

August 8, 2008

Via FedEX

Mr. Steve Morgan
Florida Department of Environmental Protection
Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Subject:

Pasco County Utilities

West Pasco Class III Landfill Opinion of Probable Closure Costs Pending Permit #26254-001-SO/T3

Tt# 01.0040.006

Dear Mr. Morgan:

On behalf of Pasco County Utilities, Tetra Tech is submitting this response to your request for additional information, dated May 17, 2007, for the above referenced permit renewal. Your comments are stated first with our responses following.

1. Please note that quantities and unit costs for closure and long-term care items may be added or changed based on comments and revisions to the above referenced permit application, therefore the proposed closure and long-term care costs may need to be revised accordingly.

Response: Acknowledged.

2. Based on your response to the comments provided below, please provide a revised DEP Form 62-701.900(28) that incorporates all proposed changes to the closure and long-term care cost estimates and is signed by both the engineer preparing the cost estimate and the owner/operator.

Response: Please see the attached revised form.

3. The closing and long-term care cost estimates provided are based on a closure design (e.g. soil subgrade/40 mil synthetic liner/top soil protective layer, stormwater side slope conveyances, passive gas wells, etc.) inconsistent with the closure plan and design referenced in the above referenced permit



application. Please provide revised closing and long-term care estimates, as applicable, consistent with the proposed closure and long-term care plan and design of the facility. These cost estimates will be reviewed in its entirely after receipt of this information.

Response: Tetra Tech has received a copy of the closure design from the engineer (CDM) preparing the permit renewal application for this facility. A revised Financial Assurance Cost Estimate Form, based on this design, is attached for review. Also attached are assumptions and third-party costs used in preparing the form.

4. Cost estimates provided as part of permit renewal shall be revised cost estimates and include the submittal of explanations and calculations to support quantities provided. The information, calculations, and/or assumptions utilized in support of the estimated unit quantities were not provided. This comment was previously provided in the Department's February 28, 2007 financial assurance RAI letter. Please provide this information.

Response: Assumptions and calculations used in preparing the calculations are attached for review.

5. Revised cost estimates cannot be based on inflation adjustment of previously approved costs, or be based on the costs for the County to perform the work. Therefore costs "obtained in-house or inflated from previous submittals..." cannot be utilized for estimated unit costs for closure. This comment was previously provided in the Department's February 28, 2007 financial assurance RAI letter. Please provide current third-party quotes to support all unit costs.

Response: Third-party costs and sources for typical costs used in preparing the calculations are attached for review. These references include costs provided by Goodwin Brothers Construction, Orange County Environmental Protection Division, and the Florida Department of Transportation.

6. The third-party quote provided by Goodwin Brothers Construction included a cost for "Synthetic-40 mil" which does not specify what type of liner the quote is based on (e.g. HDPE, LLDPE, PVC, etc.). Please provide a third-party quote that provided this information. Please provided supporting documentation of Goodwin Brothers Construction's experience in liner installation or provide a third-party quote from a firm with adequate experience in liner installation.

Response: Goodwin Brothers Construction was asked for, and has provided, a quote for typical costs associated with installation of the 40-mil geosynthetic liner. The contractor provided the requested cost.

Mr. Steve Morgan August 8, 2008 Page 3

We trust these responses will satisfy the Department's concerns. Please call me if you have any questions.

Very truly yours,

Tetra Tech

Jennifer L. Deal, P.E.

Project Manager

Attachments

Cc: John Power, Pasco County Utilities

Bob Sigmond, Pasco County Utilities Andy Woodcock, P.E., Tetra Tech

Aamod Sonawane, P.E., CDM

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Tetra Tech, Inc.

201 E. Pine St., Suite 1600.

Orlando, FL.32801:

Engineering Business #2429

Jennifer L. Deal, P.E.

Florida Registration # 58592

WEST PASCO CLASS III LANDFILL LONG TERM CARE PLAN

PENDING PERMIT #26254-001-SO/T3

PREPARED TO ACCOMPANY THE PERMIT RENEWAL APPLICATION PREPARED BY CDM, TAMPA, FLORIDA

1.0 FINAL USE AND LONG TERM CARE

At this time, the Owner anticipates that the proposed final use of the closed landfill will be open field within the 800 acre Shady Hills Solid Waste Facility. The final use for the landfill site will exclude any buildings or other structures, unless such buildings are structures are specifically designed to address gas venting and settlement considerations associated with construction over a landfill. Long term care for the site will include maintaining the landscaping, and erosion control for a period of thirty (30) years and maintaining the groundwater and gas monitoring plan for a period of time established by the FDEP.

1.1 Replacement of Monitoring Devices

If the monitor wells or other devices required by the Groundwater Monitoring Plan are destroyed or fail to operate for any reason, the landfill Owner or Operator, shall upon discovery, notify the FDEP in writing. All inoperative monitoring devices shall be repaired or replaced with functioning devices within 60 days of the discovery of the malfunctioning unit unless the landfill Owner or Operator is notified otherwise in writing from the FDEP.

1.2 <u>Long Term Monitoring</u>

Once the Landfill facility is closed, groundwater and gas monitoring will continue for a period of up to 30 years with reports submitted to the FDEP. Groundwater reports will be submitted semi-annually, leachate monitoring annually, and gas monitoring reports will be submitted on a quarterly basis. The owner may apply for a reduction in this period provided no problems have occurred.

1.3 Maintenance

Regular maintenance of all areas shall be performed by the operator or a designated agent in order to assure that the maintenance standards are achieved. The maintenance shall include monitoring for a minimum of thirty (30) years after planting, replacement of any planted areas that fail to survive in accordance with the established standards, and the maintenance of all required slopes, final cover, embankments, fences, gates, signs, monitoring systems and stormwater facilities. The operator will maintain a stockpile on-site of cover material to be used for final cover maintenance.

1.3.1 Revegetation

1. Revegetation of all disturbed areas shall be conducted in a manner so as to achieve permanent revegetation which shall minimize soil erosion and surface water runoff. Should washes, rills, gullies, or the

like, develop after revegetation and before a thirty (30) year maintenance period, such eroded areas shall be repaired, the slopes stabilized and revegetated, within thirty (30) days.

- 2. Good quality topsoil shall be applied as the soil cover material for all reclaimed areas. Alternate growing media must be approved by the FDEP prior to commencement of revegetation.
- 3. Revegetation efforts shall commence within thirty (30) days after completion of regrading and shall be completed within one hundred and twenty (120) days.

1.3.2 Reduced Long-term Care Period

The owner of the landfill at the time, may apply to the FDEP for a permit modification to reduce the long-term care schedule after a 5-year history after closure in accordance with FAC 62-701.620(2).

1.3.3 Right of Access and Access Control

The owner currently poses a right of access to the subject site. The future owner or operator, will maintain this right of access route and the property for the life of the landfill and throughout the long-term care period. Pasco County and all other owners/operators will maintain all security barriers (fencing, signage, gates) for the design life and long-term care period of the landfill.

1.3.4 Successors of Interest

Any person or corporation acquiring rights or ownership, possession or operation of the proposed Class III landfill will be subject to all the requirements of the permit for the proposed facility. Any lease or transfer of property will include the following conditions:

- 1. The previous owner or operator responsible for closure shall maintain proof of financial responsibility with the FDEP.
- 2. State the party responsible for continuance of monitoring, maintenance, and correction of problems.
- 3. Mineral rights to any recoverable materials buried at the landfill. Disturbance of a closed landfill will require a FDEP permit.

1.3.5 Completion of Long-Term Care

Upon completion of the landfill's long term care period, owner/operator, will notify the FDEP that a certification has been placed in the landfill's operating record verifying that long-term care has been completed in accordance with the approved Closure and Long-term Care Plans.

1.4 FINANCIAL RESPONSIBILITY

Upon approval of the application, the owner or operator will provide a Letter of Understanding guaranteeing financial responsibility for closure and post-closure costs. The financial guarantee will be submitted prior to permit being issued.

The Financial Assurance Cost Estimate Form, and supporting documentation, for the Class III Landfill is attached. Third party estimates for selected portions of the required work were used for the estimates.

1.4.1 Annual Cost Adjustments

The owner/operator of the landfill will submit an annual cost adjustment statement of closure and long-term care costs certified by a P.E. to the FDEP. These cost estimates will be revised for inflation and any changes in closure or corrective action plans. Upon approval of the adjusted financial estimates by the FDEP, the owner/operator shall ensure that the financial mechanism is updated accordingly.

FDEP FORM 62-701.900(28) FINANCIAL ASSURANCE COST ESTIMATE



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)

FINANCIAL ASSURANCE COST ESTIMATE FORM

Date:	08,	/08/08		Date of DEP Approval:				
I. GENERAL IN	IFORMATI	ON:						
Facility Name:	West P	asco Cla	ss III La	ndfill		WACS or GM	1SID #:	GMS 4051M30035
Permit / Applica	tion No.:	26255-0	001-SO			Expiration	Date:	
Facility Address	: 14606 H	ays Road	l, Springl	nill, FL 34	610, 3 mi	les north o	f Stat	e Road 52
Permittee:		ounty Ut						
Mailing Address	: 7530 Li	ttle Roa	d, Suite	205, New I	Port Riche	y, FL 33654	·	
	:_28°22'5	_		: <u>82°33'30</u>	"W	or	UTM:	
Solid Waste Dis	sposal Unit	s Included Acres	d in Estima	te: Date Unit Began Accepting Waste		Design Life o From Date of Receipt of W	Initial	
1	-	5	_	Jun-90		20		
2		5		May-02		20		
3		5	_	N/A	_	20		
4		5	_	Jun-90		20		
	,		-		- -	* - 1		
	•		-					
Total Landfill Acre	age include	ed in this e	stimate.	20	_Closure _	20	i	_ong-Term Care
Type of landfill:	-		Class I	√	_Class III _		(C&D Debris
II. TYPE OF FINA	NCIAL AS	SURANCE	E DOCUME	NT (Check Type)				
	etter of Cr	edit*	_		Insurance C	ertificate		*Indicates
s	Surety Bond	1*	_		Escrow Acco	ount	c	mechanisms that require use of a
Т	rust Fund	Agreement	: 	✓	Financial Te Letter of	st Understand		Standby Trust Fund Agreement

N hwest District C ernmental Center sacola, FL 32501-5794 850-595-8360

Northeast District 7825 Baymeadows Way, Ste. B200 3319 Maguire Blvd., Ste. 232 3804 Coconut Palm Dr. Jacksonville, FL 32256-7590 Orlando, FL 32803-3767 Tampa, FL 33619 Fort Myers, FL 33901-3881 904-448-4300

Central District 407-894-7555

Southwest District 813-744-6100

South District 941-332-6975

Southeast District 400 North Congress Ave. West Palm Beach, FL 33401 561-681-6600

111	ESTIM	ATE A	וות	MEDI	ENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code 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 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)-245-8732.

Latest Department Approved Closure Cost Estimate:	ne Department approved closure cost es Current Year Inflation Factor	amate dated.	Inflation Adjusted Closure Cost Estimate:
	X	=	\$0.00
This adjustment is based on the E	Department approved long-term care cost	t actimate dated:	·
Latest Department Approved Annual Long-Term Care Cost	Current Year	i estimate dated.	Inflation Adjusted Annual Long-Term Care
Latest Department Approved		r esumate dated.	Inflation Adjusted
Latest Department Approved Annual Long-Term Care Cost Estimate:	Current Year Inflation Factor	= X	Inflation Adjusted Annual 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 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 (F.A.C.), Rule 62-701.630 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 submitted to the Department annually, revised or adjusted as required by Rule 62-701.630(4), F.A.C.

Signature of Engineer

Jennifer L. Deal, P.E.

Name & Title (please type)

<u> 58592</u>

Florida Registration Number (affix seal) & Date

201 E. Pine St., Suite 1000

Engineering Business # 2429

Orlando, FL 32801 🖈

🛪 Jennifer L. Deal, P.E

Tetra Tech, Inc. 201 E. Pine St. #1000,

Mailing Address

407-839-3955

Telephone Number

DEP FORM 62-701.900(28) Effective 5-27-01

Robet J Sigmons Fiscal Busines Name & Title (please type) Sent - Dint

125-847-804 Telephone Number

The above referenced "Financial Assurance Cost Estimate" is an Engineer's opinion of probable costs for the facility, based upon a number of assumptions. These costs may vary due specific decisions made by the contractor including cost and extent of labor, equipment and materials, and market conditions, and a variety of other conditions over which the Engineer and Tetra Tech have no control.

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.

^{**} Costs must be for a third party providing all material and labor

	RIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
1. Prop	osed Monitoring Wells	(Do not i			
		EA	0	\$0.00	\$0.00
2. Slop	e and Fill (bedding layer betwe	en waste and b	arrier layer):		
	Excavation Grading	CY AC	20	\$5,200.00	\$104,000.0
	Placement and Spreading	CY	32,267	\$2.20	\$70,987.4
	Compaction	CY		·	\$0.00
	Off-Site Material	CY			\$0.00
	Delivery	CY			\$0.00
			Subtotal SI	ope and Fill:	\$174,987.4
. Cove	r Material (Barrier Layer):				
	Off-Site Glay Soil 24"Soil (15% bulking)	CY	74,213	\$2.20	\$163,268.60
	Synthetics - 40 mil	SY	871,200	\$0.88	\$766,656.00
	Synthetics - GCL	SY			\$0.00
	Synthetics - Geonet	SY	,		\$0.00
	Synthetics - Other	SY		.	\$0.00
			Subtotal Barr	ier Layer Cover:	\$929,924.60
Top So	oil Cover:			•	
	Off-Site Material	CY	16,133	\$15.00	\$241,995.00
	Delivery	CY			\$0.00
	Spread	CY			\$0.00
			Subtotal To	op Soil Cover:	\$241,995.00

^{**} Third Party Estimate / Quote must be provided for each item

DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
5. Vegetative Layer				
Sodding	SY	96,800	\$3.84	\$371,712.00
Hydroseeding	AC			\$0.00
Fertilizer	AC			\$0.00
Mulch	AC			\$0.00
Other Watering	SYLS	1	\$7,500.00	\$7,500.00
		Subtotal V	egetative Layer:	\$379,212.00
6. Stormwater Control System:				
Earthwork	CY			\$0.00
Grading	SY			\$0.00
Piping	LF			\$0.00
Ditches	LF			\$0.00
Berms	LF		<u> </u>	\$0.00
Control Structures	EA			\$0.00
Other	LS	200	\$65.00	\$13,000.00
		Subtotal Sto	rmwater Controls:	\$13,000.00
. Gas Controls: Passive				
Wells 8 at 25 dept	h EALF	200	\$80.00	\$16,000.00
Pipe and Fittings	LF	1,200	\$38.00	\$45,600.00
Monitoring Probes	EA		**************************************	\$0.00
NSPS/Title V requirements	LS	S Tolon		\$0.00
		Subtotal Pas	sive Gas Control:	\$61,600.00

SCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL
Gas Control: Active Extraction				
Traps	EA	Name of the last o	7	\$0.00
Sump	EA			\$0.00
Flare Assembly	EA		-	\$0.00
Flame Arrestor	EA			\$0.00
Mist Eliminator	EA	-	entre principal de la companya de l La companya de la co	\$0.00
Flow Meter	EA			\$0.00
Blowers	EA	Processing to a standard and a second		\$0.00
Collection System	LF			\$0.00
Other (describe)				\$0.00
		Subtotal Activ	e Gas Extraction:	\$0.00
curity System: Existing				
√ Fencing	LF			\$0.00
Gate(s)	EA			\$0.00
Sign(s)	EA			\$0.00
		Subtotal Se	curity System:	\$0.00
gineering:				
Closure Plan report	LS			\$25,000.00
Certified Engineer	LS			\$8,000.00
NSPS/Title V Air Permit	LS			
Final Survey	LS			\$7,000.00
Certification of Closure	LS			\$5,000.00
				
Other (detail) QA/aCPla	n LS			\$2,500.00

11. Professional Services

	Contract Ma	nagement	Quality A	Assurance	
	Hours	LS	Hours	LS	Total
P.E. Supervisor	24	\$3,120.0	60	\$7,800.0	\$10,920.00
On-Site Engineer			160	\$17,600.	\$17,600.00
Office Engineer	60	\$6,600.0	60	\$6,600.0	\$13,200.00
On-Site Technician			1,000	\$60,000.	\$60,000.00
Other (explain) Tra	vel			\$2,500.00	\$2,500.00
DESCRIPTION		UNIT	QUANTITY	UNIT COST	TOTAL
Quality Assurance Te	esting	LS	1	\$40,000.	\$40,000.00
			Subtotal P	rofessional Serv	rices: \$144,220.00
			Subtotal of 1-11	Above: _	\$1,992,439.00
12. Contingency		% of Total (ex	xample. enter .1 for 1	0%)	10%
			Closing Cost S	ubtotal: _	2,191,682.90
13. Site Specific Cost	s (explain)				
Mobilization	າ			_	\$30,000.00
Waste Tire	Facility				\$248,501.00
Materials R	ecovery Facility			_	
Special Wa	stes			_	
Leachate M	lanagement Syste	m Modification	· 		
Other				_	
-			Subtotal Site Specif	fic Costs:	\$278,501.00
			TOTAL CLOSING	costs _	\$2,470,183.90

VI. ANNUAL COST FOR LONG-TERM CARE			(Check Term Length)			
•	5 Years	20 Years	✓30 Years	Other		
See 62-701.600(1)a.1. andfills certified closed rears remaining.	, 62-701.620(1), 62-701.6 d and Department accepte	30(3)a. and 62-701.730 ed, enter the remaining	0(11)b. F.A.C. for required long-term care length as "	term length. For Other" and provide		
	** Third Party Estim ** Costs must be for	ate / Quote must be pro a third party providing a	vided for each item Ill material and labor			
All items mus	t be addressed. Attach a	a detailed explanation f	or all items marked not ap	plicable (N/A)		
	Sampling Frequency	N	and the street of the street o	PARTY COLUMN AND SALE CARACTERISTIC CO.		
Description	(events/yr.)	Number of Wells	\$ / Well / Event	\$/Year		
Groundwater Monitor	ring (62-701.510(6), and	(8)(a))				
Monthly	12	<u> </u>		\$0.00		
Quarterly	4			\$0.00		
Semi-Annual	2	12	\$484.10	\$11,618.40		
Annual	1			\$0.00		
		Subtotal Gr	oundwater Monitoring:	\$11,618.40		
Surface Water Monito	oring (62-701.510(4), and	(8)(b)				
Monthly	12			\$0.00		
Quarterly	4			\$0.00		
Semi-Annual	2			\$0.00		
Annual	1			\$0.00		
		Subtotal Surf	ace Water Monitoring:	\$0.00		
Sas Monitoring		•				
Monthly	12			\$0.00		
Quarterly	4 .	3	\$150.00	\$1,800.00		
emi-Annual	2			\$0.00		
Annual	1			\$0.00		
		Subtotal	Gas Monitoring:	\$1,800.00		

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Description	Sampling Frequency (events/yr.)	Number of Locations	\$/Location/Event	\$ / Year
4. Leachate Monitoring (62-	701.510(5), (6)(b) ar	nd 62-701.510(8)(c)		
Monthly	12		·	\$0.00
Quarterly	4		<u> </u>	\$0.00
Semi-Annual	2	1	\$750.00	\$1,500.00
Annual		and the female managed the man () is the man desired.	um - quaequente que mante allemente en lagre que trata en en el constitución de la consti	\$0.700
Other				\$0.00
		Subtotal L	eachate Monitoring:	\$1,500.00
DESCRIPTION	UNIT	QUANTITY	UNIT COST	ANNUAL COS
Collection Pipes	LF	1	\$14,000.00	\$14,000.00
Maintenance				
Sumps, Traps	EA			\$0.00
Lift Stations	EA			\$0.00
Cleaning	LS			\$0.00
Tanks	EA			\$0.00
mpoundments				
Liner Repair	SY		·	\$0.00
Sludge Removal	CY			\$0.00
veration Systems	CY			\$0.00
Floating Aerators	EA	· · · · · · · · · · · · · · · · · · ·		\$0.00
Spray Aerators	EA			\$0.00
isposal				
Off-site (Include Transportation and	1000 gallon Disposal)	12	103	\$1,236.00
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6. Leachate Collection/Treatment Systems Operation

Operation		Hours	\$/Hour	Total
P.E. Supervisor	HR	8	\$130.00	\$1,040.00
On-Site Engineer	HR	16	\$110.00	\$1,760.00
Office Engineer	HR	8	\$110.00	\$880.00
OnSite Technician	HR	40	\$60.00	\$2,400.00
Materials	LS			
Subtotal	Leachate Co	ollection/Treatment System M	laintenance & Operation:	\$6,080.00
7. Maintenance of Groundwater I	Monitoring W	'ells		
Monitoring Wells	LF			\$0.00
Replacement	EA	1	\$2,500.00	\$2,500.00
Abandonment	EA			\$0.00
		Subtotal Groundwater Mon	nitoring Well Maintenance:	\$2,500.00
DESCRIPTION	UNIT	QUANTITY	UNIT COST	ANNUAL COST
8. Gas System Maintenance				
Piping, Vents	LF			\$0.00
Blowers	EA			\$0.00
Flaring Units	EA			\$0.00
Meters, Valves	EA			\$0.00
Compressors	EA			\$0.00
Flame Arrestors	EΑ			\$0.00
Operation	LS			
		SubTota	al Gas System:	\$0.00
. Landscape				
Mowing 20 Ac @ 4/40	AC	80	\$150.00	\$12,000.00
Fertilizer	AC			\$0.00
		Subtotal Landso	cape Maintenance:	\$12,000.00

DESCRIPTION	UNIT	QUANTITY	UNIT COST	ANNUAL COST
10. Erosion Control & Co	over Maintenance			
Sodding	SY	2,420	\$3.84	\$9,292.80
Regrading	AC	1	\$5,200.00	\$2,600.00
Liner Repair	SY LS	1	\$1,000.00	\$1,000.00
Clay	CY	•		\$0.00
	**************************************	Subtottal Erosion Contr	ol and Cover Maintenance:	\$12,892.80
11. Storm Water Manage	ment System Maintena	nce		
Conveyance Maintena	nce LS			\$2,500.00
		Subtotal Storm Water	er System Maintenance:	\$2,500.00
12. Security System Mair	ntenance			
Fences	LF ·	100	\$13.41	\$1,341.00
Gate(s)	EA	1	\$1,538.50	\$769.25
Sign(s)	EA	1	\$38.36	\$38.36
		Subtotal Se	curity System:	\$2,148.61
13. Utilities	LS			\$5,000.00
14. Administrative		Hours	\$/Hour	Total
P.E. Supervisor	HR	. 8	\$130.00	\$1,040.00
On-Site Engineer	HR	16	\$110.00	\$1,760.00
Office Engineer	HR	80	\$110.00	\$8,800.00
OnSite Technician	HR	40	\$60.00	\$2,400.00
Other (explain)	÷			\$0.00
		Subtotal Ad	lministrative:	\$14,000.00
5. Contingency	% of Total	***		10%
	\$87,275.81	Subtotal Co	ontingency:	\$8,727.58
	, = , 5 . 0 4			

16. Site Specific Costs (explain)	UNIT COST	_	
Biennial Groundwater Report (1 per 2 years)	LS	\$2,750.00	
	LS		
	LS		
ANNUAL LONG-TERM (ANNUAL LONG-TERM CARE COST (\$/Year):		
NUMBER OF YEARS OF	NUMBER OF YEARS OF LONG-TERM CARE		
TOTAL LONG-TERM	TCARE COST (\$)	\$2,962,601.73	

ASSUMPTIONS, EXPLANATIONS, AND CALCULATIONS

PASCO COUNTY UTILITIES WEST PASCO CLASS III LANDFILL OPINION OF PROBABLE COSTS ASSUMPTIONS, EXPLANATIONS, AND CALCULATIONS

- 1. The estimate assumes fence, locking gate(s), sign(s), gas probes, and monitor wells are existing at the facility.
- 2. Costs for groundwater sampling, analysis, and reporting, gas monitoring and reporting, and leachate monitoring and reporting are based on costs provided by Tetra Tech.
- 3. No active gas extraction system is proposed in the landfill design. Cost for installation of the passive gas vents are based on typical shallow drilling and materials costs.
- 4. Cost for security system maintenance were obtained from the FDOT Item Average Unit Costs paid for 2007 construction projects, with a 1.025 inflation adjustment for 2008.
- 5. Costs for quality assurance plan development, closure certification, monitor well maintenance, closure report/permit services, and professional and administrative services are based on costs provided by Tetra Tech.
- 6. Cost for quality assurance testing is an assumed rate of \$2,000 per acre. To Tetra Tech's knowledge, there is not an existing closure construction quality assurance plan for this site on which to base this calculation.
- 7. Cost estimates for mowing and temporary irrigation were obtained from Goodwin Brothers Construction.
- 8. The approved final cover will include a 40-mil LLDPE geosynthetic liner. Final cover soil quantities are based on an area of 20 acres, 24 inches of compacted soil above the geosynthetic and 6 inches of top soil. Third party costs for cover material and associated labor, and grading were provided by Goodwin Brothers Construction.
- 9. Cost for sodding is based on an estimate calculated by the Orange County Environmental Protection Division for the purpose of determining financial assurance obligations.
- 10. The estimate assumes that construction rework and additional construction quality assurance testing will not be required. The closure cost includes a 10% contingency.
- 11. Assumes established vegetation is drought resistant and does not require regular irrigation after the first month.
- 12. Cost for final survey is provided by Tetra Tech.
- 13. Assumes gas remediation and groundwater remediation will not be required.

- 14. Cost for disposal of 1000 gallons of leachate is assumed to be once monthly and is based on an estimate calculated by the Orange County Environmental Protection Division for the purpose of determining financial assurance obligations.
- 15. Soil Cover Calculations:

$$(20 \text{ ac})(43560 \text{ ft2/ac}) = 871,200 \text{ ft2} = 96,800 \text{ yd2}$$

1-foot cover over 20 acres = (20 ac)(871200 ft2/ac)(1 ft)/(27 ft3/yd3) = 32,267 yd3

2-feet cover over 20 acres = (20ac)(871200 ft2/ac)(2 ft)/(27 ft3/yd3) = 64,533 yd3 at 15% bulking factor = 74,213 yd3 to account for compaction

6-inches topsoil over 20 acres = (20 ac)(871200 ft2/ac)(0.5 ft)/(27 ft3/yd3) = 16,133 yd3

16. Tire Calculations:

Per 2002 calculations, 2450 tons of tires (2450 tons total, 50 tons are large tires)

(2400 tons car tires)(2000 lb/ton)(1 tire/30 lb) = 160,000 car tires

25 tons, or 1,667 car tires are on rims

50 tons are large tires, at 50 lb/tire = 2000 large tires

Per conversation with local tire processor:

\$1.50 per car tire

\$3.00 per car tire on rim

\$3.00 per large tire

(\$1.50)(158,333) = \$237,500

(\$3.00)(1,667) = \$5001

(\$3.00)(2,000) = \$6,000

Total = \$248,501

THIRD PARTY ESTIMATES

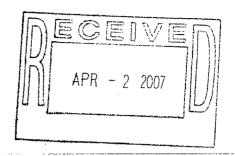


Phone (352) 796-0149 Fax (352) 544-1084

Construction Co., Inc.

3/28/07

Erick Van Malssen Tetra Tech 201 E Pine St Ste 1000 Orlando FL 32801



RE: DEP Financial Assurance Costs

- Slope and Fill: Site Grading = \$5,200.00 AC
- Slope and Fill: Placement/Spreading = \$2.20 CY
- Cover Material: Synthetic-40mil = \$.88 SF
- Top Soil Cover: Off Site Material = \$15.00 CY
- Revegitation: Sodding = \$2.00 SF
- Landscape Irrigation System: Temporary Watering 30 days = \$7,500.00 LS
- Landscape Maintenance: Mowing = \$150.00 AC

Daniel Goodwin Jr.

Estimator

YEAR PRICE LIST IS BEING INFLATION ADJUSTED TO:

2008 (see Item III. Estimate Adjustment)

								•	mont)	
DESCRIPTION	UNIT	REPORTED UNIT PRICE	PRICE RATIO	Αſ	IFLATION DJUSTED	INFLATION	RE	FERENCE	DATE	
CLOSURE			IVATIO	UI	VIT COST	FACTOR	UI	NIT PRICE	REVISED	REFERENCE SOURCE
General										
Mobilization (General)	LS	\$ 30,000.00	100%	\$ 3	30,000.00	1.000	\$	30,000.00	1/1/0	I FDD
Mobilization (Gas Contractor)	LS	\$ 25,000.00	100%	\$ 2	25,000.00			25,000.00	:	B EPD staff
Proposed Monitoring Wells				<u> </u>		1,000	Ψ.	23,000.00	1/1/08	EPD staff
Well Installation	FT	\$ 32.72	100%	\$	32,72	1.030	\$	31,77	1/1/07	Schedule_021507
Well Completion	EA	\$ 172.65	100%	\$	172.65	1,030		167.62	:	TOTAL TOT DESIGNATION OF THE PARTY
Slope and Fill							4′	107,02	1/1/07	Schedule_021507
Placement and spreading	SY	\$ 4.45	100%	\$	4.45	1.000	\$	4.45	1/1/00	DOM
Compaction	CY	\$ 1.21	100%	\$	1,21	1.000			i	RS Means 2008: 32 91 19.13 0400
Off-site material (slope and fill)	CY	\$ 12.37	100%		12.37	1.000		1,21		RS Means 2008: 31 23 23.24 0300
Cover Material				<u> </u>	14,07	1.000		12.37	1/1/08	RS Means 2008: 31 05 13.10 0200
Off-site clay (barrier layer)	CY	\$ 29.82	100%	\$	29.82	1.000	\$	29.82	1/1/09	DO M
Top Soil Cover							Ψ	L 7.02	17 1708	RS Means 2008: 31 05 13.10 0700
Off-site material (cover)	CY	\$ 10.68	100%	\$	10.68	1.000	\$	10.68	1/1/08	RS Means 2008: 31 05 13.10 0200
Off-site material (veg. support)	CY	\$ 30.17	100%	\$	30.17	1.000		30.17		RS Means 2008: 31 05 13.10 0200
Vegetative Layer										7.0 Micaria 2000, 32 91 19,13 0800
. Sodding	SY	\$ 3.84	100%	\$	3.84	1.000	\$	3.84	1/1/08	RS Means 2008: 32 92 23.10 0300
Hydroseeding	SY	\$ 0.35	100%	\$	0.35	1.000	\$	0.35	T.	RS Means 2008: 32 92 19.13 1000
Stormwater Control System							<u> </u>			10000 2000, 32 32 13.13 1000
Sodding	SY	\$ 3.18	100%	\$	3.18	1.000	\$	3.18	! 1/1/08	RS Means 2008: 32 92 23.10 0300
Engineering							·	2,20		110 Means 2006, 32 92 23,70 0300

Final Survey Professional Services	AC	\$ 5,463.64	100%	\$ 5,463.	1.093	\$	5,000.00	10/1/05 MSW Management; "Landfill Economic
Quality Assurance Testing (cap) Landscaping	AC	\$ 19,669.09	100%	\$ 19,669.0	09 1.093		18,000.00	10/1/05 MSW Management; "Landfill Economic
Hydroseeding	SY	\$ 0.35	100%	\$ 0.3	5 1.000	\$	0.35	1/1/08 RS Means 2008: 32 92 19.13 1000
DESCRIPTION	UNIT	REPORTED UNIT PRICE	PRICE	INFL. ADJ	INFLATION	REI	FERENCE	DATE
ONG-TERM CARE	0.111	- OWN PAICE	RATIO	UNIT COS	FACTOR	UN	IIT PRICE	REVISED REFERENCE SOURCE
Groundwater Monitoring								- ISE GOOKGE
Each Well -Each Event	EA	\$ 484.10	100%	\$ 484.1	0 1.030	\$	470.00	FDEP PCP Template (C.8)_021507
Leachate Collection Treatment System (Operati	on				Ψ	17 0.00	1/1/07 FDEP PCP Lab Rate Schedule_021507
Off-site Disposal	1000 GAL	\$ 103.00	100%	\$ 103.00	1.030	d.	100.5=	
Maintenance of Groundwater Wells Well Installation	FT	\$ 32.72					100.00	1/1/07 EPD staff
Well Completion	EA	\$ 172.65	100%				31.77	1/1/07 Schedule_021507
Gas System Maintenance		T 1/2,00	100%	\$ 172.6	1.030	\$	167.62	1/1/07 Schedule_021507
Flaring Units	EA	\$ 515.00	100%	\$ 515.00	1.030	d-	F00 · ·	
Landscape maintenance				4 313.00	1.030	<u> </u>	500.00	1/1/07 EPD staff
Mowing (cap)	AC	\$ 346.91	100%	\$ 346.9:	1.041	d d	227.00	
Mowing (pond bank, setback- 4/yr)	AC	\$ 1,387.66	100%				327.00 1,308.00	1/1/06 RS Means 2006: 02230-200-1020
Erosion Control & Cover Maintenance	-			, , , , , , , , , , , , , , , , , , , ,		Ψ.	1,308.00	1/1/06 RS Means 2006: 02230-200-1020
Sodding		\$ 6.85	100%	\$ 6.85	1.000	\$	6.05	1/1/03 DO 1/1
Regrading (inc. off-site veg. sup. soil)	AC	\$ 24,337.94		\$ 24,337.94			6.85 1,337.94	1/1/08 RS Means 2008: 32 92 23.10 0700
Off-site clay (barrier layer)	CY	\$ 26.27	100%					1/1/08 RS Means 2008: 32 91 19.13 0800
Site Update and Permitting			-			Ψ	26.27	1/1/08 RS Means 2008: 31 05 13.10 0700
Topographic survey	AC	\$ 314.03	100%	\$ 314.03	1.061		296.00	

Florida Department of Transportation Item Average Unit Cost

From 2007/01/01 to 2007/12/31

Contract Type: (LCCL) STATEWIDE Displaying: VALID ITEMS WITH HITS

	No. of	to the second			1.1111.1111.1111.1111.1111.1111.1111.1111	1985 1885 1885 1885 1	
Item	Conts	Weighted	Total	Total	Unit		
	COILCE	Average	Amount	Quantity	Meas	0h - 0	
0101 1	255		George Controlled			Obs?	Description
0102 1	255	\$421,924.77	\$135,859,775.35	322.000	LS	**	
	255	\$863.19	\$66,784,873.67	77,370.000	DA	И	MOBILIZATION
	9	\$342,030.12	\$3,420,301.21	10,000		N	MAINTENANCE OF TRAFFIC
	5	\$592,987.85	\$2,964,939.23		LS	N	SPECIAL DETOUR 1 :
0102 2 3	4	\$915,067.38	\$3,660,269.51	5.000	LS	N	SPECIAL DETOUR 2
0102 2 4	4	\$223,163.93	\$892,655.72	4.000	LS	И	SPECIAL DETOUR 3
0102 2 5	2	\$112,500.00	\$225,000.00	4.000	LS	И	SPECIAL DETOUR 4
0102 2 6	1	\$50,000.00	\$50,000.00	2.000	LS	N	SPECIAL DETOUR 5
0102 2 7	1	\$50,000.00	\$50,000.00	1.000	LS	N	SPECIAL DETOUR 6
0102 3	65	\$26.94	\$1,446,579.53	1.000	LS	N	SPECIAL DETOUR 7
0102 14	113	\$51.76	\$1,426,815.42	53,699.800	CY	N	COMMERCIAL MATL FOR DRIVEWAY MAINT
0102 60	241	\$.29		27,564.000	HM	N	TRAFFIC CONTROL OFFICER
0102 61	49	\$37.42	\$1,301,225.68	4,490,720.000	ED	И	WORK ZONE SIGN
0102 71 11	55	\$21.66	\$89,387.81	2,389.000	EA	N	BUSINESS SIGN
0102 71 12	4	\$40.37	\$6,545,609.63	302,161.750	LF	N	BARRIER WALL, TEMP, F&I, CONCRETE
0102 71 13	14	\$48.62	\$109,039.09	2,701.000	LF	N	BARRIER WALL, TEMP, F&I, WATERFILLED
0102 71 14	29	\$51.89	\$2,794,112.32	57,468.000	$_{ m LF}$	N	BARRIER WALL, TEMP, F&I LOW PROFILE, CONC
0102 71 21	43	,	\$4,757,077.42	91,673.500	LF	N	BARRIER WALL, TEMP, F&I, TYPE K
0102 71 22	4	\$6.12 \$9.72	\$1,534,825.53	250,613.000	LF	N	BARRIER WALL, TEMP, REL, CONCRETE
0102 71 23	11		\$52,094.64	5,361.000	LF	N	BARRIER WALL, TEMP, REL, WATERFILLED
0102 71 24	18	\$5.81	\$479,496.93	82,560.000	$_{ m LF}$	N	BARRIER WALL TEMP BET COMPANY
0102 73	3	\$13.75	\$978,933.41	71,199.000	LF	И	BARRIER WALL, TEMP, REL, LOW PROFILE, CONC BARRIER WALL, TEMP, REL, TYPE K
0102 74 1	229	\$24.64	\$87,480.00	3,550.000	LF	N	TEMPORARY GUARDRAIL
0102 74 2	112	\$.18	\$2,602,937.68	14,847,968.000	ED	N	BARRICADE, TEMP, TYPS I, II, DI, VP & DRUM
0102 76	173	\$.37	\$395,572.16	1,073,803.000	ED	N	BARRICADE, TEMP, TYPE III, 6
0102 77	233	\$8.20	\$673,355.62	82,148.000	ED	И	ADVANCE WARNING ARROW PANEL
0102 78	152	\$.45	\$682,907.42	1,504,921.000	ED	N	HIGH INTENSITY FLASH LI, TEMP, TYP B
0102 79	67	\$3.67	\$1,571,749.05	428,623.000	EA	И	REFLECTIVE PAVT MARKER, TEMPORARY
0102 89 7		\$.16	\$296,378.06	1,874,336.000	ED	N	LIGHTS BARD WALL AND
0102 98 2	66	\$1,409.10	\$1,411,921.75	1,002.000	LO	N	LIGHTS, BARR WALL MNT, TEMP, TYP C, STDY BRN
0102 98 2	1	\$145.00	\$2,175.00	15.000	EA	N	CRASH CUSHION/IMP ATTE, TEMP, REDIRECT OPT
	192	\$19.19	\$2,292,674.49	119,455.000	ED	N	BARRICADE, TYPE III, 6', TO REMAIN
0102104 1	2	\$112.79	\$94,180.20	835.000	ED	N 14	CHANGEABLE-VARIABLE MESSAGE SIGN, TEMP
0102104 2	9	\$25.51	\$379,614.93	14,882.000	ED	N N	TEMPORARY TRAFFIC CONTROL, PORT SIGNAL
0102107	55	\$15.04	\$991,709.19	65,951.000	DA	N	TEMPORARY TRAFFIC CONTROL, FIXED SIGNAL
0102150 1	34	\$29.30	\$408,788.44	13,952.000	ED	N	TEMP TRAFFIC DETECTION, INTERSECT
				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1/1	PORTABLE REGULATORY, SIGN

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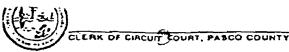
23

Florida Department of Transportation Item Average Unit Cost From 2007/01/01 to 2007/12/31

Contract Type: (('CC')) STATEWIDE Displaying: VALID ITEMS WITH HITS From: 0100 To: 199999999

	No. of	F4 - 3 - 3 - 5 - 5					
Item		Weighted	Total	Total	Unit		
20011	Conts	Average	Amount	Quantity			
				Quantity	Meas	Obs?	Description
0550 10150	2	\$11.57	\$1,216,727.68	105	-		
0550 10220	20	\$13.08	\$498,877.75	105,185.600	LF	N	FENCING, TYPE A, 8.1-10.0', STANDARD
0550 10221	1	\$18.25		38,130.000	LF	N	FENCING, TYPE B, 5.1-6.0, STANDARD
0550 10222	14	\$16.46	\$85,008.50	4,658.000	LF	N	FENCING, TYPE B, 5.1-6.0, W/ BARB ATTMT
0550 10228	3		\$1,290,275.97	78,369.600	LF	N	FENCING, TYPE B, 5.1-6.0, W/ VINYL COAT
0550 10240	2	\$12.91	\$13,413.00	1,039.000	LF	N	FENCING, TYPE B, 5.1-6.0, RESET EXISTING
0550 10250	1	\$32.62	\$21,987.00	674.000	LF	N	FENCING, TYPE B, 7.1-8.0', STANDARD
0550 10343	1	\$19.50	\$4,446.00	228.000	$_{ m LF}$	N	FENCING TYPE B. C. 1. 10 C. STANDARD
0550 10353		\$100.00	\$156,000.00	1,560.000	LF	N	FENCING, TYPE B, 8.1-10.0', STANDARD FEA
0550 10918	2	\$405.11	\$195,262.46	482.000	LF	N	FENCING, TYPE R, 7.1-8.0, W/FULL ENCLOS
0550 10918	1.	\$73.50	\$1,470.00	20,000	LF	N	FENCING, TYPE R, 8.1-10', W/FULL ENCLOS
	2	\$29.23	\$201,074.00	6,880.000	LF	N	FENCING, SPECIAL TYP, 0.0-5.0', RESET EXI
0550 60124	1	\$1,100.00	\$1,100.00	1.000	EA	N	FENCING, SPECIAL TYPE, 5.1-6.0', SPECIAL
0550 60127	1	\$2,500.00	\$2,500.00	1.000	EA		FENCE GATE, TYP A, DBL, 18.1-20.' OPENING
0550 60211	2	\$865.00	\$1,730.00	2.000		N	FENCE GATE, TYP A, DBL, > THAN 30' OPENING
0550 60212	. 1	\$1,500.00	\$4,500.00		EA	И	FENCE GATE, TYP B, SGL, 0- 6.0' OPENING
0550 60222	3	\$1,337.78	\$12,040.00	3.000	EA	N	FENCE GATE, TYP B, SGL, 6.1-12.0' OPENING
0550 60223	3	\$2,023.36	\$20,233.63	9.000	EA	N	FENCE GATE, TYP B, DBL, 6.1-12.0' OPENING
0550 60224	5	\$1,295.18	\$22,018.11	10.000	EA	N	FENCE GATE, TYP B, DBL, 12.1-18.0' OPENING
0550 60225	5	\$2,356.67		17.000	EA	N	FENCE GATE, TYP B, DBU, 18.1-20.0' OPENING
0550 60227	1	\$6,300.00	\$35,350.00	15.000	EA	N	FENCE GATE, TYP B, DBL, 20.1-24' OPENING
0550 60232	1	\$1,200.00	\$6,300.00	1.000	EA	N	FENCE GATE, TYP B, DBL, > THAN 30' OPENING
0550 60233	4	\$3,037.50	\$1,200.00	1.000	EA	N	FENCE GATE, TYP B, SLIDE/CANT, 6.1-12'OPEN
0550 60234	3		\$18,225.00	6.000	EA	N	FENCE GATE, TYP B, SLIDE/CANT, 12.1-18'OPEN
0550 60235	2	\$2,334.00	\$11,670.00	5.000	EA	N	FENCE GATE, TYP B, SLIDE/CANT, 18.1-20 OPEN
0550 60236	1	\$4,250.00	\$8,500.00	2.000	EA	N	FENCE GATE, TYP B, SLIDE/CANT, 20.1-24 OPEN
0550 60925		\$3,700.00	\$33,300.00	9.000	EA	N	FENCE GATE, TYP B, SLIDE/CANT, 24.1-30'OPEN
0550 60923	2	\$3,295.20	\$16,476.00	5.000	EA	N	GATE, SPECIAL, DOUBLE, 20.1-24' OPENING
	1	\$6,558.00	\$6,558.00	1.000	EA	N	GATE, SPECIAL, SLIDING/CANT, 12.1-18' OPEN
0550 60934	1	\$7,580.00	\$15,160.00	2.000	EA	N	FENCE GATE, SPL, SLIDE/CANT, 18.1-20'OPEN
0550 60935	1	\$7,500.00	\$22,500.00	3,000	EA	N.	PENCE CAME ON GLIDE/CANT, 18.1-20 OPEN
0555 1 1	52	\$20.67	\$3,389,539.19	163,946.000	LF	N	FENCE GATE, SPL, SLIDE/CANT, 20.1-24 OPEN
0555 1 2	41	\$24.95	\$1,127,550.58	45,200.000	LF	N	DIRECTIONAL BORE, LESS THAN 6"
0555 1 3	2	\$131.96	\$47,770.00	362.000	LF	N	DIRECTIONAL BORE, 6" TO < 12"
0555 1 6	1	\$802.00	\$789,970.00	985.000	LF	N	DIRECTIONAL BORE, 12" TO < 18"
0556 1 2	3	\$251.65	\$124,065.00	493.000	LF		DIRECTIONAL BORE, 36" TO < 48"
0556 1 4	4	\$232.07	\$381,760.70			N	JACK AND BORE, CASE DIA 6"TO<12"
		,,	\$301,700.70	1,645.000	LF	N	JACK AND BORE, CASE DIA 18"TO<24"

PASCO COUNTY LETTER OF UNDERSTANDING



JEO PITTIVIAN

0400 Ens 1904,521 4542 \$4%COW \$3" 154" ATM PORT PICHES #13-947 BTES

April 6, 1992

Mr. Fred Wick Department of Environmental Regulation 2600 Blair Stone Road Tallahausee, FL 32399-2400

FE: PASCO COUNTY - Letter of Understanding - Landfill Closure and Long-Term Care

Dear Mr. Wick:

Attached is the referenced letter which should satisfy your department's requirements.

Should you have any questions, please contact me. -

Thańk you.

Sincefely,

Director, Financial Services

/do/OL\$348.2

ENDER,

Reply to:

Pasce County Courtbouce, 705 E. Live Oak Ave., Dade City, FL 20525

Pasce Covernment Center, PO Drawn 338, New Part Rickey, FL 34658-8338

<u>LETTER OF UNDERSTANDING</u>

The Pasco County Board of County Commissioners (the "BOARD"), through the Office of the Pasco County Clerk of the Carcuit Court (the "CLERK"), Division of Financial Services, established an interest-bearing account (no. 251192) with the Florida State Board of Administration. The beneficiary of this account is the BOARD; the account is managed by the CLERK.

This account includes a restricted cash subsidiary account ("SUBACCOUNT") maintained on the books of account of the BOARD for the sole purpose of accumulating funds for Landfill Closure and Long-Term Care of: the Ridge Road Landfill; the East Pasco Sanitary Landfill; the West Pasco Class I and Class III Landfills; and any future sites according to Rule 17-701.076, FAC(1989). The total amount to be maintained in this SUBACCOUNT shall be determined, from time to time, by a Registered Professional Engineer with the State of Florida, and approved by the Florida Department of Environmental Regulation.

It is the intent that funds maintained in this SUBACCOUNT are not to be used for any purpose other than Landfill Closure and Long-Term Care, as described above; disbursement from this SUBACCOUNT must be approved by the BOARD with oversight provided by the CLERK.

Jay Kominsky, Director Division of Financial Services

DL5348 j

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