



May 9, 2025

Mr. Steve Cassulo
Chiquita Canyon Landfill
29201 Henry Mayo Drive
Castaic, CA 91384

**Subject: Compliance Order Milestone 2A-1 (Formerly Mitigation Measure #2A)
Operations and Maintenance Plan, Chiquita Canyon Landfill, Castaic,
California**

Dear Mr. Cassulo,

On behalf of Chiquita Canyon, LLC (Chiquita), Tetra Tech and SCS Engineers hereby submit this Operations and Maintenance Plan for the existing 30-mil High Density Polyethylene (HDPE) geosynthetic cover (also referred to as a geomembrane cover) installed over portions of the reaction area at the Chiquita Canyon Landfill (Landfill), pursuant to Milestone 2A-1 (formerly referred to as Mitigation Measure #2A) of the June 6, 2024 Compliance Order issued by the Los Angeles County Department of Public Health, Solid Waste Management Program, acting as the Local Enforcement Agency (LEA).

Chiquita installed approximately 44.6 acres of geosynthetic cover in accordance with Milestone 2A-1 of the June 6, 2024 Compliance Order as of December 27, 2024. Additionally, as of January 3, 2025, approximately 1.3 acres of geosynthetic cover were installed over the disposal area in accordance with the west toe drain workplan. See **Attachment 1** for approximate limits of geosynthetic cover installed as of January 10, 2025, and **Attachment 2** for the technical data sheet for the geosynthetic cover material.

Chiquita submitted a Final Completion Report for its installation of the geosynthetic cover to the LEA on January 17, 2025.¹ The LEA, in collaboration with the California Department of Resources Recycling and Recovery (CalRecycle), conditionally approved the Final Completion Report on April 9, 2025, contingent on Chiquita submitting an Operations and Maintenance Plan providing the information requested by the LEA. Per the LEA's conditional approval, Tetra Tech and SCS prepared, on behalf of Chiquita, this Operations and Maintenance Plan to ensure the continuous seal around the vertical landfill gas (LFG) wells are in good repair and not compromised and to include a plan to be implemented in the event of geomembrane deterioration and/or damage.

In addition, Chiquita and contractor personnel are implementing the air monitoring and maintenance procedures described in the *Revised Geomembrane Cover Monitoring and Maintenance Plan*, attached as an appendix to Chiquita's *Revised Cover Installation Plan*,

¹ See Final Completion Report of Milestone 2A-1 (Formerly Mitigation Measure #2A), Chiquita Canyon Landfill, Jan. 17, 2025, available at <https://chiquitacanyon.com/odor-mitigation/>.



submitted to the U.S. Environmental Protection Agency (US EPA) in December 2024 pursuant to the Unilateral Administrative Order, EPA Docket No. RCFA 7003-09-2024-0001 and CERCLA 106-09-2024-05, and approved by US EPA in January 2025. This monitoring and maintenance plan can be found on Chiquita's Odor Mitigation website, available at <https://chiquitacanyon.com/odor-mitigation/stipulated-order-for-abatement/>. This O&M plan incorporates this monitoring and maintenance plan by reference.

Vertical LFG Well Seals

Chiquita performs visual inspections of the geosynthetic cover including the LFG well seals, in accordance with Chiquita's April 16, 2024 Second Revised Written Plan for documenting and tracking cover issues (approved by the LEA on May 2, 2024); Milestone 2B of the LEA's June 6, 2024 Compliance Order; and Conditions 30 and 101 of the South Coast Air Quality Management District (SCAQMD)'s Stipulated Order (most recently modified on April 16, 2025). These logs are collected and submitted to the LEA on a weekly basis and to the South Coast AQMD on a monthly basis, and are posted on Chiquita's Odor Mitigation website.

Additionally, every well within the reaction area is monitored and the data collected is evaluated to determine if any atmospheric intrusion is occurring, which might indicate a leak in the area around the well. If the data indicates possible intrusion, additional inspections of the penetration in the area are performed as not all leaks may result in emissions. This additional evaluation enables discovery of non-emissions based liner issues. Repairs performed are noted by repair personnel.

During these routine inspections, if a seal is found to be leaking either through a visual inspection or from audible noise (which can be a result of possible LFG or vacuum leaks), it will be assessed and repairs will be made in accordance with the following:

LFG Well Seal Adjustment:

- Some LFG well seals may need adjustment so that they remain sealed to the well casing while also allowing for movement caused by settlement. LFG well seals may need to be tightened or adjusted downwards so that they properly seal and are positioned to prevent stress to the LFG well seal.

LFG Well Seal Replacement:

- If an LFG well seal is found to have deteriorated or torn due to the conditions in the area or due to stress, it will be repaired in accordance with the geomembrane replacement or repair plan as outlined below.

Geomembrane Replacement

Chiquita performs visual inspections of the geosynthetic cover in accordance with Chiquita's April 16, 2024 Second Revised Written Plan for Documenting and Tracking Cover Issues; Milestone 2B of the LEA's June 6, 2024 Compliance Order; and Conditions 30 and 101 of the South Coast AQMD Stipulated Order (most recently modified on April 16, 2025). Chiquita promptly repairs



any cover issues identified during these inspections. Chiquita maintains a log documenting the results of these inspections and actions taken to repair the damage. These logs are collected and submitted to the LEA on a weekly basis and to the South Coast AQMD on a monthly basis, and are posted on Chiquita's Odor Mitigation website.

Chiquita visually inspects the geosynthetic cover, including connection points, seams, and seals, for deterioration and/or damage. Portions of the geomembrane shall be repaired when they show signs of deterioration and/or damage.

The geomembrane used to replace the deteriorated/damaged geomembrane shall have a minimum nominal thickness of 30 mils and be made of High Density Polyethylene, consistent with the cover material described in the technical data sheet included as Attachment 2.

Repairs to the geosynthetic cover shall be made in accordance with the following:

Temporary Repairs:

- When deteriorated/damaged geomembrane is discovered, it shall be temporarily sealed with flex tape until the permanent repair can be made.

Permanent Repairs:

- Prior to permanent repairs being performed, an organic vapor analyzer will be used to determine emissions levels. Once the permanent repair has been made the geosynthetic cover shall be tested for any methane leaks using the organic vapor analyzer. If the testing results upon completion of the repairs indicate the methane concentration has returned to compliance, the patch will be determined to be complete. If monitoring indicates a leak is still present, additional repairs will be implemented until compliance is achieved.
- Holes or tears smaller than 1/4-inch shall be repaired by extrusion welding. The surface of the geosynthetic cover shall be ground to a minimum 1 inch around hole, cleaned, and dried immediately before welding.
- Holes or tears larger than 1/4-inch shall be patched. Patches shall be round or oval in shape and made of the same material as the geosynthetic cover. Patches shall extend to a minimum of 6 inches beyond the edge of the defect and shall be a minimum of 12 inches in diameter. The edge of the patch shall be beveled. The patch shall not be cut while in contact with the geosynthetic cover. Clean and dry all surfaces at the time of repair. The patch shall be extrusion welded to the geosynthetic cover
- Areas of the geosynthetic cover with large defects where the preceding methods are not appropriate shall be removed and replaced. Replacement geomembrane shall be dual-hot wedge seamed where possible.



Sincerely,

A handwritten signature in black ink, appearing to read 'Julie H'.

Julie Hauenstein, P.E.
Project Manager
Tetra Tech
(909) 835-8167

A handwritten signature in black ink, appearing to read 'Bill Haley'.

Bill Haley, P.E.
Project Director
SCS ENGINEERS
(858) 524-9525

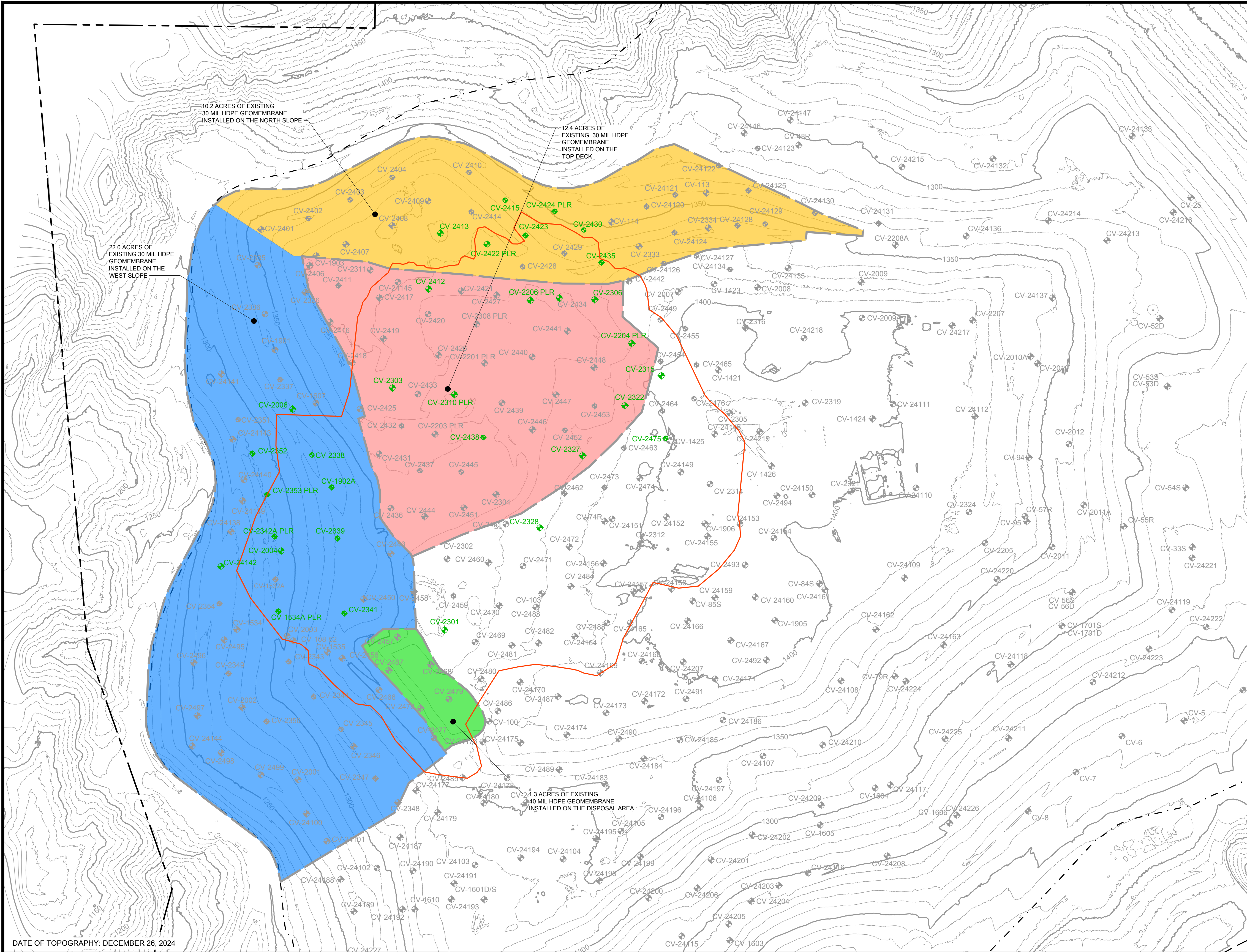
Attachments:

1. Figure illustrating the approximate limits of the Geomembrane Cover installed as of January 10, 2025
2. 30 mil HDPE Geomembrane Technical Data Sheet

cc: John Perkey, Waste Connections
Mark Adams, Waste Connections
Kate Logan, Waste Connections
Nicole Ward, Waste Connections
Amanda Froman, Waste Connections
Robert Ragland, Los Angeles County Department of Public Health
Liza Frias, Los Angeles County Department of Public Health
Nichole Quick, M.D., Los Angeles County Department of Public Health
Shikari Nakagawa-Ota, Los Angeles County Department of Public Health
Ken Habaradas, Los Angeles County Department of Public Health
Karen Gork, LEA
Eric Morofuji, LEA
Renee Jensen, LEA Counsel
Blaine McPhillips, Senior Deputy County Counsel
Emiko Thompson, Los Angeles County Department of Public Works
Alex Garcia, Los Angeles County Department of Regional Planning
Ai-Viet Huynh, Los Angeles County Department of Regional Planning
Wes Mindermann, CalRecycle
Janelle Heinzler, CalRecycle
Todd Thalhamer, CalRecycle
Jeff Lindberg, California Air Resources Board
Jack Cheng, South Coast Air Quality Management District
Larry Israel, South Coast Air Quality Management District
Enrique Casas, Los Angeles Regional Water Quality Control Board
Joel Jones, United States Environmental Protection Agency
Linda Lye, California Environmental Protection Agency

Attachment 1

**Figure illustrating the approximate limits of the Geomembrane Cover
installed as of January 10, 2025**



- NOTES:
- EXISTING LINER LIMITS PER JANUARY 10, 2025 AERIAL PHOTO.
 - LIMIT OF SETTLEMENT AS OF JANUARY 3, 2025.
 - WELLS SHOWING SIGNS OF A REACTION AS OF JANUARY 10, 2025 DATA PER SCS ENGINEERS. A REACTIVE WELL IS A VERTICAL WELL THAT EXHIBITS ALL OF THE FOLLOWING CHARACTERISTICS:
 - LANDFILL GAS (LFG) WELLHEAD TEMPERATURES IN EXCESS OF APPROXIMATELY 160 DEGREES FAHRENHEIT.
 - POOR GAS QUALITY (DEFINED AS METHANE LEVELS OF LESS THAN 30 PERCENT) IN CONJUNCTION WITH METHANE-TO-CARBON DIOXIDE (CH4:CO2) RATIOS LESS THAN 1.0.
 - THE CONCENTRATION OF HYDROGEN (H2) IN THE LFG MEASURED GREATER THAN 2 PERCENT BY VOLUME.

- LEGEND
- PROPERTY BOUNDARY
 - PERMITTED LIMIT OF REFUSE
 - EXISTING LIMIT OF LINER
 - LIMIT OF SETTLEMENT
 - 2024 MAJOR CONTOUR
 - 2024 MINOR CONTOUR
 - EXISTING VERTICAL WELL
 - EXISTING VERTICAL WELL - PRESSURIZED LEACHATE RELEASE
 - EXISTING VERTICAL WELL - REACTIVE
 - EXISTING HORIZONTAL WELL

DATE OF TOPOGRAPHY: DECEMBER 26, 2024

NO.	REVISION DESCRIPTION	BY:	

TETRA TECH
21700 Copley Drive, Suite 200
Diamond Bar, CA 91765
TEL 909.860.7777 FAX 909.860.8017



CHIUQUITA CANYON LANDFILL			
APPROXIMATE LIMITS OF GEOSYNTHETIC COVER			
DESIGNED BY :	J.M.H	FILE : FIGURE 1 - APPROXIMATE LIMITS OF GEOSYNTHETIC COVER.dwg	
DRAWN BY :	J.S.C	DATE : 01-2025	SCALE: AS SHOWN
CHECKED BY :	A.N.P	DATE : 01-2025	FIGURE 1
APPROVED BY :	J.M.H	DATE : 01-2025	

P:\Waste Connectors\Chiquita\Ode Control\CAD\Sheets\Figures\FIGURE 1 - APPROXIMATE LIMITS OF GEOSYNTHETIC COVER.dwg 1/17/2025 5:43 PM

Attachment 2
30 mil HDPE Geomembrane Technical Data Sheet

PROPERTY ⁽¹⁾	TEST METHOD	FREQUENCY	UNIT Imperial	1084228
SPECIFICATIONS				
Thickness (Nominal $\pm 10\%$) (11)	ASTM D5994	Every roll	mils	30
Asperity Height (min. avg.)	ASTM D7466	Every roll	mils	16
Resin Density	ASTM D1505	Certified	g/cc	> 0.932
Melt Index - 190°C/2.16 kg (max.)	ASTM D1238	Certified	g/10 min	1.0
Density	ASTM D792	One per batch	g/cm ³	≥ 0.940
Carbon Black Content	ASTM D4218	Every 2 rolls	%	2.0 - 3.0
Carbon Black Dispersion	ASTM D5596	Every 10 rolls	Category	Cat. 1 & Cat. 2
OIT - Standard (min. avg.)	ASTM D8117	Per formulation	min	100
Tensile Properties (min. avg) (2)	ASTM D6693	Every 5 rolls		
Strength at Yield			lbs/in	63
Elongation at Yield			%	12
Strength at Break			ppi	45
Elongation at Break			%	100
Tear Resistance (min. avg.)	ASTM D1004	Every 10 rolls	lbf	21
Puncture Resistance (min. avg.)	ASTM D4833	Every 10 rolls	lbf	45
Dimensional Stability	ASTM D1204	Certified	%	± 2
Stress Crack Resistance (SP-NCTL)	ASTM D5397	One per batch	hr	500
Oven Aging - % retained after 90 days	ASTM D5721	Per formulation (5)		
HP-OIT (min. avg.)	ASTM D5885		%	80
UV Resistance - % retained after 1,600 hr	ASTM D7238	Per formulation (5)		
HP-OIT (min. avg.)	ASTM D5885		%	50
SUPPLY SPECIFICATIONS(Roll dimensions may vary $\pm 1\%$)				
Roll Dimension - Width	-		ft	22.5
Roll Dimension - Length	-		ft	830
Area (Surface/Roll)	-		ft ²	18675
Color (one side) (4)	-			White

NOTES

1. Testing frequency based on standard roll dimensions and one batch is approximately 180,000 lbs (or one railcar).
2. Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.
4. Black or grey spots may be visible on the textured surface. Smooth edge may not have the same consistent shade of color as the membrane itself. The colored layer may cause the carbon black content results to be higher than 3%.
5. Certified by core (black) formulation on geomembrane roll or molded plaque.
11. The minimum average thickness is $\pm 10\%$ of the nominal value.

* All values are nominal test results, except when specified as minimum or maximum.

* The information contained herein is provided for reference purposes only and is not intended as a warranty or guarantee. Final determination of suitability for use contemplated is the sole responsibility of the user. SOLMAX assumes no liability in connection with the use of this information.

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.