632	90,000 ft ²	
2	Strength (MD)				lbf
3	Strength (CMD)				lbf
4	Elongation (MD)				%
5	Elongation (CMD)				%
6	Trapezoidal Tear Strength	MD	ASTM D4533	90,000 ft ²	lbf
7	Trapezoidal Tear Strength	TD	ASTM D4533	90,000 ft ²	lbf
8	Puncture Resistance (CBR)		ASTM D6241	540,000 ft ²	lbf
9	Apparent Opening Size (max.)		ASTM D4751	540,000 ft ²	mm
10	Permittivity		ASTM D4491	540,000 ft ²	sec ⁻¹

Test	1	2	3	4	5	6	7	8	9	10
Specification	10	270	270	50	50	105	105	725	0.150	1.0
2027535586	11.0	415	452	78	82	146	195	1,048	0.150	2.3
2027649094	11.1	391	465	81	85	145	214	1,084	0.150	2.0
2027649165	11.4	411	435	84	77	156	188	1,054	0.150	1.8
2027649190	11.1	377	435	88	84	141	194	990	0.123	2.0
2027649193	11.1	383	417	88	78	151	165	1,058	0.150	2.1
2027651047	10.6	373	424	82	94	163	182	1,012	0.150	1.6
2027651048	10.6	373	424	82	94	163	182	1,012	0.150	1.6
2027651067	10.5	403	427	79	81	154	166	1,076	0.150	1.6
2027651069	10.5	403	427	79	81	154	166	1,076	0.150	1.6
2027651093	10.7	375	426	77	76	146	188	1,071	0.125	1.8
2027651094	10.7	375	426	77	76	146	188	1,071	0.125	1.8
2027651095	10.1	382	402	78	71	150	180	984	0.125	2.1

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TEST RESULTS

PROJECT NUMBER: SW2401
 SALES ORDER: SO-096486
 PACKING SLIP NUMBER: Pre-SO-096486-2

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6	7	8	9	10
2027651096	10.1	382	402	78	71	150	180	984	0.125	2.1
2027651097	10.1	382	402	78	71	150	180	984	0.125	2.1
2027651099	10.2	379	395	80	73	145	178	1,072	0.125	1.7
2027651101	10.2	379	395	80	73	145	178	1,072	0.125	1.7
2027654253	11.0	390	447	83	84	172	183	981	0.125	1.8
2027654257	10.7	381	440	81	74	143	179	903	0.150	1.6
2027654274	10.9	377	429	82	78	146	190	999	0.125	1.6
2027654278	11.3	409	451	82	75	160	197	1,012	0.125	1.7
2027654279	11.7	408	474	79	74	149	176	1,100	0.125	1.6
2027654284	10.9	403	447	86	81	149	173	994	0.125	1.6
2027654286	10.9	403	447	86	81	149	173	994	0.125	1.6
2027654290	10.6	384	447	80	81	152	196	1,106	0.150	1.9
2027654291	11.9	412	478	80	80	157	192	1,023	0.150	1.6
2027654295	10.7	405	477	85	88	161	203	1,021	0.150	1.9
2027654296	10.7	405	477	85	88	161	203	1,021	0.150	1.9
Specification	10	270	270	50	50	105	105	725	0.150	1.0
2027649160	10.9	383	424	77	81	162	176	1,085	0.150	1.6
2027649192	11.1	377	435	88	84	141	194	990	0.123	2.0
2027649242	11.7	430	476	80	82	173	200	1,154	0.150	1.9
2027651045	10.7	394	443	86	88	155	192	1,029	0.150	1.6
2027651046	10.7	394	443	86	88	155	192	1,029	0.150	1.6
2027651049	10.6	373	424	82	94	163	182	1,012	0.150	1.6
2027651050	10.6	373	424	82	94	163	182	1,012	0.150	1.6
2027651065	10.6	376	407	81	79	159	187	954	0.150	1.7
2027651072	10.8	384	401	77	84	163	207	1,020	0.150	1.7
2027651092	10.7	375	426	77	76	146	188	1,071	0.125	1.8
2027651098	10.1	382	402	78	71	150	180	984	0.125	2.1

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2401
 SALES ORDER: SO-096486
 PACKING SLIP NUMBER: Pre-SO-096486-2

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6	7	8	9	10
2027651100	10.2	379	395	80	73	145	178	1,072	0.125	1.7
2027653298	11.8	399	517	80	74	153	165	904	0.150	1.8
2027653299	11.8	399	517	80	74	153	165	904	0.150	1.8
2027654252	11.0	390	447	83	84	172	183	981	0.125	1.8
2027654258	10.7	381	440	81	74	143	179	903	0.150	1.6
2027654280	11.7	408	474	79	74	149	176	1,100	0.125	1.6
2027654281	11.7	408	474	79	74	149	176	1,100	0.125	1.6
2027654287	10.6	384	447	80	81	152	196	1,106	0.150	1.9
2027654292	11.9	412	478	80	80	157	192	1,023	0.150	1.6
2027654293	11.9	412	478	80	80	157	192	1,023	0.150	1.6
2027654294	11.9	412	478	80	80	157	192	1,023	0.150	1.6
2027654300	10.7	376	441	77	80	155	189	1,082	0.150	1.7
2027654301	10.7	376	441	77	80	155	189	1,082	0.150	1.7
2027654302	10.7	376	441	77	80	155	189	1,082	0.150	1.7
2027654303	11.0	384	424	80	84	174	203	998	0.150	1.6
2027654305	11.0	384	424	80	84	174	203	998	0.150	1.6

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CoA Date: 10/31/2023

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC:HOUSTON
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: LabqualityUSA
Fax:

Delivery #: 81018522
PO #: 609144
Weight: 199500.000 LB
Ship Date: 10/31/2023
Package: BULK
Mode: Hopper Car
Car #: HCBX001745
Seal No: 363979

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DQK611442

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.37	g/10min
Density	D1505	0.9545	g/cm3
Production date		20231028	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPCChem).
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.

JIAHUI LI
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806

**Formosa Plastics**

FORMOSA PLASTICS CORPORATION, TEXAS

201 FORMOSA DRIVE
PO BOX 700
POINT COMFORT

TX 77978

PHONE: (888) FPCUSA3

Certificate of Analysis
(CONFIDENTIAL)CUSTOMER: SOLMAX GEOSYNTHETICS LLC
19103 GUNDLE ROAD

HOUSTON

TX 77073

PRODUCT : HB5502B

RAILCAR MULX200882

CLEANING/INSPECTION NO: 200882101723

S/O NO : E3AA976

CUSTOMER PO : PO-609270

DATE SHIPPED: 11/05/23

LOT NO : 23J1200

WEIGHT (LB) : 196,600.00

CUSTID: FT05970 SPIDM6

TEST ITEM

Melt Index, g/10min

Density, g/cm3

REFERENCE METHOD

ASTM D1238

ASTM D1505

TEST VALUE

.36

.9550

QC SUPERVISOR: LINDA KAO

DOUBLE-SIDED GEOCOMPOSITE DEPLOYMENT LOG

K-22

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE PANEL PLACEMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
PH1	7655	Geocomposite	7/25/2024	BDL	105	15	1,575	
PH2	7655	Geocomposite	7/25/2024	BDL	105	15	1,575	
PH3	7655	Geocomposite	7/25/2024	BDL	14	15	210	
PH3A	7714	Geocomposite	7/25/2024	BDL	91	15	1,365	
PH4	7714	Geocomposite	7/25/2024	BDL	105	15	1,575	
PH5	7714	Geocomposite	7/25/2024	BDL	27	15	405	
PH5A	7776	Geocomposite	7/25/2024	BDL	78	15	1,170	
PH6	7776	Geocomposite	7/25/2024	BDL	105	15	1,575	
PH7	7776	Geocomposite	7/25/2024	BDL	36	15	540	
PH7A	7739	Geocomposite	7/25/2024	BDL	69	15	1,035	
PH8	7739	Geocomposite	7/25/2024	BDL	105	15	1,575	
PH9	7739	Geocomposite	7/25/2024	BDL	47	15	705	
PH9A	7713	Geocomposite	7/25/2024	BDL	60	15	900	
PH10	7713	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH11	7713	Geocomposite	7/25/2024	BDL	38	15	570	
PH11A	7743	Geocomposite	7/25/2024	BDL	48	15	720	
PH12	7743	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH13	7743	Geocomposite	7/25/2024	BDL	79	15	1,185	
PH13A	7682	Geocomposite	7/25/2024	BDL	27	15	405	
PH14	7682	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH15	7682	Geocomposite	7/25/2024	BDL	92	15	1,380	
PH15A	7720	Geocomposite	7/25/2024	BDL	14	15	210	
PH16	7720	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH17	7720	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH18	7791	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH19	7791	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH20	7722	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH21	7722	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH22	7694	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH23	7694	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH24	7694	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH24A	7711	Geocomposite	7/25/2024	BDL	94	15	1,410	
PH25	7711	Geocomposite	7/25/2024	BDL	12	15	180	
PH26	7711	Geocomposite	7/25/2024	BDL	24	15	360	
PH26A	7702	Geocomposite	7/25/2024	BDL	82	15	1,230	
PH27	7702	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH28	7702	Geocomposite	7/25/2024	BDL	34	15	510	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
PH28A	7700	Geocomposite	7/25/2024	BDL	72	15	1,080	
PH29	7700	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH30	7700	Geocomposite	7/25/2024	BDL	49	15	735	
PH30A	7693	Geocomposite	7/25/2024	BDL	57	15	855	
PH31	7693	Geocomposite	7/25/2024	BDL	106	15	1,590	
PH32	7693	Geocomposite	7/26/2024	BDL	64	15	960	
PH32A	7891	Geocomposite	7/26/2024	BDL	40	15	600	
PH33	7891	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH34	7891	Geocomposite	7/26/2024	BDL	70	15	1,050	
PH34A	7710	Geocomposite	7/26/2024	BDL	36	15	540	
PH35	7710	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH36	7710	Geocomposite	7/26/2024	BDL	78	15	1,170	
PH36A	7657	Geocomposite	7/26/2024	BDL	28	15	420	
PH37	7657	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH38	7657	Geocomposite	7/26/2024	BDL	86	15	1,290	
PH38A	7719	Geocomposite	7/26/2024	BDL	20	15	300	
PH39	7719	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH40	7719	Geocomposite	7/26/2024	BDL	104	15	1,560	
PH40A	7657	Geocomposite	7/26/2024	BDL	2	15	30	
PH41	7709	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH42	7709	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH43	7727	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH44	7727	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH45	7661	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH46	7661	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH47	7661	Geocomposite	7/26/2024	BDL	16	15	240	
PH47A	7724	Geocomposite	7/26/2024	BDL	90	15	1,350	
PH48	7724	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH49	7724	Geocomposite	7/26/2024	BDL	33	15	495	
PH49A	7664	Geocomposite	7/26/2024	BDL	73	15	1,095	
PH50	7664	Geocomposite	7/26/2024	BDL	106	15	1,590	
PH51	7664	Geocomposite	7/26/2024	BDL	44	15	660	
PH51A	7692	Geocomposite	7/26/2024	BDL	62	15	930	
PH52	7692	Geocomposite	7/27/2024	BDL	106	15	1,590	
R1	7662	Geocomposite	7/27/2024	BDL	164	15	2,460	
R2	7735	Geocomposite	7/27/2024	BDL	165	15	2,475	
R3	7795	Geocomposite	7/27/2024	BDL	167	15	2,505	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
R4	7790	Geocomposite	7/27/2024	BDL	168	15	2,520	
R5	7788	Geocomposite	7/27/2024	BDL	168	15	2,520	
R6	7652	Geocomposite	7/27/2024	BDL	168	15	2,520	
R7	7734	Geocomposite	7/27/2024	BDL	167	15	2,505	
S1	7763	Geocomposite	8/15/2024	BDL	232	15	3,480	
S2	7669	Geocomposite	8/15/2024	BDL	230	15	3,450	
S3	7798	Geocomposite	8/15/2024	BDL	232	15	3,480	
S4	7706	Geocomposite	8/15/2024	BDL	232	15	3,480	
S5	7655	Geocomposite	8/15/2024	BDL	232	15	3,480	
S6	7723	Geocomposite	8/15/2024	BDL	232	15	3,480	
S7	7792	Geocomposite	8/15/2024	BDL	232	15	3,480	
S8	7663	Geocomposite	8/15/2024	BDL	232	15	3,480	
S9	7672	Geocomposite	8/15/2024	BDL	232	15	3,480	
S10	7677	Geocomposite	8/15/2024	BDL	232	15	3,480	
S11	7674	Geocomposite	8/15/2024	BDL	232	15	3,480	
S12	7678	Geocomposite	8/15/2024	BDL	232	15	3,480	
S13	7688	Geocomposite	8/15/2024	BDL	232	15	3,480	
B1	7799	Geocomposite	8/15/2024	BDL	232	15	3,480	
B2	7660	Geocomposite	8/15/2024	BDL	232	15	3,480	
B3	7705	Geocomposite	8/15/2024	BDL	232	15	3,480	
B4	7665	Geocomposite	8/15/2024	BDL	232	15	3,480	
B5	7690	Geocomposite	8/15/2024	BDL	232	15	3,480	
B6	7708	Geocomposite	8/15/2024	BDL	232	15	3,480	
B7	7738	Geocomposite	8/15/2024	BDL	232	15	3,480	
B8	7670	Geocomposite	8/19/2024	BDL	232	15	3,480	
B9	7691	Geocomposite	8/19/2024	BDL	232	15	3,480	
B10	7671	Geocomposite	8/19/2024	BDL	232	15	3,480	
B11	7750	Geocomposite	8/19/2024	BDL	232	15	3,480	
B12	7721	Geocomposite	8/19/2024	BDL	232	15	3,480	
B13	7701	Geocomposite	8/19/2024	BDL	232	15	3,480	
B1A	7725	Geocomposite	8/19/2024	BDL	60	15	900	
B2A	7725	Geocomposite	8/19/2024	BDL	67	15	1,005	
B3A	7725	Geocomposite	8/19/2024	BDL	62	15	930	
B4A	7715	Geocomposite	8/19/2024	BDL	58	15	870	
B5A	7715	Geocomposite	8/19/2024	BDL	50	15	750	
B6A	7715	Geocomposite	8/19/2024	BDL	60	15	900	
B7A	7715	Geocomposite	8/19/2024	BDL	52	15	780	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
B8A	7799	Geocomposite	8/19/2024	BDL	59	15	885	
B9A	7799	Geocomposite	8/19/2024	BDL	50	15	750	
B10A	7799	Geocomposite	8/19/2024	BDL	48	15	720	
B11A	7799	Geocomposite	8/19/2024	BDL	55	15	825	
B12A	7787	Geocomposite	8/19/2024	BDL	52	15	780	
B13A	7787	Geocomposite	8/19/2024	BDL	52	15	780	
RP1	7725	Geocomposite	8/19/2024	BDL	4	15	60	
RP2	7725	Geocomposite	8/19/2024	BDL	6	15	90	
RP3	7725	Geocomposite	8/19/2024	BDL	8	15	120	
S14	7747	Geocomposite	8/20/2024	BDL	232	15	3,480	
S15	7741	Geocomposite	8/20/2024	BDL	232	15	3,480	
S16	7656	Geocomposite	8/20/2024	BDL	232	15	3,480	
S17	7653	Geocomposite	8/20/2024	BDL	232	15	3,480	
S18	7782	Geocomposite	8/20/2024	BDL	232	15	3,480	
S19	7752	Geocomposite	8/20/2024	BDL	232	15	3,480	
S20	7699	Geocomposite	8/20/2024	BDL	232	15	3,480	
S21	7695	Geocomposite	8/20/2024	BDL	232	15	3,480	
S22	7754	Geocomposite	8/20/2024	BDL	232	15	3,480	
S23	7753	Geocomposite	8/20/2024	BDL	232	15	3,480	
B14	7742	Geocomposite	8/20/2024	BDL	232	15	3,480	
B15	7796	Geocomposite	8/20/2024	BDL	232	15	3,480	
B16	7654	Geocomposite	8/20/2024	BDL	232	15	3,480	
B17	7726	Geocomposite	8/20/2024	BDL	232	15	3,480	
B18	7676	Geocomposite	8/20/2024	BDL	232	15	3,480	
B19	7758	Geocomposite	8/20/2024	BDL	232	15	3,480	
B20	7794	Geocomposite	8/20/2024	BDL	232	15	3,480	
B21	7696	Geocomposite	8/20/2024	BDL	232	15	3,480	
S24	7737	Geocomposite	8/21/2024	BDL	232	15	3,480	
S25	7697	Geocomposite	8/21/2024	BDL	232	15	3,480	
S26	7749	Geocomposite	8/21/2024	BDL	232	15	3,480	
S27	7757	Geocomposite	8/21/2024	BDL	232	15	3,480	
S28	7740	Geocomposite	8/21/2024	BDL	115	15	1,725	
S29	7740	Geocomposite	8/21/2024	BDL	97	15	1,455	
S30	7745	Geocomposite	8/21/2024	BDL	76	15	1,140	
S31	7745	Geocomposite	8/21/2024	BDL	58	15	870	
S32	7745	Geocomposite	8/21/2024	BDL	31	15	465	
S33	7712	Geocomposite	8/21/2024	BDL	18	15	270	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
W1	7712	Geocomposite	8/21/2024	BDL	111	15	1,665	
W2	7712	Geocomposite	8/21/2024	BDL	79	15	1,185	
W3	7744	Geocomposite	8/21/2024	BDL	57	15	855	
W4	7744	Geocomposite	8/21/2024	BDL	38	15	570	
W5	7744	Geocomposite	8/21/2024	BDL	16	15	240	
B14A	7762	Geocomposite	8/22/2024	BDL	44	15	660	
B15A	7762	Geocomposite	8/22/2024	BDL	40	15	600	
B16A	7766	Geocomposite	8/22/2024	BDL	35	15	525	
B17A	7766	Geocomposite	8/22/2024	BDL	36	15	540	
B18A	7766	Geocomposite	8/22/2024	BDL	38	15	570	
B19A	7766	Geocomposite	8/22/2024	BDL	78	15	1,170	
B20A	7766	Geocomposite	8/22/2024	BDL	34	15	510	
B20B	7667	Geocomposite	8/22/2024	BDL	43	15	645	
B21A	7667	Geocomposite	8/22/2024	BDL	83	15	1,245	
B22	7668	Geocomposite	8/22/2024	BDL	232	15	3,480	
B23	7689	Geocomposite	8/22/2024	BDL	232	15	3,480	
B24	7797	Geocomposite	8/22/2024	BDL	232	15	3,480	
B25	7748	Geocomposite	8/22/2024	BDL	232	15	3,480	
B26	7746	Geocomposite	8/22/2024	BDL	232	15	3,480	
B27	7770	Geocomposite	8/22/2024	BDL	232	15	3,480	
B28	7736	Geocomposite	8/22/2024	BDL	232	15	3,480	
B22A	7784	Geocomposite	8/22/2024	BDL	82	15	1,230	
B23A	7784	Geocomposite	8/22/2024	BDL	64	15	960	
B24A	7784	Geocomposite	8/22/2024	BDL	79	15	1,185	
B25A	7787	Geocomposite	8/22/2024	BDL	73	15	1,095	
B26A	7659	Geocomposite	8/22/2024	BDL	77	15	1,155	
B27A	7659	Geocomposite	8/22/2024	BDL	76	15	1,140	
B28A	7659	Geocomposite	8/22/2024	BDL	195	15	2,925	
W6	7669	Geocomposite	8/24/2024	BDL	100	15	1,500	
W7	7669	Geocomposite	8/24/2024	BDL	103	15	1,545	
W8	7718	Geocomposite	8/24/2024	BDL	107	15	1,605	
W9	7718	Geocomposite	8/24/2024	BDL	110	15	1,650	
W10	7703	Geocomposite	8/24/2024	BDL	114	15	1,710	
W11	7703	Geocomposite	8/24/2024	BDL	100	15	1,500	
W11A	7717	Geocomposite	8/24/2024	BDL	17	15	255	
W12	7717	Geocomposite	8/24/2024	BDL	121	15	1,815	
W13	7707	Geocomposite	8/24/2024	BDL	123	15	1,845	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
W14	7716	Geocomposite	8/24/2024	BDL	125	15	1,875	
W15	7698	Geocomposite	8/24/2024	BDL	128	15	1,920	
W16	7780	Geocomposite	8/27/2024	BDL	140	15	2,100	
W17	7681	Geocomposite	8/27/2024	BDL	101	15	1,515	
W17A	7780	Geocomposite	8/27/2024	BDL	42	15	630	
W18	7681	Geocomposite	8/27/2024	BDL	123	15	1,845	
W18A	7780	Geocomposite	8/27/2024	BDL	20	15	300	
W19	7675	Geocomposite	8/27/2024	BDL	154	15	2,310	
W20	7778	Geocomposite	8/28/2024	BDL	150	15	2,250	
W21	7761	Geocomposite	8/28/2024	BDL	103	15	1,545	
W21A	7778	Geocomposite	8/28/2024	BDL	55	15	825	
W22	7761	Geocomposite	8/28/2024	BDL	124	15	1,860	
W22A	7759	Geocomposite	8/28/2024	BDL	40	15	600	
W23	7759	Geocomposite	8/28/2024	BDL	172	15	2,580	
W24	7783	Geocomposite	8/28/2024	BDL	173	15	2,595	
W25	7673	Geocomposite	8/28/2024	BDL	126	15	1,890	
W25A	7783	Geocomposite	8/28/2024	BDL	52	15	780	
W26	7658	Geocomposite	8/28/2024	BDL	94	15	1,410	
W26A	7783	Geocomposite	8/28/2024	BDL	81	15	1,215	
W27	7658	Geocomposite	8/28/2024	BDL	139	15	2,085	
W27A	7679	Geocomposite	8/28/2024	BDL	46	15	690	
W28	7679	Geocomposite	8/28/2024	BDL	187	15	2,805	
W29	7685	Geocomposite	8/28/2024	BDL	184	15	2,760	
W30	7671	Geocomposite	8/28/2024	BDL	167	15	2,505	
W20A	7685	Geocomposite	8/28/2024	BDL	29	15	435	
W31	7666	Geocomposite	8/28/2024	BDL	145	15	2,175	
W31A	7671	Geocomposite	8/28/2024	BDL	73	15	1,095	
W32	7680	Geocomposite	8/28/2024	BDL	125	15	1,875	
W32A	7666	Geocomposite	8/28/2024	BDL	80	15	1,200	
W33	7684	Geocomposite	8/28/2024	BDL	111	15	1,665	
W33A	7680	Geocomposite	8/28/2024	BDL	96	15	1,440	
W34	7684	Geocomposite	8/29/2024	BDL	93	15	1,395	
W34A	7683	Geocomposite	8/29/2024	BDL	61	15	915	
W35	7683	Geocomposite	8/29/2024	BDL	115	15	1,725	
W36	7775	Geocomposite	8/29/2024	BDL	49	13	637	

LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEOCOMPOSITE PANEL PLACEMENT LOG

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
B29	7707	Geocomposite	9/12/2024	BDL	137	15	2,055	
B29A	4430	Geocomposite	9/12/2024	BDL	144	15	2,160	
B30	4481	Geocomposite	9/12/2024	BDL	136	12	1,632	
B30A	4430	Geocomposite	9/12/2024	BDL	80	6	480	
B30B	4430	Geocomposite	9/12/2024	BDL	41	1.5	62	

DOUBLE-SIDED GEOCOMPOSITE TRANSMISSIVITY RESULTS



TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

Austin, TX - USA | CA - USA | SC - USA | Gold Coast - Australia | Suzhou - China | Sao Paulo, Brazil | Johannesburg - Africa

GEOCOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047652
TRI Log #: 24-000109

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Hydraulic Transmissivity (ASTM D4716)													
Direction Tested: Machine Direction Normal Load (psf): 10,000 Hydraulic Gradient: 0.1 Test Length (in): 12 Test Width (in): 12 Plate / Sample / Plate Seat Time (hours) Specimen													
	1	2	3	4	5	6	7	8	9	10			
Volume (cc)	517	520	513	513	515	513							
Time (s)	70.53	70.56	70.53	100	100	100							
Flow Rate (GPM/ft width)	0.12	0.12	0.12	0.08	0.08	0.08					0.10	0.02	
Transmissivity (m²/s)	2.44E-04	2.45E-04	2.42E-04	1.69E-04	1.70E-04	1.69E-04					2.07E-04	4.07E-05	9.00E-05
Test Temp (C)		19.5			19.7								
Temp. Corr. Factor		1.015			1.011								
Peel Strength (ASTM D7005)													
A - MD Average Peel Strength (ppi)	5.03	4.17	2.47	2.58	1.92						3.23	1.31	1.0 min
A - MD Average Peel Strength (g/in)	2284	1893	1121	1171	872						1468	594	
B - MD Average Peel Strength (ppi)	0.80	0.53	1.73	1.34	3.82						1.64	1.30	1.0 min
B - MD Average Peel Strength (g/in)	364	240	785	608	1734						746	592	
Note: A and B represent a randomly assigned top and bottom of the sample													
Thickness (ASTM D5199)													
	GEONET COMPONENT												
Thickness (mils)	215	213	213	219	221	226	223	218	213	207	216	6	200 min ave
											207	<< min	
Mass/Unit Area (ASTM D5261)													
	GEONET COMPONENT												
5" diameter Circle - Mass (g)	9.64	10.56	10.28	10.46	10.60	10.71	10.29	10.27	10.33	10.70			
Mass/unit area (lbs./sq.ft)	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.01	
Density (ASTM D1505)													
	GEONET COMPONENT												
Density (g/cm³)	0.954	0.954	0.954								0.954	0.000	0.94 min
Carbon Black Content (ASTM D4218)													
	GEONET COMPONENT												
% Carbon Black	2.64	2.60									2.62	0.03	2.0 min
Melt Flow Index (ASTM D1238, Method A, 190°C / 2.16 kg)													
Melt Flow Index (g/10 min)	0.4393	0.4425									0.4409		
Tensile Properties (ASTM D7179, 12 ipm strain rate)													
	GEONET COMPONENT												
MD Max. Strength (ppi)	65	68	70	66	72						68	3	45 min
MD Elong. @ Max. Strength (%)	27	25	26	27	25						26	1	
MD Machine Direction													

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GEOCOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite

Sample Identification: 0116-047652

TRI Log #: 24-000109

GEOTEXTILE - SIDE A

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	4.81	4.47	4.20	4.13	4.35	4.67	4.93	5.35	4.77	4.60	4.63	0.37	
Mass/Unit Area (oz/sq.yd)	11.19	10.40	9.77	9.61	10.12	10.86	11.47	12.44	11.10	10.70	10.76	0.85	10 min
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	421	399	440	374	472	407	380	370	394	389	405	32	260 min
TD - Tensile Strength (lbs)	434	506	600	637	493	503	455	528	446	449	505	68	260 min
MD - Elong. @ Max. Load (%)	88	92	93	91	93	92	89	90	97	85	91	3	50 min
TD - Elong. @ Max. Load (%)	113	101	105	106	107	105	103	105	97	100	104	4	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1116	1053	989	1078	1062	1012	1006	1062	1177	1113	1067	57	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	175	170	175	191	118	176	168	189	175	218	175	25	100 min
TD - Tear Strength (lbs)	169	187	179	190	173	167	183	232	219	177	188	21	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.130	0.135	0.137	0.149	0.134						0.137	0.007	
Sieve No.	100	100	100	100	100						100		100 max
MD Machine Direction	TD Transverse Direction												

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GECOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047652
TRI Log #: 24-000109

GEOTEXTILE - SIDE B

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	3.69	4.62	4.87	4.80	4.66	4.73	4.63	4.52	4.56	4.52	4.56	0.33	
Mass/Unit Area (oz/sq.yd)	8.58	10.75	11.33	11.16	10.84	11.00	10.77	10.51	10.61	10.51	10.61	0.76	10 min
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	380	390	447	411	367	401	354	375	314	465	390	44	260 min
TD - Tensile Strength (lbs)	591	534	530	526	498	497	449	422	373	457	488	63	260 min
MD - Elong. @ Max. Load (%)	85	93	97	92	81	98	87	86	89	91	90	5	50 min
TD - Elong. @ Max. Load (%)	114	105	97	103	103	103	101	98	94	98	102	6	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1121	950	1160	1057	1038	1298	1213	1102	1038	1104	1108	98	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	158	129	132	152	105	153	149	159	138	177	145	20	100 min
TD - Tear Strength (lbs)	243	170	139	149	168	149	171	211	189	248	184	39	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.134	0.134	0.132	0.137	0.137						0.135	0.002	
Sieve No.	100	100	100	100	100						100		100 max
MD Machine Direction	TD Transverse Direction												

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GEOCOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047681
TRI Log #: 24-000109

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Hydraulic Transmissivity (ASTM D4716)													
Direction Tested: Machine Direction Normal Load (psf): 10,000 Hydraulic Gradient: 0.1 Test Length (in): 12 Test Width (in): 12 Plate / Sample / Plate Seat Time (hours) Specimen													
	541	536	533	513	509	503							
Volume (cc)	80.41	80.49	80.48	90.47	90.46	90.43							
Time (s)	0.11	0.11	0.11	0.09	0.09	0.09							
Flow Rate (GPM/ft width)	2.25E-04	2.22E-04	2.21E-04	1.88E-04	1.87E-04	1.85E-04							
Transmissivity (m²/s)		19.4			19.6								
Test Temp (C)		1.017			1.013								
Temp. Corr. Factor													
											0.10	0.01	
											2.05E-04	1.97E-05	9.00E-05
Peel Strength (ASTM D7005)													
A - MD Average Peel Strength (ppi)	4.42	5.72	4.04	5.61	5.51						5.06	0.77	1.0 min
A - MD Average Peel Strength (g/in)	2007	2597	1834	2547	2502						2297	351	
B - MD Average Peel Strength (ppi)	5.65	5.09	6.66	4.09	4.34						5.17	1.04	1.0 min
B - MD Average Peel Strength (g/in)	2565	2311	3024	1857	1970						2345	471	
Note: A and B represent a randomly assigned top and bottom of the sample													
Thickness (ASTM D5199)													
GEONET COMPONENT													
Thickness (mils)	204	208	215	216	226	224	220	215	212	211	215	7	200 min ave
											204	<< min	
Mass/Unit Area (ASTM D5261)													
GEONET COMPONENT													
5" diameter Circle - Mass (g)	9.51	9.38	9.96	9.88	10.53	10.68	10.53	10.20	10.54	10.32			
Mass/unit area (lbs./sq.ft)	0.15	0.15	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.01	
Density (ASTM D1505)													
GEONET COMPONENT													
Density (g/cm³)	0.954	0.954	0.954								0.954	0.000	0.94 min
Carbon Black Content (ASTM D4218)													
GEONET COMPONENT													
% Carbon Black	2.78	2.73									2.76	0.04	2.0 min
Melt Flow Index (ASTM D1238, Method A, 190°C / 2.16 kg)													
Melt Flow Index (g/10 min)	0.4107	0.4040									0.4074		
Tensile Properties (ASTM D7179, 12 ipm strain rate)													
GEONET COMPONENT													
MD Max. Strength (ppi)	75	69	65	70	65						69	4	45 min
MD Elong. @ Max. Strength (%)	25	25	25	28	27						26	2	
MD Machine Direction													

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GEOCOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite

Sample Identification: 0116-047681

TRI Log #: 24-000109

GEOTEXTILE - SIDE A

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	4.76	5.37	5.15	5.04	4.64	4.46	4.49	4.94	4.83	5.10	4.88	0.30	
Mass/Unit Area (oz/sq.yd)	11.07	12.49	11.98	11.72	10.79	10.37	10.44	11.49	11.23	11.86	11.35	0.69	10 min
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	439	408	437	422	426	439	455	493	474	371	437	34	260 min
TD - Tensile Strength (lbs)	568	496	487	480	437	508	591	475	483	519	504	45	260 min
MD - Elong. @ Max. Load (%)	101	97	103	95	85	99	99	105	105	101	99	6	50 min
TD - Elong. @ Max. Load (%)	97	97	98	101	101	98	103	103	93	106	100	4	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1109	1231	1263	1140	1156	1113	1022	1062	1080	1142	1132	73	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	193	141	144	151	174	151	174	143	171	161	160	17	100 min
TD - Tear Strength (lbs)	149	245	141	187	236	186	232	167	203	179	192	36	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.127	0.128	0.117	0.116	0.142						0.126	0.011	
Sieve No.	100	100	100	100	100						100		100 max
MD Machine Direction	TD Transverse Direction												

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GECOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047681
TRI Log #: 24-000109

GEOTEXTILE - SIDE B

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	4.90	4.72	4.55	4.02	4.50	4.34	4.39	5.05	4.64	4.87	4.60	0.31	10 min
Mass/Unit Area (oz/sq.yd)	11.40	10.98	10.58	9.35	10.47	10.09	10.21	11.75	10.79	11.33	10.69	0.71	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	401	384	400	408	410	406	435	394	432	419	409	16	260 min
TD - Tensile Strength (lbs)	461	415	448	513	490	478	400	460	437	454	456	34	260 min
MD - Elong. @ Max. Load (%)	87	85	95	97	89	90	102	91	94	83	91	6	50 min
TD - Elong. @ Max. Load (%)	108	107	93	103	105	98	93	102	99	105	101	5	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1167	1070	1047	1152	993	979	1096	1071	1075	1131	1078	62	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	133	134	162	114	116	200	176	147	151	167	150	27	100 min
TD - Tear Strength (lbs)	165	183	203	182	191	154	204	192	269	227	197	32	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.143	0.141	0.133	0.130	0.153						0.140	0.009	100 max
Sieve No.	100	100	100	100	70						100		
MD Machine Direction	TD Transverse Direction												

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GEOCOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047712
TRI Log #: 24-000109

PARAMETER											TEST REPLICATE NUMBER											MEAN	STD. DEV.	PROJ. SPEC.																							
											1	2	3	4	5	6	7	8	9	10																											
Hydraulic Transmissivity (ASTM D4716)																																															
Direction Tested: Machine Direction																																															
Normal Load (psf):											10,000																																				
Hydraulic Gradient:											0.1																																				
Test Length (in)											12																																				
Test Width (in)											12																																				
Plate / Sample / Plate											Plate Inflow  Outflow DS GC Plate																																				
Seat Time (hours)											Specimen																																				
											1											2																									
											528											518		502		589		592		591																	
											80.41											80.38		80.45		80.44		80.46		80.43																	
											0.11											0.10		0.10		0.12		0.12		0.12																	
0.25											2.18E-04											2.14E-04		2.07E-04		2.43E-04		2.44E-04		2.43E-04																	
																						19.6				19.7																					
																						1.013				1.011																					
Peel Strength (ASTM D7005)																																															
A - MD Average Peel Strength (ppi)											3.20											1.13		3.27		3.76		3.15																			
A - MD Average Peel Strength (g/in)											1453											513		1485		1707		1430																			
B - MD Average Peel Strength (ppi)											5.50											3.27		2.39		1.31		2.43																			
B - MD Average Peel Strength (g/in)											2497											1485		1085		595		1103																			
Note: A and B represent a randomly assigned top and bottom of the sample																																															
Thickness (ASTM D5199)																																															
											GEONET COMPONENT																																				
Thickness (mils)											222											221		213		216		210		212		221		219		211		210									
Mass/Unit Area (ASTM D5261)																																															
											GEONET COMPONENT																																				
5" diameter Circle - Mass (g)											10.65											10.64		10.13		10.84		10.18		10.12		10.60		10.35		9.64		10.12									
Mass/unit area (lbs./sq.ft)											0.17											0.17		0.16		0.18		0.16		0.16		0.17		0.17		0.16		0.16									
Density (ASTM D1505)																																															
											GEONET COMPONENT																																				
Density (g/cm3)											0.953											0.953		0.953																							
Carbon Black Content (ASTM D4218)																																															
											GEONET COMPONENT																																				
% Carbon Black											2.61											2.62																									
Melt Flow Index (ASTM D1238, Method A, 190°C / 2.16 kg)																																															
Melt Flow Index (g/10 min)											0.4012											0.4015																									
Tensile Properties (ASTM D7179, 12 ipm strain rate)																																															
											GEONET COMPONENT																																				
MD Max. Strength (ppi)											63											71		63		69		72																			
MD Elong. @ Max. Strength (%)											26											27		26		26		24																			
MD Machine Direction																																															

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GEOCOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite

Sample Identification: 0116-047712

TRI Log #: 24-000109

GEOTEXTILE - SIDE A

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	5.18	4.83	5.07	4.76	4.62	4.87	4.30	4.94	4.80	4.67	4.80	0.25	
Mass/Unit Area (oz/sq.yd)	12.05	11.23	11.79	11.07	10.75	11.33	10.00	11.49	11.16	10.86	11.17	0.57	10 min
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	406	436	428	404	479	435	426	408	426	413	426	22	260 min
TD - Tensile Strength (lbs)	507	597	525	457	488	514	512	504	487	467	506	39	260 min
MD - Elong. @ Max. Load (%)	96	95	97	97	92	87	91	91	94	79	92	6	50 min
TD - Elong. @ Max. Load (%)	99	113	102	100	107	101	107	99	107	109	104	5	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	934	979	1106	952	1040	1364	1087	1039	1150	1200	1085	130	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	153	147	145	150	181	162	188	135	187	176	163	19	100 min
TD - Tear Strength (lbs)	167	182	182	222	217	266	190	203	214	185	203	28	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.143	0.141	0.121	0.132	0.139						0.135	0.009	
Sieve No.	100	100	100	100	100						100		100 max
MD Machine Direction	TD Transverse Direction												

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GECOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047712
TRI Log #: 24-000109

GEOTEXTILE - SIDE B

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	4.49	4.72	4.85	4.94	4.78	4.95	4.49	4.88	4.70	4.82	4.76	0.17	10 min
Mass/Unit Area (oz/sq.yd)	10.44	10.98	11.28	11.49	11.12	11.51	10.44	11.35	10.93	11.21	11.08	0.38	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	522	488	569	574	462	437	413	420	429	478	479	59	260 min
TD - Tensile Strength (lbs)	412	415	458	420	445	492	439	533	530	508	465	47	260 min
MD - Elong. @ Max. Load (%)	111	103	103	107	93	95	97	92	91	95	99	7	50 min
TD - Elong. @ Max. Load (%)	89	93	99	92	93	100	99	97	98	105	97	5	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1084	1182	959	1060	1181	1176	1188	1271	970	1134	1120	101	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	163	156	170	151	144	170	192	175	146	166	163	15	100 min
TD - Tear Strength (lbs)	194	206	175	203	230	256	193	169	196	220	204	26	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.132	0.132	0.129	0.143	0.129						0.133	0.006	100 max
Sieve No.	100	100	100	100	100						100		
MD Machine Direction	TD Transverse Direction												

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GEOCOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047747
TRI Log #: 24-000109

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Hydraulic Transmissivity (ASTM D4716)													
Direction Tested: Machine Direction Normal Load (psf): 10,000 Hydraulic Gradient: 0.1 Test Length (in): 12 Test Width (in): 12 Plate / Sample / Plate Seat Time (hours) Specimen													
	1	2	3	4	5	6	7	8	9	10			
Volume (cc)	585	584	585	511	505	510							
Time (s)	90.44	90.38	90.43	170	170	170							
Flow Rate (GPM/ft width)	0.10	0.10	0.10	0.05	0.05	0.05							
Transmissivity (m²/s)	2.14E-04	2.14E-04	2.14E-04	9.91E-05	9.80E-05	9.89E-05							
Test Temp (C)		19.8			19.8								
Temp. Corr. Factor		1.008			1.008								
											0.08 1.56E-04	0.03 6.31E-05	9.00E-05
Peel Strength (ASTM D7005)													
A - MD Average Peel Strength (ppi)	2.51	2.04	1.71	1.02	3.58						2.17 986	0.96 434	1.0 min
A - MD Average Peel Strength (g/in)	1140	926	776	463	1625								
B - MD Average Peel Strength (ppi)	5.84	4.49	4.37	1.53	2.55						3.76 1705	1.71 775	1.0 min
B - MD Average Peel Strength (g/in)	2651	2038	1984	695	1158								
Note: A and B represent a randomly assigned top and bottom of the sample													
Thickness (ASTM D5199)													
	GEONET COMPONENT												
Thickness (mils)	217	212	212	215	219	224	222	220	211	209	216 209	5 << min	200 min ave
Mass/Unit Area (ASTM D5261)													
	GEONET COMPONENT												
5" diameter Circle - Mass (g)	10.73	10.41	10.25	10.19	10.63	10.43	10.80	10.11	9.84	9.84			
Mass/unit area (lbs./sq.ft)	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.01	
Density (ASTM D1505)													
	GEONET COMPONENT												
Density (g/cm³)	0.953	0.953	0.953								0.953	0.000	0.94 min
Carbon Black Content (ASTM D4218)													
	GEONET COMPONENT												
% Carbon Black	2.65	2.65									2.65	0.00	2.0 min
Melt Flow Index (ASTM D1238, Method A, 190°C / 2.16 kg)													
Melt Flow Index (g/10 min)	0.3967	0.3960									0.3964		
Tensile Properties (ASTM D7179, 12 ipm strain rate)													
	GEONET COMPONENT												
MD Max. Strength (ppi)	63	69	66	66	67						66	2	45 min
MD Elong. @ Max. Strength (%)	26	26	29	26	24						26	2	
MD Machine Direction	TD Transverse Direction												



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GECOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite

Sample Identification: 0116-047747

TRI Log #: 24-000109

GEOTEXTILE - SIDE A

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	4.72	4.62	4.64	4.50	4.60	4.63	4.64	4.90	4.70	4.42	4.64	0.13	
Mass/Unit Area (oz/sq.yd)	10.98	10.75	10.79	10.47	10.70	10.77	10.79	11.40	10.93	10.28	10.79	0.30	10 min
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	376	358	427	371	420	447	386	380	359	407	393	30	260 min
TD - Tensile Strength (lbs)	422	500	534	531	465	369	478	487	425	430	464	52	260 min
MD - Elong. @ Max. Load (%)	89	86	102	92	92	94	95	102	92	93	94	5	50 min
TD - Elong. @ Max. Load (%)	101	106	97	105	95	95	99	96	98	92	98	4	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1163	1087	1014	1020	1066	1110	1140	1090	1035	936	1066	67	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	156	164	148	156	132	162	134	172	142	198	156	19	100 min
TD - Tear Strength (lbs)	190	211	182	179	214	172	233	203	219	209	201	20	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.126	0.142	0.133	0.153	0.122						0.135	0.013	
Sieve No.	100	100	100	70	100						100		100 max
MD Machine Direction	TD Transverse Direction												

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GEOCOMPOSITE TEST RESULTS
TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047747
TRI Log #: 24-000109

GEOTEXTILE - SIDE B

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	4.46	4.13	4.04	4.16	4.85	4.74	4.57	4.81	4.77	4.42	4.50	0.30	10 min
Mass/Unit Area (oz/sq.yd)	10.37	9.61	9.40	9.68	11.28	11.03	10.63	11.19	11.10	10.28	10.46	0.70	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	401	432	432	372	367	413	377	320	413	481	401	44	260 min
TD - Tensile Strength (lbs)	425	516	463	464	434	434	385	471	465	420	448	36	260 min
MD - Elong. @ Max. Load (%)	96	99	94	93	88	89	97	86	98	91	93	5	50 min
TD - Elong. @ Max. Load (%)	99	104	93	103	99	95	96	95	95	107	99	4	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1066	1079	1144	1155	1044	1035	1016	1081	994	1037	1065	52	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	160	172	166	127	156	144	169	142	179	170	158	16	100 min
TD - Tear Strength (lbs)	197	203	230	197	221	195	176	178	215	237	205	20	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.131	0.135	0.143	0.124	0.139						0.134	0.007	100 max
Sieve No.	100	100	100	100	100						100		
MD Machine Direction	TD Transverse Direction												

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GEOCOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047777
TRI Log #: 24-000109

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Hydraulic Transmissivity (ASTM D4716)													
Direction Tested: Machine Direction Normal Load (psf): 10,000 Hydraulic Gradient: 0.1 Test Length (in): 12 Test Width (in): 12 Plate / Sample / Plate Seat Time (hours) Specimen													
	Volume (cc)	602	602	590	540	550	551						
	Time (s)	80.39	80.40	80.34	80.37	80.42	80.41						
0.25	Flow Rate (GPM/ft width)	0.12	0.12	0.12	0.11	0.11	0.11				0.11	0.01	9.00E-05
	Transmissivity (m²/s)	2.46E-04	2.46E-04	2.41E-04	2.21E-04	2.25E-04	2.25E-04				2.34E-04	1.17E-05	
	Test Temp (C)		20.1			20.1							
	Temp. Corr. Factor		1.001			1.001							
Peel Strength (ASTM D7005)													
A - MD Average Peel Strength (ppi)	1.17	1.48	3.55	1.97	2.86						2.21	0.99	1.0 min
A - MD Average Peel Strength (g/in)	531	672	1612	894	1298						1002	448	
B - MD Average Peel Strength (ppi)	1.86	4.23	5.05	4.20	4.39						3.95	1.22	1.0 min
B - MD Average Peel Strength (g/in)	844	1920	2293	1907	1993						1791	552	
Note: A and B represent a randomly assigned top and bottom of the sample													
Thickness (ASTM D5199)													
	GEONET COMPONENT												
Thickness (mils)	203	207	217	221	221	218	218	215	210	209	214	6	200 min ave
											203	<< min	
Mass/Unit Area (ASTM D5261)													
	GEONET COMPONENT												
5" diameter Circle - Mass (g)	9.11	9.47	10.03	10.24	10.26	10.47	10.64	10.47	10.43	10.04			
Mass/unit area (lbs./sq.ft)	0.15	0.15	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.01	
Density (ASTM D1505)													
	GEONET COMPONENT												
Density (g/cm³)	0.952	0.952	0.952								0.952	0.000	0.94 min
Carbon Black Content (ASTM D4218)													
	GEONET COMPONENT												
% Carbon Black	2.72	2.69									2.71	0.02	2.0 min
Melt Flow Index (ASTM D1238, Method A, 190°C / 2.16 kg)													
Melt Flow Index (g/10 min)	0.4196	0.4211									0.4204		
Tensile Properties (ASTM D7179, 12 ipm strain rate)													
	GEONET COMPONENT												
MD Max. Strength (ppi)	66	66	64	69	61						65	3	45 min
MD Elong. @ Max. Strength (%)	27	24	27	26	25						26	2	
MD Machine Direction													

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GEOCOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems

Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047777
TRI Log #: 24-000109

GEOTEXTILE - SIDE A

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	4.85	4.56	4.27	4.38	4.25	4.76	4.61	4.29	4.51	4.30	4.48	0.21	10 min
Mass/Unit Area (oz/sq.yd)	11.28	10.61	9.93	10.19	9.89	11.07	10.72	9.98	10.49	10.00	10.42	0.50	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	420	391	362	356	404	409	381	366	400	387	388	21	260 min
TD - Tensile Strength (lbs)	450	440	495	488	420	459	470	451	477	388	454	32	260 min
MD - Elong. @ Max. Load (%)	102	94	87	93	84	100	95	91	92	81	92	7	50 min
TD - Elong. @ Max. Load (%)	102	105	101	104	105	111	103	101	105	105	104	3	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1091	993	1077	1101	1043	1002	1033	1078	932	1066	1042	53	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	184	145	149	134	142	128	151	159	153	163	151	16	100 min
TD - Tear Strength (lbs)	193	171	202	174	176	166	196	209	185	182	186	14	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.122	0.154	0.130	0.145	0.136						0.137	0.013	100 max
Sieve No.	100	70	100	100	100						100		
MD Machine Direction	TD Transverse Direction												

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GECOMPOSITE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lealand Landfill Cell 11B and C

Material: Solmax 200-10-10 Double Sided Geocomposite
Sample Identification: 0116-047777
TRI Log #: 24-000109

GEOTEXTILE - SIDE B

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	4.77	4.62	4.63	4.28	4.58	4.52	4.18	4.52	4.33	5.17	4.56	0.28	10 min
Mass/Unit Area (oz/sq.yd)	11.10	10.75	10.77	9.96	10.65	10.51	9.72	10.51	10.07	12.03	10.61	0.65	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	451	377	377	379	367	421	387	379	377	353	387	28	260 min
TD - Tensile Strength (lbs)	403	479	473	408	388	422	392	484	449	394	429	38	260 min
MD - Elong. @ Max. Load (%)	86	89	89	85	84	88	96	92	93	94	90	4	50 min
TD - Elong. @ Max. Load (%)	109	99	103	97	96	108	95	95	103	106	101	5	50 min
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	996	836	1110	1095	942	1007	1060	1184	1101	1067	1040	99	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	155	172	150	150	161	120	163	167	143	134	151	16	100 min
TD - Tear Strength (lbs)	165	170	244	184	203	145	177	205	167	209	187	29	100 min
Apparent Opening Size (ASTM D4751)													
Opening Size Diameter (mm)	0.127	0.138	0.150	0.123	0.143						0.136	0.011	100 max
Sieve No.	100	100	70	100	100						100		
MD Machine Direction	TD Transverse Direction												

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GEONET INFORMATION

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**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GEONET INVENTORY**

Roll Number	Resin Lot Number	Date	Roll Dimensions		Conformance Sample (Yes/No)	MQC Certificate (Yes/No)	Comments
			Length, ft	Width, ft			
0116-046993	DQK611302	1/17/2024	300	15	-	Yes	
0116-046994	DQK611302	1/17/2024	300	15	-	Yes	
0116-046995	DQK611302	1/17/2024	300	15	-	Yes	
0116-046996	DQK611302	1/17/2024	300	15	-	Yes	
0116-046997	DQK611302	1/17/2024	300	15	-	Yes	
0116-046998	DQK611302	1/17/2024	300	15	-	Yes	
0116-046999	DQK611302	1/17/2024	300	15	-	Yes	
0116-047000	DQK611302	1/17/2024	300	15	-	Yes	
0116-047001	DQK610751	1/17/2024	300	15	-	Yes	
0116-047002	DQK610751	1/17/2024	300	15	-	Yes	
0116-047003	DQK610751	1/17/2024	300	15	-	Yes	
0116-047004	DQK610751	1/17/2024	300	15	-	Yes	
0116-047005	DQK610751	1/17/2024	300	15	-	Yes	
0116-047006	DQK610751	1/17/2024	300	15	-	Yes	
0116-047007	DQK610751	1/17/2024	300	15	-	Yes	
0116-047008	DQK610751	1/17/2024	300	15	-	Yes	
0116-047009	DQK610751	1/17/2024	300	15	-	Yes	
0116-047010	DQK610751	1/17/2024	300	15	-	Yes	
0116-047011	DQK610751	1/17/2024	300	15	-	Yes	
0116-047012	DQK610751	1/17/2024	300	15	-	Yes	
0116-047013	DQK610751	1/17/2024	300	15	-	Yes	
0116-047014	DQK610751	1/17/2024	300	15	-	Yes	
0116-047015	DQK610751	1/17/2024	300	15	-	Yes	
0116-047016	DQK610751	1/17/2024	300	15	-	Yes	
0116-047017	DQK610751	1/17/2024	300	15	-	Yes	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GEONET INVENTORY**

Roll Number	Resin Lot Number	Date	Roll Dimensions		Conformance Sample (Yes/No)	MQC Certificate (Yes/No)	Comments
			Length, ft	Width, ft			
0116-047018	DQK610751	1/17/2024	300	15	-	Yes	
0116-047019	DQK610751	1/17/2024	300	15	-	Yes	
0116-047020	DQK610751	1/17/2024	300	15	-	Yes	
0116-047021	DQK610751	1/17/2024	300	15	-	Yes	
0116-047022	DQK610751	1/17/2024	300	15	-	Yes	
0116-047023	DQK610751	1/17/2024	300	15	-	Yes	
0116-047024	DQK610751	1/17/2024	300	15	-	Yes	
0116-047025	DQK610751	1/17/2024	300	15	-	Yes	
0116-047026	DQK610751	1/17/2024	300	15	-	Yes	
0116-047027	DQK610751	1/17/2024	300	15	-	Yes	
0116-047028	DQK610751	1/17/2024	300	15	-	Yes	
0116-047106	DQK610751	1/17/2024	300	15	-	Yes	
0116-047107	DQK610751	1/17/2024	300	15	-	Yes	
0116-047108	DQK610751	1/17/2024	300	15	-	Yes	
0116-047197	DQK610751	1/17/2024	300	15	-	Yes	
0116-047198	DQK610751	1/17/2024	300	15	1/25/2024	Yes	
0116-047199	DQK610751	1/17/2024	300	15	-	Yes	
0116-047200	DQK610751	1/17/2024	300	15	-	Yes	
0116-047201	DQK610751	1/17/2024	300	15	-	Yes	
0116-047202	DQK610751	1/17/2024	300	15	-	Yes	
0116-047203	DQK610751	1/17/2024	300	15	-	Yes	
0116-047204	DQK610751	1/17/2024	300	15	-	Yes	
0116-047253	DQK610751	1/17/2024	300	15	-	Yes	
0116-047254	DQK610751	1/17/2024	300	15	-	Yes	
0116-047255	DQK610751	1/17/2024	300	15	-	Yes	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GEONET INVENTORY**

Roll Number	Resin Lot Number	Date	Roll Dimensions		Conformance Sample (Yes/No)	MQC Certificate (Yes/No)	Comments
			Length, ft	Width, ft			
0116-047275	DQK610751	1/17/2024	300	15	-	Yes	
0116-047276	DQK610751	1/17/2024	300	15	-	Yes	
0116-047277	DQK610751	1/17/2024	300	15	-	Yes	
0116-047278	DQK610751	1/17/2024	300	15	-	Yes	
0116-047279	DQK610751	1/17/2024	300	15	-	Yes	
0116-047280	DQK610751	1/17/2024	300	15	-	Yes	
0116-047281	DQK610751	1/17/2024	300	15	-	Yes	
0116-047282	DQK610751	1/17/2024	300	15	-	Yes	
0116-047283	DQK610751	1/17/2024	300	15	-	Yes	
0116-047284	DQK610751	1/17/2024	300	15	-	Yes	
0116-047285	DQK610751	1/17/2024	300	15	1/25/2024	Yes	
0116-047286	DQK610751	1/17/2024	300	15	-	Yes	
0116-047287	DQK610751	1/17/2024	300	15	-	Yes	
0116-047288	DQK610751	1/17/2024	300	15	-	Yes	
0116-047289	DQK610751	1/17/2024	300	15	-	Yes	
0116-047290	DQK610751	1/17/2024	300	15	-	Yes	
0116-047291	DQK610751	1/17/2024	300	15	-	Yes	
0116-047331	DQK611442	1/17/2024	300	15	-	Yes	
0116-047332	DQK611442	1/17/2024	300	15	-	Yes	
0116-047333	DQK611442	1/17/2024	300	15	-	Yes	
0116-047334	DQK611442	1/17/2024	300	15	-	Yes	
0116-047335	DQK611442	1/17/2024	300	15	-	Yes	
0116-047336	DQK611442	1/17/2024	300	15	-	Yes	
0116-047359	DQK611442	1/17/2024	300	15	-	Yes	
0116-047360	DQK611442	1/17/2024	300	15	-	Yes	

**LEA LAND LANDFILL
UNIT IIB&C CONSTRUCTION
6041-001-17-01
GEONET INVENTORY**

Roll Number	Resin Lot Number	Date	Roll Dimensions		Conformance Sample (Yes/No)	MQC Certificate (Yes/No)	Comments
			Length, ft	Width, ft			
0116-047361	DQK611442	1/17/2024	300	15	-	Yes	
0116-047362	DQK611442	1/17/2024	300	15	-	Yes	
0116-047363	DQK611442	1/17/2024	300	15	-	Yes	
0116-047364	DQK611442	1/17/2024	300	15	-	Yes	
0116-047365	DQK611442	1/17/2024	300	15	-	Yes	
0116-047366	DQK611442	1/17/2024	300	15	1/25/2024	Yes	
0116-047367	DQK611442	1/17/2024	300	15	-	Yes	
0116-047368	DQK611442	1/17/2024	300	15	-	Yes	
0116-047369	DQK611442	1/17/2024	300	15	-	Yes	
0116-047370	DQK611442	1/17/2024	300	15	-	Yes	
0116-047371	DQK611442	1/17/2024	300	15	-	Yes	
0116-047372	DQK611442	1/17/2024	300	15	-	Yes	
0116-047373	DQK611442	1/17/2024	300	15	-	Yes	
0116-047374	DQK611442	1/17/2024	300	15	-	Yes	
0116-047375	DQK611442	1/17/2024	300	15	-	Yes	
0116-047376	DQK611442	1/17/2024	300	15		Yes	
0116-047377	DQK611442	1/17/2024	300	15	-	Yes	
0116-047378	DQK611442	1/17/2024	300	15	-	Yes	
0116-047379	DQK611442	1/17/2024	300	15	-	Yes	
0116-047380	DQK611442	1/17/2024	300	15	-	Yes	



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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-3

PROJECT NAME: LEALAND LF CELL 11B & C

ROLL NUMBER	MANUFACT. DATE	RESIN LOT NUMBER
Product Code : 1106474-50814-3		
<u>HyperNet 200 mils / 5.00 mm</u>		
TRI Pickup - Kendall Villarreal		
2ft x Roll Width		
1/100,000 sf, min 1/Lot		
Roll List to be emailed to <sampling@tri-env.com> and <klvillarreal@tri-env.com>		
0116-046993	2023-12-14	DQK611302
0116-046994	2023-12-14	DQK611302
0116-046995	2023-12-14	DQK611302
0116-046996	2023-12-14	DQK611302
0116-046997	2023-12-14	DQK611302
0116-046998	2023-12-14	DQK611302
0116-046999	2023-12-14	DQK611302
0116-047000	2023-12-14	DQK611302
0116-047001	2023-12-14	DQK610751
0116-047002	2023-12-14	DQK610751
0116-047003	2023-12-14	DQK610751
0116-047004	2023-12-14	DQK610751
0116-047005	2023-12-14	DQK610751
0116-047006	2023-12-14	DQK610751
0116-047007	2023-12-14	DQK610751
0116-047008	2023-12-14	DQK610751
0116-047009	2023-12-14	DQK610751
0116-047010	2023-12-14	DQK610751

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17 Jan 2024

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:

SW2401

SALES ORDER:

SO-096486

PACKING SLIP NUMBER:

Pre-SO-096486-3

PROJECT NAME: LEALAND LF CELL 11B & C

0116-047011	2023-12-14	DQK610751
0116-047012	2023-12-14	DQK610751
0116-047013	2023-12-14	DQK610751
0116-047014	2023-12-14	DQK610751
0116-047015	2023-12-14	DQK610751
0116-047016	2023-12-14	DQK610751
0116-047017	2023-12-14	DQK610751
0116-047018	2023-12-14	DQK610751
0116-047019	2023-12-14	DQK610751
0116-047020	2023-12-14	DQK610751
0116-047021	2023-12-14	DQK610751
0116-047022	2023-12-14	DQK610751
0116-047023	2023-12-14	DQK610751
0116-047024	2023-12-14	DQK610751
0116-047025	2023-12-14	DQK610751
0116-047026	2023-12-14	DQK610751
0116-047027	2023-12-14	DQK610751
0116-047028	2023-12-14	DQK610751
0116-047106	2023-12-16	DQK610751
0116-047107	2023-12-16	DQK610751
0116-047108	2023-12-16	DQK610751
0116-047197	2023-12-17	DQK610751
0116-047198	2023-12-17	DQK610751
0116-047199	2023-12-17	DQK610751
0116-047200	2023-12-17	DQK610751
0116-047201	2023-12-17	DQK610751
0116-047202	2023-12-17	DQK610751
0116-047203	2023-12-17	DQK610751

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:

SW2401

SALES ORDER:

SO-096486

PACKING SLIP NUMBER:

Pre-SO-096486-3

PROJECT NAME: LEALAND LF CELL 11B & C

0116-047204	2023-12-17	DQK610751
0116-047253	2023-12-18	DQK610751
0116-047254	2023-12-18	DQK610751
0116-047255	2023-12-18	DQK610751
0116-047275	2023-12-18	DQK610751
0116-047276	2023-12-18	DQK610751
0116-047277	2023-12-18	DQK610751
0116-047278	2023-12-18	DQK610751
0116-047279	2023-12-18	DQK610751
0116-047280	2023-12-18	DQK610751
0116-047281	2023-12-18	DQK610751
0116-047282	2023-12-18	DQK610751
0116-047283	2023-12-18	DQK610751
0116-047284	2023-12-18	DQK610751
0116-047285	2023-12-18	DQK610751
0116-047286	2023-12-18	DQK610751
0116-047287	2023-12-18	DQK610751
0116-047288	2023-12-18	DQK610751
0116-047289	2023-12-18	DQK610751
0116-047290	2023-12-18	DQK610751
0116-047291	2023-12-19	DQK610751
0116-047331	2023-12-19	DQK611442
0116-047332	2023-12-19	DQK611442
0116-047333	2023-12-19	DQK611442
0116-047334	2023-12-19	DQK611442
0116-047335	2023-12-19	DQK611442
0116-047336	2023-12-19	DQK611442
0116-047359	2023-12-20	DQK611442

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MANUFACTURING QUALITY CONTROL



PROJECT NUMBER:

SALES ORDER:

PACKING SLIP NUMBER:

SW2401

SO-096486

Pre-SO-096486-3

PROJECT NAME: LEALAND LF CELL 11B & C

0116-047360	2023-12-20	DQK611442
0116-047361	2023-12-20	DQK611442
0116-047362	2023-12-20	DQK611442
0116-047363	2023-12-20	DQK611442
0116-047364	2023-12-20	DQK611442
0116-047365	2023-12-20	DQK611442
0116-047366	2023-12-20	DQK611442
0116-047367	2023-12-20	DQK611442
0116-047368	2023-12-20	DQK611442
0116-047369	2023-12-20	DQK611442
0116-047370	2023-12-20	DQK611442
0116-047371	2023-12-20	DQK611442
0116-047372	2023-12-20	DQK611442
0116-047373	2023-12-20	DQK611442
0116-047374	2023-12-20	DQK611442
0116-047375	2023-12-20	DQK611442
0116-047376	2023-12-20	DQK611442
0116-047377	2023-12-20	DQK611442
0116-047378	2023-12-20	DQK611442
0116-047379	2023-12-20	DQK611442
0116-047380	2023-12-20	DQK611442

QUANTITY (ROLLS): 95

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17 Jan 2024

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2401
SALES ORDER: SO-096486
PACKING SLIP NUMBER: Pre-SO-096486-3

PROJECT NAME : LEALAND LF CELL 11B & C

PRODUCT: 1106474-50814-3
HyperNet 200 mils / 5.00 mm

						Rolls	
Test	Property		Direction	Test Method	Frequency	Unit	
	1 Thickness (min. avg.)			ASTM D5199	50,000 ft²	mils	
	2 Carbon Black Content			ASTM D4218	50,000 ft²	%	
	3 Density (min.)			ASTM D792	50,000 ft²	g/cm³	
	4 Tensile Strength (MD)		MD	ASTM D7179	50,000 ft²	lbf/in	
	5 Mass (avg.)			ASTM D5261	50,000 ft²	lbs/ft²	
	6 Melt Index - 190°C/2.16 kg (max.)			ASTM D1238	One per batch	g/10 min	
	7 Geonet Transmissivity (x10 ⁻³)			ASTM D4716	500,000 ft²	m²/sec	

Test	1	2	3	4	5	6	7
SPECIFICATIONS	200	2.0	0.94	45	0.160	1.0	2
0116-046993	221.20	2.47	0.953	61	0.166	0.37	6.3
0116-046994	221.20	2.47	0.953	61	0.166	0.37	6.3
0116-046995	221.20	2.47	0.953	61	0.166	0.37	6.3
0116-046996	221.20	2.47	0.953	61	0.166	0.37	6.3
0116-046997	233.00	2.30	0.953	61	0.166	0.37	6.3
0116-046998	233.00	2.30	0.953	61	0.166	0.37	6.3
0116-046999	233.00	2.30	0.953	61	0.166	0.37	6.3
0116-047000	233.00	2.30	0.953	61	0.166	0.37	6.3
0116-047001	233.00	2.30	0.953	61	0.166	0.39	6.3
0116-047002	233.00	2.30	0.953	61	0.166	0.39	6.3
0116-047003	238.00	2.64	0.951	70	0.166	0.39	6.3
0116-047004	238.00	2.64	0.951	70	0.166	0.39	6.3
0116-047005	238.00	2.64	0.951	70	0.166	0.39	6.3
0116-047006	238.00	2.64	0.951	70	0.166	0.39	6.3
0116-047007	232.00	2.64	0.951	70	0.166	0.39	6.3
0116-047008	232.00	2.20	0.951	70	0.166	0.39	6.3
0116-047009	232.00	2.20	0.951	70	0.166	0.39	6.3
0116-047010	232.00	2.20	0.951	70	0.166	0.39	6.3
0116-047011	232.00	2.20	0.951	70	0.166	0.39	6.3

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER:SW2401

SALES ORDER:SO-096486

PACKING SLIP NUMBER:Pre-SO-096486-3

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6	7
0116-047012	232.00	2.20	0.951	70	0.166	0.39	6.3
0116-047013	230.90	2.25	0.950	70	0.178	0.39	6.3
0116-047014	230.90	2.25	0.950	70	0.178	0.39	6.3
0116-047015	230.90	2.25	0.950	70	0.178	0.39	6.3
0116-047016	230.90	2.25	0.950	70	0.178	0.39	6.3
0116-047017	230.90	2.25	0.950	70	0.178	0.39	6.3
0116-047018	223.40	2.25	0.950	70	0.176	0.39	6.746
0116-047019	223.40	2.25	0.950	70	0.176	0.39	6.746
0116-047020	223.40	2.25	0.950	70	0.176	0.39	6.746
0116-047021	223.40	2.25	0.950	70	0.176	0.39	6.746
0116-047022	223.40	2.25	0.950	70	0.176	0.39	6.746
0116-047023	228.10	2.53	0.952	72	0.175	0.39	6.746
0116-047024	228.10	2.53	0.952	72	0.175	0.39	6.746
0116-047025	228.10	2.53	0.952	72	0.175	0.39	6.746
0116-047026	228.10	2.53	0.952	72	0.175	0.39	6.746
0116-047027	228.10	2.53	0.952	72	0.175	0.39	6.746
0116-047028	231.50	2.53	0.952	72	0.175	0.39	6.746
0116-047106	224.00	2.44	0.956	64	0.168	0.40	5.2
0116-047107	224.00	2.44	0.956	64	0.168	0.40	5.2
0116-047108	224.00	2.44	0.956	64	0.168	0.40	5.2
0116-047197	221.20	2.49	0.953	66	0.170	0.40	6.29
0116-047198	221.20	2.49	0.953	66	0.170	0.40	6.29
0116-047199	221.20	2.49	0.953	66	0.170	0.40	6.29
0116-047200	221.20	2.49	0.953	66	0.170	0.40	6.29
0116-047201	221.20	2.49	0.953	66	0.170	0.40	6.29
0116-047202	217.70	2.37	0.953	66	0.170	0.40	6.29
0116-047203	217.70	2.37	0.953	66	0.170	0.40	6.29
0116-047204	217.70	2.37	0.953	66	0.170	0.40	6.29
0116-047253	215.30	2.57	0.953	59	0.160	0.40	5.79
0116-047254	215.30	2.57	0.953	59	0.160	0.40	5.79
0116-047255	215.30	2.57	0.953	59	0.160	0.40	5.79
0116-047275	221.40	2.21	0.951	63	0.170	0.40	9.1
0116-047276	221.40	2.21	0.951	63	0.170	0.40	9.1

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TEST RESULTS

PROJECT NUMBER:

SW2401

SALES ORDER:

SO-096486

PACKING SLIP NUMBER:

Pre-SO-096486-3

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6	7
0116-047277	221.40	2.21	0.951	63	0.170	0.40	9.1
0116-047278	221.40	2.21	0.951	63	0.170	0.40	9.1
0116-047279	221.40	2.21	0.951	63	0.170	0.40	9.1
0116-047280	225.40	2.26	0.951	63	0.170	0.40	9.1
0116-047281	225.40	2.26	0.951	63	0.170	0.38	9.1
0116-047282	225.40	2.26	0.951	63	0.170	0.38	9.1
0116-047283	225.40	2.26	0.951	63	0.170	0.38	9.1
0116-047284	225.40	2.26	0.951	63	0.170	0.38	9.1
0116-047285	227.60	2.32	0.950	66	0.170	0.38	9.1
0116-047286	227.60	2.32	0.950	66	0.170	0.38	9.1
0116-047287	227.60	2.32	0.950	66	0.170	0.38	9.1
0116-047288	227.60	2.32	0.950	66	0.170	0.38	9.1
0116-047289	227.60	2.32	0.950	66	0.170	0.38	9.1
0116-047290	227.60	2.27	0.950	66	0.170	0.38	9.1
0116-047291	227.60	2.27	0.950	66	0.170	0.38	9.1
0116-047331	221.80	2.12	0.951	64	0.169	0.38	5.568
0116-047332	221.80	2.12	0.951	64	0.169	0.38	5.568
0116-047333	221.80	2.12	0.951	64	0.169	0.38	5.568
0116-047334	221.80	2.12	0.951	64	0.169	0.38	5.568
0116-047335	221.80	2.12	0.951	64	0.169	0.38	5.568
0116-047336	225.70	2.12	0.951	64	0.169	0.38	5.568
0116-047359	225.30	2.06	0.952	67	0.164	0.38	5.302
0116-047360	225.30	2.06	0.952	67	0.164	0.38	5.302
0116-047361	225.30	2.06	0.952	67	0.164	0.38	5.302
0116-047362	225.30	2.06	0.952	67	0.164	0.41	5.302
0116-047363	225.30	2.06	0.952	67	0.164	0.41	5.302
0116-047364	220.20	2.18	0.958	67	0.164	0.41	5.302
0116-047365	220.20	2.18	0.958	67	0.164	0.41	5.302
0116-047366	220.20	2.18	0.958	67	0.164	0.41	5.302
0116-047367	220.20	2.18	0.958	67	0.164	0.41	5.302
0116-047368	220.20	2.18	0.958	67	0.164	0.41	5.302
0116-047369	220.80	2.38	0.958	64	0.172	0.41	5.302
0116-047370	220.80	2.38	0.958	64	0.172	0.41	5.302

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MANUFACTURING QUALITY CONTROL



TEST RESULTS

PROJECT NUMBER: SW2401
 SALES ORDER: SO-096486
 PACKING SLIP NUMBER: Pre-SO-096486-3

PROJECT NAME : LEALAND LF CELL 11B & C

Test	1	2	3	4	5	6	7
0116-047371	220.80	2.38	0.958	64	0.172	0.41	5.302
0116-047372	220.80	2.38	0.958	64	0.172	0.41	5.302
0116-047373	220.80	2.38	0.958	64	0.172	0.41	5.302
0116-047374	221.20	2.65	0.958	64	0.172	0.41	5.302
0116-047375	221.20	2.65	0.958	64	0.172	0.41	5.302
0116-047376	221.20	2.65	0.958	64	0.172	0.41	5.302
0116-047377	221.20	2.65	0.958	64	0.172	0.41	5.302
0116-047378	221.20	2.65	0.958	64	0.172	0.41	5.302
0116-047379	220.20	2.66	0.958	64	0.170	0.41	5.302
0116-047380	220.20	2.66	0.958	64	0.170	0.41	5.302

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CoA Date: 11/01/2023

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC:HOUSTON
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: LabqualityUSA
Fax:

Delivery #: 81019551
PO #: 609266
Weight: 188700.000 LB
Ship Date: 11/01/2023
Package: BULK
Mode: Hopper Car
Car #: HCBX001195
Seal No: 355061

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DQK611302

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.36	g/10min
Density	D1505	0.9548	g/cm3
Production date		20231025	

The data set forth herein have been carefully compiled by Chevron Phillips Chemical Company LP (CPCChem).
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JIAHUI LI
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806



CoA Date: 11/01/2023

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC:HOUSTON
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: LabqualityUSA
Fax:

Delivery #: 81019552
PO #: 609266
Weight: 203100.000 LB
Ship Date: 11/01/2023
Package: BULK
Mode: Hopper Car
Car #: HCBX001251
Seal No: 359645

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DQK610751

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.34	g/10min
Density	D1505	0.9547	g/cm3
Production date		20231015	

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JIAHUI LI
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806



CoA Date: 10/31/2023

Certificate of Analysis

Shipped To: SOLMAX GEOSYNTHETICS, LLC:HOUSTON
19103 GUNDLE ROAD
HOUSTON TX 77073
USA

Recipient: LabqualityUSA
Fax:

Delivery #: 81018522
PO #: 609144
Weight: 199500.000 LB
Ship Date: 10/31/2023
Package: BULK
Mode: Hopper Car
Car #: HCBX001745
Seal No: 363979

Product:
MARLEX HHM 5502BN POLYETHYLENE in Bulk

Lot Number: DQK611442

Property	Test Method	Value	Unit
Melt Index	ASTM D1238	0.37	g/10min
Density	D1505	0.9545	g/cm3
Production date		20231028	

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JIAHUI LI
QUALITY ASSURANCE SUPERINTENDENT

For CoA questions contact Leslie Dziamara at +1-832-813-4806



ROLL TEST DATA REPORT

Report Date:

Roll Count 3

Sales Order No.	Customer Name	Project Location	Product Name	Project Name
SO-096486		Carlsbad, NM	E1000	Lealand LF Unit 2B&C

ROLL #	ASTM D4751 AOS (mm)	ASTM D6241 CBR PUNCTURE (lbs)	Mass per Unit Area ASTM D5261 (oz/yd ²)	ASTM D4632 Elongation @ Break (%) MD	ASTM D4632 Grab Strength (lbs) MD	ASTM D4533 Trapezoidal Tear (lbs) MD	ASTM D4491 Permeability (cm/sec)	ASTM D4491 Permittivity (sec-1)	Water Flow D4491 gpm/ft ²	ASTM D4632 Elongation @ Break (%) TD	ASTM D4632 Grab Strength (lbs) TD	ASTM D4533 Trapezoidal Tear (lbs) TD	ASTM D4355 Deterioratio n by [Xenon Arc] Exposure (%)
2027701068	0,150	996	10,67	78	385,49	140,25	0,429	1,849	136	85,00	463	187,53	80
2027701069	0,150	996	10,67	78	385,49	140,25	0,429	1,849	136	85,00	463	187,53	80
2027701070	0,150	996	10,67	78	385,49	140,25	0,429	1,849	136	85,00	463	187,53	80

Laboratory Supervisor: Daniel Vasquez

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TESTING, RESEARCH, CONSULTING AND FIELD SERVICES

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GEONET TEST RESULTS Southwest Liner Systems Project: Lea Land Landfill Cell 11B and C

Material: Solmax 200 mil Geonet
Sample Identification: 0116-047198
TRI Log #: 24-000110

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5199)													
Thickness (mils)	210	215	220	228	230	222	221	220	215	217	220 210	5.9 << min	200 min ave
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	9.98	9.83	10.17	10.50	10.43	10.93	11.14	10.49	10.20	9.13	0.17	0.01	
Mass/unit area (lbs./sq.ft)	0.16	0.16	0.16	0.17	0.17	0.18	0.18	0.17	0.17	0.15			
Density/Specific Gravity (ASTM D792, Method B)													
Density (g/cm3)	0.953	0.953	0.953								0.953	0.000	0.940 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.66	2.68									2.67	0.01	2.0 min ave
Melt Flow Index (ASTM D1238, Method A, 190°C / 2.16 kg)													
Melt Flow Index (g/10 min)	0.4037	0.4045									0.4041		
Tensile Properties (ASTM D7179, 12 ipm strain rate)													
MD Max. Strength (ppi)	58	69	75	59	65						65	7	45 min
MD Elong. @ Max. Strength (%)	31	30	32	31	27						30	2	
MD Machine Direction													

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GEONET TEST RESULTS Southwest Liner Systems Project: Lea Land Landfill Cell 11B and C

Material: Solmax 200 mil Geonet
Sample Identification: 0116-047285
TRI Log #: 24-000110

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5199)													
Thickness (mils)	212	230	219	221	220	223	233	227	222	211	222 211	7.2 << min	200 min ave
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	9.15	10.83	9.95	10.30	10.07	10.45	11.07	11.03	10.84	9.46	0.17	0.01	
Mass/unit area (lbs./sq.ft)	0.15	0.18	0.16	0.17	0.16	0.17	0.18	0.18	0.18	0.15			
Density/Specific Gravity (ASTM D792, Method B)													
Density (g/cm3)	0.953	0.953	0.953								0.953	0.000	0.94 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.61	2.67									2.64	0.04	2.0 min ave
Melt Flow Index (ASTM D1238, Method A, 190°C / 2.16 kg)													
Melt Flow Index (g/10 min)	0.4223	0.4230									0.4227		
Tensile Properties (ASTM D7179, 12 ipm strain rate)													
MD Max. Strength (ppi)	59	67	70	76	58						66	8	45 min
MD Elong. @ Max. Strength (%)	35	29	30	31	32						31	2	
MD Machine Direction													

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GEONET TEST RESULTS Southwest Liner Systems Project: Lea Land Landfill Cell 11B and C

Material: Solmax 200 mil Geonet
Sample Identification: 0116-047366
TRI Log #: 24-000110

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Thickness (ASTM D5199)													
Thickness (mils)	213	211	210	218	215	216	228	227	224	221	218 210	6.6 << min	200 min ave
Mass/Unit Area (ASTM D5261)													
5" diameter Circle - Mass (g)	9.55	9.47	9.20	10.02	10.28	10.05	10.72	10.82	10.95	10.69	0.16	0.01	
Mass/unit area (lbs./sq.ft)	0.15	0.15	0.15	0.16	0.17	0.16	0.17	0.18	0.18	0.17			
Density/Specific Gravity (ASTM D792, Method B)													
Density (g/cm3)	0.954	0.954	0.954								0.954	0.000	0.94 min
Carbon Black Content (ASTM D4218)													
% Carbon Black	2.67	2.80									2.74	0.09	2.0 min ave
Melt Flow Index (ASTM D1238, Method A, 190°C / 2.16 kg)													
Melt Flow Index (g/10 min)	0.3992	0.3958									0.3975		
Tensile Properties (ASTM D7179, 12 ipm strain rate)													
MD Max. Strength (ppi)	69	61	61	70	60						64	5	45 min
MD Elong. @ Max. Strength (%)	25	28	23	28	28						26	2	
MD Machine Direction													

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GEONET DEPLOYMENT LOG

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**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEONET DEPLOYMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
PH1	7275	GEONET	7/8/2024	BL	113	13	1,469	
PH2	7275	GEONET	7/8/2024	BL	114	13	1,482	
PH3	7275	GEONET	7/8/2024	BL	90	13	1,170	
PH3A	7291	GEONET	7/8/2024	BL	24	13	312	
PH4	7291	GEONET	7/8/2024	BL	114	13	1,482	
PH5	7291	GEONET	7/8/2024	BL	113	13	1,469	
PH6	7291	GEONET	7/8/2024	BL	65	13	845	
PH6A	7008	GEONET	7/8/2024	BL	49	13	637	
PH7	7008	GEONET	7/8/2024	BL	114	13	1,482	
PH8	7008	GEONET	7/8/2024	BL	114	13	1,482	
PH9	7008	GEONET	7/8/2024	BL	39	13	507	
PH9A	7197	GEONET	7/8/2024	BL	74	13	962	
PH10	7197	GEONET	7/8/2024	BL	116	13	1,508	
PH11	7197	GEONET	7/8/2024	BL	114	13	1,482	
PH12	7204	GEONET	7/8/2024	BL	115	13	1,495	
PH13	7204	GEONET	7/8/2024	BL	114	13	1,482	
PH14	7204	GEONET	7/8/2024	BL	83	13	1,079	
PH14A	7001	GEONET	7/8/2024	BL	31	13	403	
PH15	7001	GEONET	7/8/2024	BL	114	13	1,482	
PH16	7001	GEONET	7/8/2024	BL	115	13	1,495	
PH17	7001	GEONET	7/8/2024	BL	61	13	793	
PH17A	7334	GEONET	7/8/2024	BL	53	13	689	
PH18	7334	GEONET	7/8/2024	BL	113	13	1,469	
PH19	7334	GEONET	7/8/2024	BL	114	13	1,482	
PH20	7255	GEONET	7/8/2024	BL	113	13	1,469	
PH21	7255	GEONET	7/8/2024	BL	113	13	1,469	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEOTNET DEPLOYMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
PH22	7255	GEONET	7/8/2024	BL	87	13	1,131	
PH22A	7020	GEONET	7/8/2024	BL	25	13	325	
PH23	7020	GEONET	7/8/2024	BL	113	13	1,469	
PH24	7020	GEONET	7/8/2024	BL	113	13	1,469	
PH25	7020	GEONET	7/8/2024	BL	73	13	949	
PH25A	7017	GEONET	7/8/2024	BL	41	13	533	
PH26	7017	GEONET	7/8/2024	BL	114	13	1,482	
PH27	7017	GEONET	7/8/2024	BL	114	13	1,482	
PH28	7017	GEONET	7/8/2024	BL	47	13	611	
PH28A	7331	GEONET	7/8/2024	BL	66	13	858	
PH29	7360	GEONET	7/16/2024	BL	115	15	1,725	
PH30	7360	GEONET	7/16/2024	BL	114	15	1,710	
PH31	7360	GEONET	7/16/2024	BL	81	15	1,215	
PH31A	7287	GEONET	7/16/2024	BL	33	15	495	
PH32	7287	GEONET	7/16/2024	BL	113	15	1,695	
PH33	7287	GEONET	7/16/2024	BL	114	15	1,710	
PH34	7287	GEONET	7/16/2024	BL	62	15	930	
PH34A	7280	GEONET	7/16/2024	BL	53	15	795	
PH35	7280	GEONET	7/16/2024	BL	115	15	1,725	
PH36	7280	GEONET	7/16/2024	BL	114	15	1,710	
PH37	7280	GEONET	7/16/2024	BL	39	15	585	
PH37A	7363	GEONET	7/16/2024	BL	76	15	1,140	
PH38	7363	GEONET	7/16/2024	BL	115	15	1,725	
PH39	7363	GEONET	7/16/2024	BL	115	15	1,725	
PH40	7365	GEONET	7/16/2024	BL	115	15	1,725	
PH41	7365	GEONET	7/16/2024	BL	115	15	1,725	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEONET DEPLOYMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
PH42	7365	GEONET	7/16/2024	BL	89	15	1,335	
PH43	7392	GEONET	7/18/2024	BL	26	15	390	
PH44	7392	GEONET	7/18/2024	BL	115	15	1,725	
PH45	7392	GEONET	7/18/2024	BL	114	15	1,710	
PH45A	7378	GEONET	7/18/2024	BL	56	15	840	
PH46	7378	GEONET	7/18/2024	BL	57	15	855	
PH47	7378	GEONET	7/18/2024	BL	116	15	1,740	
PH48	7378	GEONET	7/18/2024	BL	112	15	1,680	
PH48A	7373	GEONET	7/18/2024	BL	23	15	345	
PH49	7373	GEONET	7/18/2024	BL	90	15	1,350	
PH50	7373	GEONET	7/18/2024	BL	113	15	1,695	
PH50A	7359	GEONET	7/18/2024	BL	104	15	1,560	
PH51	7359	GEONET	7/18/2024	BL	10	15	150	
PH52	7359	GEONET	7/18/2024	BL	113	15	1,695	
E1	7368	GEONET	7/19/2024	BL	113	15	1,695	
E2	7369	GEONET	7/19/2024	BL	172	15	2,580	
E3	7380	GEONET	7/19/2024	BL	173	15	2,595	
E4	7379	GEONET	7/19/2024	BL	175	15	2,625	
E5	7379	GEONET	7/19/2024	BL	176	15	2,640	
E6	7108	GEONET	7/19/2024	BL	177	15	2,655	
E7	7370	GEONET	7/19/2024	BL	177	15	2,655	
B1	7002	GEONET	7/29/2024	BL	321	15	4,815	
B2	7380	GEONET	7/29/2024	BL	260	15	3,900	
B2A	7380	GEONET	7/29/2024	BL	61	15	915	
B3	7013	GEONET	7/29/2024	BL	262	15	3,930	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEONET DEPLOYMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
B4	7285	GEONET	7/29/2024	BL	322	15	4,830	
B5	7019	GEONET	7/29/2024	BL	322	15	4,830	
B6	7198	GEONET	7/29/2024	BL	320	15	4,800	
B7	7282	GEONET	7/29/2024	BL	318	15	4,770	
B8	7021	GEONET	7/29/2024	BL	322	15	4,830	
B9	7201	GEONET	7/29/2024	BL	307	15	4,605	
B10	7289	GEONET	7/29/2024	BL	323	15	4,845	
B11	7009	GEONET	7/29/2024	BL	322	15	4,830	
B12	7007	GEONET	7/29/2024	BL	321	15	4,815	
B13	7025	GEONET	7/29/2024	BL	321	15	4,815	
B14	6997	GEONET	7/29/2024	BL	324	15	4,860	
B15	7026	GEONET	7/29/2024	BL	320	15	4,800	
B16	7278	GEONET	7/29/2024	BL	323	15	4,845	
B17	7279	GEONET	7/29/2024	BL	322	15	4,830	
B18	7016	GEONET	7/29/2024	BL	324	15	4,860	
B19	6999	GEONET	7/29/2024	BL	325	15	4,875	
B20	7003	GEONET	7/29/2024	BL	326	15	4,890	
B21	7024	GEONET	7/29/2024	BL	324	15	4,860	
B22	7028	GEONET	7/29/2024	BL	325	15	4,875	
B23	7362	GEONET	7/29/2024	BL	325	15	4,875	
B24	7253	GEONET	7/29/2024	BL	325	15	4,875	
B25	7286	GEONET	7/30/2024	BL	266	15	3,990	
B26	7336	GEONET	7/30/2024	BL	328	15	4,920	
B27	7200	GEONET	7/30/2024	BL	325	15	4,875	
B28	7015	GEONET	7/30/2024	BL	323	15	4,845	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEONET DEPLOYMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
B29	7014	GEONET	7/30/2024	BL	321	15	4,815	
B30	7276	GEONET	7/30/2024	BL	283	15	4,245	
B31	7280	GEONET	7/30/2024	BL	226	15	3,390	
B32	7280	GEONET	7/30/2024	BL	100	15	1,500	
B32A	7015	GEONET	7/30/2024	BL	7	15	105	
B32B	7364	GEONET	7/30/2024	BL	74	15	1,110	
B33	7364	GEONET	7/30/2024	BL	181	15	2,715	
B34	7364	GEONET	7/30/2024	BL	95	15	1,425	
S1	7374	GEONET	7/31/2024	BL	192	15	2,880	
S2	7367	GEONET	7/31/2024	BL	173	15	2,595	
S3	7376	GEONET	7/31/2024	BL	194	15	2,910	
S4	7377	GEONET	7/31/2024	BL	192	15	2,880	
S5	7366	GEONET	7/31/2024	BL	121	15	1,815	
S6	7371	GEONET	7/31/2024	BL	190	15	2,850	
S7	7290	GEONET	7/31/2024	BL	186	15	2,790	
S8	7277	GEONET	7/31/2024	BL	188	15	2,820	
S9	7203	GEONET	7/31/2024	BL	189	15	2,835	
S10	7332	GEONET	7/31/2024	BL	185	15	2,775	
S11	7004	GEONET	7/31/2024	BL	184	15	2,760	
S12	7281	GEONET	7/31/2024	BL	184	15	2,760	
S13	6998	GEONET	7/31/2024	BL	180	15	2,700	
S14	6995	GEONET	7/31/2024	BL	176	15	2,640	
S15	7202	GEONET	7/31/2024	BL	175	15	2,625	
S16	7023	GEONET	7/31/2024	BL	173	15	2,595	
S17	7000	GEONET	7/31/2024	BL	172	15	2,580	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEONET DEPLOYMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
S18	7107	GEONET	7/31/2024	BL	169	15	2,535	
S19	7027	GEONET	8/1/2024	BL	169	15	2,535	
S20	7365	GEONET	8/1/2024	BL	211	15	3,165	
S21	7012	GEONET	8/1/2024	BL	209	15	3,135	
S22	7254	GEONET	8/1/2024	BL	207	15	3,105	
S23	7022	GEONET	8/7/2024	BL	206	15	3,090	
S24	7106	GEONET	8/7/2024	BL	206	15	3,090	
S25	7001	GEONET	8/7/2024	BL	275	15	4,125	
S26	6996	GEONET	8/7/2024	BL	204	15	3,060	
S27	7006	GEONET	8/7/2024	BL	207	15	3,105	
S28	7006	GEONET	8/7/2024	BL	116	15	1,740	
S29	7022	GEONET	8/7/2024	BL	86	15	1,290	
S30	7106	GEONET	8/7/2024	BL	70	15	1,050	
S31	6996	GEONET	8/7/2024	BL	50	15	750	
S32	6996	GEONET	8/7/2024	BL	26	15	390	
S33	7001	GEONET	8/7/2024	BL	25	7	175	
W1	7005	GEONET	8/8/2024	BL	124	15	1,860	
W2	7005	GEONET	8/8/2024	BL	123	15	1,845	
W3	7368	GEONET	8/8/2024	BL	90	15	1,350	
W4	7202	GEONET	8/8/2024	BL	64	15	960	
W5	7369	GEONET	8/8/2024	BL	52	15	780	
W6	7380	GEONET	8/8/2024	BL	42	15	630	
W7	7369	GEONET	8/8/2024	BL	16	7	112	
W8	7011	GEONET	8/8/2024	BL	128	15	1,920	
W9	7011	GEONET	8/8/2024	BL	132	15	1,980	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEONET DEPLOYMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
W10	7018	GEONET	8/8/2024	BL	136	15	2,040	
W11	7018	GEONET	8/8/2024	BL	140	15	2,100	
W12	7010	GEONET	8/8/2024	BL	132	15	1,980	
W13	7010	GEONET	8/8/2024	BL	136	15	2,040	
W14	7333	GEONET	8/8/2024	BL	122	15	1,830	
W15	7333	GEONET	8/8/2024	BL	123	15	1,845	
W16	7107	GEONET	8/9/2024	BL	114	15	1,710	
W17	7107	GEONET	8/9/2024	BL	120	15	1,800	
W18	7283	GEONET	8/9/2024	BL	121	15	1,815	
W19	7283	GEONET	8/9/2024	BL	127	15	1,905	
W20	7199	GEONET	8/9/2024	BL	119	15	1,785	
W21	7199	GEONET	8/9/2024	BL	121	15	1,815	
W22	7374	GEONET	8/9/2024	BL	121	15	1,815	
W23	7367	GEONET	8/9/2024	BL	122	15	1,830	
W24	6993	GEONET	8/9/2024	BL	120	15	1,800	
W25	6993	GEONET	8/9/2024	BL	112	15	1,680	
W26	6993	GEONET	8/9/2024	BL	90	15	1,350	
W27	7375	GEONET	8/15/2024	BL	134	15	2,010	
W28	7375	GEONET	8/15/2024	BL	136	15	2,040	
W29	7380	GEONET	8/15/2024	BL	132	15	1,980	
W30	7375	GEONET	8/15/2024	BL	132	15	1,980	
W31	7379	GEONET	8/15/2024	BL	134	15	2,010	
W32	7379	GEONET	8/15/2024	BL	135	15	2,025	
W33	7108	GEONET	8/15/2024	BL	136	15	2,040	
W34	6994	GEONET	8/15/2024	BL	137	15	2,055	

**LEA LAND LANDFILL
UNIT IIB-C CONSTRUCTION
6041-001-17-01
GEONET DEPLOYMENT LOG**

Panel No.	Roll No.	Material Type	Date Placed	QA Monitor	Panel Dimensions			Comments
					Length, ft	Width, ft	Area, sf	
W35	6994	GEONET	8/15/2024	BL	138	15	2,070	
W36	7284	GEONET	8/29/2024	BL	82	15	1,230	
B35	7288	GEONET	9/11/2024	BL	147	15	2,205	
B35A	7288	GEONET	9/11/2024	BL	131	15	1,965	
B36	7335	GEONET	9/11/2024	BL	126	15	1,890	
B36A	7361	GEONET	9/11/2024	BL	105	8	840	
B36B	7361	GEONET	9/11/2024	BL	43	2	86	
B37	7335	GEONET	9/11/2024	BL	52	2	104	

APPENDIX L

LEACHATE COLLECTION SYSTEM AGGREGATE AND GEOTEXTILE INFORMATION

Includes pages L-1 through L-14

CONTENTS

LCS Aggregate Gradation Curve	L-1
Geotextile (10 oz/sy) Information	L-3

LCS AGGREGATE GRADATION CURVE

LOGO

M. L. Testing, LLC

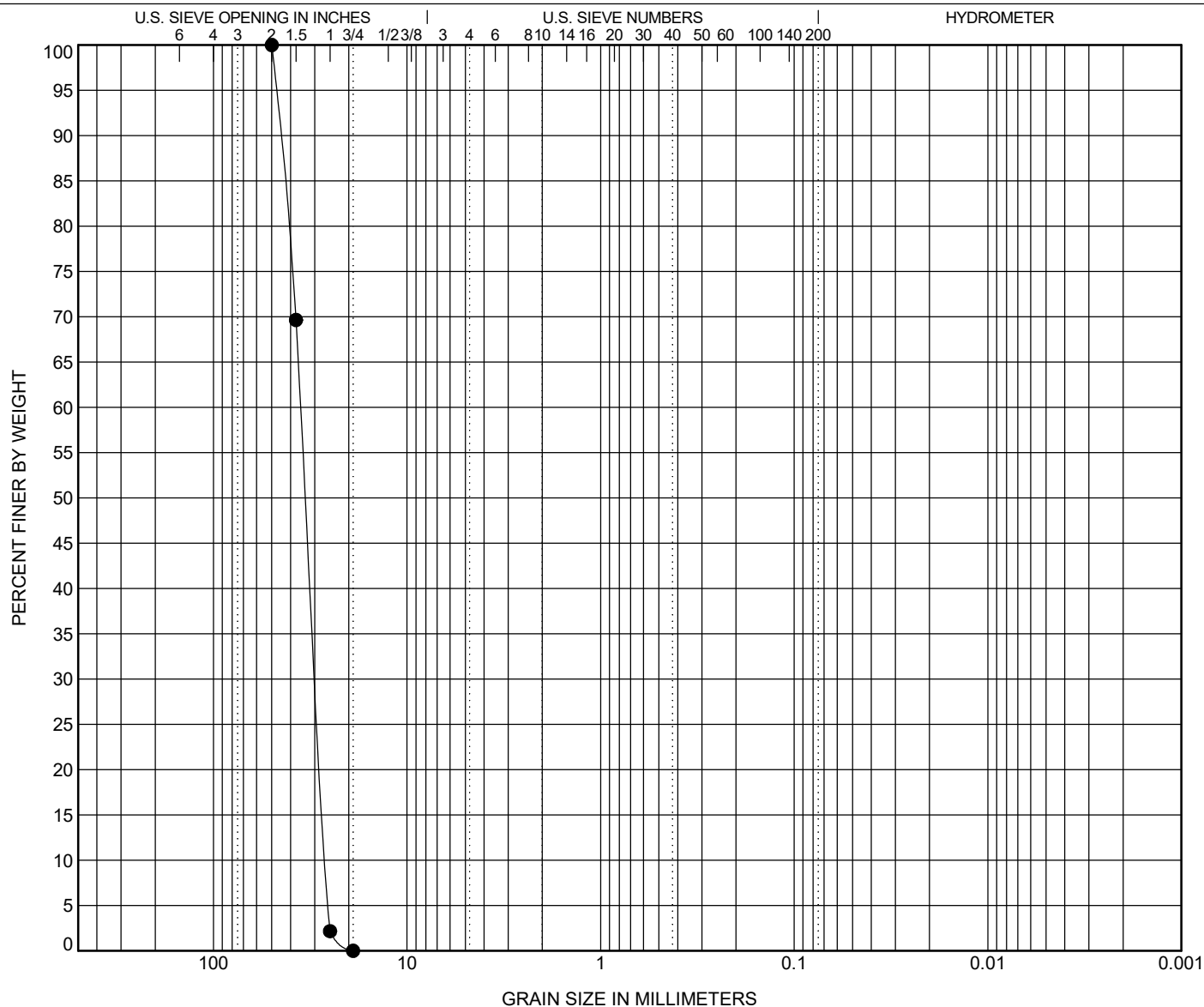
GRAIN SIZE DISTRIBUTION

CLIENT

PROJECT NAME Lea Land LF Unit IIB Construction

PROJECT NUMBER

PROJECT LOCATION



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

[illegible]

**GEOTEXTILE (10 OZ/SY)
QUALITY CONTROL DATA**

**ROLL TEST DATA REPORT**

Roll Count 3

Report Date:

Sales Order No.	Customer Name	Project Location	Product Name	Project Name
SO-096486		Carlsbad, NM	E1000	Lealand LF Unit 2B&C

ROLL #	ASTM D4751 AOS (mm)	ASTM D6241 CBR PUNCTURE (lbs)	Mass per Unit Area ASTM D5261 (oz/yd ²)	ASTM D4632 Elongation @ Break (%) MD	ASTM D4632 Grab Strength (lbs) MD	ASTM D4533 Trapezoidal Tear (lbs) MD	ASTM D4491 Permeability (cm/sec)	ASTM D4491 Permittivity (sec-1)	Water Flow D4491 gpm/ft ²	ASTM D4632 Elongation @ Break (%) TD	ASTM D4632 Grab Strength (lbs) TD	ASTM D4533 Trapezoidal Tear (lbs) TD	ASTM D4355 Deterioration by [Xenon Arc] Exposure (%)
2027701068	0,150	996	10,67	78	385,49	140,25	0,429	1,849	136	85,00	463	187,53	80
2027701069	0,150	996	10,67	78	385,49	140,25	0,429	1,849	136	85,00	463	187,53	80
2027701070	0,150	996	10,67	78	385,49	140,25	0,429	1,849	136	85,00	463	187,53	80

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Laboratory Supervisor: Daniel Vasquez

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February 7, 2024

Mail To:

Mark DeCarlo
Southwest Liner Systems
P.O. Box 1972
301 Calle Industrial
Bernalillo, NM 87004

email: mark@slliner.com

Dear Mr. DeCarlo

Thank you for consulting TRI/Environmental, Inc. (TRI) for your geosynthetics testing needs.
TRI is pleased to submit this final report of the laboratory testing for the sample(s) listed below.

Bill To:

<= Same (P.O. # SW2401)

Project: **Lea Land Landfill Cell 11B and C**

TRI Job Reference Number: 23-005080

Material(s) Tested: Five, Nonwoven Geotextile(s)

Test(s) Requested: Mass/Unit Area (ASTM D5261)
Grab Tensile (ASTM D4632)
CBR Puncture Strength (ASTM D6241)
Trapezoidal Tear (ASTM D4533)
Apparent Opening Size (ASTM D4751)
Permittivity (ASTM D4491)

If you have any questions or require any additional information, please call us at 1-800-880-8378

Sincerely,

A handwritten signature in black ink, appearing to read 'Mansukh Patel'.

Mansukh Patel
Laboratory Manager
Geosynthetic Services Division

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GEOTEXTILE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell 11B and C

Material: Nonwoven Geotextile
Sample Identification: 2027701068
TRI Log #: 23-005080

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter circle (grams)	4.80	3.88	4.13	4.58	4.82	4.18	5.50	4.64	4.64	4.26	4.54	0.46	10 min
Mass/Unit Area (oz/sq.yd)	11.16	9.02	9.61	10.65	11.21	9.72	12.79	10.79	10.79	9.91	10.57	1.07	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	426	388	431	383	410	405	392	353	374	369	393	25	260 min
TD - Tensile Strength (lbs)	485	511	457	589	443	568	541	415	381	573	496	72	260 min
MD - Elong. @ Max. Load (%)	83	90	95	81	86	89	91	81	92	90	88	5	
TD - Elong. @ Max. Load (%)	87	89	86	104	93	91	90	85	96	103	92	7	
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1296	1168	919	1014	1121	1195	971	1214	1281	1051	1123	130	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	171	155	140	127	127	111	143	119	165	170	143	22	100 min
TD - Tear Strength (lbs)	151	241	173	172	155	138	176	167	253	233	186	41	100 min
Apparent Opening Size (ASTM D4751, Method B.)													
Opening Size Diameter (mm)	0.102	0.122	0.120	0.113	0.107						0.113	0.008	100 min
Sieve No.	140	100	100	100	140						100		
MD Machine Direction	TD Transverse Direction												

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GEOTEXTILE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell 11B and C

Material: Nonwoven Geotextile
Sample Identification: 2027701068
TRI Log #: 23-005080

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Constant Head Permittivity (ASTM D4491, 51-mm Constant Head; 2 in opening)													
Water Temp. (C):	19.6												
Correction Factor:	1.013												
Test Specimen No. >:	1					2							
Thickness (mils)	96.1	96.1	96.1	96.1	96.1	95.8	95.8	95.8	95.8	95.8			
Thickness (mm)	2.44	2.44	2.44	2.44	2.44	2.43	2.43	2.43	2.43	2.43			
Volume Collected (liters)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
Time (s)	21.0	21.1	21.1	21.0	20.8	19.0	18.4	18.9	19.0	19.0			
Specimen Permittivity @20°C (sec-1)	0.95	0.95	0.95	0.95	0.96	1.05	1.08	1.06	1.05	1.05			
Specimen Flow rate (GPM/ft2)	71.1	70.7	70.7	71.1	71.7	78.5	81.1	78.9	78.5	78.5			
Specimen Flow rate (LPM/m2)			2880					3220					
Specimen Permeability (cm/s)	0.23	0.23	0.23	0.23	0.23	0.26	0.26	0.26	0.26	0.26			
Test Specimen No. >:	3					4							
Thickness (mils)	96.7	96.7	96.7	96.7	96.7	100.2	100.2	100.2	100.2	100.2			
Thickness (mm)	2.46	2.46	2.46	2.46	2.46	2.55	2.55	2.55	2.55	2.55			
Volume Collected (liters)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
Time (s)	18.2	17.8	18.6	18.5	18.0	19.0	18.9	19.0	19.6	19.1			
Specimen Permittivity @20°C (sec-1)	1.10	1.12	1.07	1.08	1.11	1.05	1.06	1.05	1.02	1.04			
Specimen Flow rate (GPM/ft2)	82.0	83.8	80.2	80.7	82.9	78.5	78.9	78.5	76.1	78.1			
Specimen Flow rate (LPM/m2)			3270					3200					
Specimen Permeability (cm/s)	0.27	0.28	0.26	0.26	0.27	0.26	0.26	0.27	0.26	0.27			
	TEMPERATURE CORRECTED					Permittivity (s-1)					1.04	0.06	1.0 min
	VALUES					Flow rate (GPM/ft2)					77.5		
						Flow rate (LPM/m2)					3140		
						Permeability (cm/s)					0.26		

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GEOTEXTILE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell 11B and C

Material: Nonwoven Geotextile
Sample Identification: 2027701090
TRI Log #: 23-005080

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter circle (grams)	5.48	4.71	4.38	4.60	4.99	4.30	4.12	4.71	5.06	5.05	4.74	0.41	10 min
Mass/Unit Area (oz/sq.yd)	12.75	10.96	10.19	10.70	11.61	10.00	9.58	10.96	11.77	11.75	11.03	0.96	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	362	428	405	336	343	379	460	578	521	501	431	82	260 min
TD - Tensile Strength (lbs)	393	380	356	363	372	482	379	544	491	540	430	75	260 min
MD - Elong. @ Max. Load (%)	80	82	79	71	75	81	87	85	83	83	81	5	
TD - Elong. @ Max. Load (%)	76	80	81	77	77	81	75	80	76	95	80	6	
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1223	1245	1071	1087	1188	904	1105	1147	1188	1286	1144	110	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	170	132	135	161	193	129	129	129	143	128	145	22	100 min
TD - Tear Strength (lbs)	209	177	170	194	200	191	164	160	215	168	185	20	100 min
Apparent Opening Size (ASTM D4751, Method B.)													
Opening Size Diameter (mm)	0.114	0.117	0.107	0.120	0.126						0.117	0.007	100 min
Sieve No.	100	100	140	100	100						100		
Permittivity (ASTM D4491,Method C: 2-inch Dia.)													
Thickness (mil)	106.2	108.3	114.9	109.9	102.3	113.7	104.5	107	116.1	119.2	110.2	5.5	0.14
Thickness (mm)	2.70	2.75	2.92	2.79	2.60	2.89	2.65	2.72	2.95	3.03	2.80		
Permittivity (Sec-1)	0.84	0.85	0.78	0.96	1.11	1.48	1.07	0.93	0.92	1.20	1.01	0.21	1.0 min
Permittivity (GPM/ft2)	62.8	63.6	58.3	71.8	83.0	110.7	80.0	69.6	68.8	89.8	75.8	15.7	638
Flow rate (LPM/m2)	2560	2591	2377	2926	3383	4511	3261	2834	2804	3657	3090		
Permittivity (cm/sec)	0.227	0.234	0.228	0.268	0.288	0.427	0.284	0.253	0.271	0.363	0.284	0.064	
MD Machine Direction	TD Transverse Direction												

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GEOTEXTILE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell 11B and C

Material: Nonwoven Geotextile
Sample Identification: 2027701612
TRI Log #: 23-005080

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter circle (grams)	5.38	4.89	4.36	4.58	5.23	5.23	5.23	5.02	4.89	4.26	4.91	0.39	10 min
Mass/Unit Area (oz/sq.yd)	12.51	11.37	10.14	10.65	12.16	12.16	12.16	11.68	11.37	9.91	11.41	0.91	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	438	471	378	381	345	459	397	441	405	384	410	41	260 min
TD - Tensile Strength (lbs)	561	505	469	590	548	586	439	467	503	580	525	55	260 min
MD - Elong. @ Max. Load (%)	82	85	86	84	77	86	86	91	87	89	85	4	
TD - Elong. @ Max. Load (%)	87	85	84	96	90	91	77	81	87	94	87	6	
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	945	1011	1328	1217	1270	1062	1200	1287	1170	1051	1154	130	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	135	148	130	150	127	187	151	142	164	146	148	17	100 min
TD - Tear Strength (lbs)	210	163	201	203	198	172	191	192	211	194	193	16	100 min
Apparent Opening Size (ASTM D4751, Method B.)													
Opening Size Diameter (mm)	0.116	0.121	0.126	0.136	0.120						0.124	0.008	100 min
Sieve No.	100	100	100	100	100						100		
MD Machine Direction	TD Transverse Direction												

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GEOTEXTILE TEST RESULTS

TRI Client: Southwest Liner Systems

Project: Lea Land Landfill Cell 11B and C

Material: Nonwoven Geotextile

Sample Identification: 2027701612

TRI Log #: 23-005080

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Constant Head Permittivity (ASTM D4491, 51-mm Constant Head; 2 in opening)													
Water Temp. (C):	19.0												
Correction Factor:	1.026												
Test Specimen No. >:	1					2							
Thickness (mils)	98.9	98.9	98.9	98.9	98.9	108.8	108.8	108.8	108.8	108.8			
Thickness (mm)	2.51	2.51	2.51	2.51	2.51	2.76	2.76	2.76	2.76	2.76			
Volume Collected (liters)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
Time (s)	22.8	21.9	22.1	22.8	22.0	18.7	18.7	18.4	18.4	18.6			
Specimen Permittivity @20°C (sec-1)	0.89	0.92	0.91	0.89	0.92	1.08	1.08	1.10	1.10	1.09			
Specimen Flow rate (GPM/ft2)	66.3	69.0	68.4	66.3	68.7	80.8	80.8	82.1	82.1	81.3			
Specimen Flow rate (LPM/m2)			2790					3350					
Specimen Permeability (cm/s)	0.22	0.23	0.23	0.22	0.23	0.27	0.27	0.30	0.30	0.30			
Test Specimen No. >:	3					4							
Thickness (mils)	108.2	108.2	108.2	108.2	108.2	106	106	106	106	106			
Thickness (mm)	2.75	2.75	2.75	2.75	2.75	2.69	2.69	2.69	2.69	2.69			
Volume Collected (liters)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
Time (s)	17.3	17.1	17.4	17.0	16.4	23.6	23.8	23.6	23.7	23.8			
Specimen Permittivity @20°C (sec-1)	1.17	1.18	1.16	1.19	1.23	0.86	0.85	0.86	0.85	0.85			
Specimen Flow rate (GPM/ft2)	87.4	88.4	86.9	88.9	92.2	64.0	63.5	64.0	63.8	63.5			
Specimen Flow rate (LPM/m2)			3540					2610					
Specimen Permeability (cm/s)	0.32	0.32	0.32	0.33	0.34	0.24	0.23	0.23	0.23	0.23			
	TEMPERATURE CORRECTED					Permittivity (s-1)					1.01	0.14	1.0 min
						Flow rate (GPM/ft2)					75.4		
						Flow rate (LPM/m2)					3070		
	VALUES					Permeability (cm/s)					0.27		

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GEOTEXTILE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell 11B and C

Material: Nonwoven Geotextile
Sample Identification: 2027701634
TRI Log #: 23-005080

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter circle (grams)	4.99	4.80	4.45	4.41	4.49	3.62	4.85	4.55	5.02	5.07	4.63	0.43	10 min
Mass/Unit Area (oz/sq.yd)	11.61	11.16	10.35	10.26	10.44	8.42	11.28	10.58	11.68	11.79	10.76	1.00	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	297	387	430	363	430	389	471	428	414	364	397	49	260 min
TD - Tensile Strength (lbs)	317	557	493	500	540	324	508	484	481	514	472	83	260 min
MD - Elong. @ Max. Load (%)	74	76	89	83	80	77	89	88	83	77	82	6	
TD - Elong. @ Max. Load (%)	87	83	83	86	92	83	84	79	81	92	85	4	
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	854	1150	1112	873	1133	906	1179	1117	1261	1218	1080	148	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	125	131	141	134	158	152	158	151	149	173	147	15	100 min
TD - Tear Strength (lbs)	142	131	186	219	180	206	193	239	172	196	187	33	100 min
Apparent Opening Size (ASTM D4751, Method B.)													
Opening Size Diameter (mm)	0.133	0.112	0.103	0.107	0.124						0.116	0.012	100 min
Sieve No.	100	100	140	140	100						100		
MD Machine Direction	TD Transverse Direction												

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The testing herein is based upon accepted industry practice as well as the test method listed. Test results reported herein do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material. TRI observes and maintains client confidentiality. TRI limits reproduction of this report, except in full, without prior approval of TRI.

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GEOTEXTILE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell 11B and C

Material: Nonwoven Geotextile
Sample Identification: 2027701634
TRI Log #: 23-005080

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Constant Head Permittivity (ASTM D4491, 51-mm Constant Head; 2 in opening)													
Water Temp. (C):	19.9												
Correction Factor:	1.005												
Test Specimen No. >:	1					2							
Thickness (mils)	107	107	107	107	107	97.7	97.7	97.7	97.7	97.7			
Thickness (mm)	2.72	2.72	2.72	2.72	2.72	2.48	2.48	2.48	2.48	2.48			
Volume Collected (liters)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
Time (s)	19.1	19.3	19.2	19.7	19.7	18.3	17.6	18.3	17.9	17.9			
Specimen Permittivity @20°C (sec-1)	1.04	1.03	1.03	1.00	1.00	1.08	1.12	1.08	1.11	1.11			
Specimen Flow rate (GPM/ft2)	77.5	76.7	77.1	75.1	75.1	80.9	84.1	80.9	82.7	82.7			
Specimen Flow rate (LPM/m2)			3140					3300					
Specimen Permeability (cm/s)	0.28	0.28	0.28	0.27	0.27	0.29	0.31	0.27	0.27	0.27			
Test Specimen No. >:	3					4							
Thickness (mils)	95.3	95.3	95.3	95.3	95.3	89.8	89.8	89.8	89.8	89.8			
Thickness (mm)	2.42	2.42	2.42	2.42	2.42	2.28	2.28	2.28	2.28	2.28			
Volume Collected (liters)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
Time (s)	16.7	16.8	16.9	16.4	16.3	20.2	20.7	20.5	20.6	20.5			
Specimen Permittivity @20°C (sec-1)	1.19	1.18	1.17	1.21	1.21	0.98	0.96	0.97	0.96	0.97			
Specimen Flow rate (GPM/ft2)	88.6	88.1	87.6	90.3	90.8	73.3	71.5	72.2	71.9	72.2			
Specimen Flow rate (LPM/m2)			3570					2940					
Specimen Permeability (cm/s)	0.29	0.29	0.28	0.29	0.29	0.24	0.23	0.22	0.22	0.22			
												</	



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GEOTEXTILE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell 11B and C

Material: Nonwoven Geotextile
Sample Identification: 2027701656
TRI Log #: 23-005080

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Mass/Unit Area (ASTM D5261)													
5" diameter circle (grams)	5.01	5.15	4.15	4.37	4.19	4.55	4.77	4.58	4.79	5.01	4.66	0.35	10 min
Mass/Unit Area (oz/sq.yd)	11.65	11.98	9.65	10.16	9.75	10.58	11.10	10.65	11.14	11.65	10.83	0.81	
Grab Tensile Properties (ASTM D4632)													
MD - Tensile Strength (lbs)	407	489	434	343	371	450	367	401	397	459	412	46	260 min
TD - Tensile Strength (lbs)	572	527	507	440	504	491	481	573	550	587	523	47	260 min
MD - Elong. @ Max. Load (%)	87	96	95	82	79	91	82	91	88	87	88	6	
TD - Elong. @ Max. Load (%)	95	89	91	84	93	92	91	89	96	97	92	4	
CBR Puncture Strength (ASTM D6241)													
Puncture Resistance (lbs)	1351	1056	1027	1169	1261	1400	1205	1032	1071	982	1155	146	725 min
Trapezoidal Tear (ASTM D4533)													
MD - Tear Strength (lbs)	169	210	166	141	136	141	143	135	143	155	154	23	100 min
TD - Tear Strength (lbs)	181	175	198	222	208	201	210	156	207	181	194	20	100 min
Apparent Opening Size (ASTM D4751, Method B.)													
Opening Size Diameter (mm)	0.115	0.111	0.129	0.121	0.121						0.119	0.007	100 min
Sieve No.	100	100	100	100	100						100		
MD Machine Direction	TD Transverse Direction												

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GEOTEXTILE TEST RESULTS

TRI Client: Southwest Liner Systems
Project: Lea Land Landfill Cell 11B and C

Material: Nonwoven Geotextile
Sample Identification: 2027701656
TRI Log #: 23-005080

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.	PROJ. SPEC.
	1	2	3	4	5	6	7	8	9	10			
Constant Head Permittivity (ASTM D4491, 51-mm Constant Head; 2 in opening)													
Water Temp. (C):	20.1												
Correction Factor:	1.003												
Test Specimen No. >:	1					2							
Thickness (mils)	87.5	87.5	87.5	87.5	87.5	91.2	91.2	91.2	91.2	91.2			
Thickness (mm)	2.22	2.22	2.22	2.22	2.22	2.32	2.32	2.32	2.32	2.32			
Volume Collected (liters)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
Time (s)	21.2	21.5	21.2	21.4	21.0	17.6	17.5	17.3	17.2	17.8			
Specimen Permittivity @20°C (sec-1)	0.93	0.92	0.93	0.92	0.94	1.12	1.13	1.14	1.15	1.11			
Specimen Flow rate (GPM/ft2)	69.6	68.7	69.6	69.0	70.3	83.9	84.4	85.3	85.8	82.9			
Specimen Flow rate (LPM/m2)			2840					3480					
Specimen Permeability (cm/s)	0.21	0.20	0.21	0.20	0.21	0.25	0.25	0.26	0.27	0.26			
Test Specimen No. >:	3					4							
Thickness (mils)	94	94	94	94	94	106.1	106.1	106.1	106.1	106.1			
Thickness (mm)	2.39	2.39	2.39	2.39	2.39	2.69	2.69	2.69	2.69	2.69			
Volume Collected (liters)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
Time (s)	14.9	15.0	15.0	14.8	14.7	23.7	24.2	23.7	23.8	24.1			
Specimen Permittivity @20°C (sec-1)	1.32	1.32	1.32	1.33	1.34	0.83	0.82	0.83	0.83	0.82			
Specimen Flow rate (GPM/ft2)	99.1	98.4	98.4	99.7	100.4	62.3	61.0	62.3	62.0	61.3			
Specimen Flow rate (LPM/m2)			4010					2540					
Specimen Permeability (cm/s)	0.32	0.31	0.31	0.32	0.32	0.20	0.19	0.22	0.22	0.22			
											1.05	0.20	1.0 min
											78.7		
											3220		
											0.25		

APPENDIX M
WCG RÉSUMÉS

Includes pages M-1 through M-12

JONATHAN V. QUEEN, P.E.
Project Director

Mr. Queen has over 17 years of experience in environmental and solid waste projects. He has been the assistant and lead Professional of Record (POR) for the liner and final cover construction at waste disposal facilities. In addition, he has experience in project management for municipal solid waste construction, design, and permitting projects.

Project Experience

Butler County Landfill, Butler County, Nebraska

- › POR for construction plan development of Cell 15A-17A, April 2019
- › POR for construction plan development of Cell 15 and 16, September 2017

East Oak RDF, Oklahoma City, Oklahoma

- › POR for 56-acre expansion of the limits of waste and airspace capacity increase of 7,000,000 CY

LP Gill Landfill, Jackson, Nebraska

- › POR for construction of Phase V Cell 1 and Overliner, December 2020.

Oklahoma Landfill, Oklahoma City, Oklahoma

- › POR for construction plan development of Phase V/Fill Sector 2, July 2020.
- › POR for construction plan development of Phase V/Fill Sector 1, October 2018.
- › POR for construction plan development of Phase III/Cell 1/Fill Sector 3B, August 2015
- › POR for 34-acre and 39-acre expansion of the limits of waste and airspace capacity increase of 3,690,000 CY and 8,850,000 CY

Osage Landfill, Bartlesville, Oklahoma

- › POR for construction plan development for Sector 1C, July 2019.
- › POR for construction plan development for Sector 2C, March 2018

Nobles County Landfill, Worthington, Minnesota

- › POR for construction plan development of Phase VI South, May 2019
- › POR for construction of Phase VI South, November 2019

Seabreeze Environmental Landfill, Angleton, Texas

- › POR for construction of Cell 12, August 2020
- › POR for construction plan development of Cell 12, April 2020

Southeast OKC Landfill, Oklahoma City, Oklahoma

- › POR for construction plan development of Sector 5B, December 2019
- › POR for construction plan development of Sector 5A6A, January 2015

› POR for 82-acre expansion of the limits of waste and airspace capacity increase of 20,500,000 CY

Travis County Landfill, Austin, Texas

› POR for construction of Cell 10A, March 2021

Education

B.S., Civil Engineering, Oklahoma University, 2004.

Related Certifications

Professional Engineer

Texas PE No.: 104766

Oklahoma PE No.: 24456

Nebraska PE No.: E-16733

Colorado PE No.: PE.0053197

Kansas PE No.: 26076

Minnesota PE No.: 56492

Mississippi PE No.:30146

New Mexico PE No.: 25844

Arizona PE No.: 71733

Iowa PE No.: P26111

South Carolina PE No.: 38696

Virginia PE No.: 402063222

North Carolina No.: 51678

Austin Brazell
Construction Manager

Mr. Brazell has 4 years of experience in construction management of projects covering over 3 million square feet of geosynthetics installation and over 200 thousand cubic yards of clay liner installation. Mr. Brazell also has 2 years of experience as a CQA technician on projects covering 2.6 million square feet of geosynthetics installation and 110 thousand cubic yards of clay liner installation. This experience includes landfill liner construction observation, construction material and soils testing, and documentation for landfill construction projects involving soil liner and geosynthetic liners. He also has experience in landfill gas well installation, pipeline inspections, and GIS applications.

Mr. Brazell is certified by the Geosynthetic Certification Institute (GCI) of the Geosynthetics Institute (GSI) as a Certified CQA Geosynthetic Materials and Compacted Clay Liner Inspector.

Mr. Brazell is certified by APNGA as a Radiation Safety Officer.

Construction Manager Project Experience

Arlington Landfill, Tarrant County

- › Assistant Construction Manager for Sector 1A/2A Overliner System Construction, January 2021 through April 2021.
- › Construction Manager for Sector 1B Overliner System Construction, January 2022 through July 2022.
- › Construction Manager for Final Cover Construction, January 2023 through July 2023.
- › Construction Manager for Sector 2B-3 Overliner System Construction, February 2023 through July 2023.

Blue Ridge Landfill, Fort Bend County

- › Assistant Construction Manager during Sector 23C Construction June 2020 through August 2020.
- › Construction Manager during Sector 12 Construction, April 2021 through September 2021.
- › Construction Manager during Sector 23D Construction, August 2021 through September 2021.

Camelot Landfill, Denton County

- › Construction Manager during Cell 05-06 Overliner Construction, July 2023 through August 2023.

Charter Waste Landfill, Ector County

- › Construction Manager during Cell 12A Construction, August 2022 through September 2022.

ECD Landfill, Ellis County

- › Assistant Construction Manager during Cell 8B Construction, May 2020 through June 2020.
- › Construction Manager during Cell 5 Construction, June 2022 through September 2022.

Fort Worth Southeast Landfill, Tarrant County

- › Construction Manager during Sector 8A/80L Construction June 2021 through August 2021.
- › Construction Manager during Sector 9-90L Construction April 2023 through June 2023.

Golden Triangle Landfill, Jefferson County

- › Construction Manager during Sector 9 Construction, June 2023 through August 2023.

Gulf West Landfill, Chambers County

- › Construction Manager during 13B Construction, October 2022 through November 2022.
- › Construction Manager during Final Cover Construction, December 2022 through May 2023.

Grimes County Highway 30 Facility

- › Construction Manager during Phase 1 Cell D Disposal Pit Construction, March 2023 through May 2023.

Horseshoe SWD Facility, Hood County

- › Assistant Construction Manager for access road construction.

Lea Land Landfill, Lea County, New Mexico

- › Assistant Construction Manager for Unit IIA Construction, May 2021 through December 2021.

Lewisville Landfill, Denton County

- › Construction Manager during Sector 4B1-5B1 Construction, February 2023.
- › Construction Manager during Sector 4B2-5B2 Construction, March 2023.

LP Gill Landfill, Jackson, Nebraska

- › Assistant Construction Manager during Phase V Cell 1 & Overliner 2020.
- › Construction Manager during Phase V Cell 2 Construction, June 2023 through August 2023.

Maloy Landfill, Hunt County

› Construction Manager during Sector I Phase 2 Construction July 2021 through August 2021.

McCarty Road Landfill, Harris County

› Construction Manager during Leachate Tank Pad Construction, December 2021 through June 2022.

Mexia Landfill, Limestone County, Texas

› Construction Manager during Phase 1-2 Cell 7 Construction January 2021 through February 2021.

Pinehill Landfill, Gregg County

› Construction Manager during Sector 2B Construction, May 2021 through June 2021.

Post Oak Landfill, Guadalupe County

› Assistant Construction Manager during Cell 1A Construction 2021.
› Construction Manager during Cell 1B-2B Construction, October 2023 through November 2023.

Pleasant Oaks Landfill, Titus County

› Construction Manager during Sector S1A Construction, March 2023 through May 2023.
› Construction Manager during Sector S1B Construction, November 2023 through December 2023.

Royal Oaks Landfill, Cherokee County

› Construction Manager during Cell 9 Construction, January 2022 through April 2022.

San Angelo Landfill, Tom Green County

› Construction Manager during Cell 12B Construction, February 2022 through March 2022.

Seabreeze Environmental Landfill, Brazoria County

› Construction Manager during Cell 12 Construction, April 2020 through August 2020.
› Construction Manager during Cell 15 Construction, February 2022 through June 2022.

Southwest Landfill, Randall County

› Construction Manager during Sector 17B Construction, March 2022 through April 2022.

Travis County Landfill

- › Construction Manager during Final Cover Construction 2021.
- › Construction Manager during Cell 10A construction 2021.

Vortex Stationary Treatment Facility, Johnson County

- › Construction Manager during Facility Closure and Final Cover Construction, October 2021 through January 2022.

Woolworth Road Landfill, Caddo Parish, Louisiana

- › Construction Manager during Contact Water Pond Construction, September 2021 through October 2021.

CQA Technician Project Experience**121 RDF Landfill, Collin County**

- › CQA Technician for installation of gas monitoring probes.

Arlington Landfill, Tarrant County

- › CQA Technician during installation of 3.0 acres of clay liner and 60-mil-HDPE liner.
- › CQA Technician during installation of 22.3 acres of clay liner for final cover construction.

Blue Ridge Landfill, Fort Bend County

- › CQA Technician during installation of 16.9 acres of clay liner and 60-mil HDPE liner.
- › CQA Technician during slope failure repair of 0.5 acres of 60-mil HDPE liner.
- › CQA Technician during Sector 11 geosynthetics repair.

Fort Worth Southeast Landfill, Tarrant County

- › CQA Technician during installation of 10.8 acres of clay liner and 60-mil HDPE liner.

Itasca Landfill, Hill County

- › CQA Technician during installation of 9 acres of clay liner and 60-mil HDPE liner.

Jefferson Davis Landfill, Louisiana

- › CQA Technician for installation of gas monitoring probes.

Lewisville Landfill, Denton County

- › CQA Technician for installation of 1.3 acres of GCL.

Pinehill Landfill, Gregg County

- › CQA Technician during installation of 6.3 acres of GCL and 60-mil HDPE liners

Reeves RDF, Reeves County

- › CQA Technician during installation of 9.5 acres of 40 and 60-mil HDPE liners.

Southwest Landfill, Randall County

› CQA Technician during installation of 4 acres of clay liner and 60-mil HDPE liner.

Turkey Creek Landfill, Johnson County

› CQA Technician during Sector 3A clay liner and geosynthetic liner repair.

Travis County Landfill

› CQA Technician during installation of 3.6 acres of clay liner.

Other Experience

› Trucklead and pipeline experience.

› Geographic Information System Database Applications.

Education

General Studies, Tarrant County College, August 2015-Current.

Additional Training

› 30-Hour OSHA Construction Outreach Training

› First Aid/CPR, American Red Cross

› APNGA Radiation Safety Officer Certified

› Troxler Electronic Laboratories Nuclear Density Device Training and Certification Course.

› U.S. DOT Hazmat Certification for Nuclear Density Device.

› TRI Environmental Construction QA/QC Geosynthetics, Compacted Clay Liner, and GCL Installations Short Courses.

Trais Walley
Construction Manager

Mr. Walley has over 3 years of experience in construction quality assurance (CQA), observation, construction material and soils testing, and documentation for landfill construction projects involving soil liner and geosynthetic liners. He also has 5 years of experience in pipeline inspections and GIS applications.

Mr. Walley is certified by the Geosynthetic Certification Institute (GCI) of the Geosynthetics Institute (GSI) as a Certified CQA Geosynthetic Materials and Compacted Clay Liner Inspector.

Mr. Walley is certified by APNGA as a Radiation Safety Officer.

Construction Manager Experience

Lea Land LLC, Lea County, New Mexico

› Assistant Construction Manager during Unit II B&C construction, April 2024 through September 2024

Blue Ridge Landfill, Fort Bend County

› Assistant Construction Manager during Sector 13B-14B construction, May 2024 through September 2024

Maloy Landfill, Hunt County

› Assistant Construction Manager during Sector G-Phase 1 construction, July 2024 through August 2024

Mexia Landfill, Limestone County

› Assistant Construction Manager during Phase 1-2 Cell 8 construction, September 2024 through October 2024

CQA Technician Project Experience

Arlington Landfill, Tarrant County

- › Assistant CQA Technician for installation of 18.8 acres of GCL and 60-mil HDPE geosynthetics.
- › CQA Technician for installation of 13.3 acres of clay liner
- › CQA Technician for installation of 8.3 acres of GCL and 40-mil LLDPE geosynthetics
- › CQA Technician for installation of 16.1 acres of GCL and 60-mil HDPE geosynthetics

Camelot Landfill, Denton County

› CQA Technician during installation of 18.6 acres of GCL and 40-mil LLDPE geosynthetics

City of Grand Prairie Landfill, Dallas County

› CQA Technician during installation of 11.1 acres of clay liner.

ECD Landfill, Ennis County

› CQA Technician during installation of 7.5 acres of clay liner and 60-mil HDPE liner.

Golden Triangle Landfill, Jefferson County

› Assistant CQA Technician during installation of 6.9 acres of clay liner and 60-mil HDPE liner.

› CQA Technician during installation of 4.3 acres of clay liner and 60-mil HDPE liner.

› CQA Technician during installation of 6.0 acres of clay liner and 60-mil HDPE liner.

Los Angeles TRD Facility, Randall County

› CQA Technician during installation of 8.9 acres of GCL and 60-mil HDPE liner.

McCarty Road Landfill, Harris County

› Assistant CQA Technician for site drainage improvements 2022.

› CQA Technician for installation of 14 LFG probes.

Polk County Landfill, Polk County

› CQA Technician during installation of 2.8 acres of GCL and 60-mil HDPE liner.

Royal Oaks Landfill, Cherokee County

› Assistant CQA Technician for installation of 5.2 acres of 60-mil HDPE geomembrane.

San Angelo Landfill, Cherokee County

› Assistant CQA Technician for installation of 10.4 acres of GCL and 60-mil HDPE liners.

Southwest Landfill, Randall County

› Assistant CQA Technician during installation of 5.04 acres of clay liner and 60-mil HDPE liner.

Education

General Studies, Weatherford College, August 2015.

Additional Training

› APNGA Radiation Safety Officer Certified

› 30-Hour OSHA Construction Outreach Training

› Troxler Electronic Laboratories Nuclear Density Device Training and Certification Course.

- › U.S. DOT Hazmat Certification for Nuclear Density Device.
- › TRI Environmental Construction QA/QC Geosynthetics, Compacted Clay Liner, and GCL Installations Short Courses.
- › First Aid/CPR, American Red Cross
- › Geographic Information System Database Applications

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Phone: (505) 476-3441

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Phone: (505) 629-6116

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 448489

CONDITIONS

Operator: LEA LAND, LLC 1300 W Main St Oklahoma City, OK 73106	OGRID: 195376
	Action Number: 448489
	Action Type: [C-137] Non-Fee SWMF Submittal (SWMF NON-FEE SUBMITTAL)

CONDITIONS

Created By	Condition	Condition Date
joseph.kennedy	None	5/15/2025