ED BARBER & ASSOCIATES

EMPRONMENTAL CONSULTING

ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 102 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

August 17, 2001

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re: File

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from M. R. Friday & Associates, Inc. on July 27-28, 2001 pursuant to Specific Condition No. 39 of the referenced permit. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of field measurements made during diel survey, reflecting high seasonal freshwater inputs
- Analytical report for analyses of total suspended solids performed by Benchmark EnviroAnalytical, Inc., as prescribed in the permit
- · Chain-of-custody record

This diel survey serves to fulfill the water quality monitoring conditions for the referenced permit. Please call me if there is a need to further discuss the enclosed data.

Sincerely.

Associate

Enclosures

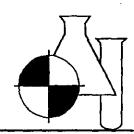
cc:

Chuck Listowski / WCIND

Larry Olsen, Ph.D.

Bob Stetler / FDEP

5



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Sarasota

Submission Number

1070536

M.R. Friday & Associates, Inc. 1748 Independence Blvd., Suite E-7

a., Suite E-7
FL 34234

SHACKETT CREEK/ WCIND

Project Name: Date Received:

07/28/2001

Time Received:

1231

Submission Number

1070536

Sample Number:

1

Sample Description:

Shackett Creek Station 1

Sample Date:

07/27/2001

Sample Method:

Grab

Sample Time:

0900

Parameter	Result	Units	Detection Procedure		Anal	Analyst		
rai ameter	Kesuit	Uints	Limit	Limit		Time	Anaiysi	
TOTAL SUSPENDED SOLIDS	6.17	MG/L	0.5	160.2	07/31/2001		TDT	

U = Analyte not detected at the value indicated

Submission Number

1070536

Sample Number:

2

07/27/2001

Sample Description:

Sample Method:

Shackett Creek Station 1

Sample Date: Sample Time:

0900

Grab

Parameter	Result	Units	Detection Procedure		Anai	ysis	Analyst	
1 at affect	Result		Limit	1 tocedure	Date	Time	Allalyst	
TOTAL SUSPENDED SOLIDS	5.83	MG/L	0.5	160.2	07/31/2001		TDT	

U = Analyte not detected at the value indicated

Submission Number

1070536

Sample Number:

3

Sample Description:

Shackett Creek Station 1

Sample Date:

07/27/2001

Sample Method:

Grab

Sample Time:

0900

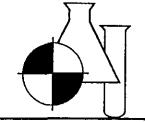
Parameter Result Units Detection Procedure Analysis Analyst

Page 1 of 3

PROJECT NAME: SHACKETT CREEK/WCIND

DATE: July 27 & 28, 2001

	ion/Time(hrs) epth (total)		DO (ppm)		-	ГЕМР (c)		1	LINI (0/00)		1)NDU mmho			pН	
Run	1	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid -	+1'	-1'	Mid -	+1'	-1'	Mid -	⊦1'
1	0900 6.2'	4.85	4.80	4.75	28.1	28.1	28.1	0	0	0	0.5	0.4	0.5	6.58	6.62	6.68
2	0926 2.9'	4.6		4.2	28.7		28.8	0.1		0,1	0.5		0.5	6.77		6.84
3	0942 4.6'	4.7	4.7	4.5	28.7	28.7	28.7	0	0	0	0.5	0.5	0.5	6.81	6.81	6.82
Run	21. 34. 20: 4.4	e i					X 3					. 13°	ed motories	e e		pel region de la
1	1300 5.9'	5.9	5.6	5.5	28.0	28.0	28.0	0	0	0	0.5	0.5	0.5	6.70	6.72	6.73
2	1321 2.5'		3.9			29.7			0.3			0.9			6.89	
3	1331 4.2'	4.8	4.6	4.6	28.9	28.9	28.9	0	0	0	0.5	0.5	0.5	4.87	4.86	4.86
Run	3 (1987) #3								i generalist				dieda distant		ng manganan Manganan	,,, ., .,
1	1700 5.7'	5.9	5.8	5.8	28.9	28.9	28.9	0	0	0	0.5	0.5	0.5	6.65	6.68	6.73
2	1719 2.4'		4.2			29.9			0.2			0.7			6.81	
3	1733 4.3'	5.0	4.7	4.6	29.2	29.2	29.1	0	0	0	0.5	0.5	0.6	6.83	6.85	6.86
Run	ANGER THE SE													Alexander Company	man mangarang	
1	2100 5.7	5.7	5.7	5.8	28.7	28.9	28.9	0	0	0	0.5	0.5	0.5	6.70	6.75	6.71
2	2118 2.5'		4.5			29.0			0			0.5			6.80	4,500
3	2130 4.3'	4.7	4.8	4.7	29.2	29.2	29.0	0	0	0	0.5	0.5	0.5	6.84	6.85	6.85
Ran	S PARTY TO SERVE					1					in in the second		tine Distance	and the same of	and the Second Control of the	
1	0100 5.5'	5.9	5.8	5.8	28.7	28.8	28.8	0.5	0.5	0.7	0.6	0.6	0.8	6,75	6.78	6.80
2	0118 2.3'		4.2	****		28.8			1.3			0.9	~~~		6.87	
3	0128 4.1'	4.7	4.7	4.7	28.9	28.8	28.8	0.8	0.8	0.7	0.6	0.6	0.6	6.87	6.87	6.8



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

TOTAL SUSPENDED SOLIDS

6.83

MG/L

160.2

0.5

07/31/2001

TDT

U = Analyte not detected at the value indicated

Submission Number

1070536

Sample Number:

4

Sample Description:

Shackett Creek Station 2

Sample Date:

07/27/2001

Sample Method:

Grab

Sample Time:

TOTAL

0926

Doromotor	Result	Units	Detection	Procedure	Anal	Analyst	
Parameter	Result	Ullits	Limit	Frocedure	Date	Time	Analyst
SUSPENDED SOLIDS	6.00	MG/L	0.5	160.2	07/31/2001		TDT

U = Analyte not detected at the value indicated

Submission Number

1070536

Sample Number:

ber: 5

Sample Description:

Shackett Creek Station 2

Sample Date: Sample Time: 07/27/2001

0926

Sample Method:

Grab

Parameter	Result Units		Detection	Procedure	Anal	Analyst	
1 at attietet	Kesuit	Omis	Limit	riocedure	Date	Time	Anaiysi
TOTAL SUSPENDED SOLIDS	8.67	MG/L	0.5	160.2	07/31/2001		TDT

U = Analyte not detected at the value indicated

Submission Number

1070536

Sample Number:

6

Sample Description:

Shackett Creek Station 3

Sample Date:

07/27/2001

Sample Method:

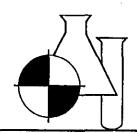
Grab

Sample Time:

0942

Parameter	Result	Units	Detection Des	Anal	Analyst			
Parameter	Result	Onits	Limit	Procedure nit		Time	Anaryst	
TOTAL SUSPENDED SOLIDS	5.83	MG/L	0.5	160.2	07/31/2001		TDT	

U = Analyte not detected at the value indicated



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1070536

Sample Number:

Sample Description:

Shackett Creek Station 3

Sample Date: Sample Time: 07/27/2001

0942

Sample Method:

Grab

		VI 14.	Detection	D 1	Anal	ysis	
Parameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	6.33	MG/L	0.5	160.2	07/31/2001		TDT

U = Analyte not detected at the value indicated

Submission Number

1070536

Sample Number:

Sample Description:

Shackett Creek Station 3

Sample Date:

07/27/2001

Sample Method:

Grab

Sample Time:

0942

Parameter	Result	Iluita	Detection	Procedure	Analysis		Analyst	
	Kesuit	Units	Limit	Limit		Time	Analyst	
TOTAL SUSPENDED SOLIDS	7.50	MG/L	0.5	160.2	07/31/2001		TDT	

U = Analyte not detected at the value indicated

08/04/2001

Dale D. Dixon / Laboratory Director

Date

Benchmark EnviroAnalytical, Inc.

653 Tenth Street East Palmetto, FL 34221 (941) 723-9986 (941) 723-6061 fax

BenchmarkEA@earthlink.net

Chain of Custody Form: Shackett Creek/WCIND

7/27/01

7/27/01

7/27/01

7/27/01

(Date) 7/27/01

(Date) 7/27/01

7/27/01

10/56/5

Michael R. Friday

(Date)

Method of discharge:

Station

ID

1

1

1

2

2

2

3

3

3

3

Collector: (Print)

Relinquished By: (Print)

Signature:

Signature:

Sample

EVpe

Grab

Grab

Grab

Grab

Grab

Grab

Grab

Grab

Grab

Surface Water

TSS

Plain

1 x 1 Quart Plastic

0900

0900

0000

OTTL

0926

0942

0942

(Time:) 094Z

(Time:)

(Time:)

Cilent:

Z

3

4

R

7/27/01

7/28/01

12:3

1750

2

4

M.R. Friday & Associates, Inc.

1748 Independence Blvd., Suite E-7

Sarasota, FL. 34234

(941) 351-1881

(941) 351-8359 fax

Lal	poratory Subm	ission #:	أ ا ك	570	536
	Field Parameters		-		Laboratory Sample #
eth	D.O. (mg/L)	Salinity (g/kg)		ductivity ihos/cm)	Sample #
3"					10
3′					2:
5′					3
1'					4
					5
2'					
1'					6
2.5					フ
4					8
Received By: (P	rint)			Date:	
Signature:	• ·			Time:	
Received For La	18/2001				
Signature:	att Del	gon Joan		Time: 12	:3/

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 102 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

July 24, 2001

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re: File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from M. R. Friday & Associates, Inc. on June 29-30, 2001 pursuant to Specific Condition No. 39 of the referenced permit. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids and additional laboratory parameters as prescribed in the permit
- · Chain-of-custody record

The upcoming July diel survey takes place two years after this project's initiation in 1999, and is to be submitted in August, serving to fulfill the water quality monitoring conditions for the referenced permit. Please call Dean Mades or me if there is a need to further discuss these data.

Sincerel

Associate

Enclosures

ce: Chuck Listowski / WCIND

Larry Olsen, Ph.D.

Bob Stetler / FDEP
Dean Mades, PE / EBA

	on/Time(hrs) pth (total)		DO (ppm)		7	ГЕМР (c)	,		LINI' (0/00)	ГУ		NDU			pН	
Run	1	-1'	Mid	+1'	-1'	Mid -	+1'	-1'	Mid -	F1'	-1'	Mid -	-1'	-1'	Mid -	+1'
1	0900 5.7'	3.7	3.0	2.9	29.3	29.7	30.0	11.4	12.5	15.8	19.1	20.1	28.0	7.36	7.44	7.48
2	0940 3.0'	4.2		3.5	28.1		28.1	13.7		13.2	23.6		23.1	7.62		7.61
3	1000 4.3'	4.2	4.0	4.3	28.4	28.5	28.8	10.9	12.5	13.3	18.3	21.1	22.2	7.62	7.64	7.71
Run 2	2						City Ti				<u> </u>	e Para			S. 61 -	
1	1300 5.2'	4.0	4.2	3.4	31.0	29.8	29.6	9.8	10.6	11.0	16.9	17.9	18.7	7.45	7.51	7.51
2	1311 2.4'		5.8			30.7			11.8			20.8			7.72	
3	1318 3.9'	6.2	4.5	3.8	30.2	29.3	29.1	11.1	14.9	13.8	20.1	24.5	23.0	7.72	7.47	7.53
Run :	等でもある。 3		gli e engel	7 (2 (2 (2)	博用:: 	- CM.2	经额线	旗便	M TA	快感情	्रिक् _{रिय} े	भ्यक्ष			2.2.4	新疆的
1	1700 4.9	6.3	5.3	3.9	30.9	30.0	29.9	6.4	6.1	11.4	11.2	10.9	19.1	7.58	7.42	7.38
2	1718 2.2'		6.3			31.0			15.5			25.6			7.77	
3	1723 3.9'	7.1	6.7	6.7	30.9	30.8	30.9	13.9	17.4	19.9	21.9	24.3	28.2	7.91	7.93	7.98
Run	4		Commission ()		Rep (A				W# 15	7. · · · ·	TO THE PARTY OF TH	<i>त</i> ्रक्ष	物源
1	2100 5.4'	3.9	4.6	3.4	28.2	29.7	29.8	7.1	8.7	10.2	12.3	14.9	17.8	7.42	7.51	7.56
2	2115 2.7'		5.5			30.1			16.1			26.5			7.90	
3	2125 4.2'	8.8	7.6	6.4	30.3	30.2	30.2	15.4	16.5	13.5	25.1	27.2	22.7	8.13	8.13	7.94
Run :	5	78. 1 T 4	grander be	10/18/10	T. S. Or		307789	HATTE	The state of	A STATE OF THE STA	物學性	100 m	2,5845		NIA.	的其他
	0100 5.0'	3.5	3.4	3.3	28.1	28.5	29.5	6.5	8.1	15.5	11.3	13.9	25.7	7.52	7.49	7.52
2	0120 2.4'		5.6			28.9			11.8			19.9			7.81	<u></u>
3	0129 3.9'	6.0	5.9	4.3	29.4	29.8	30.2	13.9	15.8	16.3	22.9	26.8	27.0	7.88	7.87	7.77
Run	6		क्राईन्ड्रेन्ड्र १९) जन्म	11/40 Pers	4 7 4 m		Genera	an open and	A COURT	Line State		TC3-T3-	Mary Artists	- W. C.	an Tear	10年19年19年
1	0500 5.2'	3.8	3.0	3.2	27.6	28.8	30,1	5.4	6.2	8.0	9.8	10.9	14.4	7.45	7.43	7.44
2	0517 2.5'		4.2			29.1			15.5			25.8			7.68	
3	0528 4.4'	4.4	4.3	3.9	29.3	29.6	29.6	18.5	18.9	19.1	30.9	30.4	31.1	7.78	7.72	7.69
Run	7		N Tra	MAN SE	3 5 ± 5 5 26	in The	or to Tigg	e mount	电影 音 电池	jerniky je	elimen -	AND THE		KOLIN SER	K. Marines, at	The Sales of States of
1	0900 5.9	4.4	3.7	2.9	28.2	28.9	30.1	5.8	8.4	13.0	10.5	14.5	22.0	7.35	7.42	7.52
2	0915 3.2'	4.4		4.2	28.5		28.8	14.9		15.3	24.9	ļ	25.3	7.70		7.62
3	0920 4,6'	5.0	4.8	3.6	29.1	29.2	29.2	17.1	16.9	21.1	28.2	27.9	34.9	7.75	7.70	7.69
10.19		Marine and Trans	\$	Y a direction of	Mary See	Month	y TSS	Sample	3 3		Quarte	rly Nut	rient S	amples		er f actorio
St	ation/Time		SECCI	11		-1"	I N	1id	4	-1'		·1'	N	1id	-	+1'
1	0900 @ 5.7'	3.0'			A @	1'	В@	3'	C @	5'	AA (@ 1'	BB @	2) 3'	CC @	Ð 5'
2	0940 @ 3.0'	3.0'			D @	1'			E @	2'	DD (@ 1'			EE @	g) 2'
3	1000 @ 4.3'	3.2'			F @	1'	G @	2'	Н@	3'	1@	i'	J @	2'	К@	3'

WEATHER CONDITIONS: Sunny in AM w/ clouds and rain in PM

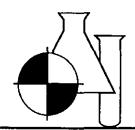
NOTES: Monitoring follows several days of intense rain

^{-1&#}x27; data collected one foot below the surface of the water

mid data collected from the middle of the water column

^{+1&#}x27; data collected one foot above the bottom

⁻⁻⁻ indicates that the water depths were too shallow for data collection in accordance with the parameters set forth pursuant to Condition No. 39(b) & (c) of the subject permit



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1060484

M.R. Friday & Associates, Inc. 1748 Independence Blvd., Suite E-7

Sarasota

FL 34234

Project Name:

SHACKETT CREEK/ WCIND

Date Received:

06/30/2001

Time Received:

1240

Submission Number

1060484

Sample Number:

Sample Date:

Sample Time:

1

06/30/2001

Sample Description:

Sample Method:

Shackett Creek 1 A - Aa

0900

Grab

D	D14	T1!4	Detection	Describera	Anal	ysis	A 1
Parameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	7.76	MG/L	0.5	160.2	07/02/2001		TDT
AMMONIA NITROGEN	0.26	MG/L	0.01	350.2	07/03/2001		BMS
ORGANIC NITROGEN	1.01	MG/L	0.04	351-350	07/03/2001		BMS
TOTAL KJELDAHL NITROGEN	1,27	MG/L	0.04	351.2	07/03/2001		BMS
TOTAL NITROGEN	1.29	MG/L	0.04	353+351	07/06/2001		BMS/DTD
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	07/06/2001		TDT
TOTAL PHOSPHORUS	0.79	MG/L	0.01	365.3	07/06/2001		BMS

U = Analyte not detected at the value indicated

Submission Number

1060484

Sample Number:

2

Sample Description:

Shackett Creek 1 B - Bb

Sample Date: Sample Time:

0900

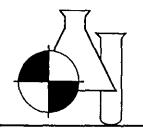
06/30/2001

Sample Method:

Grab

Donomotor	Dogult	T1-24-	Detection	Procedure	Anal	ysis	A14
Parameter	Result	Units	Limit		Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	15.8	MG/L	0.5	160.2	07/02/2001		TDT
AMMONIA NITROGEN	0.12	MG/L	0.01	350.2	07/03/2001		BMS
ORGANIC NITROGEN	1.02	MG/L	0.04	351-350	07/03/2001		BMS
TOTAL KJELDAHL NITROGEN	1.14	MG/L	0.04	351.2	07/03/2001		BMS
TOTAL NITROGEN	1.15	MG/L	0.04	353+351	07/06/2001		BMS/DTD

Page 1 of 4



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

NITRATE+NITRITE	0.01	MG/L	0.01	353.2	07/06/2001	TDT
TOTAL PHOSPHORUS	0.62	MG/L	0.01	365.3	07/06/2001	BMS

U = Analyte not detected at the value indicated

Submission Number

1060484

Sample Number:

3

Sample Description:

Shackett Creek 1 C - Cc

Sample Date:

06/30/2001

Sample Method:

Grab

Sample Time:

0900

Parameter	Result	Units	Detection	Procedure	Analysis		Amalwat
rarameter	Acsult	Omts	Limit	rrocedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	21.1	MG/L	0.5	160.2	07/02/2001		TDT
AMMONIA NITROGEN	0.16	MG/L	0.01	350.2	07/03/2001		BMS
ORGANIC NITROGEN	0.67	MG/L	0.04	351-350	07/03/2001		BMS
TOTAL KJELDAHL NITROGEN	0.83	MG/L	0.04	351.2	07/03/2001		BMS
TOTAL NITROGEN	0.85	MG/L	0.04	353+351	07/06/2001		BMS/DTD
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	07/06/2001		TDT
TOTAL PHOSPHORUS	0.26	MG/L	0.01	365.3	07/06/2001		BMS

U = Analyte not detected at the value indicated

Submission Number

1060484

Sample Number:

Sample Date:

Sample Time:

Sample Description:

Shackett Creek 2 D - Dd

06/30/2001

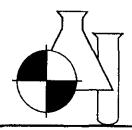
0940

Sample Method:

Grab

Parameter	Result	Units	Detection	Procedure	Anal	Analyst	
rarameter	Result	Omts	Limit	rrocedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	20.0	MG/L	0.5	160.2	07/02/2001		TDT
AMMONIA NITROGEN	0.21	MG/L	0.01	350.2	07/03/2001		BMS
ORGANIC NITROGEN	0.44	MG/L	0.04	351-350	07/03/2001		BMS
TOTAL KJELDAHL NITROGEN	0.65	MG/L	0.04	351.2	07/03/2001		BMS
TOTAL NITROGEN	0.66	MG/L	0.04	353+351	07/06/2001		BMS/DTD
NITRATE+NITRITE	0.01	MG/L	0.01	353.2	07/06/2001		TDT
TOTAL PHOSPHORUS	0.39	MG/L	0.01	365.3	07/06/2001		BMS

U = Analyte not detected at the value indicated



FDOH Certification #684167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1060484

Sample Number:

Sample Description:

Shackett Creek 2 E - Ee

Sample Date:

06/30/2001

Sample Method:

Grab

Sample Time:

1000

Danamatan	Result	Units	Detection Detection		Analysis		A
Parameter	Result	Omts	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	19.9	MG/L	0.5	160.2	07/02/2001		TDT
AMMONIA NITROGEN	0.16	MG/L	0.01	350.2	07/03/2001		BMS
ORGANIC NITROGEN	0.59	MG/L	0.04	351-350	07/03/2001		BMS
TOTAL KJELDAHL NITROGEN	0.75	MG/L	0.04	351.2	07/03/2001		BMS
TOTAL NITROGEN	0.77	MG/L	0.04	353+351	07/06/2001		BMS/DTD
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	07/06/2001		TDT
TOTAL PHOSPHORUS	0.38	MG/L	0.01	365.3	07/06/2001		BMS

U = Analyte not detected at the value indicated

Submission Number

1060484

Sample Number:

Sample Description:

Shackett Creek 3 F - I

Sample Date:

06/30/2001

Sample Method:

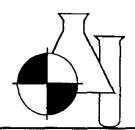
Grab

Sample Time:

1000

Donomotor	Result	Units	Detection	Procedure	Analysis		Amaleust
Parameter	Result Ollits		Limit	Limit		Time	Analyst
TOTAL SUSPENDED SOLIDS	18.1	MG/L	0.5	160.2	07/02/2001		TDT
AMMONIA NITROGEN	0.16	MG/L	0.01	350.2	07/03/2001		BMS
ORGANIC NITROGEN	0.49	MG/L	0.04	351-350	07/03/2001		BMS
TOTAL KJELDAHL NITROGEN	0.65	MG/L	0.04	351.2	07/03/2001		BMS
TOTAL NITROGEN	0.67	MG/L	0.04	353+351	07/06/2001		BMS/DTD
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	07/06/2001		TDT
TOTAL PHOSPHORUS	0.38	MG/L	0.01	365.3	07/06/2001		BMS

U = Analyte not detected at the value indicated



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1060484

Sample Number:

7

Sample Description:

Shackett Creek 3 G - J

Sample Date:

06/30/2001

Sample Method:

Grab

Sample Time:

1000

D	Result	Units	Detection	D	Analysis		Analuct
Parameter	Result	Omts	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	21.0	MG/L	0.5	160.2	07/02/2001		TDT
AMMONIA NITROGEN	0.09	MG/L	0.01	350.2	07/03/2001		BMS
ORGANIC NITROGEN	0.51	MG/L	0.04	351-350	07/03/2001		BMS
TOTAL KIELDAHL NITROGEN	0.60	MG/L	0.04	351.2	07/03/2001		BMS
TOTAL NITROGEN	0.62	MG/L	0.04	353+351	07/06/2001		BMS/DTD
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	07/06/2001		TDT
TOTAL PHOSPHORUS	0.35	MG/L	0.01	365.3	07/06/2001		BMS

U = Analyte not detected at the value indicated

Submission Number

1060484

Sample Number:

Sample Description:

Shackett Creek 3 H - K

Sample Date:

Sample Time:

TOTAL PHOSPHORUS

06/30/2001

1000

Sample Method:

Grab

Detection Analysis **Parameter** Result Units **Procedure** Analyst Limit Time Date MG/L TOTAL SUSPENDED SOLIDS 20.9 07/02/2001 TDT 0.5 160.2 MG/L 0.09 AMMONIA NITROGEN 0.01 350.2 07/03/2001 **BMS** MG/L 0.48 0.04 351-350 07/03/2001 **BMS** ORGANIC NITROGEN MG/L 0.57 TOTAL KJELDAHL NITROGEN 0.04 351.2 07/03/2001 **BMS** MG/L BMS/DTD TOTAL NITROGEN 0.59 0.04 353 + 35107/06/2001 MG/L NITRATE+NITRITE 0.02 0.01 353.2 07/06/2001 TDT

MG/L

0.01

365.3

07/06/2001

0.33

U = Analyte not detected at the value indicated

07/13/2001

Dale D. Dixon / Laboratory Director

Date

BMS

Benchma. . EnviroAnalytical, Inc.

653 Tenth Street East Palmetto, FL 34221 (941) 723-9986 (941) 723-6061 fax

BenchmarkEA@earthlink.net

Chain of Custody Form: Shackett Creek/WCIND Method of discharge: Surface Water Sample Type:

Grab

Client: A.R. Friday & Associates, Inc.

1748 Independence Blvd., Suite E-7

Sarasota, FL. 34234

(941) 351-1881

(941) 351-8359 fax

1060484

Sample Type	. Giab							
Station	TSS	TKN, NO ₃ -NO ₂ , T-N			Field Parameters			Laboratory Sample #
		NH ₃ , O-N, T-P	Temp (°C)	pН	D.O.	Salinity	Conductivity	
-	Plain	1:1 H₂SO₄			(mg/L)	(g/kg)	(µmhos/cm)	
X	1 x 1 Quart Plastic	1 x 1 Quart Plastic						
<u> 1</u>	(Time:) 0900@1' A	(Time:) 0900@1' (AA)						1 Aa
	(Time) 0900@3'(B)	(Time) 900@3' (BB						2 A+1
1	(Time:) 0900@5' @	(Time:) 0900@5 (CC)				·		3 A+ 6
Z	(Time:) 0940 @ 1'(D)	(Time:) 0940@ 1'(DD)						4 A+L
2	(Time:)	(Time:)						
2	(Time:) 0940 @ Z' (E)	(TIME) 0940@2 (EE						6 A+L
3	(Time:) 1000@ 1' (F)	(Time) (DOD Q 1' (T)						6 ALE
3	(Time:) 1000@ 2' 6	(Time:) (000@2' (J)						7 AXE
3	T	(Time:) 1000@3'(K)						8A4E

Instructions:

The effluent sample bottles for nitrogen contain premeasured 1:1 sulfuric acid (H₂SO₄). Do not rinse these bottles with sample prior to sampling.

All bottles not containing preservative may be rinsed with appropriate sample prior to collection.

The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form.

1	Collector: (Print) Michael R. Friday	Date: 6-29-01	2	Received By: (Print)	Date:
	Signeture: Whele Very	Time: 0900 h/S		Signature:	Time:
3	Relinquished By: (Print) Michael R Friday	Date: 06/30/0/	4	Received For Lab By/(Pgint) KATHARINE A. DIXON	Date: 06/30/01
	Signature: Malent Tun	Time: 1240		Signature: J Atthaline (). Siphen	Time: /24/0

Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis. The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID.

M.R. FRIDAY & ASSOCIATES, INC.

Environmental Consultants

July 20, 2001

Mr. Sam Johnston Ed Barber & Associates, Inc. 3639 Cortez Road West, Suite 102 Bradenton, FL 34210

Re: June Data Collection @ Shackett Creek in accordance with FDEP Permit No. 58-01274663-001, Condition No. 39 (b) & (c), Report No. 8

Dear Sam,

Enclosed please find the June water analysis data and the total assay data. Also enclosed is the invoice for the June event. The next monitoring event is scheduled for July 27th and 28th, 2001. Please contact me should you have any questions regarding this report or invoice. Thanks.

Respectfully submitted,

muliloc

Michael R. Friday

President

enclosures

ED BARBER & ASSOCIATES

ENTRONMENTAL CONSULTING ENTRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 102 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

June 27, 2001

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re: File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from M. R. Friday & Associates, Inc. on June 1-2, 2001 pursuant to Specific Condition No. 39 of the referenced permit. This effort reflects data for the end of May. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids
- Chain-of-custody record

Please call Dean Mades or me if there is a need to further discuss these data.

Sincerely

Sam Johnsto

Associate

Enclosures

cc:

Chuck Listowski / WCIND Larry Olsen, Ph.D.

Bob Stetler / FDEP
Dean Mades, PE / EBA

RECEIVED JUN 2 7 2001

PROJECT NAME: SHACKETT CREEK/WCIND

DATE: June 1 & 2, 2001

	on/Time(hrs) pth (total)		DO (ppm)		7	EMP (c)			LINI7 (0/00)	ГҮ		NDU mmho			рН	
Run	1	-1'	Mid	+1'	-1'	Mid →	-1'	-1'	Mid +	-1'	-1'	Mid +	⊦1'	-1'	Mid 4	+1 *
1	0900 5.9'	4.5	3.8	2.9	31.0	31.3	31.8	31.9	32.2	32.1	54.0	54.2	55.0	7.73	7.72	7.69
2	0928 3.2'	5.1		5,15	30.5		30.7	33.0		33.0	54.5		54.6	7.74		7.74
3	0946 4.0'	3.7	3.6	3.5	30.6	30.6	30.7	33.0	33.1	33.1	55.2	55.3	55.4	7.87	7.88	7.89
Run 2	2				_						,		_		श्रीति ∙ ———	
1	1300 5.5'	5.3	5.4	4.7	31.2	31.1	31.2	31.2	31.3	31.8	52.3	52.3	52.8	7.82	7.81	7.82
2	1321 2.6'		4.2			31.2			32.3			54.1			7.83	
3	1335 3.6'	4.1		4.1	31.0	1	31.0	32.9		32.9	54.4		54.4	7.80		7.80
Run	3 ************************************		of West	. 1.5	i i i i i i i i i i i i i i i i i i i	- W.	建物	1.44		18.00	美洲 夢	等 2 联的	: : -, 4 [*]	- 18 5 42 A	7.75	門教育
1	1700 4.7'	5.9	5.8	5.6	31.8	31.5	31.5	30.2	31.0	31.0	52.6	52.5	52.5	7.84	7.85	7.81
2	1713 2.0'		5.7			31.2			32.3			54.1			7.89	
3	1721 3.1'	5.0	<u> </u>	4.8	31.1		31.0	32,5		32.9	54.2		54.5	7.84		7.83
Run	4			. 4.	No. 18	100	\$ 3.43	Park (Sec.)	And a little	(eriode)#	general production of the second			el a tua	CHAPPE	NAME OF
1_	2142 5.2'	5.1	4.5	4.4	30.6	31.0	31.0	31.9	31.7	31.9	54.1	54.2	54.3	7.82	7.82	7.80
2	2202 2.5'		4.0			30.1			33.2			55.0			7.79	
3	2210 3.6	4.1		4.2	30.2		30.2	33.3		33.4	55.1		55,2	7.83		7.82
Run				1 (L. Pelikira	2.131228	~~ <u>~</u>	1989	The Parist	\$. · · ·	AND TO PARTY.	ter en vor		क्षुना हुने जाहो र	. EX PROPRIE	e ranger	Sant At
1	0100 5.3'	4.9	4.7	3.7	30.1	30.6	31.0	32.1	32.0	32.0	54.1	54.3	54.4	7.79	7.78	7.75
2	0120 2.6'		3.7			29.9			33.1			55.2			7.79	
3_	0127 3.6'	3.9	1	3.8	29.9		30.1	33.2		33.3	55.4		55.5	7.80		7.80
Run	6			٠.	.,	10.000	A 92 HO316	a a a grande de la companya de la c	e de la company	1.11.11.11.11.11.11	ejana a	W	. Spring	e denieg	gari — marining V	A HALL STATE OF STATE
1	0500 4.7	3.8	3.6	3.4	29.9	30.0	30.0	31.7	31.9	31.9	53.0	53.2	53.2	7.68	7.67	7.68
2	0521 2,1'		3.1			29.2			33.8			55.8	ļ		7.72	
3	0530 3.3'	3.3	<u> </u>	3.3	29.3		29.3	34.0		34.0	56.1		56.1	7.74	<u> </u>	7.74
Run	7				a rest	Y (95)		A CONTRACTOR		的安全人	genega.		1 . A.	1 5 12.	Hara Leading	21.17
1	0900 6.0'	4.0	3.7	3.7	29.7	29.5	29.4	32.8	32.9	32.9	55.0	55.1	55.0	7.68	7.70	7.70
2	0927 3.5'	3.5		3.4	29.0		28.9	33.3		33.5	55.2		55.3	7.72		7.71
3	0937 4.6'	4.2	4.0	3.9	29.1	29.0	29.0	33.3	33.3	33.3	55.1	55.0	55.0	7.90	7.93	7.93
₹પ્	7 1				ەرىق. ئىلىق	Month	ly TSS	Sample	#19:00 (10:00) :3		Quarte	rly Nut	rient S	amples	andri onic en	1042 PS
S	tation/Time		SECCI	łı		1'	N	1id	-	+1'		1'	N	/lid	-	+1'
1	0900 5.9'	3.3'			#1 @	1'	#2@	3'	#3 @) 5 '						
2	0928 3.2'	Too	shallow		#4 @) 1'			#5 @) 2' 						
3	0946 4.0'	4.0'			#6@) I'	#7 @	3 2'	#8 @	3'						
Щ.	J				<u>i</u>											

WEATHER CONDITIONS:

Day 1- sunny & calm in am w/ clouds & wind in pm. Day 2- sunny & breezy in am

NOTES:

- -11 data collected one foot below the surface of the water
- data collected from the middle of the water column mid
- +1' data collected one foot above the bottom
- indicates that the water depths were too shallow for data collection in accordance with the parameters set forth pursuant to Condition No. 39(b) & (c) of the subject permit

BENCHMA

EnviroAnalytical, Inc.

FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1060026

M.R. Friday & Associates, Inc. 1748 Independence Blvd., Suite E-7

Sarasota

FL 34234

Project Name:

SHACKETT CREEK/ WCIND

Date Received:

06/02/2001

Time Received:

1253

Submission Number

1060026

Sample Number:

06/02/2001

Sample Method:

Shackett Creek 1-1

Grab

Sample Date: Sample Time:

0900

Parameter	Result	Units	Detection Procedu		Anal	Analyst	
r ai ailletei	Kesuit	Omis	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	11.2	MG/L	0.5	160.2	06/04/2001	l	TDT

Sample Description:

U = Analyte not detected at the value indicated

Submission Number

1060026

Sample Number:

2

Sample Description:

Shackett Creek 1-2

Sample Date: Sample Time: 06/02/2001

Sample Method:

Grab

Parameter	Result	Units	Detection Procedur		Analy	sis	Analyst
	Reşuit	Onits	Limit		Date	Time	Anaiyst
TOTAL SUSPENDED SOLIDS	14.2	MG/L	0.5	160.2	06/04/2001		TDT

U = Analyte not detected at the value indicated

0900

Submission Number

1060026

Sample Number:

3

Sample Description:

Shackett Creek 1-3

Sample Date:

06/02/2001

Sample Method:

Grab

Sample Time:

0900

Parameter

Result

Units

Detection Limit

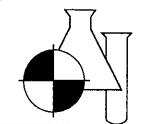
Procedure

Analysis Date Time

Analyst

Page 1 of 3

653 Tenth Street East*Palmetto, FL 34221*Phone (941)723-9986*FAX (941)723-6061



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

TOTAL SUSPENDED SOLIDS

14.9

MG/L

0.5

160.2

06/04/2001

TDT

U = Analyte not detected at the value indicated

Submission Number

1060026

Sample Number:

Sample Description:

Shackett Creek 2-4

Sample Date:

06/02/2001

Sample Method:

Grab

Sample Time:

0928

4

Result Units

Detection Limit

Procedure Analysis
Date Ti

160.2

Analyst

Time

Parameter
TOTAL SUSPENDED SOLIDS

15.5 M

MG/L

0.5

06/04/2001

TDT

U = Analyte not detected at the value indicated

Submission Number

1060026

Sample Number:

5

Sample Description:

Shackett Creek 2-5

Sample Date:

06/02/2001

Sample Method:

Grab

Sample Time:

0928

Dougratay	Result	Units	Detection	Procedure	Analy		Analyst
Parameter	Result	Ullis	Limit	rrocedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	16.8	MG/L	0.5	160.2	06/04/2001		TDT

U = Analyte not detected at the value indicated

Submission Number

1060026

Sample Number:

6

Sample Description: Sample Method: Shackett Creek 3-6

Sample Date:

06/02/2001

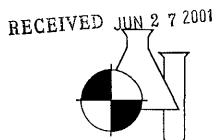
Grab

Sample Time:

0946

Davamatan	Result	Units	Detection Procedure	Analy	Analyst		
Parameter	Result	Onits	Limit	Trocedure	Date	Time	Amaryst
TOTAL SUSPENDED SOLIDS	18.6	MG/L	0.5	160.2	06/04/2001		TDT

U = Analyte not detected at the value indicated



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1060026

Sample Number:

7

,

06/02/2001

Sample Description:

Shackett Creek 3-7

Sample Method:

Grab

Sample Date: Sample Time:

0946

Parameter	Result	Units	Detection	Procedure	Analy	Analyst	
rarameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	19.3	MG/L	0.5	160.2	06/04/2001		TDT

U = Analyte not detected at the value indicated

Submission Number

1060026

Sample Number:

8

Sample Description:

Shackett Creek 3-8

Sample Date: Sample Time: 06/02/2001 0946 Sample Method:

Grab

Davamatau	Result	Units	Detection	Procedure	Analy	sis	Analyst	-
Parameter	Kesuit	Omts	Limit	riocedure	Date	Time	Analyst	
TOTAL SUSPENDED SOLIDS	17.2	MG/L	0.5	160.2	06/04/2001		TDT	

U = Analyte not detected at the value indicated

Dale D. Dixon / Laboratory Director

06/13/2001

Date

Benchmark EnviroAnalytical, Inc.

653 Tenth Street East Palmetto, FL 34221 (941) 723-9986 (941) 723-6061 fax BenchmarkEA@earthlink.net Client: M.R. Friday & Associates, Inc.

1748 Independence Blvd., Suite E-7

Sarasota, FL. 34234 (941) 351-1881

(941) 351-8359 fax

RECEIVED JUN 2 7 2001

Chain of Custody Form:

Sample Type:

Shackett Creek/WCIND

Method of discharge: Surface Water

Grah

Laboratory Submission #:

1060026

Sample Type	Grab	· ₁			<u> </u>			
Station	TSS	TKN, NO ₃ -NO ₂ , T-N			Field Parameters			Laboratory Sample #
# ID		NH ₃ , O-N, T-P	Temp (°C)	pН	D.O.	Salinity	Conductivity	Jample #
Bottle	Plain	1:1 H ₂ SO ₄			(mg/L)	(g/kg)	(µmhos/cm)	
å,	1 x 1 Quart Plastic	1 x 1 Quart Plastic						
#1 1	(Time) 0900@1'	(Time)						1-1
≠2 2i	(Time:) 0900 @ 3'	(Time:)						1-3
±3 31	(Time:) 0900@5'	(Time:)						1-5
#4 42	(Time) 0928 @ 11	(Time:)						2-7
\$2	(Fime:)	(Time:)				! 		£=2.
#5 62	(Time:) 0928 @ 2"	(Time:)					·	ユ -ス
#6 13	(Time:) 0946@1'	(Time:)						3-1
#7 83	(Time:) 0946 @ Z'	(Tigha:)						3-2
±8 9 3	(Time:) 6946 @ 3'	(fime:)						3-3

Sample must be refrigerated or stored in wet ice after collection. The maximum temperature during storage should be 4°C (39.2°F).

Instructions:

Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis. The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID.

The effluent sample bottles for nitrogen contain premeasured 1:1 sulfuric acid (H₂SO₂). Do not rinse these bottles with sample prior to sampling.

All bottles not containing preservative may be rinsed with appropriate sample prior to collection.

The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form.

1	Collector: (Print) Michael R. Friday	Date: (// O	2	Received By: (Print)	Date:
	Signature: Mulul O	Time:		Signature:	Time:
3	Relinquished By: (Print) Challe R Fiday	Date: 6/2/01	4	Received For Lab By: (Print) **EATHARINE A. DIXCU!	Date: 06/02/0/
	Signature: Molel M	Time: /253		Signature: J- Elyh asine A. Diga	Time: 125.3

ED BARBER & ASSOCIAT

ENVIRONMENTAL CONSULTING ENVIRONMENTAL MANAGEMENT SERVICES Wildewood Professional Park 3639 Cortez Road West, Suite 102 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

May 24, 2001

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from M. R. Friday & Associates, Inc. on April 27-28, 2001 pursuant to Specific Condition No. 39 of the referenced permit. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids
- Chain-of-custody record

Please call Dean Mades or me if there is a need to further discuss these data.

Sincerely

Enclosures

cc:

Chuck Listowski / WCIND

Larry Olsen, Ph.D.

Bob Stetler / FDEP Dean Mades, PE / EBA

PROJECT NAME: SHACKETT CREEK/WCIND

DATE: April 27 & 28, 2001

	on/Time(hrs) epth (total)		DO (ppm)		7	EMP (c)			LINI7 (0/00)	ГҮ		NDU			рН	
Run	1	-1'	Mid	+1'	-11	Mid +	-1'	-1'	Mid -	+1 '	-1'	Mid +	-1'	-1'	Mid +	-1'
1	0900 4.4'	4.9	4.7	3.9	23.7	24.3	25.3	-1	25.0	25.0	37.1	37.7	37.9	7.73	7.75	7.75
2	0930 1.9'		5.4			21.9			26.5			39.1			7.85	
3	0945 3.1'	5.4		5.6	21.5		21.8	26.8		26.5	38.3		38.7	7.86		7.87
Run 2	2														•	
1	1300 5.3'	7.3	5.8	5.7	24.8	23.8	23.8	24.9	26.1	26.8	39.9	39.9	40.8	7.89	7.89	7.84
2	1322 2.9'		6.6			24.2			28.5			43.9			7.96	
3	1333 4.0'	7.1	7.0	7.3	23.8	23.8	23.7	29.7	29.8	29.7	44.8	44.9	44.8	8.09	8.10	8.11
Run 3	3												- , 1941 -	T DAY	4.3	a era e
1	1700 5.4'	8.6	7.7	7.1	27.1	25.2	24.1	25.6	26.2	27.3	41.6	41.7	41.9	7.99	7.99	7.99
2	1720 2.7'		7.2	*		26.3			28.0			44.9			8.03	
3	1730 4.0'	7.6	7.2	6.9	25.7	25.0	24.8	27.9	28.9	29.0	44.5	44.8	44.8	8.03	8.06	8.06
Run 4	4							, *51 , *				. *		15/6%	da Cirka gera	Sup Ch
1	2100 4.4'	6.5	6.8	6.4	26.0	26.1	25.3	25.3	25.6	25.8	41.2	41.6	41.4	7.83	7.83	7.86
2	2118 1.6		7.4			25.1			26.3			42.7			7.99	
3	2125 2.9'	7.6		7.6	25.1		25.2	26.7		27.0	42.8		42.9	8.01		8.00
Run	5															14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1	.0100 3.7	4.9	5.3	5.3	24.5	25.0	24.8	24.3	25.8	26.8	38.8	40.9	41.9	7.78	7.81	7.86
2	0130 2.0'		5.4			23.2			26.9			40.5			7.92	
3	0146 2.5'	<u> </u>	5.4			23.1			27.1			41.1			7.91	
Run	6					- 1.55°	y V H	র্কার্থ সমূ	4 * 2 2 9 2	er i de la lag	i diyekt		로 기간함	A - 253	S. C. Harperta	
1	0500 4.5'	5.4	5.6	5.8	23.9	24.3	24.8	25.1	25.1	26.3	38.6	39.2	40.8	7.83	7.83	7.86
2	0522 2.0		5.1			22.5			27.5	<u> </u>		41.0			7.87	
3	0535 3.0'	5.5		5.4	22.9		22.9	28.0	<u> </u>	28.8	42.4		42.2	7.94		7.92
Run	7														e deser	自横 (1904年)
1	0900 4.9'	5.0	5.4	5.0	23.2	23.9	24.2	25.2	27.3	27.3	38.9	41.9	42.4	7.83	7.87	7.86
2	0918 2.5'		5.3			22.3			28.3			41.9			7.93	
3	0928 3.6	5.3		5.5	22.6		22.7	29,2		29.4	43.2		43.2	8.02		8.01
						Month	ly TSS	Sample	:5		Quarte	rly Nut	rient S	amples	*******	(4) - 4-25
S	tation/Time		SECCI	11	<u> </u>	1'	N	/lid	4	⊦1 '		-1'	N	1id	4	-1'
1	0900 4.4'	0900	3.7'		#1@) i'	#2 @) 2'	#3 @	3'						
2	0930 1.9'	Too	Shallov	/			#4@) 1'								
3	0950 3.1'	Too	Shallov	,	#5 @) ' '			#6@	2'						

WEATHER CONDITIONS: Sunny and calm both days, mid to high 80's

NOTES:

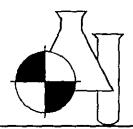
- -1' data collected one foot below the surface of the water
- mid data collected from the middle of the water column
- +1' data collected one foot above the bottom
- indicates that the water depths were too shallow for data collection in accordance with the parameters set forth pursuant to Condition No. 39(b) & (c) of the subject permit



4.

BENCHMARK

EnviroAnalytical, Inc.



FDOH Confrication #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1040518

M.R. Friday & Associates, Inc. 1748 Independence Blvd., Suite E-7

Sarasota

FL 34234

Project Name:

SHACKETT CREEK WCIND

Date Received:

04/28/2001

Time Received:

1330

Submission Number

1040518

Sample Number:

04/27/2001

Sample Description:

Shackett Creek 1-1

Sample Date: Sample Time:

0911

Sample Method:

Grah

Downston	Daguli	T Imites	Detection	Anal	Analust		
Parameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	15.3	MG/L	0.5	160.2	04/30/2001		TDT

U = Analyte not detected at the value indicated

Submission Number

1040518

Sample Number:

2

Sample Description:

Shackett Creek 1-2

Sample Date:

04/27/2001

Sample Method:

Grab

Sample Time:

0915

Parameter	Result	Units	Detection	Procedure	Anal	ysis	Analyst
	Result	Oillis	Limit	Frocedure	Date	Time	Anaiysi
TOTAL SUSPENDED SOLIDS	21.4	MG/L	0.5	160.2	04/30/2001		TDT

U = Analyte not detected at the value indicated

3

Submission Number

1040518

Sample Number:

Sample Description:

Shackett Creek 1-3

Sample Date:

04/27/2001

Sample Method:

Grab

Sample Time:

0917

Parameter

Result

Units

Detection Procedure Limit

Analysis Date Time

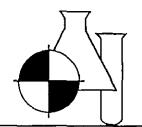
Analyst

Page 1 of 2

653 Tenth Street East*Palmetto, FL 34221*Phone (941)723-9986*FAX (941)723-6061

BENCHMARK

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

TOTAL SUSPENDED SOLIDS

16.7

MG/L

160.2

0.5

04/30/2001

TDT

U = Analyte not detected at the value indicated

Submission Number

1040518

Sample Number:

4

Sample Description:

Shackett Creek 2-4

Sample Date:

04/27/2001

Sample Method:

Grab

Sample Time:

0937

Parameter	Result Units		Detection	Detection Procedure		Analysis		
rurameter	Kesun	Units	Limit	Procedure	Date	Time	Analyst	
TOTAL SUSPENDED SOLIDS	20.9	MG/L	0.5	160.2	04/30/2001		TDT	

U = Analyte not detected at the value indicated

Submission Number

1040518

Sample Number:

i

Sample Description:

Shackett Creek 3-5

Sample Date:

04/27/2001

Sample Method:

Grab

Sample Time:

0949

Parameter	Result	Units	Detection	Detection Procedure		Analysis		
rarameter	Kesuit	Onits	Limit	Trocedure	Date	Time	Analyst	
TOTAL SUSPENDED SOLIDS	17.9	MG/L	0.5	160.2	04/30/2001		TDT	

U = Analyte not detected at the value indicated

Submission Number

1040518

Sample Number:

6

Sample Description:

Shackett Creek 3-6

Sample Date:

04/27/2001

Sample Method:

Grab

Sample Time:

0951

Parameter	Result Units	Detection	Dagaadura	Anal	Applust		
	Result	Omis	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	17.3	MG/L	0.5	160.2	04/30/2001		TDT

U = Analyte not detected at the value indicated

Dale D. Dixon / Laboratory Director

05/10/2001

Date

Benchmark EnviroAnalytical, Inc.

653 Tenth Street East Palmetto, FL 34221 (941) 723-9986 (941) 723-6061 fax BenchmarkEA@earthlink.net Client: M.R. Friday & Associates, Inc.

1748 Independence Blvd., Suite E-7

Sarasota, FL. 34234

(941) 351-1881

(941) 351-8359 fax

Chain of Custody Form: Shackett Creek/WCIND

Method of discharge:

Surface Water

Laboratory Submission #:

1040518

Station	Sample		TSS			Field Parameters			Laboratory
ID	Туре		Plain	Temp (°C)	На	D.O. (mg/L)	Salinity (g/kg)	Conductivity (µmhos/cm)	Sample #
		1 x 1 Q	uart Plastic						
# 1 1	Grab	(Date) 4/27/01	(Time:) 0911		<u> </u>				
# _{2.1}	Grab	(Date) 4/27/01	(Time:) 0915						
#31	Grab	(Date) 4/27/01	(Time:) 6917						
2	Grab	(Date)	(Time:)						
#42	Grab	(Date) 4/27/01	(Time:) 0937						
'2	Grab	(Date)	(Time:)						
# <i>5</i> 3	Grab	(Date) 4/27/01	(Time:) 0949						
3	Grab	(Date)	(Time:)						
#63	Grab	(Date) 4/27/01	(Time:) 095 (

1	Michael R. Friday	Date: 4/27/01	2	Received By: (Print)	Date:
	Signature: Melel Day	Time:		Signature: SKG.	Time:
3	Relinquished By: (Print) Michael R Friday	Date: 4/28/01	4	Scott Gibson Scott Telegram	Date: 4/28/01
				· · · · · · · · · · · · · · · · · · ·	1000

ED BARBER & ASSOCIATES

ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 102 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

April 30, 2001

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from M. R. Friday & Associates, Inc. on April 1-2, 2001 pursuant to Specific Condition No. 39 of the referenced permit. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the syster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

A review of this monitoring program indicates that the last sample event will take place in September of this year. By copy of this correspondence I am requesting that Dr. Olsen provide us with his recommendation whether to continue with this effort up to this time. He has been provided all of the water quality data reports and is very familiar with their relevance, or lack thereof, to the ongoing oyster monitoring effort.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids
- Chain-of-custody record

Please call Dean Mades or me if there is a need to further discuss these data.

Sincere

Associate

Enclosures

Chuck Listowski / WCIND cc:

Larry Olsen, Ph.D.

Bob Stetler / FDEP

Charles Kovach/FDEP

Dean Mades, PE / EBA

Roger Rasbury / Sarasota County Storm Water

PROJECT NAME: SHACKETT CREEK/WCIND

DATE: April 1 & 2, 2001

	on/Time(hrs) ptb (total)		DO (ppm)		7	EMP (c)			LINI7 (0/00)	Γ Y		NDU(nmho	~ -		pН	
Run	1	-1'	Mid	+1'	-1'	Mid →	-1'	-1'	Mid +	<u>-1'</u>	- i'	Mid +	⊦1'	-1'	Mid +1'	
1	0900 4.9	6.6	6.1	4.7	22.3	22.8	23.4	7.2	7.5	9.2	11.0	12.1	14.0	7.69	7.66	7.61
2	0945 2.3'		4.9			22.2			14.7			21.5			7.75	
3	1000 4.0'	5.5	5.3	4.9	22.0	22.0	21.9	11.7	12.2	13.8	17.8	18.8	21.3	7.71	7.68	7.61
Run :	2		a market same	100 A	N. C. N.	学列間		224		A. 199	5.44		N. S. C.		N. I	43
1	1300 5.2'	7.0	6.8	5.5	23.9	23.3	23.5	6.2	9.5	12.3	10.2	[1.1]	19.4	7.68	7.70	7.66
2	1320 2.6'		5.2			24.1			15.7			25.7	-	-	7.66	
3	1330 4.9'	5.2	5.1	5.3	24.1	23.8	23.5	15.9	17.0	18.0	25.3	26.0	27.9	7.69	7.68	7.70
Run	The state of the s	NAME OF	ner went	建立原 的	学的数	A SA			初學院	學學	B IR III			A STATE		7.0
1	1700 5.31	7.7	7.1	6.7	25.5	24.7	23.8	6.5	7.0	8.7	11.5	12.0	15.1	7.74	7.71	7.70
2	1721 3.0	6.2		5.6	25.1	1	25.2	16.7		17.6	27.3	-	28.2	7.79		7.74
3	1734 5.0	6.4	5.6	4.8	25.1	24.9	24.2	15.2	17.0	21.8	25.5	29.1	34.2	7.78	7.75	7.74
Run	4		THE PLAN	Transfer Control	SALES POR	A PROPERTY				地於和朝		建 联基础	N. P. CAR	國共和	4	200
1	2100 5.0	7.1	6.4	5.8	23.0	23.1	23.9	6.0	6.0	8.3	10.0	10.1	13.9	7.66	7.67	7.68
2	2115 2.5'		6.8			24.3			10.7			17.3			7.79	
3	2123 4.8'	6.7	5.8	5.3	24.2	25.0	25.1	11.8	15.0	17.1	19.5	24.8	27.9	7.80	7.72	7.71
Run	5 FAMILY 1877 **	WE HAT	HAT JOHN THE	HAVE TO SERVICE	TO DE			A STATE OF	PARTY			16.5 19.5	THE STATE OF	44		
1	0100 4.4'	6.2	6.2	5.4	22.3	23.0	23.4	5.1	5.5	5.7	8.3	9.1	9.5	7.63	7.62	7.63
2	0124 1.7'		5.8			23.2	•		10.5			17.2			7.67	
3	0136 3.6	6.4		5.6	23.3		23.9	10.8		12.1	17.5		20.0	7.68		7.68
Run	6 Marie Co			(Sept. 2017)												
i	0500 4.0'	6.4	4.6	4.2	21.8	22.5	22.9	3.3	4.0	5.1	5,4	6.3	8.5	7.54	7.57	7.55
2	0523 1.3'		4.5			22.7			10.0			17.4			7.59	
3_	0538 3.1'	5.2		5.0	22.1		22.5	9.7		12.2	11.5		13.8	7.65		7.64
Run	7 2 12 2		a to a se		HY		PERSON	TO SERVE	i o i	C WIN	HART	***	WALL OF			
1	0900 4.5'	6.4	5.5	5.1	21.5	22.2	22.5	3.0	3.7	5.8	4.9	6.2	9.7	7.48	7.49	7.50
2	0920 2.1'		4.9			21.6			12.3			18.9			7.58	
3	0930 4.0'	5.0	4.7	4.5	22.0	22.2	22.3	14.5	17.6	18.0	23.0	26.9	27.3	7.67	7.68	7.69
36%	新华州政治	ingress.		电影		Mo	nthly I	SS San	ples "		多种族	Quarte	rly Nu	rient S	amples	N. C.
s	tation/Time		SECCI	ł (1'	N	1id	1	-1'		I'	M	1id	+	-1'
1	0900 4.9'		4.5'		#1 @	3) 1.0'	#2 @	2.5'	#3 @	a) 4.0'	#4 @	3 1.0'	#5 (@ 2.5'	#6 @	g 4.0°
2	0945 2.3'	т	oo Shal	low	-		#7 @	@ 1.0 ^t	-		_		#8 (@ 1.0	-	
3	1000 4.0'	Т	oo Shal	low	#9 (@ 1.0'	#10 (@ 2.0'	#11	@ 3.0	#12	@ 1.0'	#13	@ 2.0'	#14	@ 3.0

WEATHER CONDITIONS: Bright and sunny both days with a cool NNE breeze following two days of very heavy rainfall.

NOTES: Station #2 was devoid (scoured?) of the green algae that was previously abundant in the area.

^{-1&#}x27; data collected one foot below the surface of the water

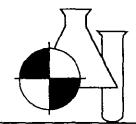
mid data collected from the middle of the water column

^{+1&#}x27; data collected one foot above the bottom

indicates that the water depths were too shallow for data collection in accordance with the parameters set forth pursuant to Condition No. 39(b) & (c) of the subject permit

BENCHMARK

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1040026

M.R. Friday & Associates, Inc. 1748 Independence Blvd., Suite E-7 Sarasota FL 34234

Project Name:

SHACKET CREEK WCIND

Date Received:

04/02/2001

Time Received:

1310

Submission Number

1040026

Sample Number:

Sample Description:

Shacket Creek Sta. 1 @ 1'

Sample Date:

04/02/2001

Sample Method:

Grab

Sample Time:

0900

D	Result	Units	Detection	Decodore	Anal	ysis	A 3 4
Parameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	3.88	MG/L	0.5	160.2	04/03/2001		MP
AMMONIA NITROGEN	0.05	MG/L	0.01	350.2	04/10/2001		BMS
ORGANIC NITROGEN	0.82	MG/L	0.04	351-350	04/10/2001		BMS
TOTAL KJELDAHL NITROGEN	0.87	MG/L	0.04	351.2	04/03/2001		BMS
TOTAL NITROGEN	0.89	MG/L	0.04	353+351	04/06/2001		BMS/TDT
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	04/06/2006		TDT
TOTAL PHOSPHORUS	0.18	MG/L	0.01	365.3	04/06/2001		BMS

U = Analyte not detected at the value indicated

Submission Number

1040026

Sample Number:

1B

Sample Description:

Shacket Creek Sta. 1 @ 2.5'

Sample Date: Sample Time: 04/02/2001 0900

Sample Method:

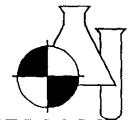
Grab

Domonator	Danile	Tieta	Detection	Dungadana	Anal	ysis	A 1 4
Parameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	6.24	MG/L	0.5	160.2	04/03/2001		MP
AMMONIA NITROGEN	0.06	MG/L	0.01	350.2	04/10/2001		BMS
ORGANIC NITROGEN	0.79	MG/L	0.04	351-350	04/10/2001		BMS
TOTAL KJELDAHL NITROGEN	0.85	MG/L	0.04	351.2	04/03/2001		BMS
TOTAL NITROGEN	0.88	MG/L	0.04	353+351	04/06/2001		BMS/TDT

Page 1 of 4

BENCHMARK

EnviroAnalytical, Inc.



FDOH Certification #684167 and #84455 FDEP Quality Assurance #870594G

NITRATE+NITRITE	0.03	MG/L	0.01	353.2	04/06/2006	TDT
TOTAL PHOSPHORUS	0.17	MG/L	0.01	365.3	04/06/2001	BMS

U = Analyte not detected at the value indicated

Submission Number

1040026

Sample Number:

1C

Sample Description:

Shacket Creek Sta. 1 @ 4'

Sample Date:

04/02/2001

Sample Method:

Grab

Sample Time:

0900

Damorastan	Result	Y1-24-	Detection	Procedure	Anal	ysis	A 1 4
Parameter	Result	Units	Limit	rrocedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	5.71	MG/L	0.5	160.2	04/03/2001		MI
AMMONIA NITROGEN	0.01U	MG/L	0.01	350.2	04/10/2001		BMS
ORGANIC NITROGEN	0.87	MG/L	0.04	351-350	04/10/2001		BMS
TOTAL KJELDAHL NITROGEN	0.87	MG/L	0.04	351.2	04/03/2001		BMS
TOTAL NITROGEN	0.92	MG/L	0.04	353+351	04/06/2001		BMS/TD7
NITRATE+NITRITE	0.05	MG/L	0.01	353.2	04/06/2006		TD
TOTAL PHOSPHORUS	0,16	MG/L	0.01	365,3	04/06/2001		ВМ

U = Analyte not detected at the value indicated

Submission Number

1040026

Sample Number:

2

Sample Description: Shacket Creek Sta. 2 @ 1'

Sample Date:

04/02/2001

Sample Method:

Grab

Sample Time:

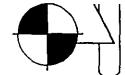
0945

Parameter	Result	Units	Detection	Procedure	Anal	ysis	Amalast
rar ameter	Kesuit	Ontis	Limit	Frocedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	11.6	MG/L	0.5	160.2	04/03/2001		MP
AMMONIA NITROGEN	0.15	MG/L	0.01	350.2	04/10/2001		BMS
ORGANIC NITROGEN	0.64	MG/L	0.04	351-350	04/10/2001		BMS
TOTAL KJELDAHL NITROGEN	0.79	MG/L	0.04	351.2	04/03/2001		BMS
TOTAL NITROGEN	0.87	MG/L	0.04	353+351	04/06/2001		BMS/TDT
NITRATE+NITRITE	0.08	MG/L	0.01	353.2	04/06/2006		TDT
TOTAL PHOSPHORUS	0.11	MG/L	0.01	365.3	04/06/2001		BMS

U = Analyte not detected at the value indicated

EnviroAnalytical, Inc.

FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G



Submission Number

1040026

Sample Number:

3A

Sample Description:

Shacket Creek Sta. 3 @ 1'

Sample Date:

04/02/2001

Sample Method:

Grab

Sample Time:	Sam	ole T	ime:
--------------	-----	-------	------

1000

P	Danulé	Units	Detection	Procedure	Anal	ysis	A T4
Parameter	Result	Units	Limit	rrocedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	4.94	MG/L	0.5	160.2	04/03/2001		MP
AMMONIA NITROGEN	0.01U	MG/L	0.01	350.2	04/10/2001		BMS
ORGANIC NITROGEN	0.85	MG/L	0.04	351-350	04/10/2001		BMS
TOTAL KJELDAHL NITROGEN	0.85	MG/L	0.04	351.2	04/03/2001		BMS
TOTAL NITROGEN	0.93	MG/L	0.04	353+351	04/06/2001		BMS/TDT
NITRATE+NITRITE	0.08	MG/L	0.01	353.2	04/06/2006		TDT
TOTAL PHOSPHORUS	0.12	MG/L	0.01	365,3	04/06/2001		BMS

U = Analyte not detected at the value indicated

Submission Number

1040026

Sample Number:

3B

Sample Description:

Shacket Creek Sta. 3 @ 2'

Sample Date:

04/02/2001

Sample Method:

Grab

Sample Time:

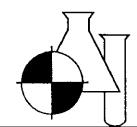
1000

D	D14	T1	Detection	December 1	Anal	ysis	4 -1 - 1
Parameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS .	6.02	MG/L	0.5	160.2	04/03/2001		MP
AMMONIA NITROGEN	0.20	MG/L	0.01	350.2	04/10/2001		BMS
ORGANIC NITROGEN	0.61	MG/L	0.04	351-350	04/10/2001		BMS
TOTAL KJELDAHL NITROGEN	0.81	MG/L	0.04	351.2	04/03/2001		BMS
TOTAL NITROGEN	0.88	MG/L	0.04	353+351	04/06/2001		BMS/TDT
NITRATE+NITRITE	0.07	MG/L	0.01	353.2	04/06/2006		TDT
TOTAL PHOSPHORUS	0.12	MG/L	0.01	365,3	04/06/2001		BMS

U = Analyte not detected at the value indicated

BENCHMARK

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1040026

Sample Number:

3C

Sample Description:

Shacket Creek Sta. 3 @ 3'

Sample Date:

04/02/2001

Sample Method:

Grab

Sample Time:

1000

D	Result	Units	Detection	Decoders	Anal	ysis	Amalast
Parameter	Kesuit	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	9.87	MG/L	0.5	160.2	04/03/2001		MP
AMMONIA NITROGEN	0.17	MG/L	0.01	350.2	04/10/2001		BMS
ORGANIC NITROGEN	0.73	MG/L	0.04	351-350	04/10/2001		BMS
TOTAL KIELDAHL NITROGEN	0.90	MG/L	0.04	351.2	04/03/2001		BMS
TOTAL NITROGEN	0.98	MG/L	0.04	353+351	04/06/2001		BMS/TDT
NITRATE+NITRITE	80.0	MG/L	0.01	353.2	04/06/2006		TDT
TOTAL PHOSPHORUS	0.12	MG/L	0.01	365.3	04/06/2001		BMS

U = Analyte not detected at the value indicated

04/17/2001

Date

Benchmark EnviroAnalytical, Inc.

653 Tenth Street East Palmetto, FL 34221 (941) 723-9986

(941) 723-6061 fax

BenchmarkEA@earthlink.net

Chain of Custody Form:

Shackett Creek/WCIND

Method of discharge: Sample Type:

Surface Water

Grab

Client: M.R. Friday & Associates, Inc.

1748 Independence Blvd., Suite E-7

Sarasota, FL. 34234

(941) 351-1881

(941) 351-8359 fax

Laboratory Submission #: 01040026

Štation 🙀	TSS	TKN, NO ₃ -NO ₂ , T-N	Field Parameters									
# 1D 94	-	NH ₃ , O-N, T-P	Temp (°C)	рН	D.O.	Salinity	Conductivity	Sample i				
Sample # C found	Plain	1:1 H ₂ SO ₄ .		1	(mg/L)	(g/kg)	(µmhos/cm)					
S S	1 x 1 Quart Plastic	1 x 1 Quart Plastic										
#1 1 #4	(Time:) 0960 Q 1'	(Time:) 0900 @ 1'						1A				
#Z 11 5	(Time:) 6900 @ 2.5'	(Three) 0900 @ 2.5'			,			18				
#3 41#6	(Mirrie) 0900 @ 4'	(Time) 0900 @ 4'						1C				
4 4 1	(Time:)	(Time:)										
#7 •2#8	(Time) 6985@ 1'	(Time) 0945 @ 1'						2A				
	(Timet)	(Time:)										
\$9 \$3 1Z	(Time) 1000 @ 1'	(Time) 1000 @ 1'						3A				
3 _ L	(Time) 1000 @ Z'	(Time) 1000 @ Z'		<u>,</u>		-		38				
#11 · 3#H	(Time) .1000 @ 3'	(Time) 1000 @ 3'						3 0				

Sample must be refrigerated or stored in wet ice after collection. The maximum temperature during storage should be 4°C (39,2°F).

Instructions:

Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis. The following information should be added to each bottle label collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID.

2. The effluent sample bottles for nitrogen contain premeasured 1:1 sulfuric acid (H₂SO₂). Do not rinse these bottles with sample prior to sampling.

All bottles not containing preservative may be rinsed with appropriate sample prior to collection.

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ar and the residence in the second of the

File

ED BARBER & ASSOCIATES

ENTRONMENTAL CONSULTING

ENTRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

March 23, 2001

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from M. R. Friday & Associates, Inc. on February 23-24, 2001 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

We understand that Sarasota County's monitoring network may soon incorporate the Cowpen Slough control structure in an attempt to focus upon water quality and loads entering the Dona Bay estuary. As you are aware, we are in full support of this effort. Assessment of long-term trends within this water body would be greatly enhanced by establishing this station. Our current monitoring efforts in Shakett Creek are proving to be very expensive and would greatly benefit from such integrated features. To replace this program with a focused, long-term sampling regime would be of great benefit to Sarasota County, the Florida Department of Environmental Protection and others.

To avoid duplication of effort while focusing upon a comprehensive long-term monitoring program is of mutual and multi-agency benefit. With this in mind, a meeting with the FDEP, a representative of Sarasota County and the Manasota 88 would be helpful to revisit the West Coast Inland Navigation District's water quality monitoring program. We could either meet at the WCIND, Sarasota County or your offices. Since the current monitoring program does not allow an ability to merge such physical and chemical parameters efforts to close this current data gap for nutrient load inputs from the Cowpen Slough watershed would promote needed watershed management objectives. Please contact us regarding the Department's capabilities to facilitate this meeting to discuss assessment of long-term estuarine trends and health in a cost-effective manner, as mentioned by Bob Stetler earlier this year.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids
- · Chain-of-custody record

Please call Dean Mades or me if there is a need to further discuss these data.

Sincefely,

Associate

Enclosures

cc: Chuck Listowski / WCIND

Bob Stetler / FDEP

Charles Kovach/FDEP

Larry Olsen, Ph.D.

Dean Mades, PE / EBA

Theresa Connor / Sarasota County Storm Water

PROJECT NAME: SHACKETT CREEK/WCIND

DATE: February 23 & 24, 2001

Station/Time(hrs) Depth (total)		DO (ppm)		TEMP (c)		SALINITY (0/00)			CONDUCT (mmho)			рН					
Run	1		-1'	Mid	+1'	-1'	Mid	+1*	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'
1	0900	4.2'	4.3	4.35	4.1	23.0	23.5	24.2	32.5	32.6	33.9	43.4	44.7	47.I	7.57	7.59	7.62
2	0930	1.7		6.1			23.3	****		34.0			46.5			7.86	
3	0945	4.3'	4.7	4.7	4.5	23.0	22.9	23.0	34.5	37.7	36.2	47.1	47.7	46.8	7.75	7.75	7.75
Run 2							- 1 . W	-1 -1 10	的技術		ru n _			a e sa e	神機のようである		
1	1300	5.2'	5.7	5.5	5.14	25.2	24.3	24.0	31.5	32.9	33.5	45.2	45.7	46.3	7.69	7.70	7.73
2	1320	2.5'		7.55			25.2			36.9			49.2			7.99	
3	1330		5.65	5.25	5.0	24.4	24.2	24.5	34.8	35.0	35.1	48.8	49.0	48.9	7.82	7.83	7.83
Run .	41480-00 41480-00	29.79°		48 2 98.	- September	- WAR			344			di-es-jouis)		E) MON BLAN			
1	1700	4.81	6.1	6.6	5.3	26.0	25.3	24.7	32.6	33.4	34.4	47.1	48.3	48.4	7.78	7.80	7.80
2	1720	1,9'		5.4			25.0			34.7			49.0			7.82	
3	1730		5.8	5.6	5.4	25.1	25.1	25.0	34.7	34.6	34.8	49.1	49.1	48.9	7.83	7.82	7.82
Run	1		3.44 3.44 <u>9</u>	a libraria								in Section		- Maringale			
1	2100	5.0	5.8	5.0	4.4	25.6	24.8	24.3	32.5	34.0	34.2	47.0	47.8	47.8	7.75	7.74	7.71
2	2120	2.5'		4.2			24.6		ļ <u></u>	35.2			49.8			7.73	
3	2143		5.4	5.25	5.1	24.3	24.3	24.2	34.9	35.4	36.0	49.4	49.5	49.3	7.84	7.84	7.84
Run	5	in the second of	r								5500000 			Project Control			
1	0100	5.8'	5.9	5.0	4.3	24.3	24.5	24.5	32.8	34.4	34.6	47.0	48.1	48.3	7.74	7.74	7.70
2	0128	3.0'	4.6		4.5	23.8		23.9	35.2		35.5	49.1		49.2	7.79		7.79
3	0144		5.3	4.9	4.6	23.9	23.9	24.0	35.5	35.4	35.1	48.9	49.0	49.0	7.82	7.82	7.81
Run	6' '			-86 1817) 1	5 - 30 - 485 1				ALC: NO.		W CORRE	AND THE	40.35	1997 (1995) 1	Traver	1940	
1	0500	4.9'	4.8	4.5	3.4	23.9	23.9	24.3	32.9	34.7	34.7	46.5	46.7	47.0	7.64	7.65	7.65
2	0530	2.0'		4.35			23.3			34.7			47.7			7.71	
3	0545		4.6	4.5	4.4	23.5	23.4	23.4	34.7	34.4	34.6	47.8	47.8	47.9	7.73	7.73	7.73
Run	7		, , , , , , ,	.: -3 ¹ / ₂ ,	14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	ि क्ष⊀्≥ 	TERRITOR I		593.*** I	T - 18 (1871)	e"minionia T	Antickii Antickii		STATE OF THE	VEYERS	
1	0900		3.85	3.6	3.3	23.7	24.1	24.4	31.5	32.6	34.0	45.0	46.8	48.0	7.54	7.58	7.60
2	0918			5.8			23.2			34.2			47.3			7.82	
3	0932	4.0'	4.8	4.6	4.55	23.1	23.0	23.0	34.2	34.6	35.5	47.1	47.3	47.9	7.73	7.72	7.73
-						1		,		ĭ				Τ		, 	
Station/Time		SECCHI		 			1id +1'		-1'		Mid		+1'				
1	0900	4.2'	Too shallow		#1 #2		#3										
2	0929	1.7'	Too shallow		#4												
3	0958	4.3'	2.7'			#5		#6		#7							!

WEATHER CONDITIONS:

Sunny, warm both mornings, partly cloudy 1st afternoon

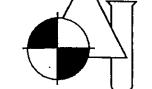
NOTES:

- -1' data collected one foot below the surface of the water
- mid data collected from the middle of the water column
- +1' data collected one foot above the bottom
 - -- indicates that the water depths were too shallow for data collection in accordance with the parameters set forth pursuant to Condition No. 39(b) & (c) of the subject permit



DENVINAMA

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #64455 FDEP Quality Assurance #870594G

Submission Number

1020433

M.R. Friday & Associates, Inc. 1748 Independence Blvd., Suite E-7

Sarasota

FL 34234

Project Name:

SHACKETT CREEK /WCIND

Date Received:

02/24/2001

Time Received:

1300

Submission Number

1020433

Sample Number:

1

Sample Description:

Shackett Creek 1 / #1

Sample Date:

02/23/2001

Sample Method:

Grab

Sample Time:	0900	

Parameter	Result	Units	Detection	Procedure	Anal	Amalust		
r at atheter	Kouit	Cincs	Limit		Date	Time	Analyst	
TOTAL SUSPENDED SOLIDS	12.9	MG/L	0.5	160.2	02/26/2001		MP	

U = Analyte not detected at the value indicated

Submission Number

1020433

Sample Number:

2

Sample Description:

Shackett Creek 1 / #2

Sample Date:

02/23/2001

Sample Method:

Grab

Sample Time:

0900

Parameter	Danul	Units	Detection	Dagaduna	Anal	Amalast	
rarameter	Result	Onts	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	11.2	MG/L	0.5	160.2	02/26/2001		МР

U = Analyte not detected at the value indicated

Submission Number

1020433

Sample Number:

3

Parameter

Sample Description:

Shackett Creek 1 / #3

Sample Date:

02/23/2001

Sample Method:

Grab

Sample Time:

0900

Result

Units

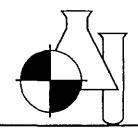
Detection Limit Procedure Analysis
Date Time

Analyst

Page 1 of 3

653 Tenth Street East*Palmetto, FL 34221*Phone (941)723-9986*FAX (941)723-6061

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

TOTAL SUSPENDED SOLIDS

15.7

MG/L

160.2

0.5

02/26/2001

MP

U = Analyte not detected at the value indicated

Submission Number

1020433

Sample Number:

02/23/2001

Sample Description:

Shackett Creek 2 / #4

Sample Date: Sample Time:

0929

Sample Method:

Grah

Parameter	Result	Units	Detection		Anal	ysis	Amalust
rarameter	кош	Omes	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	13.3	MG/L	0.5	160.2	02/26/2001		MP

U = Analyte not detected at the value indicated

Submission Number

1020433

Sample Number:

5

Sample Description:

Shackett Creek 3 / #5

Sample Date: Sample Time: 02/23/2001

0958

Sample Method: Grab

Detection Analysis Result Units **Procedure Parameter** Analyst Limit Time Date MG/L TOTAL SUSPENDED SOLIDS 0.5 160.2 02/26/2001 MP

U = Analyte not detected at the value indicated

Submission Number

1020433

Sample Number:

6

Sample Description:

Shackett Creek 3 / #6

Sample Date:

02/23/2001

Sample Method:

Grab

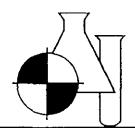
Sample Time:

0958

Parameter	Dogule	Units	Detection	Procedure	Anal	ysis	Amaluat
Parameter	Result	Units	Limit	rrocedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	32.8	MG/L	0.5	160.2	02/26/2001		MP

U = Analyte not detected at the value indicated

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1020433

Sample Number:

7

Sample Description:

Shackett Creek 3 / #7

Sample Date:

02/23/2001

Sample Method:

Grab

Sample Time:

0958

Parameter TOTAL SUSPENDED SOLIDS	Result	Units	Detection		Analysis		Amplust	
			Limit	Procedure	Date	Time	Analyst	
TOTAL SUSPENDED SOLIDS	29.7	MG/L	0.5	160.2	02/26/2001		MP	

U = Analyte not detected at the value indicated

Dale D. Dixon / Laboratory Director

03/07/2001

Director Date

Benchmark EnviroAnalytical, Inc.

653 Tenth Street East
Palmetto, FL 34221
(941) 723-9986
(941) 723-6061 fax
BenchmarkEA@earthlink.net

Client: M.R. Friday & Associates, Inc.

1748 Independence Blvd., Suite E-7

Sarasota, FL. 34234

(941) 351-1881

(941) 351-8359 fax

Chain of Custody Form:	Shackett Creek/WCIND
------------------------	----------------------

Method of discharge: Surface Water

Laboratory Submission #:

1020433

Station	Sample		TSS		•	Field Parameters	3		Laboratory Sample #
ID	Type		Plain	Temp (°C)	pН	D.O. (mg/L)	Salinity (g/kg)	Conductivity (µmhos/cm)	
			Quart Plastic						
#1 1	Grab	2-23-01	1 000 @ 1'						
#Z 1	Grab	2-23-01	0900 @ Z'						
# ₃ 1	Grab	2-23-01	900 C3'						
2	Grab	(Data)	(Yime:)						
#42	Grab	2-23-01	(Time:) 0929@.81						
2	Grab	(Date)	(Time:)						
#53	Grab	2-23-01	1958@1'						
#5 ³	Grab	Z-23-01	(fine) 0958@2'						
#73	Grab	Z-23-01	0958 @ 3'		· · · · · · · · · · · · · · · · · · ·				

1	Collector: (Print) Michael R. Friday	Date:	2	Received By: (Print)	Date:
	Signature:	3-33-01 Time: 1000		Signature:	Time:
3	Relinquieted By: (Print) Michael R. Friday	Date: 2-24-01	4	Received For Lab By: (Print) KATHARINE A. DIXON	Date: 02/24/0/
	Signeture:	Time: /300		Signature: Talkarin O. Dupa	Time: /300

M.R. FRIDAY & ASSOCIATES, INC.

Environmental Consultants



March 19, 2001

Mr. Sam Johnston Ed Barber & Associates, Inc. 3639 Cortez Road West, Suite 211 Bradenton, FL 34210

Re: February Data Collection @ Shackett Creek in accordance with FDEP Permit No. 58-01274663-001, Condition No. 39 (b) & (c), Report No. 4

Dear Sam,

Enclosed please find the February report to include the total suspended solids data. Also enclosed is the invoice for the February event. The next monitoring event is scheduled for March 30 and 31, 2001. Please contact me should you have any questions regarding this report or invoice.

Respectfully submitted,

Mulel of Juj

Michael R. Friday

President

enclosures

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MINNAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

February 19, 2001

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from M. R. Friday & Associates, Inc. on January 26-27, 2001 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

We again request the Department's consideration of a monitoring program that incorporates flows at the Cowpen Slough structure. This was discussed with Bob Stetler during a recent meeting with the WCIND and Charles Kovach of your office is also copied on this correspondence to solicit the Department's thoughts to obtain meaningful data on loadings to the Dona Bay estuary. By copy of this correspondence to Sarasota County we are requesting that their staff examine this issue as well, since their programs may also incorporate a need to evaluate nutrient and other loads to these receiving waters.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids
- Chain-of-custody record

Please call Dean Mades or me if there is a need to further discuss these data.

Sam Johns

Associate

Enclosures

cc: Chuck Listowski / WCIND

Bob Stetler / FDEP

Charles Kovach/FDEP

Larry Olsen, Ph.D.

Dean Mades, PE / EBA

Theresa Connor / Sarasota County Storm Water

	on/Time pth (tota		(DO (ppm)			ΓΕΜΡ (c)	•		LINI7 (0/00)	ΓY		NDU nmho			pН	
Run	1		-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'	-I1	Mid	+1'
3	0900	1.6'		7.70			13.9			29.8			37.0			8.13	
2	0930																
1	0946	3.5'	6.55	6.35		16.0	16.8		28.3	29.0		37.0	38.3		8.09	7.91	
Run	2	0年98				可對		种的	10.00	以	PAR S		4	的人	(F.X)		7.5
3	1305	3.1'	9.2	9.1		14.9	14.9		30.5	30.7		38.2	38.3	••	8.01	7.95	
2	1328	1.5'		9.85			16.0			30.5			39.1			7.87	
1	1350	4.4'	7.1	7.0	7.25	16.5	16.6	17.0	26.8	29.0	29,9	35.2	37.7	39.3	7.66	7.65	7.71
Run	3		THE STATE OF THE S										L'av é				
3	1700	3.5'	8.61	9.1		15.3	15.5		30.9	31.0		39.2	39.8		8.16	8.20	
2	1710	1.7'		9.48			15.8			31.2			39.5			8.33	
1	1730	4.3'	8.10	7.65	7.30	16.5	16.8	17.1	28.2	28.5	29.3	37.1	38.4	39.2	8.21	8.16	8.16
Run	7		70		# 40 X									4.4.6.C			
3	2100	3.5'	9.15	9.0		14.9	15.0		31.9	32.1		39.7	40.0		8.27	8.40	
2	2120	2.0'		8.4			14.6	<u> </u>		31.2			40.5			8.44	
1		4.6'	7.85	7.49	7.20	15.4	16.9	16.9	28.1	29.2	29.7	37.6	39.3	39.4	8.30	8.30	8.30
Run	5					A Par										ASTA OF THE	(dia)
3	0100	4.0'	9.2	8.4	8.15	13.8	14.0	14.0	32.8	33.0	32.5	39.8	40.2	40.0	8.39	8.42	8.45
2	0121	2.6'	7.90	7.55		13.3	13.9		31.7	31.9		38.8	39.3		8.42	8.44	
1	0142		7.65	7.20	6.90	14.9	15.8	16.0	29.2	29.9	30.0	36.8	38.9	39.0	8.32	8.36	8.38
Run	6	PH) **											1701				
3	0500	3.8'	8.1	8.0	7.85	13.7	14.0	14.1	31.3	31.4	31.9	38.6	39.0	39.9	8.38	8.44	8.47
2	0515	1.9'	_	7.9			13.3			31.2			38.0			8.47	
1	0535		6.45	6.40	6.52	15.1	15.9	17.0	29.1	29.2	29.5	37.9	37.9	38.5	8.26	8.26	8.28
Run	7																
3	0903	2.9'	8.85	8.55		14.8	14.9		29.6	30.2	<u> </u>	39.3	39.9		8.25	8.31	<u> </u>
2	0920	1.1'		8.0	<u> </u>		13.8	<u> </u>		29.5			37.4		<u> </u>	8.21	
1	0944		6.49	6.45		15.8	16.7		27.8	28.9		36.2	39.0		7.76	7.76	
			1			Mo	othly	ISS Sac	nples 🛪				Quar	erly N	utrient	Sample	
St	ation/T	ime		ECCI	11	<u> </u>	-1'	N	1id	+	-1'		1'	N	1id	+	-1'
3	0900	1.6'	тоо	SHAL	LOW	<u> </u>		#1 (3 0.8	-				-		-	
2	1330	1.6'	тоо	SHALI	LOW	-		#4 @	2) 0.8'	-				-		-	
1	1000	3.5'	тоо	SHAL	LOW	#2 (@ ۱.0'	#3 (@ 2.0'			-				-	

WEATHER CONDITIONS:

Clear and cool w/ ENE winds day 1, partly cloudy w/ slight ESE winds day 2

NOTE: Due to an extreme low tide combined with a ENE wind, Station #2 during Run 1 was not accessible due to shallow water

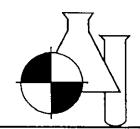
^{-1&#}x27; data collected one foot below the surface of the water

mid data collected from the middle of the water column

^{+1&#}x27; data collected one foot above the bottom

⁻⁻⁻ indicates that the water depths were too shallow for data collection in accordance with the parameters set forth pursuant to Condition No. 39(b) & (c) of the subject permit

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

1010496

M.R. Friday & Associates, Inc. 1748 Independence Blvd., Suite E-7 Sarasota

FL 34234

Project Name:

SHACKETT CREEK/WCIND

Date Received:

01/27/2001

Time Received:

1235

Submission Number

1010496

Sample Number:

01/26/2001

Sample Description:

Shackett Creek / W C I N D 3 - 1

Sample Method:

Grab

Sample Date: Sample Time:

0910

Parameter	Result	Units	Detection	Decodum	Anal	ysis	Analyst
rarameter	Vesuit	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	10.9	MG/L	0.5	160.2	01/30/2001	<u> </u>	MP

U = Analyte not detected at the value indicated

Submission Number

1010496

Sample Number:

2

Sample Description:

Shackett Creek / W C I N D 2 - 4

Sample Date:

01/26/2001

Sample Method:

Grab

Sample Time:

1330

Parameter	Result	Units	Detection	Procedure	Anal	ysis	Amalust
Farameter	Result	Onits	Limit	rroceuure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	9.33	MG/L	0.5	160.2	01/30/2001		MP

U = Analyte not detected at the value indicated

Submission Number

1010496

Sample Number:

3

Parameter

Sample Description:

Shackett Creek / W C I N D 1 - 2

Sample Date:

01/26/2001

Sample Method:

Grab

Sample Time:

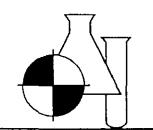
0946

Result Units Detection **Procedure** Limit

Analysis Date Time

Analyst

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

TOTAL SUSPENDED SOLIDS

9.53

MG/L

0.5

160.2

01/30/2001

MP

U = Analyte not detected at the value indicated

Submission Number

1010496

Sample Number:

Sample Description:

Shackett Creek / W C I N D1 - 3

Sample Date: Sample Time: 01/26/2001 0954

Sample Method:

Grab

Downwatow	Result	Units	Detection	Procedure	Anal	ysis	A molerat
Parameter	Kesun	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	14.4	MG/L	0.5	160.2	01/30/2001		MP

U = Analyte not detected at the value indicated

02/07/2001

Date

Benchmark EnviroAnalytical, Inc.

653 Tenth Street East
Palmetto, FL 34221
(941) 723-9986
(941) 723-6061 fax
BenchmarkEA@earthlink.net

Client: M.R. Friday & Associates, Inc.

1748 Independence Blvd., Suite E-7

Sarasota, FL. 34234

(941) 351-1881

(941) 351-8359 fax

Chain of Custody Form: Shackett Creek/WCIND

Method of discharge: Surf

Surface Water

Laboratory Submission #:

1010496

Station	Sample	Т	SS			Field Parameters			Laboraton Sample #
ID	Туре	PI	ain	Temp (°C)	рН	D.O. (mg/L)	Salinity (g/kg)	Conductivity (µmhos/cm)	:
		1 x 1 Qu	art Plastic						
з 🍅	Grab	(Date)	(Timic)						
3 + #1	Grab	(Date) 1-26-01	(Time:) 0910						
3 3	Grab	(Date)	(Time:)						
Z 4	Grab	(Date)	(Time:)						
Z - # #	Grab	10ata) 1-26-01	(Time) 1330						
Z 6	Grab	(Date)	(Time:)			-			
1 + *Z	Grab	(Date) 1-26-01	(Time) 0946						
1 4 7 3	Grab	(Date) 1-24-01	(Time:) 0954						
1 9	Grab	(Dete)	(Time:)						

Sample must be refrigerated or stored in wet ice after collection. The maximum temperature during storage should be 4°C (39.2°F).

structions:

Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis. The following information should be added to each bottle label after collection with permanent black ink; date and time of collection, sampler's name or initials, and any field number or ID.

The effluent sample bottles for nitrogen contain premeasured 1:1 sulfuric acid (H₂SO₄). Do not rinse these bottles with sample prior to sampling.

All bottles not containing preservative may be rinsed with appropriate sample prior to collection.

The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form.

1	Collector: (Print) Michael R. Friday	Date: 1-26-01	2	Received For Leb By: (Print) **ATHAPINE A. DIXON	Date: 01/27/0/
	Signature: Mulul 1	Time: 1700 hrs.		Signature: Hethanica. Signin	Time: 1235

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

February 9, 2001

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from M. R. Friday & Associates, Inc. on December 29-30, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

Please note that the monitoring data reported for Station Nos. 1 and 3 for November 28-28, 2000 should be exchanged to accurately reflect these site locations. Station No. 2's data remain indicative of the referenced location. Also, refinement of this monitoring program to incorporate flows has been discussed with Bob Stetler during a recent meeting with the WCIND and Bob was to meet with Charles Kovach of your office to investigate this matter further. By copy of this correspondence we are again requesting that this issue be examined.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids and additional quarterly analytes

Chain-of-custody record

Please call Dean Mades or me if there is a need to further discuss these data.

Sam Johnston, Jr

Associate

Sincere

Enclosures

ce: Chuck Listowski / WCIND

Larry Olsen, Ph.D.

Bob Stetler / FDEP

Charles Kovach/FDEP

Dean Mades, PE / EBA

Theresa Connor / Sarasota County Storm Water

PROJECT NAME: Shackett Creek - WCIND

DATE: December 29 and 30, 2000

	on/Time(hrs) pth (total)		DO (ppm)			ГЕМР (c)			LINI7 (0/00)			NDU mmho		-		pН	
Run I		-1'	Mid	+1'	-1' !	Mid +	1'	-1'	Mid +	1'	-1' I	Mid +	1'	-1' i	Mid +	1'	
3	0900 3.0'	6.9	6.9		18,1	18.1		29.5	30.2		40.1	41.6		7.73	8.04		
2	0935 1.2'		6.35			18.1			30.0			44.2			8.08		
1	1013 3.9'	5.4	5.7	5.9	18.5	18.2	19.1	25.8	30.0	30.1	41.6	41.9	42.1	7.95	8.00	8.04	
Run 2	沙特特别的		14. 经股份		1000年	-2630			A.A.			可能信息	avery.		14.30	Tel sol	
3	1302 3.5'	7.15	7.1		17.2	17.2		31.2	31.2		42.1	42.8		7.97	8.05		
2	1321 1.7'		7.9			17.8			30.4			42.0			8.18		
1	1347 4.2'	5.6	5.9	5.9	18.3	19.1	19.1	29.0	29.9	30.1	40.2	41.5	42.5	8.02	8.07	8.08	
Run 3	PROPERTY.	内部海	的作品		的過級					经验的	學學家	学等	學學學	2		THE STATE OF	
3	1700 3.2'	8.2	8.0		17.4	17.7		29.9	31.0		41,2	41.6		8.08	8.20		
2	1710 2.0'		7.35			17.9			30.8			41.5			8.19		
1	1733 4.5'	6.75	6.0	5.9	18.1	18.8	19.0	28.4	29.6	30.0	39.0	40.5	41.9	8.10	8.11	8.11	
Run			电像	No.	表列码				W. All		特別教		M. 19.50				
3	2100 3.6'	7.3	7.22	u	16.9	17.0		31.7	31.4		41.5	41.5		8.13	8.17		
2	2115 2.4'		6.45			16.9			31.1			41.1			8.20		
1	2141 5.0	6.65	6.25	5.95	17.5	18.2	18.5	28.8	30.1	31.0	39.1	42.0	42.8	8.16	8.16	8.17	
Run	1 - 3/1/1/1/			A STATE		7.30				× 30.50	P-91-04		H. W.	TO THE SECOND		7.77	
3	0100 4.4'	6.65	6.5	6.45	16.0	16,2	16.2	31.9	32.0	32.0	41.1	42.2	41.6	8.09	8.13	8.15	
2	0121 3.0'		6.69			16.0			31.5		•	40.8			8.20		
1	0143 5.5'	6.45	6.0	5.95	16.8	18,2	18.2	29.4	30.4	31.0	39.9	40.9	41.4	8.16	8.17	8.17	
Run (对对对对对	NE STE			杨秋秋	The state	40	从公司	i de	ALM.	*61	No.	##\(A)	法是依	14.97	2.	
3	0500 3.5'	6.60	6.55		15.6	15.9		31.2	31.8		40.8	41.0		8.03	8.11		
2	0515 2.4'		6.65			15.3			31.6			40.5			8.17		
1	0533 4.7'	6.1	5.7	5.8	16.4	18.1	18.5	29.0	30.9	30.2	38.8	41.3	41.2	8.11	8.12	8.13	
Run	神经验			性的			1	NA C	學學	e de la compa	的说	100	A-A-W	****	17)-2	er ik a	
3	0900 3.0'		6.5			15.5			30.9			39.7			7.98		
2	0910 1.4'		6.6			15.1			30.6			39.2			8.14		
1	0940 3.9'	5.2	5.3	5.25	16.0	18.1	18.5	29.1	29.8	29.9	37.8	40.8	41.5	7.98	8.02	8.05	
1	A CONTRACTOR OF THE PERSON OF	a surrey	5/40			e Mo	nthly T	SS San	ples			Quarte	rly Nut	rient S	in ples		
Sta	ation/Time	s	ECCI	Π,	-	1.	M	lid	+	1'	-	1'	М	Lid	+	1'	
3	0900 hrs.	Too s	hallow		#1@	1.0'	#4@	1.5'			#3 @	1.0'	#2 @		_		
2	0935 hrs.	Too si	hallow		-		#6@				-		#5 @				
1	1013 hrs.	Too s	hallow		#12 @		#8@	2.0	#10@	 g 3.0°	#7 @	1.0'	#9@	2.0'	#11 (6	g 3.0'	

WEATHER CONDITIONS: Cool and cloudy day I with NE winds, cool and partly cloudy day 2 with NNE winds.



⁻l' data collected one foot below the surface of the water

mid data collected from the middle of the water column

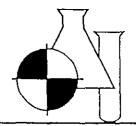
^{+1&#}x27; data collected one foot above the bottom

indicates that the water depths were too shallow for data collection in accordance with the parameters set forth pursuant to Condition No. 39(b) & (c) of the subject permit

EnviroAnalytical, Inc.

EnviroAnaiyi

FDOII Certification #E84167 and #84455 FDEP Quality Assurance #870594G



Submission Number

120509

M.R. Friday & Associates, Inc. 1748 Independence Blvd., Suite E-7

Sarasota

FL 34234

Project Name:

SHACKETT CREEK/WCIND

Date Received:

12/30/2000

Time Received:

1400

Submission Number

120509

Sample Number:

1A1

Sample Description:

Shackett Creek - Sta. 3 @ 1' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

Sample Time:

0905

Parameter	Result	Units	Detection	Procedure	Analysis		Analyst
Parameter			Limit	Trocedure	Date	Time	Anaiyst
TOTAL SUSPENDED SOLIDS	29.0	MG/L	0.5	160.2	01/02/2001		MP

U = Analyte not detected at the value indicated

Submission Number

120509

Sample Number:

1A2

Sample Description:

Shackett Creek - Sta. 3 @ 1' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

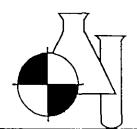
Sample Time:

0910

D	D14	Timita	Detection	D J	Analysis		Analyst	
Parameter	Result	Units	Limit	Procedure	Date	Time	Anaiyst	
AMMONIA NITROGEN	0.14	MG/L	0.01	350.2	01/02/2001		BMS	
ORGANIC NITROGEN	0.02	MG/L	0.01	351-350	01/05/2001		BMS/SG	
TOTAL KJELDAHL NITROGEN	0.16	MG/L	0.04	351.2	01/05/2001		SG	
TOTAL NITROGEN	0.18	MG/L	0.04	353+351	01/05/2001		SG/BMS	
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	01/05/2001		BMS	
TOTAL PHOSPHORUS	0.06	MG/L	10.0	365.3	01/02/2001		BMS	

U = Analyte not detected at the value indicated

EnviroAnalytical, Inc.



FDOIL Certification #E84167 and #64455 FDEP Quality Assurance #870594G

Submission Number

120509

Sample Number:

1B1

Sample Date:

12/28/2000

Sample Description:

Shackett Creek - Sta. 3 @ 1.5' Depth

Sample Method:

Grab

Sample Time:

0912

Th	D16	T1-:4-	Detection	Describer	Anal	ysis	
Parameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	13.2	MG/L	0.5	160.2	01/02/2001		MP

U = Analyte not detected at the value indicated

Submission Number

120509

Sample Number:

Sample Date:

Sample Time:

1B2

12/28/2000

0909

Sample Description:

Shackett Creek - Sta. 3 @ 1.5' Depth

Sample Method:

Grab

Parameter	Result	Units	Detection	Procedure	Anal	Analyst	
Farameter	Result	Onns	Limit		Date	Time	Analyst
AMMONIA NITROGEN	0.07	MG/L	0.01	350.2	01/02/2001		BMS
ORGANIC NITROGEN	0.12	MG/L	0.01	351-350	01/05/2001		BMS/SG
TOTAL KJELDAHL NITROGEN	0.19	MG/L	0.04	351.2	01/05/2001		SG
TOTAL NITROGEN	. 0.20	MG/L	0.04	353+351	01/05/2001		SG/BMS
NITRATE+NITRITE	0.01	MG/L	10.0	353.2	01/05/2001		BMS
TOTAL PHOSPHORUS	0.06	MG/L	10.0	365.3	01/02/2001		BMS

U = Analyte not detected at the value indicated

Submission Number

120509

Sample Number:

Sample Description:

Shackett Creek - Sta. 2 @ 0.6' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

Sample Time:

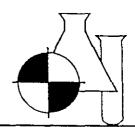
0936

2A1

Parameter	Result	Units	Detection	Anal	Applyet		
r an aneter	Result	Ollitz	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	16.1	MG/L	0.5	160,2	01/02/2001		MP

U = Analyte not detected at the value indicated

EnviroAnalytical, Inc.



FDOIL Confidention #E84167 and #84455 FDEP Quality Assurance #E70594G

Submission Number

120509

Sample Number:

2A2

Sample Description:

Shackett Creek - Sta. 2 @ 0.6' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

Sample Time:

0935

Pa	Result	Units	Detection	Procedure	Anal	Analyst	
Parameter	Kesuit	Units	Limit		Date	Time	Analyst
AMMONIA NITROGEN	0.09	MG/L	0.01	350.2	01/02/2001		BMS
ORGANIC NITROGEN	0.10	MG/L	0.01	351-350	01/05/2001		BMS/SG
TOTAL KJELDAHL NITROGEN	0.19	MG/L	0.04	351.2	01/05/2001		SG
TOTAL NITROGEN	0.20	MG/L	0.04	353+351	01/05/2001		SG/BMS
NITRATE+NITRITE	0.01	MG/L	0.01	353.2	01/05/2001		BMS
TOTAL PHOSPHORUS	0.06	MG/L	0.01	365.3	01/02/2001		BMS

U = Analyte not detected at the value indicated

Submission Number

120509

Sample Number:

3AI

Sample Description:

Shackett Creek - Sta. 1 @ 1' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

Sample Time:

1035

Parameter	Result	Units	Detection	Droodura	Analysis		Analyst	
Parameter			Limit	Procedure	Date	Time	Analyst	
TOTAL SUSPENDED SOLIDS	8.72	MG/L	0.5	160.2	01/02/2001		MP	

U = Analyte not detected at the value indicated

Submission Number

120509

Sample Number:

3A2

42

Sample Description:

Shackett Creek - Sta. 1 @ 1' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

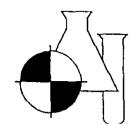
Sample Time:

1019

Proposition	Dogula	Ylmita	Detection	Procedure	Anal	Analyst	
Parameter	Result	Units	Limit	Trocedure	Date	Time	Analyst
AMMONIA NITROGEN	0.08	MG/L	0.01	350.2	01/02/2001		BMS
ORGANIC NITROGEN	0.21	MG/L	0.01	351-350	01/05/2001		BMS/SG
TOTAL KJELDAHL NITROGEN	0.29	MG/L	0.04	351.2	01/05/2001		SG
TOTAL NITROGEN	0.31	MG/L	0.04	353+351	01/05/2001		SG/BMS
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	01/05/2001		BMS
TQTAL PHOSPHORUS	0.11	MG/L	0.01	365.3	01/02/2001		BMS

Page 3 of 5

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

U = Analyte not detected at the value indicated

Submission Number

120509

Sample Number:

3B1

Sample Description:

Shackett Creek - Sta. 1 @ 2' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

Sample Time:

1024

Parameter.	D14	TI:	Detection	Dunadina	Anal	Analyst	
Parameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	9.44	MG/L	0.5	160.2	01/02/2001		MP

U = Analyte not detected at the value indicated

Submission Number

120509

Sample Number:

3B2

Sample Description:

Shackett Creek - Sta. 1 @ 2' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

Sample Time:

1026

Downwater	Result	Y1	Detection	Decoders	Anal	Analyst		
Parameter	Result	Units	Limit	Procedure	Date	Time	Anaryst	
AMMONIA NITROGEN	0.06	MG/L	0.01	350.2	01/02/2001		BMS	
ORGANIC NITROGEN	0.21	MG/L	10.0	351-350	01/05/2001		BMS/SG	
TOTAL KJELDAHL NITROGEN	0.27	MG/L	0.04	351.2	01/05/2001		SG	
TOTAL NITROGEN	0.29	MG/L	0.04	353+351	01/05/2001		SG/BMS	
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	01/05/2001		BMS	
TOTAL PHOSPHORUS	0.09	MG/L	0.01	365.3	01/02/2001		BMS	

U = Analyte not detected at the value indicated

Submission Number

120509

Sample Number:

3C1

Sample Description:

Shackett Creek - Sta. 1 @ 3' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

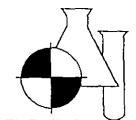
Sample Time:

1032

Donomaton	Danile	I India	Detection	Describer	Anal	A To	
Parameter	Result	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	28.1	MG/L	0.5	160.2	01/02/2001		MP

U = Analyte not detected at the value indicated

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

120509

Sample Number:

3C2

Sample Description:

Shackett Creck - Sta. 1 @ 3' Depth

Sample Date:

12/28/2000

Sample Method:

Grab

Sample Time:

1033

D	D 14	Y 7 14	Detection	December	Anal	ysis	Analyst	
Parameter	Result	Units	Limit	Procedure	Date	Time	Anaiyst	
AMMONIA NITROGEN	0.10	MG/L	0.01	350.2	01/02/2001		BMS	
ORGANIC NITROGEN	0.14	MG/L	0.01	351-350	01/05/2001		BMS/SG	
TOTAL KJELDAHL NITROGEN	0.24	MG/L	0.04	351.2	01/05/2001		SG	
TOTAL NITROGEN	0.26	MG/L	0.04	353+351	01/05/2001		SG/BMS	
NITRATE+NITRITE	0.02	MG/L	0.01	353.2	01/05/2001		BMS	
TOTAL PHOSPHORUS	0.09	MG/L	0.01	365.3	01/02/2001		BMS	

U = Analyte not detected at the value indicated

01/20/2001

Date



DATE: November 27 & 28, 2000

	ion/Time (hrs.) epth (total)		DO (ppm))	7	EMP (c)			LINI7 (0/00)	ГҮ		NDU mmho			pН	
Run	1	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'
3	1314 3.0'	7.3	7.2		22.0	21.0		23.9	27.0		36.5	40.0		7.84	7.82	
2	1345 1.6'	7.0			22.2			23.3			37.5			7.70		
1	1424 4.7	6.5	6.2	5,6	21.9	21.2	21.0	21.9	24.2	29.2	38.9	39.9	36.2	7.5	7.51	7.52
Run	2	•		13.30	00000				Sec. 1	, &	信任身	14497	i de la	7000	电路机	(時間)
3	1655 3.6'	7.4	7.2		22.0	22.0		24.0	24.9		38.0	38.2		7.7	7.77	
2	1705 1.9'	7.3			22.2			24.9			38.0			7.81		
1	1736 4.9'	7.1	6.1	5.4	21.9	21.2	21.1	22.8	24.2	26.1	35.1	36.1	38.0	7.69	7.77	7.81
Run		NEW AND				SI AND					W. Salar					
3	2102 4,2'	8.0	8.1	8.0	21.0	21.0	21.1	26.0	25.9	26.0	37.5	39.1	39.8	8.02	8.0	7.95
2	2132 2.8'	6.9	6.7		21.1	21.1		26.2	26.1	ļ _	37.5	41.5		7.97	7.97	
1	2200 5.7	6.6	6.2	6.2	21.9	21.9	21.9	23.9	27.0	24.5	40.0	38.5	41.5	7.83	7.79	7.82
Run			TO MAN									Sec. 1				TO STATE
3	0053 4.4'	7.6	7.3	7.2	20.9	21.3	21.3	24.9	25.1	25.8	36.9	39.8	38.1	7.98	8.03	8.05
2	0115 2.9'	6.5	6.0		21.2	20.2	<u> </u>	25.2	25.2	<u> </u>	39.9	39.9		8.0	8.01	
1	0148 5.3'	5.2	5.2	5.1	19.0	21.5	21.5	25.1	25.0	25.0	36.1	40.5	41.0	7.06	7.82	7.82
Run	3	W. Salahar	医乳	W-104	20-0	Solitan		Blake.	N. A.							N de la
3	0506 3.1'	6.9	6.8		20.1	20.7		25.0	25.8		42.5	41.2		7.0	7.92	
2	0525 1.6'	5.7	<u> </u>		19.9	<u> </u>		28.3			38.1		<u> </u>	7.89	<u> </u>	
1	0554 4.4'	5.4	5.3	5.3	19.5	20.0	20.0	24.5	25.5	24.5	37.0	44.2	35.2	7.76	7.77	7.79
Run	COLUMN 			31.00	7					機械	TO MAIL	(Project			in in	
3	0900 2.3'	6.3			20.9			24.5			36.8			7.74	1	
2	0916 0.8'		6.2			20.1			25.0			38.1		<u> </u>	7.77	
1	0955 3.5'	5.3	5,4		19.3	20.8		24.9	25.0		29.9	36.5		7.55	7.63	
Run		W. 37.700	1000	Mark I		742	教教		No.	HONEY			SP 200			MAN
3	1300 3.0'	7.9	7.85		21.0	21.1		25.8	26.0		38.0	39.9		7.66	7.72	
2	1314 1.6'	7.1		-,	21.8			28.0			41.9			7.73		
1	1342 4.5'	7.0	7.1	6.3	21.4	21.4	21.9	23.1	23.1	25.0	36.0	35.8	38.9	7.55	7.55	7.59
***		1000	15 10 12							5						
					· ·		┰╌╌	SS Sat	, 				T .		Sample	
	tion/ Time	 	SECCI		 	1'	 	[id	- +	-['	 	1'	 	lid		-j'
3	1314 hrs.	t	o shall	ow	#1@	1.	#2@	1.5'			N/A		N/A		N/A	
2.	1354 hrs.	to	oo shall	0W	#3 @	1'					N/A		N/A		N/A	
1	1430 hrs.		4.0*		#4 @	1'	#5@	2.5'	#6@	3.5'	N/A		N/A		N/A	

WEATHER CONDITIONS: Cold front passes through earlier in weekend, cool during day, very cold at night, partly cloudy day 1, sunny day 2

WIND: NNE TEMP:

Unknown

^{-1&#}x27; data collected one foot below the surface of the water

mid data collected from the middle of the water column

^{+1&#}x27; data collected one foot above the bottom

A dashed line indicates that the water depths were too shallow for data analysis in accordance with the parameters set forth pursuant to Condition No. 39(b) & (c) of the subject permit

X.X data in bold type was found to be inconsistent when collected yet to work and the second section of the section of

1748 Independence Bivd., Suite E-7 353 Tenth Street East Sarasota, FL. 34234 Palmetto, FL 34221 (941) 351-1881 941) 723-9986 (941) 351-8359 fax 941) 723-6061 fax 3enchmarkEA@earthlink.net Chain of Custody Form: Shackett Creek/WCIND 120508 Aethod of discharge: Surface Water Laboratory Submission #: Sample Type: Grab TKN, NO₃-NO₂, T-N Station **TSS** Field Parameters Laboratory Sample # NH₃, O-N, T-P ID Temp (°C) pН D.O. Salinity Conductivity (umhos/cm) (mg/L)(g/kg)Plain 1:1 H₂SO₄ 1 x 1 Quart Plastic 1 x 1 Quart Plastic mme) 0905 e1". #1 mme 0910 @ 1', # 3 mm: 0912@151#4 mm: 0909@1.51#2 mmei 0936@.6,#6 (mmei 0935@.6,#5 (Mine) 1035@ 1', # 12 (Mine) 1019@ 1' # 7 Merc 1024 @ Z' # 8 (Merc) 1026@ Z' (Time) 1032 @ 3' # 10 (Time:) 1633@ 3',# 11 (Time:) (Time:) Sample must be refrigerated or stored in wet ice after collection. The maximum temperature during storage should be 4°C (39.2°F). ructions: Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis. The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID. The effluent sample bottles for nitrogen contain premeasured 1:1 sulfuric acid (H₂SO₄). Do not rinse these bottles with sample prior to sampling. All bottles not containing preservative may be rinsed with appropriate sample prior to collection. The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form. Date: Received By: (Print) Michael R. Friday Collector: (Print) 1200 hs

3enchmark EnviroAnalytical, Inc.

Relinquished By: (Print)

Signature:

Client: M.R. Friday & Associates, Inc.

Received For Lab By: (Priett)

Signature:

M.R. FRIDAY & ASSOCIATES, INC.

Environmental Consultants

BECEIVED FEB 1 % 2001

February 7, 2001

Mr. Sam Johnston Ed Barber & Associates, Inc. 3639 Cortez Road West, Suite 211 Bradenton, FL 34210

Re: Revised data reflecting station ID changes

Dear Sam,

Enclosed please find the revised November and December "in situ" data reports. Also enclosed is a revised December "full assay" water analysis from Benchmark. As discussed, the reports now reflect the station ID numbers as described in your narrative. I apologize for the mistake on my part and am thankful that the error in the previous reports (by others) was found. Naturally, future reports will reflect the correct station ID numbers. The January report has been revised and will be submitted shortly. I am awaiting the lab results. Thanks.

Respectfully submitted,

Whole Ody

Michael R. Friday

President

enclosures

ED BARBER & ASSOCIATES

ENTRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

December 21, 2000

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from M. R. Friday & Associates, Inc. on November 27-28, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids
- Chain-of-custody record

Please call Dean Mades or me if there is a need to further discuss these data.

Sincerely,

Sam Johnston Associate

Associate

Enclosures

cc: Chuck Listowski / WCIND

Bob Stetler / FDEP

Larry Olsen, Ph.D.

Dean Mades, PE / EBA

Theresa Connor / Sarasota County Storm Water

	tion/Time (hrs.) DO Depth (total) (ppm)		7	TEMP (c)			SALINITY (0/00)			CONDUCT (mmho)			pH			
Run	1	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'
1	1314 3.0'	7.3	7.2		22.0	21.0		23.9	27.0		36.5	40.0		7.84	7.82	
2	1345 1.6'	7.0			22.2			23.3			37.5			7.70		
3	1424 4.7'	6.5	6.2	5.6	21.9	21.2	21.0	21.9	24.2	29.2	38.9	39.9	36.2	7.5	7.51	7.52
Run	2				<u>'</u>	. S. Syn Sy		的秘书	通用符		i was		\$55 P.		sia di Sin	
1	1655 3.6'	7.4	7.2		22.0	22.0		24.0	24.9		38.0	38.2		7.7	7.77	
2	1705 1.9'	7.3			22.2			24.9			38.0			7.81		,
3	1736 4.9'	7.1	6.1	5.4	21.9	21.2	21.1	22.8	24.2	26.1	35.1	36.1	38.0	7.69	7.77	7,81
Rur	1.3		de i sisetualija V	Service A	in divaria.			NAME.	Paris.	1810-1615	等等等	HOUSE.	ger Arreite	1. W. W.		
1	2102 4.2	8.0	8.1	8.0	21.0	21.0	21.1	26,0	25.9	26.0	37.5	39.1	39.8	8.02	8.0	7.95
2	2132 2.8'	6.9	6.7		21.1	21.1	<u> </u>	26.2	26.1		37.5	41.5		7.97	7.97	
3	2200 5.7	6.6	6.2	6.2	21.9	21.9	21.9	23.9	27.0	24.5	40.0	38.5	41.5	7.83	7.79	7.82
Rui	14		er 139						3.50		933			TO THE		7677 A
1	0053 4.4	7.6	7.3	7.2	20.9	21.3	21.3	24.9	25.1	25.8	36.9	39.8	38.1	7.98	8.03	8.05
2	0115 2.9	6.5	6.0		21,2	20.2		25.2	25.2		39.9	39.9		8.0	8.01	
3	0148 5.3'	5.2	5.2	5.1	19.0	21.5	21.5	25.1	25.0	25.0	36.1	40.5	41.0	7.06	7.82	7.82
Ru	1.5			Taka ta di pin	er egy	प ्रमुख		1911/19			性物學			179936	(45×15)	和於
1	0506 3.1'	6.9	6.8		20.1	20.7		25.0	25.8		42.5	41.2		7.0	7.92	
2	0525 1.6'	5.7			19.9			28.3			38.1			7.89		
3	0554 4.4'	5.4	5.3	5.3	19.5	20.0	20.0	24.5	25.5	24.5	37.0	44.2	35.2	7.76	7,77	7.79
Ru	n 6			n din selekt	(tate 40)	* CS		STATE OF				X 25 (25)	The Control	ASMA.	40.50 £0.4	
1	0900 2.3'	6.3			20.9		ļ	24.5			36.8			7.74		
2	0916 0.8'		6.2			20.1			25.0			38,1			7.77	<u> </u>
3	0955 3.5'	5.3	5.4		19.3	20.8		24.9	25.0		29.9	36.5		7.55	7.63	
Ru	n 7		i dina	T. T. T. C.			377.7			Militan			n) m) e de	enger T		
1	1300 3.0	7.9	7.85		21.0	21.1	ļ	25.8	26.0		38.0	39.9		7.66	7.72	
2	1314 1.6'	7.1			21.8		<u> </u>	28.0			41.9	<u> </u>	ļ	7.73		
3	1342 4.5'	7.0	7.1	6.3	21.4			23.1	23.1	25.0	36.0					
	Berger (1965) in the contract of the contract	., ,	7******	i szi-ki s				TSS Sa						utrient		
Sta	ution/ Time		SECCI	<u> </u>		-1'		Aid	Ť	+1'	Τ.	-1'	Т	Mid	Т	+1'
1	1314 hrs.	· 	oo shall		#1@) l'	+	1.5'			N/A		N/A		N/A	
.2	1354 hrs.	1	oo shall	ow	#3 @	<u> </u>			 		N/A		N/A		N/A	
3	1430 hrs.	+-	4.0'		#4 @	D 1'	#5 @	g 2.5'	#6@	3.5	N/A		N/A		N/A	
L	<u> </u>															

WEATHER CONDITIONS: Cold front passes through earlier in weekend, cool during day, very cold at night, partly

cloudy day 1, sunny day 2

WIND: NNE TEMP:

-1' data collected one foot below the surface of the water

mid data collected from the middle of the water column

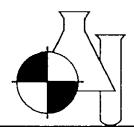
+1" data collected one foot above the bottom

A dashed line indicates that the water depths were too shallow for data analysis in accordance with the parameters set forth pursuant to Condition No. 39(b) & (c) of the subject permit

X.X data in bold type was found to be inconsistent when collected yet re-verified in situ

Unknown

EnviroAnalytical, Inc.



FDOH Certification #E84167 and #84455 FDEP Quality Assurance #870594G

Submission Number

110504

M.R. Friday & Associates, Inc. 1748 Independence Blvd., Suite E-7 Sarasota FL 34234

Project Name:

WCIND REPORT

Date Received:

11/28/2000

Time Received:

1600

Submission Number

110504

Sample Number:

Sample Description:

Shackett Creek - #1

Sample Date:

11/27/2000

Sample Method:

Grab

Sample Time:

1314

Doromotor	Result	Detection		Anal	Analyst		
Parameter	Keuit	Units	Limit	Procedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	15.1	MG/L	0.5	160.2	11/29/2000		MP

U = Analyte not detected at the value indicated

Submission Number

110504

Sample Number:

Sample Description:

Shackett Creek - #2

Sample Date:

11/27/2000

Sample Method:

Grab

Sample Time:

1314

Parameter	Docult	Result Units Detection Procedure					Analyst
r at attletet	Kout	Units	Limit	Toceanie	Date	Time	Anaryst
TOTAL SUSPENDED SOLIDS	17.8	MG/L	0.5	160.2	11/29/2000		MP

U = Analyte not detected at the value indicated

Submission Number

110504

Sample Number:

Shackett Creek - #3

Sample Date:

11/27/2000

Sample Method:

Sample Description:

Grab

Sample Time:

1354

Parameter

Result

Units

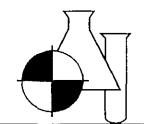
Detection Procedure Limit

Analysis Date Time

Analyst

Page 1 of 2

EnviroAnalytical, Inc.



FDOH Cortification #E84167 and #84455 FDEP Quality Assurance #870594G

TOTAL SUSPENDED SOLIDS

15.4

MG/L

0.5

160.2

11/29/2000

MP

U = Analyte not detected at the value indicated

Submission Number

110504

Sample Number:

Sample Description:

Shackett Creek - #4

Sample Date:

11/27/2000

Sample Method:

Grab

Sample Time:

1430

Parameter	Result	Units	Detection Proces	Analysis	Analyst
ratameter	Kesuit	Omis	Limit	Date Time	Analyst
TOTAL SUSPENDED SOLIDS	12.9	MG/L	0.5 160	.2 11/29/2000	MP

U = Analyte not detected at the value indicated

Submission Number

110504

Sample Number:

Sample Description:

Shackett Creek - #5

Sample Date:

11/27/2000

Sample Method:

Grab

Sample Time:

1430

Parameter	Result	Units	Detection	Procedure	Anal	Analyst	
r ar annetes	Kean	Omes	Limit	rrocedure	Date	Time	Analyst
TOTAL SUSPENDED SOLIDS	 12.9	MG/L	0.5	160.2	11/29/2000		MP

U = Analyte not detected at the value indicated

Submission Number

110504

Sample Number:

Sample Description:

Shackett Creek - #6

Sample Date:

11/27/2000

Sample Method:

Grab

Sample Time:

1430

Parameter	Result	Units	Detection	Procedure	Anal	Analyst	
1 at attitute	KGut		Limit	Trocedure	Date	Time	Anatyst
TOTAL SUSPENDED SOLIDS	16.3	MG/L	0.5	160.2	11/29/2000		МР

U = Analyte not detected at the value indicated

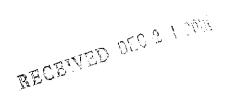
12/06/2000

Date

Be	nchmark Er	nviroAn	alytical	Inc.		C	Client Name: MR. Friday & Acroc					
653	3 Tenth Street Eas	st					Д	ddress:	4	1		
Pali	metto, FL. 34221						C	ity, State, 2	 Zip:			
(94	1) 723-9986						P	hone:			,	
(94	1) 723-6061 fax						F	ax:		•		
Ber	chmark@worldne	t.att.net					Ē	mail Addres	ss:			
Pro	oject Name: _	Shi	uckett	Creek-	WCINI) Rep	ort L	.aborato	ry Submissio	on #: ()504	
	Sample	Sample	Sample	Collec			Contai		Preservative ³	Parameters for A	Analysis Laboratory	
	I.D.	Type¹	Matrix ²	Date	Time	Qty	Capacity	Туре			Sample #	
		GRAB	$ S\omega $	11-27-00	1314-45	1	1Bt.	P	PLAIN	<u> </u>	1	
	2.	1		1	1314 1/15					,	2	
	<u> </u>				1354 1/15			<u> </u>			3	
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	tions: Each bottle has a label id with permanent black inl The affluent sample bott All bottles not containing The client is responsible Collector: (print)	to indicate whe ated or stored in entifying sample k: date and time cles for nitrogen g preservative m for documentat	ather the sample a wet ice after co a ID, premeasure of collection, s contain premea nay be rinsed with	is being discharged to ollection. The maximul d preservative contains ampler's name or initia sured 1:1 sulfuric acid h appropriate sample p	drinking water (DW m temperature durin and in the bottle, samples, and any field nur (H ₂ SO ₄). Do <u>not</u> rin prior to collection.	/), grounds og storage ple type, c mber or ID se these b	should be 4' lient ID, and cottles with s	C (39.2°F). Uniparameters for a sample prior to satisfication.	der "Preservative," list nalysis. The following i		re added to the sample container. It to each bottle label after collection Date:	
	Signature Relinquished to Lab By	20	2	7	Time: 1600 (45 5)		Signature	For Lab By: (prin	11)		Time:	
3	Signature				Time:	4	Signature	A TO	10 00	Ma One	11/28/DO Time: 16:00	

M.R. FRIDAY & ASSOCIATES, INC.

Environmental Consultants



December 19, 2000

Mr. Sam Johnston Ed Barber & Associates, Inc. 3639 Cortez Road West, Suite 211 Bradenton, FL 34210

Re: Revised November Data Collection @ Shackett Creek in accordance with FDEP Permit

No. 58-01274663-001, Condition No. 39 (b) & (c)

Dear Sam,

Enclosed please find the revised November report to include the seventh run and additional definitions. I have enclosed one copy of original size for your file and one reduced for the FDEP. Please contact me should you have any questions regarding this report. Thanks.

Respectfully submitted,

Melony

Michael R. Friday

President

enclosures

M.R. FRIDAY & ASSOCIATES, INC.

Environmental Consultants

December 13, 2000

Mr. Sam Johnston Ed Barber & Associates, Inc. 3639 Cortez Road West, Suite 211 Bradenton, FL 34210

Re: November Data Collection @ Shackett Creek in accordance with FDEP Permit No. 58-01274663-001, Condition No. 39 (b) & (c)

Dear Sam,

Enclosed please find the November report to include the monthly total suspended solids. Also enclosed is the invoice for November. The next monitoring event is scheduled for December 29, 2000. Please contact me should you have any questions regarding the report or invoice. Thanks.

Respectfully submitted,

Mulel OTy

Michael R. Friday

President

enclosures

PROJECT NAME: SHACKETT CREEK - WCIND DATE: November 27 & 28, 2000

	ation/Time (hrs.) Depth (total) DO TEMP (ppm) (c)		SA	LINI' (0/00)		CONDUCT (mmho)			рН							
Run	1	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'	-1'	Mid	+1'
1	1314 3.0'	7.3	7.2		22.0	21.0		23.9	27.0		36.5	40.0		7.84	7.82	
2	1345 1.6'	7.0			22.2			23.3			37.5			7.70		
3	1424 4.7'	6.5	6.2	5.6	21.9	21.2	21.0	21.9	24.2	29.2	38.9	39.9	36.2	7.5	7.51	7.52
Run	2															
1	1655 3.6'	7.4	7.2		22.0	22.0		24.0	24.9	 -	38.0	38.2		7.7	7.77	
2	1705 1.9'	7.3			22.2			24.9			38.0			7.81		`
3	1736 4.9'	7.1	6.1	5.4	21.9	21.2	21.1	22.8	24.2	26.1	35.1	36.1	38.0	7.69	7.77	7.81
Run	3															
1	2102 4.2'	8.0	8.1	8.0	21.0	21.0	21.1	26.0	25.9	26.0	37.5	39.1	39.8	8.02	8.0	7.95
2	2132 2.8'	6.9	6.7		21.1	21.1		26.2	26.1		37.5	41.5		7.97	7.97	
3	2200 5.7'	6.6	6.2	6.2	21.9	21.9	21.9	23.9	27.0	24.5	40.0	38.5	41.5	7.83	7.79	7.82
Run	4									_						
1	0053 4.4'	7.6	7.3	7.2	20.9	21.3	21.3	24.9	25.1	25.8	36.9	39.8	38.1	7.98	8.03	8.05
2	0115 2.9'	6.5	6.0		21.2	20.2		25.2	25.2		39.9	39.9		8.0	8.01	
3	0148 5.3'	5.2	5.2	5.1	19.0	21.5	21.5	25.1	25.0	25.0	36.1	40.5	41.0	7.06	7.82	7.82
Run	5															
1	0506 3.1'	6.9	6.8		20.1	20.7		25.0	25.8		42.5	41.2		7.0	7.92	
2	0525 1.6'	5.7			19.9			28.3		W-4-4	38.1			7.89		
3	0554 4.4'	5.4	5.3	5.3	19.5	20.0	20.0	24.5	25.5	24.5	37.0	44.2	35.2	7.76	7.77	7.79
Run	6															
1	0900 2.3'	6.3			20.9			24.5			36.8			7.74		
_						1				I		1				

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

December 5, 2000

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from AscI Environmental Quality Laboratory on October 30-31, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids
- Chain-of-custody record

Please note that our review of data collected for this event has resulted in the laboratory reanalysis of total suspended solids for the mid-depth sample site at Station No. 2. The measurement was validated in the lab with possible explanations of either sampler or natural sediment perturbations in these shallow waters.

Please call Dean Mades or me if there is a need to further discuss these data.

Sincerety.

Sam Johnston.

Associate

Enclosures

cc: Chuck Listowski / WCIND

Bob Stetler / FDEP Dean Mades, PE / EBA

Larry Olsen, Ph.D. Dean M Theresa Connor / Sarasota County Storm Water



CHEMISTRY SAMPLE ANALYSIS

Page: 1

Report Date: 11/30/2000

BECOME AND A COM

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

EQL ID: 1457 / 4597

Customer Proj: SHAKETT CREEK D!EL

Sample Deta/Times	40/24/00	44.20	Samala#:	40500					
Sample Date/Time: Station/Location:	10/31/00 STA 1	11:32 I-MID	. Sample#:	18588					
Ar	nalysis		Res	uit	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. SUSPENDED S	OLIDS		11.5		mg/L	EPA 160.2	0.6	11/02/00	SR
Sample Date/Time:			Sample#:	18589					
Station/Location:	STA	GIM-5						Analysis	
Ar	nalysis		Res	ult	Units	Method	MDL	Date	Analyst *DQ
TOT. SUSPENDED S	oups		106.		mg/L	EPA 160.2	0.6	11/02/00	SR
Sample Date/Time: Station/Location:		11:57 3-TOP	Sample#:	18590					
Ar	nalysis		Res	ult	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. SUSPENDED S	OLIDS		5.4		mg/L	EPA 180.2	6.0	11/02/00	SR
Sample Date/Time:	10/31/00	11:58	Sample#:	18591					
Station/Location:	STA 3	3-MID						s a familia	
Ar	nalysis		Res	uit	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT, SUSPENDED,S	OL!DS		6.2		mg/L	EPA 160.2	0.6	11/02/00	SR
Sample Date/Time:	10/31/00	11.59	Sample#:	18592		· — · · · · · · · · · · · · · · · · · ·			
Station/Location:	STA	-BOTTOM	1					Analysis	
Ar	alysis		Res	ult	Units	Method	MDL	Analysis Dale	Analyst *DQ
TOT, SUSPENDED S	OLIDS		7.3		mg/L	EPA 160.2	0.6	11/02/00	SR

NOTE: Reported results not valid without accompanying signature page.

Laboratory Testing & Environmental Services

DOH CERTIFICATION #E85086

BECOLIED ALL OF YOU

SHAKETT CREEK

Page 1

4

		DEPTH (ft)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (o/oo)
Date: 10/30/ Run/Station	2000 Time						
1 1	11:30						
		1.	25.04	6.04	7.51	43.59	28.10
		3.	.25,11	6.53	7.52	42.62	27.40
		6.		★ 10.16	7.57	44.11	28.47
				7.			
Date: 10/30/	2000						
Run/Station	Time						
1 2	11:35						
		1.	24.18	7.19	7.53	43.67	28.16
Date: 10/30/ Run/Station	2000 Time						
1 3	12:00						
		1.	25.07	6.83	7.4	37.26	23.56
		2.2	24.11	6.58	7.39	39.45	25.12
		5.4	25.47	6.39	7.39	44.57	28.81
Date: 10/30/							
Run/Station	Time						
2 1	15:30						
		1	25.72	6.69	7.65	44.82	28.99
		2.3	25.85	6.83	7.66	45.43	29.43
		3.3	25.93	6.95	7.66	46.43	30.16
5 1.							
Date: 10/30/							
Run/Station	Time						
2 2	15:35	4	25.41	7 24	7.00	45.0	20.24
		1.	25.41	7.21	7.69	45.3	29.34
Date: 10/30/							
Run/Station	Time						
2 3	15:55		25.70	670	7.07	27.70	00.00
		1.	25.78	6.78	7.67	37.78	23.93
		2.4 4.8	25.52 25.57	6.09 5.7 7	7.63 7.64	46.03 43.72	29,87 28,19
		4.0	23.31	5.77	1.04	45.72	20.13
Date: 10/30/ Run/Station	2000 Time						
3 1	19:15						
,		1.	25.99	6.84	7.69	44.21	28.55
		2.4	25.91	6.73	7.73	44.23	28.56
		5.3	26.	7.29	7.84	47.25	30.76
							303
Date: 10/30/ Run/Station	2000 Time						
3 2	19:25						
		1.	25.43	7.13	7.67	45.7	29.63

^{*} Note: Equipment Error

RECEIVED DEC 0 4 2000

SHAKETT CREEK

	DEPTH (ft)	TEMP (c)	D.O. (ppm)	Нq	COND (mmho)	SALINITY (0/00)
Date: 10/30/2 Run/Station 3 3	2000 Time 19:50	•				
	1. 2.4 4.9	25.81 25.53 25.45	6.69 5.8 5.79	7.69 7.66 7.67	35.68 40.93 43.58	22.44 26.18 28.09
Date: 10/30/2 Run/Station 4 1	2000 Time 23:35 1.	25.23	6.27	7.58	46.12	29.94
_	2.2 3.6	25.46 25.13	6.42 6.23	7.6 7.56	45.43 45.12	29.43 29.21
Date: 10/30/2 Run/Station 4 2	2000 Time 23:41 1.	25.36	6.69	7.62	45.12	29.21
Date: 10/30/2 Run/Station 4 3		20.00	0.00	1.02	70.12	25.21
	1. 2.3 4.5	25.36 25.46 25.93	6.22 6.42 6.23	7.65 7.62 7.66	45.22 45.16 44.32	29.28 29.24 28.63

SHAKETT CREEK

DE CONTROL 3

Page 3

			_*				
		DEPTH (m)	TEMP (c)	D.O. (ppm)	PΗ	COND (mmho)	SALINITY (o/oo)
Date: Run/Station 5 1	10/31/2000 Time 3:30						
		1.	25.33	6.1	7.56	45.23	27.18
		2.	25.42	6.04	7.62	45.12	28.46
		4.	25.12	5.12	7.6	44.6	28.12
				•=			
Date: Run/Station 5 2	10/31/2000 Time 3:36						
		1.	25.18	5.98	7.61	45.16	28.16
Date: Run/Station	10/31/2000 Time						
5 3	3:50						
		1,	26.03	5.86	7.63	45.22	28.12
		2.1	25.96	6.03	7,62	44.89	27.18
		4.2	26.18	5.92	7.66	45.18	28.19
Date: Run/Station 6 1	10/31/2000 Time 7:30						
		1.	24.65	5.89	7.73	38.75	24.61
		2.2	24.78	5.88	7.75	39.05	24.76
	f	3.1	24.85	5.96	7.79	40.6	25.88
Date: Run/Station 6 2	10/31/2000 Time 7:35	1.	22.9	7.17	7.85	37.47	23.74
			22.0	7.17	7.00	37.77	20.14
Date: Run/Station 6 3	10/31/2000 Time 7:51						
		1.	25.59	4.71	7.76	31.63	19.66
		2.2	25.69	5.13	7.8	35.46	22.96
		4.2	25.43	5.71	7.85	40.	25.49
Date: Run/Station 7 1	10/31/2000 Time 11:30						
		1.	25.44	6.79	7.58	39.11	24.86
		2.5	25.35	6.86	7.65	39.42	25.07
		5.	25.42	7.17	7.82	39.42	25.27

^{*} Note: Equipment Error

SHAKETT CREEK

	\vec{l}'	E-1911
RECOTT Page	4	
J.e.		

		DEPTH (m)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (0/00)
Date:	10/31/2000						
Run/Station	Time						
7 2	11:36						
		1.	26.14	7.46	7.66	37.24	23.50
Date:	10/31/2000						
Run/Station	Time						
7 3	11:56						
		1.	25.48	6.39	7.61	29.53	18.23
		2.3	25.84	5.63	7.62	35.31	21,11
		4.5	25.75	5.78	7.65	41.07	26.25

Environmental Quality Laboratory 1009 Tamiami Trail Port Charlotte, FL 33953



Toll Free (877) 452-2712 Phone (941) 625-3137 Fax (941) 629-7467

Sample Information					Analysis Request page									0	f			
	Barber & Associates "new	Phone:		8														
Project:	hatetl Geek Diel	FAX:										١.						1
	SO/1457/4597	HRS Form?								ıχ		, 						ainers
Address:		□Yes	No	Preserve	Minerals	Nutrient	NO2/0.P	Metals	Bacteria	сворля								# of Container
EQL Sample No.	Sample Description	Collection Date	Collection Time															
18590	Station 1-Mid	10/31/00	11:32							X								
18589	Station 2 - mid		11:37							X								1
18590	Station 3 - Top		11:57							X								
14591	" - mid		11:58							X								1
18592	1' = Bottom		11:59							×								1.
1859			*															
									<u> </u>									
	·																	
																•		
a may																		
Comments:		Ch	ain of	Cus	stoc	yk								-	Total # i	of Conta	iners =	5
Transfer	Released by:	Date	Time	Rece	ived by:		•											-
1st	Trong & Fricket (Sample collector)	10/31/00	13:30	amber K 10-31-00														
2nd	U			<u> </u>														
3rd			 _	ļ	· ·			_										
4th				 														
5th] .]		1)

ED BARBER & ASSOCIATES

ENFORMENTAL CONSULTING ENVIRONMENTAL MINNAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

November 17, 2000

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re: File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from AscI Environmental Quality Laboratory on September 26-27, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids, nitrate + nitrite nitrogen, ammonium nitrogen, Kjeldahl nitrogen and total phosphorus.
- Chain-of-custody record

Please note that our review of *in situ* data collected for this event have resulted in a laboratory audit. Their findings indicate that certain dissolved oxygen data couldn't be validated due to lack of membrane saturation requirements. Without calibration backup additional *in situ* data could also be questioned. Unfortunately, by the time EBA noticed these disparities and the lab was able to identify the cause for these data excursions a significant amount of time that had elapsed. The lab has since performed its scheduled October event. We are awaiting results from AScI for this most recent monitoring episode. Upon receipt of these monitoring data they will be reviewed and sent to your attention pursuant to reporting requirements. Our next quarterly sampling event is currently scheduled to take place during December, which will include the laboratory as well as *in situ* analytes.

We have placed a high priority upon data developed as part of this permit monitoring requirement to meet necessary quality assurance/quality control criteria both in the field and laboratory. Without development of such standards our monitoring efforts are greatly diminished. With influences such as Cowpen Slough and other sources of runoff within the watershed it is important that all data be collected and utilized to accurately assess water quality conditions.

After careful consideration of data collected during the September event we have chosen to engage M.R. Friday & Associates, Inc. to resume these monitoring efforts, beginning this month. Benchmark Laboratories, Inc. is working with them to provide analytic services.

Please call Dean Mades or me if there is a need to discuss this matter.

Sincerely/

Enclosures

Chuck Listowski / WCIND CC:

Bob Stetler / FDEP Larry Olsen, Ph.D. Dean Mades, PE / EBA

Theresa Connor / Sarasota County Storm Water



CHEMISTRY SAMPLE ANALYSIS

Page:

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Report Date: 10/17/2000

LABID: 1457 / 2900

Customer Proj: SHAKETT CREEK QUARTERLY

Sample Date/Time: Station/Location:	09/27/00 1 MID	9:12	Sample#:	12724				A 1 1 -		
Analysis			Result		Units	Method	MDL	Analysis Date	Analyst	•DQ
TOT. NITRATE+NITRITE			0.126		mg/L	EPA 353.2	0.002	10/03/00	HAN	
AMMONIA/AMMONIU	M-NITROGE	ų.	0.242		mg/L	EPA 250.1	0.01	10/04/90	HAN	
TOT.KJEL.N			1.85		mg/L	EPA 351.2	0.1	10/06/00	HAN	
ORGANIC NITROGEN	I (CALC)		1,61		mg/L	EPA 350.1, 351.2	0.1	10/06/00	HAN	
TOTAL PHOSPHORU	S		0.501		mg/L	EPA 365.4	0.01	10/06/00	HAN	
TOT. SUSPENDED S	OLIDS		6.5		mg/L	EPA 160.2	0.6	10/02/00	TF	
Sample Date/Time: Station/Location:	09/27/00 2 MID	9:17	Sample#:	12725				Analouia		
Ar	alysis		Resu	ılt	Units	Method	MDL	Analysis Date	Analyst	•DQ
TOT. NITRATE+NITRI	TE		0.122		mg/L	EPA 353,2	0.002	10/03/00	HAN	
AMMONIA/AMMONIU	M-NITROGE!	A.	0.22		mg/L	EPA 350.1	0.01	10/04/00	HAN	
TOT.KJEL.N			2.21		mg/L	EPA 351.2	0.1	10/06/00	HAN	
ORGANIC NITROGEN	(CALC)		1.99		mg/L	EPA 350.1, 351.2	0.1	10/06/00	HAN	
TOTAL PHOSPHORU	s		0.571		mg/L	EPA 365.4	0.01	10/06/00	HAN	
TOT. SUSPENDED S	DLIDS		16.4		mg/L	EPA 160.2	0.6	10/02/00	TF	
Sample Date/Time: , Station/Location:	09/27/00 3 TOP	9:43	Sample#:	12726				Analysis		,_
An	alysis		Resu	lt	Units	Method	MDL	Date	Analyst	•DQ
TOT. NITRATE+NITRI	TE		0.139		mg/L	EPA 353.2	0.002	10/03/00	HAN	
AMMONIAAMMONIU	M-NITROGE!	1	0.114		mg/L	EPA 350.1	0.04	10/04/00	HAN	
TOT.KJEL.N			1.67		mg/L	EPA 351.2	0.1	10/06/00	HAN	
ORGANIC NITROGEN	I (CALC)		1.556		mg/L	EPA 350.1, 351.2	0.1	10/03/00	HAN	
TOTAL PHOSPHORU	S		0.457		mg/L	EPA 365.4	0.01	10/06/00	HAN	
TOT, SUSPENDED SO	DLIDS		3.6		mg/L	EPA 160.2	0.6	10/02/00	TF	

NOTE: Reported results not valid without accompanying signature page.

Laboratory Testing & Environmental Services

DOH CERTIFICATION #E85086



CHEMISTRY SAMPLE ANALYSIS

Page:

ED BARBER & ASSOCIATES

Report Date: 10/17/2000

Customer:

LABID: 1457 / 2900

Customer Proj: SHAKETT CREEK QUARTERLY

3639 CORTEZ ROAD

Sample Date/Time: 09/27/00 9:4 Station/Location: 3 MID	4 Sample#: 12727					
Analysis	Result	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. NITRATE+N!TRITE	0.14	mg/L	EPA 353.2	0.002	10/03/00	HAN
AMMONIA/AMMONIUM-NITROGEN	0.118	mg/L	EPA 350.1	0.01	10/04/00	HAN
TOT.KJELN	1.69	mg/L	EPA 351.2	0.1	10/06/00	HAN
ORGANIC NITROGEN (CALC)	1.57	mg/L	EPA 350.1, 351.2	0.1	10/06/00	HAN
TOTAL PHOSPHORUS	0.475	mg/L	EPA 365.4	0.01	10/06/00	HAN
TOT. SUSPENDED SOLIDS	2.9	mg/L	EPA 160.2	0.6	10/02/00	TF
Sample Date/Time: 09/27/00 9:4 Station/Location: 3 BOTTOM						
Analysis	Result	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. NITRATE+NITRITE	0.139	mg/L	EPA 353.2	0.002	10/03/00	HAN
AMMONIA/AMMONIUM-NITROGEN	0.123	mg/L	EPA 350.1	0.01	10/04/00	HAN
TOT.KJEL.N	1.72	mg/L	EPA 351.2	0.1	10/06/00	HAN
ORGANIC NITROGEN (CALC)	1.6	mg/L	EPA 350.1, 351.2	0.1	10/06/00	HAN
	0.475	mg/L	EPA 365.4	0.01	10/06/00	HAN
TOTAL PHOSPHORUS	0.475	mgrc	LI 71 000,4	0.0.	10100100	L DATA

NOTE: Reported results not valid without accompanying signature page.



SHAKETT CREEK Page

	DEPTH (ft)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)		INITY (00)
Date: 09/26/2000 Run/Station Time	e						
1 1 9:00							
	1.	29.61	8.06	7.31	10.65		5.82
	2.5	29.64	9.11	7.34	12.63		7.04
	3.7	29.7	11.63	7.3	16.28		9.34
Date: 09/28/2000							
Run/Station Time	e -						
2 1 13:05							
	1.	31.15	7.61	7.08	9.6		5.18
	2.2	30.11	8.45	7.1	12.84		7.17
Date: 09/26/2000 Run/Station Time	e						
2 2 13:11	_						
	1.	30.19	5.49	7.03	11.35		6.25
Date: 09/26/2000 Run/Station Time	e						
2 3 13:36					•		
2 3 10.50	1.	30.01	8.14	6.98	0.368	<	0.01
	3.1	29 09	7.55	6.97	0.364	<	0.01
	6.2	28.47	5.05	7.02	0.627		0.06
Date: 09/26/2000 Run/Station / Time	e						
3 1 17.01							
	1.	31.38	15.14	7.66	4.85		2.39
Date: 09/26/2600 Run/Station Time	G					•	
3 2 17:06							
	1.	31.49	6.88	7.41	3.78		1.79
Date: 09/25/2000 Run/Station Time	e						
3 3 17:31							
	1.	29.92	9.18	7.33	0.435	۷.	0.01
	2.3	29.66	7.48	7.39	0.554		0.02
	4.6	29.49	10.53	7 63	0.567		0.02
Date: 09/26/2000 Run/Station Time							
4 1 21:02				-			
	1.	30.18	10.25	7.44	12.02		6.66
	2.2 3.4	30.16 30.46	10.03 - 11.26	7.51 7.6	11.23 . 10.12r c	_	6.17 5.50

Laboratory Testing & Environmental Services 50 DOH CERTIFICATION #E85086



SHAKETT CREEK Page

	DEPTH (ft)	TEMP (c)	D.O. (ppm)	рH	COND (mmho)	SALI (o/c	
Date: 09/26/2 Run/Station	2000 Time						
4 2	21:11						
	1.	30.18	6.92	7.42	11.34		6.24
Date: 09/26/2	2000						
Run/Station	Time						
4 3	21:36						
	1,-	29.35	9.78	7.36	0.393	<	0.01
	2.2	29.62	8.23	7.35	0.892		0.20
	4.3	29.42	9.56	7.34	0.653		0.07
Date: 09/26/2	2000						
Run/Station	Time						
2	9:09						
	1.	29.32	9.11	7.43	5.525		2.78
Date: 09/26/2	2000						
Run/Station	Time						
3	9:26						
	1.	28.49	6.91	7.13	0.386	<	0.01
	2.3	28.37	6.23	7.19	0.397	<	0.01
	5.2	28.33	5.23	7.45	0.52	<	0.91

Laboratory Testing & Environmental Services DOH CERTIFICATION #E85086



SHAKETT CREEK Page 3

		EPTH (ft)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (o/oo)
Date: 09/27/20 Run/Station	·Time						
5 1	1:03						5.50
		1.	30.16	10.56	7.56	10.13	5.50
		2.	30.54	10.14	7.5	9.56	5.16
		3.3	29.16	11.12	7.54	10.12	5.50
Date: 09/27/20 Run/Station	000 Time	-					
5 3	1:36						
		1.	29.17	7.6	7.89	0.714	0.10
		2.2	29.62	7.54	7.47	0.567	0.02
		3.5	29.45	8.89	7.45	0.675	80.0
Date: 09/27/2 Run/Station	000 Time					·	
6 1	5:04						
		1.	29.45	10.55	7.44	13.12	7.34
		2.2	29.3	10.12	7.45	16.15	9.25
•		3.4	30.15	11.26	7.1	17.04	9.82
Date: 09/27/2 Run/Station	Time						
6 2	5:12						
		1.	29.06	5.48	7.5	6.25	3.20
		1.	29.06	5.48	7.5	6.25	3.20
Date: 09/27/2	000		•				
Run/Station	Time						
6 3	5:40						
0 0	0.10	1.	29.6	5.93	7.52	0.892	0.20
		3.3	29.54	6.15	7.56	0.876	0.19
		4.2	29.16	5.06	7.62	0.624	0.05
Date: 09/27/2 Run/Station	000 Time						
7 1	9:10						
	-	1.	29.41	17.04	7.38	7.63	4.01
		2.1	29 5	24.58	7.41	9.063	4.86
		3.2	29.47	26.18	7.55	10.46	5.70
Onlar construct							
Date: 09/27/2							
Run/Station	Time						
7 2	9:16	1.	29.07	12.32	7.48	5.836	2.96
		4.	23.01	12.32	,,70	3.000	2.00

Date: 09/27/2000

Run/Station TimLaboratory Testing & Environmental Services

7 3 9:42 DOH CERTIFICATION #E85086 0.538 0.01
1. 28.35 9.06 7.38 0.01
1.009 TAMIAMI TRAIL, PORT CHARLOTTE, FLORIDA 33953 9 PH 941-6253137 • TOLLIFBEE 1-877-452-2712



SHAKETT CREEK								
	DEPTH (ft)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (c/co)		
Date: 09/27/ Run/Station 2	/2000 Time 1:11							
	1.	30.14	5.98	7.57	9.45	5.09		

101.1.00 (01.) .. = - . -Phone (941) 625-3137 Environmental Quality Laboratory 1009 Tamiami Trail Port Charlotte, FL 33953 Fax (941) 629-7467 Sample Information **Analysis Request** page / of Phone: Project: FAX: Labia. HRS Form? Address: Ø No □Yes Collection Collection EQL Sample Description Sample No. Date **Chain of Custody** Total # of Containers = ... Time Received by: Transfer Released by: Date 1st 1200 2nd 3rd

Form 00-01

41h 51h



FAX COVER SHEET

DATE: ///pg/02 TIME: //:30 FAX N: (941) 739-3829
TO: SAM JOHNSTON
COMPANY: Ex RARGAL & ASSOC.
FROM: CRAIL TOWN
MESSAGE:
COPY TO FOLLOW BY MAIL: YES:NO:
TOTAL NUMBER OF PAGES INCLUDING COVER PAGE: 2

November 9, 2000

Sam Johnston, Jr. Ed Barber & Associates 3639 Cortez Rd. Suite 222 Bradenton, FL 34210

Dear Sam:

Sanders Laboratories is pleased to provide the following price quote to your company for the Shakett Creek Surface Water Monitoring Project:

PARAMETER	COST/	COST/
	EVENT	YEAR
Surface Water Monitoring		
Field Sampling & Analysis - 3 sites sampled quarter	ly; 4/yr.	
Diel Study	\$1,700.0	0 \$ 6,800.00
D.O.		
Conductivity		
Salinity		
Temperature		
pH		
Secchi Disc		
Tot. Suspended Solids		
Field Blank QC		
Field Duplicate QC		
* price includes boat usage if necessary		
Quarterly Analysis – 3 sites sampled semi-annually	r; 2/yr.	
Nitrate-N	\$48.00	\$96.00
Nitrite-N	\$42.00	\$84.00
Ammonia	\$45.00	\$90.00
Tot. Kjeldahl Nitrogen	\$60.00	\$120.00
Organic Nitrogen (calc.)	\$0.00	\$0.00
Tot. Phosphorus	\$54.00	\$108.00
Duplicate QC Sample	\$83.00	\$166.00
	Total per year \$	7,464.00

Thank you for considering Sanders Laboratories, Inc.

Sincerely,

Craig R. Toler

Laboratory Director

=== COVER PAGE ===

SHAKETT CREEK

TO:

FAX: 19417393829

FROM: SANDERS LABS

FAX: 19414846774

TEL: 19414888103

COMMENT: CONFIDENTIAL



FAX COVER SHEET

DATE: 11/7 TIME: 1545 FAX # (941) 738-3829
DATE: 11/2 TIME: 1545 FAX # (941) 738-3829 TO: 56m Decy
COMPANY: ESA
FROM: Will
MESSAGE: Revised Statement and
Feb. quote for Diel Study
twater Quality
COPY TO FOLLOW BY MAIL: YES NO
TOTAL NUMBER OF PAGES INCLUDING COVER SHEET:



Ed Barber & Associates 3639 Cortez Road West Suite 212 Bradenton. Florida 34210 November 2, 1999

Reference: Shakett Creek Turbidity Monitoring Statement

Dates of monitoring;

9/30/99 through 10/30/99

Scope of work;

To provide turbidity monitoring for Dredge operations, field technician and use of boat to facilitate

monitoring. Monitoring to be accomplished every two hours at selected sites during dredge operations.

22 Days @ \$480.00 per day.

Total Cost--\$10560.00

We appreciate the opportunity to serve Ed Barber & Associates and West Coast Inland Navigation District.

Net due 10 days from receipt

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

November 8, 2000

Mr. Ken Kondel, Laboratory Manager AScI Laboratories, Inc. 1009 Tamiami Trail Pt. Charlotte, FL 33953

RE: Shakett Creek Diel Monitoring Report; Invoice No. 1457/2900

Dear Mr. Kondel:

We have discussed with Ray Dennis concerns relayed in October 25th correspondence relating to the referenced report. With an understanding of events which led to data and reporting concerns, we feel as though it is in the best interest of project continuity and all parties involved that reassignment of ongoing monitoring tasks take place.

By notice of this correspondence please note that these services of AScI Laboratories, Inc. shall no longer be necessary. We request that AScI submit and invoice any work and data reports performed to date as soon as possible. Although it is with regret that we must now identify a new contractor to perform these tasks I hope you will appreciate this requirement to maintain active lines of communication and strict quality assurance/quality control on projects such as these, especially where data reporting efforts result from specific permit conditions.

As discussed, the laboratory analyses provided as part of the referenced report appear acceptable. However, we cannot recommend payment for the additional data at this time. While Mr. Dennis has requested an invoice adjustment of \$50.00 we feel as though a discount of \$150.00 is more than reasonable when considering the expenditures of time and effort evaluating the efficacy of this report. In discussions with Mr. Dennis it would appear that certain dissolved oxygen data couldn't be validated due to lack of membrane saturation requirements. Without calibration backup additional *in situ* data could also be questioned. For example, anticipated salinity concentration gradients as established with numbered stations were not evident in these readings, as discussed in the October correspondence.

The participation of AScI Laboratories, Inc. with its monitoring and analytical efforts to date has been appreciated. Please contact me should you wish to discuss this topic further.

Sincerely.

CC:

Samuel A. Johnston, Jr.

Senior Scientist

Chuck Listowski/WCIND Dean Mades, PE/EBA



INVOICE

* INVOICE#:

1457 / 2900

INVOICE DATE:

10/12/00

10/13/00

RECEIVED OCT 2 8 2000

TO: ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

SUITE 106 BRADENTON

FL 34210

NET DUE 30 DAYS

Customer PO#

941-739-3903

Sample Date:

09/27/00

Sample No.

12724 thru 12728

Customer Project: SHAKETT CREEK QUARTERLY

 Analyses
 Quantity
 Price/Sample
 Amount

 Project Contract Price
 5
 \$11.60
 \$762.64

 \$762.64
 \$762.64
 \$762.64

Please make check payable to AScI Corporation and mail to:
First Virginia Bank
For the credit of AScI Corporation
P.O. Box 985, Falls Church, VA 22040-0985

*Please reference the Invoice# with your payment of this Account.

NOTE: Late charges of 1.5% per month may be added to the above amount.

Laboratory Testing & Environmental Services

DOH CERTIFICATION #E85086

Liivironinentai Quanty Laboratory

10/12/2000

ED BARBER & ASSOCIATES 3639 CORTEZ ROAD SUITE 106 BRADENTON FL 34210

Cust. Proj: SHAKETT CREEK QUARTERLY

Attached are the results from 5 sample(s) received by the Environmental Quality Laboratory for analysis. The EQ Lab identification number is 1457 / 2900. Please refer to this number when requesting information regarding these data. Also, this letter should be attached to any data submitted by you to regulatory agencies.

The Laboratory has an approved FDEP Comprehensive Quality Assurance Plan (#870264) which specifies the procedures used in the analyses of the above referenced samples. In addition, the Laboratory is certified by FDOH for the analyses of environmental and drinking water samples (#E85086). This certification number should be referenced when attesting to regulatory agencies regarding the protocols of the analytical procedures used.

The Environmental Quality Laboratory is pleased to have served you and hopes to meet any future laboratory needs you may have.

Sincerely,

Ken Kondel

Laboratory Operations Manager

Laboratory Testing & Environmental Services
DOH CERTIFICATION #E85086

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CHEMISTRY SAMPLE ANALYSIS

Page:

je:

Report Date:

10/17/2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

LABID: 1457 / 2900

Customer Proj: SHAKETT CREEK QUARTERLY

Sample Date/Time: Station/Location:	09/27/00 1 MID	9:12	Sample#:	12724				Analysis		
Analysis			Resu	ılt	Units	Method	MDL	Date	Analyst	*DQ
TOT, NITRATE+NITRITE			0.126		mg/L	EPA 353.2	0.002	10/03/00	HAN	
AMMONIAVAMMONIU	M-NITROGE	N	0.242		mg/i_	EPA 350.1	0.01	10/04/00	HAN	
TOT KJELN			1.85		mg/L	EPA 351.2	0.1	10/06/00	HAN	
ORGANIC NITROGEN	I (CALC)		1.61		mg/L	EPA 350.1, 351.2	0.1	10/06/00	HAN	
TOTAL PHOSPHORU	S		0.501		mg/L	EPA 365.4	0.01	10/06/00	HAN	
TOT, SUSPENDED SOLIDS			6.5		mg/L	EPA 160.2	0.6	10/02/00	TF	
Sample Date/Time: Station/Location:	09/27/00 2 MID	9:17	Sample#:	12725						
Analysis		Rest	ılt	Units	Method	MDL	Analysis Date	Analyst	*DQ	
TOT. NITRATE+NITRITE			0.122		mg/L	EPA 353.2	0.002	10/03/00	HAN	
AMMONIA/AMM ONIU	M-NITROGE	N	0.22		mg/L	EPA 350.1	0.01	10/04/00	HAN	
TOT.KJEL.N			2.21	•	mg/L	EPA 351.2	0.1	10/06/00	HAN	
ORGANIC NITROGEN	(CALC)		1.99		mg/L	EPA 350.1, 351.2	0.1	10/06/00	HAN	
TOTAL PHOSPHORU	S		0,571		mg/L	EPA 365.4	0.01	10/06/00	HAN	
TOT. SUSPENDED S	OLIDS		16.4		mg/L	EPA 160.2	0.6	10/02/00	TF	
Sample Date/Time: Station/Location:	09/27/00 3 TOP	9:43	Sample#:	12726						
Ar	nalysis		Resu	ılt	Units	Method	MDL	Analysis Date	Analyst	*DQ
TOT. NITRATE+NITR	ITE		0.139		mg/L	EPA 353.2	0.002	10/03/00	HAN	
AMMONIA/AMMONIU	M-NITROGE	N	0.114		mg/L	EPA 350.1	0.01	10/04/00	HAN	
TOT.KJEL.N			1.67		mg/L	EPA 351.2	0.1	10/06/00	HAN	
ORGANIC NITROGEN	(CALC)		1.556		mg/L	EPA 350.1, 351.2	0.1	10/03/00	HAN	
TOTAL PHOSPHORU	8		0.457		mg/L	EPA 365.4	0.01	10/06/00	HAN	
TOT SUSPENDED S	OLIDS		3.6		mg/L	EPA 160.2	0.6	10/02/00	TF	

NCTE: Reported results not valid without accompanying signature page.

Laboratory Testing & Environmental Services

DOH CERTIFICATION #E85086



CHEMISTRY SAMPLE ANALYSIS

Page:

Report Date:

10/17/2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

LABID: 1457 / 2900

Customer Proj: SHAKETT CREEK QUARTERLY

Sample Date/Time: Station/Location:	09/27/00 9:44 3 MID	Sample#: 12727					
Analysis		Result	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. NITRATE+NITRI	TE	0.14	mg/L	EPA 353.2	0.002	10/03/00	HAN
AMMONIA/AMMONIU	M-NITROGEN	0.118	mg/L	EPA 350.1	0.01	10/04/00	HAN
TOT.KJELN		1.69	mg/L	EPA 351.2	0.1	10/06/00	HAN
ORGANIC NITROGEN	(CALC)	1.57	mg/L	EPA 350.1, 351.2	0.1	10/06/00	HAN
TOTAL PHOSPHORU	S	0.475	mg/L	EPA 365.4	0.01	10/06/00	HAN
TOT. SUSPENDED S	OLIDS	2.9	mg/L	EPA 160.2	0.6	10/02/00	TF
Sample Date/Time: Station/Location:	09/27/00 9:45 3 BOTTOM	Sample#: 12728					
Analysis		Result	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. NITRATE+NITR	ITE	0.139	mg/L	EPA 353.2	0.002	10/03/00	HAN
AMMONIA/AMMONIU	M-NITROGEN	0.123	mg/L	EPA 350.1	0.01	10/04/00	HAN
TOT.KJEL.N		1.72	mg/L	EPA 351.2	0.1	10/06/00	HAN
ORGANIC NITROGEN	N (CALC)	1.6	mg/L	EPA 350.1, 351.2	0.1	10/06/00	HAN
TOTAL PHOSPHORU	S	0.475	mg/L	EPA 365.4	0.01	10/06/00	HAN
TOT, SUSPENDED S	OLIDS	2.7	mg/L	EPA 160.2	0.6	10/02/00	TF

NOTE: Reported results not valid without accompanying signature page.

Laboratory Testing & Environmental Services

DOH CERTIFICATION #E85086



SHAKETT CREEK Page

		DEPTH (ft)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)		INITY (00)
Date: 09/26/2	2000 Time							
1 1	9:00							
•	5.00	1.	29.61	8.06	7.31	10.65		5.82
		2.5	29.64	9.11	7.34	12.63		7.04
		3.7	29.7	11.63	7.3	16.28		9.34
Date: 09/28/2								
Run/Station 2 1	Time 13:05							
2 1	13.03	1.	31.15	7.61	7.08	9.6		E 40
		2.2	30.11	8.45	7.00 7.1	9.0 12.84		5.18 7.17
				55	,	12.07		
Date: 09/26/2 Run/Station	2000 Time							
2 2	13:11							
		1.	30.19	5.49	7.03	11.35		6.25
Date: 09/26/2 Run/Station	2000 Time							
2 3	13:36							
		1.	30.01	8.14	6.98	0.368	<	0.01
		3.1	29.09	7.55	6.97	0.364	<	0.01
		6.2	28.47	5.05	7.02	0.627		0.06
Date: 09/26/2 Run/Station	2000 Time							
3 1	17.01							
		1.	31.38	15.14	7.66	4.85		2.39
Date: 09/26/2 Run/Station	2000 Time							
3 2	17:06							
		1.	31.49	6.88	7.41	3.78		1.79
Date: 09/26/3 Run/Station	Time							
3 3	17:31							
		1.	29.92	9.18	7.33	0.435	<	0.01
		2.3	29.66	7.48	7.39	0.554		0.02
		4.6	29.49	10.53	7 63	0.567		0.02
Date: 09/26/2 Run/Station 4 1	2000 Time 21:02							
7 1	£ 1,U£	1.	30.18	10.25	7.44	12.02		6.66
		2.2	30.16	10.23	7.51	11.23		6.17
		_ 3.4	30.46-	a 11 26	7,51	10.12= -	_	Q. 17 E. E.O.

Laboratory Testing & Environmental Services 500

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SHAKETT CREEK Page 2

	DEPTH (ft)	H TEMP	D.O. (ppm)	рН	COND (mmho)		INITY (00)
Date: 09/26/ Run/Station	2000 Time						
4 2	21:11						4
	1,	30.18	6.92	7.42	11.34		6.24
Date: 09/26/	2000						
Run/Station	Time						
4 3	21:36						
	1.	29 35	9.78	7.36	0.393	<	0.01
	2.2	29.62	8.23	7.35	0.892		0.20
	4.3	29.42	9.56	7.34	0.653		0.07
Date: 09/26	2000						
Run/Station	Time						
2	9:09						
	1.	29.32	9.11	7.43	5.525		2.78
Date: 09/26/	/2000						
Run/Station	Time						
3	9:26						
	1.	28.49	6.91	7.13	0.386	<	0.01
	2.3	28.37	6.23	7.19	0.397	<	0.01
	5.2	28.33	5.23	7.45	0.52	<	0.01
	0.12						

Laboratory Testing & Environmental Services

DOH CERTIFICATION #E85086



SHAKETT CREEK

Page 3

		EPTH (ft)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (0/00)
Date: 09/27/2 Run/Station 5 1	2000 Time 1:03						
		1. 2. 3.3	30.16 30.54 29.16	10.56 10.14 11.12	7.56 7.5 7.54	10.13 9.56 10.12	5.50 5.16 5.50
Data: 09/27/2 Run/Station 5 3	2000 Time 1:36						
3	1.55	1. 2.2 3.5	29.17 29.62 29.45	7.6 7.54 8.89	7.89 7.47 7.45	0.714 0.567 0.675	0.10 0.02 0.08
Date: 09/27/2 Run/Station	Time						
6 1	5:04	1. 2.2 3.4	29.45 29.3 30.15	10.55 10.12 11.26	7.44 7.45 7.1	13.12 16.15 17.04	7.34 9.25 9.82
Date: 09/27/2	2000 Time						
6 2	5:12	1. 1.	29.06 29.06	5.48 5.48	7.5 7.5	6.25 6.25	3.20 3.20
Date: 09/27/ Run/Station	2000 Time						
6 3	5:40	1. 3.3 4.2	29.6 29.54 29.16	5.93 6.15 5.06	7.52 7.56 7.62	0.892 0.876 0.624	0.20 0.19 0.05
Date: 09/27/ Run/Station 7 1	2000 Time 9:10						
7 1	9.10	1. 2.1 3.2	29.41 29.5 29.47	17.04 24.88 26.18	7.38 7.41 7.55	7.63 9.063 10.46	4.01 4.86 5.70
Date: 09/27/ Run/Station	Time						
7 2	9:16	1.	29.07	12.32	7.48	5.836	2.96

Date: 09/27/2000

Run/Station TimeLaboratory Testing & Environmental Services

7 3 9:42 DOH CERTIFICATION #E85086 0.538 0.01
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FX 941-629-7467 • EMAIL: eqlab@ascicorp.com8 • WEBSEE: www.ascicorp.com



SHAKETT CREEK

Page

	DEPTH (ft)	TEMP (c)	D.O. (ppm)	рΗ	COND (mmho)	SALINITY (0/00)
Date: 09/27/2						
Run/Station	Time					
2	1:11					
	1.	30.14	5.98	7.57	9.45	5.09

DOH CERTIFICATION #E85086

Toll Free (877) 472-2712 IMMENTALL - JULY 1) YUL **Environmental Quality Laboratory** Phone (941) 625-3137 1009 Tamiami Trail Port Charlotte, FL 33953 Fax (941) 629-7467 Sample Information **Analysis Request** page_/_ of_ Barber of Associates Phone: Client: □ new lab FAX: Project: _ Labig. HRS Form? NO2/0.P. Address: □Yes Ø No Sample Description Collection Collection EQL Sample No. Time 9/27/00

comments: \$ 762.64 special invoice

Chain of Custody

Total # of Containers ≈ ____

Transfer	Released by:	Dale	Time	Recgifed by:
1st	Jugge L. Auskut (Sample collector)	9/27/00	9:50	1 Dan Kensh
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4th				Numaly 9.2760
5th				

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING

ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210

Tel: 941-739-3903 Fax: 941-739-3829

October 25, 2000

Mr. Ken Kondel, Laboratory Manager AScI Laboratories, Inc. 1009 Tamiami Trail Pt. Charlotte, FL 33953

RE: Shakett Creek Diel Monitoring Report; Invoice No. 1457/2900

Dear Mr. Kondel:

As discussed with Tracy earlier this week, the referenced monitoring data taken September 26th indicate some rather high dissolved oxygen readings taken throughout the water column at 21:36 when one might expect them to be lower with either increasing depth, relatively high water temperatures or due to the onset of respiration at this time of day. Even the dissolved oxygen measurement of 15.14 mg/L taken at Station No. 1 at 17:01 seems suspect due to the high water temperatures of 31.38 °C, where saturation values in pure water, unencumbered by salinity, have reported saturation values approximately half of this value. The values reported at Stations 1 and 2, which range between 12.23 – 26.18 mg/L are most likely typos since such measurements would not even be indicative of supersaturated conditions. Also, the *in situ* salinity and conductivity readings reported for the most downstream Station No. 3 are consistently lower than the most upstream Station No. 1. Perhaps the numbering has been reversed and we request that these data be revisited for consistency with station assignments. As most field and laboratory SOP's include backup instrumentation and periodic quality control measurements we request that these data be reviewed to confirm field readings in the submitted data report.

In addition to these concerns for interpretation of *in situ* measurements are needs for several report revisions. The initial sampling run appears at the beginning of page 1 and continues at the end of page 2. These sampling data should be reported chronologically to be consistent with other diel measurements. Also, the data reported for Station 3 at 9:42 are illegible due to their placement at the bottom of page 3. Copies of these sections are provided to assist with your review of these sections.

While laboratory analyses provided as part of this report appear acceptable, we cannot recommend payment for the additional data at this time. Review of the field measurements and quality assurance protocol in addition to reformatting of data, should they be found acceptable, will serve to expedite approvals for payment.

Please contact me if you have any questions or require additional information concerning these questions. As you are aware, water quality monitoring efforts for Shakett Creek appear as specific conditions for a permit issued by the Department of Environmental Protection. As such, they are reviewed by many parties

Shakett.doc

and may eventually appear in such databases as STORET or other repositories used by environmental agencies and others. It is therefore imperative that their integrity remains unchallenged when submitted as part of the permit monitoring requirements.

Should you have any questions relating to these observations please do not hesitate to contact me. We wish to resolve these concerns as soon as possible to meet requisite reporting deadlines.

Sincerel

Samuel A. Johnston

Senior Scientist

Enclosures

cc: Chuck Listowski/WCIND (w/enclosures)

Dean Mades, PE/EBA

SHAKETT CREEK

Page

•						- .	
	DEPTH	TEMP	D.O.	рН	COND	SALINITY	
	(ft)	(c)	(ppm)		(mmho)	(0/00)	
	Time						
1 1 9	:00	29.61	9.06	7.31	10.65	5.82	
وسراد بساوره الم	1.	29.64	8.06 9.11	7.31 7.34	12.63	7.04	
CONTINUE	3.7	29.7	11.63	7.3	16.28	9.34	
ON PAGE	, J						
Date: 09/28/200 Run/Station	i0 Time						
2 1 13	3:05						
	1.	31.15	7.61	7.08	9.6	5.18	
	2.2	30.11	8.45	7.1	12.84	7.17	. (initia
D-1	.=					()	ic the
Date: 09/26/200 Run/Station	iu Time					Zć	, E. H
	3:11					· · / '	lower fr.
2 2 10	1.	30.19	5.49	7.03	11.35	6.25	Cie.
						}	
Date: 09/26/200	00					1	
	Time	•				1	
2 3 13	3:36					1	
	1.	30.01	8.14	6.98	0.368	< 0.01	
•	3.1	29 09	7.55	6.97	0.364	< 0.01	
	6.2	28.47	5.05	7.02	0.627	0.06	
Date: 09/26/200				SATU	RATION	7.4 AT	31%
	Time 7.01		.//	- /·•(- -		•	<i>a</i> - <i>C</i>
3 1 1	1.	31.38	15.14	7.66	4,85	2.39	
	**	0.130			.,,,,		
Date: 09/26/200	oe .						
	Time						
3 2 17	7:06						
	1.	31.49	6.88	7.41	3.78	1.79	
Date							
Date: 09/25/200 Run/Station	70 Time						
	7:31						
, i	1.	29.92	9.18	7.33	0.435	< 0.01	
	2.3	29.66	7.48	7.39	0.554	0.02	
	4.6	29.49	10.53	7.63	0.567	0.02	
Date: 09/26/200							
	Time						
4 1 2	1:02	00.10	411.00	-		2.52	
	1.	30.18	10.25	7.44	12.02	6.66	
	2.2 - 3.4	30.16 - 30.46	10.03	7.51 7.6	11.23	6.17 • 5.50	

Laboratory Testing & Environmental Services 5.50 DOH CERTIFICATION #E85086

1009 TAMIAMI TRAIL, PORT CHARLOTTE, FLORIDA 33953 • PH 941-625-3137 • TOLL FREE 1-877-452-2712 FX 941-629-7467 • EMAIL: eqlab@ascicorp.com • WEBSITE: www.ascicorp.com

~ 1 1 4	KETT	\sim	
> H A	XPII.	UKE	

Page 2

		DEPTH (ft)	TEMP (c)	D.O. (ppm)	pH	COND (mmho)		INITY (00)	
Date: 09/26 Run/Station	/2000 Time								
4 2	21:11	1.	30.18	6.92	7.42	11.34		6.24	
Date: 09/26 Run/Station	3/2000 Time								-
4 3	21:36	1. 2.2	29.35 29.62	9.78 8.23	7.36 7.35	0.393 0.892	<	0.01 0.20	
D. I.		4.3	29.42	9.56	7,34	0.653	11.	0.07	P
Date: 09/26 Run/Station 2	3/2000 Time 9:09			Y	1.0.3 H	AFURATI	thi	s tu Appro	ne ot ex 7-b mall
V		1.	29.32	9.11	⊘ 7.43	5.525		2.78	at rape
Date: 09/26 Run/Station 3	3/2000 Time 9:28								
0		1.	28.49	6.91	7,13	0.386	<	0.01	
١.		2.3	28.37	6.23	7.19	0.397	<	0.01	
. A _		5.2	28.33	5.23	7.45	0.52	<	0.91	
RE	PORT	51	MPLE	RUN	No. I	TOGEAT	HER		

SHAKETT CREEK

Page

3

	~						
	ח	EPTH	TEMP	D.O.	рН	COND	SALINITY
		(ft)	(c)	(ppm)	F	(mmho)	(0/00)
		(11)	(0)	(PP111)		((0,00)
_							
Date: 09/27/							
Run/Station	Time						
5 1	1:03						
		1.	30.16	10.56	7.56	10.13	5.50
		2.	30.54	10.14	7.5	9.56	5.16
		3.3	29.16	11.12	7.54	10.12	5.50
Date: 09/27/	2000						
Run/Station	Time						
5 3	1:36						
3 3	1.30	4	00.47	7.6	7.89	0.714	0.10
		1.	29.17	7.6			
		2.2	29.62	7.54	7.47	0.567	0.02
		3.5	29.45	8.89	7.45	0.675	0.08
Date: 09/27/	2000						
Run/Station	Time		•				•
6 1	5:04						
		1.	29.45	10.55	7.44	13.12	7.34
		2.2	29.3	10.12	7.45	16.15	9.25
		3.4	30.15	11.26	7.1	17.04	9.82
		3.4	30.10	,5			
Dote: co.o.							
Date: 09/27/							
Run/Station	Time				•		
6 2	5:12						0.00
		1.	29.06	5.48	7.5	6.25	3.20
		1.	29.06	5.48	7.5	6.25	3.20
1							
Date: 09/27	/2000						
Run/Station	Time						
6 3	5:40						
		1.	29.6	5.93	7.52	0.892	0.20
		3.3	29.54	6.15	7.56	0.876	0.19
		4.2	29,16	5.06	7.62	0.624	0.05
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Date: 09/27	IODOO			-	 ,	7	
Run/Station	Time				TUPOS	•	
7 1	9:10			/_	•	•	
<i>t</i> 1	9.10	4	٦, 4, ٢	47.04	7.00	7.62	4.01
		1.	29.41	17.04	7.38	7.63	
		2.1	29 5	24.68	7.41	9.063	4.86
		3.2	29.47	26.13	7.55	10.46	5.70
			l	1			
Date: 09/27	/2000		;	}			
Run/Station	Time			} {			
7 2	9:16		,	1			
	-	1.	29.07	12.32	7.48	5.836	2.96
				k			

Date:

09/27/2000

Run/Station

Tim Laboratory Testing & Environmental Services

7 3 9:42 DOH CERTIFICATION #E85086 0.538 0.01
1 28.35 7.56 7.56 0.538 0.01
1009 TAMIAMI TRAIL, PORT CHARLOTTE, FLORIDA 33953 7. PH 941-6263137 • TOLLIFREE 1-877-452-2712
FX 941-629-7467 • EMAN: eqlab@ascicorp.coms • WEBSEE: www.ascicorp.com

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ENTRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

3639 Cortez Road West, Suite 211 Bradenton, Florida 34210

Tel: 941-739-3903 Fax: 941-739-3829

August 10, 2000

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from AScI / Environmental Quality Laboratory on July 26 and 27, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. The survey was performed subsequent to the completion of all dredging on March 3, 2000.

Monitoring locations associated with the diel survey are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of monthly diel in-situ field measurements
- Analytical report for total suspended solids samples

Please call me or Sam Johnston if there is a need to discuss this matter.

Sincerely,

Dean M. Mades, P.E.

Associate

cc: Bob Stetler / FDEP

Chuck Listowski / WCIND

Theresa Connor / Sarasota County Storm Water

Bob Brady / AScI (letter only)

Larry Olsen / EBA

Sam Johnston / EBA



RECEIVED AUG 1 0 2000

08/07/2000

ED BARBER & ASSOCIATES 3639 CORTEZ ROAD SUITE 106 BRADENTON FL 34210

Cust. Proj: SHAKETT CREEK WATER QUALITY

Attached are the results from 15° sample(s) received by the Environmental Quality Laboratory for analysis. The EQ Lab identification number is 1457 / 2572. Please refer to this number when requesting information regarding these data. Also, this letter should be attached to any data submitted by you to regulatory agencies.

The Laboratory has an approved FDEP Comprehensive Quality Assurance Plan (#870264) which specifies the procedures used in the analyses of the above referenced samples. In addition, the Laboratory is certified by FDOH for the analyses of environmental and drinking water samples (#E85086). This certification number should be referenced when attesting to regulatory agencies regarding the protocols of the analytical procedures used.

The Environmental Quality Laboratory is pleased to have served you and hopes to meet any future laboratory needs you may have.

Sincerely,

Ken Kondel

Laberatory Operations Manager



Environmental Quality Laboratory BECEIVED AUG 1 0 2000

CHEMISTRY SAMPLE ANALYSIS

Page:

Report Date:

08/07/2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

LABID: 1457 / 2572

Customer Proj: SHAKETT CREEK WATER QUALITY

									· .
Sample Date/Time: Station/Location:	07/27/00 STA-1	11:05 MID	Sample#:	11438					
An	alysis		Resi	ılt	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT, SUSPENDED S	OLIDS		16.9		mg/L	EPA 160.2	0.6	08/01/00	TF
Sample Date/Time: Station/Location:	07/27/00 STA-2-	11:15 MID	Sample#:	11439					
Analysis			Resi	uit	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. SUSPENDED S	OLIDS		16.1		mg/L	EPA 160.2	0.6	08/01/00	TF
Sample Date/Time: Station/Location:	07/27/00 STA-3-		Sample#:	11440				Analysis	
Ar	alysis		Resi	ilt	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT, SUSPENDED S	OLIDS		10.7		mg/L	EPA 160.2	0.6	08/01/00	TF
Sample Date/Time: Station/Location:	07/27/00 STA-3-	11:33 MID	Sample#:	11441					AND THE PERSON OF THE PERSON O
Ar	alysis		Resi	ılt.	Units	Method	MDL	Analysis Dat e	Analyst *DQ
TOT. SUSPENDED S	OLIDS		9.4	· -	mg/L	EPA 160.2	0.6	08/01/00	TF
Sample Date/Time: Station/Location:		11:36 BOTTOM	Sample#:	11442					
Ar	alysis		Resu	ılt	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. SUSPENDED S	OLIDS		11.3		mg/L	EPA 160.2	0.6	08/01/00	TF

NOTE: Reported results not valid without accompanying signature page.



SHAKET FREIRONMENTAL Quality Laboratory

Page

	DEPTH (ft)	TEMP (c)	D.O. (ppm)	рΗ	COND (mmho)	SALINITY (o/oo)
Date: 07/26/2000 Run/Station Tim						
1 1 11:00						.=
	1. 2.	30.45	3.72	7.57	28.57	17.50
	3.	30,55 30,53	3.6 3.53	7.53 7.5	34.31 37.83	21.48
	3.	30.55	3.53	7.5	37.63	23.96
Date: 07/26/2000 Run/Station Tim	ne					
1 2 11:10)					
	1.	29.91	4.02	7.5	29.7	18.27
Date: 07/26/2000 Run/Station Tim	ne					
1 3 11:42						
	1.	31.27	3.93	7.39	25.99	15.74
	2.5	31.18	3.95	7.41	27.6	16.83
	5.5	30.97	4.17	7.37	33.95	21.23
Date: 07/26/2000 Run/Station Tim						
2 1 15:00		22.24	2.62	7 47	22.22	04.04
	1.	33.31	3.53	7.47	33.68	21.04
Date: 07/26/2000 Run/Station Tim			,			
2 2 15:11		20.50	. 70			
	1.	33.59	3.78	7.61	27.59	16.83
Date: 07/26/2000 Run/Station Tim 2 3 15:35						
	1.	32.56	4.07	7.43	19.25	11.25
	2.1	31.83	- 4.07	7.46	19.81	11.62
	3.1	31.74	^ 3.98	7.37	24.45	14.70
Date: 07/26/2000 Run/Station Tim						
3 1 19:05		22.00	r.00	7.00	00.5	00.5
	1.	32.92	5.02	7.62	33.5	20.91
Date: 07/26/2000 Run/Station Tim 3 2 19:12						
	1.	3 1.23	4.84	7.64	31.85	19.76
Date: 07/26/2000						, -

Laboratory oTesting & Environmental Services 0.42
2.1 31.99 4.63 7.66 24.84
1009 TAMIAMI TRAIL, PORT CHARLOTTE, FLORIDA 33953 7.68H 941-625-3137 • TOLLE BEE 1-877-452-2712 FX 941-629-7467 • EMAIL: eqlab@ascicorp.com • WEBSITE: www.ascicorp.com

Run/Station

45 5



	DEPTH (ft)	TEMP (c)	D.O. (ppm)	рH	ÇOND (mmho)	SALINITY (0/00)
Date: 07/26/200 Run/Station	00 Time					
4 1 23	3:05					
	1.	32.6	4.64	7.6	34.22	21.42
	2.	32.15	4.82	7.6	30.1	18.55
	3.	32_56	4.27	7.62	35.6	22.39
	00 Time 3:10 1.	33.52		7.6	32.84	20.45
Date: 07/26/200 Run/Station	0 Time					
4 3 23	3:38					
	1.	32.45		7.4	35.1	22.03
	2.	33.22		7.35	35.08	22.02
	4.	32.41		7.41	33.45	20.88



SHAKET ERREITORMENTAL Quality Laboratory

Page :

	DEPTH (ft)	TEMP (c)	D.O. (ppm)	рΗ	COND (mmho)	SALINITY (o/oo)
	0 Time 01					
	1. 2.1	33.4 32.46	3.98 4.5	7.56 7.42	34 .89 35 .8	21.89 22.53
	Time					
5 2 3:	1.	33.53	4.05	7.5	35.1	22.03
	Fime					
5 3 3:	35 1.	33.03	3.98	7.41	35.12	22.05
	2.5	33.67	4.02	7.4	33.47	20.89
	4.5	32.45	4.82	7.37	32.1	19.93
Date 07/27/200	0 Time					
6 1 7:	05					
	1,	32.48	4.05	7.55	31.94	19.82
	2.1 3.5	32.59 31.56	4.67 3.24	7.48 7.56	29.48 29.5	18.12 18.13
Date: 07/27/200		••			20.0	10.10
	Time					
6 2 7:	12 1.	32.95	4.1	7.52	34.24	21.43
	1.	32.33	7.1	7.52	34.24	21.45
	Time					
6 3 7:	41 1,	22.54	~4.68	7.25	22.44	20.07
	2.5	33.54 32.58	4.00 4.1	7.35 7.41	33.44 34.53	20.87 21.63
	4.2	33.46	4.06	7.32	34.12	21.34
Date: 07/27/200 Run/Station	0 Time					
	:03					
	1.	33.45	4.05	7.45	35.2	22.10
	2.	32.47	3.9	7.43	34.72	21.77
Date: 07/27/200 Run/Station	0 Time					
	:15					
	1,	33.24	4.35	7.56	34.2	21.40

Date: 07/27/

Run/Station Time Laboratory Testing & Environmental Services

DEPTH (ft)	TËMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (o/oo)
2.5	33.67	4.21	7.39	31.86	19.77
4.1	33.45	4.19	7.58	32.4	20.14

Environmental Quality Laboratory
1009 Tamiami Trail Port Charlotte, FL 33953



Toll Free (877) 472-2712 Phone (941) 625-3137 Fax (941) 629-7467

	e Information						<u>An</u>	aly	<u>sis</u>	Re	que	<u>est</u>			p	age_	c	of
Client:	& Barber + Associates onew	Phone:]					
Project:	akoH Creek Whiter Quality	FAX:		<u> </u>			1											-
Labid:	J	HRS Form?																. sec
Address:		□Yes	M No	Preserved	Minerals	Nutrients	a Ø	_ ≅	era	cBOD/TSS								of Containers
		□ 162	片No	Pres	Mine	15 E	NO2/O.P.	Metals	Bacteria	<u>g</u>		_				ļ		ğ #
EQL Sample No.	Sample Description	Collection Date	Collection Time															
11438	STAI-MIN	7/27/00	11:05							X								1
(1429	STA2-Mid	7/27/00	11:15							X								1_
114:10	STA3-TUP	7/21/00	11:31							X								1.
11441	STA3-Mid	7/27/10	11:33	<u> </u>				<u> </u>		×			<u> </u>					1
11415	STA 3- Bottom	7/27/01	11:360	<u> </u>	[<u> </u>	<u> </u>			×								
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Transfer	Released by:	Date	Time	Rece	ived by:													
1st	Trains Frictest (Sample collector)	7/27/00	13:00	<u> </u>	9/0	بعار				<u> </u>								
2nd	· · ·		ļ	<u> </u>	<u> </u>													
3rd				<u> </u>								_						— ₹
4th		1		i						,							_	•

5th

ED BARBER & ASSOCIATES

ENTRONMENTAL CONSULTING

ENTRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

August 3, 2000

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from AscI Environmental Quality Laboratory on June 27 and 28, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids, nitrate + nitrite nitrogen, ammonium nitrogen, Kjeldahl nitrogen and total phosphorus.
- Chain-of-custody record

Please call me or Sam Johnston if there is a need to discuss this matter.

Sincerely,

Dean M. Mades, P.E.

Associate

cc:

Chuck Listowski / WCIND Bob Brady / EQL (letter only)

Bob Stetler / FDEP Sam Johnston / EBA Larry Olsen, Ph.D.

Theresa Connor - later after mail out



SHAKET Environmental Quality Laboratory

Page

			DEPTH (ft)	1 EMP (c)	D.O. (ppm)	рH	COND (mmho)	SALINITY (0/00)
Date	0. 00.07							
Date Run	⊭. 06/27 /Station	72000 Time						
1	1	11:00						
			1.	28.31	3.89	7.48	44.27	28.59
			3.5	28.05	4.25	7.5	46.37	30.12
			4.503	28.24	3.84	7.5	46.04	29.88
Date	e: 06/27	72000						
Run	/Station	Time						
1	2	11:10						
			1.	28.21	4.41	7.46	43.05	27.71
Date	00.2.	/2000						
Run 1	/Station 3	Time						
,	3	11:33	1,	26.02	3.84	7.20	44.05	
			2.5	29.83 29.62	3.97	7.39 7.4	41,99 41,93	26.94 26.90
		1.00	5.	29.09	4.64	7.45	42.49	27.30
•	• • • •	t ever Magaid		1				21.00
Date		/2000						
Run	/Station	Time						*
2	1	15:05		e e e e e e e e e e e e e e e e e e e	-	•		
			1.	28.59	4.14	7.48	42.41	27.24
			2.5	28.57	4.2	7.51	42.81	27.53
			4.8	28.55	4 66	7.52	45.99	29.84
Date	e: 06/27	/2000						
Run	/Station	Time						
2	2	15:11						
			1.	28.09	4.57	7.44	38 74	24.61
Date	∋ : 06/27	/2000)				
Run	/Station	Time						
2	3	15:38						
			1,	30.58	3.91	7.41	38.31	24.31
			2.2	30.23	4.06	7.41	41.39	26.51
		÷	4.5	29.03	4.8	7.47	42.6	27.38
Date	a. 00.007	/2000					4	
	/Station	72000 Time						
3	1	19:30	•					
-			1.	25.58	4.15	7.45	43.47	28.01
	•	وا در در	2.5	28.59	4.28	7.47	43 47	28.01
Just .	ryen vi	1 111	5.5	28.58	4.7	7.51	43.52	28.05
والمرادية والمرادية	•							
Date								
	/Station	Time		•				
3	2	19:35		07.00		-		
			1	27.39	4.56	7.48	41.27	26.42

Laboratory Testing & Environmental Services



SHAKETI CREEK Onmental Quality Laboratory

	DEPTH	TEMP	D.O.	ρН	COND	SALINITY
	(ft)	(c)	(ppm)		(mmho)	(0/00)
Date: 06/2	7/2000					
Run/Station	Time					
3 3	19:51					
	1,	29.53	4.06	7.43	20.21	24.22
					38.21	24.23
	2.6	29.4	4.09	7.42	40.77	26.06
	5.3	28.7	4.77	7.45	42.81	27.53
	7/2000					
Run/Station	· Time					
4 1	23:11					
	1.	28.59	4.88	7.49	45.98	29.83
	2.2	28.52	4.93	7.48	45.56	29.53
Date: 06/2	7/2000					
Run/Station	Time					
4 2	23:24					
	1.	28.46	4.62	7.45	44.22	28.55
Data: acm	T/0000					
	7/2000					
Run/Station	Time					
3	23:42					
	1.	28.25	4.24	7.5	44.12	28.48
	2.2	28.43	4.78	7.42	43.52	28.05

4.56

7.43

43.81

28.26

4.3

28.7

Page

2



SHAKETE INGINO IN SHAKETE IN SHAK

Page

		DEPTH (ft)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (o/oo)
Date: 06/28/	2000						
Date: 06/28/ Run/Station	ZUUU Time						
5 1	3:31						
J 1	3.31	4	00.40				
		1.	28.46	4.54	7.5	44.25	28.58
		2.4	28.53	4.53	7.49	44.12	28.48
	:	3.5	28.22	4.22	7.5	43.23	27.84
Date: 06/28/ Run/Station	2000 Time						
5 2	3:42						
5 2	J.72	1.	27.43	4.09	7.47	42.05	27.05
		1.	27,43	4.05	7.47	43.25	27.85
Date: 06/28/ Run/Station	2000 Time						
5 3	3:56						
-		1.	27.34	4.63	7.41	43.55	28.07
		2.3	27.46	4.24	7.42	43.13	27.76
		4.5	27.24	4.34	7.38	. 44.22	28.55
					,,,,,		20.00
Date: 06/28/	2000						
Run/Station	Time						
6 1	7:30						
		1.	27.61	4.02	7.5	46.58	30.27
		2.1	27.63	4.14	7.52	46.53	30.23
		3.2	27.59	4.49	7.56	46.76	30.40
							C C. 10
Date: 06/28/ Run/Station	2000 Time						
6 2	7:37						
		1.	26.7	4.39	7.45	44,47	28.74
							20., ,
Date: 06/28/ Run/Station	2000 Time		•				
6 3	7:53						
		1,	28.08	3.82	7.39	38.23	24 25
		2.6	28.01	3.97	7.38	41.71	26.74
		5.4	27.96	4.62	7.42	42.65	27.42
						લ	
	Time					4	
7 1	11:00						
		1.	27.63	3.94	7.35	44.49	28.75
		2.1	27.75	4.04	7.39	43.86	28.29
Date: 06/28/2							
Run/Station 7 2	Time 11:05						
		1.	27.3	4.32	7.37	48.34	31.56

Laboratory Testing & Environmental Services



SHAKETT CREEK Quality Laboratory

			DEPTH (ft)	TEMP (c)	D.O. (ppm)	pΗ	COND (mmho)	SALINITY (o/oo)
Date: Run/S	06/2 Station	28/2000 Time		4				
7	3	11:25						
			1.	27.74	3.97	7.3	40.65	25.98
			2.3	27.71	4.22	7.33	42.72	27.47
			5.6	27.67	4.76	7.39	43.02	27.68

Page



07/14/2000

ED BARBER & ASSOCIATES 3639 CORTEZ ROAD SUITE 106 BRADENTON FL 34210

Cust. Proj: ED BARBER & ASSOCIATES

RECEIVED JUL 2 1 3000

Attached are the results from sample(s) received by the Environmental Quality Laboratory for analysis. The EQ Lab identification number is 1457 / 1814. Please refer to this number when requesting information regarding these data. Also, this letter should be attached to any data submitted by you to regulatory agencies.

The Laboratory has an approved FDEP Comprehensive Quality Assurance Plan (#870264) which specifies the procedures used in the analyses of the above referenced samples. In addition, the Laboratory is certified by FDOH for the analyses of environmental and drinking water samples (#E85086). This certification number should be referenced when attesting to regulatory agencies regarding the protocols of the analytical procedures used.

The Environmental Quality Laboratory is pleased to have served you and hopes to meet any future laboratory needs you may have.

Sincerely,

Laboratory Operations Manager



Environmental Quality Laboratory CHEMISTRY SAMPLE ANALYSIS

Page:

Report Date:

07/14/2000

Egogiated in 8 Times

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

LABID: 1457 / 1814

Customer Proj: SHAKETT CREEK

Sample Date/Time: 06/28/00 11:0' Station/Location: 1-MID	1 Sample#: 8550)				
Analysis	Result	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. NITRATE+NITRITE	0.014	mg/L	EPA 353.2	0.002	07/06/00	HAN
AMMONIA/AMMONIUM-NITROGEN	0.122	mg/L	EPA 350.1	0.01	07/06/00	HAN
TQT.KJEL.N	0.687	mg/L	EPA 351.2	0.1	07/07/00	HAN
ORGANIC NITROGEN (CALC)	0.565	mg/L	EPA 350.1, 351.2	0.1	07/07/00	НВ
TOTAL PHOSPHORUS	0.188	mg/L	EPA 365.4	0.01	07/07/00	HAN
TOT. SUSPENDED SOLIDS	17.9	mg/L	EPA 160.2	0.6	07/01/00	TF
Sample Date/Time: 06/28/00 11:06	Sample#: 8551				—	
Station/Location: 2-MID					A t	
Analysis	Result	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. NITRATE+NITRITE	0.015	mg/L	EPA 353.2	0.002	07/06/00	HAN
AMMONIA/AMMONIUM-NITROGEN	0.121	mg/L	EPA 350.1	0.01	07/06/00	HAN
TOT.KJEL.N	0.768	mg/L	EPA 351.2	0.1	07/07/00	HAN
ORGANIC NITROGEN (CALC)	0.647	mg/L	EPA 350.1, 351.2	0.1	07/07/00	нв
TOTAL PHOSPHORUS	0.2	mg/L	EPA 365.4	0.01	07/07/00	HAN
TOT. SUSPENDED SOLIDS	18.8	mg/L	EPA 160.2	0.6	07/01/00	TF
Sample Date/Time: 06/28/00 11:26	Sample#: 8552	· 	*** *** · ·- • ***** * · · ·			
Station/Location: 3-TOP Analysis	' Result	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. NITRATE+NITRITE	0.007	mg/L	EPA 353.2	0.002	07/06/00	HAN
AMMONIA/AMMONIUM-N!TROGEN	0.125	rng/L	EPA 350.1	0.01	07/06/00	HAN
TOT.KJEL.N	0.359	mg/L	EPA 351.2	0.1	07/07/00	HA.N
ORGANIC NITROGEN (CALC)	0.734	mg/L	EPA 350.1, 351.2	0.1	07/07/00	HB
TOTAL PHOSPHORUS	0.307	mg/L	EPA 365.4	0.01	07/07/00	HAN
TOT. SUSPENDED SOLIDS	18.9	mg/L	EPA 160.2	0.6	07/01/00	TF

NOTE: Reported results not valid without accompanying signature page.



Environmental Quality Laboratory

CHEMISTRY SAMPLE ANALYSIS

Page:

RECEIVED WILL S 1 222.

Report Date: 07/14/2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

LABID: 1457 / 1814

Customer Proj: SHAKETT CREEK

Sample Date/Time: Station/Location:	06/28/00 11:28 3-MID	Sample#: 8553					
Ar	alysis	Result	Units	Method	MDL	Analysis Date	Analyst *DQ
TOT. NITRATE+NITR	ITÈ	0.009	mg/L	EPA 353.2	0.002	07/06/00	HAN
AMMONIAVAMMONIU	M-NITROGEN	0.102	mg/L	EPA 350.1	0.01	07/06/00	HAN
TQT.KJEL.N		0.841	mg/L	EPA 351.2	0.1	07/07/00	HAN
ORGANIC NITROGE	N (CALC)	0.739	mg/L	EPA 350.1, 351.2	0.1	07/07/00	нв
TOTAL PHOSPHORU	IS	0.311	mg/L	EPA 365.4	0.01	07/07/00	HAN
TOT. SUSPENDED S	OLIDS	19.9	mg/L	EPA 160.2	60.2 0.6		TF
Sample Date/Time:	06/28/00 11:30	Sample#: 8554					•
Station/Location:							
	3-BOTTOM				•	Analysis	
Ar	3-BOTTOM nalysis	Result	Units	Method	MDL	Analysis Date	Aпalyst *DQ
Ar	alysis	Result 0.01	Units mg/L	Method EPA 353.2	MDL 0.002	-	Aπalyst *DQ HAN
	nalysis ITE					Date	•
TOT. NITRATE+NITR	nalysis ITE	0.01	mg/L	EPA 353.2	0.002	Date 07/06/00	HAN
TOT. NITRATE+NITR AMMONIA/AMMONIU	nalysis ITE IM-NITROGEN	0.01 0.113	mg/L mg/L	EPA 353.2 EPA 350.1	0.002 0.01 0.1	Date 07/06/00 07/06/00	HAN HAN
TOT. NITRATE+NITR AMMONIA/AMMONIU TOT.KJEL.N	nalysis ITE M-NITROGEN N (CALC)	0.01 0.113 0.765	mg/L mg/L mg/L	EPA 353.2 EPA 350.1 EPA 351.2	0.002 0.01 0.1	Date 07/06/00 07/06/00 07/07/00	HAN HAN HAN

NOTE: Reported results not valid without accompanying signature page.

Environmental Quality Laboratory 1009 Tarniami Trail Port Charlotte, FL 33953



Ioli Free (§77) 472-2712 Phone (941) 625-3137 Fax (941) 629-7467

Samip	le Information				*.		Ar	naly	sis	Re	que	es <u>t</u>			pa	је	_ of_	
Client: Project:	Ed Barber of Associates onew Shaket Creek Quaterly	Phone:		ab	55											T	1	
Labid:	00/1457/1814	HRS Form?		19	1								1				. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
Address:	ω((131)1019	□Yes	A No	Preserved	Minerals	Nutrients	NO2O.P.	Metals	Bacteria	восится	,	·					# of Contain	زز
EQL Sample No	Sample Description	Collection Date	Collection Time			1	A !				जन्म ५ <u>)</u>		Age .					
8550	1-Mid	6/28	11:01	V	0	2.7		1								\bot	3	
853 853 853	2-Mid	10128	11:06	V		\prod	_					4					7	
8552	3.700	6/28	11:26	V		Ш	<u> </u>				<u> </u>					4	7	<u>.</u>
0555	1 3-mid	6/28	1128	1	$oxed{oxed}$	Ц_	<u> </u>	 				<u> </u>				\dashv		
8554	3-Bottom	6128	1130	V	1	14	<u> </u>									 -	1	4
		ļ		<u> </u>		 	<u> </u>	 	<u> </u>		 					-	- -	-
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		 			ļ				}	}	 				 -	\dashv		-
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Comments:	That last special involve	Ch	nain of (Cus	stoc	dy		<u>l</u>	 .	!	<u>. </u>	l!			Total # of	Contai	iners +	_((
Transfer	Released by:	Date	Time	Rece	ived by:													
1st	Macyl Thuckut (Sample collector)	6-29			1/10	24												
2nd	3,																	
3rd																		
4th																		
5th															- '-			

ED BARBER & ASSOCIATES

ENTROMENTAL CONSULTING

ENTROMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

June 5, 2000

Ms. Rose Poynor, Habitat Restoration Section
Florida Department of Environmental Protection, Southwest District
3804 Coconut Palm Drive
Tampa, FL 33619

Re: File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from AScI / Environmental Quality Laboratory on May 22 and 23, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. The survey was performed subsequent to the completion of all dredging on March 3, 2000.

Monitoring locations associated with the diel survey are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of monthly diel in-situ field measurements
- Analytical report for total suspended solids samples

Please call me or Sam Johnston if there is a need to discuss this matter.

Sincerely,

Dean M. Mades, P.E.

Associate

cc: Bob Stetler / FDEP

Chuck Listowski / WCIND
Theresa Connor / Sarasota County Storm Water
Bob Brady / AScI (letter only)
Larry Olsen / EBA
Sam Johnston / EBA

05/31/2000

ED BARBER & ASSOCIATES 3639 CORTEZ ROAD SUITE 106 BRADENTON FL 34210

Cust. Proj: ED BARBER & ASSOCIATES

Attached are the results from 5 sample(s) received by the Environmental Quality Laboratory for analysis. The EQ Lab identification number is 1457 / 1570. Please refer to this number when requesting information regarding these data. Also, this letter should be attached to any data submitted by you to regulatory agencies.

The Laboratory has an approved FDEP Comprehensive Quality Assurance Plan (#87264) which specifies the procedures used in the analyses of the above referenced samples. In addition, the Laboratory is certified by FDOH for the analyses of environmental and drinking water samples (#E85086 & 85116) respectively. These certification numbers should be referenced when attesting to regulatory agencies regarding the protocols of the analytical procedures used.

The Environmental Quality Laboratory is plesed to have served you and hopes to meet any future laboratory needs you may have.

Sincerely,

Laboratory Operations Manager

Report Date:

05/31/2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

LABID:

/ 1570

Customer Proj:

Sample Date/Time:

05/23/00

12:08

Sample#:

7262

Station/Location:

1-M

Analysis

Analysis

Analysis

Result

Units

Method

MDL

Analysis Date

Analyst *DQ

TOT, SUSPENDED SOLIDS Sample Date/Time:

05/23/00

12:12

Sample#:

11.6

Result

7263

EPA 160.2

06 05/26/00

1457

AB

Station/Location:

2-M

Method

Analysis

Date

Analyst *DQ

TOT, SUSPENDED SOLIDS

13.6

mg/L

Units

Units

mg/L

EPA 160.2

0.6 "

MDL

05/26/00

AΒ

Sample Date/Time: Station/Location:

05/23/00

12:27

Sample#:

7264

Method

Analyst *DQ

TOT SUSPENDED SOLIDS

12.7

Result

Sample Date/Time:

05/23/00

12:28

Sample#:

mg/L

EPA 160.2

0.6

Station/Location:

3-M

7265

MDL

05/26/00

Analysis

Date

AB

Analysis

Result

Analysis

13.3

MDL

Date

Analyst *DQ

TOT, SUSPENDED SOLIDS

05/23/00

Analysis

12:29

Sample#:

EPA 160.2

Method

0.6

05/26/00

Sample Date/Time: Station/Location:

3-B

Result

14.8

7266

Units

Units

AB

Anaiyst *DQ

TOT, SUSPENDED SOLIDS

mg/L

mg/L

Method EPA 160.2

0.6

MDi.

Date 05/26/00

Analysis

AΒ

NOTE: * See attached Data Qualifier Codes Reported results not valid without accompanying signature page.

Laboratory Testing & Environmental Services

SHAKETT CREEK

· ·					
	DEPTH TEM (c)	IP D.O. (ppm)	рН	COND (mmho)	SALINITY (a/oo)
	**				•
Date: 05/22/2000					
Run/Station Time					
1 1 12:00		•		40.00	
	1. 28.37 2.1 28.38		7.36	48.98	31.91
	3.2 28.68	6.65 7. 3 2	7.35 7.34	49.04 48.82	31.80 31.84
	3.2 20.00	1.32	7.34	40.02	31.04
Date: 05/22/2000 Run/Station Time					
1 2 . 12:10					
	1. 28.52	6.04	7.38	48.61	32.22
Date: 05/22/2000 Run/Station Time					
1 3 12:40					
1 3 12.40	1. 28.43	5.81	7.74	47.83	31.04
	2.5 28.36		7.7 4 7.77	47.9	31.10
	5.5 28.27	6.56	7.34	48.04	31.35
			7.2.		
Date: 05/22/2000					
Run/Station Time					
2 1 16:05					
	1 29.44	"	7.28	49.19	32.12
.	2.2 29.44	6.47	7.27	48.58	31.65
Date: 05/22/2000					
Run/Station Time					
2 2 16:12					
	1. 29.1	6.33	7.3	49.04	31,81
_					
Date: 05/22/2000					
Run/Station Time 2 3 16:38					
2 3 16:38	4 20.77			40.05	04.47
	1. 29.77 2.5 29.66	6.35 6.54	7.28	48.05 48.22	31.17
	5.2 29.49	6.82	7.28 7.31	48.18	31.30 31.19
•	0.2 20.10	0.02	7.31	70.10	31.13
Date: 05/22/2000 Run/Station Time					
3 1 20:05					
	1. 29.5	6.32	7.39	48.91	31.80
	2.5 29.49		7.38	49.05	31.91
	5.5 29.51	6.78	7.37	49.2	32.00
Date: 05/22/2000 Run/Station Time					
3 2 20:14					
	1. 27.33	5.89	7.38	50.47	32.51
	,, 27.00	5.05	7.50	JU11	J4.J1
Date: 05/22/2000					
Run/Station Time					
3 3 20:32					
	1. 30.38		7.37	46.92	30.33
	2.2 30.33	6.45	7.37	47.07	30.45

2

SHAKETT CREEK

DEPTH TEMP D.O. pH COND SALINITY (mmho) (o/oo)
4.2 29.46 7.11 7.38 47.51 30.73

,

SHAKETT CREEK

,						.*		70
						•	Page	305
		HAKETT CRE	EEV				. ugc	, 7m.
	3	MAKE IT CRE	iek					r EIVED
		DEPTH	ТЕМР (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (o/oo)	DECENTED JUN 05 20°
Data		×.						
Run/Station	23/2000 Time							
4 1	0:02	1.	29.14	6.44	7.43	48.59	31.59	
Run/Station	23/2000 Time							
4 2	0:11	1.	28.03	5.54	7.4	49.21	32.05	
Date: 05/2	23/2000 Time							
4 3	0:33							
		1. 2.	30.2 30.09	6.17 6.38	7.35 7.36	45.88 46.81	29.50 30.23	
		3.	30.04	7.17	7.38	47.25	30.64	
Date: 05/2	23/2000		•					
Run/Station	Time		•				•	
5 1	4:02	1.	27.44	C 40	7.40	40.22	24.45	
		2.1	27.32	6.42 6.72	7.42 7.44	49.33 49.3	31.45 31.44	
		3.2	27.89	6.38	7.43	48.16	31.56	
Run/Station	23/2000 Time							
5 2	4:10	1.	26.56	6.68	7.46	49.46	31.55	
Date: 05/2 Run/Station	23/2000 Time							
5 3	4:34							
		1. 2.2	28.23 28.2	6.91 6.94	7.38 7.39	47.49 47.75	31.52 31.28	
		4.2	28.15	6.93	7.38	47.56	31.72	
Date: 05/2 Run/Station	23/2000 Time							
6 1	8:06							
		1. 2.4	27.85 27.84	5.27 5.41	7.17 7.17	49.02 49.16	31.95 32.04	
		5.4	27.78	5.9	7.18	49.16	32.05	
Date: 05/2 Run/Station 6 2	23/2000 Time 8:13							
	•	1.	26.31	5.73	7.12	49.52	32.21	
Date: 05/2 Run/Station 6 3	23/2000 Time 8:33							
		1.	28.76	5.4	7.13	45.49	29.37	
		2.5	28.86	5.68	7.16	48.14	31.26	
		5.3	28.25	6.93	7.18	48.84	` 31.71	

SHAKETT CREEK

	DEPTH	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (0/00)
Date: 05/23/2000						
Run/Station Time						
7 1 12:07						
	1.	28.81	4.7	7.27	49.08	31.97
	2.5	28.84	4.93	7.25	49.28	32.11
	5.6	28.93	5.51	7.24	49.45	32.19
Date: 05/23/2000 Run/Station Time 7 2 12:11						
	1.	28.56	4.67	7.25	49.51	31.82
Date: 05/23/2000 Run/Station Time 7 3 12:26						
	1,	29.13	4,28	7.21	48.21	31.22
	2.5	28.83	4.3	7.2	48.81	31.69
	5.6	28.72	4.6	7.19	48.81	31.80

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

May 12, 2000

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from AScI / Environmental Quality Laboratory on April 27 and 28, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. The survey was performed subsequent to the completion of all dredging on March 3, 2000.

Monitoring locations associated with the diel survey are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

The following information is transmitted herewith:

- List of monthly diel field measurements made on April 27th and 28th
- Analytical report for total suspended solids samples
- · Chain-of-custody record

Please call me or Sam Johnston if there is a need to discuss this matter.

Sincerely,

Dean M. Mades, P.E.

Associate

cc: Bob Stetler / FDEP

Chuck Listowski / WCIND
Theresa Connor / Sarasota County Storm Water

Bob Brady / AScI (letter only) Larry Olsen / EBA

Sam Johnston / EBA



05/04/2000

ED BARBER & ASSOCIATES 3639 CORTEZ ROAD SUITE 106 BRADENTON FL 34210

Cust. Proj: ED BARBER & ASSOCIATES

Attached are the results from 5 sample(s) received by the Environmental Quality Laboratory for analysis. The EQ Lab identification number is 1457 / 1306. Please refer to this number when requesting information regarding these data. Also, this letter should be attached to any data submitted by you to regulatory agencies.

The Laboratory has an approved FDEP Comprehensive Quality Assurance Plan (#87264) which specifies the procedures used in the analyses of the above referenced samples. In addition, the Laboratory is certified by FDOH for the analyses of environmental and drinking water samples (#E85086 & 85116) respectively. These certification numbers should be referenced when attesting to regulatory agencies regarding the protocols of the analytical procedures used.

The Environmental Quality Laboratory is plesed to have served you and hopes to meet any future laboratory needs you may have.

Sincerely,

Ken Kondel

Laboratory Operations Manager



SHAKE ENVIRONMENTAL Quality Laboratory

1 Page

		DEPTH (ft)	TEMP (c)	D.O. (ppm)	ρН	COND (mmho)	SALINITY (o/oo)
Date: 04/27/	2000						
Run/Station	Time						
i 1	11.10						
		1.	24.37	4.83	6.	45.17	29.24
		2.7	24.2	4 48	5.81	45.69	29.62
		3.7	24.15	5 42	5.49	46.23	30.02
Date: 04/27/	2000						
Run/Station	ຳໂກາຍ						
1 2	11:15						
		1.	24.32	4.66	6.53	44.79	28.97
Date: 04/27/ Run/Station	2000 Time		•				
1 3	11:25				•		
		1,	25.18	4,69	6.99	41.78	26.79
		2.2	24.64	4.19	6.92	43.76	28.22
		4.6	24.79	5.99	5.9	44.14	28.50
Date: 04/27/3	Time						
2 1	3:10 6	M					
	•	1.	26.25	5.33	7.22	46.5€	30.10
		1.5	26.12	5.57	7.16	30.14	18.58
Date: 04/27/2 Run/Station	2000 Time	•					
2 2	3:15 p	~					
	,	1.	26.35	7.79	7.59	45.58	29.76
Date: 04/27/5	2000 Time						
2 3	3:35 📭	^					
	į	1.	27 66	3.32	7.52	43,14	27.77
		2.	27 19	3.13	7.47	44,1;	28.69
		3.8	25.77	3.07	7.46	-1.6	28.83
Date: 04/27/2 Run/Station	2000 Time						
3 1	19:05						
		1	26.37	5.90	7.55	47.09	30.64
		2.3	23.62	1.16	7.72	47.18	30 71
		4.5	26.38	6.48	7.83	47,34	30.83
Date: 04/27/2 Run/Station	000 Time						
3 2	19:10						
		1.	26.37	5.01	7.47	46 62	30.30

Laboratory Testing & Environmental Services



2 Page

		EPTH (ft)	TEMP (c)	D.O. (ppm)	рH		ALINITY (o/oo)
Date: 04/27/							
Run/Station	Time						
3 3	19:20						
		1.	26.6	5.78	7.33	43.76	28.22
		2.3	26.42	5.74	7.33	44.	28.39
		4.6	25.02	5.42	7.33	44.86	29.02
Date: 04/27/	0000						
Date: 04/27/ Run/Station	2000 Time						
4 1	23:00						
		1.	25.51	5.03	7.49	45.87	29.75
		2.1	25.69	5.08	7.55	46.13	29.94
		3.5	25.83	5.1	7.62	46.66	30.33
Date: 04/27/	2000						
Run/Station	Time						
4 2	23:05						
	20.03	1.	23.57	4.68	7.33	46.5	30.21
Date: 04/27/2	2000						
Run/Station	Time						
4 3	23:26						
		1.	27.22	5.05	7.4	43.3	27.89
		2.	26.69	5.58	7.39	43.92	28.34
		4.1	26.05	6.71	7.38	44.78	28.96
	,						



SHAKE FOREE ON THE CONTROL OF SHAKE FORE ON THE CONTROL ON THE CONTROL OF SHAKE FORE ON THE CONTROL ON THE CONTROL O

3 Page

		DEPTH (ft)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (o/oo)
Date: 04/28/ Run/Station 5 1	/2000 Time 3:02						
J 1	3.02	4	24.22	6.04	7.55	10.00	
		1. 2.	24.23 24.45	6.24 6.21	7.55	46.23	30.02
		2. 4.1	24.45 24.56	6.36	7.52 7.6	46.52 46.67	30.23
		4.1	24.55	0.30	7.0	46.67	30.34
Date. 04/28/ Run/Station	2000 Time						
5 2	3:11						
		1.	23.22	5.23	7.44	46.52	30.23
Date. 04/28/ Run/Station	Time						
5 3	3:20	4	25.24	0.40			
		1.	25.34	6.19	7.2	43.1	. 27.74
		2.	25.42	5.96	7.19	. 43.24	27.84
		4.1	25.23	6.24	7.2	44.62	28.84
Date: 04/28/ Run/Station 6 1	2000 Time 7:15						
		1.	23.97	5.76	7.23	46.28	30.05
		2.3	24.01	6.12	7.26	46.49	30.21
		4.6	24.05	7.21	7.32	46.59	30.28
Date: 04/28/							
Run/Station	Time						
6 2	7:20						
		1.	21.92	5.72	7.15	45.69	29.62
Date: 04/28/ Run/Station	Time						
6 3	7:35		0.5.40				
		1	25.49	5.39	7.15	42,82	27.54
		2.2		5.3	7.16	44.38	28.67
		4.2	25.57	5.78	7.19	44.93	29.07
	2000 Time 11:06						
		1.	24.35	5 51	7.35	47.05	30.61
		2.	24.32	5.65	7.36	47.1	30.65
		2.8	24.64	6.16	7.39	47.18	30.71
Date: 04/28/ Run/Station	2000 Time						

Laboratory Testing & Environmental Services 30.10

11:14



4 Page

			DEPTH (ft)	' ТЕМР (c)	D.O. (ppm)	pΗ	COND (mmho)	SALINITY (0/00)
Date: Run/s	04/2 Station	28/2000 Time						
7	3	11:30						
			1.	25.39	4.79	7.28	44.34	28.64
			2.3	25.45	4.7	7.29	44.64	28.86
			4.7	25.41	5.28	7.34	44.84	29.00



Environmental Quality Laboratory

CHEMISTRY SAMPLE ANALYSIS

Page:

Report Date:

05/04/2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

LABID:

/1306

Customer Proj: SHAKETT CREEK DIEL/STUDY SAMPLING

Sample Date/Time:

04/28/00

Analysis

Analysis

Analysis

Analysis

Analysis

11:06

Station/Location:

1-MIDDLE

Units

Method

EPA 160.2

MDL

Analyst *DQ

TOT, SUSPENDED SOLIDS

14.7

mg/L 6357

0.6

05/01/00

Sample Date/Time:

04/28/00

11:15

Sample#:

18.8

Result

Analysis

Date

Analysis

Date

TF

Station/Location:

2-MIDDLE

Result

Units

Method

Analyst *DQ

TOT, SUSPENDED SOLIDS Sample Date/Time:

04/28/00

11:30 Sample#: 6358

mg/L

EPA 160.2

0.6

MDL.

05/01/00

TF

Station/Location:

3-TOP

Result

Method

Analysis MDL Date

Analyst *DQ

TOT, SUSPENDED SOLIDS

22.8

mg/L

EPA 160.2

3.6

Sample Date/Time:

04/28/00 11:32 Sample#:

6359

Units

Units

Units

05/01/00

TF

Station/Location:

3-MIDDLE

Result

Method

MDL.

Analysis Analyst *DQ Date

TOT. SUSPENDED SOLIDS

11:35

29.

ma/L

EPA 160.2

TF

Sample Date/Time:

04/28/00

Sample#:

6360

0.6

05/01/00

Station/Location:

3-BOTTOM

Result

20.6

Analysis MOL

Analyst *DQ

TOT, SUSPENDED SOLIDS

mg/L

Method EPA 160.2

0.6

Date

05/01/00

TF

NOTE: * See attached Data Qualifier Codes Reported results not valid without accompanying signature page.

Laboratory Testing & Environmental Services

Environmental Quality Laboratory 1009 Tamiami Trail Port Charlotte, FL 33953



Toll Free (877) 472-2712 Phone (941) 625-3137 Fax (941) 629-7467

Sample	<u>e Informa</u>	tion		-				An	aly	sis	Re	que	est_			pa	age_	0	of	
Client:	MACKET	CREE	C □ new	Phone:																
Project:				FAX:													•			
Labid:			1306	HRS Form?																191
Address:			2	□Yes	n Na	Preserved	Minerals	Nutrients	NOZO.P.	<u>\$</u>	Bacteria	cBOD/[SS								# of Container
			5	165	□ No	P.	Mire	호	2 0	Metals	Bac	Og:								* of (
EQL Sample No.		Sample	Description	Collection Date	Collection Time															
6256				4.28	11:06							+								
6357			1 - 1/4		11:14			-				1								
1,258			7.7		11:30				<u> </u>			1								1
10359			12M		11:32									<u></u>						1
1,36C		 		V	11.35										<u> </u>	<u></u>				1
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,1st	Trawit.	Tivi	Ku + (Sample collector)	4-28	3.00	,	XW	سعا	_											
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3rd																				
4th								•								:				
⁻¹² 5th		· .																		

BANCHENTAL MARCHINET SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

April 28, 2000

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from Environmental Quality Laboratory on March 27 and 28, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the waterquality monitoring report submitted to the District on November 9, 1999. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

Monitoring was temporarily suspended between 7:00 p.m. on the 27th and 3:00 a.m. on the 28th due to heavy rain and lightning. Prior to the survey the weather was unseasonably warm and very dry.

The following information is transmitted herewith:

- List of field measurements made during diel survey
- Analytical report for analyses of total suspended solids, nitrate + nitrite nitrogen, ammonium nitrogen, Kieldahl nitrogen and total phosphorus.
- Chain-of-custody record

Please call me or Sam Johnston if there is a need to discuss this matter.

Sincerely

Associate

cc:

Chuck Listowski / WCIND

Larry Olsen, Ph.D.

Bob Brady / EQL (letter only)

Bob Stetler / FDEP Sam Johnston / EBA

		(Ar				
	DEPTH	TEMP	D.O.	рН	COND	SALINITY
	(91) 54	(c)	(ppm)	•	(mmho)	(0/00)
	44					5 \$
Date: 03/27/200	00					II.
	Time					
1 1 12	:10					
	1.	23.87	6.96	7.61	47.63	31.97
	3.1	23.93	7.16	7.6	47.02	31.33
	6.3	23.9	7.58	7.6	48.09	31.38
Date: 03/27/200	00					
	Γime					
1 2 12	:15				1	
	1.	24.34	6.26	7.62	47.47	30.87
Date: 03/27/200	20					
	DU Time					
	:00					
. •	1.	24.59	6.07	7.4	45.43	29.37
	2.7	24.47	6.08	7.34	45.58	29.50
	5.9	24.4	6.26	7.24	45.68	29.60
Detail common						
Date: 03/27/200 Run/Station	υυ Time					
	:00					
2 , ,,,	1.	24.53	6.86	7.73	47.69	31.03
	3.	24.58	7.03	7.7	48.28	31.49
	6.	24.53	6.88	7.6	48.3	31.52
Date: 03/27/200						
	Time .					
2 2 13	:05 1.	24.8 5	5.96	7.74	47.65	30.99
	1.	24.65	5.90	7.74	47.05	30.99
Date: 03/27/200	00					
Run/Station	Time					
2 3 15	:20					
	1.	24.83	6.4	7.67	45.71	29.60
	2.7	24.8	6.42	7.68	45.92	29.76
	5.4	24.66	6.45	7.72	45.95	29.80
Date: 03/27/200	00					
	Гime					
3 1 19	:00					
	1.	24.37	7.91	7.57	47.42	30.84
	2.5	24.39	7.99	7.53	47.62	31.03
	5.8	24.42	8.	7.46	47.74	31.11
Date: 03/27/200	00					
	rime					
	:05					
	1.	24.44	6.67	7.57	47.33	30.76

SHAKETT CREEK

							Page	EIVED APR 17
							• •	APR 1
		SHAKETT CRE	EK				- C'	EIVED
		,	\sim				REC	1 -
		DEPTH	TEMP	D.O.	pН	COND	SALINITY	
		(p1) \$\times	(c)	(ppm)	·	(mmho)	(0/00)	
Date: 03/2 Run/Station	8/2000 Time							1
5 1	3:00							
		1.	24.38	7.1	7.5	44.23	28.56	
		2.1 3.2	24.67 24.4	6.71 6.88	7.22 7.23	44.61 44.07	29.01 29.05	
		J.L	&T.T	0.00	1.23	14.07	25.00	
Run/Station	8/2000 Time							
5 2	3:12		05.0			45.04	00.00	
		1.	25.6	6.92	7.22	45.21	30.02	
Date: 03/2 Run/Station	8/2000 Time							
5 3	3:35							
		1.	23.89	6.71	7.33	46.12	29.53	
		2. 4.	23.98 23.9	6.23 6.55	7.57 7.55	45.22 45.51	29.37 30.10	
		₹.	23,5	0.00	7.55	45.51	30.10	
Run/Station	8/2000 Time							
6 1	7:00	4	24.2	7.2	7.07	44.0	29.89	
		1. 2.2	2 4 .2 25.1	7.14	7.27 7.28	44.2 44.12	30.10	
		3.5	24.56	6.77	7.22	43.07	29.12	
Date: 03/2	8/2000							
Run/Station	Time							
6 2	7:11							
		1.	24.63	6.55	7.52	45.48	29.40	
Date: 03/2 Run/Station	8/2000 Time							
6 3	7:41							
		1.	23.87	7.34	6.61	44.91	29.67	
		2.2 3.5	23.98 24.51	7.51 7.2	6.55	44.93 45.24	29.12 30.20	
Date: 03/2	8/2000	3.5	24.51	1.2	6.24	45.24	30.20	
Run/Station	Time							
7 1	11:42	1.	23.84	7.49	7 20	46.23	30.05	
		1. 2.	23.47	7.49 7.35	7.32 7.29	43.38	30.09	
		4.	23.41	7.19	7.28	46.47	30.22	
Date: 02/2	9/2000							
Date: 03/2 Run/Station	8/2000 Time				-			
7 2	11:51					1 ,		
		1.	24.2	5.65	7.33	46.18	29.86	
Date: 03/2	8/2000							
Run/Station	Time		1			at .		
7 3	11:30							
		1.	24.69	7.22	6.81	43.07	27.29	

SHAKETT CREEK

RECTIVED APR 17 2000

Page

Library	?) ·				Ro.
DEPHI (M)	TEMP (c)	D.O. (ppm)	рH	COND (mmho)	SALINITY (o/oo)
2. 3.	24.59 24.66	6.72 5.92	6.59 6.34	43.7 45.32	28.10 29.34



04/12/2000

ED BARBER & ASSOCIATES 3639 CORTEZ ROAD SUITE 106 **BRADENTON FL 34210**

Cust. Proj: ED BARBER & ASSOCIATES

RECEIVED APR 17 2000

Attached are the results from 5 sample(s) received by the Environmental Quality Laboratory for analysis. The EQ Lab identification number is 1457 / 939. Please refer to this number when requesting information regarding these data. Also, this letter should be attached to any data submitted by you to regulatory agencies.

The Laboratory has an approved FDEP Comprehensive Quality Assurance Plan (#87264) which specifies the procedures used in the analyses of the above referenced samples. In addition, the Laboratory is certified by FDOH for the analyses of environmental and drinking water samples (#E85086 & 85116) respectively. These certification numbers should be referenced when attesting to regulatory agencies regarding the protocols of the analytical procedures used.

The Environmental Quality Laboratory is plesed to have served you and hopes to meet any future laboratory needs you may have.

Sincerely,

Laboratory Operations Manager

RECEIVED APR 17 2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Page:

Report Date:

Sample#: 4338

04/12/2000

Customer Project: SHAKETT CREEK DIEL STUDY/SAMPLING

Labid:

/ 939 1457

Station#/Location:

1-MIDDLE

Sample Date/Time:

03/28/00

11:46

	Analysis										
Analysis	Result	Units	Date	Analyst	MDL_	Method	Code				
•											
TOT. SUSPENDED SOLIDS	17.	mg/L	03/31/00	AS	0.6	EPA 160.2					
TOT. NITRATE+NITRITE	0.005	mg/L	03/31/00	H8	0.002	EPA 353.2					
MMONIA/AMMONIUM-NITROGEN	0.039	mg/L	03/31/00	HB	0.01	EPA 350.1					
rot.kjel.n	0,557	mg/L	03/31/00	HAN	0.1	EPA 351.2					
FOTAL PHOSPHORUS	0.089	mg/L	03/31/00	HAN	0.01	EPA 365.4					

NOTE: * See Attached Sheet for Data Qualifier Codes Reported results not valid without accompanying signature page.

RECEIVED NPR 1 7 2000

CHEMISTRY SAMPLE ANALYSIS

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Page:

Report Date:

04/12/2000

Labid:

1457 / 939

Sample#: 4339

, 50

Station#/Location:

2-MIDDLE

Customer Project: SHAKETT CREEK DIEL STUDY/SAMPLING

Sample Date/Time:

03/28/00

11:51

	Analysis										
Analysis	Result	Units	Date	Analyst	MDL ·	Method	Code				
TOT. SUSPENDED SOLIDS	25.1	mg/L	03/31/00	AS	0.6	EPA 160.2					
TOT. NITRATE+NITRITE	0.008	mg/L	03/31/00	НВ	0.002	EPA 353.2					
AMMONIA/AMMONIUM-NITROGEN	0.05	mg/L	03/31/00	HB	0.01	EPA 350.1					
TOT.KJEL.N	0.663	mg/L	03/31/00	HAN	0.1	EPA 351.2					
TOTAL PHOSPHORUS	0.137	mg/L	03/31/00	HAN	0.01	EPA 365.4					

NOTE: * See Attached Sheet for Data Qualifier Codes Reported results not valid without accompanying signature page.

RECEIVED APR 17 2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Page:

Report Date:

04/12/2000

1457 / 939

Labid:

Sample#: 4340

Station#/Location:

3-TOP

Customer Project: SHAKETT CREEK DIEL STUDY/SAMPLING

Sample Date/Time:

03/28/00

11:35

			Analysis	•			•DQ
Analysis	Result	Units	Date	Analyst	MDL	Method	Code
•	1						
OT. SUSPENDED SOLIDS	12.6	mg/L	03/31/00	AS	0.6	EPA 160.2	
OT. NITRATE+NITRITE	0.005	mg/L	03/31/00	нв	0.002	EPA 353.2	
MMONIA/AMMONIUM-NITROGEN	0.041	mg/L	03/31/00	HB	0.01	EPA 350.1	
OT.KJEL.N	0.903	mg/L	03/31/00	HAN	0.1	EPA 351.2	
OTAL PHOSPHORUS	0.173	mg/L	03/31/00	HAN	0.01	EPA 365.4	

NOTE: * See Attached Sheet for Data Qualifier Codes .

Reported results not valid without accompanying signature page.



RECEIVED APR 17 2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Page:

5

Report Date: 04/12/2000

Customer Project: SHAKETT CREEK DIEL STUDY/SAMPLING

Labid:

Sample#: 4342

1457 / 939

Station#/Location:

3-BOTTOM

Sample Date/Time:

03/28/00

11:37

· · · · · · · · · · · · · · · · · · ·			Analysis				*DQ
Analysis	Result	Units	Date	Analyst	MDL	Method	Code
OT. SUSPENDED SOLIDS	21.7	mg/L	03/31/00	AS	0.6	EPA 160.2	
OT. NITRATE+NITRITE	0:006	mg/L	03/31/00	НВ	0.002	EPA 353.2	
MMONIA/AMMONIUM-NITROGEN	0.044	mg/L	03/31/00	HB	0.01	EPA 350.1	
OT.KJEL.N	0.882	mg/L	03/31/00	HAN	0.1	EPA 351.2	
OTAL PHOSPHORUS	0.172	mg/L	03/31/00	HAN	0.01	EPA 365.4	

NOTE: * See Attached Sheet for Data Qualifier Codes Reported results not valid without accompanying signature page.

RECEIVED APR 17 2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Page:

Report Date:

Sample#: 4341

04/12/2000

Customer Project: SHAKETT CREEK DIEL STUDY/SAMPLING

Labid:

1457

/ 939

Station#/Location:

3-MIDDLE

Sample Date/Time:

03/28/00

11:36

			Analysis				*DQ
Analysis	Result	Units	Date	Analyst	MDL	Method	Code
· · · · · · · · · · · · · · · · · · ·						 	
OT. SUSPENDED SOLIDS	28.6	mg/L	03/31/00	AS	0.6	EPA 160.2	
OT. NITRATE+NITRITE	0.017	mg/L	03/31/00	НВ	0.002	EPA 353.2	
MMONIA/AMMONIUM-NITROGEN	0.068	mg/L	03/31/00	HB	0.01	EPA 350.1	
OT.KJEL.N	1.05	mg/L	03/31/00	HAN	0.1	EPA 351.2	
OTAL PHOSPHORUS	0.193	mg/L	03/31/00	HAN	0.01	EPA 365.4	

NOTE: * See Attached Sheet for Data Qualifier Codes Reported results not valid without accompanying signature page.

MARCH, JUDE, SEPT, DEC Environmental Quality Laboratory 1009 Tamiami Trail Port Charlotte, FL 33953



Toll Free (877) 472-2712. Phone (941) 625-3137 Fax (941) 629-7467

	e Information						An	aly	sis	Re	que	st			pa	age_	L 01	
	d Barber & Associates onew	Phone:		ab			, ,											
Project:	hatet creek Quaterly	FAX:	_	10	125	ļ		ļ	ļ					,		, ,	- 1	Į.
Labid:	00/1457/939	HRS Form?		.5		,,				12								pinerie
Address:		□Yes	≯ No	Preserved in	Minerals	Nutrients	NO200.P.	Metals	Bacteria	cBOD/TSS								# of Containers
EQL Sample No.	Sample Description	Collection Date	Collection Time															
4338	I-Mid	3/28/00	11:46	V	Qt	1/2/												a
4339	2-Mid-	3/28/00	11:51	V	Ш													2 2 1 1
4340	3.700	3/28/00	11:35	V					<u> </u>								1	2
4341	3 - Mid	3/28/00	11:36	1	Ш													\mathcal{I}
4342	3-BOTOM	2/28/00	11:37	V	V	K												7
									<u> </u>									
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Transfer	Released by:	Date	Time	Rece	Apg by:	0	· · · · ·	· / · _	\leq	1	10	A	· ·					
1st	Tray & Frechet (Sample collector)	3/28/00	12:do		Ш	ЩÜ	W	10	<u> </u>	\mathcal{W}_{\emptyset}	MAN	\mathcal{M}						
2nd	0 -				1,1						·							
3rd				<u></u>											·			
415																		
5th				<u></u>	·-·-		<u></u>							<u> </u>]

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

March 21, 2000

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from Environmental Quality Laboratory on February 28 and 29, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the waterquality monitoring report submitted to the District on November 9th. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the oyster mitigation area where dredge material from the trestle and cove areas was placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

Notes on previously submitted turbidity monitoring reports describe climatic conditions during the 28th and 29th as sunny with moderate winds generally out of the north.

The following information is transmitted herewith:

- List of monthly diel field measurements made on February 28th and 29th
- Analytical report for total suspended solids samples
- Chain-of-custody record

Please call me or Sam Johnston if there is a need to discuss this matter.

Sincerely,

Dean M. Mades, P.E.

Associate

cc:

Chuck Listowski / WCIND Bob Brady / EQL (letter only) Bob Stetler / FDEP Sam Johnston / EBA

Larry Olsen, Ph.D.



March 7, 2000

RECEIVED MAR 1 3 2000

Mr. Dean Mades Ed Barber & Associates 3639 Cortez Road Suite 106 Bradenton, FL 34210

Re: Shakett Creek Diel Study

Dear Dean:

As we discussed by phone, March 8, 2000, the TSS water quality samples were neglected to be collected at the same time as the diel study. These samples were collected on March 2, 2000, two days after the ending of the diel study. We are sorry for any inconvenience this may have caused.

Sincerely,

Tracy L. Frickert

Tray I Thicket

Biologist

* Note -- There was no rain or unusual climate conditions during the interim period 3/1-2/00.

Dentilledes
3/21/00



RECEIVED MAR 1 3 2000

Environmental Quality Laboratory

		DEPTH SW	(~w				
		DEPTH SY	TEMP	D.O.	pН	COND	SALINITY
		(24)	(c)	(ppm)		(mmho)	(0/00)
		Ex		., ,		, ,	,
•		1					
Date:	02/28/2000						
Run/Station							
1 1	11:00						
		1.	23.02	5.78	8.94	38.96	24.82
		2.5	23.01	5.71	8.92	39.17	25.00
		5.3	22.94	4.58	8.81	40.15	25.67
Date:	02/28/2000						
Run/Station	Time						
1 2	11:10						
		1.	22.93	6.35	8.47	39.46	25.11
				0.00	0.47	55.10	20.11
Date:	02/28/2000						
Run/Station	Time					•	
1 3	12:00						
_		1.	23.97	6.28	8.98	35.11	22.05
		2.2	23.48	5.76	8.92	36.74	23.27
		4.2	23.12				
		4.2	23.12	5.52	8.88	37.16	23.55
Date:	02/28/2000						
Run/Station							
2 1	3:00						
2 1	3.00				:		
		1.	23.56	3.81	7.76	27.2	16.70
		2.1	23.48	2.23	7.78	27.18	16.65
		3.4	24.51	3.19	7.81	30.29	18.68
Date:	02/28/2000		t				
Run/Station							
2 2	3:15						
		1.	24.52	6.68	7.72	43.41	27.91
	1						
Date:	02/28/2000						
Run/Station	Time						
2 3	3:45						
		1.	24.79	6.77	7.75	39.76	25.23
		2.1	23.55	5.95	7.71	41.1	26.33
		4.3	23.14		7.64		26.46
			•				
Date:	02/28/2000						
Run/Station	Time						
3 1	19:00						
		1.	24.07	6.95	8.48	43.23	27.87
		2.5	24.37	6.69	8.53	43.88	28.31
		5.	24.33	6.77	8.63	44.19	28.51
		 -		W. 1 T	0.00		20.01
Date:	02/28/2000						
Run/Station							
3 2	19:05						
- -		1.	23.74	6.65	8.34	43.68	28.09
		••	LU.17	0.03	0.54	40.0 0	20.09
Date:	02/28/2000						
	Time						

Run/Station

3 19:35 Laboratory Testing & Environmental Services
7.84 8.18 38.33 24.37
1009 TAMIAMI TRAIL, PORT CHARLOTTE, FLORIDA 33953 • PH 941-625-3137 • TOLL FREE 1-877-452-2712



Environmental Quality Laboratory RECEIVED MAR 1 3 2000

	DEPTH	TEMP (c)	D.O. (ppm)	рH	COND (mmho)	SALINITY (o/oo)
	2.1	24.87	7.3	8.17	39.35	25.07
	4.5	23.39	6.23	8.17	40.98	26.23
Date: 02/28/2000						
Run/Station Time				•		
4 1 23:00						
	1.	23.72	6.84	7.76	41.18	26.38
Date: 02/28/2000 Run/Station Time 4 2 23:05						
20.00	1.	21.19	6.99	7.38	41.46	26.51
Date: 02/28/2000 Run/Station Time 4 3 23:35						
	1.	24.89	6.59	6.95	37.95	24.05
	2.2	22.48	6.28	6.94	38.84	24.57
	3.7	23.74	6.12	6:98	40.44	25.85



Environmental Quality Laboratory TRCEIVED MAR 1 3 2000

		(5)	₹ [™])				
		DEPTHE	TEMP	D.O.	ρH	COND	SALINITY
		(124)	(c)	(ppm)	P	, (mmho)	(0/00)
		%	(-/	(PP)		. ()	(0/00)
Date		•					
Date:	02/29/2000						
Run/Stati							
5 1	3:00						
		1.	23.14	6.77	8.62	41.05	25.32
		2.2	23.62	6.71	8.77	41.17	25.52
		4.4	23.34	6.99	8.63	40.2	24.07
Date:	02/29/2000						
Run/Stati							
5 2	3:10						
		1,	23.16	6.89	8.53	42.44	24.42
Date:	02/29/2000		1				
Run/Stati	on Time						
5 3	3:40						
		1,	23.22	6.88	8.32	41.61	25.10
		2.2	23.1	6.75	8.24	40.2	24.92
		4.4	23.12	6.68	8.22	40.12	25.01
			20.12	0.00	0.22	40.12	20.01
Date:	02/29/2000						
Run/Statio							
6 1	7:00				:		
• ,	7.00	1.	23.22	C C4	•	44.05	25.42
				6.51	8.67	41.05	25.10
		2.1	23.15	6.67	8.66	41.15	25.17
		3.8	23.01	6.7	8.67	41.24	2 5.60
Date:	00/00/0000						
Run/Statio	02/29/2000						
6 2	7:10						
	-	1.	23.6	6.67	8.47	42.24	24.89
Datas	*						
Date:	02/29/2000						
Run/Statio							
6 3	7:40						
		1.	24.05	6.88	8.06	41.89	25.04
		2.2	23.89	7.04	8.05	40.56	24.89
		4.4	24.1	7.11	7.89	41.98	24.91
	02/29/2000						
Run/Statio							
7 1	11:00						
		1.	21.95	5.89	7.21	43.96	28.40
		2.2	21.88	5.75	7.42	44.08	28.50
		3.7	21.86	5.45	7.67	44.12	28.51
	02/29/2000						
Run/Statio							
7 2	11:05						
		1.	21.79	7.37	6.4	41.32	26.45
Date:	02/29/2000						
Run/Static	n Time						

Run/Station

7 3 11:30 Laboratory Testing & Environmental Services
1. 23.16 5.34 6.51 37.01 23.54
1009 TAMIAMI TRAIL, PORT CHARLOTTE, FLORIDA 33953 • PH 941-625-3137 • TOLL FREE 1-877-452-2712



Environmental Quality Laboratory RECEIVED MAR 1 3 2009

DEPTH (M)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (0/00)
2.2	22.85	5.09	6.51	39.49	25.20
4.2	22.6	5.14	6.48	39.88	25.49



03/06/2000

ED BARBER & ASSOCIATES 3639 CORTEZ ROAD SUITE 106 BRADENTON FL 34210 RECFIVED MAR 1 3 2000

Cust. Proj: ED BARBER & ASSOCIATES

Attached are the results from 5 sample(s) received by the Environmental Quality Laboratory for analysis. The EQ Lab identification number is 1457 / 692. Please refer to this number when requesting information regarding these data. Also, this letter should be attached to any data submitted by you to regulatory agencies.

The Laboratory has an approved FDEP Comprehensive Quality Assurance Plan (#87264) which specifies the procedures used in the analyses of the above referenced samples. In addition, the Laboratory is certified by FDOH for the analyses of environmental and drinking water samples (#E85086 & 85116) respectively. These certification numbers should be referenced when attesting to regulatory agencies regarding the protocols of the analytical procedures used.

The Environmental Quality Laboratory is plesed to have served you and hopes to meet any future laboratory needs you may have.

Sincerely,

Laboratory Operations Manager



Environmental Quality Laboratory RECEIVED MAR 1 3 2000

CHEMISTRY SAMPLE ANALYSIS

Page:

Report Date:

03/06/2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

LABID: 1457

/ 692

Customer Proj: SHAKETT CREEK DIEL STUDY/SAMPLING

Sample Date/Time:

TOT. SUSPENDED SOLIDS

03/02/00 13:45

Sample#: 3414

Station/Location:

1-MID

A	nalysis		Resu	lt	Units	Method	MDL	Analysis Date	Analyst	*DC
TOT. SUSPENDED S	OLIDS		24.		mg/L	EPA 160.2	0.6	03/04/00	AS	
Sample Date/Time: Station/Location:	03/02/00 2-MID	13:50	Sample#:	3415						
Aı	nalysis		Resu	lt	Units	Method	MDL	Analysis Date	Analyst	•DQ
TOT. SUSPENDED S	OLIDS		23.4		mg/L	EPA 160.2	0.6	03/04/00	AS	
Sample Date/Time: Station/Location:	03/02/00 3-TOP	13:55	Sample#:	3416						
Aı	nalysis		Resu	lt	Units	Method	MDL	Analysis Date	Analyst	*DQ
TOT. SUSPENDED S	OLIDS		23.		mg/L	EPA 160.2	0.6	03/04/00	AS	
Sample Date/Time: Station/Location:	03/02/00 3-MID	14:00	Sample#:	3417						
A	nalysis		Resu	tt	Units	Method	MDL	Analysis Date	Analyst	*DQ
TOT. SUSPENDED S	OLIDS		29.		mg/L	EPA 160.2	0.6	03/04/00	AS	
Sample Date/Time: Station/Location:	03/02/00 3-BOTT	14:05 OM	Sample#:	3418	J					
A	nalysis		Resu	it .	Units	Method	MDL	Analysis Date	Analyst	•DQ

NOTE: * See attached Data Qualifier Codes Reported results not valid without accompanying signature page.

21.4

mg/L

EPA 160.2

0.6

03/04/00

AS

Environmental Quality Laboratory, Inc. 1009 Tamiami Trail Port Charlotte, FL 33953

4th 5th



Phone (941) 625-3137 Fax (941) 629-7467

1009 Tamiami Trail Port Charlotte, FL 33953	•		•	4								F	⁻ax (9	941) 6	,29-7	7467
Sample Information						An	aly	sis	Re	que	st		р	age_	10	f_
Project: Stylet Charles & ASSOC - Diew Project: Stylet Charles & ASSOC - Diew Sampling Labid: 65/1457	Phone: FAX: HRS Form? □Yes	□ No	Preserved	Minerals ()	Nutrients	NO2/0.P.	Metats	Bacteria	eBOD/TSS							of Containers
EQL Sample Description 344 - Mid 345 2 Mid 347 3 TOD 347 3 ROHOM	Collection Date	Collection Time	24			2	W W	Ba	88							/ / / /
Transfer Released by: Transfer Transfer Released by: Transfer (Sample collector)	Date	nain of	- N	Vog vis)	whe			nd e	7 N X			Total #	of Conta	iners =	5
1st (Sample collector) 2nd 3rd	3/2/00	3:15	1	1/m	r. V.V	114	<u>y</u>	<u></u>	KW C	(<u>,,, , , , , , , , , , , , , , , , , , </u>	<u>-</u> _			· · · · · · · · · · · · · · · · · · ·		

RECEIVED MAR 1 3 2000

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

February 18, 2000

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001', Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from Environmental Quality Laboratory on January 25 and 26, 2000 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9th. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the mitigation area where dredge material is being placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

Notes on previously submitted turbidity monitoring reports describe climatic conditions during the 25th and 26th as partly cloudy with moderate winds out of northeast.

The following information is transmitted herewith:

- List of monthly diel field measurements made on January 25th and 26th
- Analytical report for total suspended solids samples
- · Chain-of-custody record

Please call me or Sam Johnston if there is a need to discuss this matter.

Sincerely

Dean M. Mades, P.E.

Associate

CC:

Chuck Listowski / WCIND

Bob Brady / EQL (letter only)

Bob Stetler / FDEP Sam Johnston / EBA Larry Olsen, Ph.D.



02/14/2000

ED BARBER & ASSOCIATES 3639 CORTEZ ROAD SUITE 106 BRADENTON FL 34210

Cust. Proj: ED BARBER & ASSOCIATES

Attached are the results from 5 sample(s) received by the Environmental Quality Laboratory for analysis. The EQ Lab identification number is 1457 / 348. Please refer to this number when requesting information regarding these data. Also, this letter should be attached to any data submitted by you to regulatory agencies.

The Laboratory has an approved FDEP Comprehensive Quality Assurance Plan (#87264) which specifies the procedures used in the analyses of the above referenced samples. In addition, the Laboratory is certified by FDOH for the analyses of environmental and drinking water samples (#E85086 & 85116) respectively. These certification numbers should be referenced when attesting to regulatory agencies regarding the protocols of the analytical procedures used.

The Environmental Quality Laboratory is plesed to have served you and hopes to meet any future laboratory needs you may have.

Sincerely,

Laboratory Operations Manager



		DEPTH W	TEMP (c)	D.O. (ppm)	ρН	COND (mmho)	Page SALINITY (0/00)
Date: Run/Station 1 3	01/25/2000 Time 12:00						
		1. 1.3 2.7	19.24 19.28 1 9.43	4.88 4.52 4.09	7.77 7.78 8.	33.41 35.73 37.82	21.05 22.63 24.07
Date: Run/Station	01/25/2000 Time 12:35						
		1. 2.5 5.	16.46 16.5 16.57	7.34 7.34 7.52	7.72 7.73 7.77	36.62 36.84 37.03	23.2 23.42 23.5
Date: Run/Station 1 2	01/25/2000 Time 12:40						
		1.	16.56	8.19	7.75	37.12	23.56
Date: Run/Station 2 1	01/25/2000 Time 16:00						
		1. 2.5 5.	16.95 16.94 16.84	8.06 7.96 8.06	7.49 7.47 7.45	39.04 39.9 40.56	24.64 25.6 25.98
Date: Run/Station 2 2	01/25/2000 Time 16:10						
		1.	17.12	7.85	7.55	38.62	24.57



Environmental Quality Laboratory

		DEPTH (M)	TEMP (c)	D.O. (ppm)	Нq	COND (mmho)	Page SALINITY (0/00)
Date: Run/Station	01/25/2000 Time						
2 3	16:40						
		1,	18.4	6.21	7.57	36.54	23.1
		2. 4.	18.06 18.26	7.03 6.89	7.58 7.61	35.56 36.41	23.14 23.06
Date:	04 105 10000			0.00		00,41	25.00
Run/Station	01/25/2000 Time						
3 1	20:00						
•		1.	16.87	8.02	8.02	33.96	21.37
		2. 3.	16.92 16.94	7.7 6.57	7.62 7.73	35.06 35.45	22.05 22.37
Date:	01/25/2000						22.01
Run/Station	Time						
3 2	20:05						
		1.	16.01	8.23	7.66	38.12	24.25
Date: Run/Station 3 3	01/25/2000 Time 20:25						
		1.	18.69	6.06	7.65	34.74	21.94
		2. 4.	18.82 18.8	5.18 6.07	7.63 7.67	35.73 36.09	22.55 22.85



		DEPTH (pr) (XX	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	Page SALINITY (o/oo)
Date: Run/Station 4 1	01/26/2000 Time 0:11	,					
		1.	16.36	7.87	7.85	39.14	24.99
Date: Run/Station 4 2	01/26/2000 Time 0:15						
		1.	15.23	8.15	7.72	38.95	24.7
Date: Run/Station 4 3	01/26/2000 Time 0:45						
		1. 2.3 3.5	18.15 17.92 17.6	6.07 6.59 7.54	7.63 7.66 7.74	36.08 36.81 37.11	22.82 23.33 23.57
Date: Run/Station 5 1	01/26/2000 Time 4:05						
		1. 2. 4.	16.85 16.88 16.8	7.55 7.08 7.12	7.55 7.08 7.77	33.97 33.82 34.7	22.63 24.12 23.03
Date: Run/Station 5 2	01/26/2000 Time 4:11						
	•	1.	16.22	7.82	7.63	36.01	22.37
Date: Run/Station 5 3	01/26/2000 Time 4:36						
		1.	17.11	6.89	7.71	36.77	24.54



Environmental Quality Laboratory

		DEPTH	TEMP (c)	D.O. (ppm)	Нα	COND (mmho)	Page SALINITY (o/oo)
		1.9 3.8	17.02 16.51	7.11 6.91	7.77 7.68	36.21 35.71	23.2 23.32
Date: Run/Station 6 1	01/26/2000 Time 8:00						
		1. 2.1 3.5	16.43 16.56 16.45	7.02 7.11 6.78	7.65 7.63 7.67	35.6 34.89 35.2	22.67 23.12 22.81
Date: Run/Station 6 2	01/26/2000 Time 8:05						
ŕ		1.	16.04	6.81	7.66	35.78	23.34
Date: Run/Station 6 3	01/26/2000 Time 8:32						
		1. 2. 4.	17.77 17.69 17.81	6.82 6.06 6.69	7.71 7.58 7.72	34.73 35.71 35.42	23.36 22.87 23.42
Date: Run/Station 7 1	01/26/2000 Time 12:15		1				
		1. 2. 2.5	15.66 15.66 15.68	1.48 1.49 4.47	7.36 7.42 7.47	25.78 26.19 26.14	15.92 16.09 16.04
Date: Run/Station 7 2	01/26/2000 Time 12:30						
		1.	15.11	8.46	7.67	36.22	22.94



Epvironmental Quality Laboratory

Datas		04 100 (0000	DEPTH	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	Page SALINITY (o/oo)
Date:		01/26/2000	~					
Run/S	lation	Time						
7	3	12:55						
			1.	18.34	4.36	7.41	35.55	22.51
			2.	18.35	4.3	7.42	35.86	22.67
			3.	18.38	4.46	7.44	35.75	22.6

Environmental Quality Laboratory

CHEMISTRY SAMPLE ANALYSIS

1622

Page:

Report Date:

02/14/2000

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

LABID: 1457

/ 348

Customer Proj: SHAKETT CREEK DIEL STUDY/SAMPLING

Sample Date/Time:

01/26/00 12:15

Sample#:

Station/Location:	1-MID	12,10		1022						
Aı	nalysis		Resu	ılt	Units	Method	MDL	Analysis Date	Analyst	*DQ
TOT. SUSPENDED S	OLIDS		8.		mg/L	EPA 160.2	0.6	02/02/00	AB	
Sample Date/Time: Station/Location:	01/26/00 2-MID	12:30	Sample#:	1623						
Aı	nalysis		Resu	ilt	Units	Method	MDL	Analysis Date	Analyst	*DQ
TOT. SUSPENDED S	OLIDS		3.7		mg/L	EPA 160.2	0.6	02/02/00	AB	
Sample Date/Time: Station/Location:	01/26/00 3-TOP	12:55	Sample#:	1624						
Aı	nalysis		Resu	ilt	Units	Method	MDL	Analysis Date	Analyst	*DQ
TOT. SUSPENDED S	OLIDS		8.9		mg/L	EPA 160.2	0.6	02/02/00	AB	
Sample Date/Time: Station/Location:	01/26/00 3-MID	13:00	Sample#:	1625						
Ar	nalysis		Resu	lt	Units	Method	MDL	Analysis Date	Analyst	DQ.
TOT. SUSPENDED S	OLIDS		14.4		mg/L	EPA 160.2	0.6	02/02/00	AB	
Sample Date/Time: Station/Location:	01/26/00 3-BOTT	13:05 OM	Sample#;	1626						
Aı	nalysis		Resu	ſt	Units	Method	MDL	Analysis Date	Analyst	•DQ
TOT. SUSPENDED S	OLIDS		27.2		mg/L	EPA 160.2	0.6	02/02/00	AB	

NOTE: * See attached Data Qualifier Codes Reported results not valid without accompanying signature page.

Laboratory Testing & Environmental Services

1009 TAMIAMI TRAIL, PORT CHARLOTTE, FLORIDA 33953 • PH 941-625-3137 • TOLL FREE 1-877-472-2712 FX 941-629-7467 • EMAIL: eglab@ascicorp.com • WEBSITE: www.ascicorp.com

Environmental Quality Laboratory, Inc. 1009 Tamiami Trail Port Charlotte, FL 33953



Phone (941) 625-3137 Fax (941) 629-7467

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Project: Sh	aket creek Diel Study Sumpline	FAX:			က္က							·						
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		2103	M IAO	Ē	Z.	25	ğ	Metals	Bac	<u> </u>								, g #
EQL Sample No.	Sample Description	Collection Date	Collection Time															
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2nd	0			1	14.	• • •	•											
3rd												-						
4th																		
, Sth				1														- 1

Meaning

- Q Sample held beyond the accepted holding time. This code shall be used if the value is derived from a sample that was prepared or analyzed <u>after</u> the approved holding time restrictions for sample preparation or analysis.
- Value reported is less that the laboratory method detection limit. The value is reported for informational purposes, only and shall not be used in statistical analysis.
- U Indicates that the compound was analyzed for but not detected. This shall be used to indicate that the specified component was not detected. The value associated with the qualifier shall be the laboratory method detection limit. Unless requested by the client, less than the method detection limit values shall not be reported (see "T" above).
- V Indicates that analyte was detected in both the sample and the associated method blank. Note: the value in the blank shall not be subtracted from associated samples.
- Y The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z Too many colonies were present (TNTC), the numeric value represents the filtration volume.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- ? Data is rejected and should not be used. Some of all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
- * Not analyzed due to interference. Note: if reporting data to the U.S. Environmental Protection Agency Water Quality Storage and Retrieval (STORET) date base, a numerical value must be entered. Such values are not meaningful and shall not be used.

If more than one code applies, and the data is to be entered in STORET, only one code shall be reported. The code shall be selected based on the following hierarchy:

```
?

•, O

Y

V

H

B, K, L, M, I, T, Z, U, N, Q

A, F

I
```

The following codes deal with certain aspects of field activities. The codes shall be used <u>if</u> the laboratory has knowledge of the specific sampling event. The codes shall be added by the organization collecting samples if they apply:

- D Measurement was made in the field (i.e. in situ). This applies to any value (ex. pH, specific conductance, etc.) that was obtained under field conditions using approved analytical methods. Note: When data is to be entered into STORET, and parameter code specifies a field measurement (e.g. "Field pH"), this code is not required.
- E Indicates that extra samples were taken at composite stations.
- R Significant rain in the past 48 hours. This code shall be used where the rainfall might contribute to a lower than normal value.
- ! Data deviates from historically established concentration ranges.

Environmental Quality Laboratory, Inc. Data Qualifier Codes (Page 1)

Symbol

Meaning

- A Value reported is the mean (average) of two or more determinations. This code shall be used if the results of two or more discrete and separate samples are averaged. These samples shall have been processed and analyzed (e.g. laboratory replicate samples, field duplicates, etc.) independently. Do not use this code if the data are the result of replicate analysis on the same sample aliquot, extract or digestate. Under most conditions, replicate values shall be reported as individual analyses.
- B Results based upon colony counts outside the acceptable range. This code applies to microbiological tests and specifically to membrane filter colony counts. The code is to be used if the colony count is generated from a plate in which the total number of coliform colonies exceeds the method indicated ideal ranges which are:

Total Coliforms: 20-80 colonies Fecal Coliforms: 20-60 colonies

- F When reporting species: F indicates the female sex
- Yalue based on field kit determination; results may not be accurate. This code shall be used if a field screening test (i.e. field gas chromatograph data, immunoassay, vendor-supplied field kit, etc.) was used to generate the value and the field kit or method has not been recognized by the Department as equivalent to laboratory methods.
- J Estimated value; value not accurate. This code shall be used in the following instances:
 - surrogate recovery limits have been exceeded;
 - 2. no known quality control criteria exists for the component;
 - 3. the reported value failed to meet the established quality control criteria for either precision or accuracy,
 - 4. the sample matrix interfered with the ability to make any accurate determination; or
 - 5. if the data is questionable because of improper laboratory or field protocols (e.g. composite sample was collected instead of a grab sample).

Note a "J" value shall be accompanied by justification for its use.

A "J" value shall not be used if another code applies (e.g., K, L, M, T, V, Y, I)

- K Off-scale low. Actual value is known to be less that the value given. This code shall be used if:
 - 1. The value is less than the lowest calibration standard <u>and</u> the calibration curve is known to be non-linear, or
 - 2. The value is known to be less than the reported value based on sample size, dilution or some other variable.

This code shall not be used to report values that are less than the laboratory practical quantitation limit or laboratory method detection limit.

- Coff-scale high. Actual value is known to be greater than value given. To be used when the concentration of the analyte is above the acceptable level for quantitation (exceeds the linear range or highest calibration standard) and the calibration curve is known to exhibit a negative deflection.
- M When reporting chemical analyses: presence of material is verified but not quantified; the actual value is less than the value given. The reported value shall be the laboratory practical quantitation limit. This code shall be used if the level is too low to permit accurate quantification, but the estimated concentration is greater than the method detection limit. If the value is less than the method detection limit use "I" below.

When reporting Oxygen Reduction Potential or Temperature: indicates a negative value When reporting Species: indicates male sex.

- N Presumptive evidence of presence of material. This qualifier shall be used if:
 - 1. the component has been tentatively identified based on mass spectral library search;
 - 2. there is an indication that the analyte is present, but quality control requirements for confirmation were not met (i.e. presence of analyte was not confirmed by alternate procedures).
- O Sampled, but analysis lost or not performed. Note: if reporting data to the U.S. Environmental Protection Agency Water Quality Storage and Retrieval (STORET) data base, a numerical value must be entered. Such values are not meaningful and shall not be used.

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

December 30, 1999

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from Environmental Quality Laboratory on December 14 and 15, 1999 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9th. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the mitigation area where dredge material is being placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

Notes on previously submitted turbidity monitoring reports describe climatic conditions during the 14th and 15th as clear to partly cloudy, with light winds out of the east and northeast.

The following information is transmitted herewith:

- List of monthly diel field measurements made on December 14th and 15th
- Analytical report for total suspended solids samples
- Chain-of-custody record

Please call me or Sam Johnston if there is a need to discuss this matter.

Sincerely,

Associate

cc:

Chuck Listowski / WCIND Bob Brady / EQL (letter only) Bob Stetler / FDEP Sam Johnston / EBA

Larry Olsen, Ph.D.

							Page	1	超
	3	639 CORTI	R & ASSOCIAT EZ RD IN FL 34210	ES					RECEIVED
		DEPTH (m)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (o/oo)		ED GE
Date: Run/Station	12/14/1999 Time	,							ري د
1 1	11:05	1.	22.50	0.00	7.07	44.31	28.68		7 10
		1.	23.58	6.63	7.87	44.51	20.00		1999
Date: Run/Station	12/14/1999 Time								
1 2	11:11	1.	23.89	7.03	7.77	38.91	25.03		
_		',	20.00	7.00	1.11	00.01	20.00		
Date: Run/Station 1 3	12/14/1999 Time								
1 3	11:35	1.	23.7	7.17	7.65	27.96	17.5		
		1.6	23.91	6.7	7.65	31.06	19.48		
		2.7	24.04	6.36	7.64	41.55	26.72		
Date: Run/Station	12/14/1999 Time								
2 1	15:37					44.00	20.04		
		1.	24.44	7.21	7.98	44.68	28.91		
Date: Run/Station	12/14/1999 Time		•						
2 2	15:39		24.05	7.00	7.07	42.06	27.71		
		1.	24.85	7.82	7.97	43.06	27.71		
Date:	12/14/1999			-					
Run/Station 2 3	Time 15:13	. '							
2 3	15,15	1.	24.32	7.62	7.76	39.7	25.02		
		2.1	24.1	6.97	7.64	42.46	27.32		
		4.1	23.71	6.32	7.39	44.3	28.63		
Date: Run/Station	12/14/1999 Time						1		
3 1	19:05								
		1.	23.89	6.63	7.99	43.8	28.3		
Date: Run/Station	12/14/1999 Time					ı			
3 2	19:10								
		1.	24.06	6.59	7.7	43.97	28.36		
Date: Run/Station									
3 3	19:40		24.4	7.00	7 70	20.47	22.44		
		1. 2.1	24.4 24.24	7.22 6.07	7.76 7.76	32.47 39.73	22.14 25.3		
		4.3	23.71	5.83	7.76 7.72	44.05	28.44		
				•					
Date: Run/Station	12/14/1999 Time				•				

12/14/1999 Time 22:55

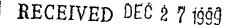
Run/Station 4 1 3639 CORTEZ RD BRADENTON FL 34210

	•	DEPTH	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	SALINITY (o/oo)
		1.	23.69	6.53	7.86	45.07	29.24
Date: Run/Station 4 2	12/14/1999 Time 22:59						
		1.	23.42	7.16	7.78	43.36	27.75
Date: Run/Station 4 3	12/14/1999 Time 23:15						
		1.	24.19	6.14	7.78	38.19	23.14
		2.4 4.8	24.15 23.8	5.77	7.75	43.71 44.34	28,21 28,64
		4.0	23.0	5.32	7.73	44.34	20.04
Date: Run/Station 5 1	12/15/1999 Time 3:05					ı	
- ,	•	1.	23.22	6.49	7.97	44.9	29.21
Date: Run/Station 5 2	12/15/1999 Time 3:07						
	0.01	1.	22.16	7.13	7.78	42.02	28.15
Date: Run/Station 5 3	12/15/1999 Time 3:25						
		1.	23.88	5.81	7.7	33.85	21.44
		2.1	24.17	5.31	7.69	43.26	27.84
		4.2	24.06	5.52	7.72	44.04	28.4
Date: Run/Station 6 1	12/15/1999 Time 7:05	1.	23.08	6.01	7.84	39.77	25.4
		1.	23.00	0.01	7.04	33.77	20.4
Date: Run/Station 6 2	12/15/1999 Time 7:09						
		1.	22.59	5.08	7.62	42.5	27.82
Date: Run/Station 6 3	12/15/1999 Time 7:25						
		1.	24.05	5.44	7.71	36.41	22.75
		2.2	24.03	4.95	7.69	41.14	26.79
		4.4	23.71	4.66	7.66	44.24	28.56
Date: Run/Station	12/14/1999 Time					*	
7 1	11:20		02.04				
		1.	23.01	6.69	7.73	40.04	25.53

3

ED BARBER & ASSOCIATES 3639 CORTEZ RD BRADENTON FL 34210

Date: Run/Stati	12/15/1999 on Time	DEPTH (pr) ÇX	TEMP (c)	D.O. (ppm)	ρΗ	COND (mmho)	SALINITY (o/oo)
7 2	11:35						
		1.	21.78	7.71	7.74	38.07	26.71
Date: Run/Stati	12/15/1999 on Time						
7 3	12:00						
		1.	24.03	6.12	7.19	35.56	23.26
		2.	24.13	5.29	7.13	41,27	26.75
		4.1	24.1	5.45	7.1	43.91	28.33





Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Report Date:

12/20/1999

Page: LABID:

Customer Proj:

Analysis

Analysis

Analysis

11:20

1457

/23765

MDL

Sample Date/Time:

12/15/1999

Sample#:

SHAKETT CREEK DIEL STUDY/SAMPLING

16872

Station/Location:

1-MID

Result

Units

Method

*DQ Analysis ∪ate

TOT. SUSPENDED SOLIDS

14.8

mg/L

Units

EPA 160.2

0.6

12/16/99

Sample Date/Time:

12/15/1999

11:35 Sample#: 16875

Station/Location:

2-MID

Result

Method

MDL

MDL

*DQ Analysis Date

*DQ

TOT. SUSPENDED SOLIDS

13.8

mg/L

mg/L

EPA 160.2

Method

EPA 160.2

0.6

12/16/99

Sample Date/Time: Station/Location:

12/15/1999

12:00 Sample#:

15.3

16877

TOT, SUSPENDED SOLIDS

3-TOP

Units Result

0,6

Date

12/16/99

Analysis

NOTE: * See attached Data Qualifier Codes

Reported results not valid without accompanying signature page.



RECEIVED DEC 2 7 1999

Customer:

ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Report Date:

12/20/1999

Page:

2

Customer Proj:

SHAKETT CREEK DIEL STUDY/SAMPLING

LABID:

1457 /23765

Sample Date/Time:

Sample#:

12/15/1999

12:00

Station/Location:

3-MID

16878

Analysis	Result	Units	Method	MDL	Analysis Date	*DQ
TOT, SUSPENDED SOLIDS	12.	mg/L	EPA 160.2	0.6	12/16/99	
	C	370				

Sample Date/Time: Station/Location:

12/15/1999

16879

3-BOTTOM

Analysis	Result	Units	Method	MDL	Analysis *DQ Date
TOT. SUSPENDED SOLIDS	17.	mg/L	EPA 160.2	0.6	12/16/99

NOTE: * See attached Data Qualifier Codes

Reported results not valid without accompanying signature page.

RECEIVED DEC 2 7 1999

Environmental Quality Laboratory, Inc. 1009 Tamiami Trail Port Charlotte, FL 33953



Phone (941) 625-3137 Fax (941) 629-7467

Sample	intormation					An	aıy	<u>SIS</u>	<u>Ke</u>	que	est		p:	age_	<u></u>	of <u></u>	
Client:	A Kulbara 1456. • new	Phone: FAX:			10											•	
Labid: Address:	99/1457/23765	HRS Form?	y No	Preserved	Minerals	Nutrients	NOZO.P.	Metals	Bacteria	cBOD/TSS							# of Containers
EQL Sample No.	Sample Description	Collection Date	Collection Time														
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11273	1B									<u> </u>							
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Transfer Released by:

1st (Sample collector)

2nd

3rd

4th

5th 6s

Environmental Quality Laboratory, Inc. Data Qualifier Codes (Page 1)

Symbol

Meaning

- Value reported is the mean (average) of two or more determinations. This code shall be used if the results of two or more discrete and separate samples are averaged. These samples shall have been processed and analyzed (e.g. laboratory replicate samples, field duplicates, etc.) independently. Do not use this code if the data are the result of replicate analysis on the same sample aliquot, extract or digestate. Under most conditions, replicate values shall be reported as individual analyses.
- B Results based upon colony counts outside the acceptable range. This code applies to microbiological tests and specifically to membrane filter colony counts. The code is to be used if the colony count is generated from a plate in which the total number of coliform colonies exceeds the method indicated ideal ranges which are:

Total Coliforms: 20-80 colonies Fecal Coliforms: 20-60 colonies

- F When reporting species: F indicates the female sex
- Value based on field kit determination; results may not be accurate. This code shall be used if a field screening test (i.e. field gas chromatograph data, immunoassay, vendor-supplied field kit, etc.) was used to generate the value and the field kit or method has not been recognized by the Department as equivalent to laboratory methods.
- J Estimated value; value not accurate. This code shall be used in the following instances:
 - 1. surrogate recovery limits have been exceeded;
 - 2. no known quality control criteria exists for the component;
 - the reported value failed to meet the established quality control criteria for either precision or accuracy.
 - 4. the sample matrix interfered with the ability to make any accurate determination; or
 - if the data is questionable because of improper laboratory or field protocols (e.g. composite sample was collected instead of a grab sample).

Note a "J" value shall be accompanied by justification for its use.

A "J" value shall not be used if another code applies (e.g., K, L, M, T, V, Y, I)

- K Off-scale low. Actual value is known to be less that the value given. This code shall be used if:
 - 1. The value is less than the lowest calibration standard <u>and</u> the calibration curve is known to be non-linear, or
 - 2. The value is known to be less than the reported value based on sample size, dilution or some other variable.

This code shall not be used to report values that are less than the laboratory practical quantitation limit or laboratory method detection limit.

- Confescale high. Actual value is known to be greater than value given. To be used when the concentration of the analyte is above the acceptable level for quantitation (exceeds the linear range or highest calibration standard) and the calibration curve is known to exhibit a negative deflection.
- M When reporting chemical analyses: presence of material is verified but not quantified; the actual value is less than the value given. The reported value shall be the laboratory practical quantitation limit. This code shall be used if the level is too low to permit accurate quantification, but the estimated concentration is greater than the method detection limit. If the value is less than the method detection limit use "T" below.

When reporting Oxygen Reduction Potential or Temperature: indicates a negative value When reporting Species: indicates male sex.

- N Presumptive evidence of presence of material. This qualifier shall be used if:
 - 1. the component has been tentatively identified based on mass spectral library search;
 - 2. there is an indication that the analyte is present, but quality control requirements for confirmation were not met (i.e. presence of analyte was not confirmed by alternate procedures).
- O Sampled, but analysis lost or not performed. Note: if reporting data to the U.S. Environmental Protection Agency Water Quality Storage and Retrieval (STORET) data base, a numerical value must be entered. Such values are not meaningful and shall not be used.

Meaning

- Sample held beyond the accepted holding time. This code shall be used if the value is derived from a sample that was prepared or analyzed <u>after</u> the approved holding time restrictions for sample preparation or analysis.
- Value reported is less that the laboratory method detection limit. The value is reported for informational purposes, only and shall not be used in statistical analysis.
- U Indicates that the compound was analyzed for but not detected. This shall be used to indicate that the specified component was not detected. The value associated with the qualifier shall be the laboratory method detection limit. Unless requested by the client, less than the method detection limit values shall not be reported (see "T" above).
- V Indicates that analyte was detected in both the sample and the associated method blank. Note: the value in the blank shall not be subtracted from associated samples.
- Y The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z Too many colonies were present (TNTC), the numeric value represents the filtration volume.
- I The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- ? Data is rejected and should not be used. Some of all of the quality control data for the analyte were outside criteria, and the presence or absence of the analyte cannot be determined from the data.
- Not analyzed due to interference. Note: if reporting data to the U.S. Environmental Protection Agency Water Quality Storage and Retrieval (STORET) date base, a numerical value must be entered. Such values are not meaningful and shall not be used.

If more than one code applies, and the data is to be entered in STORET, only one code shall be reported. The code shall be selected based on the following hierarchy:

```
?
*,O
Y
V
H
B, K, L, M, I, T, Z, U, N, Q
A, F
```

The following codes deal with certain aspects of field activities. The codes shall be used if the laboratory has knowledge of the specific sampling event. The codes shall be added by the organization collecting samples if they apply:

- D Measurement was made in the field (i.e. in situ). This applies to any value (ex. pH, specific conductance, etc.) that was obtained under field conditions using approved analytical methods. Note: When data is to be entered into STORET, and parameter code specifies a field measurement (e.g. "Field pH"), this code is not required.
- E Indicates that extra samples were taken at composite stations.
- R Significant rain in the past 48 hours. This code shall be used where the rainfall might contribute to a lower than normal value.
- ! Data deviates from historically established concentration ranges.

ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

November 22, 1999

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the diel water-quality survey performed by personnel from Environmental Quality Laboratory on November 8 and 9, 1999 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 870264. Monitoring locations associated with this activity are generally illustrated in figures 1 and 2 submitted with the water-quality monitoring report submitted to the District on November 9th. More specifically, the sites are located as follows:

- Site No. 1 is located on Cow Pen Slough about one-half mile upstream from Laurel Road and 250-feet upstream from the mouth of Fox Creek where it enters Cow Pen Slough,
- Site No. 2 is located about 200 feet west northwest of the mitigation area where dredge material is being placed, and
- Site No. 3 is located about 200 feet east northeast from the dredge channel at the railroad trestle.

Note that the location of Site No. 2 referenced in this report is about 700 feet downstream from the location sampled during the preceding diel survey. Both locations are shallow, quiescent embayments. Site No. 2 was relocated because the current location is closer to the mitigation area and the previous location was too shallow to access throughout an entire tidal cycle without re-suspending bottom sediment.

Notes on previously submitted turbidity monitoring reports describe climatic conditions between November 5th and 9th as clear and sunny, with light winds out of the east and northeast.

The following information is transmitted herewith:

- List of monthly diel field measurements made on November 8th and 9th
- Analytical report for total suspended solids samples
- Chain-of-custody record

Please call me or Sam Johnston if there is a need to discuss this matter.

Sincerely,

Dean M. Mades, P.E.

Associate

cc:

Chuck Listowski / WCIND

Bob Brady / EQL (letter only)

Bob Stetler / FDEP Sam Johnston / EBA Larry Olsen, Ph.D.

or les



November 17, 1999

ED BARBER & ASSOCIATES 3639 CORTEZ ROAD SUITE 106 BRADENTON FL 34210

Cust. Proj: SHAKETT CREEK DIEL STUDY/SAMPLIN

Attached are the results from 10 sample(s) received by the Environmental Quality Laboratory for analysis. The EQ Lab identification number is 99/1457/23470; please refer to this number when requesting information regarding these data. Also, this letter should be attached to any data submitted by you to regulatory agencies.

The Laboratory has an approved FDEP Comprehensive Quality Assurance Plan (#870264) which specifies the procedures used in the analyses of the above referenced samples. In addition, the Laboratory is certified by FDOH for the analysis of environmental and drinking water samples (#E85086 & 85116) respectively. These certification numbers should be referenced when attesting to regulatory agencies regarding the protocols of the analytical procedures used.

The Environmental Quality Laboratory is pleased to have served you and hopes to meet any future laboratory needs you may have.

Sincerely,

. Ken Kondel

Laboratory Operations Manager



Date: 11/08/1999	DEPTH (pr)	TEMP (c)	D.O. (ppm)	рН	COND (mmho)	Page 1 SALINITY (0/00)
Run/Station Time				• •		
1 3 11:30	1.0 1.5 2.5	21.88 21.64 21.69	4.87 4.52 4.74	7.93 7.88 7.86	41.770 44.360 44.080	27.19 28.44 28.43
Date: 11/08/1999 Run/Station Time 1 1 12:06						
	1.0 2.4 4.8	22.91 22.38 22.35	6.65 5.86 4.93	7.70 7.76 7.67	24.420 27.640 35.110	14.64 16.13 22.16
Date: 11/08/1999 Run/Station Time 1 2 12:59						
Date: 11/08/1999	1.0	22.77	6.18	7.97	38.800	24.85
Run/Station Time 2 1 15:45	1.0 2.3 4.5	23.63 22.80 21.99	7.50 6.37 5.24	7.94 7.90 7.89	24.360 27.590 36.230	14.65 16.89 22.89
Date: 11/08/1999 Run/Station Time 2 3 15:55	 					
	1.8	23.43 23.32 23.16	7.33 6.96 6.63	8.00 8.00 8.03	34.260 34.400 36.150	21.90 21.62 22.92
Date: 11/08/1999 Run/Station Time 2 2 16:12	1.0	23.74	7 00	7.00	20 400	
Date: 11/08/1999 Run/Station Time	1.0	<i></i>	7.09	7.99	32.400	20.07
3 3 19:40		21.86 22.49	6.90 6.52	7.74 7.95	26.190 ₁ 28.370	15.85 17.56



	DEPTH (pr) (x 4.8	TEMP (c) 22.16	D.O. (ppm) 5.85	рН 7.91	COND (mmho) 36.610	Page 2 SALINITY (0/00) 23.10
Date: 11/08/199 Run/Station Time 3 1 20:1	е			• ;		
	1.0 3.0 6.0	22.58 22.58 22.59	6.26 6.28 6.05	7.97 7.96 7.93	42.210 42.310 44.560	26.94 27.40 28.87
Date: 11/08/1999 Run/Station Time 3 2 20:20	e . O					
	1.0	22.68 21.93	6.46 6.06	7.88 7.75	40,620 40,550	24.60 25.17
Date: 11/08/1999 Run/Station Time 4 1 23:19)					
	1.0 1.5 3.0	22.12 22.14 22.16	6.24 6.28 5.87	7.89 7.86 7.80	40.850 40.890 46.240	26.18 26.21 30.41
Date: 11/08/1999 Run/Station Time 4 3 23:45	9					
	1.0 2.8 5.6	22.18 22.68 22.52	6.25 6.59 6.21	7.88 7.89 7.87	28.030 31.100 37.600	17.20 19.52 23.88



E	DEPTHOVAN (pf) CX	TEMP	D.O. (ppm)	рН	COND (mmho)	Page 3 SALINITY (o/oo)
Date: 11/09/1999 Run/Station Time 5 2 3:15	1.0	21.61	6.45	7.77	32.680	20.43
Date: 11/09/1999 Run/Station Time 5 1 3:20	1.0	21.90	6.37	7.89	37.020	23.55
	2.5 5.0	22.32 22.28	3.41 6.16	7.88 7.80	41.800 45.190	27.11 28.93
Date: 11/09/1999 Run/Station Time 5 3 4:00						
	1.0 2.5 5.0	21.22 22.32 22.55	6.24 6.21 6.07	7.82 7.85 7.83	27.650 28.710 37.540	16.96 17.69 23.84
Date: 11/09/1999 Run/Station Time 6 2 7:10	1.0	20.40	5.91	7.77	31.650	19.77
Date: 11/09/1999 Run/Station Time 6 1 7:50						
Date: 11/09/1999	1.0	21.84	6.82	7.92	40.050	25.52
Run/Station Time 6 3 8:20	1.0	22.17 22.28	6.57 6.14		25.590 27.460	15.63 16.91
Date: 11/09/1999 Run/Station Time	4.3	22.62	5.92	7.82	37.980	24.18
7 2 11:11	1.0	23.03	4.46	7.72	35.490	22.25

EQL Environmental Services, Inc.



Date: 11/09/1999		TEMP (c)	D.O. (ppm)	рН	COND (mmho)	Page 4 SALINITY (o/oo)
Run/Station Time 7 1 11:16						
	1.0 3.3 6.7	22.09 22.04 21.92	6.06 6.15 5.65	7.78 7.83 7.82	37.470 40.260 40.390	24.44 25.61 25.75
Date: 11/09/1999 Run/Station Time 7 3 11:45						
	1.0 2.3 4.6	22.90 22.55 22.54	7.04 6.17 5.38	7.99 7.97 7.91	26.110 30.160 37.400	15.71 19.23 23.80



CHEMISTRY SAMPLE ANALYSIS

Customer: ED BARBER & ASSOCIATES

Report Date: 11/17/1999

3639 CORTEZ ROAD

Page: 1

Customer Proj: SHAKETT CREEK DIEL STUDY/SAMPLING

LABID: 99/ 1457/23470

Sample Date/Time: 11/15/1999 11:00 Sample#: 15518

Station/Location:

1-TOP

Analysis Result Units Method MDL Analysis *DQ

Date

TOT. SUSPENDED SOLIDS 7.6 mg/L EPA 160.2 0.6 11/16/99

Sample Date/Time: 11/15/1999 11:05 Sample#: 15519

Station/Location: 1-MID

Analysis Result Units Method MDL Analysis *DQ

Date

TOT. SUSPENDED SOLIDS 21. mg/L EPA 160.2 0.6 11/16/99

Sample Date/Time: 11/15/1999 11:10 Sample#: 15520

Station/Location:

1-BOTTOM

Analysis Result Units Method MDL Analysis *DQ

Date

TOT. SUSPENDED SOLIDS 10.8 mg/L EPA 160.2 0.6 11/16/99

Sample Date/Time: 11/15/1999 12:00 Sample#: 15521

Station/Location:

2-MID

Analysis Result Units Method MDL Analysis *DQ

Date

TOT. SUSPENDED SOLIDS 9.8 mg/L EPA 160.2 0.6 11/16/99

NOTE: * See attached Data Qualifier Codes

Reported results not valid without accompanying signature page.



CHEMISTRY SAMPLE ANALYSIS

Customer: ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Report Date: 11/17/1999

Page:

Customer Proj: SHAKETT CREEK DIEL STUDY/SAMPLING

LABID: 99/ 1457/23470

Sample Date/Time: 11/15/1999 12:20 Sample#: 15522

Station/Location:

3-TOP

Analysis

Analysis

Result Units

Method

MDL

Analysis *DQ

Date

TOT. SUSPENDED SOLIDS

9.8 mg/L

EPA 160.2

0.6 11/16/99

Sample Date/Time: 11/15/1999 12:25 Sample#: 15523

Station/Location:

3-MID

MDL

Analysis *DQ

Date

TOT. SUSPENDED SOLIDS

10.4 mg/L

Result Units

EPA 160.2

Method

0.6 11/16/99

Sample Date/Time: 11/15/1999 12:30 Sample#: 15524

Station/Location:

3-BOTTOM

Analysis

Result Units

Method

MDL

Analysis *DQ

Date

TOT. SUSPENDED SOLIDS

16.8 mg/L

EPA 160.2

0.6 11/16/99

Sample Date/Time: Station/Location:

1 STATION #1

Analysis

Method

Sample#: 15587

MDL

Analysis *DQ

Date

SECCHI (Field)

0.7 ft.

Result Units

0. 11/08/99 D

NOTE: * See attached Data Qualifier Codes

Reported results not valid without accompanying signature page.

Environmental Quality Laboratory, Inc.

EQL Environmental Services, Inc.

1009 TAMIAMI TRAIL, PORT CHARLOTTE, FLORIDA 33953 • PH 941-625-3137 • FX 941-629-7467



CHEMISTRY SAMPLE ANALYSIS

Customer: ED BARBER & ASSOCIATES

3639 CORTEZ ROAD

Report Date: 11/17/1999

Page: 3

Customer Proj: SHAKETT CREEK DIEL STUDY/SAMPLING

LAMID: 99/ 1457/23470

Sample Date/Time:

Sample#: 15588

Station/Location:

2 STATION #2

Analysis

Result Units

Method

MIDL A:

Analysis *DQ

Date

SECCHI (Field)

2. ft.

0. 11/08/99 D

Sample Date/Time: Station/Location:

Sample#: 15589

ocation: 3 STATION #3

Analysis

Result Units

Method

MDL

Analysis *DQ

Date

SECCHI (Field)

2. ft.

0.11/03/99 D

NOTE: * See attached Data Qualifier Codes

Reported results not valid without accompanying signature page.

Environmental Quality Laboratory, Inc. 1009 Tamiami Trail Port Charlotte, FL 33953



Phone (941) 625-3137 Fax (941) 629-7467

Sample	Information						<u>An</u>	aly	<u>sis</u>	Rec	que	<u>st</u>			pa	age_	0	1
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Labid:	99/1457/23478	HRS Form?			1													2
Address:	711131123110	□Yes	≫ No	Pakean	Minerals	Nutrients	HOZO.F.	Metals	Bacteria	евоотва								S of Cords
EQL Sample No.	Sample Description	Collection Date	Collection Time															
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ED BARBER & ASSOCIATES

ENVIRONMENTAL CONSULTING
ENVIRONMENTAL MANAGEMENT SERVICES

Wildewood Professional Park 3639 Cortez Road West, Suite 211 Bradenton, Florida 34210 Tel: 941-739-3903 Fax: 941-739-3829

November 4, 1999

Ms. Rose Poynor, Habitat Restoration Section Florida Department of Environmental Protection, Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Re:

File No. 58-01274663-001, Shakett Creek Navigational Dredging

Dear Ms. Poynor:

The enclosed material summarizes the water-quality sampling performed by personnel from Sanders Laboratories on October 7 and 8, 1999 pursuant to Specific Condition No. 39 of the referenced permit and their currently approved Quality Assurance Plan No. 930013. Monitoring locations associated with this activity are illustrated in the attached figures 1 and 2.

Notes on previously submitted turbidity monitoring reports describe climatic conditions on the 7th and 8th as partly cloudy with winds between 5 and 15 knots out of the south and southwest. It was also reported that approximately 8 inches of rainfall occurred in the vicinity between October 3rd and 5th.

The following information is transmitted herewith:

- List of monthly diel field measurements made on October 7th and 8th
- · Analytical report for quarterly water-quality samples collected on October 7th
- · Chain-of-custody record

Please call mc or Sam Johnston if there is a need to discuss this matter.

Sincerely,

Dean M. Mades, P.E.

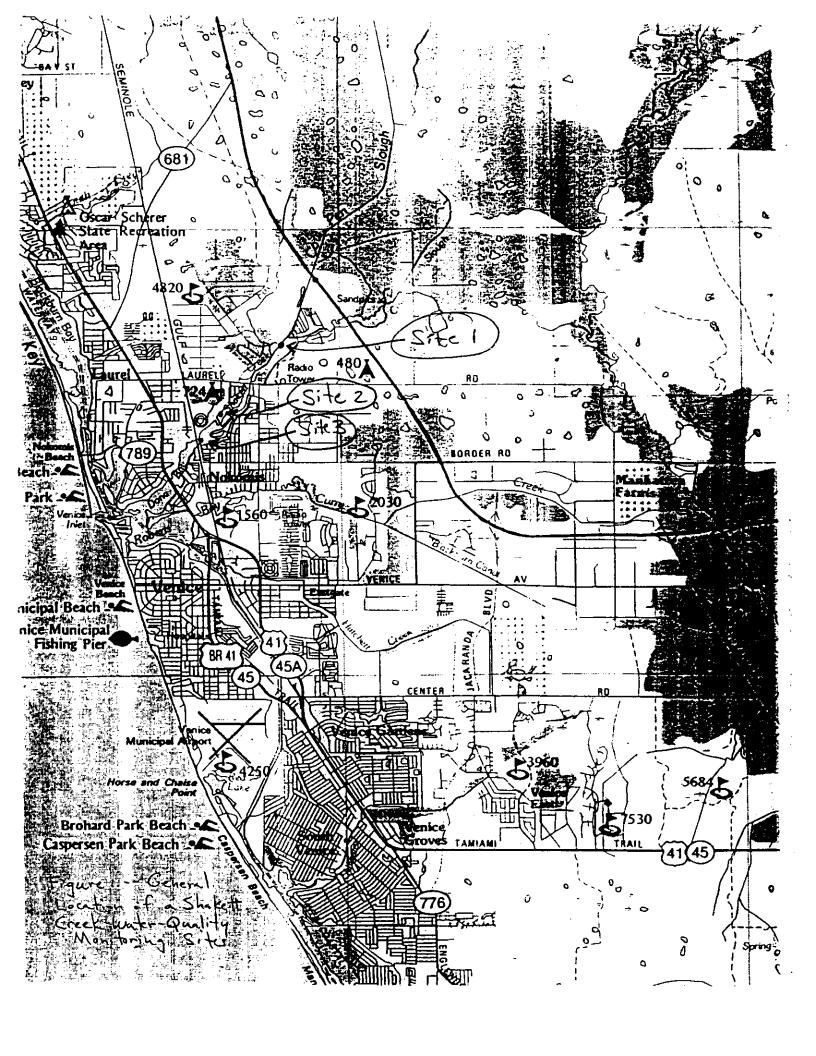
Associate

Enclosures:

cc:

Chuck Listowski / WCIND
Bob Stetler / FDEP
Larry Olsen, Ph.D.
Will Dromgoole / SL (letter only)

Sam Johnston / EBA



anders (aboratories Environmental Testing Services

CHAIN-OF-CUSTODY RECORD

Report To:

PROJECT NSFR. 10012

Page _____ of ____

Bill To:	Customer Type:
P.O. #	Field Report #:
Project Name 14/4, + We while	& Adexidading Kit #
Project Location: Shife if Ca	REQUESTED DUE DATE:
PRESERVAT	
Sample	
DATE TIME TYPE CONTY	Sample 1D#
	XXX XX -CIA
10/1/19/210 G XXX	XXX XXX -CZA
19/1/19/220 G7 XXX	XXX XXX -C3A
10/1/7 13/0 G XXX	XXX XXX - CAIN
10/7/89/23C GXXX	XXX XXX I - CSA
1-15/19 124E G XXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
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Date	Time	Site #	Tide stage	Dir/FPS	T. Depth	S. Depth	We	eath	ner	Cor	nditions	D.O.	Ph	Temp	Sal. %		Secchi [Depth
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	1210	1B	#	.75FPS		3.5'	Air	Te	mp	. 27	.4	8.64	6.83	27.8	0.10%	181.8	н	
	1220	1C	rr .	11		6.0'	19	#n	H			9.13	6.98	27.6	0.10%	190.4	4	
7-Oct	1300	2B	u	0.01FPS WSW	2.0'	1.0'	if	••			11	4.76	6.97	27.5	0.70%	1410-	1.2'	
7-Oct.	1230	3A	11	.50FPS	4.3'	1.0'	"	11		**	84	8.7	6.7	26.9	0.40%	826	1.4'	
	1240	3B	If	WSW		2.15'	11	#1		f 1	41	6.91	6.96	26.4	0.30%	693	tı .	
	1250	3C	H	H		3.3'	H	ŧŧ		u1	•	7.2	6.9	26.3	0.40%	766 '	ıı	
7-Oct	1605	1A	Outgoing	SSW	7.0'	1.0'	Par	rtlv	Clo	udv	,	7.89	6.96	27.5	0.10%	198	1.2'	
	1615		"	.75FPS		3.5'	Air	_		-			6.86		0.10%	189.1		
	1625		11	te		6.0'	n	"		•	•		6.91		0.10%	196 '		
	1640	2B	10	WSW 0.01FPS	2.0'	1.0'	#	н	•)	n	3.95	7.02	27.3	0.65%	1385	1.0'	
	1655	3A	•		4.3'	1.0'	**	**	r	,	**	7.35	7.01	27.1	0.39%	815	1.6'	
	1705			0.65FPS		2.15'	**	11	*	I	•		6.93		0.30%	732 '		
	1715		41	н		3.3'	n	11	41	1	41		6.96		0.35%	772 '		
7-Oct.	2000	1A	Incoming	SSW	7.0'	1.0'	Par	rtly	Clo	udy	•	8.65	7.02	27.6	0.15%	202		
	2010	1B		0.85FPS		3.5'	Air	Ter	mp.	25.	.9	8.72	6.89	27.5	0.10%	183.2		
	2020	1C	п			6.0"	"	H		"	"	8.99	7.14	27.5	0.14%	198.5		
	2035	2B	Incoming	None	2.0'	1.0'	**	"		11	44	3.54	7.02	27.3	0.69%	1415		RECEIVED
	2045	3A	Incoming	ENE	5.0'	1.0'	M	**	1	17	14	7.65	7.14	27.2	2.50%	3600		H
	2056		"	.15FPS		2.5'		11	1	11	**	8.02			3.05%	4105		Œ
	2110		ti .	н		4.0'	н	41	ı	H	Ħ	7.05			4.65%	6465		_
8-Oct	1205am	1A	Incoming	SSW	7.0'	1.0'	Cle	ar S	Skie	s		7.04	7.54	26.4	0.10%	186.2		VOV
J 00	1215am		н	.85FPS		3.5'	Air				9		7.65		0.10%	184.5		0 ,
	1225am		н	.00110		6.0'	H	#		· ·	н		7.25		0.10%	192.3		4 1999
	1240am	2B	Incoming	None	2.0'	1.0'	n	"		•	н	2.69	7.14	27.2	2.22%	3445	A (N)	ŭ

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	1255am	13A	Slack	Mixing	5.5'	1.0'	.#	**	n	11	8.25	7.17	24.8	0.41%	826
	110am		**	zone		2.75'		n	10	и	7.98	7.46	24.6	1.05%	1465
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									_				A		405
8-Oct	400am	1A	Outgoing	SSW	7.0'	1.0'		ar Sk			6.99	7.48		0.10%	195
	410am	1B	н	1.0FPS		3.5'	Air	Tem	23.€	6	7.25	7.37	25.6	0.10%	186
	420am	1C	н	•		6.0'	Ħ	11	**	**	7.84	6.96	25.8	0.10%	172
	435am	2B	Outgoing	WSW	2.1'	1.0'	н			н	3 42	7.36	24.2	2.15%	3105
	4338111	20	Outgoing	0.1FPS	2.1	1.0					02	1.00		2	
	450am	3A .	Outgoing	WSW	5.0'	1.0'	*	H	11	a	7.99	7.26	23.9	0.41%	827
	500am		n	.50FPS		2.5'	**	14	11	**	9.02	7.48	24.5	0.32%	685
	510am		н	n		4.0'	**	11	11	"	8.25	7.37	25.1	0.31%	679
8-Oct	MA008	1A	Outgoing	SSW	7.0'	1.0'		ar Sk				7.36		0.10%	202
	810am	1B	H	1.0FPS		3.5'	Air	Temp	o. 25.	9	6.85	7.25		0.10%	175
	820am	1C	Ħ	n		6.0'	"	н	10	**	8.04	7.58	24.2	0.23%	548
	025	20	Outgoing	wsw	2.0'	1.0'	,		e1		2 96	7.14	24 9	1.06%	1472
	835am	ZD	Outgoing	0.1FPS	2.0	1.0					2.00		2	1.0075	
	845am	3A	Outgoing	WSW	5.0'	1.0'	н	11	61	n	7.64	6.99	24.8	0.32%	691
			"	1.1fps		2.5'	Ħ	н	11		8.45	7.35	25.1	0.31%	681
	905am	•	н	"		4.0'		11	н	н	7.99	7.27	24.9	0.31%	684
	Journ	~~													

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INTAKE #: 9910072



Date: 29-Oct-99

Ed Barber & Associates Sam Johnston/WCIND 3639 Cortez Rd. Suite 222 Bradenton, FL 34210**Project Name:** Monthly & Quarterly Monitoring

Project Location: Shakett Creek

> Job ID: 0

Sample Supply: Surface Water

> Collector: Will Dromgoole

Sample Received

Date/Time: 10/7/99 16:45

Lab ID	Sample ID	Type	Sample Date/Time
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	Analysis	Method	Result	D. L.	Unit	Analysis Date/Time	LabiD:
10072-0	1A 1A 1' BS GRB 10/7	/99 12:00					
	Total Suspended Solids	EPA 160.2	9.0	0.7	mg/L	10/8/99	E84380
	Nitrite-N	EPA 354.1	10.0>	10.0	mg/L	10/8/99	E84380
	Nitrate-N	EPA 353.2	< 0.01	0.01	mg/L	10/12/99	E84380
	Ammonia-N	EPA 350.3	0.13	0.05	mg/L	10/18/99	E84380
	Nitrogen, Total Kjeldahl	EPA 351.2	1.89	0.1	mg/L	10/12/99	E84380
	Phosphorus, Total	EPA 365.2	0.266	0.003	mg/L	10/12/99	E84380
	Organic Nitrogen	Calc.	1.76	0.01	mg/L	10/18/99	E84380
	pH, Field	EPA 150.1	6.93	n/a	std unit	10/7/99	E84380
	Conductivity	EPA 120.1	194	1.0	umhos/cm	10/7/99	E84380
	Water Temperature	EPA 170.1	27.7	0.1	°C	10/7/99	E84380
	Secchi Depth		1.3		ft.	10/7/99	E84380
	Flow		0.75		fps	10/7/99	E84380
	Weather, Condition		pt cloudy			10/7/99	E84380
	Dissolved Oxygen, Field	EPA 360.1	9.20	0.10	mg/L	10/7/99	E84380
	Salinity	SM2520B	0.1		%	10/7/99	E84380
	Sample Depth		i		ft.	10/7/99	E84380
10072-0	2A 1B Mid GRB 10/7	/99 12:10					
	Total Suspended Solids	EPA 160.2	10.3	0.7	mg/L	10/8/99	E84380
	Nitrite-N	EPA 354.1	<0.01	0.01	mg/L	10/8/99	E84380
	Nitrate-N	EPA 353.2	<0.01	0.01	mg/L	10/12/99	E84380
	Nitrogen, Total Kjeldahl	EPA 351.2	1.19	0.1	mg/L	10/18/99	E84380

HRS Certification#'s 84352 and E84380(Nokomis) 85449 and E85457(Ft. Myers)

Lab ID Sample ID Type Sample Date/Time

Analysis	Method	Result	D. L.	Unit	Analysis Date/Time	LabID
Ammonia-N	EPA 350.3	0.09	0.05	mg/L	10/12/99	E8438
Phosphorus, Total	EPA 365.2	0.284	0.003	mg/L	10/12/99	E8438
Organic Nitrogen	Calc.	1.10	0.01	mg/L	10/18/99	E8438
pH, Field	EPA 150.1	6.83	n/a	std unit	10/7/99	E8438
Conductivity	EPA 120.1	182	1.0	umhos/cm	10/7/99	E8438
Water Temperature	EPA 170.1	27.8	0.1	°C	10/7/99	E8438
Secchi Depth		1.3		ft.	10/7/99	E8438
Flow		0.75		fps	10/7/99	E8438
Weather, Condition		pt cloudy			10/7/99	E8438
Dissolved Oxygen, Field	EPA 360.1	8.64	0.10	mg/L	10/7/99	E8438
Salinity	SM2520B	0.1		%	10/7/99	E8438
Sample Depth		3.5		ft.	10/7/99	E8438
072-03A 1C 1'AB GRB 10/7/99	12:20					
Total Suspended Solids	EPA 160.2	11	0.7	mg/L	10/8/99	E843
Nitrite-N	EPA 354.1	<0.01	0.01	mg/L	10/8/99	E843
Nitrate-N	EPA 353.2	<0.01	0.01	mg/L	10/12/99	E843
Nitrogen, Total Kjeldahl	EPA 351.2	1.22	0.1	mg/L	10/18/99	E843
Ammonia-N	EPA 350.3	0.20	0.05	mg/L	10/12/99	E843
Phosphorus, Total	EPA 365.2	0.275	0.003	mg/L	10/12/99	E843
Organic Nitrogen	Calc.	1.02	0.01	mg/L	10/18/99	E843
pH, Field	EPA 150.1	6.98	n/a	std unit	10/7/99	E843
Conductivity	EPA 120.1	190	1.0	umhos/cm	10/7/99	E843
Water Temperature	EPA 170.1	27.6	0.1	°C	10/7/99	E843
Secchi Depth		1.3		ft.	10/7/99	E843
Flow		0.75		fps	10/7/99	E843
Weather, Condition		pt cloudy			10/7/99	E843
Dissolved Oxygen, Field	EPA 360.1	9.13	0.10	· mg/L	10/7/99	E843
Salinity	SM2520B	0.1		%	10/7/99	E843
Sample Depth		6.0		ſt.	10/7/99	E843
072-04A 2B Mid GRB 10/7/99	13:10					
Total Suspended Solids	EPA 160.2	15	0.7	mg/L	10/8/99	E843
Nitrite-N	EPA 354.1	<0.01	0.01	mg/L		E843
Nitrate-N	EPA 353.2	<0.01	0.01	mg/L		E843
, 11tt 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	21/1 222.2	-0.01		3 -		

HRS Certification#'s 84352 and E84380(Nokomis) 85449 and E85457(Ft. Myers)

Lab ID	Sample ID	Type	Sample Date/Time
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Analysis	Method	Result	D. L.	Unit	Analysis Date/Time	Lab(D
Ammonia-N	EPA 350.3	<0.05	0.05	mg/L	10/12/99	E84380
Phosphorus, Total	EPA 365.2	0.222	0.003	mg/L	10/12/99	E84380
Organic Nitrogen	Calc.	2.43	0.01	mg/L	10/18/99	E84380
pH, Field	EPA 150.1	6.97	n/a	std unit	10/7/99	E84380
Conductivity	EPA 120.1	1,410	1.0	umhos/cm	10/7/99	E84380
Water Temperature	EPA 170.1	27.5	0.1	°C	10/7/99	E84380
Secchi Depth		1.4		ft.	10/7/99	E8438
Flow		0.01		fps	10/7/99	E8438
Weather, Condition		pt cloudy			10/7/99	E8438
Dissolved Oxygen, Field	EPA 360.1	4.76	0.10	mg/L	10/7/99	E8438
Salinity	SM2520B	0.7		%	10/7/99	E8438
Sample Depth		1.0		ft.	10/7/99	E8438
072-05A 3A 1' BS GRB 10/7/99	12:30					
Total Suspended Solids	EPA 160.2	7.2	0.7	mg/L	10/8/99	E8438
Nitrite-N	EPA 354.1	<0.01	0.01	mg/L	10/8/99	E8438
Nitrate-N	EPA 353.2	<0.01	0.01	mg/L	10/12/99	E8438
Nitrogen, Total Kjeldahl	EPA 351.2	2.81	0.1	mg/L	10/18/99	E843
Ammonia-N	EPA 350.3	0.08	0.05	mg/L	10/12/99	E843
Phosphorus, Total	EPA 365.2	0.231	0.003	mg/L	10/12/99	E843
Organic Nitrogen	Calc.	2.73	0.01	mg/L	10/18/99	E843
pH, Field	EPA 150.1	6.70	n/a	std unit	10/7/99	E843
Conductivity	EPA 120.1	826	1.0	umhos/cm	10/7/99	E843
Water Temperature	EPA 170.1	26.9	0.1	°C	10/7/99	E843
Secchi Depth		1.4		ft.	10/7/99	E843
Flow		0.50		fps	10/7/99	E843
Weather, Condition		pt cloudy			10/7/99	E843
Dissolved Oxygen, Field	EPA 360.1	8.70	0.10	mg/L	10/7/99	E843
Salinity	SM2520B	0.4		%	10/7/99	E843
Sample Depth		1.0		ft.	10/7/99	E843
072-06A 3B Mid GRB 10/7/99	12:40					
Total Suspended Solids	EPA 160.2	7.6	0.7	mg/L	10/8/99	E843
Nitrite-N	EPA 354.1	<0.01	0.01	mg/L	10/8/99	E843
Nitrate-N	EPA 353.2	<0.01	0.01	mg/L	10/12/99	E843
Nitrogen, Total Kjeldahl	EPA 351.2	2.26	0.1	mg/L	10/18/99	E843

HRS Certification#'s 84352 and E84380(Nokomis) 85449 and E85457(Ft. Myers)

				REGE	· · ~ ~	
Analysis	Method	Result	D. L.	Unit	Analysis Date/Time	LabID:
Phosphorus, Total	EPA 365.2	0.258	0.003	mg/L	10/12/99	E84380
Organic Nitrogen	Calc.	2.18	0.01	mg/L	10/18/99	E84380
pH, Field	EPA 150.1	6.91	n/a	std unit	10/18/99	E84380
Conductivity	EPA 120.1	693	1.0	umhos/cm	10/7/99	E84380
Water Temperature	EPA 170.1	26.4	0.1	°С	10/7/99	E84380
Secchi Depth		1.4		ft.	10/7/99	E84380
Flow		0.50		fps	10/7/99	E84380
Weather, Condition		pt cloudy			10/7/99	E84380
Dissolved Oxygen, Field	EPA 360.1	6.91	0.10	mg/L	10/7/99	E84380
Salinity	SM2520B	0.3		%	10/7/99	E84380
Sample Depth		2.15		ft.	10/7/99	E84380
Ammonia-N	EPA 350.3	0.08	0.05	mg/L	10/18/99	E84380
10072-07A 3C 1' AB GRB 10/7/99	12:50					
Total Suspended Solids	EPA 160.2	12	0.7	mg/L	10/8/99	E84380
Nitrite-N	EPA 354.1	<0.01	10.0	mg/L	10/8/99	E84380
Nitrate-N	EPA 353.2	<0.01	0.01	mg/L	10/12/99	E84380
Nitrogen, Total Kjeldahl	EPA 351.2	2.14	0.1	mg/L	10/18/99	E84380
Ammonia-N	EPA 350.3	<0.05	0.05	mg/L	10/12/99	E84380
Phosphorus, Total	EPA 365.2	0.231	0.003	mg/L	10/12/99	E84380
Organic Nitrogen	Calc.	2.14	0.01	mg/L	10/18/99	E84380
pH, Field	EPA 150.1	6.90	n/a	std unit	10/7/99	E84380
Conductivity	EPA 120.1	766	1.0	umhos/cm	10/7/99	E84380
Water Temperature	EPA 170.1	26.3	0.1	°C	10/7/99	E84380
Secchi Depth		1.4		ft.	10/7/99	E84380
Flow		0.50		fps	10/7/99	E84380
Weather, Condition	•	pt cloudy			10/7/99	E84380
Dissolved Oxygen, Field	EPA 360.1	6.84	0.10	mg/L	10/7/99	E84380
Salinity	SM2520B	0.4		%	10/7/99	E84380
Sample Depth		3.3		ft.	10/7/99	E84380

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Analysis

Result D. L.

Unit Analysis Date/Time LabID:

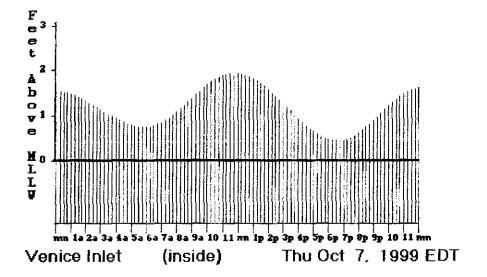
Approved by:

Comments:

Method

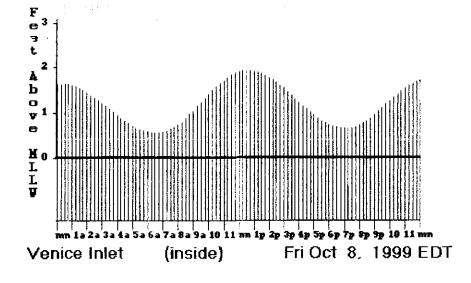
()

Debra Sanders Laboratory Director



TideMaster - (C) Zephyr Services, Pittsburgh PA

12:00H	1.6 ft	5:00a	0.8 ft	10:00a 1.8 ft	3:00p 1.3 ft	8:00p 0.7 ft
1:00a	1.5 £t	6:00a	0.8 £t		4:00p 1.0 ft	9:00p 0.9 ft
2:00a	1.4 ft	7:00a	0.9 ft	12:00N 2.0 ft 7	5:00p 0.7 ft	10:00p 1.3 ft
3:00a	1.2 ft	8:00a	1.1 ft	1:00p 1.9 ft/		11:00p 1.6 ft
4:00 a	1.0 ft	9:00a	1.5 ft	2:00p 1.6 ft	7:00p 0.5 ft	12:00H 1.7 ft



TideMaster - (C) Zephyr Services, Pittsburgh PA

/	12:00H	1.7 £€\	6:00a	0.8 ft	10:004	1.5 ft	3:00p	1.6 ft	8:00p	0.8 ft
	1:00a	1.7 £t	6:00a	0.6 £t	11:00a	1.8 ft	4:00p	1.3 <i>E</i> t	9:00p	1.0 ft
	The Real Property lies, the Person of the Pe				- T					i
			7:00a			2.0 £t	-		10:00p	1.3 ft
			-							1
	3:00a	1.3 ft	8:00a	0.8 £t	1:00p	2.0 ft	6:00p	0.8 ft	11:00p	1.6 ft
			1	,	\ :				and the second of the second	
	4:00a	1.0 ft	9:00a	1.1 ft	2:00p	1.8 ft	7:00p	0.7 £t	12:00H	1.8 ft
_										