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OCT 03 2002

Florida Department of
Solid Waste Section

Memorandum

Environmental Protection

CENTRAL DISTRICT

2-7340

TO: Financial Coordinator
Solid Waste Section
MS-4565
Division of Waste Management
OCD-SW-02-0376

FROM: James N. Bradner, P.E.
Program Manager
Solid and Hazardous Waste

DATE: October 2, 2002

SUBJECT: Volusia County – SW
Tomoka Farms Road Landfill,
East Cell, Class
Permit Application Nos. SC64-0078767-014 & SO64-0078767-015
Review of Closure/Long-Term Care Cost Estimates

We have reviewed the enclosed closure and long-term care cost estimates submitted August 23, 2002, for the subject facility and believe that they are adequate for the site at this time.

Please feel free to contact me if you need any additional information.

JNB
JNB/gc/ew

Enclosures

cc: Frank Hornbrook – DEP – Tallahassee – MS-4565



Florida Department of Environmental Protection
 Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form #	62-701.900(28)
Form Title	Financial Assurance Cost Estimate Form
Effective Date	05-27-01
DEP Application No.	(Filled by DEP)

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FINANCIAL ASSURANCE COST ESTIMATE FORM

Date: _____ Date of FDEP Approval: _____

Solid Waste Section

I. GENERAL INFORMATION:

Facility Name: Tomoka Farms Road Landfill East Cell WACS or GMSID #: _____
 Permit / Application No.: SC64-0078767-014 Expiration Date: N/A
 Facility Address: 1990 Tomoka Farms Road Daytona Beach, FL
 Permittee: Volusia County
 Mailing Address: 3151 East State Road 44 DeLand, FL 32724

Latitude: 29-07-50 Longitude: 81-06-02 or UTM: _____

Solid Waste Disposal Units Included in Estimate:

Phase / Cell	Acres	Date Unit Began Accepting Waste	Design Life of Unit From Date of Initial Receipt of Waste
East Class I Cell	47	N/A	10 Years
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Total Landfill Acreage included in this estimate. _____ 47 Closure _____ 47 Long-Term Care

Type of Landfill: Class I _____ Class III _____ C&D Debris

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check Type)

_____ Letter of Credit * _____ Insurance Certificate
 _____ Performance Bond * Escrow Account
 _____ Guaranty Bond * _____ Trust Fund Agreement

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

Northwest District
 160 Governmental Center
 Pensacola, FL 32501-5794
 850-595-8360

Northeast District
 7825 Baymeadows Way, Ste. B200
 Jacksonville, FL 32256-7590
 904-448-4300

Central District
 3319 Maguire Blvd., Ste. 232
 Orlando, FL 32803-3767
 407-894-7555

Southwest District
 3804 Coconut Palm Dr.
 Tampa, FL 33619
 813-744-6100

South District
 2295 Victoria Ave., Ste. 364
 Fort Myers, FL 33901-3881
 941-332-6975

Southeast District
 400 North Congress Ave.
 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 sets forth the method of a cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of in current dollars. Select one of the methods of cost estimate adjustment below.

(a) Inflation Factor Adjustment

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 Deflator by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste Financial Coordinator at (850)-488-0300.

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

Latest Department Approved Closure Cost Estimate:	x	Current Year Inflation Factor	=	Inflation Adjusted Closure Cost Estimate:
_____		_____		_____

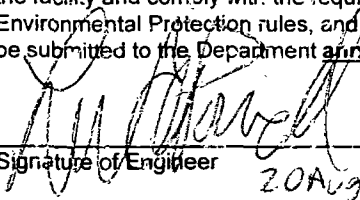
This adjustment is based on the Department approved long-term care cost estimate dated: _____

Latest Department Approved Annual Long-Term Care Cost Estimate:	x	Current Year Inflation Factor	=	Inflation Adjusted Annual Long-Term Care Cost Estimate
_____		_____		_____
		Number of Years of Long Term Care Remaining:	x	_____
		Inflation Adjusted Long-Term Care Cost Estimate:	=	_____

(b) Recalculate Estimates (see section V)

IV. CERTIFICATION BY ENGINEER

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



 Signature of Engineer

 Signature of Owner/Operator

Lee A. Powell, P.E.

 Name & Title (please type)

 Name & Title (please type)

35992

 Florida Registration Number (affix seal)
 SCS Engineers

 Telephone Number

501 N. Grandview Ave Suite 400 Daytona Beach, FL 32118

 Mailing Address

386 238-7770

 Telephone Number

V RECALCULATE ESTIMATED CLOSING COST

For the time period in the landfill operation when the extent and manner of its operation makes closing **most expensive**.

**** Third Party Estimate / Quote must be provided for each item**
**** Costs must be for a third party providing all material and labor**

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
1 Proposed Monitoring Wells		(Do not include wells already in existence.)		
	EA			
2 Slope and Fill (bedding layer between waste and barrier layer):				
Excavation	CY	0.00	0.00	\$0.00
Placement and Spreading	CY	75830.00	2.50	\$189,575.00
Compaction	CY	0.00	0.00	\$0.00
Off Site Material	CY	0.00	0.00	\$0.00
Delivery	CY	0.00	0.00	\$0.00
			Subtotal Slope and Fill:	\$189,575.00
3 Cover Material (Barrier Layer):				
18 Inches Cover Soil	CY	113740.00	2.50	\$284,350.00
Synthetics - 40 mil	SY	227480.00	4.11	\$934,942.80
Synthetics - GCL	SY	0.00	0.00	\$0.00
Synthetics - Geonet	SY	0.00	0.00	\$0.00
Synthetics - Other	SY	0.00	0.00	\$0.00
			Subtotal Barrier Layer Cover:	\$1,219,292.80
4 Top Soil Cover:				
Off-Site Material	CY	0.00	0.00	\$0.00
Delivery	CY	0.00	0.00	\$0.00
Spread	CY	37915.00	2.50	\$94,787.50
			Subtotal Top Soil Cover	\$94,787.50

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
5. Vegetative Layer				
Sodding	SY	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Hydroseeding	AC	<u>47.00</u>	<u>2,275.00</u>	<u>\$106,925.00</u>
Fertilizer	AC	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Mulch	AC	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Other	SY	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Subtotal Vegetative Layer:				<u>\$106,925.00</u>
6. Stormwater Control System:				
Earthwork	CY	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Grading	SY	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Piping	LF	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Ditches	LF	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Berms	LF	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Control Structures	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Side Slope Drains	LS	<u>0.00</u>	<u>0.00</u>	<u>\$138,320.00</u>
Subtotal Stormwater Controls:				<u>\$138,320.00</u>
7. Gas Controls: Passive				
Wells	EA	<u>46.00</u>	<u>1,900.00</u>	<u>\$87,400.00</u>
Pipe and Fittings	LF	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Monitoring Probes	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
NSPS/Title V requireme	LS	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Subtotal Passive Gas Control:				<u>\$87,400.00</u>

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
8. Gas Control: Active Extraction		Not Applicable		
Traps	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Sump	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Flare Assembly	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Flame Arrestor	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Mist Eliminator	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Flow Meter	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Blowers	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Collection System	LF	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Other (describe)		<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Subtotal Active Gas Extraction:				<u> </u>
9. Security System		Not Applicable		
Fencing	LF	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Gate(s)	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Sign(s)	EA	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Subtotal Security System:				<u> </u>
10. Engineering:				
Closure Plan report	LS	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Certified Engineer	LS	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
NSPS/Title V Air Permit	LS	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Final Survey	LS	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Certification of Closure	LS	<u>0.00</u>	<u>0.00</u>	<u>\$0.00</u>
Other (detail)	<u> </u>	<u>0.00</u>	<u>0.00</u>	<u>\$100,000</u>
Subtotal Engineering:				<u>\$100,000</u>

11. Professional Services

	Contract Management		Quality Assurance		TOTAL
	Hours	LS	Hours	LS	
P.E. Supervisor	0	0.00	0	0.00	\$0.00
On-Site Engineer	0	0.00	0	0.00	\$0.00
Office Engineer	0	0.00	0	0.00	\$0.00
On-Site Technician	0	0.00	0	0.00	\$0.00
Other (explain)	0	0.00	0	0.00	\$0.00
Quality Assurance Testing		LS	0	0.00	\$150,000
Subtotal Professional Services:					<u>\$150,000</u>

Subtotal of 1-11 Above: \$2,086,300.30

12. Contingency % of Total 10.00%

Closing Cost Subtotal: \$2,294,930.00

13. Site Specific Costs (explain)

<u>Mobilization</u>	<u>\$0.00</u>
<u>Waste Tire Facility</u>	<u>\$0.00</u>
<u>Materials Recovery Facility</u>	<u>\$0.00</u>
<u>Special Wastes</u>	<u>\$0.00</u>
<u>Leachate Management System Modification</u>	<u>\$0.00</u>
<u>Other</u>	<u>\$0.00</u>
<u> </u>	<u>\$0.00</u>

Subtotal Site Specific Costs: \$0.00

TOTAL CLOSING COSTS: \$2,294,930.00

VI ANNUAL COST FOR LONG-TERM CARE

(Check Term Length)

_____ 5 years _____ 20 years X 30 years _____ Other

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.

**** Third Party Estimate / Quote must be provided for each item**
**** Costs must be for a third party providing all material and labor**

All items must be addressed. Attach a detailed explanation for all items marked not applicable (N/A).

DESCRIPTION	Sampling Frequency (events/yr.)	Number of Wells	\$/Well/Event	\$ / Year
1. Groundwater Monitoring (62-701.510(6), and (8)(a))		Not Applicable		
Monthly	12	_____	0.00	\$0.00
Quarterly	4	_____	0.00	\$0.00
Semi-Annual	2	_____	0.00	\$0.00
Annual	1	_____	0.00	\$0.00
Subtotal Groundwater Monitoring:				\$0.00
2. Surface Water Monitoring (62-701.510(4), and (8)(b))		Not Applicable		
Monthly	12	_____	0.00	\$0.00
Quarterly	4	_____	0.00	\$0.00
Semi-Annual	2	_____	0.00	\$0.00
Annual	1	_____	0.00	\$0.00
Subtotal Surface Water Monitoring:				\$0.00
3. Gas Monitoring				
Monthly	12	_____	0.00	\$0.00
Quarterly	4	_____	3000.00	3000.00
Semi-Annual	2	_____	0.00	\$0.00
Annual	1	_____	0.00	\$0.00
Subtotal Gas Monitoring:				\$3,000.00

DESCRIPTION	Sampling Frequency (events/yr.)	Number of Wells	\$/Well/Event	\$/Year
4. Leachate Monitoring (62-701.510(5), (6)(b) and 62-701.510(8)(c))			Not Applicable	
Monthly	12	0	0.00	\$0.00
Quarterly	4	0	0.00	\$0.00
Semi-Annual	2	0	0.00	\$0.00
Annual	1	0	0.00	\$0.00
Other		0	0.00	\$0.00
Subtotal Groundwater Monitoring:				\$0.00

DESCRIPTION	UNIT	QUANTITY	UNIT COST	ANNUAL COS
5. Leachate Collection/Treatment Systems Maintenance				
Maintenance				
Collection Pipes	LF	0	0.00	\$0.00
Sumps, Traps	EA	0	0.00	\$0.00
Lift Stations	EA	4	2,000.00	\$8,000.00
Cleaning	LS	0	0.00	\$0.00
Tanks	EA	0	0.00	\$0.00
Impoundments				
Liner Repair	SY	0	0.00	\$0.00
Sludge Removal	CY	0	0.00	\$0.00
Aeration Systems				
Floating Aerators	EA	0	0.00	\$0.00
Spray Aerators	EA	0	0.00	\$0.00
Disposal				
Off-site (Include Transportation and Disposal)	1000 gallon	625	4.00	\$2,500.00

6. Leachate Collection/Treatment Systems Operation

Operation		Hours	\$/Hour	Total
P.E. Supervisor	HR	0	0.00	\$0.00
On-Site Engineer	HR	0	0.00	\$0.00
Office Engineer	HR	0	0.00	\$0.00
On-site Technician	HR	0	0.00	\$0.00
Materials	LS	0	0.00	\$0.00
Subtotal Leachate Collection/Treatment System Maintenance & Operation:				\$10,500.00

7. Maintenance of Groundwater Monitoring Wells

Not Applicable

Monitoring Wells	LF	0	0.00	\$0.00
Replacement	EA	0	0.00	\$0.00
Abandonment	EA	0	0.00	\$0.00
Subtotal Groundwater Monitoring Well Maintenance:				\$0.00

8. Gas System Maintenance

Piping, Vents	EA	47	50.00	\$2,350.00
Blowers	EA	0	0.00	\$0.00
Flaring Units	EA	0	0.00	\$0.00
Meters, Valves	EA	0	0.00	\$0.00
Compressors	EA	0	0.00	\$0.00
Flame Arrestors	EA	0	0.00	\$0.00
Operation	LS	0	0.00	\$0.00
Subtotal Gas System:				\$2,350.00

9. Landscape

Mowing	AC	47	350.00	\$16,450.00
Fertilizer	AC	0	0.00	\$0.00
Subtotal Landscape Maintenance:				\$16,450.00

DESCRIPTION	UNIT	QUANTITY	UNIT COST	ANNUAL COST
10. Erosion Control & Cover Maintenance				
Sodding	SY	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Regrading	AC	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Liner Repair	SY	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Clay	CY	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Subtotal Erosion Control and Cover Maintenance:				<u>\$10,000.00</u>
11. Storm Water Management System Maintenance				
Conveyance Maintenance	LS	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Subtotal Storm Water System Maintenance:				<u>\$10,000.00</u>
12. Security System Maintenance				
		Not Applicable		
Fences	LF	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Gate(s)	EA	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Sign(s)	EA	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Subtotal Security System:				<u>\$0.00</u>
13. Utilities	LS	<u>1</u>	<u>15000.00</u>	<u>\$15,000.00</u>
14. Administrative				
		Not Applicable		
P.E. Supervisor	HR	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
On-Site Engineer	HR	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Office Engineer	HR	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
On-site Technician	HR	<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Other (explain)		<u>0</u>	<u>0.00</u>	<u>\$0.00</u>
Subtotal Administrative:				<u>\$0.00</u>
15. Contingency	% of Total	<u>\$67,300.00</u>	<u>10%</u>	<u>\$6,700.00</u>
Subtotal Contingency:				<u>\$6,700.00</u>

16. Site Specific Costs (explain)

UNIT COST

_____	<u>LS</u>	<u>\$0.00</u>
_____	<u>LS</u>	<u>\$0.00</u>
_____	<u>LS</u>	<u>\$0.00</u>

ANNUAL LONG-TERM CARE COST (\$/Year): **\$74,000.00**

NUMBER OF YEARS OF LONG-TERM CARE **30**

TOTAL LONG-TERM CARE COST (\$): **\$2,220,000.00**