Task 2.3

Quarterly Status Report #2

For the Project entitled

Lamb Island Dairy Remediation

SFWMD Contract No. C-13410

Submitted by
HSA Engineers & Scientists

HSA Project No. 8005-7106-00
June 2005

Introduction

This is the second of the six required quarterly status reports for the Lamb Island Dairy Remediation project. The Contract requires quarterly status reports beginning concurrently with the construction of the remedial alternatives. A Contract Amendment (Amendment No. 1 to Contract No. C-13410) was entered into on March 21, 2004, which set in-place the design conditions included in the Final Detailed Design and Specifications Package. The construction of the remedial alternative is substantially complete with minor delays due to weather impacts during construction. This report covers the period of July 1, 2004 to September 30, 2004. The primary activities completed during this reporting period have been additional adjustments and repair to the surface water containment berms and associated ditches and the final treatment of Alum to Ponds 3 and 4. Construction activity status is shown below in **Table1**.

Surface Water Containment Berms and Ditches

By mid July construction of the HIA containment area berm and ditch, and outer pasture berm and ditch were complete (see **Figure 1**). The cumulative runoff from the HIA flows by gravity through the former eco-reactor(wetland treatment system) and swale system via a series of metal culverts with riser inlets. An emergency overflow culvert and riser was installed just east of the termination of the HIA berm with the ecoreactor wetland treatment system berm to maintain one foot of freeboard and to set the maximum water level within the HIA containment area at 43 feet NGVD before storm waters are allowed to discharge from the HIA containment area. From the 40 acre HIA containment area, water flows by gravity to the existing 6.5 acre wetland treatment system. By late July within the wetland treatment system, a total of four discrete cells were constructed with culverts and risers connecting each cell. Boards were set in each riser to a height of 41 feet NGVD. From the wetland treatment system, water then flows by gravity into a swale prior to discharge off the property. The previously existing discharge culvert was removed and replaced with a new 36-inch diameter culvert and riser. The riser boards were set at 40 feet NGVD. A 36-inch diameter discharge culvert with riser was also placed on the southern most side of the outer pasture containment berm. Board elevations were set at 40 feet. NGVD as well. Three terrace berms were constructed by disking and then grading the areas shown in **Figure 1**. All berm embankments were then compacted and were seeded with Bahia grass. The approximate 16 acre wetland/marsh area created on the southern end of the pasture during quarter 1 activities was cleaned up and graded to a bottom elevation of approximately 36.25 feet NGVD. Due to seasonal weather patterns (ie. Hurricane Jeane, Ivan, Charley and Hurricane Frances) an abnormally large quantity of rain fell on site in late August and early September which resulted in a breach of the outer pasture berm in several places as shown in **Figure 4**. All breaches were immediately repaired and additional areas of the berm were further improved to ensure berm integrity.

GW Monitoring Well

SW6

Culvert

Staff Gauge
No. 1

HIA Containment Berm

SW1

New culvert and
cross-over

Culvert

Overflow Culvert

Eco-Reactor

SW2

Terrace Berm

Culvert

Terrace Berm

Edge of Farm
Containment
Berm

Staff Gauge
No. 2

Discharge
Culvert

SW3

SW4

Terrace Berm

Staff Gauge No. 3

Discharge Culvert

SW5

North

Scale: 1" = 500'

Figure 1 Site Plan and Monitoring Stations

LEGEND

SW5 Surface Water Sampling Location

Surface Water Flow Direction

Alum Amended Pond Waters

Pond 1 & 2 Backfilled With Soil
After Alum Amending Animal
Wastes

Culvert

Table 1.
Construction Tasks

Task No.	Task Description	Status
1	Subcontracts and Procurement	Completed
2	Construction	
2.1	Kick- off meeting	Completed
2.11	Project Mobilization/ surveying	Completed
2.12	Erosion Control Measures	Completed
2.13	Clearing and grubbing	Completed
2.2	Berm construction and culvert replacement/ installation	
2.21	Outer pasture berm	Completed
2.22	HIA berms	Completed
2.23	Eco- reactor berms	Completed
2.24	seed berms	Completed
2.3	Dewater and fill HIA ditches	Completed
2.4	Pond 2	
2.41	Set- up dewatering equipment	Completed
2.42	Dewater	Completed
2.43	Move residual solids to Pond 1	Completed
2.44	Knock down berms	Completed
2.5	Pond 1	
2.51	Set- up dewatering equipment	Completed
2.52	Dewater	Completed
2.53	Dewater -continue	Completed
2.54	Alum amendment	Completed
2.55	Maintain dewater and allow to dry	Completed
2.56	Install filter fabric	Completed
2.57	Knock down berms and backfill pond	Completed
2.6	Pond 3 Alum amendment	Completed
2.7	Pond 4 Alum amendment	Completed
2.8	Demobilization	

Pond 1 and Pond 2 Closure

By mid-July the moisture content of Pond 1 and 2 waste material areas were dry enough to cover with a thin layer of soil. A filter fabric material was then applied to the surface of those areas as shown in **Figure 5**. Additional fill material taken from the created wetland area to the south was applied over the filter fabric and compacted, and the area was dressed to conform to the surrounding area.

Pond 3 and 4 Treatment

Table 2 below shows the results of the first alum treatment of approximately 3500 gallons of alum in Pond 3 and approximately 500 gallons of alum in Pond 4. Based on

the results, additional treatment of Pond 3 with alum was necessary. Additional treatment of Pond 4 was not necessary. A small boat was used in the same manner as before to mix the alum into the pond water until subsequent tests showed average SRP results below 150 ppb (0.15 mg/L). **Appendix A** contains field sampling lab data and chain of custodies. A total of approximately 6000 gallons of alum was added to Pond 3. Prior to Pond 3 treatment a shallow groundwater monitoring well was installed on the south side of Pond 3 to monitor the impact of Alum treatment on local groundwater. Background results for TP, SRP and Total Aluminum are shown in **Table 2**.

Table 2.

Pond 3 Water Phosphorus Data

	P3 Raw		P3-E	P3-W	P3-A	P3-B	P3-C	P3-D	P3-E	P3-F
Date	TP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP
6/17/04 *	2.6	1.2								
6/24/04+					0.532	0.559	0.508	0.524	0.56	0.507
7/1/04^			0.32	0.34						
7/16/04					0.08	0.061	0.068	0.06	0.068	0.073

Pond 4 Water Phosphorus Data

	P4-Raw (Pre-treament)		P4-A (Post Treatment)	P4-B
Date	TP	SRP	SRP	SRP
6/17/04	2.50	0.58		
6/24/04			0.016	0.014

Ground Water Well Data

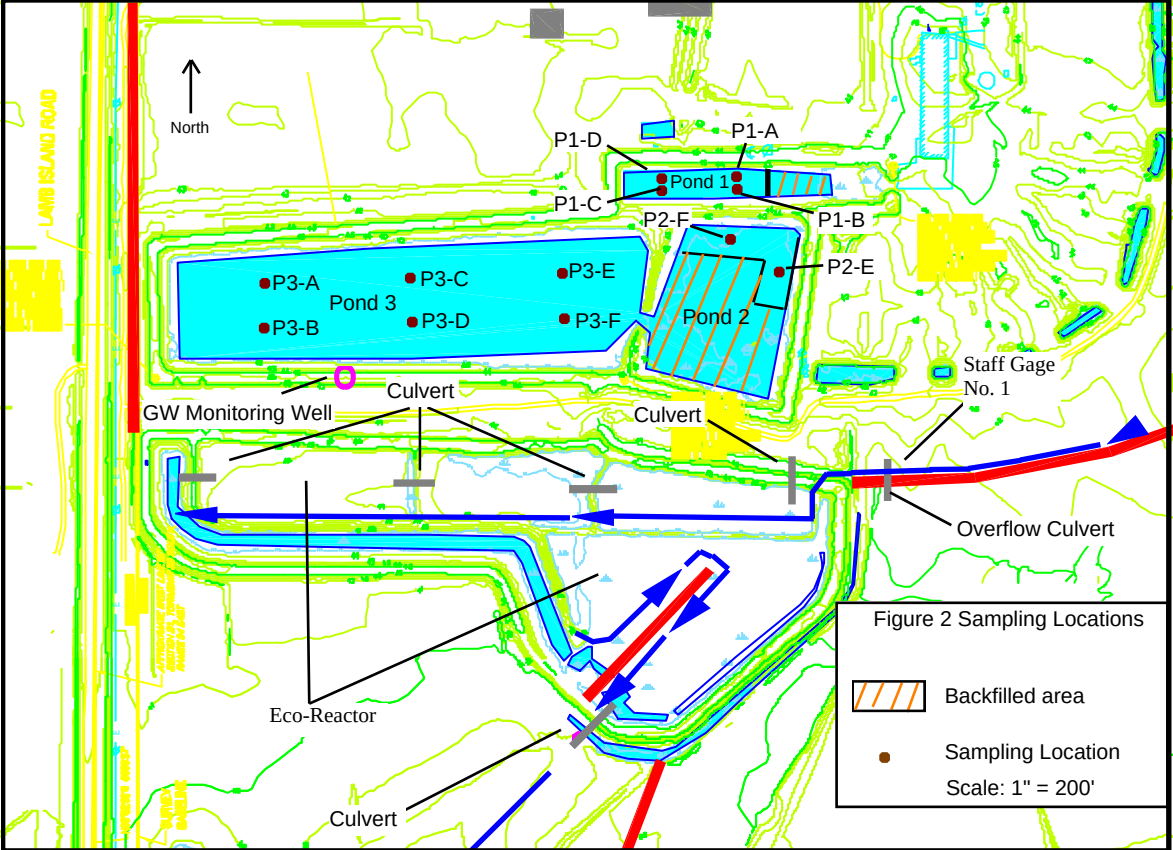
	TMPW-1		
Date	TP	SRP	Total AL
6/15/04	0.33	BDL	1.16
6/22/04	0.25	BDL	3.32

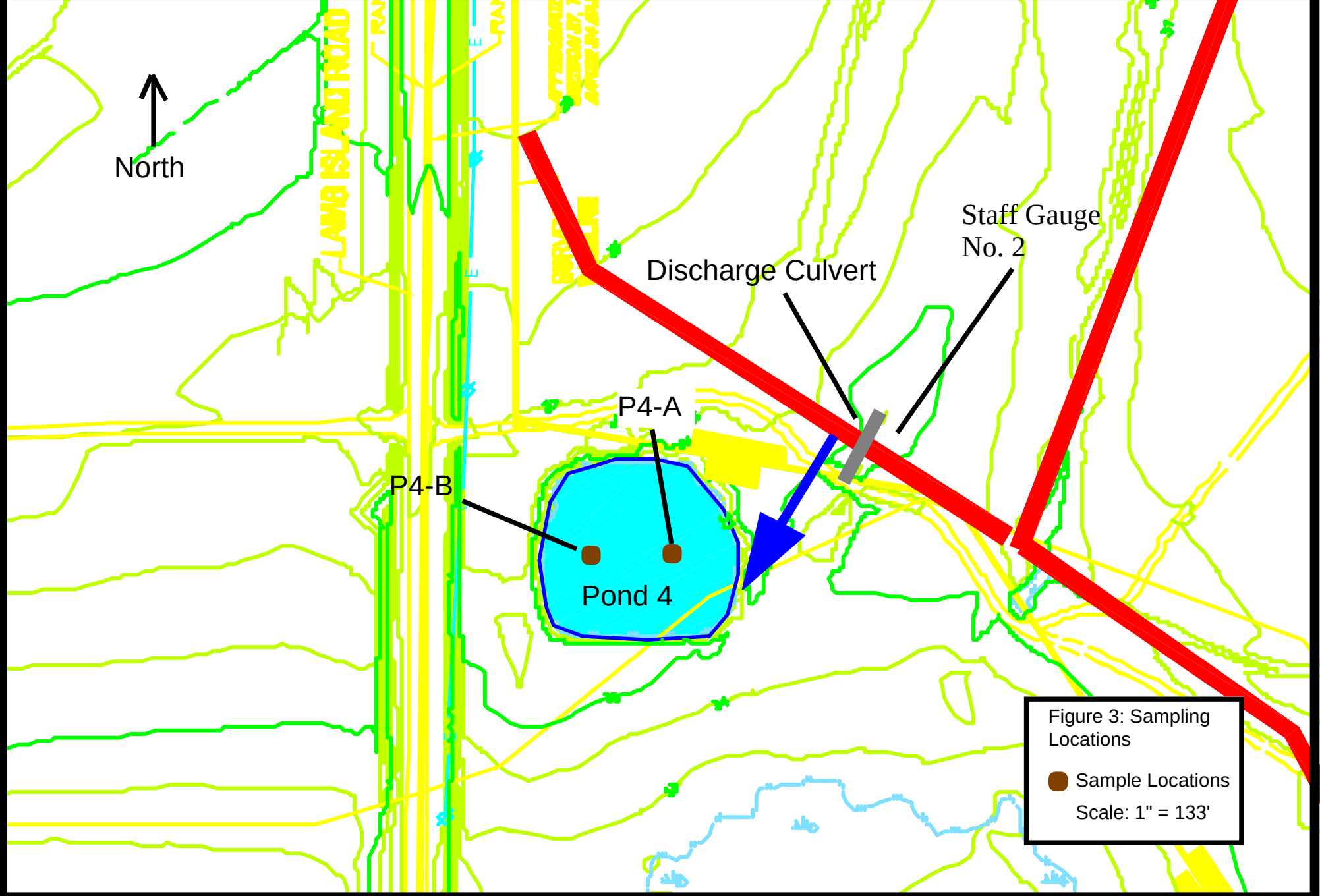
Notes:
All values given in mg/L
* Phosphorus data prior to any alum treatment
+ Phosphorus data after first alum treament
^ Phosphorus data after second alum trement
BDL = Below Detection Limit

Third Quarter Activities

Tasks remaining to be completed in the next quarter are:

- Submittal of Project Performance Monitoring Plan.
- Quarterly water quality sampling trip.
- Possible water quality sampling after significant rain events.


North
LAMB ISLAND ROAD
P1-D
P1-A
Pond 1
P1-C
P1-B
P2-F
P2-E
P3-A
P3-C
P3-E
Pond 3
P3-B
P3-D
P3-F
Pond 2
Staff Gage
No. 1
GW Monitoring Well
Culvert
Culvert
Overflow Culvert
Eco-Reactor
Culvert
Figure 2 Sampling Locations
Backfilled area
Sampling Location
Scale: 1" = 200'


North
LAMB ISLAND ROAD
Staff Gauge
No. 2
Discharge Culvert
P4-A
P4-B
Pond 4
Figure 3: Sampling Locations
Sample Locations
Scale: 1" = 133'

Invoicing Status Sheet

SFWMD Contract No. C-13410	Q-2 Report			September 30, 2004
TASKS / DELIVERABLES DESCRIPTION	**Task Budget**	**Invoiced this Period**	**Invoiced to Date**	**Retainage Not Invoiced**
TASK 1 - Detailed Design for Selected Alternatives				
1.1 Project kick-off meeting	$1,500	$0	$1,500	
1.2 Draft Preliminary 30% Design Package	$21,223	$0	$21,223	
1.3 Final Preliminary 30% Design Package	$3,975	$0	$3,975	
1.4 Detailed 90% Design Package	$7,603	$0	$7,603	
1.5 Final Detailed Design and Specifications Package	$4,227	$0	$4,227	
1.6 Construction Completion	$282,493	$0	$187,234	
TASK 2 - Project Implementation and Performance Monitoring				
2.1 Draft Performance Monitoring Plan	$4,507	$4,507	$4,507	
2.2a Final Performance Monitoring Plan	$2,100	$0	$0	
2.2b One (1) Year of Monitoring (15 events)	$10,033	$0	$0	
2.3 Quarterly Reports	$17,770	$0	$0	
2.4 Quarterly Site Meetings	$4,060	$0	$0	
TASK 3 - Project Performance Evalutation				
3.1 Draft O&M Plan	$3,985	$0	$0	
3.2 Final O&M Plan	$1,933	$0	$0	
3.3 Draft Final Report	$11,715	$0	$0	
3.4 Final Project Report	$4,856	$0	$0	
Totals	**$381,980**	**$4,507**	**$230,269**	

MWBE Participation:

Amount to date = $ 41,611.40
MWBE Goal = 7.0%
Target Project Goal = $ 26,738.60

Figure 4. Outer pasture berm breach after Hurricane Frances

Figure 5. Filter fabric cover over Pond 1

Appendix A

Jupiter
Environmental Laboratories, Inc.

JUN 22 2004

NB

Address: HSA Engineers & Scientists
1486-A Skees Road
West Palm Beach, Fl 33411
Attn: Terry Horan

Page: 1 of 1
Date: 6/21/2004
Log # 11060-01

Sample Description COC # 17738
Project: 8005710600
Project Address: Lamb Island
Water Analysis

Label: TMPW-1
Date Sampled: 6/15/2004
Date Received: 6/15/2004 14:40
Collected By: Client

Parameter	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho	U	mg/l	4500P-E	1	0.025	6/17/2004	6/17/2004	ESC
Phosphorus, Total	0.33	mg/l	365.2	1	0.1	6/19/2004	6/19/2004	ESC
Aluminum	1.16	mg/l	200.8	1	0.02	6/21/2004	6/21/2004	MH

U = Below Laboratory Detection Limits

Respectfully Submitted,

Pam Shore
Quality Assurance Director

All Analyses were performed using EPA, ASTM, USGS, or Standard Methods.
CompQAP # 960152 EPA #FL01040 HRS #E86546 #E86515
NELAC CERTIFIED

BAR CODE

Chain of Custody Record

LAB USE ONLY

J.E.L. Log # 11060

P.O. # _____

Quote# _____

Jupiter Environmental Laboratories

A

Company Name HSA

Address 1486-A SKEES Rd.

City WPB State FL. Zip 33411

Sampling Site Address Lamb Island

Attn: TERRY HORAN Fax/Email

Project Name Lamb Island Project # 8005710600

Sampler Name/Signature Ronald Durham

LAB ANALYSIS

#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont	Press Codes	Parameters: A ORTHO-P	C TP	B→ ALUMINUM	Field Filtered (Y/N)	Integrity OK (Y/N)	Comments
1	TMPW-1	6/15/04	12:20	GW	3		✓	✓	✓			
2												
3												
4												
5												
6												
7												
8												
9												
10												

Matrix Codes*

S	Soil/Solid Sediment	SW	Surface Water
GW	Ground Water	SL	Sludge
WW	Waste Water	O	Other (Please Specify)
DW	Drinking Water		

Pres Codes**

A-	none	I-	Ice
B-	HNO_3	O-	Other
C-	H_2SO_4	M-	MeOH
D-	NaOH		
E-	HCl		

Relinquished by	Date	Time	Received by	Date	Time
Ronald Durham	6/15/04	12:25	[signature]	6/15/04	1440

QA/QC level with report

None ___1___2___3___ See price guide for applicable fees

T.A.T. Request

X Standard

___ Rush

FDEP___

SFWMD___

Date Required _____

Temp Control: cc Ice ___°C

ORIGINAL

Jupiter Environmental Laboratories, Inc.
150 Old Dixie Highway, Jupiter, FL 33458
(561) 575-0030 • Fax (561) 575-4118 • jupiterlabs@bellsouth.net

C.O.C.# 17738

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: Terry Horan

Page: 1 of 4
Date: 6/25/2004
Log # 11084-01

Label: P-3 Raw
Date Sampled: 6/17/2004
Date Received: 6/17/2004 3:00:00
Collected By: Client

Sample Description: COC # 17770
Project # 8005710600
Location: Lamb Island
Matrix: Water

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	1.20	mg/L	/365.2	50	1.25	6/19/2004	6/19/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

Pam Shore
Quality Assurance Director

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: Terry Horan

Page: 2 of 4
Date: 6/25/2004
Log # 11084-02

Sample Description: COC # 17770
Project # 8005710600
Location: Lamb Island
Matrix: Water

Label: P-3 Raw
Date Sampled: 6/17/2004
Date Received: 6/17/2004 3:00:00
Collected By: Client

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphorous By ICP-MS								
Phosphorous	2.60	mg/L	/365.10	1	0.1	6/24/2004	6/24/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

Pam Shore
Quality Assurance Director

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: Terry Horan

Page: 3 of 4
Date: 6/25/2004
Log # 11084-03

Sample Description: COC # 17770
Project # 8005710600
Location: Lamb Island
Matrix: Water

Label: P-4 Raw
Date Sampled: 6/17/2004
Date Received: 6/17/2004 3:00:00
Collected By: Client

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	0.580	mg/L	/365.2	10	0.25	6/19/2004	6/19/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

Pam Shore
Quality Assurance Director

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: Terry Horan

Page: 4 of 4
Date: 6/25/2004
Log # 11084-04

Sample Description: COC # 17770
Project # 8005710600
Location: Lamb Island
Matrix: Water

Label: P-4 Raw
Date Sampled: 6/17/2004
Date Received: 6/17/2004 3:00:00
Collected By: Client

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphorous By ICP-MS								
Phosphorous	2.50	mg/L	/365.10	1	0.1	6/24/2004	6/24/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

Pam Shore
Quality Assurance Director

BAR CODE

Chain of Custody Record

LAB USE ONLY

J.E.L. Log # 11084
P.O. #
Quote#

Jupiter Environmental Laboratories

Company Name HSA
Address 1486-A SKEES Rd.
City W.P.B. State FL Zip 33411
Sampling Site Address LAMB Island
Attn: TERRY HORAN Fax/Email 561-689-9005
Project Name Lamb Island Project # 8005 7106 00
Sampler Name/Signature Ronald Durh...

#	Sample	Date	Time	Matrix	Containers	ORTHO-P (A)	TP (C)	Comments
1	AP-3 RAW	6/17/04	1345	SW	1	✓		
2	AP-3 RAW	↓	1345	↓	1		✓	
3	AP-4 RAW	↓	1400	↓	1	✓		
4	AP-4 RAW	↓	1400	↓	1		✓	
5								
6								
7								
8								
9								
0								

S Soil/Solid Sediment, GW Ground Water, WW Waste Water, DW Drinking Water, SW Surface Water, SL Sludge, O Other (Specify)

A- none, B- HNO_3, C- H_2SO_4, D- NaOH, E- HCl, F- Ice, G- Other, M- MeOH

Relinquished	Date/Time	Received	Date	Time
Ronald Durh...	6/17/04 1500	[illegible signature]	6/17/04	1500

QA/QC level with report
None __ 1 __ 2 __ 3 __ See price guide for applicable fees

T.A.T. Request: X Standard ___ Rush
FDEP ___ SFWMD ___ Date Required ___

Temp Control: ICE °C

Page 1 of 1

Jupiter Environmental Laboratories, Inc.
150 Old Dixie Highway, Jupiter, FL 33458
(561) [illegible] • Fax (561) [illegible] • jupiterlabs@bellsouth.net

C.O.C.# 17778

CLIENT COPY

Jupiter
Environmental Laboratories, Inc.

Address: HSA Engineers & Scientists
1486-A Skees Road
West Palm Beach, Fl 33411
Attn: David Hightower

Page: 4 of 4
Date: 7/2/2004
Log # 11114-04

Sample Description COC # 17771
Project: 80057106
Project Address: Lamb Island
Water Analysis

Label: TMPW-1
Date Sampled: 6/22/2004
Date Received: 6/23/2004 8:00
Collected By: Client

Parameter	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho	U	mg/l	365.2	1	0.025	6/25/2004	6/25/2004	ESC
Phosphorus, Total	0.25	mg/l	365.2	1	0.10	6/29/2004	6/29/2004	ESC
Aluminum	3.32	mg/l	200.8	1	0.02	6/28/2004	6/28/2004	MH

U = Below Laboratory Detection Limits

Respectfully Submitted,

Pam Shore
Quality Assurance Director

All Analyses were performed using EPA, ASTM, USGS, or Standard Methods.
CompQAP # 960152 EPA #FL01040 HRS #E86546 #E86515
NELAC CERTIFIED

CODE	SUBMITTED MO	DA	YR	COLLECTOR	NUMBER		TYPE
. . .	06	25	04	DH	. . .		EXP MON

CHEMISTRY FIELD DATA LOG

LIMS NUM	NB	SAMPLE NUMBER	DATE/TIME COLLECTED MO	DA	YR	TIME	STATION	TYPE	MTRX	METH	UD	DS	WE	FIELD WATER QUALITY DATA DEPTH	TEMP	PH	COND	DO	SSD	SALINITY	REDOX	TDEPTH	COMMENTS
		13	6	24	04		P3-A		SW	G				.	7.25	.		.	.	.		.	
		14	6	24	04		P3-B		SW	G				.	7.19	.		.	.	.		.	
		15	6	24	04		P3-C		SW	G				.	7.72	.		.	.	.		.	
		16	6	24	04		P3-D		SW	G				.	7.85	.		.	.	.		.	
		17	6	24	04		P3-E		SW	G				.	7.99	.		.	.	.		.	
		18	6	24	04		P3-F		SW	G				.	7.96	.		.	.	.		.	
		19	6	24	04		P4-A		SW	G				.	6.0	.		.	.	.		.	
		20	6	24	04		P4-B		SW	G				.	5.26	.		.	.	.		.	
														.	.	.		.	.	.		.	
														.	.	.		.	.	.		.	
														.	.	.		.	.	.		.	
														.	.	.		.	.	.		.	
														.	.	.		.	.	.		.	
														.	.	.		.	.	.		.	
														.	.	.		.	.	.		.	

Please circle the tests to be performed on the above samples.

Laboratory use only

WHITE (500ml)

69	BOD
15	LPH
14	LCOND
12	TURB
16	TSS
77	VSS
55	F
114	TDS

MAGENTA (125ml) H_2SO_4 pH < 2

21	TKN
25	TPO4
100	TOC

ORANGE (125ml)

13	COLOR
73	DIC
23	OPO4
19	NO2
32	CL
33	SO4
27	SIO4

LIGHT BLUE (125ml) H_2SO_4 pH < 2

26	TDPO4
22	TDKN
89	DOC

GREY (60ml) H_2SO_4 pH < 2

18	NOx
20	NH4

BEIGE (250ml)

67	ALKA
168	APA
58	TIC

YELLOW (IL)

63	CARO
61	CHLA
112	CHLA2
62	CHLB
113	CHLC
64	PHEO

BRIGHT BLUE (250/60ml) HNO_3 pH < 2

96	TOTAG	110	TOTMN
66	TOTAL	116	TOTNI
106	TOTAS	107	TOTPB
108	TOTBA	169	TOTSB
170	TOTBE	101	TOTSE
103	TOTCD	172	TOTSN
72	TOTCR	171	TOTTL
104	TOTCU	105	TOTZN
177	TOTFE		

GREEN (250/60ml) HNO_3 pH < 2

52	TDSAG	48	TDSMN	30	CA
39	TDSAL	50	TDSNI	31	MG
40	TDSAS	46	TDSPB	28	NA
41	TDSBA	173	TDSSB	29	K
174	TDSBE	51	TDSSE		
42	TDSCD	176	TDSSN		
43	TDSCR	53	TDSSR		
45	TDSCU	175	TDSTL		
178	TDSFE	54	TDSZN		

BROWN (125ml) HNO_3 pH < 2

102	TOTHG

RED (125ml) HNO_3 pH < 2

49	TDSHG

BIOLOGICAL

TC

FC

FS

Received by (Initials) _____ Date _____

Login Group _____ Sample _____

Test List Code _____

WQM-2 Revised 11/30/99

David Lightner
Relinquished by (Signature)

6/25/04
Date

9:00
Time

Samples on ice. _____

Project	Station	Samplenum	Presampnum	DateCollected	TimeColle	ProgramT	SampTyp	ColMetho	Matrix	TestName	Value	Units	MDL
LAB2	P3-A	L25043-13	P19722-13	24-Jun-04	12:00	EXP	SAMP	G	SW	OPO4	0.532	mg/L	0.004
LAB2	P3-B	L25043-14	P19722-14	24-Jun-04	12:00	EXP	SAMP	G	SW	OPO4	0.559	mg/L	0.004
LAB2	P3-C	L25043-15	P19722-15	24-Jun-04	12:00	EXP	SAMP	G	SW	OPO4	0.508	mg/L	0.004
LAB2	P3-D	L25043-16	P19722-16	24-Jun-04	12:00	EXP	SAMP	G	SW	OPO4	0.524	mg/L	0.004
LAB2	P3-E	L25043-17	P19722-17	24-Jun-04	12:00	EXP	SAMP	G	SW	OPO4	0.56	mg/L	0.004
LAB2	P3-F	L25043-18	P19722-18	24-Jun-04	12:00	EXP	SAMP	G	SW	OPO4	0.507	mg/L	0.004
LAB2	P4-A	L25043-19	P19722-19	24-Jun-04	12:00	EXP	SAMP	G	SW	OPO4	0.016	mg/L	0.004
LAB2	P4-B	L25043-20	P19722-20	24-Jun-04	12:00	EXP	SAMP	G	SW	OPO4	0.014	mg/L	0.004

INITIAL

Chain of Custody Record

BAR CODE

LAB USE ONLY

J.E.L. Log # 11169
P.O. #
Quote#

Jupiter Environmental Laboratories

Company Name: 4SA Engineers & Scientists
Address: 1440-A Skees Rd.
City: West Palm State: FL Zip: 33411
Sampling Site Address: Okeechobee
Attn: David Hightower Fax/Email: 561-688-9005
Project Name: Lamb Island Project #: 8005-7106
Sampler Name/Signature: David Hightower

LAB ANALYSIS

Press Codes: A
Parameters: Ortho-P

#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont	Ortho-P											Field Filtered (Y/N)	Integrity OK (Y/N)	Comments
1	P3 - E	7/1/04	15:00	SW	1	✓													
2	P3 - W	7/1/04	15:05	SW	1	✓													
3																			
4																			
5																			
6																			
7																			
8																			
9																			
0																			

Matrix Codes*
S Soil/Solid Sediment; GW Ground Water; WW Waste Water; DW Drinking Water; SW Surface Water; SL Sludge; O Other (Please Specify)

Pres Codes **
A- none; B- HNO_3; C- H_2SO_4; D- NaOH; E- HCl; I- Ice; O- Other; M- MeOH

Relinquished by	Date	Time	Received by	Date	Time
David Hightower	7/1/04	16:30	S. Dalton	7/1/04	16:30

QA/QC level with report
None ✓1 __ 2 __ 3 __ See price guide for applicable fees

T.A.T. Request: ✓ Standard; __ Rush
FDEP ___ SFWMD ___ Date Required ______

Temp Control: ______ °C

ORIGINAL

Jupiter Environmental Laboratories, Inc.
150 Old Dixie Highway, Jupiter, FL 33458
(561) 575-0030 • Fax (561) 575-4118 • jupiterlabs@bellsouth.net

C.O.C.# 17684

Page 1 of 1

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: David Hightower

Page: 1 of 2
Date: 7/7/2004
Log # 11169-01

Sample Description: COC # 17684
Project # 80057106
Location: Lamb Island
Matrix: Water

Label: P3-E
Date Sampled: 7/1/2004
Date Received: 7/1/2004 4:30:00 P
Collected By: Client

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	0.320	mg/L	/365.2	1	0.025	7/3/2004	7/3/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

Pam Shore
Quality Assurance Director

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: David Hightower

Date: 7/7/2004
Log # 11169-02

Sample Description: COC # 17684
Project # 80057106
Location: Lamb Island
Matrix: Water

Label: P3-W
Date Sampled: 7/1/2004
Date Received: 7/1/2004 4:30:00 P
Collected By: Client

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	0.340	mg/L	/365.2	1	0.025	7/3/2004	7/3/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

Pam Shore
Quality Assurance Director

BAR CODE

Chain of Custody Record

LAB USE ONLY

(55)

J.E.L. Log # 11239

P.O. #

Quote#

Jupiter Environmental Laboratories

Company Name HSA Engineers & Scientists

Address 1486 - A Skees Rd.

City West Palm Beach State FL Zip 33411

Sampling Site Address Okeechobee

Attn: David Hightower Fax/Email 561 - 686 - 9025

Project Name Lamb Island Project #

Sampler Name/Signature David Hightower

LAB ANALYSIS

#	Sample Label (Client ID)	Collected Date	Collected Time	Matrix Code*	# of Cont	Press Codes	Parameters: O. Hyd - P	Field Filtered (Y/N)	Integrity OK (Y/N)	Comments
1	P3 - A	7/16/04	1205	SW	1		✓			
2	P3 - B	7/16/04	1210	SW	1		✓			
3	P3 - C	7/16/04	1215		1		✓			
4	P3 - D	7/16/04	1220		1		✓			
5	P3 - E	7/16/04	1225		1		✓			
6	P3 - F	7/16/04	1230		1		✓			
7										
8										
9										
10										

Matrix Codes*

S	Soil/Solid Sediment	SW	Surface Water
GW	Ground Water	SL	Sludge
WW	Waste Water	O	Other (Please Specify)
DW	Drinking Water		

Pres Codes**

A-	none	I-	Ice
B-	HNO_3	O-	Other
C-	H_2SO_4	M-	MeOH
D-	NaOH		
E-	HCl		

Relinquished by	Date	Time	Received by	Date	Time
David Hightower	7/16/04	15:35		7/16/04	1535

QA/QC level with report

None X 1 2 3 See price guide for applicable fees

T.A.T. Request

X Standard

Rush

FDEP

SFWMD

Date Required

Temp Control:

°C

ORIGINAL

Jupiter Environmental Laboratories, Inc.
150 Old Dixie Highway, Jupiter, FL 33458
(561) 575-0030 • Fax (561) 575-4118 • jupiterlabs@bellsouth.net

C.O.C.# 18188

JUL 2 6 2004

AB

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: David Hightower

Page: 1 of 6
Date: 7/20/2004
Log # 11239-01

Sample Description: COC # 18188
Project # Lamb Island
Location: Okeechobee
Matrix: Water

Label:
Date Sampled: 7/16/2004
Date Received: 7/16/2004 3:35:00
Collected By:

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	0.080	mg/L	/365.2	1	0.025	7/17/2004	7/17/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

fw Pam Shore
Quality Assurance Director

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: David Hightower

Date: 7/20/2004
Log # 11239-02

Sample Description: COC # 18188
Project # Lamb Island
Location: Okeechobee
Matrix: Water

Label: P3-B
Date Sampled: 7/16/2004
Date Received: 7/16/2004 3:35:00
Collected By: Client

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	0.061	mg/L	/365.2	1	0.025	7/17/2004	7/17/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

for Edward E Dale
Pam Shore
Quality Assurance Director

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: David Hightower

Page: 3 of 6
Date: 7/20/2004
Log # 11239-03

Sample Description: COC # 18188
Project # Lamb Island
Location: Okeechobee
Matrix: Water

Label: P3-C
Date Sampled: 7/16/2004
Date Received: 7/16/2004 3:35:00
Collected By: Client

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	0.068	mg/L	/365.2	1	0.025	7/17/2004	7/17/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

for Edward Dalton

Pam Shore
Quality Assurance Director

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: David Hightower

Page: 4 of 6
Date: 7/20/2004
Log # 11239-04

Sample Description: COC # 18188
Project # Lamb Island
Location: Okeechobee
Matrix: Water

Label: P3-D
Date Sampled: 7/16/2004
Date Received: 7/16/2004 3:35:00
Collected By: Client

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	0.060	mg/L	/365.2	1	0.025	7/17/2004	7/17/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

for Edward Dale

Pam Shore
Quality Assurance Director

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: David Hightower

Page: 5 of 6
Date: 7/20/2004
Log # 11239-05

Sample Description: COC # 18188
Project # Lamb Island
Location: Okeechobee
Matrix: Water

Label: P3-E
Date Sampled: 7/16/2004
Date Received: 7/16/2004 3:35:00
Collected By: Client

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	0.068	mg/L	/365.2	1	0.025	7/17/2004	7/17/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

for Edward L. Dalton
Pam Shore
Quality Assurance Director

Jupiter
Environmental Laboratories, Inc.

Client # 3650
Address: HSA Engineers & Scientists WPB
1486-A Skees Road
West Palm Beach, FL 33411
Attn: David Hightower

Page: 6 of 6
Date: 7/20/2004
Log # 11239-06

Label: P3-F
Date Sampled: 7/16/2004
Date Received: 7/16/2004 3:35:00
Collected By: Client

Sample Description: COC # 18188
Project # Lamb Island
Location: Okeechobee
Matrix: Water

Description	Results	Units	Method	Dilution Factor	Detection Limit	Extraction Date	Analysis Date	Analyst
Phosphate-Ortho								
Phosphate-Ortho	0.073	mg/L	/365.2	1	0.025	7/17/2004	7/17/2004	ESC

U = Below Laboratory Detection Limit

Soil results are reported in dry weight

All Analysis were performed using EPA, ASTM, USGS or Standard Methods.
CompQAP #960152 EPA #FL01040 HRS #E86546
NELAC Certified

Respectfully Submitted,

for Edward Dabre

Pam Shore
Quality Assurance Director