

#### FINANCE & RECORDS

March 24, 2022

Mr. Bill Blum Iowa Department of Natural Resources Wallace State Office Building Des Moines, IA 50319

Dear Mr. Blum:

Enclosed is the Financial Assurance Annual Report and related attachments for the Muscatine County Landfill (Permit 70-SDP-2-75P). The attachments are as follows:

- 1. Financial Assurance Annual Report.
- 2. Letter from the chief financial officer for the "Local Government Financial Test".
- 3. Closure and Post-Closure Cost Estimates prepared by Evora Consulting
- 4. The Annual Comprehensive Financial Report for the City of Muscatine for the year ended June 30, 2021, can be found at:

https://www.muscatineiowa.gov/DocumentCenter/View/23029/Annual-Comprehensive-Financial-Report-for-Fiscal-Year-ending-June-30-2021-PDF

See the Muscatine County Solid Waste Agency column on the Statement of Net Position on page 36 and Note 6 on page 70 for verification of the assets restricted for closure and post-closure costs. Copies of those pages are also attached.

Please contact me if you have any questions or need any additional information. Thank you for your assistance.

Sincerely,

Nancy A. Lueck Finance Director

**Enclosures** 



#### FINANCE & RECORDS

March 24, 2022

Iowa Department of Natural Resources
Planning, Permitting & Engineering Services
Wallace State Office Building
502 E 9th Street
Des Moines, IA 50319

Dear Sir or Madam:

I am the chief financial officer of the City of Muscatine, operator of the Muscatine County Sanitary Landfill, for the Muscatine County Solid Waste Management Agency. This letter is in support of the City of Muscatine's use of the Financial Test to demonstrate financial assurance for closure and post-closure care costs, as specified in IAC 567 Chapter 113.14(3) and 113.14(4).

The City of Muscatine is the operator of the following Municipal Solid Waste Landfill for which financial assurance for closure and post-closure care is demonstrated through the Financial Test, as specified in IAC 567 Chapter 113.14(6)"f":

Landfill Name: <u>Muscatine County Sanitary Landfill</u>

Address: Muscatine County, Iowa

Permit No: <u>70-SDP-2-75 P</u>

The current closure and/or post-closure cost estimates, in accordance with IAC 567 Chapter 113.14(3) and 113.14(4), are shown below for each facility covered by the Financial Test:

Closure cost to be assured: \$2,191,205

Post-closure cost to be assured: \$ 770,159

The City of Muscatine meets or exceeds the Financial Test criteria as shown in Alternative I (attached) and agrees to comply with the reporting requirements as specified in subrule 113.14(6)"f".

As chief financial officer for the City of Muscatine, I hereby certify that the information provided in this letter is true to the best of my knowledge and that this letter is being submitted in accordance with IAC 567 Chapter 113.14(6)"f" for the "Local Government Financial Test".

Sincerely,

Nancy A. Lueck Finance Director The figures for the following items are derived from the City of Muscatine's independently audited, year-end financial statements/audit report for the latest completed fiscal year, ended June 30, 2021. MD&A on page 24 of Audit & Solid Waste Agency

### Alternative I

Sum of the current closure and postclosure cost estimates being assured by the financial test.	\$2,961,364	\$2,842,130	)
	From most recent annual auditor's report	recent	<sup>nd</sup> most annual s report
2. Total Revenues for past two years	\$57,227,564	\$50,706,55	3
3. Total Expenditures for past two years	\$49,425,393	\$47,587,40	1
Current bond rating of most recent outstanding general obligation bonds	Aa2	A	a2
Must be able to answer "yes" or "true" to the following		Yes/	No/
5. Has evidence been provided of most recent bond rating?		True Yes	False
6. Are outstanding general obligation bonds rated at least Aaa, Aa, A, Moody's or AAA, AA, A or BBB, as issued by Standard & Pool	Yes		
7. There are no outstanding general obligation bonds that are currently	True		
8. There are no outstanding general obligation bonds rated lower than Moody's or BBB as issued by Standard & Poor's	True		
<ol> <li>Have financial statements (audit) been prepared in conformity with Accounting Principles or with Other Comprehensive Basis of Ac</li> </ol>	Yes		
10. Is line 3 less than line 2 in each of the past two years?		Yes	
11. If answered "no" to line 10, is the difference between line 3 and line percent of line 2 in each of the past two years?	N/A		
12. Is line 1 less than 43 percent of line 2?	Yes		
13. Have not received an adverse opinion or disclaimer of opinion fror certified public accountant or office of the auditor of the state of	True		
14. Have closure and postclosure costs being assured been referenced recent audit report or instead placed in the owner's files if timing reference in the most recent audit?	Yes		

### **Definitions:**

<sup>&</sup>quot;Deficit" - means total annual revenues minus total annual expenditures.

<sup>&</sup>quot;Total revenues" – means revenues from all taxes and fees but does not include the proceeds from borrowing or asset sales, excluding revenue from funds managed by local government on behalf of a specific third party.

<sup>&</sup>quot;Total expenditures" - means all expenditures excluding capital outlays and debt repayment.

<sup>&</sup>quot;Cash plus marketable securities" — means all the cash plus marketable securities held by the local government on the last day of a fiscal year, excluding cash and marketable securities designated to satisfy past obligations such as pensions

<sup>&</sup>quot;Debt service" – means the amount of principal and interest due on a loan in a given time period, typically the current year.

### City of Muscatine, Iowa

### Statement of Net Position June 30, 2021



	Primary Government			Component Units						
		rnmental tivities	В	usiness-type Activities		Total	C	Auscatine ounty Solid aste Agency		Muscatine Power & Water
ASSETS						F10. 9F136F19F1		100000000		
Cash and pooled investments Investments	\$ 1	6,355,728	\$	12,346,464	\$	28,702,192	S	1,710,962	S	31,035,241
Receivables (net of allowance		2,768,929		704,631		3,473,560		-		36,719,087
for uncollectibles);										
Interest		6,482		496		6,978		253		23,697
Taxes Accounts	9	7,421,429		1 026 626		17,421,429		675		0.620.600
Intergovernmental		532,521 4,292,105		1,925,626		2,458,147 5,368,947		34		9,530,599
Internal balances		(641,487)		641,487		5,500,747		· ·		12
Inventories		127,203		43,137		170,340		12		23,620,437
Prepaids		201		10,616		10,616		15		803,304
Restricted assets: Temporarily restricted:										
Cash and pooled investments		-		162,512		162,512		2,594,476		947,250
Ascets held for ressale		9		172,517		172,517		2,354,470		947,230
Unamortized debt issuance costs		70						-		45,181
Capital assets:										
Land, art work and construction										
in progress, not being depreciated  Other capital assets not of accumulated	2	6,455,435		5,272,796		31,728,231		1,080,608		16,105,952
depreciation		2,076,685		85,669,619		147,746,304		775,792		14
Utility plant in service	`	=		•		147,740,504		*		107,958,340
Joint venture rights				50		-		_		117,118
Total assets	12	9,395,030		108.026,743		237,421,773		6,162,091		226,906,206
DEFERRED OUTFLOWS OF RESOURCES										
Pension related deferred outflows		5,338,745		756,685		6.095.430				5,750,383
OPEB related deferred outflows		230,807		67,018		297,825				122,406
Total deferred outflows of resources		5,569,552		823,703		6,393,255		-		5,872,789
LIABILITIES										
Accounts payable and accruals		2,603,795		1.834,851		4,438,646		77.049		10,656,256
Retainages payable		209,107		161,328		370,435		77,047		10,030,230
Deposits		- 60		48,617		48,617		15		1,220,731
Accrued interest payable		26,649		18,059		44,708		-		
Escrow liability Unearned revenue		41,381		2,192		43,573		12		
Unearned revenue - O&M account		79,043		43,180		122,223		2.0		323,238 28,032,866
Liabilities payable from restricted assets:				_		-				26,032,800
Current installment of long-term debt		- 1		-		-				2,953,729
Accrued interest payable		-		•		-				45,604
Noncurrent liabilities: Due within one year		3 3 4 5 4 1 6								
Due in more than one year	1	3,347,419 0,285,823		1,060,568		4,407,987 43,438,324		1,926 1,665		30,645,153
Closure/post-closure obligation	_	-		33,825		33,825		4,092,274		1,024,122
Total liabilities		6,593,217		16,355,121		52,948,338		4,172,914		74,901,699
DEFENDED INC. ONC. OF PROCUPORS							-			.,,
Pension related deferred inflows		744,454		191,715		936,169		- 25		6,633,059
OPEB related deferred inflows		23,618		6,858		30,476		-		113,257
Deferred inflow - property taxes	1	7,274,177				17,274,177		12		
Total deferred inflows of resources		8,042,249		198,573		18,240,822				6,746,316
NET POSITION										
Net investment in capital assets	7	7,447,711		80.664,102		158,111,813		1,856,400		104,267,844
Restricted for:		100				,,		1,070,400		, 07,607,074
Debt service		104,143		128,687		232,830		12		901,646
Public works		2,763,455				2,763,455		2.5		10.70
Community and economic development		243,542		-		243,542				-
Public safety Employee benefits		10,935 213,065		-		10,935 213,065				
Tax increment financing projects		1,034,367		35		1,034,367		0		- 0
Capital projects		57,995		-		57,995				
Perpetual care, nonexpendable		903,684		+0.0		903,684				2
Endowments: Nonexpendable		122 000				122.000				
Expendable		132,000 458,872		5		132,000 458,872				
Unrestricted		3.040,653)		11,503,963		8,463,310	_	132,777		45,961,490
Total net position		0,329,116		92,296,752	S	172,625,868	s	1,989,177	s	151,130,980
The state of the s			_		Ť		-	1,707,177	_	-2-,139,709

The notes to the financial statements are an integral part of this statement.

### \*

### NOTE 6. LANDFILL CLOSURE AND POSTCLOSURE CARE COST

State and federal laws and regulations require the Muscatine County Solid Waste Management Agency to place a final cover on its landfill site when it stops accepting waste and to perform certain maintenance and monitoring functions at the site for thirty years after closure.

Although closure and post closure care costs will be paid only near or after the date that the landfill stops accepting waste, the Agency reports a portion of these closure and post closure care costs as an operating expense in each period based on landfill capacity used as of each balance sheet date. The \$4,092,274 reported as landfill closure and post closure care liability at June 30, 2021, represents the cumulative amount reported to date based on the use of 78.0% of the estimated capacity of the current landfill property. The Agency will recognize the remaining estimated cost of closure and post closure care of \$1,156,512 as the remaining estimated capacity is filled over the 13 remaining years.

These amounts are based on what it would cost to perform all closure and post closure care in 2021. The Agency expects the currently-permitted landfill property to reach its capacity in 2034. Actual costs may be higher due to inflation, changes in technology, or changes in regulations. Financial assurances for closure and post-closure care is demonstrated through the Financial Test as specified in IAC 567 Chapter 113.14(6)f. The Agency has begun to accumulate resources to fund these costs in accordance with state and federal requirements.

### NOTE 7. RETIREMENT SYSTEMS

### Iowa Public Employees Retirement System (IPERS) Pension Plan

<u>Plan Description</u> – IPERS membership is mandatory for employees of the City, except for those covered by another retirement system. Employees of the City are provided with pensions through a cost-sharing multiple employer defined benefit pension plan administered by Iowa Public Employees' Retirement System (IPERS). IPERS issues a stand-alone financial report which is available to the public by mail at 7401 Register Drive, P.O. Box 9117, Des Moines, Iowa 50306-9117 or at <a href="https://www.ipers.org">www.ipers.org</a>.

IPERS benefits are established under Iowa Code chapter 97B and the administrative rules thereunder. Chapter 97B and the administrative rules are the official plan documents. The following brief description is provided for general informational purposes only. Refer to the plan documents for more information.

Pension Benefits – A regular member may retire at normal retirement age and receive monthly benefits without an early-retirement reduction. Normal retirement age is age 65, any time after reaching age 62 with 20 or more years of covered employment, or when the member's years of service plus the member's age at the last birthday equals or exceeds 88, whichever comes first. Members cannot begin receiving retirement benefits before age 55. The formula used to calculate a regular member's monthly IPERS benefit includes:

- A multiplier based on years of service.
- The member's highest five-year average salary, except members with service before June 30, 2012 will use the highest three-year average salary as of that date if it is greater than the highest five-year average salary.





# Rating Action: Moody's assigns Aa2 to Muscatine, IA's GOULT bonds

#### 24 Mar 2020

New York, March 24, 2020 — Moody's Investors Service has assigned a Aa2 to the City of Muscatine, IA's \$6.3 million General Obligation Corporate Purpose Bonds, Series 2020. Moody's maintains a Aa2 rating on the city's previously issued general obligation unlimited tax (GOULT) debt. Following the sale, the city will have \$18 million of GOULT debt outstanding.

### RATINGS RATIONALE

The Aa2 rating reflects the city's sound financial operations. Operating fund balance and liquidity are healthy. The city is located in eastern lowa (Aaa stable) and has comparatively low resident incomes and some economic concentration in manufacturing. The tax base is growing, however. Debt burden is moderate while pension burden is slightly elevated given the city's participation in two state-managed pension plans.

We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety. Muscatine is not susceptible to immediate material credit risks related to coronavirus. The longer term impact will depend on both the severity and duration of the crisis. The situation surrounding coronavirus is rapidly evolving. If our view of the credit quality of Muscatine changes, we will update the rating and/or outlook at that time.

### **RATING OUTLOOK**

Moody's does not typically assign outlooks to local governments with this amount of debt.

# FACTORS THAT COULD LEAD TO AN UPGRADE

- -Significant economic activity that drives both expansion and diversification of the city's tax base and improvement in resident incomes
- -Reduction in pension burden

# FACTORS THAT COULD LEAD TO A DOWNGRADE

- -Weakening of the local economy evidenced by declining of property values, increased unemployment, or a decline in the city's socioeconomic profile
- -Narrowing of operating reserves or liquidity
- -Growth in debt or pension burdens

### **LEGAL SECURITY**

The city's GOULT debt, including the Series 2020 bonds, is supported by its pledge to levy unlimited ad valorem property taxes.

### **USE OF PROCEEDS**

The proceeds of the Series 2020 bonds will finance various capital improvements within the city's five year capital plan.

### **PROFILE**

The City of Muscatine is located along the Mississippi River, approximately 30 miles southwest of the Quad cities metropolitan area. The city serves a resident population of nearly 24,000 and is the county seat of Muscatine County, IA (Aa2).. The city provides public safety (police and fire), public works, cultural and recreation, and other governmental services. The city's major business-type activities include sewer (collection and treatment), sanitation and an airport. Muscatine Power and Water, a component unit of the city, provides residents with electric, water (treatment and distribution) and communication services.



March 23, 2022

Ms. Nancy Lueck, Finance Director City of Muscatine 215 Sycamore Street Muscatine, Iowa 52761

RE: 2022 Financial Assurance

**Muscatine County Sanitary Landfill** 

Permit No. 70-SDP-02-75P Project No. MCSWA 22001

### Dear Ms. Lueck:

Evora Consulting (Evora) is providing the enclosed documentation to be included in the 2022 Financial Assurance submittal to the Iowa Department of Natural Resources (DNR) for the above referenced facility. Attached is the completed DNR Municipal Solid Waste Sanitary Landfill Financial Assurance Report Form for the year 2022. Attachment A contains the 2022 third-party revised closure/post closure cost estimates as required by the Iowa Administrative Code and the above-referenced facility's operating permit.

If you have any questions or comments regarding this letter, please contact our office at (515) 256-8814. Sincerely,

**Evora Consulting** 

Matthew D. Corry, P.E.

Project Engineer

Timothy C. Buelow, P.E. Principal Engineer

Copies: Addressee

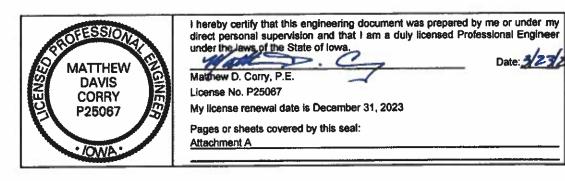
Mr. Dave Popp, Solid Waste Manager, Muscatine Recycling Center and Transfer Station

Electronic File

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#### Certification



# Municipal Solid Waste Sanitary Landfill Financial Assurance Report Form

Section 1: FACILITY INFORMATION (please print or type)

Information Requested	
Facility Name	Muscatine County Sanitary Landfill
Permitted Agency/Entity	Muscatine County Solid Waste Management Agency
Permit Number	70-SDP-02-75P

### Section 2: CLOSURE/POSTCLOSURE OR CORRECTIVE ACTION COST ESTIMATES

Information Requested	Cost Estimate	Date of Cost Estimate
Updated Closure Cost Estimate	\$ 3,669,247	February 23, 2022
Updated Post Closure Cost Estimate	\$ 1,886,593	February 23, 2022
Initial or Updated Corrective Action Cost Estimate		

<sup>\*</sup>Attach closure/postclosure cost estimate(s) signed and certified by an lowa-licensed professional engineer. Cost estimates shall include, at a minimum, each of the cost line items defined in 113.14(3)"c" for closure and 113.14(4)"c" for postclosure. Please provide closure and/or postclosure site area acreage information with the estimates.

Provide a cost estimate for corrective action only if corrective action is required and a corrective action plan has been approved by the Department. Attach the corrective action cost estimate signed and certified by an lowa-licensed professional engineer. The cost estimate shall account for total costs of the activities described in the approved corrective action plan for the corrective action period.

### Section 3: FACILITY WASTE TONNAGE INFORMATION

Information Requested	Tons
Remaining permitted capacity as of the beginning of permit holder's current fiscal year	560,767*
Amount of waste disposed of at the facility during the prior year	39,029

<sup>\*</sup>Remaining permitted capacity obtained from subtracting amount of waste disposed of at the facility during the prior year (39,029 tons) from the previous year's remaining permitted capacity (599,796 tons).

### **Section 4: Proof of Compliance**

Publicly Owned Municipal Solid Waste Landfills	(ATTACH AUDIT REPORT)
Owner's Most Recent Annual Audit Report	

Prepared by: Bohnsack & Frommelt LLP, Certified Public Accountants

For fiscal year ending: June 30, 2021

### Privately Owned Municipal Solid Waste Landfills (ATTACH AFFIDAVIT)

Attach owner/operator's affidavit indicating that an annual review has been performed by a certified public accountant to determine whether the privately owned landfill is in compliance with IAC 567 Chapter 113. The affidavit shall state the name of the certified public accountant, the dates and conclusions of the review, and the steps taken to rectify any deficiencies identified by the accountant.

### **Section 5: FINANCIAL ASSURANCE INSTRUMENT**

Type and Value of Financial Assurance Instrument(s)			ATTACH INSTRUMENT(S)
Assurance Instrument	Establishment Date	Mechanism Covers	Instrument Value*
Trust Fund 567 IAC 113.14(6)"a"		Closure  Postclosure  Corrective Action	
Surety Bond 567 IAC 113.14(6)"b"		Closure  Postclosure  Corrective Action	
Letter of Credit 567 IAC 113.14(6)"c"		Closure ☐ Postclosure ☐ Corrective Action ☐	
Insurance 567 IAC 113.14(6)"d"		Closure ☐ Postclosure ☐ Corrective Action ☐	
Corporate Financial Test 567 IAC 113.14(6)"e"		Closure ☐ Postclosure ☐ Corrective Action ☐	
Local Gov't. Financial Test 567 IAC 113.14(6)"f"	April 17, 2003	Closure ⊠ Postclosure ⊠ Corrective Action □	\$2,961,364
Corporate Guarantee 567 IAC 113.14(6)"g"		Closure ☐ Postclosure ☐ Corrective Action ☐	
Local Gov't Guarantee 567 IAC 113.14(6)"h"		Closure □ Postclosure □ Corrective Action □	
Local Gov't. Dedicated Fund 56+7 IAC 113.14(6)"i"		Closure ☐ Postclosure ☐ Corrective Action ☐	

<sup>\*</sup>Pursuant to IAC 567 113.14(9), if account(s) are restricted/reserved to pay for closure, postclosure or corrective action costs, then the amount of the financial assurance instrument may be reduced by the sum of the cash balance of the account(s) established to comply with subrule 113.14(8).

### **Section 6: INITIAL PROOF OF ESTABLISHMENT OF ACCOUNTS**

Check Which Applies: New Mechanism Previously Submitted
Pursuant to IAC 567 Chapter 113.14(8)"f", documentation of the establishment of accounts is to be submitted to the department by April 1, 2003 for currently permitted MSWLFs. Permit holders for MSWLFs permitted after April 1, 2003, shall submit documentation of the establishment of accounts prior to the MSWLF's initial receipt of waste.
Please attach documentation indicating accounts/fund have been established for closure and postclosure care and if the account(s) are restricted/reserved for closure or postclosure care. Examples of documentation include bank statements for closure/postclosure accounts, letter signed by the chief financial officer, letter from certified public accountant, etc.
Accounts established pursuant to paragraph 113.14(6)"a" for trust funds or paragraph 113.14(6)"i" for local government dedicated funds also satisfies the requirements of this subrule, and the permit holder shall not be required to establish additional closure and postclosure accounts.

### **Section 7: CLOSURE AND POSTCLOSURE ACCOUNTS**

Completion of the following closure and postclosure account information complies with the annual financial statement requirements of IAC 567 113.14(3)"a" and 113.14(4)"a" by indicating the current balance(s) of the closure/postclosure account(s) or dedicated/trust fund and the projected amount(s) to be deposited in the account(s).

Under "Beginning Balance", please state the account/fund balance 30 days after the start of the previous fiscal year, for "Ending Balance", indicate the account balance 30 days after the close of the previous fiscal year, and for "Projected Deposit", indicate the amount to be deposited within 30 days of the close of the permit holder's fiscal year.

Information Requested	Beginning Balance	Ending Balance	Projected Deposit
Closure Account Balance (see formula below)	\$1,337,341	\$1,478,042	\$152,506
Postclosure Account Balance (see formula below)	\$1,069,315	\$1,116,434	\$53,603
	Or		
Dedicated Fund Balance (see formula below)			
Trust Fund Balance (see formula below)		-	

### Formula for Projected Deposits

**Closure or Postclosure Account** 

CE - CB x TR

Where "CE" is the closure or postclosure cost estimate, "CB" is the balance 30 days after close of the previous fiscal year, "RPC" is the remaining permitted capacity in tons, of the landfill from the beginning of the current fiscal year, and "TR" is the total number of tons of solid waste disposed in the prior year.

**Dedicated/Trust Fund** 

CE - CB

Where "CE" is the closure or postclosure cost estimate, "CB" is the balance 30 days after close of the previous fiscal year, and "Y" is number of years remaining in the pay-in period.

If needed, the space below can be used to show calculations for projected deposits

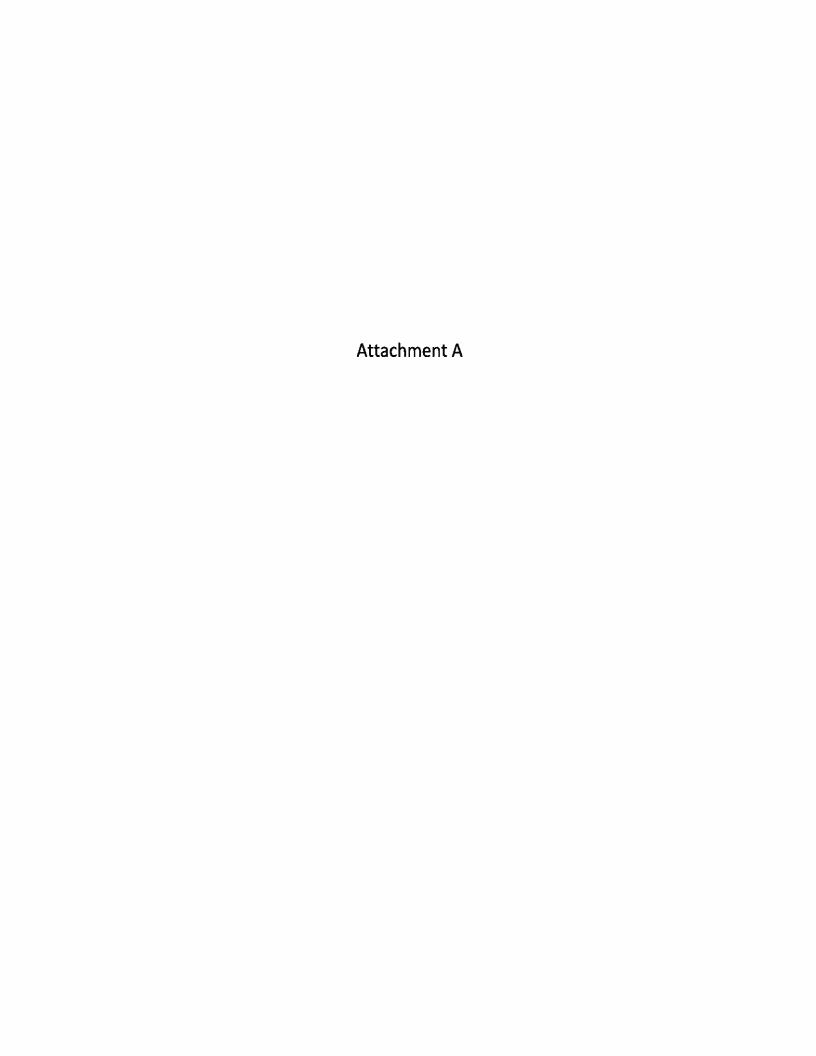
Closure	Postclosure
\$3,669,247- \$1,478,042 × 39,029 = <b>\$152,506</b> 560,767	\$1,886,593 - \$1,116,434 × 39,029 <b>= \$53,603</b> 560,767

# Section 8: PERMIT HOLDER ENDORSEMENT

DOCUMENTATION ESTABLISHES	LETED AND ENDORSED FORM AL NOTIFICATION AND PROOF OF I WITH IAC 567 CHAPTER 113.	
Nancy Lueck	Finance Directo	or
Name of Official	Title	
City of Muscatine		
Agency/Entity		
215 Sycamore Street		
Address		
Muscatine	Iowa	52761
City	State	Zip
563-264-1550	563-264-0750	
Telephone	Fax	
nlueck@muscatineiowa.gov		
Email Address		

Yoney a Lueva	Finance Director	3-34-22
Signature of Official	Title	Date

Questions? Contact Mr. Bill Blum at (515) 725-8376 or bill.blum@dnr.iowa.gov



Task		Cost per	Unit	Cost Year		otal Cost
Closure and Postclosure Plan Document Revisions	1.0	\$ 7,500	lump sum	2021	S	7,500
Site Preparation, Earthwork, and Final Grading	1.0	\$ 445,117	lump sum	2021	Š	445,117
Drainage Control Culverts, Piping, and Structures	0.0	\$ · -	lump sum	2021	Š	
Erosion Control Structures, Sediment Ponds, and Terraces	1.0	\$ 61,378	lump sum	2021	Š	61,378
5. Final Cap Construction	1.0	\$ 1,742,902	lump sum	2021	Š	1,742,902
6. Cap Vegetation Soil Placement	1.0	\$ 192,315	lump sum	2021	Š	192,315
7. Cap Seeding, Mulching, and Fertilizing	1.0	\$ 65,882	per acre	2021	Š	65.882
Monitoring Well, Piezometer, and Gas Control Modifications	1.0	\$ 703,115	lump sum	2021	Š	703,115
Leachate System Cleanout and Extraction Well Modifications	1.0	\$ 4.000	lump sum	2021	Š	4,000
10. Monitoring Well Installation and Abandonments	0.0	\$ -	lump sum	2021	Š	-,,500
11. Facility Modifications to Effect Closed Status	1.0	\$ 750	lump sum	2021	Š	750
12. Engineering and Technical Services	1.0	\$ 196,000	lump sum	2021	ŝ	196,000
13. Legal, Financial, and Administrative Services	1.0	\$ 40,000	lump sum	2021	Š	40.000
14. Closure Compliance Certifications and Documentation	1.0	\$ 7,500	lump sum	2021	Š	7,500
2021 Total Cost of Closure					Š	3,466,459
2021 over 2020 Inflation Factor:		1.0585			\$	202,788
2022 Total Cost of Closure					\$	3,669,247

#### Notes

56.03 acres

<sup>3</sup> Phase 1, 2, 3, 4, and 5 (landfill cap = Standard Composite)

18.62 acres

<sup>4</sup> Approximate borrow area

6.50 acres

<sup>5</sup> Tasks 5, 6, and 7 above include 0.06 acres for the previously closed area beneath the rock stockpile area (See Doc DNA No. 83590).

<sup>&</sup>lt;sup>1</sup> Task items based on the list from 567 IAC 113.14(3)"c"(6). Calculations for each task are contained on the following pages.

<sup>&</sup>lt;sup>2</sup> Previously Closed Areas

1. Closure	and Postclosure Plan Document Revisions		Cost basis year:			2021
	1a. Closure and Postclosure Plan Document Revisions			\$	7,500	lump sum
	Total Cost of Item 1			-	7,500	lump sum
	Assume: - Based on current costs on similar contracts.			•	7,500	idinp sum
2. Site Prep	paration, Earthwork, and Final Grading		Cost basis year:			2021
	2a. Mobilization/Demobilization			\$	50,000	lump sum
	2b. Site Preparation			\$		lump sum
	2c. Waste Relocation and Grading Layer Placement			\$		lump sum
	Total Cost of Item 2			Š		lump sum
				•	,	TEMP CELL
	Assume:					
	<ul> <li>Items 2a, 2b, and 2c based on costs from similar projects.</li> </ul>					
	<ul> <li>Item 2b includes site preparation including stripping and disking of soils.</li> </ul>					
	Unit cost per CY:	\$	2.53 per cubic yard			
	Volume per acre (6-inch depth):	•	807 CY			
	Area requiring stripping:		15.94 Acres			
	- Item 2c		7373 7 713732			
	Unit cost per CY to relocate waste:	\$	5.00 per CY			
	Volume of waste to be relocated:	•	59,555 CY			
	Unit cost per CY:	\$	15.00 per CY			
	Volume per acre (12-inch depth):	•	1613 CY			
	Area requiring stripping:		2.68 acres			
			2.00 00100			
3. Drainage	Control Culverts, Piping, and Structures		Cost basis year:			2021
	3a. Drainage Control Culverts, Piping, and Structures			\$	-	lump sum
	Total Cost of Item 3		<u> </u>	Š		lump sum
				•		iamp oum
	Assume:					
	<ul> <li>No new drainage structures needed at the time of closure.</li> </ul>					
4. Erosion (	Control Structures		Cost basis year:			2021
	4a. Soil Terrace and Diversion Berms					
	4b. TRM Letdowns			\$		lump sum
	4c. Silt Fences			\$		lump sum
	Total Cost of Item 4			\$		lump sum
	Total Cost of Item 4			\$	61,378	lump sum
	Assume:					
	- Items 4a - 4c based on bid prices from similar projects.					
	- Item 4a					
	Volume per LF of terrace (includes 20% shrink):		3.1 CY			
	Approximate terrace length, upper and lower:		3,500 LF			
	Approximate earthwork quanity for terraces:	_	10,920 CY			
	Unit cost based on actual costs of similar projects: - Item 4b	\$	3.30 per CY			
	Unit cost based on actual costs of similar projects:		\$1.61 per SF			
	Square feet of TRM per LF:		15 SF per LF Letdow	'n		
	Linear feet of letdown at the time of closure:		376 LF			
	- Item 4c	_				
	Unit cost based on actual costs of similar projects:	\$	2.33 per LF			
	Approximate length of silt fence:		7,000 LF			

5. Final Cap Construction Cost basis year: 2021

5a. Phase 1, 2, 3, 4, and 5 Composite Cap \$ 1,735,922 lump sum 5b. Previously Closed Area Beneath the Rock/Soil Stockpile Area (24" Infiltration layer / non-composite) 6,980 lump sum

Total Cost of Item 5 \$ 1,742,902 lump sum

#### Assume:

- Items 5a and 5b based on bid prices from similar projects.
- Item 5b. Phases 1, 2, 3, 4, and 5,

Unit cost per CY (18' compacted soil): 3.06 per CY Volume per acre (includes 20% shrink): 2,904 CY per acre Unit cost per SF (geomembrane liner): 0.71 per sq. ft Area per acre (geomembrane liner): 43,560 SF per acre Unit cost per SF (geocomposite): 0.80 per sq. ft Area per acre (geocomposite): 43,560 feet per acre Phases 1, 2, 3, 4, and 5: 18.62 acres Subsurface drainage system: 7,960 LF Unit cost per LF (trenches, aggregate, and pipe): 22.78 per LF Geomembrane and geocomposite anchor trench length\*: 4,544 LF Unit cost per LF (geomembrane and geocomposite anchor trench)\*: 35.44 per LF

\*includes sideslope termination trench

- Item 5c. Previously Closed Area Beneath the Rock Stockpile Area (See Doc DNA No. 83590) Unit cost per CY (infiltration layer): 2.78 per CY Volume per acre (includes 20% shrink): 3,872 CY per acre Previously Closed Area Beneath the Rock Stockpile Area: 0.65 acres

#### 6. Cap Vegetative Soil Placement

6a. Phase 1, 2, 3, 4, and 5 (24" erosion layer (composite): 185,853 lump sum 6b. Previously Closed Area Beneath the Rock/Soil Stockpile Area (24" erosion layer) 6,462 lump sum Total Cost of Item 6 192,315 lump sum

Cost basis year:

- Item 6a based on bid prices from similar projects.
- Item 6a. Phase 1 and Phase 1 Abutment.

Unit cost per CY (erosion layer): 2.58 per CY Volume per acre (includes 20% shrink): 3,872 CY per acre Areas A and B: 18.62 acres

- Item 6b. Previously Closed Area Beneath the Rock Stockpile Area (See Doc DNA No. 83590). Unit cost per CY (erosion layer): 2.58 per CY Volume per acre (includes 20% shrink): 3,872 CY per acre Previously Closed Area Beneath the Rock Stockpile Area: 0.65 acres

2021

			Cost basis year:			2021
7a. Seeding, Mulching, & Fertilizing				\$	65,882	lump sum
Total Cost of Item 7		<del></del>		\$	65,882	lump sum
Assume:						
- Item 7a based on bid prices from similar projects.						
- Item 7a.						
Unit cost per acre:	\$	2 557	per acre			
Total area*:	•		acres			
*Includes previously closed area beneath the	rock stockpile area (See Doc					
onitoring Well, Piezometer, and Gas Control Installation			Cost basis year:			2021
8a. Monitoring Well Modifications				•		t
8b. Piezometer Modifications				\$	-	lump sum
8c. Gas Control Modifications - Gas Collection Layer	r (geocomposite)			\$ \$		lump sum
8d. Gas Control Modifications - Gas Collection Pipin	(Accounthosite)					lump sum
8e. Gas Control Modifications - Vents	a			\$ \$		lump sum
Total Cost of Item 8		<u> </u>	<del></del>	\$		lump sum lump sum
				Ψ	703,113	iump sum
Assume:						
- Items 8c through 8e are applicable to Phases 1, 2,	3, 4, and 5 only.					
- Items 8a and 8b.						
No monitoring wells or piezometers needing n	nodification at the time of clos	sure.				
- Item 8c.						
Unit cost per sq. ft:	\$	0.75	per sq. ft			
Area per acre:		43,560	sq. ft,			
Area of landfill requiring gas control:		18.62	acres			
<ul> <li>Item 8d based on bid costs from similar contracts.</li> </ul>						
Unit cost per LF:	\$	33.76	per LF			
Approximate length of Gas Collection Piping:		2,507	LF			
<ul> <li>Item 8e based on bid costs from similar contracts.</li> </ul>						
Unit cost per vent:	\$	1,500	per vent			
Approximate quantity of vents:			ea			
						2021
achate System Cleanout and Extraction Well Modification	<u>s</u>		Cost basis year:			2021
	<u>s</u>		Cost basis year:	¢	1 000	
achate System Cleanout and Extraction Well Modification  9a. Leachate Piezometer/Cleanout Extension  9b. Leachate Manhole Extension	<u>s</u>		Cost basis year:	\$		lump sum
	<u>s</u>		Cost basis year:	\$	3,000	lump sum lump sum
9a. Leachate Piezometer/Cleanout Extension 9b. Leachate Manhole Extension	<u>s</u>		Cost basis year:		3,000	lump sum
9a. Leachate Piezometer/Cleanout Extension 9b. Leachate Manhole Extension	<u>s</u>		Cost basis year:		3,000	lump sum lump sum
9a. Leachate Piezometer/Cleanout Extension 9b. Leachate Manhole Extension  Total Cost of Item 9  Assume:	<u> </u>		Cost basis year:		3,000	lump sum lump sum
9a. Leachate Piezometer/Cleanout Extension 9b. Leachate Manhole Extension  Total Cost of Item 9  Assume: - Item 9a based on bid prices from similar projects.		2			3,000	lump sum lump sum
9a. Leachate Piezometer/Cleanout Extension 9b. Leachate Manhole Extension  Total Cost of Item 9  Assume:	/cleanouts to raise	2 500			3,000	lump sum lump sum
9a. Leachate Piezometer/Cleanout Extension 9b. Leachate Manhole Extension  Total Cost of Item 9  Assume: - Item 9a based on bid prices from similar projects. Approximate number of leachate piezometers. Cost per extension:		2 500			3,000	lump sum lump sum
9a. Leachate Piezometer/Cleanout Extension 9b. Leachate Manhole Extension  Total Cost of Item 9  Assume: - Item 9a based on bid prices from similar projects. Approximate number of leachate piezometers.	/cleanouts to raise:				3,000	lump sum lump sum

10. Monitoring Well Installation and Abandonments   S   lump sum			-			11/2
Assume: - No monitoring well installation and abandonment needed at the time of closure.  11. Facility Modifications to Effect Closed Status  12. Signs Modification/Removal  13. Signs Modification/Removal  14. Signs Modification/Removal  15. Item 114  Assume: - Item 114  Estimate cost of primary signs at: - Approximate number of signs: - Item 114  12. Esting - Approximate number of signs: - Item 120  Cost basis year: - Cost for Item 12  Assume: - Cost for Item 12  Assume: - Cost for Item 12a - 12d based on similar contracts Item 12c Construction Observation Cost: - Rem 12c Construction Observation Days: - Total Cost of Item 12a - 12d based on similar contracts Item 12c Cost for Item 2 - 12d based on similar contracts Item 12c Cost for Item 2 - 12d based on similar contracts Item 12c Cost for Item 2 - 12d based on similar contracts Item 12c Cost for Item 2 - 12d based on similar contracts Item 12c Cost for Item 2 - 12d based on similar contracts Item 12c Cost for Item 12a - 12d based on similar contracts Item 12c Cost for Item 12a - 12d based on similar contracts Item 12c Cost for Item 13 - Cost for Item 13 - Assume: - Item 13a and 13b based on current costs from similar contracts Item 13a and 13b based on current costs from similar contracts Item 13a and 13b based on current costs from similar contracts Item 13a and 13b based on current costs from similar contracts.	10. Monitoring Well Installation and Abandonments		Cost basis year:			2021
Assume: - No monitoring well installation and abandonment needed at the time of closure.  11. Facility Modifications to Effect Closed Status  12. Signs Modification/Removal  13. Signs Modification/Removal  14. Signs Modification/Removal  15. Item 114.  Assume: - Item 114 Estimate cost of primary signs at: - Estimate cost of signs: - Item 114 Estimate cost of primary signs at: - Estimate cost of primary signs at: - Estimate cost of primary signs at: - Estimate cost of signs: - Item 126 Construction Observation - Item 127 Construction Observation - Item 128 Cost for Item 128 - 12d based on similar contracts Item 120 Cost for Items 12a - 12d based on similar contracts Item 120 Cost for Items 12a - 12d based on similar contracts Item 120 Cost for Items 12a - 12d based on similar contracts Item 120 Cost for Items 12a - 12d based on similar contracts Item 12c Cost for Items 12a - 12d based on similar contracts Item 12c Cost for Item 13 - Assume: - Item 13a and 13b based on current costs from similar contracts Item 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts.				\$	-	lump sum
Assume: - No monitoring well installation and abandonment needed at the time of closure.  11. Facility Modifications to Effect Closed Status  11a. Signs Modification/Removal  7 total Cost of Item 11  Assume: - Item 11a. Estimate cost of primary signs at: - Rem 11a. Estimate cost of primary signs at: - Approximate number of signs: - 1 sign  12. Engineering and Technical Services - Cost basis year: - Cost filem 12 - S 186,000 lump sum - Total Cost of Item 12 - S 186,000 lump sum - Total Cost of Item 12 - Construction Observation Cost: - Item 12c Construction Observation Days: - Cost basis year: - Cost of Item 13 - Assume: - Items 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts.	Total Cost of Item 10		<del></del>	\$		
11e. Signs Modification/Removal   \$ 750   lump sum		closure.				
Assume:  - Item 11a.	1. Facility Modifications to Effect Closed Status		Cost basis year:			2021
Assume: - Item 11a. Estimate cost of primary signs at: Approximate number of signs:  2. Engineering and Technical Services  2. Cost basis year: 2. Engineering and Technical Services  2. Engineering and Technical S				\$	750	lumo sum
Assume: - Item 11a. Estimate cost of primary signs at: Approximate number of signs:  2. Engineering and Technical Services Cost basis year:  2. Engineering and Technical Services Cost basis year:  2. Engineering and Technical Services Cost basis year:  2. Engineering and Technical Services 12a. Bid Documents and Letting 12b. Testing 12c. Construction Observation 12d. Construction Observation 12d. Construction Staking 12d. Construction Staking 12d. Construction Staking 156,000 lump sum 170tal Cost of Item 12 18 196,000 lump sum 197,000 lump sum 198,000 lump sum	Total Cost of Item 11	<u>-</u>		\$		
Estimate cost of primary signs at: Approximate number of signs:  2. Engineering and Technical Services Cost basis year: 2. Engineering and Technical Services Cost Documents and Letting 12a. Bid Documents and Letting 12b. Testing 12c. Construction Observation 12c. Construction Observation 12d. Construction Observation 12d. Construction Staking Total Cost of Item 12 Assume: - Cost for Items 12a - 12d based on similar contracts Item 12c. Construction Observation Cost: Approximate Construction Observation Days:  3. Legal, Financial, and Administrative Services 13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey  Total Cost of Item 13 Assume: - Items 13a and 13b based on current costs from similar contracts.  4. Closure Compliance Certifications and Documentation Cost basis year: 2021  24a. Closure Certification Document  5 7,500 lump sum	Assume:					
Approximate number of signs:  2. Engineering and Technical Services  Cost basis year:  2021  12a. Bid Documents and Letting 12b. Testing 12c. Construction Observation 12d. Construction Staking 12d. Construction Staking 12d. Construction Staking 12d. Construction Staking 15d. Oos of Item 12  Assume: - Cost for Items 12a - 12d based on similar contracts Item 12c. Construction Observation Days: 1,200 per day Approximate Construction Observation Days: 1,200 per day Approximate Construction Observation Days: 1,200 per day 1,200 pe	- Item 11a.					
Approximate number of signs:  2. Engineering and Technical Services  Cost basis year:  2021  12a. Bid Documents and Letting 12b. Testing 12c. Construction Observation 12d. Construction Observation 12d. Construction Staking 12d	Estimate cost of primary signs at:	\$	750 per sign			
12a. Bid Documents and Letting 12b. Testing 12c. Construction Observation 12c. Construction Observation 12d. Construction Staking 12d. Construction Observation 12d. Construction Observation Cost: 12d. Construction Observation Cost: 12d. Construction Observation Days: 12d. Construction Observation Days: 12d. Construction Observation Days: 12d. Legal, Financial, and Administrative Services 12d. Cost basis year: 12d. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey 12d. Cost of Item 13 12d. Cost of Item 14 12d. Closure Compliance Certifications and Documentation 12d. Cost of Item 14 12d. Closure Conflication Document 12d. Cost of Item 14 12d. Closure Certification Document 12d. Cost of Item 14 12d. Cost of Item 1		*	. •			
12a. Bid Documents and Letting 12b. Testing 12c. Construction Observation 12c. Construction Observation 12d. Construction Staking 12c. Construction Staking 12d. Construction Observation 12d. Cost of Item 12 12e. Construction Observation Cost: 12em 12c. Construction Observation Cost: 12em 12c. Construction Observation Days: 130 days 130 days 130 days 130 days 131 days 132. Legal, Financial, and Administrative Services 13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey 13c. Cost basis year: 13c. Cost of Item 13 13c. Cost of Item						
12b. Testing 12c. Construction Observation 12c. Construction Staking  Total Cost of Item 12  Assume: - Cost for Items 12a - 12d based on similar contracts Item 12c. Construction Observation Cost: - Item 12c. Construction Observation Cost: - Item 12c. Construction Observation Days:  3. Legal, Financial, and Administrative Services 13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey  Total Cost of Item 13  Assume: - Items 13a and 13b based on current costs from similar contracts.  4. Closure Compliance Certifications and Documentation  Cost basis year: 2021  2021  2021  2021  2021  2021	2. Engineering and Technical Services		Cost basis year:			2021
12c. Construction Observation 12d. Construction Staking 12d. Construction Observation Cost: 12d. Construction Observation Cost: 12d. Construction Observation Cost: 12d. Construction Observation Days: 12d. Construction Days: 12d. Construction Days: 12d. Construction Days: 12d. Construction Days	12a. Bid Documents and Letting			s	20 000	lump sum
12d. Construction Staking  Total Cost of Item 12  Assume: - Cost for Items 12a - 12d based on similar contracts Item 12c. Construction Observation Cost: - Item 12c. Construction Observation Days: - Cost basis year: - Cost basis year: - Cost basis year: - Cost basis year: - Cost of Item 13 - Assume: - Items 13a and Administrative Services - Items 13a and 13b based on current costs from similar contracts Items 13a and 13b based on current costs from similar contracts Cost basis year: - Items 13a and 13b based on current costs from similar contracts Cost basis year: - Items 13a and 13b based on current costs from similar contracts Cost basis year: - Cost bas	12b. Testing				10,000	lump sum
12d. Construction Staking \$ 10,000 lump sum  Assume: - Cost for Items 12a - 12d based on similar contracts Item 12c. Construction Observation Cost: Approximate Construction Observation Days:  1.200 per day Approximate Construction Observation Days: 130 days  3. Legal, Financial, and Administrative Services 13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey  Total Cost of Item 13  Assume: - Items 13a and 13b based on current costs from similar contracts.  Cost basis year: 2021  40,000 lump sum lump sum Lump sum Cost basis year: 2021  14a. Closure Certifications and Documentation Cost basis year: 2021						
Assume: - Cost for Items 12a - 12d based on similar contracts Item 12c. Construction Observation Cost: Approximate Construction Observation Days:  3. Legal, Financial, and Administrative Services Cost basis year: 2021  13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey Total Cost of Item 13 Assume: - Items 13a and 13b based on current costs from similar contracts.  Cost basis year: 2021  40,000 lump sum 40,000 lump sum Cost basis year: 2021  41a. Closure Certifications and Documentation Cost basis year: 2021				•		
- Cost for Items 12a - 12d based on similar contracts Item 12c. Construction Observation Cost: Approximate Construction Observation Days:  S. Legal, Financial, and Administrative Services 13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey  Total Cost of Item 13  Assume: - Items 13a and 13b based on current costs from similar contracts.  Closure Compliance Certifications and Documentation  Cost basis year: 2021  40,000 lump sum Cost basis year: 2021	Total Cost of Item 12			\$		
- Item 12c. Construction Observation Cost: Approximate Construction Observation Days:  3. Legal, Financial, and Administrative Services Cost basis year:  13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey Total Cost of Item 13  Assume: - Items 13a and 13b based on current costs from similar contracts.  Cost basis year:  2021  40,000 lump sum Cost basis year:  2021  40,000 lump sum Cost basis year:  2021	Assume:					
Approximate Construction Observation Days:  3. Legal, Financial, and Administrative Services  13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey  Total Cost of Item 13  Assume: - Items 13a and 13b based on current costs from similar contracts.  Closure Compliance Certifications and Documentation  130 days  Cost basis year: 2021  2021  2021  2021  2021  2021  2021  2021  2021  2021						
Approximate Construction Observation Days:  3. Legal, Financial, and Administrative Services  13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey  Total Cost of Item 13  Assume: - Items 13a and 13b based on current costs from similar contracts.  Closure Compliance Certifications and Documentation  130 days  Cost basis year: 2021  2021  2021  2021  2021  2021  2021  2021  2021  2021  2021	Construction Observation Cost:	•	1.200 per day			
13a. Legal, Financial, and Administrative Services 13b. Waste Boundary and Property Survey  Total Cost of Item 13  Assume: - Items 13a and 13b based on current costs from similar contracts.  Closure Compliance Certifications and Documentation  Cost basis year:  2021  14a. Closure Certification Document  Total Cost of Item 14		Ψ				
13b. Waste Boundary and Property Survey \$ 10,000 lump sum  Total Cost of Item 13 \$ 40,000 lump sum  Assume: - Items 13a and 13b based on current costs from similar contracts.  Closure Compliance Certifications and Documentation Cost basis year: 2021  14a. Closure Certification Document \$ 7,500 lump sum	B. Legal, Financial, and Administrative Services		Cost basis year:			2021
13b. Waste Boundary and Property Survey \$ 10,000 lump sum  Total Cost of Item 13 \$ 40,000 lump sum  Assume: - Items 13a and 13b based on current costs from similar contracts.  Closure Compliance Certifications and Documentation Cost basis year: 2021  14a. Closure Certification Document \$ 7,500 lump sum	13a. Legal, Financial, and Administrative Services			g.	30,000	lumo sum
Assume: - Items 13a and 13b based on current costs from similar contracts.  I. Closure Compliance Certifications and Documentation  14a. Closure Certification Document  Total Cost of Item 14	13b. Waste Boundary and Property Survey				10.000	lumo sum
- Items 13a and 13b based on current costs from similar contracts.  Closure Compliance Certifications and Documentation  Cost basis year: 2021  14a. Closure Certification Document \$ 7,500 lump sum	Total Cost of Item 13	-		\$		
- Items 13a and 13b based on current costs from similar contracts.  Closure Compliance Certifications and Documentation  Cost basis year: 2021  14a. Closure Certification Document \$ 7,500 lump sum	Assume:					
14a. Closure Certification Document \$ 7,500 lump sum						
Total Cost of Item 14	. Closure Compliance Certifications and Documentation		Cost basis year:			2021
Total Cost of flow 14	14a. Closure Certification Document			æ	7 500	haran name
	<del></del>			φ		

#### Assume

<sup>-</sup> Item 14a based on current costs from similar contracts.

Task	Units	Cost per l	Jnit	Cost Year	30	Year Cost
General Site Facilities, Access Roads, and Fencing Maintenance	30	\$ 769 / y	ear	2021	\$	23,077
Cap and Vegetative Cover Maintenance	30	\$ 4,366 / y	ear	2021	\$	130,966
Drainage and Erosion Control Systems Maintenance	30	\$ 1,526 / ye	ear	2021	\$	45,781
Groundwater to Waste Separation Systems Maintenance	30	\$ 110 / y	ear	2021	\$	3,300
5. Gas Control Systems Maintenance	30	\$ 846 / y	ear	2021	\$	25,389
6. Gas Control Systems Monitoring and Reporting	30	\$ 2,400 / y	ear	2021	\$	72,000
7. Groundwater and Surface Water Monitoring Systems Maintenance	30	\$ 361 / y	ear	2021	\$	10,842
Groundwater and Surface Water Quality Monitoring and Reporting	30	\$ 28,326 / y	ear	2021	\$	849,779
9. Groundwater Monitoring Systems Performance Evaluations and Reports	30	\$ - / y	ear	2021	\$	-
10. Leachate Control Systems Maintenance	30	\$ 8,801 / y	ear	2021	\$	264,030
11. Leachate Management, Transportation, and Disposal	30	\$ 6,655 / y	ear	2021	\$	199,663
12. Leachate Control Systems Performance Evaluations and Reports	30	\$ 1,000 /y	ear	2021	\$	30,000
13. Engineering and Technical Services	30	\$ 1,500 / y	ear	2021	\$	45,000
14. Legal, Financial, and Administrative Services	30	\$ 1,500 / y	ear	2021	\$	45,000
15. Financial Assurance, Accounting, Audits, and Reports	30	\$ 1,250 / y	ear	2021	\$	37,500
2021 Total Cost of Postclosure		\$ 59,411			\$	1,782,327
2021 over 2020 Inflation Factor:		1.0585			\$	104,266
2022 Total Cost of Postclosure					\$	1 886 503

### Notes:

<sup>&</sup>lt;sup>1</sup>Task items based on the list from 567 IAC 113.14(4)"c"(6). Calculations for each task are contained on the following pages.

aral Site Facilities, Access Roads, and Fencing Maintenance			Cost basis year:			2021
1a. Sign Replacement				\$	75	рег уеаг
1b. Roadway Maintenance				\$		per year
1c. Fence Repair and Replacement  Total Cost of Item 1	<u> </u>	<del></del>		\$ \$		per year per year
Assume:						
- Item 1a.						
Estimated cost of sign replacement	\$	750				
Frequency of sign replacement;		1	time within		10	years
- Item 1b.						
Roadway aggregate and structural fill (average width 15 feet):	\$	12.66	per LF			
Roadway length:		4,575				
Average yearly estimated gravel replenish at:			of road length			
Average yearly estimated area of gravel replenish:		46	SY			
- Item 1c.		7.504	. e			
Length of perimeter barbwire fence (existing): Yearly estimated fence repair:		7,581				
Barbwire fence repair cost:	\$		of the total per year per LF			
Dalbwile leftee repair cost.	Ð	3.04	per Lr			
and Vegetative Cover Maintenance			Cost basis year:			2021
2a. Final Cover Repair				\$	1 708	per year
2b. Reseeding				\$		per year
2c. Weed and Tree Control				\$		per year
2d. Mowing				\$		per year
Total Cost of Item 2				\$		per year
Assume:						
- Item 2a based on similar projects.						
Unit cost per CY:	\$	2.58	per CY			
Estimated area requiring maintenance:		74.7	acres			
Estimated repair depths:		1	FT			
Yearly estimated final cover repair at:		0.5%	of the total area			
Volume per year (includes 10% shrink):		662	CY per year			
- Item 2b based on similar projects.	_					
Unit cost;	\$		per acre			
Current area requiring final cover:			acres			
Yearly estimated final cover repair at:  Area per year:			of the total area acres			
- Item 2c.		0.4	acres			
Current final cover area:		74.7	acres			
Unit cost based on actual costs of similar projects:	\$	117.68				
Frequency of weed and tree control event:	•		of total area every		3	years
- Item 2d.			•			
Mobilization	\$	500	per mobilization			
Cost per acre	\$	50	per acre			
Acres		74.7	acres			
		1	time within		3	years
nage and Erosion Control Systems Maintenance			Cost basis year:			2021
3a. Ditch Cleaning & Sedimentation Pond Cleaning				\$	360	per year
3b. Culvert Cleaning and Repair				\$		per year
3с. Тепасе Repair				\$		per year
Total Cost of Item 3				\$	1,526	per year
Assume:						
- Item 3a.	•	460	man aparri bassa			
Estimated crew at:	\$		per crew hour		40	vace
Frequency of cleaning ditch: - Item 3b.		8	hours every		10	years
Two man let truck at:	\$	250	per crew hour			
No. of hours per event:	\$		hours			
Frequency of cleaning/repairing culverts:	•		time within		10	years
- Item 3c						30410
Estimated unit cost:	\$	3.30	per CY			
Volume per LF of terrace (includes 20% shrink):	•		CY			
Approximate terrace length:		10,920				
Approximate terrace retigin.		10,020	L1			

\$	1.00	Cost basis year:	\$		2021 per year per year
\$			- '		
\$			- '		
\$		15	•	,,,	poi year
\$					
		LF (approximate)			
	3	times within		30	years
		Cost basis year:			2021
			s	846	per year
	<del></del>				per year
			•	040	Poi Jeai
\$		•			
	-,				
	1%	per year during the	postci	osure pe	riod
		Cost basis year:			2021
			e.	2.000	
					per year per year
		·		<del></del> -	
			•	-,	por year
\$	500	per event			
	4	events every		1	year
•					
3	400	per year			
		Cost basis year:			2021
		_			per year
			\$	361	per year
	19	wells			
\$	35	per FT			
\$	22,567	•			
	645	FT			
_		per FT			
\$	ວລ				
\$ \$	35,462	peri			
\$	35,462	•			
\$	35,462 250	per well			
\$ \$ \$	35,462 250 4,750	per well			
\$	35,462 250 4,750	•			
	\$	\$ 500 4 \$ 400	\$ 33.76 per LF 2,507 LF 1% per year during the Cost basis year:  \$ 500 per event 4 events every \$ 400 per year  Cost basis year:  19 wells 9 wells 645 FT \$ 35 per FT \$ 22,567	\$ 33.76 per LF 2,507 LF 1% per year during the postol  Cost basis year:  \$ 500 per event 4 events every  \$ 400 per year  Cost basis year:  \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 846 \$ 9 wells 645 FT \$ 35 per FT \$ 22,567

			•	_		
oundwater and Surface Water Quality Monitoring and Reporting			Cost basis year:			2021
8a. Groundwater Sampling				\$	7 970	per year
8b. Analysis				\$		per year
8c. Water Quality Report				Š		per year
Total Cost of Item 8		<del></del>		\$		per year
Assume:						
<ul> <li>Items 8a - 8c based on current similar contracts.</li> </ul>						
<ul> <li>Conduct routine semiannual samplings for the wells in detection monitor</li> </ul>	ing pe	er 113.10(5	5).			
No. of wells in detection monitoring per 113.10(5):		3				
No. of underdrain outfalls in detection monitoring per 113 10(5):		0				
- Conduct routine semiannual samplings for the wells in assessment mon	itoring		0(6).			
No. of wells in assessment monitoring per 113,10(6):		16				
No. of underdrain outfalls in assessment monitoring, per 113.10(6):		0				
No. of remaining events for 5-year frequency Appendix II sampling:		6	times during the 30	year	post-closi	ure period.
- Item 8a.						
Estimated mobilization and equipment cost per sampling event :	\$	1,450	per sampling event			
Frequency of mobilization:		2	times within		1	уеаг
Total mobilization cost:	\$	2,900	per year			•
Estimated cost per sampling per point (Standard)	\$		per sampling point			
Estimated cost per sampling per point (Ap. 2):	\$		per sampling point			
Frequency of detection and assessment monitoring:	_		times within		1	year
Total sampling cost: - Item 8b.	\$	5,070	per year			
Frequency of Appendix I sampling:		2	flance within			
Appendix I analytical cost:	\$		times within per sample		1	year
Rate of duplicate samples and "+" parameters.	Ψ	15%				
Total Appendix I analytical cost:	\$		per year for next		30	years
Appendix II analytical cost:	\$		per sample			, 04.0
Total Appendix II analytical cost:	\$		per year for next		30	years
Note: Appendix I sampling is not analyzed when Appendix II samp			por year for flexi		30	years
- Item 8c.	m vg i v	roquirou.				
AWQR cost:	\$	5.000	per report			
			per report			
Spring Sampling Notification (SSN) cost	\$					
Spring Sampling Notification (SSN) cost Statistical Software Licensing:	\$		per year			
Spring Sampling Notification (SSN) cost		225	per year time within		1	year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):		225	time within		1	
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN): undwater Monitoring Systems Performance Evaluations and Reports		225			1	year 2021
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN): undwater Monitoring Systems Performance Evaluations and Reports N/A		225	time within	\$	1	
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN): undwater Monitoring Systems Performance Evaluations and Reports		225	time within	\$	-	2021
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9		225	time within		-	2021 per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume:		225	time within		- -	2021 per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9		225	time within		-	2021 per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.		225	time within		-	2021 per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume:		225	time within		-	2021 per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.		225	time within  Cost basis year:	\$	-	2021  per year  per year  2021
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning		225	time within  Cost basis year:	\$	4,801	2021 per year per year 2021 per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning 10b. Leachate Collection System Operation & Maintenance		225	time within  Cost basis year:	\$ \$ \$	4,801 4,000	2021 per year per year 2021 per year per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning		225	time within  Cost basis year:	\$	4,801 4,000	2021 per year per year 2021 per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning 10b. Leachate Collection System Operation & Maintenance		225	time within  Cost basis year:	\$ \$ \$	4,801 4,000	2021 per year per year 2021 per year per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning 10b. Leachate Collection System Operation & Maintenance  Total Cost of Item 10		225	time within  Cost basis year:	\$ \$ \$	4,801 4,000	2021 per year per year 2021 per year per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning 10b. Leachate Collection System Operation & Maintenance  Total Cost of Item 10  Assume:		1	time within  Cost basis year:	\$ \$ \$	4,801 4,000	2021 per year per year 2021 per year per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning 10b. Leachate Collection System Operation & Maintenance  Total Cost of Item 10  Assume: - Item 10a. Unit cost per LF: Length of leachate lines:	\$	1.00	time within  Cost basis year:  Cost basis year:	\$ \$ \$	4,801 4,000	2021 per year per year 2021 per year per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning 10b. Leachate Collection System Operation & Maintenance  Total Cost of Item 10  Assume: - Item 10a.  Unit cost per LF: Length of leachate lines: Frequency of leachate line jet cleaning:	\$	1.00 14,403	time within  Cost basis year:  Cost basis year:	\$ \$ \$	4,801 4,000 8,801	2021 per year per year 2021 per year per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning 10b. Leachate Collection System Operation & Maintenance  Total Cost of Item 10  Assume: - Item 10a.  Unit cost per LF: Length of leachate lines: Frequency of leachate line jet cleaning: - Item 10b based on current similar contracts.	\$	1.00 14,403	Cost basis year:  Cost basis year:  Cost basis year:  per LF LF (approximate) time within	\$ \$ \$	4,801 4,000 8,801	2021 per year per year 2021 per year per year per year
Spring Sampling Notification (SSN) cost: Statistical Software Licensing: Frequency of reporting (both AWQR and SSN):  undwater Monitoring Systems Performance Evaluations and Reports  N/A  Total Cost of Item 9  Assume: - Included in Item 8.  achate Control Systems Maintenance  10a. Leachate Line Cleaning 10b. Leachate Collection System Operation & Maintenance  Total Cost of Item 10  Assume: - Item 10a.  Unit cost per LF: Length of leachate lines: Frequency of leachate line jet cleaning:	\$	1.00 14,403 1 2,000	time within  Cost basis year:  Cost basis year:  per LF LF (approximate)	\$ \$ \$	4,801 4,000 <b>8,801</b>	2021 per year per year 2021 per year per year per year

eachate Management, Transportation, and Disposal			Cost basis year:			2021
11a. Leachate Transportation and Disposal  Total Cost of Hem 11				\$	6,655	per year
Total Cost of Item 11				\$	6,655	per year
Assume:						
- Item 11a.						
Historical hauling and disposal cost:	\$		per gallon			
Estimated generation from the FML-lined Area:		30,324	gallon/acre/year, fo	r first	3 years	
Note: Reference: (From similar projects in southeast lowa.)						
Estimated generation from FML capped cells:		12	gallons per acre pe	r year	for rema	ining 27 year
Note: Leachate generation rate ratio of open and FML capper Current area requiring FML cap:	d conditions			= 0.0	4%	
Total cost from composite (FML cap) cells:	\$		acres			
	<del>9</del>	1,303	per year			
Estimated generation from unlined area collection lines		2,000	gallon/ac/yr		56.03	acres
Total cost from unlined area toe drains	\$	3,922	per year			
Total estimated electrical and testing costs	\$	750	per vear			
chate Control Systems Performance Evaluations and Reports			Cost basis year:			2021
12a. Leachate Control System Performance Evaluation Report  Total Cost of Item 12	· <del></del> -			\$	1,000	per year
Total Cost of Item 12				\$	1,000	per year
Assume:						
- Item 12a based on current similar contracts.						
Estimated yearly cost for LCSPE report:	\$	1.000	per year			
, , , , , , , , , , , , , , , , , , , ,	Ψ	1,000	per year			
gineering and Technical Services			Cost basis year:			2021
			Cool basis year.			2021
13a. Engineering and Technical Services				\$	500	per year
13b. Semi-Annual Inspections  Total Cost of Item 13				\$	1,500	per year
Total Cost of Item 13				\$	2,000	per year
Assume:						
• Item 13a.						
Estimated cost for engineering and technical services:	s	500	рег уеаг			
- Item 13b.	•	500	poi year			
Estimated cost for postclosure inspection:	S	1.000	per event			
Inspection frequency:	•		events per	year	for	year 1
Inspection frequency:			events per	years		years 2-5
Inspection frequency;			event per	years		years 6-30
			•	Ť		,
gal, Financial, and Administrative Services			Cost basis year:			2021
14a. Legal, Financial, and Administrative Services				\$	1 500	per vear
Total Cost of Item 14	<u>'</u>	····	<del></del>	S		per year
Assume				-	.,	po. your
Assume; - Item 14a.						
Estimated yearly costs:	•	4.500				
Louisiand yearly code,	\$	1,500	per year			
ancial Assurance, Accounting, Audits, and Reports			Cost besis			2004
			Cost basis year:			2021
15a. Annual financial assurance estimate and report				\$	1,000	per year
15b. Annual financial assurance audit  Total Cost of Item 15			<del></del>	\$	250	рег уеаг
, and added the state of the st				\$	1,250	per year
Assume:						
- Item 15a.						
Estimated yearly costs based on current similar contracts: - Item 15b.	\$	1,000	per year			
- nom 139.						
Financial/administrative cost:	\$	250	per year			