

FORM 28  
CLOSURE-POST CLOSURE LAND USE PLAN



## FORM 28

### CLOSURE/POST – CLOSURE LAND USE PLAN

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 28, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General References: 273.191, 273.192, 273.321, 273.322, 275.503, 277.191, 277.192, 277.321, 277.322

#### SECTION A. SITE IDENTIFIER

Applicant/permittee: **North East Waste Systems, LLC**

Site Name: **North East Waste Systems Transfer Facility**

Facility ID (as issued by DEP): **TBD by PaDEP**

#### SECTION B. POST-CLOSURE LAND USE PLAN

Give Location in Application **Attachment 28-1**

Instructions: Narrative shall be submitted which contains a detailed description of the proposed use of the facility following closure, including a discussion of the utility and capacity of the revegetated land to support a variety of alternative uses, and the relationship of the use to existing land use policies and plans. Attach appropriate documentation referencing "Form 28; Closure."

- 1. How the proposed post closure land use is to be achieved and the necessary support activities which maybe needed to achieve the proposed land use.
- 2. The consideration which has been given to making the proposed post closure land use consistent with landowner plans and applicable State and local land use plans and programs.

#### SECTION C. CLOSURE PLAN

Give Location in Application **Attachment 28-1**

Instructions: Narrative shall be submitted describing the activities that are proposed to occur during the post-closure period. Attach appropriate documentation referencing "Form 28; Closure." The plan shall include:

- 1. Plan for decontamination and removal of equipment, structures and related materials from the facility.
- 2. An estimate of the year in which final closure will occur, including an explanation of the basis for the estimate.
- 3. If the facility will close in stages, a description of how and when the facility will begin and implement partial closure. (Schedule for closure)
- 4. A description of the steps necessary for closure if the facility closes prematurely.
- 5. A narrative description, including a schedule, of measures that are proposed to be carried out after closure at the facility, including measures relating to:
  - a. Water quality monitoring.
  - b. Gas control and monitoring,
  - c. Leachate collection, treatment, and pumping.
  - d. Erosion and sedimentation control.
  - e. Revegetation including maintenance of the final cover.
  - f. Access control.
  - g. Other maintenance activities.
- 6. Description of means by which funds will be made available to cover cost of post closure operations, which shall include an assessment of projected post closure maintenance costs, a description of how the necessary funds will be raised, a description of relevant legal documents, and a description of how the funds will be managed prior to closure.
- 7. The name, address, telephone number, and email address at which the operator can be reached during the post-closure period.



ATTACHMENT 28-1  
FORM 28 NARRATIVE RESPONSES

**NORTH EAST WASTE SYSTEMS, LLC  
NORTH EAST WASTE SYSTEMS TRANSFER**

**FORM 28: CLOSURE / POST-CLOSURE LAND USE PLAN**

**ATTACHMENT 28-1: FORM 28 NARRATIVE RESPONSES**

**SECTION B. POST-CLOSURE LAND USE PLAN**

- 1. *How the proposed post-closure land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use.***

There is no specific post-closure land use proposed for the facility at this time. The transfer facility is anticipated to operate indefinitely. Should the transfer facility cease operations in the future, the property will likely be converted for an alternative industrial use. This would likely require a land development permit, which would address the support activities needed for the proposed land use at that time.

- 2. *The consideration which has been given to making the proposed post closure land use consistent with landowner plans and applicable State and local land use plans and programs.***

There are no landowner plans at this time for post-closure land use. Any future land use will be consistent with applicable state and local land use plans and programs.

**SECTION C. CLOSURE PLAN**

- 1. *Plan for decontamination and removal of equipment, structures and related materials from the facility.***

Equipment needing decontamination when the facility closes will primarily be the construction vehicles that were used in daily waste processing operations. Procedures for decontaminating these vehicles, and any other equipment used in waste processing operations, will involve clearing away all dirt, waste, and other debris via shovels and high pressure washing devices. Cleaning will occur within the transfer facility building where wash water can be collected and contained within the leachate handling system. Each piece of equipment will be visually inspected prior to exiting the site. Similarly, push walls and floors of the transfer facility building will be pressure washed.

- 2. *An estimate of the year in which final closure will occur, including an explanation of the basis for the estimate.***

NEWS anticipates operating this facility indefinitely; therefore, no closure year is proposed.

**3. If the facility will close in stages, a description of how and when the facility will begin and implement partial closure.**

Not applicable – the facility will not close in stages.

**4. A description of the steps necessary for closure if the facility closes prematurely.**

There is not a defined lifespan for a transfer facility, and therefore, premature closure is not applicable.

**5. A narrative description, including a schedule, of measures that are proposed to be carried out after closure at the facility, including measures relating to:**

**a. Water quality monitoring.**

Water quality monitoring is not anticipated following closure of this facility. Groundwater monitoring is not typically required for transfer facilities. While the facility's NPDES permit may require surface water sampling, this monitoring will likely end once the facility closes.

**b. Gas control and monitoring.**

Gas control and monitoring is not required for a transfer facility.

**c. Leachate collection, treatment and pumping.**

When the facility closes, the equipment and transfer building will be decontaminated, and wash water will be collected and conveyed to the onsite leachate tank, where it will be pumped out for offsite treatment. Once the site is decontaminated, the leachate collection piping and tank may be removed.

**d. Erosion and sedimentation control.**

Erosion and sediment control is not anticipated during post-closure of the facility.

**e. Revegetation including maintenance of the final cover.**

Revegetation of the site during post-closure is not anticipated. While redevelopment of the site may occur should the facility close, regrading and revegetation would be addressed at that time through separate permitting.

**f. Access control.**

Vehicular access to the site will be controlled via gates and fencing. The fencing and gates will be periodically inspected for damage and repaired as necessary. During the post-closure period, site access will be limited to personnel designated to perform duties at the site.

***g. Other site maintenance activities.***

If the site were to close, litter and debris will be removed, and overall site tidiness will be maintained. No other site maintenance is anticipated.

***6. Description of means by which funds will be made available to cover cost of post closure operations, which shall include an assessment of projected post closure maintenance costs, a description of how the necessary funds will be raised, a description of relevant legal documents, and a description of how the funds will be managed prior to closure.***

A bond will be obtained and forwarded to the PaDEP when requested. The bond amount will be based on the calculations in Attachments 28-2 for proper maintenance, closure and post-closure of the facility.

***7. The name, address, telephone number, and email address at which the operator can be reached during the post-closure period.***

Post-closure operations will be conducted by the applicant or associated company. Inquiries should be addressed to:

North East Waste Systems, LLC  
4000 4<sup>th</sup> Street  
Moosic, PA 18507  
(570) 270-2000  
[bill@billrinaldi.com](mailto:bill@billrinaldi.com)



## TRANSFER FACILITY BONDING WORKSHEETS AND BACKUP

**BONDING WORKSHEETS  
FOR  
WASTE TRANSFER STATIONS**

Revised August 30, 2001



Date Prepared

January 2026

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

I.D. Number

TBD

**BONDING WORKSHEET A  
TRANSFER FACILITY DECONTAMINATION**

**How do I start?** Select a likely “worst case” scenario where you would have a maximum amount of the facility open and in need of closure. Provide a description of the scenario stages:

Assume as worst case scenario that the facility’s daily volume will be on the floor at any one time; hence, 500 tons of waste must be removed from the facility at a weight of 3 cy per ton (1,500 cy).

- |  |                         |        |
|--|-------------------------|--------|
| 1. Maximum volume of waste to be removed from storage, tipping floor and equipment.:   | <u>1,500 (trucking)</u> | CY     |
| 2. Unit cost to dispose of waste off-site (this should include, but not be limited to removal, transportation and disposal costs).                     | <u>38.33 (trucking)</u> | \$/CY  |
| 3. Cost to decontaminate floors, scales, equipment   | <u>2,570</u>            | LS     |
| 4. Volume of contaminated soils to be removed  | <u>0</u>                | CY     |
| 5. Unit cost to dispose of soils off-site (this should include, but not be limited to sampling, analysis, removal, transportation and disposal costs). | <u>N/A</u>              | \$/CY  |
| 6. Volume of wastewater generated during decontamination.  | <u>11,600</u>           | Gal    |
| 7. Unit cost to dispose of decontamination water   | <u>0.336</u>            | \$/Gal |
| 8. Cost for facility maintenance:  | <u>0</u>                | LS     |
| 9. Engineering and QA/QC costs   | <u>0</u>                | LS     |
| 10. Cost Summary   |                         |        |
| a. Waste Removal (line 1 x line 2)   | \$ <u>57,500</u>        |        |
| b. Facility decontamination (line 3)   | \$ <u>2,570</u>         |        |
| c. Contaminated soils (line 4 x line 5)  | \$ <u>0</u>             |        |
| d. Wastewater disposal (line 6 x line 7)   | \$ <u>3,900</u>         |        |
| e. Maintenance (line 8)  | \$ <u>0</u>             |        |
| f. QA/QC (line 9)  | \$ <u>0</u>             |        |

**Total \$ 63,970**

(Place this total on Summary Cost Worksheet – line 1)

Date Prepared

January 2026

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

I.D. Number

TBD

**BONDING WORKSHEET B  
SURFACE WATER MONITORING**

**Solid Waste Surface Water Sampling**

- 1. Number of surface points monitored for Solid Waste Permit 0
- 2. Unit cost to sample a surface point (record keeping and shipping) N/A \$/point
- 3. Unit cost to analyze sample(s)
  - a. Quarterly (25 PA Code §279.233) N/A \$/point
  - b. Annually (25 PA Code §279.233) N/A \$/point
- 4. Unit cost to analyze data (includes review of lab QA/QC data, database input, form completion, and data review) N/A \$/point
- 5. Cost to sample and analyze: quarterly (line 2 + line 3a + line 4) N/A \$/point
- 6. Cost to sample and analyze: annually (line 2 + line 3b + line 4) N/A \$/point
- 7. Number of years of sampling (     time to close) N/A years

**NPDES Surface Discharge Sampling**

- 8. Number of outfalls monitored 1
  - 9. Monitoring frequency (i.e. monthly, quarterly, etc) quarterly
  - 10. Number of samples to be taken per point/year 4
  - 11. Unit cost to sample a surface point (record keeping and shipping) 73 \$/point
  - 12. Unit cost to analyze sample(s) (including data review and completing DMR) 325 \$/point
  - 13. Number of years of sampling (10+ time to close) 10 years
  - 14. Cost Summary –Surface Water Monitoring
    - a. Cost of Quarterly Surface Water Monitoring (line 1 x “4” x line 5 x line 7) \$ 0
    - b. Cost of Annual Surface Water Monitoring (line 1 x line 6 x line 7) \$ 0
    - c. Cost of NPDES Monitoring (line 8 x line 10 x [line 11 + line 12] x line 13) \$ 15,920
    - d. NPDES renewals (includes application development, fees, etc.) use 10% of line 14c \$ 1,592
- Subtotal \$ 17,512**

Adjustment for resampling, assessments, etc.

- a. Use 0% of subtotal if no assessments in last 2 yrs.
- b. Use 5% of subtotal if assessment in last 2 yrs.
- c. Use 10% if in assessment, abatement or increased monitoring

**Total    \$ 17,512**

(Place this total on Summary Cost Worksheet – line 2)

Date Prepared

January 2026

COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WASTE MANAGEMENT

I.D. Number

TBD

**BONDING WORKSHEET C  
 GROUNDWATER MONITORING SYSTEM**

1. Number of wells in the approved monitoring plan. \_\_\_\_\_ 0
  - a. Shallowest well depth \_\_\_\_\_ N/Aft.
  - b. Deepest well depth \_\_\_\_\_ N/Aft.
  - c. Average well depth \_\_\_\_\_ N/Aft.
  - d. Number with dedicated pumps \_\_\_\_\_ N/A
2. Unit cost to upgrade a well with a dedicated pump \_\_\_\_\_ N/A \$/well
3. Unit cost to install a well (including, drilling, installation, developing and pump installation) \_\_\_\_\_ N/A \$/well
4. Number of wells to be installed (wells in the approved plan that haven't been installed) \_\_\_\_\_ N/A
5. Number of wells to be replaced over the life of the monitoring period (use 10% of line 1 and round up) \_\_\_\_\_ N/A
6. Number of pumps to be replaced/repared (use 25% of line 1 over the monitoring period) \_\_\_\_\_ N/A
7. Unit cost to purge and sample a well (include methane monitoring, record keeping and shipping) \_\_\_\_\_ N/A \$/well
8. Unit cost to analyze sample(s)
  - a. Quarterly (25 PA Code §279.233) \_\_\_\_\_ N/A \$/well
  - b. Annually (25 PA Code §279.233) \_\_\_\_\_ N/A \$/well
9. Unit cost to analyze data (includes review of lab QA/QC data, database input, form completion, statistical analysis and data review) \_\_\_\_\_ N/A \$/well
10. Cost to purge, sample and analyze: quarterly (line 7 + line 8a + line 9) \_\_\_\_\_ N/A \$/well
11. Cost to purge, sample and analyze: annually (line 7 + line 8b + line 9) \_\_\_\_\_ N/A \$/well
12. Number of years of sampling (\_\_\_\_\_ + time to close) \_\_\_\_\_ N/A years

13. Cost Summary –Groundwater Monitoring System

a. System upgrade ([line 1 – line 1d] x line 2)	\$ _____	N/A
b. Wells to be Installed (line 3 x line 4)	\$ _____	N/A
c. Wells to be replaced (line 3 x line 5)	\$ _____	N/A
d. Pumps to be replaced (line 2 x line 6)	_____	N/A
e. Cost of Quarterly Monitoring (line 1 x “4” x line 10 x line 12)	\$ _____	N/A
f. Cost of Annual Monitoring (line 1 x line 11 x line 12)	\$ _____	N/A
<b>Subtotal</b>	<b>\$ _____</b>	<b>N/A</b>

Adjustment for resampling, assessments, etc.

a. Use 0% of subtotal if no assessments in last 2 yrs.		
b. Use 5% of subtotal if assessment in last 2 yrs.		
c. Use 10% if in assessment, abatement or increase monitoring	\$ _____	N/A

**Total**    \$ \_\_\_\_\_    **N/A**

(Place this total on Summary Cost Worksheet – line 3)

Date Prepared

January 2026

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

I.D. Number

TBD

**BONDING WORKSHEET D  
OTHER MONITORING AND REPORTING**

Please list the annual costs to maintain the following permits/registrations that apply. Additional space is provided for items applicable to your facility, but not listed.

- 1. Title V or other air permit (include the annual permit fee, cost to complete emissions inventory and emissions fees) \$ \_\_\_\_\_
- 2. NSPS Annual Report preparation cost \$ \_\_\_\_\_
- 3. Solid Waste Annual Report preparation cost \$ \_\_\_\_\_ 200
- 4. Local permit or Host Agreement requirements \$ \_\_\_\_\_
- 5. UST/AST registration \$ \_\_\_\_\_
- 6. Other \_\_\_\_\_ NPDES \$ \_\_\_\_\_ 150
- 7. Other \_\_\_\_\_ \$ \_\_\_\_\_
- 8. Other \_\_\_\_\_ \$ \_\_\_\_\_
- 9. Other \_\_\_\_\_ \$ \_\_\_\_\_
- 10. Other \_\_\_\_\_ \$ \_\_\_\_\_
- 11. Number of years of monitoring/maintenance (10+ time to close) \_\_\_\_\_ 10 years

**Total** (sum of lines 1 to 10 x line 11) \$ **3,500**

(Place this total on Summary Cost Worksheet – line 4)

Date Prepared

January 2026

COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WASTE MANAGEMENT

I.D. Number

TBD

**BONDING WORKSHEET E**  
**SUMMARY COST WORKSHEET**

**Cost Summary – Transfer Stations**

1. Decontaminating the Facility	\$ <u>63,970</u>
2. Surface Water Monitoring	\$ <u>17,512</u>
3. Ground Water Monitoring	\$ <u>0</u>
4. Other Monitoring	\$ <u>3,500</u>
5. Other Costs <sup>1</sup>	\$ <u>0</u>
6. Other Costs <sup>1</sup>	\$ <u>0</u>
<b>Subtotal</b>	<b>\$ <u>84,982</u></b>

**Inflation**

7. Inflation rate (projected inflation for the next three years based on the inflation for the prior three years).	<u>9.80%</u>
8. Inflation cost for facility (subtotal x line 7)	\$ <u>8,327</u>

**Contingency and administrative fees**

9. Administrative fees (10%) (subtotal x 0.1)	\$ <u>8,498</u>
10. Contingency fee amount (subtotal x rate of contingency fee from Table 1)	\$ <u>10,623</u>

**Total** (subtotal + line 8 + line 9 + line 10) \$ **112,430**

**Note:** Inflation rate calculated with the most current data available at the time of submission. The applicant reserves the right to modify the inflation rate following the release of the Q4 2025 inflation data.

<sup>1</sup> You should include any costs that would be incurred by the Department, but were not included in these sheets. Provide separate sheets for documentation.

**NORTH EAST WASTE SYSTEMS, LLC**  
**NORTH EAST WASTE SYSTEMS TRANSFER FACILITY**

**BONDING WORKSHEET CALCULATIONS**

Worksheet A – Transfer Station Decontamination

*1. Estimated Volume of Waste to be Removed from Storage*

The maximum daily volume proposed for the facility is 500 tons per day (tpd). The maximum amount of waste to be removed from the facility is assumed to be equal to the maximum daily volume, or 500 tons, as a worst case scenario. It has been assumed that 500 tons of material is staged on the facility tipping floor. Approximate waste density is assumed to be 3 cubic yards (cy)/ton, resulting in 1,500 cy on the tipping floor.

*2. Estimated Unit Cost to Dispose of Waste Off-site*

NEWS has obtained estimates for transport and disposal of waste from the facility. NEWS estimates transport and disposal costs for waste via trucking is \$70/ton. At 3 cy/ton, cost for disposal is \$23.33/cy. From RS Means, the unit rate for front end loaders and hauling are \$1.70/cy and \$13.30/cy, respectively. The total disposal rate is \$23.33/cy + \$1.70/cy + \$13.30/cy = \$38.33/cy.

*3. Cost to Decontaminate Floors, Scales, Equipment*

Assume it would take two laborers using two pressure washers two days to decontaminate the facility, assuming 8 hours per day. From RS Means, the unit rate for a laborer is \$73.00/hr, and a pressure washer can be rented for \$117.02 per day. The total cost to decontaminate the facility is  $(\$73.00 * 2 \text{ laborers} * 2 \text{ days} * 8 \text{ hrs/day}) + (\$117.02 * 2) = \$2,570$ .

*6. Volume of Wastewater Generated during Decontamination*

Operation of the pressure washers would generate approximately 5 gallons per minute, or 300 gallons per hour. Over two days (32 operating hours), the total wastewater generated would be 9,600 gallons. In addition, assume 2,000 gallons of leachate is onsite, for a total of 11,600 gallons.

*7. Unit Cost to Dispose of Contaminated Water*

Estimate is based on costs to haul wastewater from a similar site. This assumes \$1,385/load for the tanker and driver, \$0.05/gallon for disposal, and \$550/wash. It is assumed that 2 loads will be required, and the tanker will wash following the 2<sup>nd</sup> load.

Total disposal cost =  $(\$1,385/\text{load} * 2 \text{ loads}) + (11,600 \text{ gal} * \$0.05/\text{gal}) + (\$550) = \$3,900$

Disposal cost per gallon =  $\$3,900 / 11,600 \text{ gallons} = \$0.336/\text{gallon}$

Bonding Worksheet B – Surface Water Monitoring

Assume 1 NPDES sampling locations are required for the facility. This point will be sampled quarterly, resulting in a total of four (4) samples taken per year for ten (10) years.

*11. Unit Cost to sample a surface point*

Assume 1 hour to sample at a labor rate of \$73/hour.

*12. Unit cost to analyze sample(s)*

Sample analytical costs based on costs for similar facilities. Assume \$325 per sample.

Bonding Worksheet C – Groundwater Monitoring System

Groundwater monitoring is not proposed for the transfer station. Therefore, this worksheet is not applicable.

Bonding Worksheet D – Other Monitoring and Reporting

It is assumed one additional municipal waste Annual Operating Report for the facility would need to be filed upon closure. Although the report is typically filed internally, a cost of \$2,000 was estimated for an outside consultant. This will be a one-time lump sum cost over the period of 10 years. Therefore, the annual cost for this item is \$200.

It is assumed one additional NPDES Annual Operating Report for the facility would need to be filed upon closure. A cost of \$1,500 was estimated for an outside consultant. This will be a one-time lump sum cost over the period of 10 years. Therefore, the annual cost for this item is \$150.

Bonding Worksheet E – Summary Cost Worksheet

*Inflation*

Inflation was calculated using the Gross Domestic Product (GDP) for Q4 2021 through Q3 2025. Due to the Q4 2025 data being unreleased, the quarterly GDP from Q4 2021 to Q3 2022, Q4 2022 to Q3 2023, etc. were averaged. The percent difference was then calculated between each subsequent average. The sum of these is the reported inflation rate for Q4 2021 through Q3 2025. The applicant reserves the right to modify the inflation rate following the release of the Q4 2025 inflation data.

Inflation =

$$\frac{(((120.164+121.288+121.92+122.914)/4)-((112.847+115.126+117.728+119.031)/4)) / ((112.847+115.126+117.728+119.031)/4) + (((123.405+124.374+125.167+125.696)/4)-((120.164+121.288+121.92+122.914)/4)) / ((120.164+121.288+121.92+122.914)/4) + (((126.45+127.577+128.248+129.428)/4)-((123.405+124.374+125.167+125.696)/4)) / ((123.405+124.374+125.167+125.696)/4)}$$

= 9.80%

References

1. RS Means - Heavy Construction: 2026 release

# 31 23 Excavation and Fill

## 31 23 16 - Excavation

Code	Description	Crew	Daily Output	Labor-Hours	Unit	Material	2026 Bare Costs		Total	Total Incl O&P
							Labor	Equipment		
31 23 16.35	Hydraulic Rock Breaking and Loading 30,000 psi rock	B-13N	240	.067	B.C.Y.		4.8	18.9	23.7	28
31 23 16.42	Excavating, Bulk Bank Measure									
	EXCAVATING, BULK BANK MEASURE									
	R312316-40									
0010	Common earth piled								15%	15%
0011	For loading onto trucks, add									
0020	For mobilization and demobilization, see Section 01 54 36.50									
0050	For hauling, see Section 31 23 23.20									
0100	Excavator, hydraulic, crawler mtd., 1 C.Y. cap. = 100 C.Y./hr.	B-12A	800	.020	B.C.Y.		1.2	1.2	2.4	3.1
0200	1-1/2 C.Y. cap. = 125 C.Y./hr.	B-12B	1000	.016			.99	1.1	2.1	2.7
0250	2 C.Y. cap. = 165 C.Y./hr.	B-12C	1320	.012			.75	1.2	1.9	2.4
0300	3 C.Y. cap. = 260 C.Y./hr.	B-12D	2080	.008			.48	1.0	1.5	1.8
0305	3-1/2 C.Y. cap. = 300 C.Y./hr.	"	2400	.007			.41	.90	1.3	1.5
0310	Wheel mounted, 1/2 C.Y. cap. = 40 C.Y./hr.	B-12E	320	.050			3.1	2.1	5.2	6.9
0360	3/4 C.Y. cap. = 60 C.Y./hr.	B-12F	480	.033			2.0	1.7	3.8	4.9
0500	Clamshell, 1/2 C.Y. cap. = 20 C.Y./hr.	B-12G	160	.100			6.2	6.5	12.7	16.2
0550	1 C.Y. cap. = 35 C.Y./hr.	B-12H	280	.057			3.5	5.2	8.7	11
0950	Dragline, 1/2 C.Y. cap. = 30 C.Y./hr.	B-12I	240	.067			4.1	5.3	9.4	11.9
1000	3/4 C.Y. cap. = 35 C.Y./hr.	"	280	.057			3.5	4.5	8.0	10.2
1050	1-1/2 C.Y. cap. = 65 C.Y./hr.	B-12P	520	.031			1.9	2.9	4.9	6.1
1100	3 C.Y. cap. = 112 C.Y./hr.	B-12V	900	.018			1.1	2.7	3.8	4.6
1200	Front end loader, track mtd., 1-1/2 C.Y. cap. = 70 C.Y./hr.	B-10N	560	.021			1.3	1.0	2.3	3.1
1250	2-1/2 C.Y. cap. = 95 C.Y./hr.	B-100	760	.016			1	1.6	2.6	3.2
1300	3 C.Y. cap. = 130 C.Y./hr.	B-10P	1040	.012			.73	1.3	2.0	2.5
1350	5 C.Y. cap. = 160 C.Y./hr.	B-10Q	1280	.009			.59	1.4	2.0	2.5
1500	Wheel mounted, 3/4 C.Y. cap. = 45 C.Y./hr.	B-10R	360	.033			2.1	1.0	3.1	4.2
1550	1-1/2 C.Y. cap. = 80 C.Y./hr.	B-10S	640	.019			1.1	.94	2.1	2.7
1600	2-1/4 C.Y. cap. = 100 C.Y./hr.	B-10T	800	.015			.95	.98	1.9	2.4
1601	3 C.Y. cap. = 140 C.Y./hr.	"	1120	.011			.68	.70	1.3	1.7
1650	5 C.Y. cap. = 185 C.Y./hr.	B-10U	1480	.008			.51	.87	1.3	1.7
1800	Hydraulic excavator, truck mtd. 1/2 C.Y. = 30 C.Y./hr.	B-12J	240	.067			4.1	4.0	8.2	10.5
1850	48" bucket, 1 C.Y. = 45 C.Y./hr.	B-12K	360	.044			2.7	4.6	7.4	9.2
3700	Shovel, 1/2 C.Y. cap. = 55 C.Y./hr.	B-12L	440	.036			2.2	2.4	4.6	6
3750	3/4 C.Y. cap. = 85 C.Y./hr.	B-12M	680	.024			1.4	1.9	3.4	4.2
3800	1 C.Y. cap. = 120 C.Y./hr.	B-12N	960	.017			1.0	1.5	2.6	3.2
3850	1-1/2 C.Y. cap. = 160 C.Y./hr.	B-12O	1280	.013			.78	1.2	2.0	2.5
3900	3 C.Y. cap. = 250 C.Y./hr.	B-12T	2000	.008			.50	1.2	1.7	2.1
4000	For soft soil or sand, deduct								15%	15%
4100	For heavy soil or stiff clay, add								60%	60%
4200	For wet excavation with clamshell or dragline, add								100%	100%
4250	All other equipment, add								50%	50%
4400	Clamshell in sheeting or cofferdam, minimum	B-12H	160	.100			6.2	9.2	15.4	19.2
4450	Maximum	"	60	.267			16.5	24.5	41.0	51
5000	Excavating, bulk bank measure, sandy clay & loam piled								15%	15%
5020	For loading onto trucks, add									
5100	Excavator, hydraulic, crawler mtd., 1 C.Y. cap. = 120 C.Y./hr.	B-12A	960	.017	B.C.Y.		1.0	1.0	2.0	2.6
5150	1-1/2 C.Y. cap. = 150 C.Y./hr.	B-12B	1200	.013			.83	.96	1.7	2.2
5300	2 C.Y. cap. = 195 C.Y./hr.	B-12C	1560	.010			.64	1.0	1.6	2.0
5400	3 C.Y. cap. = 300 C.Y./hr.	B-12D	2400	.007			.41	.90	1.3	1.5
5500	3-1/2 C.Y. cap. = 350 C.Y./hr.	"	2800	.006			.35	.77	1.1	1.3
5610	Wheel mounted, 1/2 C.Y. cap. = 44 C.Y./hr.	B-12E	352	.045			2.8	1.9	4.8	6.3
5660	3/4 C.Y. cap. = 66 C.Y./hr.	B-12F	528	.030			1.8	1.6	3.4	4.5
8000	For hauling excavated material, see Section 31 23 23.20									

# 31 23 Excavation and Fill

## 31 23 23 - Fill

31 23 23.20 Hauling	Crew	Daily Output	Labor-Hours	Unit	Material	2026 Bare Costs			Total Incl O&P
						Labor	Equipment	Total	
4096	B-34D	340	.024	L.C.Y.		1.4	2.3	3.7	4.6
4098		220	.036			2.2	3.6	5.8	7.2
4100		160	.050			3.0	4.9	8.0	9.9
4102		140	.057			3.4	5.7	9.1	11.3
4104		120	.067			4.0	6.6	10.6	13.3
4106		340	.024			1.4	2.3	3.7	4.6
4108		240	.033			2.0	3.3	5.3	6.6
4110		180	.044			2.7	4.4	7.1	8.8
4112		140	.057			3.4	5.7	9.1	11.3
4114		120	.067			4.0	6.6	10.6	13.3
4214		440	.018			1.1	1.8	2.9	3.6
4216		400	.020			1.2	1.9	3.2	3.9
4218		340	.024			1.4	2.3	3.7	4.6
4220		260	.031			1.8	3.0	4.9	6.1
4222		220	.036			2.2	3.6	5.8	7.2
4224		180	.044			2.7	4.4	7.1	8.8
4225		160	.050			3.0	4.9	8.0	9.9
4226		440	.018			1.1	1.8	2.9	3.6
4228		420	.019			1.1	1.8	3.0	3.7
4230		360	.022			1.3	2.2	3.5	4.4
4232		300	.027			1.6	2.6	4.2	5.3
4234		240	.033			2.0	3.3	5.3	6.6
4236		220	.036			2.2	3.6	5.8	7.2
4238		180	.044			2.7	4.4	7.1	8.8
4240		320	.025			1.5	2.4	4.0	4.9
4242		280	.029			1.7	2.8	4.5	5.7
4244		240	.033			2.0	3.3	5.3	6.6
4246		220	.036			2.2	3.6	5.8	7.2
4250		340	.024			1.4	2.3	3.7	4.6
4252		300	.027			1.6	2.6	4.2	5.3
4254		260	.031			1.8	3.0	4.9	6.1
4256		240	.033			2.0	3.3	5.3	6.6
4260		360	.022			1.3	2.2	3.5	4.4
4262		320	.025			1.5	2.4	4.0	4.9
4264		280	.029			1.7	2.8	4.5	5.7
4266		260	.031			1.8	3.0	4.9	6.1
4268		180	.044			2.7	4.4	7.1	8.8
4270		120	.067			4.0	6.6	10.6	13.3
4272		100	.080			4.8	7.9	12.8	15.9
4274		320	.025			1.5	2.4	4.0	4.9
4276		300	.027			1.6	2.6	4.2	5.3
4278		260	.031			1.8	3.0	4.9	6.1
4280		180	.044			2.7	4.4	7.1	8.8
4282		140	.057			3.4	5.7	9.1	11.3
4284		120	.067			4.0	6.6	10.6	13.3
4286		100	.080			4.8	7.9	12.8	15.9
4294		300	.027			1.6	2.6	4.2	5.3
4296		280	.029			1.7	2.8	4.5	5.7
4298		200	.040			2.4	3.9	6.4	7.9
4300		160	.050			3.0	4.9	8.0	9.9
4302		120	.067			4.0	6.6	10.6	13.3
4304		100	.080			4.8	7.9	12.8	15.9
4306		300	.027			1.6	2.6	4.2	5.3

## Installing Contractor's Overhead & Profit

Below are the average installing contractor's percentage markups applied to base labor rates to arrive at typical billing rates.

**Column A:** Labor rates are based on union wages averaged for 30 major U.S. cities. Base rates, including fringe benefits, are listed hourly and daily. These figures are the sum of the wage rate and employer-paid fringe benefits such as vacation pay, employer-paid health and welfare costs, and pension costs, plus appropriate training and industry advancement funds costs.

**Column B:** Workers' compensation rates are the national average of state rates established for each trade.

**Column C:** Column C lists average fixed overhead figures for all trades. Included are federal and state unemployment costs set at 8%; social security taxes (FICA) set at 7.65%; builder's risk insurance costs set at 0.80%; and public liability costs set at 2.02%. All percentages, except those for social security taxes, vary from state to state as well as from company to company.

**Columns D and E:** Percentages in Columns D and E are based on the presumption that the installing contractor has annual billing of \$4,000,000 and up. Overhead percentages may increase with smaller annual billing. The overhead percentages for any given contractor may vary greatly and depend on a number of factors such as the contractor's annual volume, engineering and logistical support costs, and staff requirements. The figures for overhead and profit will also vary depending on the type of job, the job location, and the prevailing economic conditions. All factors should be examined very carefully for each job.

**Column F:** Column F lists the total of Columns B, C, D, and E.

**Column G:** Column G is Column A (hourly base labor rate) multiplied by the percentage in Column F (O&P percentage).

**Column H:** Column H is the total of Column A (hourly base labor rate) plus Column G (Total O&P).

**Column I:** Column I is Column H multiplied by eight hours.

Abbr.	Trade	A		B	C	D	E	F	G	H	I								
		Base Rate Incl. Fringes										Workers' Comp. Ins.	Average Fixed Overhead	Overhead	Profit	Total Overhead & Profit		Rate with O & P	
		Hourly	Daily													%	Amount	Hourly	Daily
SkwK	Skilled Workers Average (35 trades)	\$ 67.25	\$538.00	6.3%	18.5%	13.0%	10%	47.8%	\$32.10	\$ 99.35	\$ 794.80								
	Helpers Average (5 trades)	49.30	394.40	8.5		11.0		48.0	23.70	73.00	584.00								
	Foreman Average, Inside (\$.50 over trade)	67.75	542.00	6.3		13.0		47.8	32.35	100.10	800.80								
	Foreman Average, Outside (\$.20 over trade)	69.25	554.00	6.3		13.0		47.8	33.05	102.30	818.40								
Clab	Common Building Laborers	51.05	408.40	6.5		11.0		46.0	23.45	74.50	596.00								
Asbe	Asbestos/Insulation Workers/Pipe Coverers	71.30	570.40	6.1		16.0		50.6	36.10	107.40	859.20								
Boil	Boilermakers	78.15	625.20	3.6		16.0		48.1	37.60	115.75	926.00								
Bric	Bricklayers	63.45	507.60	7.8		11.0		47.3	30.00	93.45	747.60								
Brhe	Bricklayer Helpers	51.05	408.40	7.8		11.0		47.3	24.15	75.20	601.60								
Carp	Carpenters	64.60	516.80	6.5		11.0		46.0	29.70	94.30	754.40								
Cefi	Cement Finishers	60.90	487.20	4.9		11.0		44.4	27.05	87.95	703.60								
Elec	Electricians	76.95	615.60	2.8		16.0		47.3	36.40	113.35	906.80								
Elev	Elevator Constructors	107.00	856.00	2.6		16.0		47.1	50.40	157.40	1259.20								
Eqhv	Equipment Operators, Crane or Shovel	72.95	583.60	4.6		14.0		47.1	34.35	107.30	858.40								
Eqmnd	Equipment Operators, Medium Equipment	69.05	552.40	4.6		14.0		47.1	32.50	101.55	812.40								
Eqht	Equipment Operators, Light Equipment	65.85	526.80	4.6		14.0		47.1	31.00	96.85	774.80								
Eqol	Equipment Operators, Oilers	61.85	494.80	4.6		14.0		47.1	29.10	90.95	727.60								
Eqmrm	Equipment Operators, Master Mechanics	73.05	584.40	4.6		14.0		47.1	34.40	107.45	859.60								
Glaz	Glaziers	61.70	493.60	6.6		11.0		46.1	28.45	90.15	721.20								
Lath	Lathers	64.65	517.20	4.6		11.0		44.1	28.55	93.20	745.60								
Marb	Marble Setters	62.25	498.00	7.8		11.0		47.3	29.45	91.70	733.60								
Mill	Millwrights	68.90	551.20	3.9		11.0		43.4	29.90	98.80	790.40								
Mstz	Mosaic & Terrazzo Workers	60.65	485.20	4.7		11.0		44.2	26.80	87.45	699.60								
Pord	Painters, Ordinary	53.80	430.40	6.5		11.0		46.0	24.75	78.55	628.40								
Psst	Painters, Structural Steel	55.30	442.40	10.4		11.0		49.9	27.60	82.90	663.20								
Pape	Paper Hangers	54.15	433.20	6.5		11.0		46.0	24.90	79.05	632.40								
Pile	Pile Drivers	65.90	527.20	7.0		16.0		51.5	33.95	99.85	798.80								
Plas	Plasterers	58.20	465.60	7.2		11.0		46.7	27.15	85.35	682.80								
Plah	Plasterer Helpers	52.05	416.40	7.2		11.0		46.7	24.30	76.35	610.80								
Plum	Plumbers	78.90	631.20	3.4		16.0		47.9	37.80	116.70	933.60								
Rodm	Rodmen (Reinforcing)	68.80	550.40	4.8		14.0		47.3	32.55	101.35	810.80								
Rofc	Roofers, Composition	57.40	459.20	16.6		11.0		56.1	32.15	89.55	716.40								
Rots	Roofers, Tile & Slate	57.40	459.20	16.6		11.0		56.1	32.15	89.55	716.40								
Rohe	Roofers, Helpers (Composition)	43.05	344.40	16.6		11.0		56.1	24.15	67.20	537.60								
Shee	Sheet Metal Workers	76.40	611.20	4.9		16.0		49.4	37.75	114.15	913.20								
Spri	Sprinkler Installers	79.70	637.60	3.6		16.0		48.1	38.35	118.05	944.40								
Stpi	Steamfitters or Pipefitters	79.70	637.60	3.4		16.0		47.9	38.20	117.90	943.20								
Ston	Stone Masons	64.20	513.60	7.8		11.0		47.3	30.35	94.55	756.40								
Sswk	Structural Steel Workers	70.40	563.20	8.3		14.0		50.8	35.80	106.20	849.60								
Tilf	Tile Layers	60.70	485.60	4.7		11.0		44.2	26.80	87.50	700.00								
Tilh	Tile Layers Helpers	49.40	395.20	4.7		11.0		44.2	21.80	71.20	569.60								
Trit	Truck Drivers, Light	58.35	466.80	7.5		11.0		47.0	27.40	85.75	686.00								
Trhv	Truck Drivers, Heavy	61.00	488.00	7.5		11.0		47.0	28.65	89.65	717.20								
Sswl	Welders, Structural Steel	70.40	563.20	8.3		14.0		50.8	35.80	106.20	849.60								
Wrck	*Wrecking	51.05	408.40	8.5		11.0		48.0	24.50	75.55	604.40								

\*Not included in averages

Heavy Construction Costs with RSMMeans Data

**01 54 | Construction Aids**

**01 54 33 | Equipment Rental**

		UNIT	HOURLY OPER. COST	RENT PER DAY	RENT PER WEEK	RENT PER MONTH	EQUIPMENT COST/DAY
4030	10' wide, 150 H.P.	Ea.	118.76	2,298.28	7,126.21	20,004.62	2,375.35
4050	Crawler, 8' wide, 100 H.P., diesel		108.78	850	3,000	7,000	1,470.26
4060	10' wide, 150 H.P.		129.12	1,490.82	4,420.15	11,151.59	1,917
4070	Concrete paver, 12' to 24' wide, 250 H.P.		108.82	1,978.26	6,180.26	17,405.15	2,106.65
4080	Placer-spreader-trimmer, 24' wide, 300 H.P.		145.95	2,996.50	9,364.97	26,333.77	3,040.62
4100	Pump, centrifugal gas pump, 1-1/2" diam., 65 GPM		4.86	63.42	198.02	553.80	78.52
4200	2" diameter, 130 GPM		6.18	55.54	162.87	439.62	82.04
4300	3" diameter, 250 GPM		6.35	68.44	195.47	511.69	89.90
4400	6" diameter, 1500 GPM		27.57	399.97	1,010.08	2,572.19	422.55
4500	Submersible electric pump, 1-1/4" diameter, 55 GPM		.50	47.97	127.09	324.96	29.44
4600	1-1/2" diameter, 83 GPM		.55	50.82	239.28	598.55	52.29
4700	2" diameter, 120 GPM		2.04	77.33	212.08	547.31	58.74
4800	3" diameter, 300 GPM		3.77	141.53	346.27	987.24	99.38
4900	4" diameter, 560 GPM		18.29	152.89	379.70	1,080.97	222.24
5000	6" diameter, 1590 GPM		27.37	246.31	738.94	2,153.04	366.74
5100	Diaphragm pump, gas, single, 1-1/2" diameter		1.40	43.71	131.12	382.04	37.44
5200	2" diameter		4.94	49.17	147.51	429.80	69.01
5300	3" diameter		5.01	81.53	239.28	608.77	87.95
5400	Double, 4" diameter		7.48	237.49	544.58	1,369.41	168.76
5450	Pressure washer 5 GPM, 3000 psi		4.80	112.57	393.01	952.62	117.02
5460	7 GPM, 3000 psi		6.13	113	354.79	861.67	120
5470	High Pressure Water Jet 10 KSI		49.12	849.48	2,637.84	7,402.84	920.52
5480	40 KSI		34.63	1,152.04	3,590.40	10,087.08	995.11
5500	Trash pump, self-priming, gas, 2" diameter		4.73	101.94	282.03	668.29	94.24
5600	Diesel, 4" diameter		8.29	176.72	527.87	1,290.26	171.86
5650	Diesel, 6" diameter		20.89	429.13	1,299.54	3,703.08	427.05
5655	Grout Pump		23.22	330.49	1,027.94	2,882.02	391.31
5700	Salamanders, L.P. gas fired, 100,000 Btu		3.58	76.05	224.35	566.58	73.49
5705	50,000 Btu		2.07	28.40	72.08	187.76	30.99
5720	Sandblaster, portable, open top, 3 C.F. capacity		.74	153	604.25	1,635	126.79
5730	6 C.F. capacity		1.25	243.10	903.60	1,638.80	190.68
5740	Accessories for above		.17	27.93	87.03	244.13	18.75
5750	Sander, floor		.95	83.12	257.87	591.13	59.19
5760	Edger		.65	62.15	189.15	412.20	43.02
5800	Saw, chain, gas engine, 18" long		2.18	78.66	246.14	579.98	66.64
5900	Hydraulic powered, 36" long		.97	85.14	255.43	744.24	58.87
5950	60" long		.97	95.04	285.11	830.70	64.81
6000	Masonry, table mounted, 14" diameter, 5 H.P.		1.64	103.38	343.11	786.60	81.76
6050	Portable cut-off, 8 H.P.		2.25	98.80	305.09	699.27	79.01
6100	Circular, hand held, electric, 7-1/4" diameter		.28	24.44	88.08	224.87	19.88
6200	12" diameter		.29	55.14	133.30	335.14	29
6250	Wall saw, w/hydraulic power, 10 H.P.		4.08	150.50	451.51	1,315.56	122.94
6275	Shot blaster, walk-behind, 20" wide		5.88	330.49	1,027.94	2,882.02	252.63
6280	Sidewalk broom, walk-behind		2.78	97.17	302.71	853.31	82.81
6300	Steam cleaner, 100 gallons per hour		4.14	97.17	302.71	853.31	93.69
6310	200 gallons per hour		5.38	117.54	365.77	1,028.49	116.17
6340	Tar Kettle/Pot, 400 gallons		20.42	138.41	415.21	1,209.80	246.42
6350	Torch, cutting, acetylene-oxygen, 150' hose, excludes gases		.57	20.25	62.99	183.97	17.12
6360	Hourly operating cost includes tips and gas		25.99	8.26	25.62	71.77	213.02
6410	Toilet, portable chemical		.16	27.35	84.51	237.34	18.16
6420	Recycle flush type		.20	33.75	104.69	293.85	22.53
6430	Toilet, fresh water flush, garden hose,		.24	40.14	124.86	350.37	26.90
6440	Hoisted, non-flush, for high rise		.19	32.58	102.16	287.08	21.94
6465	Tractor, farm with attachment		21.57	348.25	1,033.71	2,346.31	379.32
6480	Trailers, platform, flush deck, 2 axle, 3 ton capacity		2.10	111.71	346.82	971.97	86.19
6500	25 ton capacity		7.74	168.74	523.43	1,469.27	166.62
6600	40 ton capacity		9.99	239.72	744.15	2,090.88	228.76
6700	3 axle, 50 ton capacity		10.84	473.48	1,420.46	4,138.78	370.80



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emergency: 800-258-5585  
**DiscoverLEWIS.com**

July 13, 2022

Mr. Laura Davis  
BAI Group, LLC  
366 Walker Drive, Suite 300  
State College, PA 16801

**Re: Vacuum Tanker Services and Leachate Transportation & Disposal**

Dear Ms. Davis

Lewis Environmental, Inc. (Lewis) is pleased to offer BAI Group, LLC (BAI Group) this proposal to provide a vacuum tanker for transportation and waste disposal services at the above referenced site in Coal Township, PA. This proposal is based on information provided by the client and Lewis' experience performing similar services in the Mid-Atlantic Region. The following is offered for your review and consideration:

**Scope of Work:**

1. Lewis will use current analytical data to generate waste profiles for leachate generated at a municipal waste transfer facility. Profiles will be submitted to the generator for signature, and once executed submitted to the disposal facility for approval.
2. Upon facility approval a mutually agreed upon schedule for the leachate hauling will be established. It is estimated that one load per week will be hauled with volumes of 5,000 to 5,700 gallons. This work is estimated to begin between September 1<sup>st</sup> to 15<sup>th</sup>.
3. Lewis will mobilize to the project site with a one (1) CDL driver and approximately 6,000 gallon vacuum tanker trucks to pump-out liquid from on-site leachate collection tanks at a waste transfer station. There is anticipated to be approximately 12,000 gallons of water to be hauled for disposal bi-weekly.
4. Lewis will provide shipping papers for each load hauled and present to the generator for signature.
5. Lewis will transport the waste to a licensed facility for disposal.
6. Lewis will provide copies of all finalized shipping paperwork to BAI Group, LLC upon receipt from the disposal facility.

**Pricing:**

Description – Waste Transportation and Disposal

Vacuum Tanker and Driver - Transportation  
 Bulk Water Disposal (1,000 gallon minimum)  
 Vacuum Truck Washout

Costs

\$1,385.00/Load  
 \$0.05/Gallon  
 \$550.00/Wash