

**AGENDA**  
**LOUDON COUNTY SOLID WASTE DISPOSAL COMMISSION**  
**September 14th, 2021**  
**6:00 p.m.**  
**LOUDON CITY MUNICIPAL BUILDING**  
**Loudon, Tennessee**

1. Opening of Meeting, Pledge of Allegiance, Invocation
2. Approval of Minutes – August 10th, 2021 - Next meeting approve August Minutes
3. Approval of ~~August~~ <sup>Sept.</sup> Agenda
4. Items of Public Concern-A 10-minute guideline is requested for items of public concern.
5. Attorney's Report:
  1. Authorize Contract Negotiations - special Meeting - tipping Fees out of county
6. Cash Activity Report
7. Operations Report (customer activity report will be available upon request)
8. Chairman's Report:
  1. Invoices
  2. Fee's collected on Mattresses and large Tires
9. Mrs. Hunters Items:
  1. Letter from Republic to TDEC - Notice of Santek acquisition,
  2. Letter from Republic to LCSWDC – Notice of Santek acquisition,
  3. Request to Mr. Randy Dixon, Republic Organization Chart and contact information,
  4. Request of final version - Santek-Republic submitted to TDEC Closure-Post closure plan and all supporting documents including map (hard copy and electronic). And Kevin Stevens letter/e-mail sent to Santek-Republic RE/Closure-Post Closure Plan (Aug. 2021)
10. **Steve Fields: RFP 2007**
  10. Old Business:  
- Questionaire:
  11. New Business:

Adjourn

How much do many landfills charge for mattresses?

You will typically pay a fee to recycle your mattress. If you drop it off, most recycling centers will charge between **\$10 to \$20**. If a contractor or a bed store picks up your mattress, you'll typically pay between \$40 to \$50.

What are the fees at Matlock Bend for Mattresses?

How are these fees collected with the stakeholders?

What charges should be placed on large tire collections?

**Loudon County Department of Accounts and Budgets**  
**Solid Waste Disposal Fund 207**  
**Monthly Cash Report**  
**August 2021**

July 2021 Combined Ending Cash Balance per Monthly Report		4,512,957.58
Adjustments:		
Less July Trustee Commission	0.00	
	0.00	
Total Adjustments		0.00
<b>Adjusted July 2021 Combined Ending Balance per Loudon Co Trustee</b>		<b>4,512,957.58</b>

**Solid Waste Disposal Commission Operating Fund**

<b>Operating Fund Ending Balance July 2021</b>		<b>4,455,369.95</b>
Cash Receipts:		
Trustee's Collections - Prior Year		
Interest & Penalty		
Surcharge - Host Fees (July 2021)	10,987.22	
Surcharge - Security Fees (July 2021)	13,872.76	
Investment Income	1,294.52	
Total Monthly Revenue		26,154.50
Cash Disbursements:		
Board & Committee Members Fees	(600.00)	
Social Security	(3.10)	
Employer Medicare	(0.73)	
Audit Services (Mitchell Emert & Hill)		
Contracts with Private Agencies (Santek)		
Engineering Services (Santek)		
Contributions (Loudon Utilities - Quarterly)		
Legal Services (July 2021)	(2,500.00)	
Legal Notices	(53.00)	
Other Contracted Ser (Englewood Land & Cattle)	(7,000.00)	
Building & Content Insurance		
In-Service/Staff Development (Refund)		
Trustee's Commission (July 2021)	(139.78)	
Total Cash Disbursements		(10,296.61)
Expenditure Credit:		
Trustee Commission Adjustment		0.00
<b><u>Operating Fund Ending Balance August 2021</u></b>		<b>4,471,227.84</b>

**Poplar Springs Subfund**

<b>Poplar Springs Subfund Balance July 2021</b>		<b>57,587.63</b>
Cash Receipts:		
Investment Income	16.73	
Total Monthly Revenue		16.73
Cash Disbursements:		
Poplar Springs Consultants	0.00	
Trustee Commission (July 2021)	(1.81)	
Total Cash Disbursements		(1.81)





650 25th Street, N.W., Suite 100  
Cleveland, Tennessee 37311  
(423) 303-7101

Email: [info@santekwasteservices.com](mailto:info@santekwasteservices.com)  
Internet: [santekwasteservices.com](http://santekwasteservices.com)

**Monthly Operations Report  
Matlock Bend Landfill  
September 14, 2021**

**Presented by:  
Santek Environmental, Inc.**

**I. OPERATIONS**

- A. Tonnage Report
- B. Customer Report
- C. Inspection
- D. Materials Classification Report
- E. Waste Characterization Report
- F. Tire Report

**II. AIRSPACE UTILIZATION SCHEDULE**

**III. HOST & SECURITY FEES**

**LANDFILL TONNAGE VOLUME**  
**MONTH ENDING -**  
**August 2021**

**MATLOCK BEND LANDFILL**

MONTH	2020	2021	2020 TO 2021
JANUARY	15,673.95	8,840.41	(6,833.54)
FEBRUARY	14,263.17	8,969.07	(5,294.10)
MARCH	16,251.35	11,681.92	(4,569.43)
APRIL	9,791.81	11,278.36	1,486.55
MAY	10,315.74	11,373.25	1,057.51
JUNE	10,928.67	11,547.60	618.93
JULY	10,444.52	11,145.42	700.90
AUGUST	9,920.07	11,178.47	1,258.40
SEPTEMBER			0.00
OCTOBER			0.00
NOVEMBER			0.00
DECEMBER			0.00
TOTAL	97,589.28	86,014.50	(11,574.78)
% of TOTAL VOLUME		100%	

**DAILY AVG FOR ANY  
 RUNNING 30 DAY PERIOD**      **372.62**

**CITY OF LOUDON**

MONTH	2020	2021	2020 TO 2021
JANUARY	457.31	409.09	(48.22)
FEBRUARY	391.61	385.74	(5.87)
MARCH	486.81	527.85	41.04
APRIL	492.81	510.31	17.50
MAY	488.38	476.11	(12.27)
JUNE	494.58	503.39	8.81
JULY	498.94	522.94	24.00
AUGUST	512.68	510.57	(2.11)
SEPTEMBER			0.00
OCTOBER			0.00
NOVEMBER			0.00
DECEMBER			0.00
TOTAL	3,823.12	3,846.00	22.88
% of TOTAL VOLUME		4.5%	

**LOUDON COUNTY**

MONTH	2020	2021	2020 TO 2021
JANUARY	514.88	522.80	7.92
FEBRUARY	455.37	470.64	15.27
MARCH	598.09	559.14	(38.95)
APRIL	635.96	522.20	(113.76)
MAY	586.33	591.94	5.61
JUNE	595.84	552.78	(43.06)
JULY	578.33	591.98	13.65
AUGUST	598.49	544.07	(54.42)
SEPTEMBER			0.00
OCTOBER			0.00
NOVEMBER			0.00
DECEMBER			0.00
TOTAL	4,563.29	4,355.55	(207.74)
% of TOTAL VOLUME		5.1%	

**DAILY AVG FOR 22.5  
 DAY PERIOD**      **496.82**

**WASTE SERVICES OF TN**

MONTH	2020	2021	2020 TO 2021
JANUARY	3,339.43	2,902.11	(437.32)
FEBRUARY	2,998.43	2,736.69	(261.74)
MARCH	3,467.07	3,535.60	68.53
APRIL	3,382.68	3,551.64	168.96
MAY	3,550.36	3,471.38	(78.98)
JUNE	3,527.18	3,595.06	67.88
JULY	3,667.57	3,608.65	(58.92)
AUGUST	3,096.54	3,415.63	319.09
SEPTEMBER			0.00
OCTOBER			0.00
NOVEMBER			0.00
DECEMBER			0.00
TOTAL	27,029.26	26,816.76	(212.50)
% of TOTAL VOLUME		31.2%	

**LENOIR CITY**

MONTH	2020	2021	2020 TO 2021
JANUARY	375.20	452.91	77.71
FEBRUARY	339.26	359.23	19.97
MARCH	472.11	479.10	6.99
APRIL	564.05	467.77	(96.28)
MAY	452.37	421.37	(31.00)
JUNE	471.63	496.86	25.23
JULY	513.08	500.08	(13.00)
AUGUST	427.70	554.03	126.33
SEPTEMBER			0.00
OCTOBER			0.00
NOVEMBER			0.00
DECEMBER			0.00
TOTAL	3,615.40	3,731.35	115.95
% of TOTAL VOLUME		4.3%	

**WASTE MANAGEMENT KNOXVILLE**

MONTH	2020	2021	2020 TO 2021
TN Trash 2020 Jan-May			
JANUARY	1,045.82	2,050.17	1,004.35
FEBRUARY	1,608.55	2,003.86	395.31
MARCH	2,424.09	2,367.36	(56.73)
APRIL	1,675.72	2,118.86	443.14
MAY	2,373.62	2,486.21	112.59
JUNE	2,549.31	2,840.18	290.87
JULY	2,527.15	2,228.29	(298.86)
AUGUST	2,529.43	2,648.98	119.55
SEPTEMBER			0.00
OCTOBER			0.00
NOVEMBER			0.00
DECEMBER			0.00
TOTAL	16,733.69	18,743.91	2,010.22
% of TOTAL VOLUME		21.8%	

**LANDFILL TONNAGE VOLUME**  
**MONTH ENDING -**  
**August 2021**

**All Others**

MONTH	2020	2021	2020 TO 2021
JANUARY	9,941.31	2,503.33	(7,437.98)
FEBRUARY	8,469.95	3,012.91	(5,457.04)
MARCH	8,803.18	4,212.87	(4,590.31)
APRIL	3,040.59	4,107.58	1,066.99
MAY	2,864.68	3,926.24	1,061.56
JUNE	3,290.13	3,559.33	269.20
JULY	2,695.79	3,693.48	997.69
AUGUST	2,755.23	3,505.19	749.96
SEPTEMBER			0.00
OCTOBER			0.00
NOVEMBER			0.00
DECEMBER			0.00
TOTAL	41,860.86	28,520.93	(13,339.93)
% of TOTAL VOLUME		33.2%	

**Materials Classification Report**  
**Matlock Bend Landfill**  
**Monthly Tonnage Summary August 2021**

Material	Tonnage	2018 Sludge %		2019 Sludge %	
<b>MSW</b>		January	4%	January	5%
		February	4%	February	5%
MSW	<u>9,472</u>	March	5%	March	4%
<b>Special Waste</b>		April	6%	April	4%
		May	8%	May	3%
Other	1,198	June	9%	June	6%
Ash	0	July	6%	July	5%
Sludge	<u>484</u>	August	4%	August	4%
<b>Total Special Waste</b>	<u><u>1,682</u></u>	September	2%	September	4%
		October	2%	October	3%
<b>Total MSW &amp; SW</b>	<b>11,154</b>	November	5%	November	4%
		December	5%	December	7%
		<b>2020 Sludge %</b>		<b>2021 Sludge %</b>	
		January	5%	January	4%
Tires	25	February	4%	February	5%
<b>Total Material</b>	<u><u>11,178</u></u>	March	4%	March	5%
		April	4%	April	6%
<b>% MSW</b>	<u>85%</u>	May	4%	May	6%
		June	5%	June	5%
<b>% Special Waste</b>	<u>15%</u>	July	5%	July	7%
		August	6%	August	4%
<b>% Sludge *</b>	<u>4%</u>	September	5%	September	
		October	3%	October	
		November	5%	November	
		December	7%	December	

\* Sludge % is stand alone,  
 % Special Waste includes "Sludge"

### 2021 Loudon MSW and Special Waste Analysis

Material	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
MSW	7,073	7,276	9,502	9,384	8,316	9,633	9,377	9,472	0	0	0	0	70,033
Special Waste	1,767	1,693	2,180	1,894	1,697	1,915	1,773	1,682	0	0	0	0	14,601
Tires	30	22	39	59	36	49	28	25	0	0	0	0	288
<b>Total</b>	<b>8,870</b>	<b>8,991</b>	<b>11,721</b>	<b>11,337</b>	<b>10,049</b>	<b>11,597</b>	<b>11,178</b>	<b>11,178</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84,921</b>
%													
MSW	80%	81%	81%	83%	83%	83%	84%	85%					83%
Special Waste	20%	19%	19%	17%	17%	17%	16%	15%					17%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>					<b>100%</b>

**2021-2022 Matlock Bend  
Landfill Tire Report**

<b>Month</b>	<b>Tonnage</b>
Jul-21	32.44
Aug-21	33.33
Sep-21	
Oct-21	
Nov-21	
Dec-21	
Jan-22	
Feb-22	
Mar-22	
Apr-22	
May-22	
Jun-22	
<b>Total (tons)</b>	<b>65.77</b>

## Matlock Bend Landfill - Module E 2021 Airspace Projection / Construction Schedule

DATE	REMAINING AIRSPACE <sup>1</sup> (CY)	MONTHLY TONNAGE	ACTUAL / PROJECTED <sup>2</sup>	UTILIZATION FACTOR	MONTHLY VOLUME CONSUMED (CY)	ENDING MONTHLY REMAINING AIRSPACE (CY)
		11,177		1.37		
May 25, 2020	628,843	-	-	-	-	-
May 26-31, 2020	-	1,915	A	1.37	2,624	626,219
June	-	10,982	A	1.37	15,045	611,174
July	-	10,481	A	1.37	14,359	596,815
August	-	9,959	A	1.37	13,644	583,171
September	-	10,031	A	1.37	13,742	569,429
October	-	10,560	A	1.37	14,467	554,962
November	-	10,081	A	1.37	13,811	541,151
December	-	10,023	A	1.37	13,732	527,419
January '21	-	8,870	A	1.37	12,152	515,267
February	-	8,991	A	1.37	12,318	502,950
March	-	11,721	A	1.37	16,058	486,892
April	-	11,337	A	1.37	15,532	471,360
May	-	11,373	A	1.37	15,581	455,779
June	-	11,548	A	1.37	15,820	439,959
July	-	10,947	A	1.37	14,997	424,962
August	-	11,037	A	1.37	15,121	409,841
September	-	11,177	P	1.37	15,313	394,528
October	-	11,177	P	1.37	15,313	379,216
November	-	11,177	P	1.37	15,313	363,903
December	-	11,177	P	1.37	15,313	348,591

<sup>1</sup> = Remaining airspace based on May 25, 2020 aerial survey.

Full Date

November-2023

<sup>2</sup> = Projected tonnages are based on a 3 month average.

<sup>3</sup> = Utilization rate based on the annual utilization rate per October 27, 2008 construction meeting (Avg. Utilization = 1.37 cy/ton)

### Tonnage for Past 3 Months

June	11,548
July	10,947
August	11,037
<b>Average</b>	<b>11,177</b>



1018 East 38<sup>th</sup> Street Chattanooga, TN 37407  
o 423.867.6582 f 423.867.6589 republicservices.com

September 1, 2021

Loudon County Solid Waste Disposal Commission  
100 River Road  
P.O. Box 351  
Loudon, TN 37774

Dear Kelly,

Pursuant to Section 10.6 and 10.7 of the Sanitary Landfill Operation Agreement between Loudon and Santek as of July 1, 2007, Santek agreed to pay the Commission a host fee and security fee as defined in the Agreement. The following recap reflects the calculation for the period of August 1, 2021 to August 31, 2021:

Host Fees (Greater of below) –	
Total Tip Fees Billed	\$288,316.32
Host Fee Percentage	<u>3.96%</u>
	<b>\$ 11,417.33</b>
Minimum Fee	<u>\$ 10,572.50</u>
Security Fees (Greater of below) –	
Total Tonnage Received	11,153.70
Rate per ton	<u>\$ 1.00</u>
Total	\$ 11,153.70
Total Tip Fees Billed	\$288,316.32
Security Fee Percentage	<u>5.00%</u>
	<b>\$ 14,415.82</b>

Our checks in payment of the above fees have been remitted to the above address for the Commission. Should you have any questions or need additional information, please let me know.

Sincerely,

Sharon Webb  
Business Unit Finance Manager

**BASS BERRY + SIMS**

**G. Scott Thomas**  
sthomas@bassberry.com  
(615) 742-6243

September 9, 2021

**Via United State Mail and email**

Kevin C. Stevens  
Kennerly, Montgomery & Finley, P.C.  
550 Main Street, Fourth Floor  
P.O. Box 442, Knoxville, Tennessee 37901  
E-Mail: [Kstevens@Kmfpc.Com](mailto:Kstevens@Kmfpc.Com)

**Re: Republic Acquisition of Santek Environmental, Inc.**

Mr. Stevens,

On behalf of Santek Environmental, Inc. (Santek), I am writing to address the concerns raised by recent allegations that approvals were not obtained from the Tennessee Department of Environmental and Conservation (TDEC) arising from the recent acquisition by Republic Services, Inc. (Republic) of the stock of Santek. It is my understanding that these allegations assert that such transaction triggered a requirement under the state solid waste laws for a modification of the landfill permit for the Matlock Bend Landfill (Landfill) owned by LCSWDC. Santek does not agree with such allegations and is of the opinion that the transaction did not trigger any requirement for TDEC approval.

The TDEC rule in question appears to be Rule 0400-11-01-02(6), which applies to a transfer, modification, revocation and/or reissuance of a permit for a solid waste landfill. That rule restricts the transfer of a permit to a new operator, unless the permit is modified to identify the permittee. The rule also provides that an "owner or operator" under the permit is the party with the ultimate responsibility for the operation of the permitted facility.

The Rule is not applicable to the Republic's acquisition of the stock of Santek. The permittee under the state landfill permit for the Landfill is the LCSWDC. The LCSWDC owns the Landfill, is responsible for the general management of solid waste in Loudon County under the Region's Solid Waste Management Plan, and under the state solid waste laws the LCSWDC has the ultimate responsibility for the operation of the Landfill. Since no change has occurred to LCSWDC, no event has occurred that triggers a transfer of the permit under Rule 0400-11-01-02(6), and therefore, no modification needs to be approved by TDEC.

Obviously, Santek has significant contractual obligations to LCSWDC to operate the Landfill in compliance with the state solid waste laws, and just like any contractor that performs solid waste management tasks on a permitted landfill in Tennessee, may have certain responsibilities to TDEC in the event that such actions are not performed in a manner consistent with state law. However, just like many landfills that are contractually managed, the ultimate responsibility under the state solid waste laws resides with the owner/permittee, the LCSWDC.

September 9, 2021

Page 2

LCSWDC retains financial responsibility with the state for the Landfill, and if Santek does not comply with its contractual obligations under the management agreement with LCSWDC, the LCSWDC can pursuant to the terms of the contract exercise remedies that include coming onto the Landfill and taking the necessary actions at the Landfill to restore compliance with the Solid Waste laws. As such, the acquisition in question has no impact on the Landfill permit and is not an event that triggers action under Rule 0400-11-01-02(6).

Accordingly, the allegations in question have no merit and no action with TDEC is required. Notwithstanding that no actions under Rule 0400-11-01-02(6) have been undertaken, TDEC has been made aware of Republic's acquisition of interests in Santek, and TDEC has indicated that such acquisition does not require any action be taken with respect to the permit.

I am happy to discuss the issue further or answer any questions that you or the LCSWDC may have on this topic.

Sincerely,

A handwritten signature in black ink that reads "G. Scott Thomas". The signature is written in a cursive, flowing style.

G. Scott Thomas

**Matlock Bend Landfill Tire & Mattress Disposal Fees**

**Tire Disposal Fees:**

Passenger Tire & Smaller: \$1.25 Per Tire  
Semi/ Tractor Trailer Tires: \$5.00 Per Tire  
Anything Larger than Semi Tire: \$200.00 Per Tire  
Tire Removal Fee: \$25.00

**Mattress Fees:**

Mattress Each: \$20.00 Per Mattress  
Mattress Per Load: \$500.000 Per Load

*Start Oct 14th  
New Fees to be adopted  
Passed on motion at  
Sept. 14th 2021  
meeting*

2ND COPY

April 28, 2021

Loudon County Solid Waste Disposal Commission  
100 River Road, Box 100  
Loudon, Tennessee 37774  
Attn: Chair



**SANTEK**  
ENVIRONMENTAL

650 25th Street, N.W., Suite 100  
Cleveland, Tennessee 37311  
(423)478-9160  
Toll Free: (800)467-9180  
Fax: (423)479-1952

Email: mail@santekenviro.com  
Internet: www.santekenviro.com

Dear Sir or Madam:

We are pleased to inform you that Santek Waste Services, LLC, a Tennessee limited liability company ("Santek"), is joining forces with Republic Services, Inc., a Delaware corporation ("Republic"). Republic is purchasing all of the outstanding equity interests of Santek (the "Transaction") pursuant to a Membership Interest Purchase Agreement between Republic and Santek (the "Purchase Agreement"), which will result in an indirect change of control of Santek's subsidiary, Santek Environmental, LLC (formerly known as Santek Environmental, Inc.) a Tennessee limited liability company ("Santek Environmental").

The closing of the Transaction is expected to occur within the next few weeks. After the Transaction closes, Republic will seamlessly operate the business as it was run in the past in an uninterrupted fashion.

As you know, Santek Environmental and Loudon County Solid Waste Disposal Commission (the "Commission") are parties to that certain Sanitary Landfill Operation Agreement, dated July 1, 2007, by and between Santek Environmental and the Commission, as amended (the "Agreement"). The purpose of this letter is to notify you of the Transaction, as required by Section 12.2 of the Agreement. We look forward to continuing our relationship with you.

Please do not hesitate to call me at 423-303-7101 or email me at twatts@santekwasteservices.com if you have any questions or require any further information regarding the Transaction. We look forward to a continued, successful relationship.

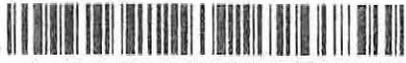
Sincerely,

Santek Environmental, LLC

By: Timothy Watts  
Name: Timothy Watts  
Title: Chief Operating Officer

cc: Kennerly, Montgomery & Finley, P.C.  
550 Main Street, 4th Floor  
Knoxville, Tennessee 37902  
Attn: C. Coulter "Bud" Gilbert

Landfill Solutions Under  
Local Government's Authority.

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> <li>■ Complete items 1, 2, and 3.</li> <li>■ Print your name and address on the reverse so that we can return the card to you.</li> <li>■ Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Signature  <input checked="" type="checkbox"/> <i>Waste CV19</i> <input type="checkbox"/> Agent  <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <i>Bu CV19</i> C. Date of Delivery <i>5/3/11</i></p>
<p>1. Article Addressed to:  <i>London County Solid Waste Disposal Commission</i>  <i>100 River Road, Box 100</i>  <i>London TN 37774</i>  <i>Attn: Chair</i></p>  <p>9590 9402 5338 9154 1696 11</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>2. Article Number (Transfer from service label)  7019 2970 0002 0278 1395</p>	<p>3. Service Type <input type="checkbox"/> Priority Mail Express®  <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail™  <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail Restricted Delivery  <input checked="" type="checkbox"/> Certified Mail® <input checked="" type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Certified Mail Restricted Delivery <input checked="" type="checkbox"/> Signature Confirmation™  <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery  <input type="checkbox"/> Collect on Delivery Restricted Delivery  <input type="checkbox"/> Insured Mail  <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</p>
<p>PS Form 3811, July 2015 PSN 7530-02-000-9053 <span style="float: right;">Domestic Return Receipt</span></p>	

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> <li>■ Complete items 1, 2, and 3.</li> <li>■ Print your name and address on the reverse so that we can return the card to you.</li> <li>■ Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>	<p>A. Signature  <input checked="" type="checkbox"/> <i>[Signature]</i> <input type="checkbox"/> Agent  <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) C. Date of Delivery</p>
<p>1. Article Addressed to:  <i>Kennerly, Montgomery + Finley, P.C.</i>  <i>550 Main Street, 4th Floor</i>  <i>Knoxville, TN 37902</i>  <i>Attn: C. Coulter "Bud" Gilbert</i></p>  <p>9590 9402 5338 9154 1696 04</p>	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>2. Article Number (Transfer from service label)  7019 2970 0002 0278 1388</p>	<p>3. Service Type <input type="checkbox"/> Priority Mail Express®  <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail™  <input type="checkbox"/> Adult Signature Restricted Delivery <input type="checkbox"/> Registered Mail Restricted Delivery  <input checked="" type="checkbox"/> Certified Mail® <input checked="" type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Certified Mail Restricted Delivery <input checked="" type="checkbox"/> Signature Confirmation™  <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation Restricted Delivery  <input type="checkbox"/> Collect on Delivery Restricted Delivery  <input type="checkbox"/> Insured Mail  <input type="checkbox"/> Insured Mail Restricted Delivery (over \$500)</p>
<p>PS Form 3811, July 2015 PSN 7530-02-000-9053 <span style="float: right;">Domestic Return Receipt</span></p>	



[kstevens@kmfpc.com](mailto:kstevens@kmfpc.com)

August 23, 2021

Santek Environmental, Inc.  
Attn: Ben Johnston  
650 25<sup>th</sup> Street, N.W., Suite 100  
Cleveland, TN 37311

**Via Certified U.S. Mail & EMAIL**

**Re: Loudon County Solid Waste Disposal Commission  
TDEC Requirement for Updated Closure/Post Closure Plan**

Dear Mr. Johnston:

As you are aware, this law firm represents the Loudon County Solid Waste Disposal Commission ("LCSWDC") relative to the Sanitary Landfill Operation Agreement executed with Santek Environmental, Inc. ("Santek") on July 1, 2007 (the "LOA"). I am writing relative to Santek's obligation to submit an updated closure/post closure care plan to the Tennessee Department of Environment and Conservation ("TDEC") pursuant to Tenn. Comp. R. & Regs. 0400-11-01-03(2)(c) (the "Plan").

TDEC is currently requiring that Santek submit the Plan on or before August 31, 2021, and LCSWDC has reviewed Santek's draft Plan that was prepared with the assistance of an outside engineering consultant. As you are aware, LCSWDC has raised concerns with the timing and sequencing of phased closure of the Landfill in Santek's draft Plan. Specifically, LCSWDC believes that Santek's draft Plan improperly delays the commencement and completion of phased closure of the Landfill. In particular, LCSWDC believes that a substantial portion of the Landfill should be closed immediately as it is at or near final elevation and has not received waste in many years. Accordingly, LCSWDC submitted for Santek's consideration a separate proposed Plan that was prepared by Dr. Robert C. Bachus of Geosyntec Consultants, which it believes represents a more timely schedule for commencement and completion of phased closure of the Landfill.

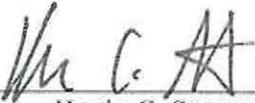
LCSWDC understands that Santek is proceeding to submit its Plan to TDEC. LCSWDC is willing to accept Santek's Plan as presented because it appears to meet the preliminary expectations of TDEC; however, LCSWDC wants to make clear that it does not specifically approve of the timing and sequencing of phased closure of the Landfill set forth therein. LCSWDC further submits that Santek's Plan is a preliminary document which is subject to change with any modifications to the Landfill Permit or expansion of the Landfill footprint. Based upon the foregoing, LCSWDC wants to preserve its objection to the timing and sequencing of phased closure of the Landfill set forth in Santek's Plan.

KENNERLY, MONTGOMERY & FINLEY, P.C.  
550 MAIN STREET, FOURTH FLOOR | KNOXVILLE, TENNESSEE 37902  
P.O. BOX 442 | KNOXVILLE, TENNESSEE 37901  
PH (865) 546-7311 | FX (865) 524-1773 | [WWW.KMFPC.COM](http://WWW.KMFPC.COM)

LCSWDC expects that the parties will be submitting a revised Plan to TDEC in the future based upon potential modifications to the Landfill Permit or expansion of the Landfill footprint. Thank you for your prompt attention to this important matter.

Sincerely,

KENNERLY, MONTGOMERY & FINLEY, P.C.

By  \_\_\_\_\_  
Kevin C. Stevens

cc: LCSWDC Members

# **CLOSURE AND POST-CLOSURE PLAN**

**Matlock Bend Landfill  
Loudon County, Tennessee  
Permit Number SNL 53-103-0203**

**August 2021  
Promus Project No. 200182**

Prepared for:  
**Santek Waste Services  
and Loudon County Solid Waste Disposal Commission**

Prepared by:





Matlock Bend Landfill  
21712 TN-72, Loudon, TN 37774  
o 865.458.2651 republicservices.com

Copy Sent to TDEC

August 24, 2021

Mr. Nick Lytle  
Tennessee Department of Environment and Conservation  
Division of Solid Waste Management  
312 Rosa L. Parks Avenue, 14th Floor  
Nashville, Tennessee 37243

RE: Closure/Post-Closure Plan Submittal Schedule  
Matlock Bend Landfill  
Permit Number SNL 53-103-0203

Dear Mr. Lytle:

Enclosed please find an updated Closure and Post-Closure Plan, a phased closure sequence drawing, updated closure and post-closure cost estimates, and long-term custodial care cost estimates for the above-referenced facility. This information is provided in response to a letter from the Division dated November 3, 2020.

Should you require additional information or have any questions or comments, please contact me via email at [LCunningham3@republicservices.com](mailto:LCunningham3@republicservices.com) or by phone at (423) 867-6512.

Sincerely,

A handwritten signature in black ink that reads "Luke Cunningham".

Luke Cunningham  
Environmental Manager  
Matlock Bend Landfill

cc: Operating Record (Hard copy and electronic)  
Matt Dillard, Matlock Bend Landfill (Electronic)  
Kelly Littleton-Brewster, Loudon County Commission (Electronic)  
Kevin C. Stevens, Kennerly, Montgomery & Finley, P.C. (Electronic)  
Rob Witcher, Promus Engineering, LLC (Electronic)

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b> .....	<b>1</b>
1.1	Purpose .....	1
1.2	Site Location and Access .....	1
1.3	Responsibility for Implementing Plan.....	1
1.4	Facility Contact.....	1
1.5	Facility Design .....	2
1.6	Expected Year of Closure.....	2
<b>2.0</b>	<b>FACILITY CLOSURE</b> .....	<b>2</b>
2.1	Closure Steps .....	2
2.2	Final Cover Design .....	3
2.2.1	<i>Final Cover Grades</i> .....	3
2.2.2	<i>Final Cover Components</i> .....	3
2.2.2.1	Geocomposite Gas Collection Layer .....	4
2.2.2.2	Fine-Grain Soil Layer .....	4
2.2.2.3	Geomembrane Liner .....	4
2.2.2.4	Geocomposite Drainage Layer .....	4
2.2.2.5	Vegetative Soil Layer.....	4
2.3	Control of Access and Use.....	4
2.4	Final Cover Certification .....	5
2.5	Other Environmental Controls.....	5
2.5.1	<i>Drainage System</i> .....	5
2.5.2	<i>Leachate Collection</i> .....	5
2.6	Signage.....	5
2.7	Borrow Area Reclamation .....	6
2.8	Survey Plat .....	6
<b>3.0</b>	<b>FACILITY POST-CLOSURE</b> .....	<b>6</b>
3.1	Post-Closure Groundwater Monitoring.....	6
3.1.1	<i>Compliance Monitoring Boundary</i> .....	7
3.1.2	<i>Groundwater Monitoring Wells and Analysis</i> .....	7
3.1.3	<i>Groundwater Sampling Protocol</i> .....	7
3.2	Post-Closure Surface Water Monitoring .....	7
3.3	Post-Closure Landfill Gas Monitoring .....	7
3.4	Post-Closure Final Cover Maintenance .....	7
3.5	Post-Closure Property Use.....	7
<b>4.0</b>	<b>FACILITY LONG-TERM CUSTODIAL CARE</b> .....	<b>8</b>
<b>5.0</b>	<b>CLOSURE AND POST-CLOSURE COST ESTIMATES</b> .....	<b>8</b>
5.1	Closure Cost Estimate.....	8

5.2	Post-Closure Cost Estimate .....	8
5.3	Long-Term Custodial Care Cost Estimate .....	8

**APPENDIX A CLOSURE AND POST-CLOSURE COST ESTIMATES**

**APPENDIX B CUSTODIAL CARE COST ESTIMATES**

**APPENDIX C MINOR MODIFICATION FORM**

**FIGURES**

**C-1 REVISED PERMIT DRAWING COVER SHEET**

**C-6A PHASED CLOSURE PLAN**

## 1.0 INTRODUCTION

### 1.1 Purpose

This Closure and Post-Closure Plan (Plan) was prepared for Matlock Bend Landfill (the Facility) located in Loudon County, Tennessee owned by the Loudon County Solid Waste Disposal Commission (Owner) and operated by Santek Waste Services (Operator). The Plan was prepared for submittal to the Tennessee Department of Environment and Conservation (TDEC) as part of updated Closure and Post-Closure permit documents. The Facility is regulated by TDEC through the *Tennessee Department of Environment and Conservation Solid Waste Management Rules* (Rules or Regulations). Closure and post-closure activities for the facility will be conducted in accordance with the Regulations. Upon approval by TDEC, this plan will supersede the currently approved Closure and Post-Closure Plan for the facility.

The purpose of this closure plan is to describe the steps necessary to completely or partially close the Facility at any point during its intended operating life. This closure plan is to be used in conjunction with the following documents:

- Current Tennessee Solid Waste Disposal Facility Permit (Permit No. SNL 053-103-0203);
- Most current Facility Permit Drawings;
- Most current Construction Quality Assurance (CQA) Plan;
- Most current Groundwater Sampling and Analysis Plan;
- Most Current Operating Plan;
- Most current Landfill Gas Monitoring Plan; and
- Tennessee Department of Environment and Conservation Solid Waste Management Rules, current version.

All updates and approved modifications to these documents are incorporated by reference.

### 1.2 Site Location and Access

The Facility is located in Loudon County about 4 miles west of Loudon, Tennessee. The entrance to the facility is off Highway 72.

### 1.3 Responsibility for Implementing Plan

The entity responsible for the operation and maintenance of the Facility is Santek Waste Services on behalf of the Loudon County Solid Waste Disposal Commission.

### 1.4 Facility Contact

During the post-closure care period, appropriate contacts may be reached at the following address:

Commission Chairman  
Loudon County Solid Waste Disposal Commission  
100 Mulberry Street  
Loudon, Tennessee 37774

Alternatively, contact information will be posted at the entrance to the facility and will be provided to TDEC.

## 1.5 Facility Design

The total landfill tract property area consists of approximately 152 acres. The currently permitted waste footprint encompasses approximately 40.7 acres. As designed, the facility has a waste disposal capacity of approximately 4.75 million cubic yards.

## 1.6 Expected Year of Closure

The life of the facility is based on several variables including achieved waste density and average waste receipts, among others. Each of these variables are influence by many factors such as realized growth rate of the area, weather, operational efficiency, and competition. Utilizing anticipated factors and calculated waste disposal volumes, the likely closure of the facility will be in approximately 2028. Closure will be performed incrementally throughout the life of the facility as phases are filled to design grade and will generally be approximately 8-20 acres.

A horizontal expansion is planned for the facility. Once the expansion application is approved, the expected closure year will be extended, and this document, as well as Sheet 6A of the Permit Drawings, will be updated.

## 2.0 FACILITY CLOSURE

### 2.1 Closure Steps

The phased development of the site will include partial closure of phases as landfill development progresses. As depicted in the proposed Permit Drawing Sheet 6A, which is included herein, the facility will be closed in phases ranging in size from approximately 8 to 20 acres. The phased approach will allow the Operator to construct closures incrementally as the facility reaches final grade. The areas depicted are based on the current plan of operations, current waste tonnage receipts, and current waste density. The plan may be modified as required by unforeseen operational constraints requiring a change to the operational plan. As stated in Section 1.6, Sheet 6A will be revised for the lateral expansion.

Once a phase is filled to final grade, the staged closure process will consist of:

- 1) TDEC will be notified of the intent to close a portion of the developed area prior to the date closure activities are expected to begin.

- 2) Plan revisions as they pertain to modification of final contours, drainage, leachate collection, and landfill gas collection and/or other plan revisions as appropriate, will be submitted to TDEC prior to beginning any closure activity.
- 3) Installation/construction of the final cover for incremental closure areas will begin within one (1) year after final grades have been achieved for the entire phased closure area. Final closure activities will be completed within 180 days after commencement of closure construction. These alternate timelines are hereby requested as a variance from Rule 0400-11-01-.04(8)(c)2 and 0400-11-01-.04(8)(c)3. Final cover component details are provided in subsequent sections of this report.
- 4) Vegetative cover will be established as soon as possible after final grading, by seeding, mulching, and fertilizing as necessary.
- 5) Borrow areas and other disturbed areas will be stabilized with vegetation or other approved stabilization methods. This would include seeding, mulching, and any necessary fertilization, and may include additional activities.
- 6) All drainage systems will be stabilized as necessary. Ditches will be vegetated or rip-rapped as necessary. Water flow velocities will be controlled with check dams, energy dissipaters or other suitable alternative.
- 7) A passive gas venting system for collecting and conveying of landfill gas will be installed on the closed phase to control landfill gas migration. In the event the landfill is subject to New Source Performance Standards (NSPS), an active gas collection and control system will be installed.
- 8) Certification of partial closure will be provided in accordance with the Rules.

## 2.2 Final Cover Design

### 2.2.1 Final Cover Grades

The final cover design provides for maximum slopes 3 horizontal:1 vertical, in accordance with the Rules. The slopes are broken with storm water diversion terraces to divert runoff to downdrains and finally into the perimeter storm water collection system.

### 2.2.2 Final Cover Components

The final cover was design to restrict the infiltration of storm water into the waste mass and minimize the production of leachate. The components were also designed to promote stability. The final cover will consist of a composite liner system comprised of a geosynthetic geomembrane liner overlying a cohesive soil cover layer. A geocomposite will overly the geomembrane liner to remove infiltration water, and the geocomposite will be drained by a perimeter subsurface final cover drain. The geocomposite drainage layer will be overlaid with an erosion layer on which vegetative cover will be established. The following sub-sections discuss the final cover design elements in more detail.

#### 2.2.2.1 Geocomposite Gas Collection Layer

A double-sided geocomposite gas collection system will be installed over the entire closure area prior to construction of the closure system components. The gas collection layer will be connected to passive gas vents as depicted in the Permit Drawings and will minimize the potential for landfill gas to accumulate under the final cover.

#### 2.2.2.2 Fine-Grain Soil Layer

A 12-inch thick fine-grain soil layer will be constructed directly over the gas collection layer over the entire cap area. The fine-grain soil layer will be constructed as outlined in the Permit Drawings, CQA Plan, and specifications.

#### 2.2.2.3 Geomembrane Liner

The final cover will be constructed with a 40-mil textured linear-low density polyethylene (LLPE) geomembrane liner that is in direct and uniform contact with the fine-grain soil layer. The geomembrane liner shall be constructed in accordance with industry standards and the CQA Plan.

#### 2.2.2.4 Geocomposite Drainage Layer

To remove infiltration from the interface of the geomembrane liner and the overlying vegetative soil layer, a geocomposite (geotextile-geonet-geotextile) drainage layer shall be installed directly over the geomembrane. The geocomposite will be constructed with a perimeter toe drain to convey the infiltration water to the perimeter stormwater channels. The geocomposite shall be installed in accordance with industry standards and the CQA Plan.

#### 2.2.2.5 Vegetative Soil Layer

The final component of the final cover system will consist of a 24-inch thick vegetative soil layer placed over the entire cap area. The erosion layer will be constructed of soils with a low potential for erosion. Such soils shall consist of those which are common to the area including CL, CH, ML and SC materials (USCS Classification). The upper 6 inches of the erosion layer shall be constructed with soils suitable for native grass cover. Once the erosion layer has been established, the closed areas will be seeded with suitable vegetation that will consist of one or more types of grasses. Mulch and fertilizer, as well as additional seeding, may be added to facilitate growth of the vegetative cover on an as needed basis.

### 2.3 Control of Access and Use

The final cover over the 40.7-acre facility will be completed in phases as discussed in Section 2.1. Once the final load of waste has been placed in an area designated for phased closure, intermediate cover grade will be established in that phase. Closure of the phase will be scheduled to allow for some settlement of the waste to occur prior to closure and to coincide with seasonal weather conditions favorable to earthwork activities and operational considerations.

## 2.4 Final Cover Certification

A certification that the final cover of a phase was completed in accordance with this plan and the CQA Plan will be submitted to TDEC. The certification shall be signed by a professional engineer and will be submitted within 60 days after the final cover has been completed for each incremental phase of closure activities.

The engineer will document that the closure was constructed to the grades indicated on the permit drawings, was constructed in accordance with the CQA Plan, and the grassing and erosion controls have been established in accordance with the facility Permit Drawings.

## 2.5 Other Environmental Controls

### 2.5.1 Drainage System

Storm water at the facility will be managed by a system of storm water diversions and conveyances. Storm water terraces will be placed on the 3H:1V slope per the design drawings. These terraces will route water to storm water slope downdrains (or letdowns) strategically placed around the perimeter of the cap. These down drains will consist of piping which will convey the storm water to the perimeter ditch system. The perimeter ditch system will convey storm water to one of the sedimentation ponds where water will be detained to provide for sediment removal. Water will be discharged from these ponds in accordance with the facility's multi-sector stormwater discharge permit. A storm water management plan for the facility is included in the Permit Drawings.

The drainage facilities, sedimentation ponds, and other erosion/sedimentation control measures described in the permit will be maintained until the vegetative cover is sufficiently established to render such maintenance unnecessary.

### 2.5.2 Leachate Collection

A leachate collection system has been previously designed for the Facility. The leachate collection system will be operated and maintained during the active and post-closure periods in accordance with the facility's Operation and Maintenance Plan and the Rules. At the end of the 30-year post-closure period, the leachate collection system will be decommissioned.

## 2.6 Signage

Prior to submitting the final closure certification, permanent signs will be established at all access points to the facility. These signs will be located and of sufficient size to be readily visible and readable. At a minimum, the signs will indicate:

- the owner of the facility,
- a contact for the facility with phone number,
- the nature of the facility, and
- no trespassing is allowed.

After installation, signs will be inspected periodically throughout the post-closure period and repaired or replaced as necessary.

## 2.7 Borrow Area Reclamation

On-site areas outside of the waste boundary from which soils are removed for closure will be reclaimed by re-grading the area to stabilize slopes and establishing permanent vegetation. Permanent erosion control measures will be established to minimize sediment runoff from the area.

## 2.8 Survey Plat

Within 90 days after completion of the final cover over the entire landfill area, a survey plat will be submitted to Loudon County for recording into the land deed and permanent land records. The plat shall contain final grades and the location and dimensions of the actual landfilled area and shall be tied to permanent benchmarks or section corners. The plat will contain the following additional information:

- A legal property description, prepared by a Land Surveyor licensed in the State of Tennessee;
- A notation stating that the permitted landowner is the Loudon County Solid Waste Disposal Commission;
- A notation indicating that the facility was a Class I solid waste management facility;
- A notation stating the beginning and closing dates of landfill operations; and
- A notation stating that its use is restricted during the post-closure period (30 years following final closure) such that, during that period, use of the property will not disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the monitoring systems unless necessary to comply with the State or Federal solid waste management laws and/or regulations. Any other disturbance of the site will be approved by the Director of TDEC if the Director can determine that such a disturbance will not increase the potential threat to human health or the environment.

A certified copy of the plat will be obtained from Loudon County and will be provided to TDEC within 10 days after filing.

## 3.0 FACILITY POST-CLOSURE

### 3.1 Post-Closure Groundwater Monitoring

Groundwater monitoring during the post-closure period will be performed in accordance with the facility's approved Groundwater Monitoring Plan, which is found in Section 1.2.6 of the current *Facility Operations Plan*.

### 3.2 Post-Closure Surface Water Monitoring

Surface water monitoring will be performed in accordance with the facility's Tennessee Multi-Sector permit (TMSP), the Rules, and any other local, State or Federal stormwater discharge requirements.

### 3.3 Post-Closure Landfill Gas Monitoring

Landfill Gas will be monitored in the following locations:

- Every 100 feet along the compliance monitoring boundary.
- Monitoring inside all permanent structures at a rate of one test per every 2,000 ft<sup>2</sup> or one test in every structure. Tests should be performed along exterior walls at columns and/or construction joints. In addition, cracks or expansion joints of building slabs on grade are possible monitoring locations.

If concentrations of explosive gases at the compliance monitoring boundary exceed the lower explosive limit (LEL), the following precautions shall be met:

- Immediate implementation of all necessary steps to ensure protection to human health.
- Within 48 hours, notification of the Tennessee Division of Solid Waste Management.
- Within 14 days, chronicle in the facility's operating records detectable gas levels and steps taken to protect human health.
- Within 90 days of detection, propose remediation plan for release of methane gas. The Tennessee Division of Solid Waste Management will be notified of remedial plan and implementation schedule.

If explosive gas concentrations in facility structures exceed 25% ofLEL, the following precautions will be taken:

- excavate facility structures,
- ventilate facility structures,
- notify fire department, and
- post notification on all facility entrances stating occupying building is prohibited.

### 3.4 Post-Closure Final Cover Maintenance

Owner personnel will routinely inspect the final cover of the facility on a quarterly basis. Any areas of the final cover that have experienced degradation will be repaired, as required to maintain the integrity of the cap system. This includes erosion of the soil portions of the final cover, the final cover storm water drainage system, and any necessary repairs to the soil or synthetic portion of the final cover. If determined necessary, repairs to the vegetative cover, including seeding, mulching, fertilization, and/or additional covering, will be completed as needed.

### 3.5 Post-Closure Property Use

The facility property will have no intended use during the post-closure period. The Owner will submit a request to TDEC prior to implementing any proposed beneficial use of the property.

#### 4.0 FACILITY LONG-TERM CUSTODIAL CARE

After receiving certification of completion of the 30-year post-closure period, the facility will enter the long-term custodial care period. Initially, the Owner will remove the leachate pumps and decommission the leachate collection system. During this period, Owner personnel will inspect the final cover of the facility on an annual basis. Personnel will also visually inspect the perimeter fence and entrance gate, access roads, perimeter stormwater channels, structures, and ponds and other facility components, as necessary. If determined necessary, repairs to the final cover, fencing, roads, and stormwater management system will be completed as needed. Recordkeeping and reporting are not required after the post-closure care period and will not be performed during the long-term custodial care period.

#### 5.0 CLOSURE AND POST-CLOSURE COST ESTIMATES

##### 5.1 Closure Cost Estimate

The closure cost estimate includes a written estimate, in current dollars, of hiring a third party to close the largest area ever requiring a final cover at any time during the active life as required by the Rules. This cost estimate will be maintained within the facility's Operating Record and will be updated annually prior to final closure or during the next Closure and Post-Closure Plan Update.

It is anticipated that the facility will be sequentially closed in phases as areas of the landfill reach final grades and have had time for some settlement to occur. Closure phases may not coincide with the filling in newly constructed cells. Sheet 6A of the Permit Drawings provides an anticipated closure sequence for the Facility. Current closure cost estimates are included with this Plan.

##### 5.2 Post-Closure Cost Estimate

Post-closure cost estimates include a written estimate, in current dollars, of the cost of hiring a third party to conduct post-closure care and environmental monitoring for the landfill as required by the Rules. The estimate accounts for the total cost to conduct post-closure care, including annual and periodic costs over the entire 30-year post closure period. This cost estimate will be maintained within the facility's Operating Record and will be updated annually or during the next Closure and Post-Closure Plan Update. Current post-closure cost estimates are included with this Plan.

##### 5.3 Long-Term Custodial Care Cost Estimate

The long-term custodial care cost estimate includes a written estimate, in current dollars, to conduct long-term post-closure care of the landfill beyond the 30-year post-closure period. The estimate accounts for the total cost to conduct long-term maintenance of the facility, including annual and periodic costs over the entire 50-year long-term custodial care period. The costs associated with long-term custodial care are provided as requested by the Division, however the costs are not required to be included in the financial assurance costs.

# APPENDIX A

## Closure and Post-Closure Cost Estimates

## MATLOCK BEND LANDFILL - PHASE I: CLOSURE

### Notes:

1. This worksheet has been prepared for the Matlock Bend Landfill
2. Quantities are based on permit drawings prepared by Santek Environmental, dated October 1996.
3. This cost is based upon recent closure costs for landfills in the region.

### INPUT PARAMETERS

1 FT SOIL/1 ACRE	1,613	CU YDS
VEGETATIVE SUPPORT LAYER	2	FT
INFILTRATION LAYER	1	FT
AREA CLOSED AS OF Year 2021	0	ACRES
AREA REQUIRING CLOSURE AS OF Year 2021	40.7	ACRES
TOTAL SUBTITLE D WASTE FOOTPRINT	40.7	ACRES
TOPSOIL REQUIRED	0	CU YDS

### 1. CONSTRUCTION OF THE FINAL COVER SYSTEM

#### A. Vegetative Support Layer Component of the Final Cover System

a. Quantity needed (yd3)	131,325
b. Purchase of topsoil (\$/yd3)	\$0.00
c. Excavation unit cost (includes excavation, transport, & placement)	\$4.00
d. Purchase & Excavation cost (a. x (b. + c.))	\$525,301.33
e. Transportation cost ( a. x e.)	\$0.00
f. Placement/spreading unit cost (\$/yd3)	\$0.00
g. Placement/spreading cost (a. x f.)	\$0.00
h. Compaction unit cost (\$/yd3)	\$0.00
i. Compaction cost (a. x h.)	\$0.00
j. Off-site topsoil delivery cost (a. x j.)	\$0.00
Total for On-Site or Off-Site Topsoil (d. + e.+ g. + i. + j.)	\$525,301.33

#### B. Infiltration Layer Component of the Landfill Final Cover System

##### 1. On-Site Clay

a. Quantity needed (yd3)	65,663
b. Purchase of clay (\$/yd3)	\$0.00
c. Excavation unit cost (includes excavation, transport, & placement)	\$7.00
d. Purchase & Excavation cost (a. x (b. + c.))	\$459,638.67
e. Transportation cost ( a. x e.)	\$0.00
f. Placement/spreading unit cost (\$/yd3)	\$0.00
g. Placement/spreading cost (a. x f.)	\$0.00
h. Compaction unit cost (\$/yd3)	\$0.00
i. Compaction cost (a. x h.)	\$0.00
j. Off-site clay delivery cost (a. x j.)	\$0.00
Total for On-Site or Off-Site Topsoil (d. + e.+ g. + i. + j.)	\$459,638.67

## 2. Quality Control/Testing of Clay

a. Number of Acres	40.7
b. Sampling and Testing costs per acre	0
c. Third Party Monitoring cost per acre during construction ( a. x c. )	\$0
<b>Total CQA Costs (a x b) + c</b>	<b>\$0</b>

## 3. Surface Preparation

a. Area of closure (acres)	40.7
b. Surface preparation cost per acre (\$/acre)	\$2,500
<b>Total for Geosynthetics Surface Preparation (a. x b.)</b>	<b>\$101,750.00</b>

**Total Prepared Sub-Base Component of the Landfill Cover System \$561,389**

**Total Soil Components \$1,086,690**

## C. Geosynthetic Components of the Landfill Cover System

## 1. Installation of Geosynthetic Components of Landfill Cover System

a. Mobilization of Equipment and Personnel (included in installed costs)	\$0
b. Number of Acres	40.70
c. Geocomposite Drainage cost per sf	\$0.45
d. Geocomposite Infiltration cost (installed, 2 layers)	\$1,595,603
e. Textured 40 mil Geomembrane cost per sf	\$0.40
f. 40 mil LLDPE cost (installed)	\$709,157
g. Tie-In Weld to Bottom Liner cost per lf	\$12.00
h. Tie-In Weld to Bottom Liner length (lf)	5,430
i. Tie-In Weld to Bottom Liner cost	\$65,160
j. Geomembrane Boot cost per boot	\$250.00
k. Geomembrane Boot quantity	65
l. Geomembrane Boot cost	\$16,250
<b>Total Geosynthetic Installation Costs (a. + d. + f. + i. + l.)</b>	<b>\$2,386,170</b>

## 2. Quality Control/Testing of Geosynthetic Components of Final Cover System

a. Number of Acres	40.7
b. Sampling and Testing costs per acre ( a. x b. )	\$0.00
c. Third Party Monitoring cost per acre during construction ( a. x c. )	\$0.00
<b>Total CQA Costs ( b. + c. )</b>	<b>\$0.00</b>

**TOTAL COSTS OF GEOSYNTHETICS \$2,386,169.60**

**TOTAL COST OF CONSTRUCTION OF FINAL COVER SYSTEM (A+B+C) \$3,472,859.60**

**2. ESTABLISHING VEGETATIVE COVER**

A. Labor (\$/acre) (included in seeding, fertilizer, and mulching unit costs)	\$0
B. Seeding (\$/acre)	\$500
C. Fertilizing (\$/acre)	\$500
D. Mulching (\$/acre)	\$1,000
E. Number of acres	40.70
<b>TOTAL For Establ. Vegetative Cover: (A+B+C+D) x E</b>	<b>\$81,400</b>

**3. ESTABLISHING OR COMPLETING A SYSTEM TO MINIMIZE AND CONTROL EROSION/SEDIMENTATION****A. Sediment Pond (Already established)**

1. Excavation and/or Fill Quantity (cubic yards)	0
2. Cost per cubic yard (\$)	\$0
3. Principal Spillway and associated appurtenances (\$)	\$0
<b>Total (1. + 2.)</b>	<b>\$0</b>

**B. Benches**

1. Lineal feet of swale (ft)	6,300
2. Earthwork per foot (\$)	\$12.00
3. Turf Reinforcement Mat per foot (\$) (included in earthwork unit cost)	0
<b>Total (1. x (2. + 3.))</b>	<b>\$75,600.00</b>

**C. Perimeter Geocomposite Drain**

1. Lineal feet of drain (ft)	5,430
2. Cost per lf of drain (\$)	\$50.00
<b>Total (1. x 2.)</b>	<b>\$271,500.00</b>

**D. Final Cover Access Road**

1. Area of road (yd <sup>2</sup> )	2,460
2. Unit cost of road (\$/yd <sup>2</sup> )	\$14.00
<b>Total (1. x 2.)</b>	<b>\$34,440.00</b>

**E. Stormwater Control Structures for Final Cover**

1. Stormwater Pipe Downchutes (ADS Pipe) (\$/LF)	\$90
2. Length Required (LF)	1,530
3. Headwall (\$/EA)	\$0
4. Headwalls Required	\$0
5. Cost of Headwalls (included in lineal foot pipe cost)	\$0
<b>Total (1. x 2.) + 5.</b>	<b>\$137,700</b>

<b>TOTAL for establishing or completing a system to minimize and control erosion and sedimentation (A. + B. + C. + D. + E.)</b>	<b>\$519,240</b>
---	------------------

**4. LEACHATE COLLECTION SYSTEM**

**5. ESTABLISHING OR COMPLETING A SYSTEM TO COLLECT OR VENT GASES****LANDFILL GAS COLLECTION PARAMETERS**

Mobilization of Equipment and Personnel	\$0
Number of LFG Passive Vents Required for First 5 YR. Phase	46
Gas Wells Depth (ft per well & total)	0
Acres of Gas Collection System Repairs/Upgrades	40.7

**A. LANDFILL GAS WELL INSTALLATION COSTS**

## Description

1. Drilling/Installation Cost per Ft.	\$0
2. Total Drill Depths	0
3. Well Head Assembly Installation (\$/well)	\$500
4. Costs for Passive Vent Installation (# of vents x item A.3 qty.)	\$23,000
5. Costs per acre for Gas Upgrades/Repairs	\$0

<b>LFG INSTALLATION COSTS</b>	<b>\$23,000</b>
-------------------------------	-----------------

**B. LANDFILL GAS SYSTEM PIPE COSTS**

## Description

1. Installation Cost - LFG Header	\$0
2. Length of LFG Header Pipe (FT)	0
3. Cost Installation - Header	\$0

1. Installation Cost - LFG Laterals (8"	\$0
2. Length of LFG Lateral Pipe (Ft.)	0
3. Cost Installation - Laterals	\$0

<b>TOTAL LFG PIPE COSTS</b>	<b>\$0</b>
-----------------------------	------------

**C. LANDFILL GAS MISC.**

## Description

1. Landfill Gas Sump Installation Cost	\$0
2. Cost - Accessories	\$0

<b>LFG MISC COST TOTAL</b>	<b>\$0</b>
----------------------------	------------

**D. LANDFILL GAS FLARE SYSTEM**

## Description

1. Landfill Gas Flare w Blowers	\$0
2. Landfill Gas Generator	\$0

<b>LFG FLARE SYSTEM TOTAL</b>	<b>\$0</b>
-------------------------------	------------

<b>LANDFILL GAS SYSTEM TOTAL COSTS (A. + B. + C. + D.)</b>	<b>\$23,000</b>
--	-----------------

**6. ESTABLISHING OR COMPLETING GROUNDWATER/SURFACE WATER****MONITORING SYSTEM (System is Presently In-Place)****A. INSTALLATION**

1. Number of wells	0
2. Drilling cost	0.00
3. Well installation oversight	0.00
4. Equipment (e.g., pumps)	0.00
5. Labor	0.00
6. Establish surface sampling points	0.00
<b>TOTAL for establishing or completing groundwater monitoring system (1.) x (2. + 3. + 4. + 5. +6.)</b>	<b>\$0.00</b>

**7. Surveying inspections to confirm final grades during the cap installation**

A. Transportation	\$0
B. Labor	\$60,000
<b>TOTAL for surveying inspections (A. + B.)</b>	<b>\$60,000.00</b>

**8. Engineering & Project Management**

1. Construction Plans and Bid Documents	\$40,000.00
2. Project Management	\$80,000.00
3. Construction Quality Assurance (a. x b.)	\$447,700.00
a. Number of Acres	40.7
b. Cost per acre	\$11,000.00
<b>Total for Engineering &amp; Project Management (1. + 2. + 3. )</b>	<b>\$567,700.00</b>

**9. Contractor Mobilization of Equipment and Personnel**

1. Mobilization of Equipment and Personnel	\$60,000.00
--	-------------

**10. TOTAL CLOSURE COSTS**

<b>Sum of TOTALS For Sections (1. through 9.) (Includes additional 10% contingency)</b>	<b>\$5,262,620</b>
---	--------------------

**MATLOCK BEND LANDFILL - PHASE II: POST-CLOSURE (YEAR 1-5)****INPUT PARAMETERS**

PHASE/CELL-ENTIRE LANDFILL	40.7	Acres
1 FT SOIL/1 ACRE	1,613	CU YDS
VEGETATIVE SUPPORT LAYER	2	FT
INFILTRATION LAYER	1	FT
Annual Volume of Leachate Generated (500 gal/acre/day)	7,427,750	Gallons
Total Sub D Landfill Post-Closure Care Area	40.7	Acres
Pre-Sub D Landfill Post-Closure Care Area	0.0	Acres
Total Post-Closure Area	40.7	Acres

**Notes:**

1. This worksheet is to be submitted as part of the C/PC Plan.
2. This facility will be maintained and monitored for 30 years after final closure
3. Fill in blanks for all activities which apply.
4. All costs are to be calculated on an ANNUAL BASIS.

**1. Surveying inspections to confirm final grade & drainage are maintained. (PREVIOUSLY CONFIRMED)****2. Maintain healthy vegetation.**

A. Transportation and Mobilization cost per event	\$0
B. Labor	\$0
C1. Seeding unit cost	\$500
C2. Seeding area (acres) (Assume 5% of total area)	2.035
C. Seeding cost	\$1,018
D1. Fertilizing unit cost	\$500
D2. Fertilizing area (acres) (Assume 5% of total area)	2.035
D. Fertilizing	\$1,018
E1. Mulching unit cost	\$1,000
E2. Mulching area (acres) (Assume 5% of total area)	2.035
E. Mulching	\$2,035
F1. Mowing unit cost (Twice per year @ \$100/acre/event)	\$200
F2. Mowing area (acres)	40.7
F. Mowing	\$8,140
<b>TOTAL for maintaining healthy vegetation (A. + B. + C. + D. + E. + F.)</b>	<b>\$12,210.00</b>

**3. Maintain the drainage facilities, sediment ponds and erosion/sedimentation control measures.**

A. Transportation	0.00
B. Labor (4 inspections/year, 8 hrs/inspection @\$75/hr)	\$2,400.00
C. Cleaning out of systems	\$3,000.00
D. Repair of gullies or rills (assumes soil on slopes will be regraded - no net soil import)	
1. Soil acquisition	
a. Quantity (yd3)	0.00
b. Purchase unit cost (\$/yd3)	0.00
c. Purchase cost (a. x b.)	0.00

d. Delivery unit cost (\$/yd <sup>3</sup> )	0.00
e. Deliver cost (a. x d.)	0.00
<b>Total 1 (c. + e.)</b>	<b>\$0.00</b>
f. Placement/spreading/compaction unit cost (\$/acre)	\$2,500
g. Placement/spreading/compaction area (assume 5% of total area)	2.035
2. Placement/spreading/compaction cost	\$5,087.50
3. Revegetation (Included in section 2)	\$0.00
<b>Total D (1. + 2. + 3.)</b>	<b>\$5,087.50</b>
<b>TOTAL For Maintaining Drainage (A. + B. + C. + D.)</b>	<b>\$10,487.50</b>

#### 4 Maintain and monitor the leachate collection, removal, and treatment system

The estimate of the volume of leachate generated during Post Closure Care are estimated on current infiltration rates that would be remaining prior to placement of the synthetic cover.

##### A. Pre-Treatment of Pre-Treatment of leachate

1. Off-site Disposal	
a. Quantity (gal)	7,427,750
b. Hauling unit cost (\$/gal)* (Hauling & Disposal Cost included)	\$0.0000
c. Hauling cost (a.x b.)**	\$0.0000
d. Disposal unit cost (\$/gal)	\$0.0100
e. Disposal cost (a.x d.)	\$74,277.50
<b>ANNUAL PER ACRE TOTAL (c. + e.)</b>	<b>\$74,278</b>
<b>ANNUAL TOTAL</b>	<b>\$74,278</b>

##### B. Maintenance of leachate collection system

1. Transportation	\$0.00
2. Labor	\$0.00
3. Repairs/Materials (e.g. below)	
a. Pumps	\$1,500.00
b. Cleaning out system	\$0.00
c. Leak detection	\$0.00
d. Leachate Analytical Testing (annual)	\$0.00
<b>TOTAL (a.+ b.+ c.+ d.)</b>	<b>\$1,500.00</b>
<b>TOTAL (1.+ 2.+ 3.)</b>	<b>\$1,500.00</b>
<b>TOTAL for monitoring &amp; maintaining leachate system (A.+ B.)</b>	<b>\$75,777.50</b>

#### 5 Maintain and monitor the gas collection or venting system

A. Transportation	\$0.00
B. Labor / Well / Trip (4 events/year @ \$600/event)	\$2,400.00
(Total Labor for Monitoring and Maintenance)	\$2,400.00
C. Repairs/Materials (e.g. below)	
1. Cleaning	\$0.00
2. Caps	\$0.00
3. Other (Gas System O&M - Replace 5 vents per year @ \$1,000/vent)	\$5,000.00
4. Title V Permitting and Compliance Fees	\$5,000.00
<b>TOTAL (1.+ 2.+ 3. + 4.)</b>	<b>\$10,000.00</b>

TOTAL for maintaining/monitoring LFG system (A.+ B.+ C.) \$12,400.00

#### 6 Maintain and monitor the groundwater and/or surface water monitoring system.

##### A. Monitoring of groundwater systems:

1. Number of wells/springs/blanks	6
2. Number of samples/well/year	2
3. Unit. cost of analysis	\$1,500
4. Cost of sampling + analysis (1. x 2. x 3.)	\$18,000
5. Labor cost per well per year (included in Item 3)	\$0
6. Labor costs (1. x 5.)	\$0
7. Report Preparation (included in Item 3)	\$0
8. Statistical Analysis (included in Item 3)	\$0
<b>ANNUAL TOTAL (4. + 6.+ 7. + 8.)</b>	<b>\$18,000.00</b>

##### B. Inspection and maintenance of system:

1. Transportation	0.00
2. Labor (Post-Closure Management)	\$5,000
3. Repairs/materials	
a. Caps	0.00
b. Tubing	0.00
c. Pumps	0.00
d. Well Redevelopment	0.00
e. Other	0.00
<b>Total (a. + b.+ c. + d. + e.)</b>	<b>\$0.00</b>
<b>TOTAL B (1. + 2. + 3.)</b>	<b>\$5,000.00</b>

##### C. Sample Ancillary Spring/Surface Water Locations

1. Annual Transportation Cost (2 trips coincide with Appendix I sample events).	\$0
2. Labor Cost of Performing Field Parameters per Location	\$0
3. Number of spring/surface water locations	1
4. Annual Labor Costs (\$2,500 per outfall per event, includes sampling & analysis)	\$5,000
5. Equipment Surcharge per event	\$0
6. Number of events per year	2
7. TMSP Annual Stormwater Permitting Fees	\$750
<b>TOTAL C. (1. + 4. + 5. + 7.)</b>	<b>\$5,750</b>
<b>TOTAL For Maintaining and Monitoring Groundwater Systems (A+B+C)</b>	<b>\$28,750.00</b>

#### 7 TOTAL POST CLOSURE COSTS (YEAR 1-5)

\$698,125

**MATLOCK BEND LANDFILL - PHASE II: POST-CLOSURE (YEAR 6-30)**

**INPUT PARAMETERS**

PHASE/CELL-ENTIRE LANDFILL	40.7	Acres
1 FT SOIL/1 ACRE	1,613	CU YDS
VEGETATIVE SUPPORT LAYER	2	FT
INFILTRATION LAYER	1	FT
Annual Volume of Leachate Generated (125 gal/acre/day)	1,856,938	Gallons
Total Sub D Landfill Post-Closure Care Area	40.7	Acres
Pre-Sub D Landfill Post-Closure Care Area	0.0	Acres
Total Post-Closure Area	40.7	Acres

**Notes:**

1. This worksheet is to be submitted as part of the C/PC Plan.
2. This facility will be maintained and monitored for 30 years after final closure
3. Fill in blanks for all activities which apply.
4. All costs are to be calculated on an ANNUAL BASIS.

**1. Surveying inspections to confirm final grade & drainage are maintained. (PREVIOUSLY CONFIRMED)**

**2. Maintain healthy vegetation.**

A. Transportation and Mobilization cost per event	\$0
B. Labor	\$0
C1. Seeding unit cost	\$500
C2. Seeding area (acres) (Assume 5% of total area)	2.035
C. Seeding cost	\$1,018
D1. Fertilizing unit cost	\$500
D2. Fertilizing area (acres) (Assume 5% of total area)	2.035
D. Fertilizing	\$1,018
E1. Mulching unit cost	\$1,000
E2. Mulching area (acres) (Assume 5% of total area)	2.035
E. Mulching	\$2,035
F1. Mowing unit cost (Twice per year @ \$100/acre/event)	\$200
F2. Mowing area (acres)	40.7
F. Mowing	\$8,140
<b>TOTAL for maintaining healthy vegetation (A. + B. + C. + D. + E. + F.)</b>	<b>\$12,210.00</b>

**3. Maintain the drainage facilities, sediment ponds and erosion/sedimentation control measures.**

A. Transportation	0.00
B. Labor (4 inspections/year, 8 hrs/inspection @\$75/hr)	\$2,400.00
C. Cleaning out of systems	\$3,000.00
D. Repair of gullies or rills (assumes soil on slopes will be regraded - no net soil import)	
1. Soil acquisition	
a. Quantity (yd3)	0.00
b. Purchase unit cost (\$/yd3)	0.00
c. Purchase cost (a. x b.)	0.00

d. Delivery unit cost (\$/yd <sup>3</sup> )	0.00
e. Deliver cost (a. x d.)	0.00
<b>Total 1 (c. + e.)</b>	<b>\$0.00</b>
f. Placement/spreading/compaction unit cost (\$/acre)	\$2,500
g. Placement/spreading/compaction area (assume 5% of total area)	2.035
2. Placement/spreading/compaction cost	\$5,087.50
3. Revegetation (Included in section 2)	\$0.00
<b>Total D (1. + 2. + 3.)</b>	<b>\$5,087.50</b>
<b>TOTAL For Maintaining Drainage (A. + B. + C. + D.)</b>	<b>\$10,487.50</b>

#### 4 Maintain and monitor the leachate collection, removal, and treatment system

The estimate of the volume of leachate generated during Post Closure Care are estimated on current infiltration rates that would be remaining prior to placement of the synthetic cover.

##### A. Pre-Treatment of Pre-Treatment of leachate

1. Off-site Disposal	
a. Quantity (gal) (125 gal/acre/day)	1,856,938
b. Hauling unit cost (\$/gal)* (Hauling & Disposal Cost included)	\$0.0000
c. Hauling cost (a.x b.)**	\$0.0000
d. Disposal unit cost (\$/gal)	\$0.0100
e. Disposal cost (a.x d.)	\$18,569.38
<b>ANNUAL PER ACRE TOTAL (c. + e.)</b>	<b>\$18,569</b>
<b>ANNUAL TOTAL</b>	<b>\$18,569</b>

##### B. Maintenance of leachate collection system

1. Transportation	\$0.00
2. Labor	\$0.00
3. Repairs/Materials (e.g. below)	
a. Pumps	\$1,500.00
b. Cleaning out system	\$0.00
c. Leak detection	\$0.00
d. Leachate Analytical Testing (annual)	\$0.00
<b>TOTAL (a.+ b.+ c.+ d.)</b>	<b>\$1,500.00</b>
<b>TOTAL (1.+ 2.+ 3.)</b>	<b>\$1,500.00</b>
<b>TOTAL for monitoring &amp; maintaining leachate system (A.+ B.)</b>	<b>\$20,069.38</b>

#### 5 Maintain and monitor the gas collection or venting system

A. Transportation	\$0.00
B. Labor / Well / Trip (4 events/year @ \$600/event)	\$2,400.00
(Total Labor for Monitoring and Maintenance)	\$2,400.00
C. Repairs/Materials (e.g. below)	
1. Cleaning	\$0.00
2. Caps	\$0.00
3. Other (Gas System O&M - Replace 5 vents per year @ \$1,000/vent)	\$5,000.00
4. Title V Permitting and Compliance Fees	\$5,000.00
<b>TOTAL (1.+ 2.+ 3.+ 4.)</b>	<b>\$10,000.00</b>

TOTAL for maintaining/monitoring LFG system (A.+ B.+ C.) \$12,400.00

**6 Maintain and monitor the groundwater and/or surface water monitoring system.**

**A. Monitoring of groundwater systems:**

1. Number of wells/springs/blanks	6
2. Number of samples/well/year	2
3. Unit. cost of analysis	\$1,500
4. Cost of sampling + analysis (1. x 2. x 3.)	\$18,000
5. Labor cost per well per year (included in Item 3)	\$0
6. Labor costs (1. x 5.)	\$0
7. Report Preparation (included in Item 3)	\$0
8. Statistical Analysis (included in Item 3)	\$0
<b>ANNUAL TOTAL (4. + 6.+ 7. + 8.)</b>	<b>\$18,000.00</b>

**B. Inspection and maintenance of system:**

1. Transportation	0.00
2. Labor (Post-Closure Management)	\$5,000
3. Repairs/materials	
a. Caps	0.00
b. Tubing	0.00
c. Pumps	0.00
d. Well Redevelopment	0.00
e. Other	0.00
<b>Total (a. + b.+ c. + d. + e.)</b>	<b>\$0.00</b>
<b>TOTAL B (1. + 2. + 3.)</b>	<b>\$5,000.00</b>

**C. Sample Ancillary Spring/Surface Water Locations**

1. Annual Transportation Cost (2 trips coincide with Appendix I sample events).	\$0
2. Labor Cost of Performing Field Parameters per Location	\$0
3. Number of spring/surface water locations	1
4. Annual Labor Costs (\$2,500 per outfall per event, includes sampling & analysis)	\$5,000
5. Equipment Surcharge per event	\$0
6. Number of events per year	2
7. TMSP Annual Stormwater Permitting Fees	\$750
<b>TOTAL C. (1. + 4. + 5. + 7.)</b>	<b>\$5,750</b>
<b>TOTAL For Maintaining and Monitoring Groundwater Systems (A+B+C)</b>	<b>\$28,750.00</b>

**7 TOTAL POST CLOSURE COSTS (YEAR 6-30)**

**\$2,097,922**

**SUMMARY OF CLOSURE/POST-CLOSURE FINANCIAL ASSURANCE REQUIREMENTS**

LANDFILL AREA FOR ESTIMATION OF CLOSURE (ACRES)	CLOSURE COST (\$)	POST CLOSURE COST (YEAR 1-5) (\$)	POST CLOSURE COST (YEARS 6-30) (\$)
40.7	\$5,262,620	\$698,125.00	\$2,097,921.88

NOTE: <sup>1</sup> Cost estimates are calculated as present value (\$ 2021 ).

# APPENDIX B

## Custodial Care Cost Estimates

**MATLOCK BEND LANDFILL - PHASE III: LONG-TERM CUSTODIAL CARE (YEAR 31-80)****INPUT PARAMETERS**

PHASE/CELL-ENTIRE LANDFILL	40.7	Acres
1 FT SOIL/1 ACRE	1,613	CU YDS
VEGETATIVE SUPPORT LAYER	2	FT
INFILTRATION LAYER	1	FT
Annual Volume of Leachate Generated	0	Gallons
Total Sub D Landfill Long-Term Custodial Care Area	40.7	Acres
Pre-Sub D Landfill Long-Term Custodial Care Area	0.0	Acres
Total Long-Term Custodial Care Area	40.7	Acres

**1. Surveying inspections to confirm final grade & drainage are maintained. (PREVIOUSLY CONFIRMED)****2. Maintain healthy vegetation.**

A. Transportation and Mobilization cost per event	\$0
B. Labor	\$0
C1. Seeding unit cost	\$500
C2. Seeding area (acres) (Assume 1% of total area)	0.407
C. Seeding cost	\$204
D1. Fertilizing unit cost	\$500
D2. Fertilizing area (acres) (Assume 1% of total area)	0.407
D. Fertilizing	\$204
E1. Mulching unit cost	\$1,000
E2. Mulching area (acres) (Assume 1% of total area)	0.407
E. Mulching	\$407
F1. Mowing unit cost (Once every other year @ \$100/acre/event)	\$50
F2. Mowing area (acres)	40.7
F. Mowing	\$2,035
<b>TOTAL for maintaining healthy vegetation (A. + B. + C. + D. + E. + F.)</b>	<b>\$2,849.00</b>

**3. Maintain the drainage facilities, sediment ponds and erosion/sedimentation control measures.**

A. Transportation	0.00
B. Labor (1 inspection/year, 8 hrs/inspection @\$75/hr)	\$600.00
C. Cleaning out of systems	\$1,500.00
D. Repair of gullies or rills (assumes soil on slopes will be regraded - no net soil import)	
1. Soil acquisition	
a. Quantity (yd3)	0.00
b. Purchase unit cost (\$/yd3)	0.00
c. Purchase cost (a. x b.)	0.00
d. Delivery unit cost (\$/yd3)	0.00
e. Deliver cost (a. x d.)	0.00
<b>Total 1 (c. + e.)</b>	<b>\$0.00</b>
f. Placement/spreading/compaction unit cost (\$/acre)	\$2,500
g. Placement/spreading/compaction area (assume 1% of total area)	0.407

2. Placement/spreading/compaction cost	\$1,017.50
3. Revegetation (Included in section 2)	\$0.00
<b>Total D (1. + 2. + 3.)</b>	<b>\$1,017.50</b>
<b>TOTAL For Maintaining Drainage (A. + B. + C. + D.)</b>	<b>\$3,117.50</b>

#### 4 Maintain and monitor the leachate collection, removal, and treatment system

The estimate of the volume of leachate generated during Long-Term Custodial Care are estimated on current infiltration rates that would be remaining prior to placement of the synthetic cover.

##### A. Pre-Treatment of Pre-Treatment of leachate

1. Off-site Disposal	
a. Quantity (gal)	0
b. Hauling unit cost (\$/gal)	\$0.0000
c. Hauling cost (a.x b.)	\$0.0000
d. Disposal unit cost (\$/gal)	\$0.0100
e. Disposal cost (a.x d.)	\$0.00
<b>ANNUAL PER ACRE TOTAL (c. + e.)</b>	<b>\$0</b>
<b>ANNUAL TOTAL</b>	<b>\$0</b>

##### B. Maintenance of leachate collection system

1. Transportation	\$0.00
2. Labor	\$0.00
3. Repairs/Materials (e.g. below)	
a. Pumps	\$0.00
b. Cleaning out system	\$0.00
c. Leak detection	\$0.00
d. Leachate Analytical Testing (annual)	\$0.00
<b>TOTAL (a.+ b.+ c.+ d.)</b>	<b>\$0.00</b>
<b>TOTAL (1.+ 2.+ 3.)</b>	<b>\$0.00</b>
<b>TOTAL for monitoring &amp; maintaining leachate system (A.+ B.)</b>	<b>\$0.00</b>

#### 5 Maintain and monitor the gas collection or venting system

A. Transportation	\$0.00
B. Labor / Well / Trip	\$0.00
(Total Labor for Monitoring and Maintenance)	\$0.00
C. Repairs/Materials (e.g. below)	
1. Cleaning	\$0.00
2. Caps	\$0.00
3. Other (Gas System O&M)	\$0.00
4. Title V Permitting and Compliance Fees	\$0.00
<b>TOTAL (1.+ 2.+ 3. + 4.)</b>	<b>\$0.00</b>
<b>TOTAL for maintaining/monitoring LFG system (A.+ B.+ C.)</b>	<b>\$0.00</b>

#### 6 Maintain and monitor the groundwater and/or surface water monitoring system.

##### A. Monitoring of groundwater systems:

TDSWM PERMIT 53-103-0203	WORKSHEET D	2021 ESTIMATE
1. Number of wells/springs/blanks		0
2. Number of samples/well/year		0
3. Unit. cost of analysis		\$0
4. Cost of sampling + analysis (1. x 2. x 3.)		\$0
5. Labor cost per well per year		\$0
6. Labor costs (1. x 5.)		\$0
7. Report Preparation		\$0
8. Statistical Analysis		\$0
<b>ANNUAL TOTAL (4. + 6.+ 7. + 8.)</b>		<b>\$0.00</b>

B. Inspection and maintenance of system:		
1. Transportation		0.00
2. Labor		\$1,500
3. Repairs/materials		
a. Caps		0.00
b. Tubing		0.00
c. Pumps		0.00
d. Well Redevelopment		0.00
e. Other		0.00
<b>Total (a. + b.+ c. + d. + e.)</b>		<b>\$0.00</b>
<b>TOTAL B (1. + 2. + 3.)</b>		<b>\$1,500.00</b>

C. Sample Ancillary Spring/Surface Water Locations		
1. Annual Transportation Cost		\$0
2. Labor Cost of Performing Field Parameters per Location		\$0
3. Number of spring/surface water locations		0
4. Annual Labor Costs		\$0
5. Equipment Surcharge per event		\$0
6. Number of events per year		0
7. TMSP Annual Stormwater Permitting Fees		\$0
<b>TOTAL C. (1. + 4. + 5. + 7.)</b>		<b>\$0</b>
<b>TOTAL For Maintaining and Monitoring Groundwater Systems (A+B+C)</b>		<b>\$1,500.00</b>

**7 TOTAL LONG-TERM CUSTODIAL CARE COSTS (YEAR 31-80) \$373,325**

# APPENDIX C

## Minor Modification Form



STATE OF TENNESSEE  
 DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
 DIVISION OF SOLID WASTE MANAGEMENT  
 WILLIAM R. SNODGRASS TENNESSEE TOWER  
 312 ROSA L. PARKS AVENUE, 14TH FLOOR  
 NASHVILLE, TN 37243  
**SOLID WASTE FACILITY MODIFICATION NOTIFICATION**

PERMIT # <b>SNL 53-103-0203</b>
DATE <b>08/23/2021</b>
TDEC USE ONLY <input type="checkbox"/> MINOR <input type="checkbox"/> MAJ

1 - FACILITY TYPE	2 - TYPES OF MODIFICATIONS		NUMBER OF MODIFICATIONS  1
<input checked="" type="checkbox"/> CLASS I <input type="checkbox"/> CLASS II <input type="checkbox"/> CLASS III <input type="checkbox"/> COMPOST	<input type="checkbox"/> OPERATIONS <input type="checkbox"/> NARRATIVE CHANGE <input type="checkbox"/> ENGINEERING PLANS <input type="checkbox"/> GROUND WATER PROGRAM	<input type="checkbox"/> CONSTRUCTION QUALITY ASSURANCE PLAN <input checked="" type="checkbox"/> CLOSURE / POST CLOSURE PLAN <input type="checkbox"/> OTHER (SPECIFY) _____	

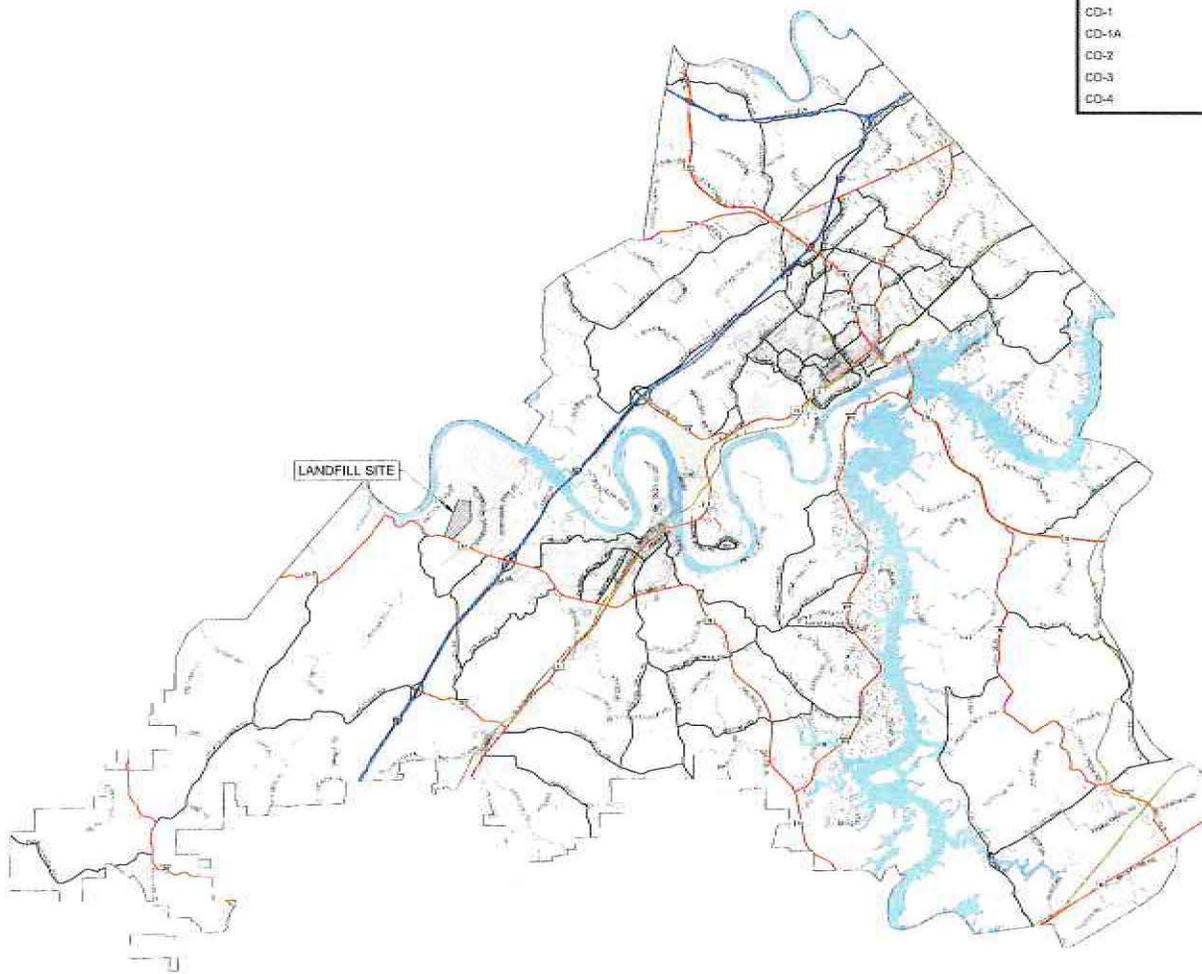
3 - FACILITY INFORMATION			
FULL LEGAL NAME OF FACILITY <b>Matlock Bend Landfill</b>		COUNTY <b>Loudon</b>	
PHYSICAL LOCATION ADDRESS (GIVE DIRECTIONS IF NECESSARY) <b>21712 TN-72</b>		CITY <b>Loudon</b>	STATE ZIP <b>TN 37774</b>

4 - CONTACT PERSONS			
FACILITY MANAGER OR SITE OPERATOR <b>Adam Hall</b>		PHONE <b>(865) 458-2851</b>	EMAIL <b>ahall2@republicservices.com</b>
RESPONSIBLE OFFICIAL <b>Matt Dillard</b>		PHONE <b>(423) 867-6518</b>	EMAIL <b>mdillard@republicservices.com</b>
FACILITY MAILING ADDRESS <b>21712 TN-72</b>		CITY <b>Loudon</b>	STATE ZIP <b>TN 37774</b>

5 - MODIFICATION INFORMATION	
DESCRIPTION OF MODIFICATION	REASON FOR MODIFICATION
1. Updated Closure and Post-Closure Plan	TDEC request
2.	
3.	

6 - CERTIFICATION REQUIRED	
<p>I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.</p>	
 SIGNATURE OF RESPONSIBLE OFFICIAL	<b>Matt Dillard</b> PRINTED NAME
<b>General Manager</b> TITLE	<b>8/27/21</b> DATE SIGNED

# FIGURES



DRAWING INDEX	
DRAWING NO.	DESCRIPTION
C-X	COVER SHEET
C-1	LOCATION MAP AND INDEX
C-2	MASTER PLAN
C-3	EXISTING TOPOGRAPHY AND BOUNDARY DATA
C-4	EXISTING HYDROGEOLOGICAL CONTOURS AND GEOTECHNICAL BORINGS
C-5	EXCAVATION, LEACHATE AND BASE PREPERATION PLAN
C-6	FINAL DEVELOPMENT PLAN
C-6A	PHASED CLOSURE PLAN 
C-7	PROFILE AND SECTIONS
C-8	SECTIONS
C-9	MODULE DEVELOPMENT PLAN
C-10	RUMBLE STRIP MUD RINSE FACILITY
CD-1	SURFACE WATER DETAILS
CD-1A	EXISTING STORM WATER DETENTION BASIN NO. 3 PLAN
CD-2	LINER COMPONENT DETAILS
CD-3	LEACHATE DRAINAGE DETAILS
CD-4	LEACHATE COLLECTION AND MISCELLANEOUS DETAILS

**Legend**

	Interstate
	State Route
	Functional Route
	Local Route
	Railroads
	Major Waterways
	Parks
	Municipal Boundary

PREPARED BY 	SHEET NO. 1 TOTAL SHEETS 1
	DATE: 11/15/2011
	SCALE: 1" = 100'
	PROJECT NO.: 11-00000000
REVIEWED BY 	SHEET NUMBER <b>C-1</b>
LOCATION MAP AND INDEX CLOSURE & POST-CLOSURE UPGRADE MARIKAK AND WARDLE COUSON, TENNESSEE	

