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ATTACHMENT 2

FDEP Form 62-701.900(28)

Closure Cost Estimating Form For Solid Waste Facilities

With Supplemental Notes and Calculations

Print Form | Reset Form

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(28), F.A.C.
Form Title: Closure Cost Estimating Form For Solid Waste Facilities
Effective Date: January 6, 2010
Incorporated in Rule 62-701.630(3), F.A.C.

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

Date of DEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: J.E.D. Solid Waste Management Facility WACS ID: 89544
Permit Application or Consent Order No.: SC49 & SO49-199726-004 &005 Expiration Date: Jan. 11, 2012
Facility Address: 1501 Omni Way, Saint Cloud, Florida 34773
Permittee or Owner/Operator: Omni Waste of Osceola County, LLC (a wholly owned subsidiary of WSI, Inc.)
Mailing Address: 1501 Omni Way, Saint Cloud, Florida 34773

Latitude: 28 ° 03 ' 32 " Longitude: 81 ° 05 ' 46 "
Coordinate Method: DGPS Datum: WGS84
Collected by: Johnston's Surveying Company/Affiliation: Johnston's Surveying

Solid Waste Disposal Units Included in Estimate:

Phase / Cell	Acres	Date Unit Began Accepting Waste	Active Life of Unit From Date of Initial Receipt of Waste	If active: Remaining life of unit	If closed: Date last waste received	If closed: Official date of closing
Phase 2 / Cell 7	12.0	N/A	1 to 2 years			

Total disposal unit acreage included in this estimate: Closure: 12.0 Long-Term Care: 12.0

Facility type: (Check all that apply) ☒ Class I ☐ Class III ☐ C&D Debris Disposal ☐ Other: _____

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check type)

☐ Letter of Credit* ☒ Insurance Certificate ☐ Escrow Account
☐ Performance Bond* ☐ Financial Test ☐ Form 29 (FA Deferral)
☐ Guarantee Bond* ☐ Trust Fund Agreement

* - Indicates mechanisms that require the use of a Standby Trust Fund Agreement

Northwest District 160 Government Center Pensacola, FL 32502-5794 850-595-8360
Northeast District 7825 Baymeadows Way, Ste. B200 Jacksonville, FL 32256-7590 904-807-3300
Central District 3319 Maguire Blvd., Ste. 232 Orlando, FL 32803-3767 407-894-7555
Southwest District 13051 N. Telecom Pky. Temple Terrace, FL 33637 813-632-7600
South District 2295 Victoria Ave., Ste. 364 Fort Myers, FL 33901-3881 239-332-6975
Southeast District 400 N. Congress Ave., Ste. 200 West Palm Beach, FL 33401 561-681-6600

III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code, (F.A.C.) sets forth the method of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of closure in current dollars. Select one of the methods of cost estimate ajustment below.

☐ **(a) Inflation Factor Adjustment** ☒ **(b) Recalculated or New Cost Estimates**

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflatory by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste website www.dep.state.fl.us/waste/categories/swfr or call the Financial Coordinator at (850) 245-8706.

This adjustment is based on the Department approved closing cost estimate dated: _____

Latest Department Approved **Closing Cost** Estimate:		Current Year Inflation Factor, ***e.g. 1.02***		Inflation Adjusted Closing Cost Estimate:
_____	×	_____	=	_____

This adjustment is based on the Department approved long-term care cost estimate dated: _____

Latest Department Approved Annual **Long-Term Care** Cost Estimate:		Current Year Inflation Factor, ***e.g. 1.02***		Inflation Adjusted Annual Long-Term Care Cost Estimate:
_____	×	_____	=	_____

Number of Years of Long Term Care Remaining: × _____

Inflation Adjusted Long-Term Care Cost Estimate: = _____

Signature by: ☐ **Owner/Operator** ☐ **Engineer** (check what applies)

_____ Signature	_____ Address
_____ Name & Title	_____ City, State, Zip Code
_____ Date	_____ E-Mail Address
_____ Telephone Number	

IV. ESTIMATED CLOSING COST (check what applies)

☒ **Recalculated Cost Estimate** ☐ **New Facility Cost Estimate**

Notes: 1. Cost estimates for the time period when the extent and manner of landfill operation makes closing most ex
2. Cost estimate must be certified by a professional engineer.
3. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.
4. In some cases, a price quote in support of individual item estimates may be required.

Description	Unit	Number of Units	Cost / Unit	Total Cost
1. Proposed Monitoring Wells	**(Do not include wells already in existence.)**			
	EA			
			Subtotal Proposed Monitoring Wells:	
2. Slope and Fill (bedding layer between waste and barrier layer):				
Excavation	CY			
Placement and Spreading	CY	20,167	$1.89	$38,115.63
Compaction	CY			
Off-Site Material	CY			
Delivery	CY			
			Subtotal Slope and Fill:	$38,115.63
3. Cover Material (Barrier Layer):				
Off-Site Clay	CY			
Synthetics - 40 mil	SY	60,500	$2.39	$144,595.00
Synthetics - GCL	SY			
Synthetics - Geonet	SY			
Synthetics - Other (explain)	SY	53,724	$3.08	$165,469.92
Geocomposite Drainage Layer			Subtotal Cover Material:	$310,064.92
4. Top Soil Cover:				
Off-Site Material	CY			
Delivery	CY			
Spread	CY	30,250	$2.04	$61,710.00
			Subtotal Top Soil Cover:	$61,710.00
5. Vegetative Layer				
Sodding	SY	60,500	$1.79	$108,295.00
Hydroseeding	AC			
Fertilizer	AC	12.5	$1,000.00	$12,500.00
Mulch	AC			
Other (explain)	SY	10,083	$3.06	$30,853.98
Vegetative soil cover (6 in thick layer)			Subtotal Vegetative Layer:	$151,648.98
6. Stormwater Control System:				
Earthwork	CY	2,175	$4.08	$8,874.00
Grading	SY			
Piping	LF	4,800	$12.12	$58,176.00
Ditches	LF			
Berms	LF			
Control Structures	EA	22	$867.00	$19,074.00
Other (explain)				
			Subtotal Stormwater Control System:	$86,124.00

Description	Unit	Number of Units	Cost / Unit	Total Cost
7. Passive Gas Control:				
Wells	EA	17	$10,998.00	$186,966.00
Pipe and Fittings	LF	2,940	$25.76	$75,734.40
Monitoring Probes	EA			
NSPS/Title V requirements	LS	1		
			Subtotal Passive Gas Control:	$262,700.40
8. Active Gas Extraction Control:				
Traps	EA	2	$6,630.00	$13,260.00
Sumps	EA			
Flare Assembly	EA			
Flame Arrestor	EA			
Mist Eliminator	EA			
Flow Meter	EA			
Blowers	EA			
Collection System	LF			
Other (explain) _____				
			Subtotal Active Gas Extraction Control:	$13,260.00
9. Security System:				
Fencing	LF			
Gate(s)	EA			
Sign(s)	EA			
			Subtotal Security System:	
10. Engineering:				
Closure Plan Report	LS	1	$20,400.00	$20,400.00
Certified Engineering Drawings	LS	1		
NSPS/Title V Air Permit	LS	1		
Final Survey	LS	1	$15,300.00	$15,300.00
Certification of Closure	LS	1	$6,120.00	$6,120.00
Other (explain) _____				
			Subtotal Engineering:	$41,820.00

Description	Hours	Cost / Hour	Hours	Cost / Hour	Total Cost
11. Professional Services					
	Contract Management		Quality Assurance		
P.E. Supervisor					
On-Site Engineer					
Office Engineer					
On-Site Technician					
Other (explain)	1	$19,308	1	$0.88	$19,308.88

Estimated @ 2% of Construction Cost (i.e., .02 x $965,443.93 = $19,308.88)

Description	Unit	Number of Units	Cost / Unit	Total Cost
Quality Assurance Testing	LS	1	$67,581.08	$67,581.08
			Subtotal Professional Services:	$86,889.96

Estimated @ 7% of Construction Cost (i.e., .07 x $965,443.93 = $67,581.08)

		Subtotal of 1-11 Above:	$1,052,333.89
12. Contingency	10 % of Subtotal of 1-11 Above		$105,233.39
		Subtotal Contingency:	$105,233.39
		Estimated Closing Cost Subtotal:	$1,157,567.28

Description	**Total Cost**
13. Site Specific Costs	
Mobilization Estimated @ 3% of Construction Cost	$28,963.32
Waste Tire Facility	
Materials Recovery Facility	
Special Wastes	
Leachate Management System Modification	
Other (explain) _____	
_____ Subtotal Site Specific Costs:	$28,963.32

TOTAL ESTIMATED CLOSING COSTS ($): $1,186,530.60

V. ANNUAL COST FOR LONG-TERM CARE

See 62-701.600(1)a.1., 62-701.620(1), 62-701.630(3)a. and 62-701.730(11)b. F.A.C. for required term length. For landfills certified closed and Department accepted, enter the remaining long-term care length as "Other" and provide years remaining.

(Check Term Length) ☐ 5 Years ☐ 20 Years ☒ 30 Years ☐ Other, ___ Years

Notes: 1. Cost estimates must be certified by a professional engineer.

2. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.

3. In some cases, a price quote in support of individual item estimates may be required.

All items must be addressed. Attach a detailed explanation for all entries left blank.

Description	Sampling Frequency (Events / Year)	Number of Wells	(Cost / Well) / Event	Annual Cost
1. Groundwater Monitoring [62-701.510(6), and (8)(a)]				
Monthly	12			
Quarterly	4			
Semi-Annually	2			
Annually	1			
			Subtotal Groundwater Monitoring:	
2. Surface Water Monitoring [62-701.510(4), and (8)(b)]				
Monthly	12			
Quarterly	4			
Semi-Annually	2			
Annually	1			
			Subtotal Surface Water Monitoring:	
3. Gas Monitoring [62-701.400(10)]				
Monthly	12			
Quarterly	4			
Semi-Annually	2			
Annually	1			
			Subtotal Gas Monitoring:	
4. Leachate Monitoring [62-701.510(5), (6)(b) and 62-701.510(8)c]				
Monthly	12			
Quarterly	4			
Semi-Annually	2			
Annually	1	1	$1,050.60	$1,050.60
Other (explain) _____				
			Subtotal Leachate Monitoring:	$1,050.60

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. Leachate Collection/Treatment Systems Maintenance				
Maintenance				
Collection Pipes	LF			
Sumps, Traps	EA	1	$508.98	$508.98
Lift Stations	EA			
Cleaning	LS	1	$399.23	$399.23
Tanks	EA			

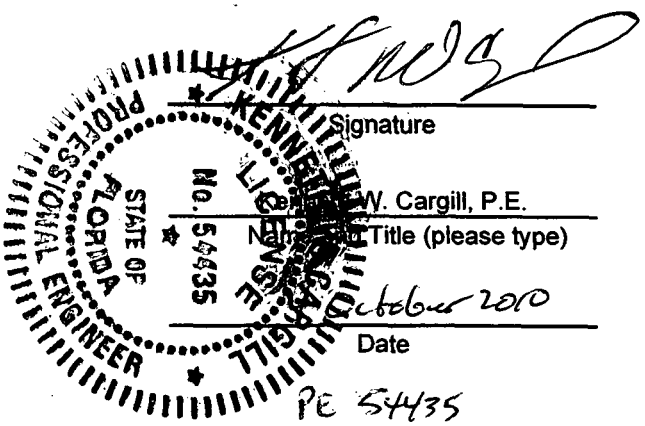
Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. (continued)				
Impoundments				
Liner Repair	SY	1	$105.06	$105.06
Sludge Removal	CY			
Aeration Systems				
Floating Aerators	EA			
Spray Aerators	EA			
Disposal				
Off-site (Includes transportation and disposal)	1000 gallon	1	$122.00	$122.00
			Subtotal Leachate Collection / Treatment Systems Maintenance:	$1,135.27
6. Groundwater Monitoring Well Maintenance				
Monitoring Wells	LF			
Replacement	EA			
Abandonment	EA			
			Subtotal Groundwater Monitoring Well Maintenance:	
7. Gas System Maintenance				
Piping, Vents	LF	25	$25.76	$644.00
Blowers	EA			
Flaring Units	EA			
Meters, Valves	EA			
Compressors	EA			
Flame Arrestors	EA			
Operation	LS	1	$850.00	$850.00
			Subtotal Gas System Maintenance:	$1,494.00
8. Landscape Maintenance				
Mowing	AC	12.5	$500.00	$6,250.00
Fertilizer	AC			
			Subtotal Landscape Maintenance:	$6,250.00
9. Erosion Control and Cover Maintenance				
Sodding	SY	100	$1.79	$179.00
Regrading	AC			
Liner Repair	SY	10	$21.00	$210.00
Clay	CY			
			Subtotal Erosion Control and Cover Maintenance:	$389.00
10. Storm Water Management System Maintenance				
Conveyance Maintenance	LS	1	$1,000.00	$1,000.00
			Subtotal Storm Water Management System Maintenance:	$1,000.00
11. Security System Maintenance				
Fences	LS	1		
Gate(s)	EA			
Sign(s)	EA			
			Subtotal Security System Maintenance:	

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
12. Utilities	LS	1	$2,521.44	$2,521.44
			Subtotal Utilities:	$2,521.44
13. Leachate Collection/Treatment Systems Operation				
Operation				
P.E. Supervisor	HR			
On-Site Engineer	HR			
Office Engineer	HR			
OnSite Technician	HR			
Materials	LS	1		
	Subtotal Leachate Collection/Treatment Systems Operation:			
14. Administrative				
P.E. Supervisor	HR			
On-Site Engineer	HR			
Office Engineer	HR			
OnSite Technician	HR			
Other	YR	1	$2,101.20	$2,101.20
See attached notes			Subtotal Administrative:	$2,101.20
			Subtotal of 1-14 Above:	$15,941.51
15. Contingency	10	% of Subtotal of 1-14 Above		$1,594.15
			Subtotal Contingency:	$1,594.15

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
16. Site Specific Costs				
			Subtotal Site Specific Costs:	
			ANNUAL LONG-TERM CARE COST ($ / YEAR):	$17,535.66
			Number of Years of Long-Term Care:	30
			TOTAL LONG-TERM CARE COST ($):	$526,069.83

VI. CERTIFICATION BY ENGINEER

This is to certify that the Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and/or long-term care of the facility and comply with the requirements of Rule 62-701.630 F.A.C. and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Cost Estimates shall be submitted to the Department annually, revised or adjusted as required by Rule 62-701.630(4), F.A.C.



Signature

Kenneth W. Cargill, P.E.
Name and Title (please type)

October 2010
Date

PE 54435
Florida Registration Number
(please affix seal)

6350 Riverside Drive
Mailing Address

Punta Gorda, Florida 33982
City, State, Zip Code

kwcargill@earthlink.net
E-Mail address (if available)

(941) 276-2004
Telephone Number

VII. SIGNATURE BY OWNER/OPERATOR

Signature of Applicant

Mike Kaiser, VP Engineering
Name and Title (please type)

mkaiser@wasteservicesinc.com
E-Mail address (if available)

1501 Omni Way
Mailing Address

Saint Cloud, Florida 34773
City, State, Zip Code

(407) 891-3720
Telephone Number

Written by:	Kirk Wills	Date:	Sept 2010	Reviewed by:	Ken Cargill	Date:	Sept 2010
Client:	Omni Waste of Osceola County, LLC	Project:	Financial Assurance	Project No.:	Cell 7	Task No.:	05

FINANCIAL ASSURANCE COST ESTIMATE FOR CLOSURE OF CELL 7: NOTES AND CALCULATIONS J.E.D. SOLID WASTE MANAGEMENT FACILITY

The information provided below presents the methods and assumptions used to estimate the cost for the items listed on the FDEP Form 62-701.900(28), F.A.C., "*Closure Cost Estimating Form for Solid Waste Facilities*" (January 6, 2010). The closure and long-term care costs were estimated for Cell 7 using the FDEP approved unit rate costs from the financial assurance cost estimate revision associated with the partial closure project completed and approved in December 2009. The December 2009 revision included bids obtained for the construction of the partial closure project completed in the third quarter of 2009 and the Phase 1, Sequence 1 and 2 Gas Collection and Control System (GCCS) construction completed in December 2008 and March 2009, respectively. The unit rate costs used in calculation of the closure and long-term care costs for Cell 7 have been inflated by 2% to account for the 2010 inflation adjustment issued by the FDEP on January 5, 2010. It is noted that the financial assurance cost estimate presented in Attachment 2 includes the closure and long-term care costs for Cell 7 only. The section numbers noted below correspond to the item numbers on FDEP Form 62-701.900(28), F.A.C.

The JED vertical expansion solid waste and environmental resource permits (ERP) were utilized for determining the closure quantities used in this closure cost estimate. The Cell 7 closure area has been divided into side slope and top deck areas as shown on Figure 1. The corrected area (to account for side slopes) for Cell 7 is included in the quantity calculations that follow.

The currently approved cost estimates for fiscal year 2010, for which financial assurance has been provided is $4,763,710.72 for the closure construction cost and $6,852,272.06 for long term care.

Written by:	Kirk Wills	Date:	Sept 2010	Reviewed by:	Ken Cargill	Date:	Sept 2010
Client:	Omni Waste of Osceola County, LLC	Project:	Financial Assurance	Project No.:	Cell 7	Task No.:	05

I. GENERAL INFORMATION

The financial assurance cost estimate presented on the FDEP form provides for the closure costs for Cell 7 (upper slopes and top) of the Phase 2 development area at the JED facility.

V. RECALCULATE ESTIMATED CLOSING COST

1. Monitoring Wells

The groundwater monitoring well system for Phases 1 through 3 (Cells 1 through 10) has already been completed. Therefore, no costs have been included as part of this financial assurance revision.

2. Slope and Fill (Bedding layer between waste and barrier layer)

On-site soils will be used for intermediate cover. The total estimated cubic yardage is 20,167 yd^3 for the 1-ft thick intermediate cover layer over the waste surface. The cost per cubic yard (yd^3) includes excavation, hauling, placement, spreading, grading, and compaction. The estimated cost for slope and fill material is as follows:

For Cell 7, the top deck area covers 1.4 acres and 3:1 side slope area of 10.6 acres for a total Cell acreage of 12 acres, as shown on Figure 1. To account for the additional area attributed to the 3:1 side slopes the plan areas are multiplied by 1.05. Therefore, the 3:1 side slope area for Cell 7; 10.6 acres x 1.05 = 11.1 acres plus 1.4 acre top deck area equals a total corrected area of **12.5 acres**.

(12.5 acres x 43,560 ft^2/acre x 1 ft cover thickness) ÷ 27 ft^3/ yd^3 = 20,167 yd^3

20,167 yd^3 @ \$1.89/ yd^3 = **\$38,115.63**

3. Cover Material (Barrier Layer)

The final cover system for the JED facility is comprised of (from bottom to top):

- 12 inch intermediate cover soil layer (Item No.2 above)

- 40-mil PE textured geomembrane;
- geocomposite drainage layer (on 3:1 side slopes only);
- 18 inch cover protective soil layer; and
- 6 inch vegetative soil layer (Item No. 4 below)

Cost for geosynthetics includes material and installation costs. Although the Permit drawings show the top deck area of Cell 7 covered with a smooth geomembrane liner, to keep the calculation simple it is assumed that the entire 12.5 acres will be covered with a textured geomembrane. This is a conservative estimate since the unit cost for smooth geomembrane liner is less than that of the textured.

The estimated quantities are:

- 40-mil PE textured geomembrane:
  12.5 acres x 43,560 ft^2/acre ÷ 9 ft^2/yd^2 = 60,500yd^2
  60,500 yd^2 40-mil PE textured geomembrane @ \$2.39/yd^2= **\$ 144,595**

- geocomposite drainage layer (on 3:1 side slopes only):
  12.5 acres – 1.4 acres (top deck of Cell 7) = 11.1 acres
  11.1 acres x 43,560 ft^2/acre ÷ 9 ft^2/yd^2 = 53,724 yd^2
  53,724 yd^2 geocomposite drainage layer @ \$3.08/yd^2= **\$ 165,469.92**

The total cost for final cover materials (excluding the intermediate and vegetative soil layers) is **\$310,064.92.**

4. Top Soil Cover

Cover protective soil will consist of material obtained from on-site. Cost for cover protective soil includes excavation, hauling, placement, spreading, grading, and compaction.

- 18 inch cover protective soil layer:
  (12.5 acres x 43,560 ft^2/acre x 1.5 ft cover thickness) ÷ 27 ft^3/ yd^3 = 30,250 yd^3
  30,250 yd^3 cover soils @ \$2.04/ yd^3 = **\$ 61,710**

5. Vegetative Layer

The vegetative soil layer consists of a 6 inch layer over the cover protective soil. The estimated cubic yardage is 10,083 yd^3. The vegetative soil will consist of material obtained from on-site sources. The cost per cubic yard includes hauling, placing, spreading, and grading. The estimated cost for the vegetative soil layer is as follows:

- (12.5 acres x 43,560 ft^2/acre x 0.5 ft cover thickness) ÷ 27 ft^3/ yd^3 = 10,083 yd^3
  10,083 yd^3 @ \$3.06/ yd^3 = **\$ 30,853.98**

The final cover area will be sodded. Sodding costs include all labor and materials.

12.5 acres x 43,560 ft^2/acre ÷ 9 ft^2/yd^2 = 60,500 yd^2
60,500 yd^2 Bahia sod @ \$1.79/yd^2= **\$ 108,295**

Fertilizer (Amendments) for the vegetative soil layer is \$1,000 per acre
12.5 acres x \$1,000/acre = **\$12,500**

The total cost for the vegetative layer (vegetative soil cover and sod) is **\$151,648.98.**

6. Storm Water Control System

Most of the perimeter site storm water control system components (i.e., concrete storm water structures, discharge pipes to dry retention areas, and perimeter road swale inlet pipes) were installed as part of the Cell 7 construction, and therefore, have not been included as part of this closure construction estimate. Storm water control components that will be installed during closure consist of side slope drainage swales, inlet structures on the side slope swales, seepage header piping, and HDPE corrugated down chute pipes. The earthwork estimate includes excavation, hauling, placement, spreading, grading, and compaction of the additional soils required on the drainage benches for sloping and cover over the down chute piping.

Based on the JED Vertical Expansion Permit drawings (Sheet 33 of 40), approximately 2,850 linear feet of side slope drainage swales, 1,500 linear feet of 18-inch down chute pipes, 3,300 linear feet of 4-in seepage header pipe, and twenty-two (22) inlet structures

will be installed to convey the storm water from the proposed side slope swales to the dry retention area located at the toe of the landfill perimeter berm. Costs associated with the additional storm water structure installed as part of the Cell 7 construction has also been included.

The total cost for the storm water control system is estimated to be **$86,124** as indicated below.

- Earthwork: Additional soil to construct drainage swales is calculated by from typical cross-section detail for the drainage swale from the Vertical Expansion Permit Drawings and using the average depth of the swale = 20.6 ft^2 per linear foot of swale. 20.6 ft^2 x 2,850 ft = 58,710 ft^3 ÷ 27 ft^3/yd^3 = 2,175 yd^3
  2,175 yd^3 @ $4.08/ yd^3 = **$ 8,874**
- Piping (material and installation):
  1. 1,500 ft of 18-inch HDPE corrugated pipe @ $29.58/ft = **$44,370**
  2. 3,300 ft of 4-inch HDPE corrugated pipe @ 4.18/ft = **$13,794** (the cost of the 4-inch drainage pipe includes the cost of the pipe and a 3-ft wide strip of geomembrane used to wrap the pipe)

To calculate an average cost per lineal foot of pipe for the FDEP form, the total pipe cost above has been divided by the total length of pipe to be installed:

($44,370 + $13,794) = $58,164 ÷ (1,500 ft + 3,300 ft) = $12.12 per ft.

- 4,800 ft x $12.12/ft = **$58,176**

- Drainage inlet structures: 22 @ $867 each = **$19,074**

7. Passive Gas Control:

The JED facility has an active gas collection and control system (GCCS) within the Phase 1 development area (i.e., Cells 1-4), which will be expanded upon with the closure of subsequent cells. The costs associated with the installation of gas controls were calculated utilizing the proposed GCCS design as provided in the vertical expansion permit

application for the JED facility (sheet 29 of 40) and the details as shown on the Phase 1, Sequence 1 - 3 GCCS Construction Drawings. Costs include materials and installation.

Gas Wells (drilling, perforated pipe section [including gravel], solid pipe section [including soil backfill], and well head):
[Drilling @ $27.54/ft, perforated pipe section @ $52.53/ft, solid pipe section @$34.68/ft, and well heads @ $1,224 each] Well depths shown are typical.

- 4 – 35 ft gas well @ $3,518/gas well = **$14,072**
- 3 – 75 ft gas well @ $6,792/gas well = **$20,376**
- 3 – 135 ft gas well @ $11,837/gas well = **$35,511**
- 3 – 170 ft gas well @ $14,479/gas well = **$43,437**
- 4 – 220 ft gas well @ $18,394/gas well = **$73,576**

To calculate an average cost per gas well for the FDEP form, the total well costs above have been divided by the proposed number of gas wells:

($14,072 + $20,376 + $35,511 + $43,437 + $73,576) = $186,972 ÷ (4 + 3 + 3 + 3 + 4) = **$10,998** per well x 17 gas wells = **$186,966**

Lateral piping (6-inch SDR-17 HDPE Pipe):

- 2,380 ft @ $18.36/ft = **$43,697**

Header piping (12-inch SDR-17 HDPE Pipe):

- 560 ft @ $34.68/ft = **$19,421**

To calculate the cost per linear foot of gas system piping, the total pipe cost has been divided by the total estimated linear footage of pipe:

($43,697 + $19,421) = $63,118 ÷ (2,380 + 560) ft = **$21.47/ft**

It is assumed that an additional 20% of the pipe cost is needed for fittings.

($21.47 x 20%) + $21.47 = $25.76

$25.76/ft x 2,940ft = **$75,734.40**

Perimeter gas monitoring probes have been installed for Phases 1 through 3 (i.e., Cells 1-10) therefore, no costs have been included in this closure cost estimate.

The total cost for passive gas controls is **$262,700.40**.

8. Active Gas Extraction Control:

Based on the proposed GCCS design, two gas flare stations will be installed as part of the GCCS for Phases 1 through 3. One gas flare station was already installed as part of the Phase 1, Sequence 1 and 2 GCCS installation (for Cells 1 through 4). One additional gas flare station will be installed for the closure of Phases 2 and 3 (Cells 5-10). The cost of the second gas flare was included as part of the Revised Financial Assurance for the remaining Phase 1 Closure Area, therefore, no additional costs have been included with the Cell 7 closure financial assurance.

Two condensate traps will be installed as part of the GCCS system within the footprint of Cell 7. The cost per condensate trap is $6,630 x 2 = **$13,260.**

The total cost for active gas extraction control is **$13,260.**

9. Security System

The perimeter fencing and gates were installed as part of the Phase 1 construction and therefore have not been included as part of this closure cost estimate.

10. Engineering

Costs for each item of engineering services associated with closure of Cell 7 are based on the costs associated with the partial closure of Phase 1. Where applicable, the costs are split based on the acreage to estimate the costs for the closure of the remaining Phase 1 area and Cells 5 and 6 (53.3 acres). As an example – the survey cost for the partial closure of Phase 1 was based on the closure area of approximately 25-acres: $30,000 / 25 acres = $1,200/acre

- Closure Permit Plan and Report (includes Construction Drawings and Technical Specifications): **$20,400**
- Final Survey: $1,224/acre x 12.5 acres = **$15,300**
- Certification Report (prepared and certified by Florida registered professional engineer): **$6,120**

Total cost for Engineering is **$41,820.**

11. Professional Services

It has been assumed that 2% of construction cost will be needed for contract/construction management, which corresponds to 0.02 x $965,443.93 = **$19,308.88**

It has also been assumed that 7% of construction cost will be needed for construction quality assurance, which corresponds to 0.07 x $965,443.93 = **$67,581.08.** This amount includes quality assurance testing.

Total cost for Professional Services is **$86,889.96**

12. Contingency

A contingency of 10% of the closure cost has been assumed: 0.10 x $1,052,333.89 = **$105,233.39.**

13. Site Specific Costs

a. Mobilization

Contractor mobilization has been assumed to be 3% of the closure cost, excluding the costs for professional services, which corresponds to 0.03 x $965,443.93 = **$28,963.32**

TOTAL ESTIMATED CLOSUE COST = $1,186,530.60

VI. ANNUAL COST FOR LONG-TERM CARE

The unit costs for calculation of the long-term care costs were primarily extracted from the Cell 6 Financial Assurance Minor Modification Application and inflated as described in the Cell 7 Minor Modification Application cover letter.

1. Groundwater Monitoring

Currently, the groundwater monitoring well network for Phases 1 through 3 (Cells 1-10) has been installed. The long-term care cost for groundwater monitoring wells was included in the previously approved financial assurance cost estimate. Therefore, no additional monitoring cost has been included as part of the long-term care cost estimate for Cell 7.

2. Surface Water Monitoring

The long-term care cost for surface water monitoring was included in the previously approved financial assurance cost estimate. Therefore, no additional monitoring cost has been included as part of the long-term care cost estimate for Cell 7.

3. Gas Monitoring

The long-term care cost for gas monitoring probes was included in the previously approved financial assurance cost estimate which included gas monitoring for Phases 1 through 3. Therefore, no additional monitoring cost has included as part of the long-term care cost estimate for Cell 7.

4. Leachate Monitoring

A leachate sample would be collected from Cell 7 annually. The leachate sampling cost includes all labor, equipment, and laboratory analyses required by the regulations.

- Annual leachate monitoring cost: **$1,050.60/year**

5. Leachate Collection/Treatment System Maintenance

For the long term care cost estimate, the following maintenance activities have been assumed:

Leachate collection pipes: Assumed that one cleaning within the 30-year monitoring period will be required for Cell 7. $11,976.84 / 30 years = **$399.23/year.**

Leachate pumps: Assumed that pumps require annual maintenance and Cell 7 will require a replacement pump during the 30-year monitoring period:

- Annual maintenance = $298.86/year
- Leachate pump replacement cost = $6,303.60/30years = $210.12/year
- Total estimated annual cost for pumps = **$508.98/year**

Leachate storage containers: Long term care for the leachate storage containers assumes that three of the four bladders will require replacement over the 30-year monitoring period. Replacement cost has been assumed to be $10,506 per flexible bladder. Total long-term care cost for the three bladder replacement was split based on number of cells (i.e. 10 cells) to estimate the Cell 7 long-term care cost for leachate storage containers.

- 3 bladders x $10,506/bladder /30 years x (1/10) = **$105.06/year**

Leachate disposal: Leachate generation rate after closure was assumed to be 20 percent of the annual average leachate generation rate for maximum waste height that was obtained from the HELP model Analysis (see Case 4 analyzed for maximum waste height of 220 ft in the calculation package entitled *Leachate Management System*).

- 24.63 cf/ac/year or 184.3 gal/ac/year x 12 acres x 20 percent = 442 gal/year → use minimum unit of 1,000 gallons as shown on FDEP form 1,000 gallons/year x $0.122/gallon for transportation and treatment = **$122/year.**

Therefore, total long-term care cost for leachate system maintenance = **$1,135.27/year.**

6. Maintenance of Groundwater Monitoring Wells

The long-term care cost for maintenance of groundwater monitoring wells was included in the previously approved financial assurance cost estimate. Therefore, no additional cost is included as part of the long-term care cost estimate for Cell 7.

7. Gas System Maintenance

Seventeen gas wells will eventually be installed within the footprint of Cell 7. It is estimated that an additional $50 per well/year will be needed for operation ($50 x 17 wells = **$850**). It is also assumed that 25 ft piping will require replacement (25 ft x 25.76/ft = **$644**). The remainder of the long-term care cost for gas system maintenance was included in the previously approved financial assurance cost estimate.

8. Landscape Maintenance

The long-term care cost estimate assumes that for the 12.5-acre area, the grass will be mowed four times per year at a cost of $113.46 per acre. Mowing/maintenance: 4 times/year x 12.5 acres x $125/acre = **$6,250/year**

9. Erosion Control and Cover Maintenance

As indicated on FDEP form.

10. Storm Water Management System Maintenance

As indicated on FDEP form.

11. Security System Maintenance

The long-term care cost for security system maintenance was included in the previously approved financial assurance cost estimate. Therefore, no additional cost is included as part of the long-term care cost estimate for Cell 7.

Written by:	Kirk Wills	Date:	Sept 2010	Reviewed by:	Ken Cargill	Date:	Sept 2010
Client:	Omni Waste of Osceola County, LLC	Project:	Financial Assurance	Project No.:	Cell 7	Task No.:	05

12. Utilities

The long-term care cost estimate for Phases 1 through 3 assumes that the power requirements for site equipment (i.e., pumps, lights, blowers, etc.) will cost $2,101.20 per month. The total utility cost for Phases 1 through 3 is split based on number of cells (i.e. 10 cells) to estimate the utility cost for Cell 7:

- $2,101.20/month x 12 months x (1/10) = **$2,521.44/year.**

13. Leachate Collection/Treatment Systems Operation

The long-tern care costs for the leachate collection/treatment system operation was include in the previously approved financial assurance cost estimate. Therefore, no additional cost is included as part of the long-term care cost for Cell 7.

14. Administrative

The long-term care cost estimate assumes that the administrative costs for Phases 1 through 3 to be $21,012/year. The total administrative cost for Phases 1 through 3 is split based on number of cells (i.e. 10 cells) to estimate the administrative cost for Cell 7:

- $21,012/year x (1/10) = **$2,101.20/year**

15. Contingency

Assuming a contingency of 10 % of total long-term annual care cost

ANNUAL LONG-TERM CARE COST: $17,535.66

TOTAL LONG-TERM CARE COST (30 years): $526,069.83