Texas Commission on Environmental Quality

Correspondence Cover Sheet
Waste Permits Division

Date: 12/10/2025
Facility Name: New Boston Landfill
Permit, Registration, or Authorization No.: 576C

Nature of Submittal:
☐ Initial
☒ Deficiency Response to TCEQ Tracking No.: 32071925
(from subject line of TCEQ Notice of Deficiency)

Affix a completed Correspondence Cover Sheet to the front of each submission to the Waste Permits Division. Check ***one box*** to indicate type of correspondence. Call (512) 239-2335 if you have questions.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Communications
Permit (New): ☐ Landfill ☐ Processor ☐ Compost	☐ Alternative Daily Cover Status Report
☐ Registration Application (New)	☐ Closure Report
☐ Major Amendment	☐ Compost Report
☐ Limited Scope Major Amendment	☐ Groundwater Alternate Source Demonstration
☒ Modification with Public Notice	☐ Groundwater Corrective Action Report
☐ Modification without Public Notice	☐ Groundwater Monitoring Report
☐ Ownership Transfer/Name Change Modification	☐ Groundwater Background Evaluation Report
☐ Temporary Authorization	☐ Landfill Gas Corrective Action Report
☐ Voluntary Revocation	☐ Landfill Gas Monitoring Report
Subchapter T: ☐ Permit ☐ Registration	☐ Liner Evaluation Report
☐ Subchapter T Disturbance Non-Enclosed Structure	☐ Soil Boring Plan
Notice of Intent: ☐ New ☐ Revision ☐ Closure	☐ Special Waste Request
☐ Other Application:	☐ Other Report or Communication:

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Notifications	
☐ CCR Registration (New)	☐ Extension Request	☐ Interim Status Change
☐ Permit Application (New)	☐ CfPT Plan/Result	☐ Interim Status Closure Plan
☐ Permit Renewal	☐ CPT Plan/Result	☐ Closure Certification/Report
☐ Post-Closure Order (New)	☐ Construction Certification/Report	**CCR Notifications:**
☐ Major Amendment	☐ Corrective Action Effectiveness Report	☐ CCR Closure Care Plan
☐ Minor Amendment	☐ Groundwater Alternative Source Demonstration Report	☐ CCR Design Criteria
Class of Permit Modification: ☐ 1 ☐ 1ED ☐ 2 ☐ 3	☐ Groundwater Background Evaluation Report	☐ CCR Groundwater Monitoring and Corrective Action Report
☐ Endorsement	☐ Groundwater Monitoring Report	☐ CCR Location Restriction
☐ Temporary Authorization	☐ Soil Core Monitoring Report	☐ CCR Operating Criteria
☐ Voluntary Revocation	☐ Treatability Study	☐ CCR Post-closure Care Plan
☐ 335.6 Notification	☐ Trial Burn Plan/Result	☐ Other Report or Notification (specify):
☐ Other:	☐ Unsaturated Zone Monitoring Report	

WPD RECEIVED: December 9, 2025
PROJECT MANAGER: Steve Niemeyer
TRACKING NUMBER: 32359259
DUE DATE: January 2, 2026

BIGGS & MATHEWS ENVIRONMENTAL, INC
TBPELS No. F-256 & No. 10194895 ♦ TBPG No. 50222

December 10, 2025

Mr. Stephen M. Niemeyer, P.E., Project Manager
Municipal Solid Waste Permits – MC 124
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, TX 78711-3087

Re: MSW Permit No. 576C – New Boston Landfill – NOD (TCEQ Tracking No. 32071925)

Dear Mr. Niemeyer:

This response to your request for additional information addressed to Guy Campbell, dated November 24, 2025, is submitted on behalf of Waste Management of Texas, Inc. for the New Boston Landfill submitted on October 28, 2025. Our responses to the Texas Commission on Environmental Quality (TCEQ) comments are presented below in the order listed in your email.

1. For Attachment D, Waste Management Unit Design, provide a new page D-iii with a P. E. seal.

RESPONSE: A new page D-iii is included.

2. Update Attachment D5, Geotechnical Design.

    a. Include the Topslope Alternate and the Sideslope Alternate:

        i. Revise Table D5-6 to include the proposed topslope and sideslope alternates.

        ii. Provide pages D5-i through D5-iv with new P.E. seals

        iii. In 8.2, Final Cover, correct the new first sentence to read, "There are two topslope final cover system designs and three sideslope final cover system designs proposed for the West and North Disposal Areas as shown on Table D-4 in Attachment D.

RESPONSE: Attachment D5 has been updated.

a. Stability calculations for the alternate sideslope cover are included. Since the top deck only has a 6% slope, it does not represent a critical stability configuration. That is why it was not included in the original permit application or in this modification.

i. Table D5-6 has been revised to include the sideslope alternate.

ii. New pages D5-i through D5-iv are included.

iii. Section 8.2 has been revised.

3. Update Attachment D8A, West and North Disposal Areas Final Cover Quality Control Plan.

   a. In 4.1, page D8A-7, specify the thickness of the infiltration layer as either 12 or 18 inches, depending on the cover system component used, or reference Table D8A-1. An infiltration layer thickness must be provided.
   b. In 7.1, page D8A-22, specify the thickness of the erosion layer as either 24 inches or 36 inches, depending on the cover system component used, or reference Table D8A-1. An infiltration layer thickness must be provided.

RESPONSE: Attachment D8A has been revised.

a. Section 4.1 has been revised

b. Section 7.1 has been revised.

4. Update Appendix D5-B, Slope Stability Analyses, to include the Topslope Alternate and Sideslope Alternate.

   a. Revise Table D5-B-1 to include the proposed topslope and sideslope alternates.
   b. Provide factor of safety calculations in the composite liner system for the proposed topslope and sideslope alternates.
   c. Provide final waste slope stability circular analyses for the North Disposal Area, for the topslope and sideslope alternates.
   d. Provide final waste slope stability block analyses for the North Disposal Area, for the topslope and sideslope alternates.
   e. Provide new cover page with an updated P.E. seal.

RESPONSE: Appendix D5-B has been updated. Stability calculations for the alternate sideslope cover are included. Since the top deck only has a 6% slope, it does not represent a critical stability configuration. That is why it was not included in the original permit application or in this modification.

a. Table D5-B-1 has been revised to include the sideslope alternate.

b. Stability calculations for the sideslope alternate are included.

c. The geosynthetic components in the final cover system do not provide driving forces or resistance forces in the circular analysis. That is why the circular analysis in the original permit application only included the soil component of the cover system and that analysis remains valid for the proposed cover alternates.

d. ***The geosynthetic components in the final cover system do not provide driving forces or resistance forces in the sliding block analysis. That is why the sliding block analysis in the original permit application only included the soil component of the cover system and that analysis remains valid for the proposed cover alternates.***

e. ***A new cover page is included.***

An electronic copy has been emailed to you and one original, and one copy are enclosed. Please call me at 817-563-1144 or email me a [redacted] if you have any questions.

Sincerely,

BIGGS & MATHEWS ENVIRONMENTAL
TBPE No. F-256 • TBPG No. 50222

Caleb Hollingshead, P.E.
Senor Project Engineer

Attachments: NOD Responses (one original and one copy)

cc: Guy R. Campbell, Waste Management of Texas, Inc.
Waste Section Manager TCEQ Region 5

Texas Commission on Environmental Quality

Application Form for Municipal Solid Waste Permit or Registration Modification or Temporary Authorization

Application Tracking Information

Facility Name: New Boston Landfill

Permittee or Registrant Name: Waste Management of Texas, Inc.

MSW Authorization Number: 576C

Initial Submission Date: 10/28/2025

Revision Date: 12/10/2025

Instructions for completing this form are provided in form TCEQ-20650-instr[1]. If you have questions, contact the Municipal Solid Waste Permits Section by email to mswper@tceq.texas.gov, or by phone at 512-239-2335.

Application Data

1. Submission Type

☐ Initial Submission ☒ Notice of Deficiency (NOD) Response

2. Authorization Type

☒ Permit ☐ Registration

3. Application Type

☒ Modification with Public Notice ☐ Modification without Public Notice

☐ Temporary Authorization (TA) ☐ Modification for Name Change or Transfer

4. Application Fee

Amount

The application fee for a modification or temporary authorization is $150.

Payment Method

☐ Check

☒ Online through ePay portal www3.tceq.texas.gov/epay/

If paid online, enter ePay Trace Number: [redacted]

[1] www.tceq.texas.gov/downloads/permitting/waste-permits/msw/forms/20650-instr.pdf

5. Electronic Versions of Application

For modifications that require public notice, TCEQ will publish electronic versions of the applications online. Applicants must provide complete electronic copies of their initial applications, responses to notices of deficiencies, and the final technically complete versions. (Refer to instructions for this form for how to submit electronically.)

6. Party Responsible for Mailing Notice

For modifications that require notice, indicate who will be responsible for mailing notice:

☐ Applicant ☐ Agent in Service ■ Consultant

Contact Name: Caleb R. Hollingshead, P.E.

Title: Senior Engineer

Email Address: [redacted]

7. Confidential Documents

Does the application contain confidential documents?

☐ Yes ■ No

If "Yes", reference the confidential documents in the application, but submit the confidential documents as an attachment in a separate binder marked "CONFIDENTIAL."

8. Facility General Information

Facility Name: New Boston Landfill

Contact Name: Guy R. Campbell Title: Engineering Manager

MSW Authorization Number (if existing): 576C

Regulated Entity Reference Number: **RN** 102594892

Physical or Street Address: 1030 W U.S. Highway 82

City: New Boston County: Bowie State: TX Zip Code: 75570

Phone Number: (903) 628-6595

Latitude (Decimal Degrees): 33° 28' 17.5"

Longitude (Decimal Degrees): 94° 26' 45"

9. Facility Types

■ Type I ☐ Type IV ☐ Type V

☐ Type IAE ☐ Type IVAE ☐ Type VI

10. Description of the Revisions to the Facility

Provide a brief description of revisions to permit or registration conditions and supporting documents referred to by the permit or registration, and a reference to the specific provisions under which the modification or temporary authorization application is being made. Also, provide an explanation of why the modification or temporary authorization is needed:

Permit modification prepared consistent with 30 TAC 305.70(k)(10) for changes to include an alternative final cover design.

11. Facility Contact Information

Site Operator (Permittee or Registrant)

Name: Waste Management of Texas, Inc.

Customer Reference Number: **CN** 600127856

Contact Name: Guy R. Campbell Title: Engineering Manager

Mailing Address: 5012 MLK Freeway

City: Fort Worth County: Tarrant State: TX Zip Code: 76119

Phone Number: (405) 417-8124

Email Address: [redacted]

Texas Secretary of State (SOS) Filing Number: 22300000

Operator (if different from *Site Operator*)

Name: N/A

Customer Reference Number: **CN** _____

Contact Name: _____ Title: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____

Email Address: _____

Texas Secretary of State (SOS) Filing Number: _____

Consultant (if applicable)

Firm Name: Biggs and Mathews Environmental, Inc.

Consultant Name: Caleb R. Hollingshead, P.E.

Texas Board of Professional Engineers Firm Registration Number: F-256

Contact Name: Caleb R. Hollingshead, P.E. Title: Senior Engineer

Mailing Address: 1700 Robert Road, Suite 100

City: Mansfield County: Tarrant State: TX Zip Code: 76063

Phone Number: (817) 563-1144

Email Address: [redacted]

Agent in Service (required for out-of-state applicants)

Name: N/A

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

12. Ownership Status of the Facility

Is this a modification that changes the legal description, the property owner, or the Site Operator (Permittee or Registrant)?

☐ Yes ☒ No

If the answer is "No", skip the next question and proceed to signature page.

Does the Site Operator (Permittee or Registrant) own all the facility units and all the facility property?

☐ Yes ☐ No

If "No", provide the following information for other owners.

Owner Name: _____

Mailing Address: _____

City: _____ County: _____ State: TX Zip Code: _____

Phone Number: _____

Email Address: _____

Signature Page

Site Operator or Authorized Signatory

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Guy R. Campbell Title: Engineering Manager

Email Address: [redacted]

Signature: G R Campbell Date: 12-10-2025

Operator or Principal Executive Officer Designation of Authorized Signatory

To be completed by the operator if the application is signed by an authorized representative for the operator.

I hereby designate _____ as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Operator or Principal Executive Officer Name: _____

Email Address: _____

Signature: _____ Date: 12-10-2025

Notary

SUBSCRIBED AND SWORN to before me by the said Guy R. Campbell

On this 10th day of December, 2025

My commission expires on the 19th day of November, 2029

Janet E. Anderson

Notary Public in and for

Tarrant County, Texas

JANET E ANDERSON
Notary Public, State of Texas
Comm. Expires 11-19-2029
Notary ID 133456696

Note: Application Must Bear Signature and Seal of Notary Public

Attachments for Permit or Registration Modification with Public Notice

Refer to instruction document **200650-instr** for professional engineer seal requirements.

Attachments Table 1. Required attachments.

Required Attachments	Attachment Number
Land Ownership Map	1
Landowners List	1
Marked (Redline/Strikeout) Pages	2
Unmarked Revised Pages	3

Attachments Table 2. Additional attachments as applicable.

Additional Attachments as Applicable (select all that apply and add others as needed)	Attachment Number
☐ TCEQ Core Data Form(s)	
☐ Signatory Authority Delegation	
☐ Fee Payment Receipt	
☐ Confidential Documents	

ATTACHMENT 1

MARKED (REDLINE/STRIKEOUT) PAGES

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT D
WASTE MANAGEMENT UNIT DESIGN

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Revised December 2025

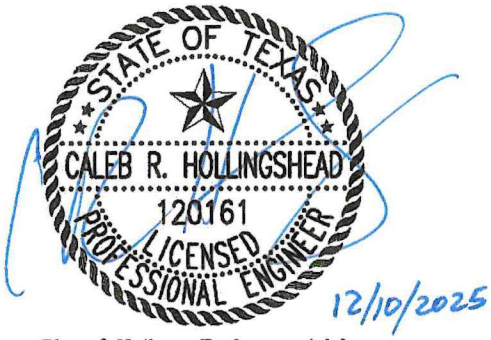
Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
12/10/2025

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

TABLES

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT D5
GEOTECHNICAL DESIGN

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Revised December 2025

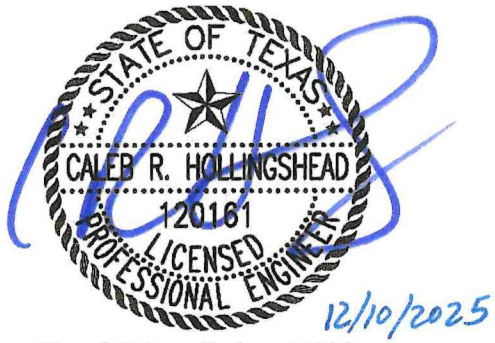
Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
12/10/2025

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222



Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

CONTENTS

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

CONTENTS (Continued)

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

TABLES

Table D5-6
New Boston Landfill
Summary of Slope Stability Analyses

Condition	Minimum Calculated Factor of Safety	Recommended Factor of Safety	Acceptable Factor of Safety
NORTH DISPOSAL AREA			
Excavated Slope			
Short Term	1.9	1.3	Yes
Long Term	2.3	1.5	Yes
Interim Waste Slope			
Circular Arc Failure	1.6	1.3	Yes
Sliding Block Failure	1.5	1.3	Yes
Final Waste Slope			
Circular Arc Failure	2.5	1.5	Yes
Sliding Block Failure	2.5	1.5	Yes
Liner Veneer			
Protective Cover/Geocomposite	2.1	1.3	Yes
Geocomposite/Geomembrane	2.6	1.3	Yes
Geomembrane/Soil Liner	2.6	1.3	Yes
Final Cover Veneer (Sideslope)			
OPTION A			
Erosion Layer/Geocomposite	2.8	1.5	Yes
Geocomposite/Geomembrane	3.5	1.5	Yes
Geomembrane/Infiltration Layer	3.5	1.5	Yes
OPTION B			
Erosion Layer/Geotextile	2.8	1.5	Yes
Geotextile/ Studded Geomembrane	2.4	1.5	Yes
Studded Geomembrane/ Infiltration Layer	3.5	1.5	Yes
ALTERNATE			
Erosion Layer/Geocomposite	2.7	1.5	Yes
Geocomposite/ Infiltration Layer	3.2	1.5	Yes
SOUTH DISPOSAL AREA			
Excavated Slope			
Short Term	2.6	1.3	Yes
Long Term	3.3	1.5	Yes
Interim Waste Slope			
Circular Arc Failure	2.1	1.3	Yes
Sliding Block Failure	3.2	1.3	Yes
Final Waste Slope			
Circular Arc Failure	2.7	1.5	Yes
Sliding Block Failure	4.3	1.5	Yes

8 COVER CONSTRUCTION

30 TAC §§330.165, 330.457

8.1 Daily, Weekly, and Intermediate Cover

The daily, weekly, and intermediate cover should be constructed of soils that are free of waste and debris. Suitable cover materials should be available from the proposed excavations or on-site borrow sources. Requirements for the placement of daily, weekly, and intermediate cover are provided in Part IV – Site Operating Plan.

8.2 Final Cover

Final cover construction has been completed over the entire 52.5 acres of the West Disposal Area and details of the cover is documented in the Final Cover Evaluation Reports (FCERs). FCER approval dates are shown on Attachment J, Drawing J.1.

There are two top slope and three sideslope final cover system designs proposed for the West and North Disposal Areas as shown on Table D-4 in Attachment D. The final cover system in the South Disposal Area will consist of an 18-inch-thick compacted soil infiltration layer overlain by an erosion layer. The final cover system requirements are provided in Attachment D8 and the final cover system details are provided in Attachment D3.

The infiltration layer material must consist of relatively homogeneous cohesive materials that are free of debris, rocks greater than one inch in diameter, plant materials, frozen materials, foreign objects, and organic material. The infiltration layer should be constructed directly over the intermediate cover once the waste has reached final grades. The infiltration layer construction procedure should be the same as those outlined in Section 7 for liner construction.

The erosion layer should consist of: (1) topsoil stockpiled during the excavation process, (2) on-site soils which has been modified to be capable of sustaining vegetation, or (3) an imported material suitable to sustain vegetation growth. This layer may be spread and placed in one lift over the drainage layer. After spreading, the layer should be rolled lightly to reduce future erosion, although not to the extent that compaction would inhibit plant growth.

8.3 Final Cover Testing and Documentation

CQA testing of the final cover system must be performed during construction. Final cover system requirements are outlined in Attachment D8.

NEW BOSTON LANDFILL

APPENDIX D5-B
SLOPE STABILITY ANALYSES

Includes pages D5-B-1 through D5-B-194

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

APPENDIX D5-B
SLOPE STABILITY ANALYSES

The results of the stability analyses indicate that the proposed slopes are stable under the conditions analyzed. The PCSTABL6 output files are presented on pages D5-B-9 through D5-B-191. The liner and final cover veneer stability calculations are provided on pages D5-B-3 through D5-B-8. Table D5-B-1 summarizes the results of the stability analyses and compares the calculated factor of safety to the recommended minimum factor of safety. The recommended minimum factors of safety were selected from the Corps of Engineers "Design and Construction of Levees" manual (EM 1110-2-1913).

Table D5-B-1
Summary of Slope Stability Analyses

Condition	Minimum Calculated Factor of Safety	Recommended Factor of Safety	Acceptable Factor of Safety
NORTH DISPOSAL AREA			
Excavated Slope			
Short Term	1.9	1.3	Yes
Long Term	2.3	1.5	Yes
Interim Waste Slope			
Circular Arc Failure	1.6	1.3	Yes
Sliding Block Failure	1.5	1.3	Yes
Final Waste Slope			
Circular Arc Failure	2.5	1.5	Yes
Sliding Block Failure	2.5	1.5	Yes
Liner Veneer			
Protective Cover/Geocomposite	2.1	1.3	Yes
Geocomposite/Geomembrane	2.6	1.3	Yes
Geomembrane/Soil Liner	2.6	1.3	Yes
Final Cover Veneer (Sideslope)			
OPTION A			
Erosion Layer/Geocomposite	2.8	1.5	Yes
Geocomposite/Geomembrane	3.5	1.5	Yes
Geomembrane/Infiltration Layer	3.5	1.5	Yes
OPTION B			
Erosion Layer/Geotextile	2.8	1.5	Yes
Geotextile/Studded Geomembrane	2.4	1.5	Yes
Studded Geomembrane/Infiltration Layer	3.5	1.5	Yes
ALTERNATE			
Erosion Layer/Geocomposite	2.7	1.5	Yes
Alternate Geocomposite/Infiltration Layer	3.2	1.5	Yes
SOUTH DISPOSAL AREA			
Excavated Slope			
Short Term	2.6	1.3	Yes
Long Term	3.3	1.5	Yes
Interim Waste Slope			
Circular Arc Failure	2.1	1.3	Yes
Sliding Block Failure	3.2	1.3	Yes
Final Waste Slope			
Circular Arc Failure	2.7	1.5	Yes
Sliding Block Failure	4.3	1.5	Yes

New Boston Landfill
Slope Stability Parameters

Required: Select the appropriate soil parameters for the slope stability analyses.

References:
1) *Attachment E - Geology Report,* New Boston Landfill Permit Application.
2) Table 8-3.1 Typical Engineering Properties of Compacted Materials, *Geotechnical Engineering Procedures for Foundation Design of Buildings and Structures,* Naval Facilities Engineering Command,
3) Tests performed by TRI for Biggs & Mathews Environmental (Appendix D5-C).
4) Qian, X, Koerner, R.M., and Gray, Donald H., *Geotechnical Aspects of Landfill Design and Construction,* Prentice Hall, 2002.
5) Bouazza, A., Zornberg, J.G., and Adam, D., *Geosynthetics in waste containment facilities: recent advances,* 2002.

Solution: The following materials may be included in the slope stability analyses.

Material	Description	Physical Properties Moisture[a] %	Dry Wt[a] pcf	Wet Wt[b] pcf
Layer I	Clay	21.7	101.9	124.0
Liner/Cover	Compacted Clay	21.7	101.9	124.0
Liner/Cover Floor	Geosynthetics	N/A	N/A	124.0
Liner/Cover Sidewall	Geosynthetics	N/A	N/A	124.0
Solid Waste	Solid Waste	N/A	N/A	50.0

[a] Average laboratory test values.
[b] Wet Wt = Dry Wt x (1 + Moisture)

Total stress parameters will be used to analyze short-term stability and effective stress parameters will be used to analyze long-term stability.

Material	Strength Parameters for Circular and Sliding Block Slope Stability: Total Stress cohesion (psf)	Total Stress friction (deg)	Effective Stress cohesion (psf)	Effective Stress friction (deg)
Layer I - Clay	1204 [a]	17 [a]	1508 [a]	18 [a]
Liner/Cover - Compacted Clay	1204 [a]	17 [a]	1508 [a]	18 [a]
Sidewall - Geomembrane/Soil Liner	273 [b]	13.5 [b]	273 [b]	13.5 [b]
Floor - Geomembrane/Soil Liner	601 [b]	6.8 [b]	601 [b]	6.8 [b]
Solid Waste	250 [c]	23 [c]	250 [c]	23 [c]

[a] Reference 2.
[b] Reference 3. Critical interface in composite liner or cover system used for calculation.
[c] Reference 4.

Interface parameters for the geosynthetics will be used to evaluate the liner and cover veneer stability.

Material Interface	Liner Strength Parameters for Veneer Slope Stability: Friction Angle (Degrees)	Cohesion (psf)
Protective Cover/Geocomposite	32.6 [a]	12 [a]
Geocomposite/Geomembrane/Soil Liner	31.8 [a]	59 [a]
Geomembrane/Soil Liner	31.8 [a]	60 [a]

[a] Reference 3.

Material Interface	Final Cover Strength Parameters for Veneer Slope Stability: Friction Angle (Degrees)	Cohesion (psf)
Option A		
Erosion Layer/Geocomposite	32.6 [a]	12 [a]
Geocomposite/Geomembrane	31.8 [a]	59 [a]
Geomembrane/Infiltration Layer	31.8 [a]	60 [a]
Option B		
Erosion Layer/Geotextile	32.6 [a]	12 [a]
Geotextile/Studded Geomembrane	31.0 [b]	0 [b]
Geomembrane/Infiltration Layer	31.8 [a]	60 [a]
Alternate		
Erosion Layer/Geocomposite	32.6 [a]	12 [a]
Geocomposite/Infiltration Layer	32.6 [a]	60 [a]

[a] Reference 3.
[b] Reference 5.

New Boston Landfill
Geosynthetic Stability Parameters

Calculate the factor of safety at each interface in the composite liner system.

Protective cover/geocomposite

Φ =	32.6	deg
β =	18.43	deg
C =	12	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	3.2	

FS @ protective cover/geocomposite = 2.1

Geocomposite/geomembrane/soil liner

Φ =	31.8	deg
β =	18.43	deg
C =	59	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	3.2	

FS @ geocomposite/geomembrane/soil liner = 2.6

Geomembrane/soil liner

Φ =	31.8	deg
β =	18.43	deg
C =	60	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	3.2	

FS @ geomembrane/soil liner = 2.6

Calculate the factor of safety at each interface in the composite final cover system A.

Erosion layer/geocomposite

Φ =	32.6	deg
β =	14.04	deg
C =	12	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ erosion layer/geocomposite = 2.8

New Boston Landfill
Geosynthetic Stability Parameters

Geocomposite/geomembrane

Φ =	31.8	deg
β =	14.04	deg
C =	59	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ geocomposite/geomembrane = 3.5

Geomembrane/infiltration layer

Φ =	31.8	deg
β =	14.04	deg
C =	60	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ geomembrane/infiltration layer = 3.5

Calculate the factor of safety at each interface in the composite final cover system B.

Erosion layer/geotextile

Φ =	32.6	deg
β =	14.04	deg
C =	12	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ erosion layer/geotextile = 2.8

Geotextile/studded geomembrane

Φ =	31.0	deg
β =	14.04	deg
C =	0	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

New Boston Landfill
Geosynthetic Stability Parameters

FS @ geotextile/studded geomembrane =	2.4

Studded geomembrane/infiltration layer

Φ =	31.8	deg
β =	14.04	deg
C =	60	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ studded geomembrane/infiltration layer =	3.5

Calculate the factor of safety at each interfacee in the alternate sideslope final cover system.

Erosion layer/geocomposite

Φ =	32.6	deg
β =	14.04	deg
C =	12	psf
u =	0.0	
γ =	127.0	pcf
r_u =	0	
H =	3	ft
a =	1.0	
b =	4.2	

FS @ studded erosion layer/geocomposite =	2.7

Geocomposite/infiltration layer

Φ =	32.6	deg
β =	14.04	deg
C =	60	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	3	ft
a =	1.0	
b =	4.2	

FS @ studded geocomposite/infiltration layer =	3.2

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT D8A
WEST AND NORTH DISPOSAL AREAS
FINAL COVER QUALITY CONTROL PLAN

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
12/10/2025

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Revised December 2025

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

4 INFILTRATION LAYER

30 TAC §330.457

4.1 General

The infiltration layer consists of compacted, relatively homogeneous, cohesive material. See Table D8A-1 for the infiltration layer thickness. The CQA monitor shall provide continuous on-site observation during infiltration layer placement, processing, compaction, and testing. The GP shall make sufficient site visits during infiltration layer construction to document the construction activities, testing, and thickness verification in the Final Cover System Report, in accordance with Section 8.

4.2 Materials

Infiltration layer material shall consist of soil that is free from debris, rubbish, frozen materials, foreign objects, and organic material. The required infiltration layer material properties are summarized in Table D8A-2.

Table D8A-2
New Boston Landfill
Infiltration Material Properties

Test	Standard	Required Property
Plasticity Index	ASTM D 4318	15 or greater
Liquid Limit	ASTM D 4318	30 or greater
Percent Passing No. 200 Mesh Sieve	ASTM D 1140	30 or greater
Percent Passing 1-inch Sieve	ASTM D 422	100
Coefficient of Permeability	ASTM D 5084 or COE EM 1110-2-1906 Appendix VII	less than or equal to 1×10^{-5} cm/sec

Preconstruction testing procedures and frequencies for infiltration layer materials are listed in Section 4.8.1.

4.3 Subgrade Preparation

Prior to placing infiltration layer material, the subgrade should be proof rolled with heavy, rubber-tired construction equipment to detect soft areas. The GP or CQA monitor must observe the proof-rolling operation. Soft areas should be compacted and then be proof rolled again.

7 EROSION LAYER

30 TAC §330.457

7.1 General

The erosion layer consists of a layer of soil with the top six inches capable of sustaining native plant growth. See Table D8A-1 for the erosion layer thickness. The CQA monitor shall provide continuous on-site observation during erosion layer placement to assure that erosion layer placement does not damage underlying geosynthetics. The GP shall make sufficient site visits during erosion layer placement to document the construction activities and thickness verification in the Final Cover Evaluation Report.

7.2 Materials

Erosion layer material shall consist of soil that is free from debris, rubbish, frozen materials, foreign objects, and organic material, or any material that could damage the underlying geosynthetics.

7.3 Preparation

Prior to placing the erosion layer material, the top of infiltration layer elevations shall be verified in accordance with the requirements of Section 4.8.3 and all testing on the underlying geosynthetics shall be completed.

7.4 Placement

The erosion layer shall be placed in a manner that minimizes the potential to damage the underlying geosynthetics. Hauling equipment shall be restricted to haul roads of sufficient thickness to protect the underlying geosynthetics. The erosion layer shall be dumped from the haul road and spread by low ground pressure equipment in a manner that minimizes wrinkles and stress in the geosynthetics. On sideslopes, erosion layer shall be placed from the bottom to the top, not across or down. Erosion layer shall not be placed over geosynthetics that are stretched across the toes of slopes. The minimum separation distance between construction equipment and the geosynthetics are listed in Table D8A-10.

The erosion layer will be seeded or sodded immediately following the application of final cover in order to minimize erosion.

ATTACHMENT 2

UNMARKED REVISED PAGES

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT D
WASTE MANAGEMENT UNIT DESIGN

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Revised December 2025

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
12/10/2025

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

TABLES

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT D5
GEOTECHNICAL DESIGN

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Revised December 2025

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256
12/10/2025

Prepared by

BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

12/10/2025

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CONTENTS

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CONTENTS (Continued)

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TABLES

Table D5-6
New Boston Landfill
Summary of Slope Stability Analyses

Condition	Minimum Calculated Factor of Safety	Recommended Factor of Safety	Acceptable Factor of Safety
NORTH DISPOSAL AREA			
Excavated Slope			
Short Term	1.9	1.3	Yes
Long Term	2.3	1.5	Yes
Interim Waste Slope			
Circular Arc Failure	1.6	1.3	Yes
Sliding Block Failure	1.5	1.3	Yes
Final Waste Slope			
Circular Arc Failure	2.5	1.5	Yes
Sliding Block Failure	2.5	1.5	Yes
Liner Veneer			
Protective Cover/Geocomposite	2.1	1.3	Yes
Geocomposite/Geomembrane	2.6	1.3	Yes
Geomembrane/Soil Liner	2.6	1.3	Yes
Final Cover Veneer (Sideslope)			
OPTION A			
Erosion Layer/Geocomposite	2.8	1.5	Yes
Geocomposite/Geomembrane	3.5	1.5	Yes
Geomembrane/Infiltration Layer	3.5	1.5	Yes
OPTION B			
Erosion Layer/Geotextile	2.8	1.5	Yes
Geotextile/ Studded Geomembrane	2.4	1.5	Yes
Studded Geomembrane/ Infiltration Layer	3.5	1.5	Yes
ALTERNATE			
Erosion Layer/Geocomposite	2.7	1.5	Yes
Geocomposite/ Infiltration Layer	3.2	1.5	Yes
SOUTH DISPOSAL AREA			
Excavated Slope			
Short Term	2.6	1.3	Yes
Long Term	3.3	1.5	Yes
Interim Waste Slope			
Circular Arc Failure	2.1	1.3	Yes
Sliding Block Failure	3.2	1.3	Yes
Final Waste Slope			
Circular Arc Failure	2.7	1.5	Yes
Sliding Block Failure	4.3	1.5	Yes

8 COVER CONSTRUCTION

30 TAC §§330.165, 330.457

8.1 Daily, Weekly, and Intermediate Cover

The daily, weekly, and intermediate cover should be constructed of soils that are free of waste and debris. Suitable cover materials should be available from the proposed excavations or on-site borrow sources. Requirements for the placement of daily, weekly, and intermediate cover are provided in Part IV – Site Operating Plan.

8.2 Final Cover

Final cover construction has been completed over the entire 52.5 acres of the West Disposal Area and details of the cover is documented in the Final Cover Evaluation Reports (FCERs). FCER approval dates are shown on Attachment J, Drawing J.1.

There are two top slope and three sideslope final cover system designs proposed for the West and North Disposal Areas as shown on Table D-4 in Attachment D. The final cover system in the South Disposal Area will consist of an 18-inch-thick compacted soil infiltration layer overlain by an erosion layer. The final cover system requirements are provided in Attachment D8 and the final cover system details are provided in Attachment D3.

The infiltration layer material must consist of relatively homogeneous cohesive materials that are free of debris, rocks greater than one inch in diameter, plant materials, frozen materials, foreign objects, and organic material. The infiltration layer should be constructed directly over the intermediate cover once the waste has reached final grades. The infiltration layer construction procedure should be the same as those outlined in Section 7 for liner construction.

The erosion layer should consist of: (1) topsoil stockpiled during the excavation process, (2) on-site soils which has been modified to be capable of sustaining vegetation, or (3) an imported material suitable to sustain vegetation growth. This layer may be spread and placed in one lift over the drainage layer. After spreading, the layer should be rolled lightly to reduce future erosion, although not to the extent that compaction would inhibit plant growth.

8.3 Final Cover Testing and Documentation

CQA testing of the final cover system must be performed during construction. Final cover system requirements are outlined in Attachment D8.

NEW BOSTON LANDFILL

APPENDIX D5-B
SLOPE STABILITY ANALYSES

Includes pages D5-B-1 through D5-B-194

12/10/2025

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

APPENDIX D5-B
SLOPE STABILITY ANALYSES

The results of the stability analyses indicate that the proposed slopes are stable under the conditions analyzed. The PCSTABL6 output files are presented on pages D5-B-9 through D5-B-191. The liner and final cover veneer stability calculations are provided on pages D5-B-3 through D5-B-8. Table D5-B-1 summarizes the results of the stability analyses and compares the calculated factor of safety to the recommended minimum factor of safety. The recommended minimum factors of safety were selected from the Corps of Engineers "Design and Construction of Levees" manual (EM 1110-2-1913).

Table D5-B-1
Summary of Slope Stability Analyses

Condition	Minimum Calculated Factor of Safety	Recommended Factor of Safety	Acceptable Factor of Safety
NORTH DISPOSAL AREA			
Excavated Slope			
Short Term	1.9	1.3	Yes
Long Term	2.3	1.5	Yes
Interim Waste Slope			
Circular Arc Failure	1.6	1.3	Yes
Sliding Block Failure	1.5	1.3	Yes
Final Waste Slope			
Circular Arc Failure	2.5	1.5	Yes
Sliding Block Failure	2.5	1.5	Yes
Liner Veneer			
Protective Cover/Geocomposite	2.1	1.3	Yes
Geocomposite/Geomembrane	2.6	1.3	Yes
Geomembrane/Soil Liner	2.6	1.3	Yes
Final Cover Veneer (Sideslope)			
OPTION A			
Erosion Layer/Geocomposite	2.8	1.5	Yes
Geocomposite/Geomembrane	3.5	1.5	Yes
Geomembrane/Infiltration Layer	3.5	1.5	Yes
OPTION B			
Erosion Layer/Geotextile	2.8	1.5	Yes
Geotextile/Studded Geomembrane	2.4	1.5	Yes
Studded Geomembrane/Infiltration Layer	3.5	1.5	Yes
ALTERNATE			
Erosion Layer/Geocomposite	2.7	1.5	Yes
Alternate Geocomposite/Infiltration Layer	3.2	1.5	Yes
SOUTH DISPOSAL AREA			
Excavated Slope			
Short Term	2.6	1.3	Yes
Long Term	3.3	1.5	Yes
Interim Waste Slope			
Circular Arc Failure	2.1	1.3	Yes
Sliding Block Failure	3.2	1.3	Yes
Final Waste Slope			
Circular Arc Failure	2.7	1.5	Yes
Sliding Block Failure	4.3	1.5	Yes

New Boston Landfill
Slope Stability Parameters

Required: Select the appropriate soil parameters for the slope stability analyses.

References:
1) *Attachment E - Geology Report,* New Boston Landfill Permit Application.
2) Table 8-3.1 Typical Engineering Properties of Compacted Materials, *Geotechnical Engineering Procedures for Foundation Design of Buildings and Structures,* Naval Facilities Engineering Command,
3) Tests performed by TRI for Biggs & Mathews Environmental (Appendix D5-C).
4) Qian, X, Koerner, R.M., and Gray, Donald H., *Geotechnical Aspects of Landfill Design and Construction,* Prentice Hall, 2002.
5) Bouazza, A., Zornberg, J.G., and Adam, D., *Geosynthetics in waste containment facilities: recent advances,* 2002.

Solution: The following materials may be included in the slope stability analyses.

Physical Properties				
Material	Description	Moisture[a] %	Dry Wt[a] pcf	Wet Wt[b] pcf
Layer I	Clay	21.7	101.9	124.0
Liner/Cover	Compacted Clay	21.7	101.9	124.0
Liner/Cover Floor	Geosynthetics	N/A	N/A	124.0
Liner/Cover Sidewall	Geosynthetics	N/A	N/A	124.0
Solid Waste	Solid Waste	N/A	N/A	50.0

[a] Average laboratory test values.
[b] Wet Wt = Dry Wt x (1 + Moisture)

Total stress parameters will be used to analyze short-term stability and effective stress parameters will be used to analyze long-term stability.

Strength Parameters for Circular and Sliding Block Slope Stability				
	Total Stress		Effective Stress	
Material	cohesion (psf)	friction (deg)	cohesion (psf)	friction (deg)
Layer I - Clay	1204 [a]	17 [a]	1508 [a]	18 [a]
Liner/Cover - Compacted Clay	1204 [a]	17 [a]	1508 [a]	18 [a]
Sidewall - Geomembrane/Soil Liner	273 [b]	13.5 [b]	273 [b]	13.5 [b]
Floor - Geomembrane/Soil Liner	601 [b]	6.8 [b]	601 [b]	6.8 [b]
Solid Waste	250 [c]	23 [c]	250 [c]	23 [c]

[a] Reference 2.
[b] Reference 3. Critical interface in composite liner or cover system used for calculation.
[c] Reference 4.

Interface parameters for the geosynthetics will be used to evaluate the liner and cover veneer stability.

Liner Strength Parameters for Veneer Slope Stability		
Material Interface	Friction Angle (Degrees)	Cohesion (psf)
Protective Cover/Geocomposite	32.6 [a]	12 [a]
Geocomposite/Geomembrane/Soil Liner	31.8 [a]	59 [a]
Geomembrane/Soil Liner	31.8 [a]	60 [a]

[a] Reference 3.

Final Cover Strength Parameters for Veneer Slope Stability		
Material Interface	Friction Angle (Degrees)	Cohesion (psf)
Option A		
Erosion Layer/Geocomposite	32.6 [a]	12 [a]
Geocomposite/Geomembrane	31.8 [a]	59 [a]
Geomembrane/Infiltration Layer	31.8 [a]	60 [a]
Option B		
Erosion Layer/Geotextile	32.6 [a]	12 [a]
Geotextile/Studded Geomembrane	31.0 [b]	0 [b]
Geomembrane/Infiltration Layer	31.8 [a]	60 [a]
Alternate		
Erosion Layer/Geocomposite	32.6 [a]	12 [a]
Geocomposite/Infiltration Layer	32.6 [a]	60 [a]

[a] Reference 3.
[b] Reference 5.

New Boston Landfill
Geosynthetic Stability Parameters

Calculate the factor of safety at each interface in the composite liner system.

Protective cover/geocomposite

Φ =	32.6	deg
β =	18.43	deg
C =	12	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	3.2	

FS @ protective cover/geocomposite = 2.1

Geocomposite/geomembrane/soil liner

Φ =	31.8	deg
β =	18.43	deg
C =	59	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	3.2	

FS @ geocomposite/geomembrane/soil liner = 2.6

Geomembrane/soil liner

Φ =	31.8	deg
β =	18.43	deg
C =	60	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	3.2	

FS @ geomembrane/soil liner = 2.6

New Boston Landfill
Geosynthetic Stability Parameters

Calculate the factor of safety at each interface in the composite final cover system A.

Erosion layer/geocomposite

Φ =	32.6	deg
β =	14.04	deg
C =	12	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ erosion layer/geocomposite = 2.8

Geocomposite/geomembrane

Φ =	31.8	deg
β =	14.04	deg
C =	59	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ geocomposite/geomembrane = 3.5

Geomembrane/infiltration layer

Φ =	31.8	deg
β =	14.04	deg
C =	60	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ geomembrane/infiltration layer = 3.5

Calculate the factor of safety at each interface in the composite final cover system B.

Erosion layer/geotextile

Φ =	32.6	deg
β =	14.04	deg
C =	12	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ erosion layer/geotextile = 2.8

Geotextile/studded geomembrane

Φ =	31.0	deg
β =	14.04	deg
C =	0	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ geotextile/studded geomembrane =	2.4

Studded geomembrane/infiltration layer

Φ =	31.8	deg
β =	14.04	deg
C =	60	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	2	ft
a =	1.0	
b =	4.2	

FS @ studded geomembrane/infiltration layer =	3.5

Calculate the factor of safety at each interfacee in the alternate sideslope final cover system.

Erosion layer/geocomposite

Φ =	32.6	deg
β =	14.04	deg
C =	12	psf
u =	0.0	
γ =	127.0	pcf
r_u =	0	
H =	3	ft
a =	1.0	
b =	4.2	

FS @ studded erosion layer/geocomposite =	2.7

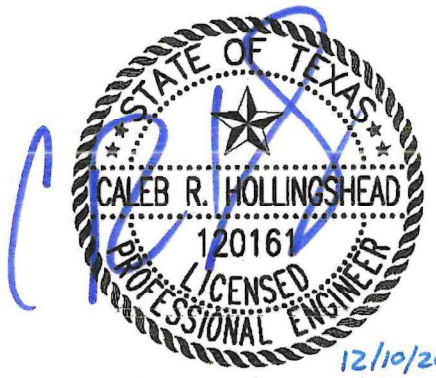
Geocomposite/infiltration layer

Φ =	32.6	deg
β =	14.04	deg
C =	60	psf
u =	0.0	
γ =	124.0	pcf
r_u =	0	
H =	3	ft
a =	1.0	
b =	4.2	

FS @ studded geocomposite/infiltration layer =	3.2

NEW BOSTON LANDFILL
BOWIE COUNTY, TEXAS
TCEQ PERMIT NO. MSW 576C

PART III – FACILITY INVESTIGATION AND DESIGN
ATTACHMENT D8A
WEST AND NORTH DISPOSAL AREAS
FINAL COVER QUALITY CONTROL PLAN



12/10/2025

Biggs & Mathews Environmental, Inc.
Firm Registration No. F-256

Prepared for

Waste Management of Texas, Inc.

Technically Complete September 12, 2014

Revised December 2025

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BIGGS & MATHEWS ENVIRONMENTAL
1700 Robert Road, Suite 100 • Mansfield, Texas 76063 • 817-563-1144

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NO. F-256 AND NO. 10194895

TEXAS BOARD OF PROFESSIONAL GEOSCIENTISTS
FIRM REGISTRATION NO. 50222

4 INFILTRATION LAYER

30 TAC §330.457

4.1 General

The infiltration layer consists of compacted, relatively homogeneous, cohesive material. See Table D8A-1 for the infiltration layer thickness. The CQA monitor shall provide continuous on-site observation during infiltration layer placement, processing, compaction, and testing. The GP shall make sufficient site visits during infiltration layer construction to document the construction activities, testing, and thickness verification in the Final Cover System Report, in accordance with Section 8.

4.2 Materials

Infiltration layer material shall consist of soil that is free from debris, rubbish, frozen materials, foreign objects, and organic material. The required infiltration layer material properties are summarized in Table D8A-2.

Table D8A-2
New Boston Landfill
Infiltration Material Properties

Test	Standard	Required Property
Plasticity Index	ASTM D 4318	15 or greater
Liquid Limit	ASTM D 4318	30 or greater
Percent Passing No. 200 Mesh Sieve	ASTM D 1140	30 or greater
Percent Passing 1-inch Sieve	ASTM D 422	100
Coefficient of Permeability	ASTM D 5084 or COE EM 1110-2-1906 Appendix VII	less than or equal to 1×10^{-5} cm/sec

Preconstruction testing procedures and frequencies for infiltration layer materials are listed in Section 4.8.1.

4.3 Subgrade Preparation

Prior to placing infiltration layer material, the subgrade should be proof rolled with heavy, rubber-tired construction equipment to detect soft areas. The GP or CQA monitor must observe the proof-rolling operation. Soft areas should be compacted and then be proof rolled again.

7 EROSION LAYER

30 TAC §330.457

7.1 General

The erosion layer consists of a layer of soil with the top six inches capable of sustaining native plant growth. See Table D8A-1 for the erosion layer thickness. The CQA monitor shall provide continuous on-site observation during erosion layer placement to assure that erosion layer placement does not damage underlying geosynthetics. The GP shall make sufficient site visits during erosion layer placement to document the construction activities and thickness verification in the Final Cover Evaluation Report.

7.2 Materials

Erosion layer material shall consist of soil that is free from debris, rubbish, frozen materials, foreign objects, and organic material, or any material that could damage the underlying geosynthetics.

7.3 Preparation

Prior to placing the erosion layer material, the top of infiltration layer elevations shall be verified in accordance with the requirements of Section 4.8.3 and all testing on the underlying geosynthetics shall be completed.

7.4 Placement

The erosion layer shall be placed in a manner that minimizes the potential to damage the underlying geosynthetics. Hauling equipment shall be restricted to haul roads of sufficient thickness to protect the underlying geosynthetics. The erosion layer shall be dumped from the haul road and spread by low ground pressure equipment in a manner that minimizes wrinkles and stress in the geosynthetics. On sideslopes, erosion layer shall be placed from the bottom to the top, not across or down. Erosion layer shall not be placed over geosynthetics that are stretched across the toes of slopes. The minimum separation distance between construction equipment and the geosynthetics are listed in Table D8A-10.

The erosion layer will be seeded or sodded immediately following the application of final cover in order to minimize erosion.