

LAWGIBB  
GROUP 

Fred Wick

January 30, 2002

D.E.P.

JAN 31 2002

Southwest District Tampa

Ms. Susan J. Pelz, P.E.  
Florida Department of Environmental Protection  
Solid Waste Section  
3804 Coconut Palm Drive  
Tampa, Florida 34654

Subject: **Additional Information for Financial Assurance Cost Estimates  
West Pasco Class III Landfill, FDEP Permit No. SO51-267334  
Pending Permit No. 26255-001-SO, Pasco County  
LAW Project 40141-8-0451.07**

Dear Ms. Pelz:


Law Engineering and Environmental Services, Inc. (LAW) is pleased to submit the enclosed eight copies of the Additional Information for Financial Assurance Cost Estimates for East Pasco Landfill. The following additional information is in response to the comments in your discussion with Mr. Bob Sigmond with Pasco County.

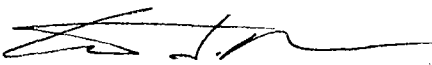
The closure cost estimate has been revised to provide for closure of four 5-acre cells at the West Pasco Class III Landfill instead of two 5-acre cells as previously provided. The site grading, fill material, and 40-mil liner closure cost unit rates have been revised based on the unit rates provided by Handex for the East Pasco Landfill financial assurance cost estimate.

LAW appreciates the opportunity to be of service to Pasco County. If you have any questions or comments concerning this report, please contact Mr. George Ellsworth at 813/289-0750.

Sincerely,

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

  
George W. Ellsworth, P.G.  
Senior Environmental Geologist  
Florida Registration 848

  
Curtis J. Roos, P.E.  
Chief Engineer  
Florida Registration 27570

GWE/CJR:cjs\G:\ENVIRO\1998\Projects\4014180451 PASCO\4014080451.07\_FA\_WP\_ADD\_INFO\_3.doc

cc: Mr. Robert J. Sigmond, Pasco County  
Mr. John Power, Pasco County

Revised Financial Assurance Cost Estimated  
Handex Cost Estimates

**D.E.P.**

**JAN 31 2002**

**Southwest District Tampa**

**ATTACHMENT A**

**FDEP FINANCIAL ASSURANCE COST ESTIMATE**



III. 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.

All items must be addressed.

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

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
<b>1. Monitoring Wells:</b>				
Borehole Excavation	CY		<u>inplace</u>	<u>\$0</u>
Backfill	CY		<u>inplace</u>	<u>\$0</u>
Gravel Pack	CY		<u>inplace</u>	<u>\$0</u>
Casing	LF		<u>inplace</u>	<u>\$0</u>
Screen	EA		<u>inplace</u>	<u>\$0</u>
Cap	EA		<u>inplace</u>	<u>\$0</u>
			<b>Subtotal Monitoring Wells</b>	<u>\$0</u>
<b>2. Slope and Fill:</b>				
Site Grading	AC	<u>20</u>	<u>2554.54</u>	<u>\$51,091</u>
Placement/Spreadin *	CY	<u>32267</u>	<u>4.14</u>	<u>\$133,584</u>
Compaction *	CY			<u>\$0</u>
Off Site Material	CY			<u>\$0</u>
			<b>Subtotal Slope and Fill</b>	<u>\$184,675</u>
<b>3. Cover Material:</b>				
Off-Site Clay	CY			<u>\$0</u>
On-Site Clay	CY			<u>\$0</u>
Synthetic-40 mil	SF	<u>871,200</u>	<u>0.58</u>	<u>\$505,296</u>
Synthetic-30 mil	SY			<u>\$0</u>
Synthetic-GCL	SY			<u>\$0</u>
Synthetic-Geonet	SY			<u>\$0</u>
Synthetic-Other	SY			<u>\$0</u>
			<b>Subtotal Cover Material</b>	<u>\$505,296</u>

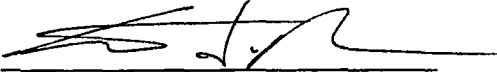
DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
<b>4. Top Soil Cover:</b>				
Off-Site Material	CY	<u>64,533</u>	<u>\$ 4.270</u>	<u>\$275,557</u>
Off Site Material	CY	<u>          </u>	<u>          </u>	<u>\$0</u>
Delivery *	CY	<u>          </u>	<u>          </u>	<u>\$0</u>
Spreading *	CY	<u>          </u>	<u>          </u>	<u>\$0</u>
Compaction *	CY	<u>          </u>	<u>          </u>	<u>\$0</u>
			<b>Subtotal Top Soil Cover</b>	<u><b>\$275,557</b></u>
<b>5. Stormwater Control:</b>				
Excavation, Grading & Recontouring	CY	<u>          </u>	<u>          </u>	<u>\$0</u>
Stormwater Sideslope Conveyances	LS	<u>200</u>	<u>\$51.45</u>	<u>\$10,290</u>
Ditch Construction	LF	<u>          </u>	<u>          </u>	<u>\$0</u>
Berm Construction	CY	<u>          </u>	<u>          </u>	<u>\$0</u>
			<b>Subtotal Stormwater Control</b>	<u><b>\$10,290</b></u>
<b>6. Gas Migration Control:</b>				
Wells (8@25ft)	LF	<u>200</u>	<u>\$67.00</u>	<u>\$13,400</u>
Pipe and Fittings	LF	<u>1200</u>	<u>\$31.00</u>	<u>\$37,200</u>
Traps	EA	<u>          </u>	<u>Not Applicable</u>	<u>\$0</u>
Sump	EA	<u>          </u>	<u>Not Applicable</u>	<u>\$0</u>
Flare Assembly	EA	<u>          </u>	<u>Not Applicable</u>	<u>\$0</u>
Flame Arrestor	EA	<u>          </u>	<u>Not Applicable</u>	<u>\$0</u>
Mist Eliminator	EA	<u>          </u>	<u>Not Applicable</u>	<u>\$0</u>
Flow Meter	EA	<u>          </u>	<u>Not Applicable</u>	<u>\$0</u>
Blowers	EA	<u>          </u>	<u>Not Applicable</u>	<u>\$0</u>
Other Describe Mobilization	LS	<u>1</u>	<u>8000</u>	<u>\$8,000</u>
Monitoring Probes	LF	<u>          </u>	<u>Not Applicable</u>	<u>\$0</u>
NSPS/Title V Requirements	LS	<u>          </u>	<u>Not Applicable</u>	<u>\$0</u>
				<u>\$0</u>
				<u>\$0</u>
			<b>Subtotal Gas Migration Control</b>	<u><b>\$58,600</b></u>

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
<b>7. Revegetation:</b>				
Sodding	SY	96,800	\$1.04	\$100,672
Irrigation 1st 30 days	LS			\$0
Hydroseeding *	AC			
Fertilizer *	AC			\$0
Mulch *	AC			\$0
			Subtotal Revegetation	\$100,672
<b>8. Landscape Irrigation System:</b>				
Temporary Watering (30 days)	LS	1	5000	\$5,000
Pumps	EA			\$0
			Subtotal Landscape Irrigation System	\$5,000
<b>9. Security System:</b>				
Fencing	LF			\$0
Gate(s)	EA			\$0
Sign(s)	EA			\$0
			Subtotal Security System	\$0
<b>10. Engineering:</b>				
Closure Plan Report	LS	1	\$20,000	\$20,000
Certified Engineering				
Drawings(for construction)	LS	1	\$5,000	\$5,000
Closure Permit	LS	1	\$10,000	\$10,000
NSPS/Title V Air Permit	LS			\$0
Other (Detail):				\$0
				\$0
				\$0
			Subtotal Engineering	\$35,000

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL**
11. Benchmark Installation	EA	<u>1</u>	<u>\$1,000</u>	<u>\$1,000</u>
Final Survey	LS	<u>1</u>	<u>\$1,000</u>	<u>\$1,000</u>
<b>Subtotal Benchmark Installation</b>				<u>\$2,000</u>
12. Certification of Closure	LS	<u>1</u>	<u>\$5,000</u>	<u>\$5,000</u>
<b>Subtotal Certification of Closure</b>				<u>\$5,000</u>
13. Administrative:				
P.E. Supervisor	HR	<u>24</u>	<u>\$85.00</u>	<u>\$2,040</u>
On-Site Engineer	HR	<u>48</u>	<u>\$71.40</u>	<u>\$3,427</u>
Office Engineer	HR	<u>48</u>	<u>\$51.50</u>	<u>\$2,472</u>
On-Site Technician 40 hrs for 4 wks	HR	<u>240</u>	<u>\$39.10</u>	<u>\$9,384</u>
Other (Explain):				
<u>Travel</u>	DAY	<u>36</u>	<u>\$50</u>	<u>\$1,800</u>
	Acre			
<b>Subtotal Administrative</b>				<u>\$19,123</u>
14. Quality Assurance:				
P.E. Supervisor	HR	<u>52</u>	<u>85.00</u>	<u>\$4,420</u>
On-Site Engineer	HR	<u>208</u>	<u>71.40</u>	<u>\$14,851</u>
Office Engineer	HR	<u>52</u>	<u>51.50</u>	<u>\$2,678</u>
On-Site Technician	HR	<u>1040</u>	<u>39.10</u>	<u>\$40,664</u>
Secretarial	HR	<u>40</u>	<u>29.75</u>	<u>\$1,190</u>
<u>Travel</u>	DAY	<u>130</u>	<u>50</u>	<u>\$6,500</u>
<u>Testing</u>	ACRE	<u>40</u>	<u>1000</u>	<u>\$40,000</u>
<b>Subtotal Quality Assurance</b>				<u>\$110,303</u>
15. Site Specific Costs (Explain):				
<u>General Closure Const. (Mob</u>				
<u>Demob., Bonds, Ins. Survey.,</u>	LS	<u>0.114942529</u>	<u>1,013,650.00</u>	<u>\$116,511</u>
<u>Tire Processin :Reg Tires</u>	Tons	<u>2450</u>	<u>60.95</u>	<u>\$149,328</u>
<u>Tire Processing: De-riming</u>	TONS	<u>25</u>	<u>0.50</u>	<u>\$13</u>
<u>Tire Processing: Large Tire</u>	TONS	<u>50</u>	<u>70.89</u>	<u>\$3,545</u>
Tire processing includes shredding, loading, transporting and dumping on site				
<b>Subtotal Site Specific Costs</b>				<u>\$269,396</u>
<b>SUBTOTAL CLOSING COSTS</b>				
				<u>\$1,580,913</u>
16. Contingency	% of Total		<u>5%</u>	<u>\$79,046</u>
<b>TOTAL CLOSING COSTS</b>				<u>\$1,659,958</u>

CERTIFICATION BY ENGINEER

This is to certify that the Financial Assurance Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principals applicable to such facilities. In my professional judgement, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and long-term care of the facility, and comply with the requirements of Florida Administrative Code (FAC), Rule 17-701.630 and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Financial Assurance Cost Estimates shall be revised and submitted to the Department annually as required by FAC 17-701.630(4).

  
Signature

4919 West Laurel Street  
Mailing Address

Curtis J. Roos, PE, Chief Engineer  
Name and Title (please type)

Tampa, FL 33607  
City, State, Zip Code

27570  
Florida Registration Number (please affix seal)

(813) 289-0750  
Telephone Number

Date: 01/29/02



IV. (for 30 yrs., see 17-701.630 (3) (a))

(circle one)

**\*\* Third Party Estimate/Quote must be provided for each item.**  
**\*\* Costs must be for a third party providing material and labor.**  
 All items must be addressed.

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

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D)=(B)x(C)
1. Groundwater Monitoring 17-701.510(6), (8)(a)	sampling frequency events/yr	# of wells	\$/well/event	\$/yr
Monthly	_____	_____	_____	\$0.00
Quarterly	_____	_____	_____	\$0.00
Semi-Annual	2	10	\$368	\$7,360.00
Annual	_____	_____	_____	\$0.00
<b>Subtotal Groundwater Monitoring</b>				<u>\$7,360</u>
2. Gas Monitoring 17-701.400(10)	sampling frequency events/yr	# of locations	\$/location/event	\$/yr
Monthly	_____	None	_____	\$0.00
Quarterly	4	3	\$72.14	\$865.68
Semi-Annual	_____	None	_____	\$0.00
Annual	_____	None	_____	\$0.00
<b>Subtotal Gas Migration Monitoring</b>				<u>\$866</u>
3. Leachate Monitoring 17-701.510(5), (6)(b), 17-701.510(8)(c)	sampling frequency events/yr	# of locations	\$/location/event	\$/yr
Monthly	_____	_____	_____	\$0.00
Quarterly	_____	_____	_____	\$0.00
Semi-Annual	2	1	\$368	\$736.00
Annual	_____	_____	_____	\$0.00
<b>Subtotal Leachate Monitoring</b>				<u>\$736</u>

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D)=(B)x(C)
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4. Surface Water Monitoring 17-701.510(4),(8)(b)	sampling frequency events/yr	# of locations	\$/location/event	\$/yr
Monthly	_____	_____	_____	\$0
Quarterly	_____	_____	_____	\$0
Semi-Annual	_____	_____	_____	\$0
Annual	_____	_____	_____	\$0
Subtotal Surface Water Monitoring				

\$ \_\_\_\_\_

5. Leachate Collection/Treatment Systems Maintenance & Operation

Collection Pipes	LS	1	\$10,000.00	\$10,000
Sumps, Traps	EA	_____	_____	\$0
Lift Stations	EA	_____	_____	\$0
Tanks	EA	_____	_____	\$0
Impoundment				
Liner Repair	SY	_____	_____	\$0
Sludge Removal	CY	_____	_____	\$0
Aeration Systems				
Floating Aerators	EA	_____	_____	\$0
Spray Aerators	EA	_____	_____	\$0
				\$0
Off-Site Disposal (include transportation and disposal)	1000gal	5690	\$ 2.87	\$16,330
Operation				
P.E. Supervisor	HR	8	\$85.00	\$680
On-Site Engineer	HR	16	\$71.40	\$1,142
Office Engineer	HR	8	\$59.40	\$475
On-Site Technician	HR	48	\$39.10	\$1,877
On-Site Pretreatment System Maintenance				
				\$0
				\$0
Other (Describe)				\$0
				\$0

Subtotal Leachate Collection/Treatment System Maintenance & Ope

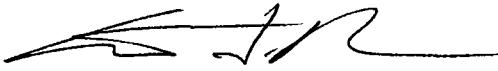
\$30,505

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D)=(B)x(C)
6. Maintenance of Groundwater				
Monitoring Wells	LS	1	\$453.00	\$453
<b>Subtotal Groundwater Monitoring Well Maintenance</b>				<u>\$453</u>
7. Maintenance of Gas Migration (10 percent of Section 6, Closure Costs)				
Piping, Vents, wells	LS	1	\$5,860.00	\$5,860.00
Wells/Vents	LF			\$0.00
Flaring Units	EA			\$0.00
Meters, Valves				\$0.00
Compressors				\$0.00
Flame Arrestors	EA			\$0.00
<b>Subtotal Gas Migration System Maintenance</b>				<u>\$5,860</u>
8. Landscape Maintenance				
Mowing	AC	160	\$15	\$2,400
Fertilizer	AC			\$0
Irrigation	AC			\$0
<b>Subtotal Landscape Maintenance</b>				<u>\$2,400</u>
9. Benchmark Maintenance	EA	1	\$312.80	\$313
<b>Subtotal Benchmark Maintenance</b>				<u>\$313</u>
10. Administrative/Overhead-				
P.E. Supervisor	HR	8	\$85.00	\$680
On-Site Engineer	HR	32	\$71.40	\$2,285
Office Engineer	HR	8	\$59.40	\$475
On-Site Technician	HR	32	\$39.10	\$1,251
Other (Explain):				
Bian GWP Rpt	LS	0.5	\$6,000	\$3,000
Electricity - include: Leachate Pumps, Blowers, Lighting, etc.	LS	1	\$1,243	\$1,243
<b>Subtotal Administrative</b>				<u>\$8,934</u>

DESCRIPTION	UNIT (A)	QUANTITY (B)	UNIT COST (C)	ANNUAL COST** (D)=(B)x(C)
<b>11. Maintenance of Cover</b>				
(10 % of Sect. 2 & 7, Closure Costs)				
Sodding, Soil	LS	1	\$6,527.55	\$6,527.55
Regrading	AC			\$0.00
Liner Repair- Synthetic	LS	1	\$800.00	\$800.00
Clay	CY			\$0.00
<b>Subtotal Cover Integrity Maintenance</b>				<b>\$7,328</b>
<b>12. Surface Water Drainage Maintenance</b>				
<i>Lumps Sum</i>				
Ditch Cleaning	LF	1	\$1,000.00	\$1,000
Stormwater Conveyance Maint.	EA			\$0
<b>Subtotal Drainage Maintenance</b>				<b>\$1,000</b>
<b>13. Security System Maintenance</b>				
<i>Lumps Sum</i>				
Fences	LF	1	\$ 800.00	\$800
Gate(s)	EA	1	\$ 100.00	\$100
Sign(s)	EA	1	\$ 100.00	\$100
<b>Subtotal Security System Maintenance</b>				<b>\$1,000</b>
<b>14. Contingency</b>				
% of Total	LS		0.05	\$66,754
<b>Subtotal Contingency</b>				<b>\$3,338</b>
<b>15. Site Specific Costs (Explain):</b>				
				\$0.00
				\$0.00
<b>Subtotal Site Specific Costs</b>				<b>\$0</b>
<b>LONG-TERM CARE COSTS (\$/yr)</b>				<b>\$70,092</b>
<b>TOTAL LONG-TERM CARE COSTS (\$)</b>				<b>\$2,102,751</b>

**CERTIFICATION BY ENGINEER**

This is to certify that the Financial Assurance Cost Estimates pertaining to the engineering features of this applicable to such facilities. In my professional judgement, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and long-term care of the facility, and comply with the requirements of Florida Administrative Code (FAC), Rule 17-701.630 and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Financial Assurance Cost Estimates shall be revised and submitted to the Department annually as required by FAC 17-701.630(4).

  
Signature 1-300

4919 West Laurel Street  
Mailing Address

Curtis J. Roos, P.E., Chief Engineer  
Name and Title (please type)

Tampa, FL 33607  
City, State, Zip Code

27570  
Florida Registration Number (please affix seal)

(813) 289-0750  
Telephone Number

Date: 01/29/02

**ATTACHMENT B**  
**HANDEX COST ESTIMATES**

**Ellsworth, George**

**From:** Asprinio, Carl [CAsprinio@handexmail.com]  
**Sent:** Friday, January 25, 2002 3:05 PM  
**To:** Ellsworth, George  
**Cc:** 'LUBITTLE@aol.com'; 'conawayg2@attbi.com'; Conaway, Gary  
**Subject:** East Pasco Landfill, Preliminary budget

1/24/2002

Mr. George W. Ellsworth  
LawGibb Group

Enclosed you will find our preliminary budget for the East Pasco Landfill Closure.

Mobilization	Lump Sum		35220.19
Site Grading, 13 acres	2554.57pr ac		33209.41
Furnish & Grade	62920 <u>sy</u>	1.38	86829.60
40 Mil Liner	566280 sf	.58	328442.40
Final Cover	41947 cy	4.27	179113.69
Total Estimate			662815.29

*# 414 cy QUOTE 1/30/02*

Estimate includes final Survey but not project bonding, site office trailers, phone/fax, etc. Also we figured that the soil material would be on site and that transportation would be minimal (1 mile ).

Thank you.  
Carl Asprinio  
Handex Construction, Inc.  
111 Kelsey Lane  
Suite E  
Tampa, FL 33619

Ph: 813-626-4646 Ext. 19  
Fx: 813-626-2996  
E-mail: casprinio@handexmail.com

*QUOTE 1/30/02*

*13 acres = 20973 cy  
\$86,879.60 / 20973 cy =  
\$4.14/cy*

# LAW

LAWGIBB Group Member 

## FACSIMILE TRANSMITTAL SHEET

LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.

To: Carl Asprinio From: George W. Ellsworth  
Company: Handex Date transmitted: January 24, 2002  
Fax Number: (813) 655-0544 or 626-2996 Telephone: (813) 636-1527  
Subject: East Pasco Landfill Cost estimates Fax Number: (813) 289-5474  
No. pages transmitted (incl. cover) \_\_\_\_\_ Hard Copy to Follow: Yes \_\_\_\_\_ No \_\_\_\_\_  
cc: \_\_\_\_\_

Urgent  For Review  Please Comment  Please Reply  Please Recycle

### COMMENTS:

The unit costs needed are for a 13 acre closure. The soil material would be from offsite and should include cost of material, transportation, labor to put in place, etc.

1. Site Grading (13 acres)
2. Fill including transportation and placement with an allowance for compaction (1 foot over the 13 acres)
3. 40 mil HDPE liner including transportation and installation (13 acres)
4. Top Soil including transportation and placement with an allowance for compaction (2 foot over the 13 acres)
4. Final Survey (13 acres)