

Chemical Analysis Report

NW-DIST-2010-06-30-03

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

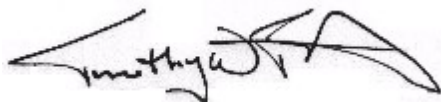
Event Description: **Beach Water Quality Monitoring - Pensacola and Navarre Beaches**
Request ID: **RQ-2010-06-07-54**
Customer: **NW-DIST**
Project ID: **DH-OIL-PST**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 308
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
Timothy W. Fitzpatrick
Liang-Tsair Lin, Ph.D.
Colin Wright, Ph.D.
Kathryn Brackett
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8085

Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 01-JUL-2010 15:32



Abbreviations and data remark codes

CERT # - NELAP (National Environmental Laboratory Accreditation Program) Certification Number of the laboratory that performed the analysis.

LCS – Laboratory Control Sample; in the QC Failures column, this notation indicates a batch recovery failure.

MS – Matrix Spike; in the QC Failures column, this notation indicates a batch recovery failure.

RPD – Relative Percent Difference; in the QC Failures column, this notation indicates a batch failure for precision.

CCV – Continuing Calibration Verification; in the QC Failures column, this notation indicates a failure of the calibration verification check sample.

RSD – Relative Standard Deviation expressed as a percentage.

SMP – Sample.

* - Item was outside the QC Limits.

** - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.

A - Value reported is the mean of two or more determinations

B - Results based on colony counts outside the acceptable range.

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

J - Estimated value

K - Actual value is known to be less than value given

L - Actual value is known to be greater than value given

N - Presumptive evidence of presence of material.

O - Sampled, but analysis lost or not performed.

Q - Sample held beyond normal holding time.

T - Value reported is less than the criterion of detection.

U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.

V - Analyte was detected in both sample and method blank.

X - Too few individuals to calculate SCI value.

Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate

Z - Colonies were too numerous to count (TNTC).

Precision is reported as relative percent difference unless otherwise noted.

Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published test performance acceptance criteria.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

All sample collection performed by Bureau of Laboratories staff followed the field Standard Operating Procedures adopted by reference in Rule 62-160 FAC unless otherwise noted.

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Results for NELAP accredited tests contained in this report meet the requirements specified by the National Environmental Laboratory Accreditation Conference (NELAC). All samples received were in acceptable condition and met NELAC requirements unless otherwise noted. Results generated in this report pertain to the samples collected and submitted for analysis.

Sample Location: FIELD BLANK

Collection Date/Time: 06/29/2010 01:00 PM

Field ID: BLANK

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1282408	EPA 8270D	Acenaphthene	0.048	U		ug/L	E31780
		Acenaphthylene	0.048	U		ug/L	
		Anthracene	0.048	UJ	CCV	ug/L	
		Benzo(a)anthracene	0.048	U		ug/L	
		Benzo(a)pyrene	0.048	U		ug/L	
		Benzo(b)fluoranthene	0.048	U		ug/L	
		Benzo(k)fluoranthene	0.048	U		ug/L	
		Benzo(g,h,i)perylene	0.048	U		ug/L	
		Chrysene	0.048	U		ug/L	
		Dibenzo(a,h)anthracene	0.048	U		ug/L	
		Fluoranthene	0.048	U		ug/L	
		Fluorene	0.048	U		ug/L	
		Indeno(1,2,3-cd)pyrene	0.048	U		ug/L	
		2-Methylnaphthalene	0.048	U		ug/L	
		Naphthalene	0.048	U		ug/L	
		Phenanthrene	0.048	U		ug/L	
		Pyrene	0.048	U		ug/L	
		Biphenyl**	0.048	U		ug/L	
		Dibenzothiophene**	0.048	U		ug/L	
		2,6-Dimethylnaphthalene**	0.048	U		ug/L	
		1-Methylnaphthalene	0.048	U		ug/L	
		1-Methylphenanthrene**	0.048	U		ug/L	
		2,3,5-Trimethylnaphthalene**	0.048	U		ug/L	

Ref. Method and Comment:

EPA 8270D: Insufficient sample to perform matrix spikes. QC failure(s) observed.

Sample Location: NAVARRE BEACH FISHING PIER

Collection Date/Time: 06/29/2010 02:45 PM

Field ID: NAVARRE BEACH FISHING PIER

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1282410	EPA 8270D	Acenaphthene	0.051	U		ug/L	E31780
		Acenaphthylene	0.051	U		ug/L	
		Anthracene	0.051	UJ	CCV	ug/L	
		Benzo(a)anthracene	0.051	U		ug/L	
		Benzo(a)pyrene	0.051	U		ug/L	
		Benzo(b)fluoranthene	0.051	U		ug/L	
		Benzo(k)fluoranthene	0.051	U		ug/L	
		Benzo(g,h,i)perylene	0.051	U		ug/L	
		Chrysene	0.051	U		ug/L	
		Dibenzo(a,h)anthracene	0.051	U		ug/L	
		Fluoranthene	0.051	U		ug/L	
		Fluorene	0.051	U		ug/L	
		Indeno(1,2,3-cd)pyrene	0.051	U		ug/L	
		2-Methylnaphthalene	0.051	U		ug/L	
		Naphthalene	0.051	U		ug/L	

Field ID: NAVARRE BEACH FISHING PIER

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1282410	EPA 8270D	Phenanthrene	0.051	U		ug/L	E31780
		Pyrene	0.051	U		ug/L	
		Biphenyl**	0.051	U		ug/L	
		Dibenzothiophene**	0.051	U		ug/L	
		2,6-Dimethylnaphthalene**	0.051	U		ug/L	
		1-Methylnaphthalene	0.051	U		ug/L	
		1-Methylphenanthrene**	0.051	U		ug/L	
		2,3,5-Trimethylnaphthalene**	0.051	U		ug/L	

Ref. Method and Comment:

EPA 8270D: Insufficient sample to perform matrix spikes. QC failure(s) observed.

Sample Location: NAVARRE BEACH PARK

Collection Date/Time: 06/29/2010 03:15 PM

Field ID: NAVARRE PARK

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1282411	EPA 8270D	Acenaphthene	0.050	U		ug/L	E31780
		Acenaphthylene	0.050	U		ug/L	
		Anthracene	0.050	UJ	CCV	ug/L	
		Benzo(a)anthracene	0.050	U		ug/L	
		Benzo(a)pyrene	0.050	U		ug/L	
		Benzo(b)fluoranthene	0.050	U		ug/L	
		Benzo(k)fluoranthene	0.050	U		ug/L	
		Benzo(g,h,i)perylene	0.050	U		ug/L	
		Chrysene	0.050	U		ug/L	
		Dibenzo(a,h)anthracene	0.050	U		ug/L	
		Fluoranthene	0.050	U		ug/L	
		Fluorene	0.050	U		ug/L	
		Indeno(1,2,3-cd)pyrene	0.050	U		ug/L	
		2-Methylnaphthalene	0.050	U		ug/L	
		Naphthalene	0.050	U		ug/L	
		Phenanthrene	0.050	U		ug/L	
		Pyrene	0.050	U		ug/L	
		Biphenyl**	0.050	U		ug/L	
		Dibenzothiophene**	0.050	U		ug/L	
		2,6-Dimethylnaphthalene**	0.050	U		ug/L	
		1-Methylnaphthalene	0.050	U		ug/L	
		1-Methylphenanthrene**	0.050	U		ug/L	
		2,3,5-Trimethylnaphthalene**	0.050	U		ug/L	

Ref. Method and Comment:

EPA 8270D: Insufficient sample to perform matrix spikes. QC failure(s) observed.

Sample Location: NAVARRE BEACH WEST

Collection Date/Time: 06/29/2010 02:10 PM

Field ID: NB WEST

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1282409	EPA 8270D	Acenaphthene	0.051	U		ug/L	E31780
		Acenaphthylene	0.051	U		ug/L	

Field ID: NB WEST

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1282409	EPA 8270D	Anthracene	0.051	UJ	CCV	ug/L	E31780
		Benzo(a)anthracene	0.051	U		ug/L	
		Benzo(a)pyrene	0.051	U		ug/L	
		Benzo(b)fluoranthene	0.051	U		ug/L	
		Benzo(k)fluoranthene	0.051	U		ug/L	
		Benzo(g,h,i)perylene	0.051	U		ug/L	
		Chrysene	0.051	U		ug/L	
		Dibenzo(a,h)anthracene	0.051	U		ug/L	
		Fluoranthene	0.051	U		ug/L	
		Fluorene	0.051	U		ug/L	
		Indeno(1,2,3-cd)pyrene	0.051	U		ug/L	
		2-Methylnaphthalene	0.051	U		ug/L	
		Naphthalene	0.051	U		ug/L	
		Phenanthrene	0.051	U		ug/L	
		Pyrene	0.051	U		ug/L	
		Biphenyl**	0.051	U		ug/L	
		Dibenzothiophene**	0.051	U		ug/L	
		2,6-Dimethylnaphthalene**	0.051	U		ug/L	
		1-Methylnaphthalene	0.051	U		ug/L	
		1-Methylphenanthrene**	0.051	U		ug/L	
		2,3,5-Trimethylnaphthalene**	0.051	U		ug/L	

Ref. Method and Comment:
EPA 8270D: Insufficient sample to perform matrix spikes. QC failure(s) observed.

Sample Location: PEN.BCH @ WALKOVER 16

Collection Date/Time: 06/29/2010 01:00 PM

Field ID: WALKOVER 16

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1282407	EPA 8270D	Acenaphthene	0.047	U		ug/L	E31780
		Acenaphthylene	0.047	U		ug/L	
		Anthracene	0.047	UJ	CCV	ug/L	
		Benzo(a)anthracene	0.047	U		ug/L	
		Benzo(a)pyrene	0.047	U		ug/L	
		Benzo(b)fluoranthene	0.047	U		ug/L	
		Benzo(k)fluoranthene	0.047	U		ug/L	
		Benzo(g,h,i)perylene	0.047	U		ug/L	
		Chrysene	0.047	U		ug/L	
		Dibenzo(a,h)anthracene	0.047	U		ug/L	
		Fluoranthene	0.047	U		ug/L	
		Fluorene	0.047	U		ug/L	
		Indeno(1,2,3-cd)pyrene	0.047	U		ug/L	
		2-Methylnaphthalene	0.047	U		ug/L	
		Naphthalene	0.047	U		ug/L	
		Phenanthrene	0.047	U		ug/L	
		Pyrene	0.047	U		ug/L	
		Biphenyl**	0.047	U		ug/L	

Field ID: WALKOVER 16

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1282407	EPA 8270D	Dibenzothiophene**	0.047	U		ug/L	E31780
		2,6-Dimethylnaphthalene**	0.047	U		ug/L	
		1-Methylnaphthalene	0.047	U		ug/L	
		1-Methylphenanthrene**	0.047	U		ug/L	
		2,3,5-Trimethylnaphthalene**	0.047	U		ug/L	

Ref. Method and Comment:
EPA 8270D: Insufficient sample to perform matrix spikes. QC failure(s) observed.

Sample Location: PENSACOLA BEACH @ FT. PICKENS

Collection Date/Time: 06/29/2010 12:15 PM

Field ID: PICKENS

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1282406	EPA 8270D	Acenaphthene	0.047	U		ug/L	E31780
		Acenaphthylene	0.047	U		ug/L	
		Anthracene	0.047	UJ	CCV	ug/L	
		Benzo(a)anthracene	0.27			ug/L	
		Benzo(a)pyrene	0.047	U		ug/L	
		Benzo(b)fluoranthene	0.047	U		ug/L	
		Benzo(k)fluoranthene	0.047	U		ug/L	
		Benzo(g,h,i)perylene	0.047	U		ug/L	
		Chrysene	0.13	I		ug/L	
		Dibenzo(a,h)anthracene	0.047	U		ug/L	
		Fluoranthene	0.047	U		ug/L	
		Fluorene	0.047	U		ug/L	
		Indeno(1,2,3-cd)pyrene	0.047	U		ug/L	
		2-Methylnaphthalene	0.047	U		ug/L	
		Naphthalene	0.047	UJ		ug/L	
		Phenanthrene	0.28			ug/L	
		Pyrene	0.047	U		ug/L	
		Biphenyl**	0.047	U		ug/L	
		Dibenzothiophene**	0.047	U		ug/L	
		2,6-Dimethylnaphthalene**	0.047	U		ug/L	
		1-Methylnaphthalene	0.047	U		ug/L	
		1-Methylphenanthrene**	0.56			ug/L	
		2,3,5-Trimethylnaphthalene**	0.047	U		ug/L	

Ref. Method and Comment:
EPA 8270D: A hydrocarbon pattern similar to that of the weathered Deepwater Horizon oil was observed in the sample. Insufficient sample to perform matrix spikes. Estimation due to Nitrobenzene-d5 surrogate spike recovery exceeding the control limits. QC failure(s) observed.

Quality Control Report

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 8270D	1-Methylnaphthalene	78.6	98.6			22.6	
	1-Methylphenanthrene	121	133			9.75	
	2,3,5-Trimethylnaphthalene	103	123			17.7	
	2,6-Dimethylnaphthalene	86.2	108			22.1	

Quality Control Report

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						SMP	MS
EPA 8270D	2-Methylnaphthalene	76.8	97.4			23.7	
	Acenaphthene	75.8	92.0			19.3	
	Acenaphthylene	81.8	96.6			16.6	
	Anthracene	87.6	101			14.6	
	Benzo(a)anthracene	104	116			11.3	
	Benzo(a)pyrene	107	118			9.63	
	Benzo(b)fluoranthene	101	111			9.61	
	Benzo(g,h,i)perylene	100	116			15.0	
	Benzo(k)fluoranthene	106	129			18.9	
	Biphenyl	85.6	106			21.5	
	Chrysene	104	117			11.4	
	Dibenzo(a,h)anthracene	103	118			13.7	
	Dibenzothiophene	119	133			11.3	
	Fluoranthene	113	127			11.2	
	Fluorene	85.6	99.4			14.9	
	Indeno(1,2,3-cd)pyrene	106	119			11.6	
	Naphthalene	65.2	87.4			29.1	
	Phenanthrene	88.4	100			12.7	
	Pyrene	94.0	106			12.2	

Reference Method Descriptions

Method:

EPA 8270D

Description

Low level PAH analyses in water matrices by GC/MS.

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8270D	06/30/2010	06/30/2010	Rasheda Ghaffari	06/30/2010	Mohammad Ghaffari	1282406, 1282407, 1282408, 1282409, 1282410, 1282411