Herrera, Rosalie

From: Grimmer, Natalie R
Sent: Friday, March 28, 2014 1:16 PM
To: Steven K. Roush (sroush@idem.in.gov)
Cc: Herrera, Rosalie
Subject: NonCompliance 24-Hour Notification Fax Report (03/25/14) - Follow up Sampling Information
Attachments: J73840-1 UDS Level 2 Report Final Report.pdf

Steve,

As identified in the Noncompliance 24-Hour Notification Fax Report that BP Whiting Business Unit submitted via fax to IDEM on 03/25/14, this email is to provide the sample results at the Outfall 002 (#6 Separator) for benzene and toxics. Attached are the results.

-Natalie

Natalie Grimmer
Environmental – Planning Team Lead
BP Products North America Inc.
Whiting Refinery - RSB 202
Phone: 219-718-8642
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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-73840-1
Client Project/Site: BP Whiting - UPSET OTCW

For:
BP Products North America Inc
2815 Indianapolis Blvd.
MC 122
Whiting, Indiana 46394

Attn: Ms. Rosalie Herrera

Authorized for release by:
3/26/2014 2:46:55 PM

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 500-73840-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative
500-73840-1

Comments
No additional comments.

Receipt
The samples were received on 3/25/2014 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C.

Except:

Oil and Grease bottle preserved by the lab.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: The %RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 228652 recovered outside control limits for Benzoic acid. All of the associated spike recoveries were within control limits.

No other analytical or quality issues were noted.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: BP Products North America Inc
Project/Site: BP Whiting - UPSET OTCW

TestAmerica Job ID: 500-73840-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-73840-1	6 Sep Inlet	Water	03/24/14 22:00	03/25/14 10:15
500-73840-2	6 Sep Outlet	Water	03/24/14 22:00	03/25/14 10:15

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Client Sample Results

Client: BP Products North America Inc
Project/Site: BP Whiting - UPSET OTCW

TestAmerica Job ID: 500-73840-1

Client Sample ID: 6 Sep Inlet

Date Collected: 03/24/14 22:00
Date Received: 03/25/14 10:15

Lab Sample ID: 500-73840-1

Matrix: Water

5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.93**		0.50	0.074	ug/L			03/26/14 09:54	1
Ethylbenzene	**1.5**		0.50	0.13	ug/L			03/26/14 09:54	1
Naphthalene	**1.3**		1.0	0.16	ug/L			03/26/14 09:54	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			03/26/14 09:54	1
Toluene	**4.4**		0.50	0.11	ug/L			03/26/14 09:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*75 - 125*		*03/26/14 09:54*	*1*
Toluene-d8 (Surr)	*101*		*75 - 120*		*03/26/14 09:54*	*1*
4-Bromofluorobenzene (Surr)	*93*		*75 - 120*		*03/26/14 09:54*	*1*
Dibromofluoromethane	*91*		*75 - 120*		*03/26/14 09:54*	*1*

Client Sample Results

Client: BP Products North America Inc
Project/Site: BP Whiting - UPSET OTCW

TestAmerica Job ID: 500-73840-1

Client Sample ID: 6 Sep Outlet

Date Collected: 03/24/14 22:00
Date Received: 03/25/14 10:15

Lab Sample ID: 500-73840-2

Matrix: Water

5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.4**		0.50	0.074	ug/L			03/26/14 10:20	1
Ethylbenzene	**0.91**		0.50	0.13	ug/L			03/26/14 10:20	1
Naphthalene	<0.16		1.0	0.16	ug/L			03/26/14 10:20	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			03/26/14 10:20	1
Toluene	**2.9**		0.50	0.11	ug/L			03/26/14 10:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 125*		*03/26/14 10:20*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*03/26/14 10:20*	*1*
4-Bromofluorobenzene (Surr)	*94*		*75 - 120*		*03/26/14 10:20*	*1*
Dibromofluoromethane	*92*		*75 - 120*		*03/26/14 10:20*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.43		5.9	0.43	ug/L		03/25/14 17:38	03/26/14 12:34	1
Bis(2-chloroethyl)ether	<0.42		2.4	0.42	ug/L		03/25/14 17:38	03/26/14 12:34	1
1,3-Dichlorobenzene	<0.30		2.4	0.30	ug/L		03/25/14 17:38	03/26/14 12:34	1
1,4-Dichlorobenzene	<0.32		2.4	0.32	ug/L		03/25/14 17:38	03/26/14 12:34	1
1,2-Dichlorobenzene	<0.34		2.4	0.34	ug/L		03/25/14 17:38	03/26/14 12:34	1
Benzyl alcohol	<3.6		24	3.6	ug/L		03/25/14 17:38	03/26/14 12:34	1
2-Methylphenol	<0.37		2.4	0.37	ug/L		03/25/14 17:38	03/26/14 12:34	1
2,2'-oxybis[1-chloropropane]	<0.36		2.4	0.36	ug/L		03/25/14 17:38	03/26/14 12:34	1
N-Nitrosodi-n-propylamine	<0.17		0.59	0.17	ug/L		03/25/14 17:38	03/26/14 12:34	1
Hexachloroethane	<1.2		5.9	1.2	ug/L		03/25/14 17:38	03/26/14 12:34	1
2-Chlorophenol	<0.95		5.9	0.95	ug/L		03/25/14 17:38	03/26/14 12:34	1
Nitrobenzene	<0.53		1.2	0.53	ug/L		03/25/14 17:38	03/26/14 12:34	1
Bis(2-chloroethoxy)methane	<0.36		2.4	0.36	ug/L		03/25/14 17:38	03/26/14 12:34	1
1,2,4-Trichlorobenzene	<0.36		2.4	0.36	ug/L		03/25/14 17:38	03/26/14 12:34	1
Benzoic acid	<5.4	*	24	5.4	ug/L		03/25/14 17:38	03/26/14 12:34	1
Isophorone	<0.34		2.4	0.34	ug/L		03/25/14 17:38	03/26/14 12:34	1
2,4-Dimethylphenol	<4.0		12	4.0	ug/L		03/25/14 17:38	03/26/14 12:34	1
Hexachlorobutadiene	<1.3		5.9	1.3	ug/L		03/25/14 17:38	03/26/14 12:34	1
Naphthalene	<0.36		1.2	0.36	ug/L		03/25/14 17:38	03/26/14 12:34	1
2,4-Dichlorophenol	<2.7		12	2.7	ug/L		03/25/14 17:38	03/26/14 12:34	1
4-Chloroaniline	<2.5		12	2.5	ug/L		03/25/14 17:38	03/26/14 12:34	1
2,4,6-Trichlorophenol	<1.3		5.9	1.3	ug/L		03/25/14 17:38	03/26/14 12:34	1
2,4,5-Trichlorophenol	<2.7		12	2.7	ug/L		03/25/14 17:38	03/26/14 12:34	1
Hexachlorocyclopentadiene	<4.1		24	4.1	ug/L		03/25/14 17:38	03/26/14 12:34	1
2-Methylnaphthalene	**0.34**	**J**	0.59	0.15	ug/L		03/25/14 17:38	03/26/14 12:34	1
2-Nitroaniline	<1.3		5.9	1.3	ug/L		03/25/14 17:38	03/26/14 12:34	1
2-Chloronaphthalene	<0.40		2.4	0.40	ug/L		03/25/14 17:38	03/26/14 12:34	1
4-Chloro-3-methylphenol	<2.6		12	2.6	ug/L		03/25/14 17:38	03/26/14 12:34	1
2,6-Dinitrotoluene	<0.14		0.59	0.14	ug/L		03/25/14 17:38	03/26/14 12:34	1
2-Nitrophenol	<2.5		12	2.5	ug/L		03/25/14 17:38	03/26/14 12:34	1
3-Nitroaniline	<2.7		12	2.7	ug/L		03/25/14 17:38	03/26/14 12:34	1
Dimethyl phthalate	<0.45		2.4	0.45	ug/L		03/25/14 17:38	03/26/14 12:34	1
2,4-Dinitrophenol	<8.8		24	8.8	ug/L		03/25/14 17:38	03/26/14 12:34	1
Acenaphthylene	<0.38		1.2	0.38	ug/L		03/25/14 17:38	03/26/14 12:34	1
2,4-Dinitrotoluene	<0.36		1.2	0.36	ug/L		03/25/14 17:38	03/26/14 12:34	1
Acenaphthene	<0.43		1.2	0.43	ug/L		03/25/14 17:38	03/26/14 12:34	1

Client Sample Results

Client: BP Products North America Inc
Project/Site: BP Whiting - UPSET OTCW

TestAmerica Job ID: 500-73840-1

Client Sample ID: 6 Sep Outlet

Date Collected: 03/24/14 22:00
Date Received: 03/25/14 10:15

Lab Sample ID: 500-73840-2

Matrix: Water

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Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	<0.42		2.4	0.42	ug/L		03/25/14 17:38	03/26/14 12:34	1
4-Nitrophenol	<2.8		24	2.8	ug/L		03/25/14 17:38	03/26/14 12:34	1
Fluorene	<0.45		1.2	0.45	ug/L		03/25/14 17:38	03/26/14 12:34	1
4-Nitroaniline	<4.7		12	4.7	ug/L		03/25/14 17:38	03/26/14 12:34	1
4-Bromophenyl phenyl ether	<1.1		5.9	1.1	ug/L		03/25/14 17:38	03/26/14 12:34	1
Hexachlorobenzene	<0.17		0.59	0.17	ug/L		03/25/14 17:38	03/26/14 12:34	1
Diethyl phthalate	<0.52		2.4	0.52	ug/L		03/25/14 17:38	03/26/14 12:34	1
4-Chlorophenyl phenyl ether	<0.96		5.9	0.96	ug/L		03/25/14 17:38	03/26/14 12:34	1
Pentachlorophenol	<6.7		24	6.7	ug/L		03/25/14 17:38	03/26/14 12:34	1
N-Nitrosodiphenylamine	<0.40		1.2	0.40	ug/L		03/25/14 17:38	03/26/14 12:34	1
4,6-Dinitro-2-methylphenol	<5.8		24	5.8	ug/L		03/25/14 17:38	03/26/14 12:34	1
Phenanthrene	<0.42		1.2	0.42	ug/L		03/25/14 17:38	03/26/14 12:34	1
Anthracene	<0.38		1.2	0.38	ug/L		03/25/14 17:38	03/26/14 12:34	1
Carbazole	<1.2		5.9	1.2	ug/L		03/25/14 17:38	03/26/14 12:34	1
Di-n-butyl phthalate	<0.95		5.9	0.95	ug/L		03/25/14 17:38	03/26/14 12:34	1
Fluoranthene	<0.38		1.2	0.38	ug/L		03/25/14 17:38	03/26/14 12:34	1
Pyrene	<0.57		1.2	0.57	ug/L		03/25/14 17:38	03/26/14 12:34	1
Butyl benzyl phthalate	<0.32		2.4	0.32	ug/L		03/25/14 17:38	03/26/14 12:34	1
Benzo[a]anthracene	<0.052		0.24	0.052	ug/L		03/25/14 17:38	03/26/14 12:34	1
Chrysene	<0.17		0.59	0.17	ug/L		03/25/14 17:38	03/26/14 12:34	1
3,3'-Dichlorobenzidine	<1.1		5.9	1.1	ug/L		03/25/14 17:38	03/26/14 12:34	1
Bis(2-ethylhexyl) phthalate	<2.9		12	2.9	ug/L		03/25/14 17:38	03/26/14 12:34	1
Di-n-octyl phthalate	<2.9		12	2.9	ug/L		03/25/14 17:38	03/26/14 12:34	1
Benzo[b]fluoranthene	<0.069		0.24	0.069	ug/L		03/25/14 17:38	03/26/14 12:34	1
Benzo[k]fluoranthene	<0.088		0.24	0.088	ug/L		03/25/14 17:38	03/26/14 12:34	1
Benzo[a]pyrene	<0.067		0.24	0.067	ug/L		03/25/14 17:38	03/26/14 12:34	1
Indeno[1,2,3-cd]pyrene	<0.10		0.24	0.10	ug/L		03/25/14 17:38	03/26/14 12:34	1
Dibenz(a,h)anthracene	<0.076		0.36	0.076	ug/L		03/25/14 17:38	03/26/14 12:34	1
Benzo[g,h,i]perylene	<0.50		1.2	0.50	ug/L		03/25/14 17:38	03/26/14 12:34	1
3 & 4 Methylphenol	<0.52		2.4	0.52	ug/L		03/25/14 17:38	03/26/14 12:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*36*		*20 - 100*	*03/25/14 17:38*	*03/26/14 12:34*	*1*
Phenol-d5 (Surr)	*28*		*20 - 100*	*03/25/14 17:38*	*03/26/14 12:34*	*1*
Nitrobenzene-d5 (Surr)	*55*		*41 - 110*	*03/25/14 17:38*	*03/26/14 12:34*	*1*
2-Fluorobiphenyl	*55*		*48 - 110*	*03/25/14 17:38*	*03/26/14 12:34*	*1*
2,4,6-Tribromophenol (Surr)	*56*		*50 - 129*	*03/25/14 17:38*	*03/26/14 12:34*	*1*
Terphenyl-d14 (Surr)	*76*		*44 - 132*	*03/25/14 17:38*	*03/26/14 12:34*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	**2.0**	**J**	5.8	0.63	mg/L		03/25/14 20:22	03/25/14 21:56	1

QC Association Summary

Client: BP Products North America Inc
Project/Site: BP Whiting - UPSET OTCW

TestAmerica Job ID: 500-73840-1

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GC/MS VOA

Analysis Batch: 228689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73840-1	6 Sep Inlet	Total/NA	Water	8260B	
500-73840-2	6 Sep Outlet	Total/NA	Water	8260B	
LCS 500-228689/4	Lab Control Sample	Total/NA	Water	8260B	
MB 500-228689/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 228652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73840-2	6 Sep Outlet	Total/NA	Water	3510C	
LCS 500-228652/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 500-228652/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 500-228652/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 228720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73840-2	6 Sep Outlet	Total/NA	Water	8270D	228652
LCS 500-228652/2-A	Lab Control Sample	Total/NA	Water	8270D	228652
LCSD 500-228652/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	228652
MB 500-228652/1-A	Method Blank	Total/NA	Water	8270D	228652

General Chemistry

Prep Batch: 228624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73840-2	6 Sep Outlet	Total/NA	Water	1664A	
LCS 500-228624/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 500-228624/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 228625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-73840-2	6 Sep Outlet	Total/NA	Water	1664A	228624
LCS 500-228624/2-A	Lab Control Sample	Total/NA	Water	1664A	228624
MB 500-228624/1-A	Method Blank	Total/NA	Water	1664A	228624

Surrogate Summary

Client: BP Products North America Inc
Project/Site: BP Whiting - UPSET OTCW

TestAmerica Job ID: 500-73840-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	TOL	BFB	DBFM
Lab Sample ID	**Client Sample ID**	**(75-125)**	**(75-120)**	**(75-120)**	**(75-120)**
500-73840-1	6 Sep Inlet	97	101	93	91
500-73840-2	6 Sep Outlet	99	99	94	92
LCS 500-228689/4	Lab Control Sample	102	97	93	97
MB 500-228689/6	Method Blank	99	99	96	92

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane

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Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		2FP	PHL	NBZ	FBP	TBP	TPH
Lab Sample ID	**Client Sample ID**	**(20-100)**	**(20-100)**	**(41-110)**	**(48-110)**	**(50-129)**	**(44-132)**
500-73840-2	6 Sep Outlet	36	28	55	55	56	76
LCS 500-228652/2-A	Lab Control Sample	44	34	80	75	87	106
LCSD 500-228652/3-A	Lab Control Sample Dup	47	33	82	74	83	100
MB 500-228652/1-A	Method Blank	42	30	62	64	63	89

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
NBZ = Nitrobenzene-d5 (Surr)
FBP = 2-Fluorobiphenyl
TBP = 2,4,6-Tribromophenol (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-228689/6
Matrix: Water
Analysis Batch: 228689

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.074		0.50	0.074	ug/L			03/26/14 09:29	1
Ethylbenzene	<0.13		0.50	0.13	ug/L			03/26/14 09:29	1
Naphthalene	<0.16		1.0	0.16	ug/L			03/26/14 09:29	1
Tetrachloroethene	<0.17		1.0	0.17	ug/L			03/26/14 09:29	1
Toluene	<0.11		0.50	0.11	ug/L			03/26/14 09:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 125*		*03/26/14 09:29*	*1*
Toluene-d8 (Surr)	*99*		*75 - 120*		*03/26/14 09:29*	*1*
4-Bromofluorobenzene (Surr)	*96*		*75 - 120*		*03/26/14 09:29*	*1*
Dibromofluoromethane	*92*		*75 - 120*		*03/26/14 09:29*	*1*

Lab Sample ID: LCS 500-228689/4
Matrix: Water
Analysis Batch: 228689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	50.0		ug/L		100	75 - 120
Ethylbenzene	50.0	51.1		ug/L		102	75 - 120
Naphthalene	50.0	52.0		ug/L		104	69 - 135
Tetrachloroethene	50.0	50.0		ug/L		100	75 - 120
Toluene	50.0	50.8		ug/L		102	75 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 125*
Toluene-d8 (Surr)	*97*		*75 - 120*
4-Bromofluorobenzene (Surr)	*93*		*75 - 120*
Dibromofluoromethane	*97*		*75 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-228652/1-A
Matrix: Water
Analysis Batch: 228720

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.36		5.0	0.36	ug/L		03/25/14 17:38	03/26/14 12:10	1
Bis(2-chloroethyl)ether	<0.35		2.0	0.35	ug/L		03/25/14 17:38	03/26/14 12:10	1
1,3-Dichlorobenzene	<0.25		2.0	0.25	ug/L		03/25/14 17:38	03/26/14 12:10	1
1,4-Dichlorobenzene	<0.27		2.0	0.27	ug/L		03/25/14 17:38	03/26/14 12:10	1
1,2-Dichlorobenzene	<0.29		2.0	0.29	ug/L		03/25/14 17:38	03/26/14 12:10	1
Benzyl alcohol	<3.1		20	3.1	ug/L		03/25/14 17:38	03/26/14 12:10	1
2-Methylphenol	<0.31		2.0	0.31	ug/L		03/25/14 17:38	03/26/14 12:10	1
2,2'-oxybis[1-chloropropane]	<0.30		2.0	0.30	ug/L		03/25/14 17:38	03/26/14 12:10	1
N-Nitrosodi-n-propylamine	<0.14		0.50	0.14	ug/L		03/25/14 17:38	03/26/14 12:10	1
Hexachloroethane	<0.97		5.0	0.97	ug/L		03/25/14 17:38	03/26/14 12:10	1
2-Chlorophenol	<0.80		5.0	0.80	ug/L		03/25/14 17:38	03/26/14 12:10	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-228652/1-A
Matrix: Water
Analysis Batch: 228720

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	<0.45		1.0	0.45	ug/L		03/25/14 17:38	03/26/14 12:10	1
Bis(2-chloroethoxy)methane	<0.30		2.0	0.30	ug/L		03/25/14 17:38	03/26/14 12:10	1
1,2,4-Trichlorobenzene	<0.30		2.0	0.30	ug/L		03/25/14 17:38	03/26/14 12:10	1
Benzoic acid	<4.6		20	4.6	ug/L		03/25/14 17:38	03/26/14 12:10	1
Isophorone	<0.29		2.0	0.29	ug/L		03/25/14 17:38	03/26/14 12:10	1
2,4-Dimethylphenol	<3.3		10	3.3	ug/L		03/25/14 17:38	03/26/14 12:10	1
Hexachlorobutadiene	<1.1		5.0	1.1	ug/L		03/25/14 17:38	03/26/14 12:10	1
Naphthalene	<0.30		1.0	0.30	ug/L		03/25/14 17:38	03/26/14 12:10	1
2,4-Dichlorophenol	<2.3		10	2.3	ug/L		03/25/14 17:38	03/26/14 12:10	1
4-Chloroaniline	<2.1		10	2.1	ug/L		03/25/14 17:38	03/26/14 12:10	1
2,4,6-Trichlorophenol	<1.1		5.0	1.1	ug/L		03/25/14 17:38	03/26/14 12:10	1
2,4,5-Trichlorophenol	<2.3		10	2.3	ug/L		03/25/14 17:38	03/26/14 12:10	1
Hexachlorocyclopentadiene	<3.4		20	3.4	ug/L		03/25/14 17:38	03/26/14 12:10	1
2-Methylnaphthalene	<0.13		0.50	0.13	ug/L		03/25/14 17:38	03/26/14 12:10	1
2-Nitroaniline	<1.1		5.0	1.1	ug/L		03/25/14 17:38	03/26/14 12:10	1
2-Chloronaphthalene	<0.34		2.0	0.34	ug/L		03/25/14 17:38	03/26/14 12:10	1
4-Chloro-3-methylphenol	<2.2		10	2.2	ug/L		03/25/14 17:38	03/26/14 12:10	1
2,6-Dinitrotoluene	<0.12		0.50	0.12	ug/L		03/25/14 17:38	03/26/14 12:10	1
2-Nitrophenol	<2.1		10	2.1	ug/L		03/25/14 17:38	03/26/14 12:10	1
3-Nitroaniline	<2.3		10	2.3	ug/L		03/25/14 17:38	03/26/14 12:10	1
Dimethyl phthalate	<0.38		2.0	0.38	ug/L		03/25/14 17:38	03/26/14 12:10	1
2,4-Dinitrophenol	<7.4		20	7.4	ug/L		03/25/14 17:38	03/26/14 12:10	1
Acenaphthylene	<0.32		1.0	0.32	ug/L		03/25/14 17:38	03/26/14 12:10	1
2,4-Dinitrotoluene	<0.30		1.0	0.30	ug/L		03/25/14 17:38	03/26/14 12:10	1
Acenaphthene	<0.36		1.0	0.36	ug/L		03/25/14 17:38	03/26/14 12:10	1
Dibenzofuran	<0.35		2.0	0.35	ug/L		03/25/14 17:38	03/26/14 12:10	1
4-Nitrophenol	<2.3		20	2.3	ug/L		03/25/14 17:38	03/26/14 12:10	1
Fluorene	<0.38		1.0	0.38	ug/L		03/25/14 17:38	03/26/14 12:10	1
4-Nitroaniline	<3.9		10	3.9	ug/L		03/25/14 17:38	03/26/14 12:10	1
4-Bromophenyl phenyl ether	<0.91		5.0	0.91	ug/L		03/25/14 17:38	03/26/14 12:10	1
Hexachlorobenzene	<0.14		0.50	0.14	ug/L		03/25/14 17:38	03/26/14 12:10	1
Diethyl phthalate	<0.44		2.0	0.44	ug/L		03/25/14 17:38	03/26/14 12:10	1
4-Chlorophenyl phenyl ether	<0.81		5.0	0.81	ug/L		03/25/14 17:38	03/26/14 12:10	1
Pentachlorophenol	<5.6		20	5.6	ug/L		03/25/14 17:38	03/26/14 12:10	1
N-Nitrosodiphenylamine	<0.34		1.0	0.34	ug/L		03/25/14 17:38	03/26/14 12:10	1
4,6-Dinitro-2-methylphenol	<4.9		20	4.9	ug/L		03/25/14 17:38	03/26/14 12:10	1
Phenanthrene	<0.35		1.0	0.35	ug/L		03/25/14 17:38	03/26/14 12:10	1
Anthracene	<0.32		1.0	0.32	ug/L		03/25/14 17:38	03/26/14 12:10	1
Carbazole	<0.99		5.0	0.99	ug/L		03/25/14 17:38	03/26/14 12:10	1
Di-n-butyl phthalate	<0.80		5.0	0.80	ug/L		03/25/14 17:38	03/26/14 12:10	1
Fluoranthene	<0.32		1.0	0.32	ug/L		03/25/14 17:38	03/26/14 12:10	1
Pyrene	<0.48		1.0	0.48	ug/L		03/25/14 17:38	03/26/14 12:10	1
Butyl benzyl phthalate	<0.27		2.0	0.27	ug/L		03/25/14 17:38	03/26/14 12:10	1
Benzo[a]anthracene	<0.044		0.20	0.044	ug/L		03/25/14 17:38	03/26/14 12:10	1
Chrysene	<0.14		0.50	0.14	ug/L		03/25/14 17:38	03/26/14 12:10	1
3,3'-Dichlorobenzidine	<0.94		5.0	0.94	ug/L		03/25/14 17:38	03/26/14 12:10	1
Bis(2-ethylhexyl) phthalate	<2.4		10	2.4	ug/L		03/25/14 17:38	03/26/14 12:10	1
Di-n-octyl phthalate	<2.5		10	2.5	ug/L		03/25/14 17:38	03/26/14 12:10	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-228652/1-A
Matrix: Water
Analysis Batch: 228720

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228652

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	<0.058		0.20	0.058	ug/L		03/25/14 17:38	03/26/14 12:10	1
Benzo[k]fluoranthene	<0.074		0.20	0.074	ug/L		03/25/14 17:38	03/26/14 12:10	1
Benzo[a]pyrene	<0.056		0.20	0.056	ug/L		03/25/14 17:38	03/26/14 12:10	1
Indeno[1,2,3-cd]pyrene	<0.084		0.20	0.084	ug/L		03/25/14 17:38	03/26/14 12:10	1
Dibenz(a,h)anthracene	<0.064		0.30	0.064	ug/L		03/25/14 17:38	03/26/14 12:10	1
Benzo[g,h,i]perylene	<0.42		1.0	0.42	ug/L		03/25/14 17:38	03/26/14 12:10	1
3 & 4 Methylphenol	<0.44		2.0	0.44	ug/L		03/25/14 17:38	03/26/14 12:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*42*		*20 - 100*	*03/25/14 17:38*	*03/26/14 12:10*	*1*
Phenol-d5 (Surr)	*30*		*20 - 100*	*03/25/14 17:38*	*03/26/14 12:10*	*1*
Nitrobenzene-d5 (Surr)	*62*		*41 - 110*	*03/25/14 17:38*	*03/26/14 12:10*	*1*
2-Fluorobiphenyl	*64*		*48 - 110*	*03/25/14 17:38*	*03/26/14 12:10*	*1*
2,4,6-Tribromophenol (Surr)	*63*		*50 - 129*	*03/25/14 17:38*	*03/26/14 12:10*	*1*
Terphenyl-d14 (Surr)	*89*		*44 - 132*	*03/25/14 17:38*	*03/26/14 12:10*	*1*

Lab Sample ID: LCS 500-228652/2-A
Matrix: Water
Analysis Batch: 228720

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	40.0	15.5		ug/L		39	20 - 100
Bis(2-chloroethyl)ether	40.0	28.9		ug/L		72	49 - 110
1,3-Dichlorobenzene	40.0	26.6		ug/L		67	34 - 100
1,4-Dichlorobenzene	40.0	29.3		ug/L		73	33 - 100
1,2-Dichlorobenzene	40.0	28.9		ug/L		72	34 - 100
Benzyl alcohol	40.0	28.8		ug/L		72	42 - 110
2-Methylphenol	40.0	29.1		ug/L		73	42 - 100
2,2'-oxybis[1-chloropropane]	40.0	30.1		ug/L		75	32 - 110
N-Nitrosodi-n-propylamine	40.0	32.0		ug/L		80	43 - 110
Hexachloroethane	40.0	26.5		ug/L		66	29 - 100
2-Chlorophenol	40.0	31.7		ug/L		79	50 - 110
Nitrobenzene	40.0	30.9		ug/L		77	52 - 110
Bis(2-chloroethoxy)methane	40.0	32.8		ug/L		82	56 - 110
1,2,4-Trichlorobenzene	40.0	28.7		ug/L		72	34 - 110
Benzoic acid	40.0	19.1	J	ug/L		48	10 - 100
Isophorone	40.0	33.9		ug/L		85	51 - 110
2,4-Dimethylphenol	40.0	32.1		ug/L		80	48 - 110
Hexachlorobutadiene	40.0	28.5		ug/L		71	28 - 110
Naphthalene	40.0	28.2		ug/L		71	39 - 110
2,4-Dichlorophenol	40.0	35.5		ug/L		89	58 - 110
4-Chloroaniline	40.0	32.6		ug/L		82	47 - 110
2,4,6-Trichlorophenol	40.0	32.6		ug/L		81	63 - 110
2,4,5-Trichlorophenol	40.0	36.0		ug/L		90	63 - 110
Hexachlorocyclopentadiene	40.0	26.4		ug/L		66	15 - 110
2-Methylnaphthalene	40.0	33.2		ug/L		83	39 - 110
2-Nitroaniline	40.0	33.3		ug/L		83	62 - 121
2-Chloronaphthalene	40.0	30.0		ug/L		75	48 - 110

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-228652/2-A
Matrix: Water
Analysis Batch: 228720

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228652

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chloro-3-methylphenol	40.0	37.6		ug/L		94	52 - 111
2,6-Dinitrotoluene	40.0	35.1		ug/L		88	63 - 110
2-Nitrophenol	40.0	34.9		ug/L		87	56 - 110
3-Nitroaniline	40.0	36.5		ug/L		91	55 - 113
Dimethyl phthalate	40.0	34.5		ug/L		86	65 - 110
2,4-Dinitrophenol	80.0	80.6		ug/L		101	25 - 148
Acenaphthylene	40.0	29.9		ug/L		75	56 - 110
2,4-Dinitrotoluene	40.0	37.4		ug/L		94	62 - 119
Acenaphthene	40.0	33.5		ug/L		84	53 - 110
Dibenzofuran	40.0	34.3		ug/L		86	56 - 110
4-Nitrophenol	80.0	38.7		ug/L		48	20 - 100
Fluorene	40.0	32.9		ug/L		82	53 - 110
4-Nitroaniline	40.0	38.3		ug/L		96	52 - 125
4-Bromophenyl phenyl ether	40.0	36.0		ug/L		90	59 - 110
Hexachlorobenzene	40.0	36.4		ug/L		91	60 - 110
Diethyl phthalate	40.0	38.8		ug/L		97	63 - 110
4-Chlorophenyl phenyl ether	40.0	35.8		ug/L		89	59 - 110
Pentachlorophenol	80.0	76.3		ug/L		95	42 - 127
N-Nitrosodiphenylamine	40.0	39.2		ug/L		98	64 - 110
4,6-Dinitro-2-methylphenol	80.0	86.4		ug/L		108	58 - 121
Phenanthrene	40.0	34.6		ug/L		87	59 - 110
Anthracene	40.0	34.7		ug/L		87	58 - 110
Carbazole	40.0	39.5		ug/L		99	62 - 112
Di-n-butyl phthalate	40.0	44.6		ug/L		111	64 - 116
Fluoranthene	40.0	35.7		ug/L		89	62 - 112
Pyrene	40.0	40.9		ug/L		102	58 - 115
Butyl benzyl phthalate	40.0	49.1		ug/L		123	64 - 126
Benzo[a]anthracene	40.0	37.6		ug/L		94	62 - 110
Chrysene	40.0	37.5		ug/L		94	62 - 111
3,3'-Dichlorobenzidine	40.0	42.2		ug/L		105	56 - 111
Bis(2-ethylhexyl) phthalate	40.0	41.9		ug/L		105	62 - 122
Di-n-octyl phthalate	40.0	42.6		ug/L		107	59 - 131
Benzo[b]fluoranthene	40.0	36.6		ug/L		91	60 - 111
Benzo[k]fluoranthene	40.0	37.8		ug/L		95	59 - 116
Benzo[a]pyrene	40.0	36.1		ug/L		90	63 - 110
Indeno[1,2,3-cd]pyrene	40.0	39.7		ug/L		99	61 - 117
Dibenz(a,h)anthracene	40.0	40.0		ug/L		100	59 - 120
Benzo[g,h,i]perylene	40.0	40.2		ug/L		100	56 - 123
3 & 4 Methylphenol	40.0	27.5		ug/L		69	38 - 110

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*44*		*20 - 100*
Phenol-d5 (Surr)	*34*		*20 - 100*
Nitrobenzene-d5 (Surr)	*80*		*41 - 110*
2-Fluorobiphenyl	*75*		*48 - 110*
2,4,6-Tribromophenol (Surr)	*87*		*50 - 129*
Terphenyl-d14 (Surr)	*106*		*44 - 132*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 500-228652/3-A
Matrix: Water
Analysis Batch: 228720

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 228652

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	40.0	15.9		ug/L		40	20 - 100	3	20
Bis(2-chloroethyl)ether	40.0	31.1		ug/L		78	49 - 110	7	20
1,3-Dichlorobenzene	40.0	27.6		ug/L		69	34 - 100	4	20
1,4-Dichlorobenzene	40.0	30.6		ug/L		76	33 - 100	4	20
1,2-Dichlorobenzene	40.0	30.3		ug/L		76	34 - 100	5	20
Benzyl alcohol	40.0	28.7		ug/L		72	42 - 110	0	20
2-Methylphenol	40.0	29.5		ug/L		74	42 - 100	1	20
2,2'-oxybis[1-chloropropane]	40.0	31.5		ug/L		79	32 - 110	4	20
N-Nitrosodi-n-propylamine	40.0	29.7		ug/L		74	43 - 110	7	20
Hexachloroethane	40.0	28.0		ug/L		70	29 - 100	6	20
2-Chlorophenol	40.0	33.6		ug/L		84	50 - 110	6	20
Nitrobenzene	40.0	33.1		ug/L		83	52 - 110	7	20
Bis(2-chloroethoxy)methane	40.0	33.4		ug/L		83	56 - 110	2	20
1,2,4-Trichlorobenzene	40.0	29.8		ug/L		75	34 - 110	4	20
Benzoic acid	40.0	15.2	J *	ug/L		38	10 - 100	23	20
Isophorone	40.0	33.2		ug/L		83	51 - 110	2	20
2,4-Dimethylphenol	40.0	33.6		ug/L		84	48 - 110	5	20
Hexachlorobutadiene	40.0	29.6		ug/L		74	28 - 110	4	20
Naphthalene	40.0	30.1		ug/L		75	39 - 110	6	20
2,4-Dichlorophenol	40.0	35.9		ug/L		90	58 - 110	1	20
4-Chloroaniline	40.0	35.1		ug/L		88	47 - 110	7	20
2,4,6-Trichlorophenol	40.0	33.8		ug/L		84	63 - 110	4	20
2,4,5-Trichlorophenol	40.0	36.1		ug/L		90	63 - 110	0	20
Hexachlorocyclopentadiene	40.0	28.2		ug/L		71	15 - 110	7	20
2-Methylnaphthalene	40.0	33.4		ug/L		83	39 - 110	0	20
2-Nitroaniline	40.0	34.4		ug/L		86	62 - 121	3	20
2-Chloronaphthalene	40.0	31.0		ug/L		77	48 - 110	3	20
4-Chloro-3-methylphenol	40.0	36.0		ug/L		90	52 - 111	4	20
2,6-Dinitrotoluene	40.0	33.9		ug/L		85	63 - 110	3	20
2-Nitrophenol	40.0	36.8		ug/L		92	56 - 110	5	20
3-Nitroaniline	40.0	37.3		ug/L		93	55 - 113	2	20
Dimethyl phthalate	40.0	34.7		ug/L		87	65 - 110	1	20
2,4-Dinitrophenol	80.0	78.1		ug/L		98	25 - 148	3	20
Acenaphthylene	40.0	30.8		ug/L		77	56 - 110	3	20
2,4-Dinitrotoluene	40.0	37.3		ug/L		93	62 - 119	0	20
Acenaphthene	40.0	33.7		ug/L		84	53 - 110	1	20
Dibenzofuran	40.0	34.8		ug/L		87	56 - 110	1	20
4-Nitrophenol	80.0	36.3		ug/L		45	20 - 100	6	20
Fluorene	40.0	32.8		ug/L		82	53 - 110	0	20
4-Nitroaniline	40.0	40.9		ug/L		102	52 - 125	7	20
4-Bromophenyl phenyl ether	40.0	37.8		ug/L		94	59 - 110	5	20
Hexachlorobenzene	40.0	37.9		ug/L		95	60 - 110	4	20
Diethyl phthalate	40.0	40.4		ug/L		101	63 - 110	4	20
4-Chlorophenyl phenyl ether	40.0	35.6		ug/L		89	59 - 110	0	20
Pentachlorophenol	80.0	75.2		ug/L		94	42 - 127	1	20
N-Nitrosodiphenylamine	40.0	39.8		ug/L		99	64 - 110	1	20
4,6-Dinitro-2-methylphenol	80.0	81.7		ug/L		102	58 - 121	6	20
Phenanthrene	40.0	35.7		ug/L		89	59 - 110	3	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 500-228652/3-A
Matrix: Water
Analysis Batch: 228720

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 228652

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Anthracene	40.0	34.5		ug/L		86	58 - 110	1	20
Carbazole	40.0	39.4		ug/L		99	62 - 112	0	20
Di-n-butyl phthalate	40.0	43.2		ug/L		108	64 - 116	3	20
Fluoranthene	40.0	34.1		ug/L		85	62 - 112	5	20
Pyrene	40.0	40.1		ug/L		100	58 - 115	2	20
Butyl benzyl phthalate	40.0	44.9		ug/L		112	64 - 126	9	20
Benzo[a]anthracene	40.0	35.5		ug/L		89	62 - 110	6	20
Chrysene	40.0	35.3		ug/L		88	62 - 111	6	20
3,3'-Dichlorobenzidine	40.0	40.3		ug/L		101	56 - 111	5	20
Bis(2-ethylhexyl) phthalate	40.0	38.4		ug/L		96	62 - 122	9	20
Di-n-octyl phthalate	40.0	37.9		ug/L		95	59 - 131	12	20
Benzo[b]fluoranthene	40.0	36.9		ug/L		92	60 - 111	1	20
Benzo[k]fluoranthene	40.0	34.6		ug/L		86	59 - 116	9	20
Benzo[a]pyrene	40.0	34.1		ug/L		85	63 - 110	6	20
Indeno[1,2,3-cd]pyrene	40.0	37.5		ug/L		94	61 - 117	6	20
Dibenz(a,h)anthracene	40.0	38.0		ug/L		95	59 - 120	5	20
Benzo[g,h,i]perylene	40.0	38.1		ug/L		95	56 - 123	5	20
3 & 4 Methylphenol	40.0	27.5		ug/L		69	38 - 110	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*47*		*20 - 100*
Phenol-d5 (Surr)	*33*		*20 - 100*
Nitrobenzene-d5 (Surr)	*82*		*41 - 110*
2-Fluorobiphenyl	*74*		*48 - 110*
2,4,6-Tribromophenol (Surr)	*83*		*50 - 129*
Terphenyl-d14 (Surr)	*100*		*44 - 132*

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 500-228624/1-A
Matrix: Water
Analysis Batch: 228625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228624

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	<0.54		5.0	0.54	mg/L		03/25/14 17:40	03/25/14 20:45	1

Lab Sample ID: LCS 500-228624/2-A
Matrix: Water
Analysis Batch: 228625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228624

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM (Oil & Grease)	40.0	39.8		mg/L		100	78 - 114

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	RPD of the LCS and LCSD exceeds the control limits

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: BP Products North America Inc
Project/Site: BP Whiting - UPSET OTCW

TestAmerica Job ID: 500-73840-1

Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Indiana	State Program	5	C-IL-02	04-30-14 *

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* Expired certification is currently pending renewal and is considered valid.

TestAmerica
THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.53

500-73840 COC

(optional)
Report To
Contact: Rose Herrera
Company: BP
Address:
Address:
Phone: 219-473-3393
Fax:
E-Mail: Rosalie.herrera@bp.com

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference# 3000285170

Chain of Custody Record

Lab Job #: 500-73840
Chain of Custody Number:
Page ____ of ____
Temperature °C of Cooler: 3.5

Client: BP Whiting
Client Project #: PO 3000285170
Project Name: UPSET OTCW
Project Location/State: Lakefront otcw
Lab Project #:
Sampler: Lerato Matlamela
Lab PM:

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Benzene	Ethylbenzene	Naphthalene	phenol	toluene	Tetrachloroethylene	O+G			Comments
1		6Sep Inlet	3/24	10pm	3	WW	X									
2		6Sep outlet	3/24	10pm	3	WW	X	X	X	X	X	X				
		6Sep outlet	3/24	10pm	1	WW		X	X	X	X	X				
		~~6Sep~~ outlet	3/24	10pm	1	WW							X			
		~~6Sep Inlet~~	~~3/24~~		~~3~~	~~WW~~	~~X~~									
		~~6Sep Outlet~~	~~3/24~~		~~3~~	~~WW~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~				

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
[illegible]	BP	3/25		[illegible]	TA	3-25-14	9:30
[illegible]	TA	3-25-14	1010	[illegible]	TA	3/25/14	1015
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)
3/26/2014

Historical Internal Chain of Custody

Login	Smp	Customer Sample ID	Matrix	Container ID	Lab Sample ID	Container Type	Location	Custody User	I/O	ICOC ID	ICOC Date
500-73840	1	6 Sep Inlet	Water	500-2644986	500-73840-A-1	Voa Vial 40ml - Hydrochloric Acid					
500-73840	1	6 Sep Inlet	Water	500-2644987	500-73840-B-1	Voa Vial 40ml - Hydrochloric Acid					
500-73840	1	6 Sep Inlet	Water	500-2644988	500-73840-C-1	Voa Vial 40ml - Hydrochloric Acid					
500-73840	2	6 Sep Outlet	Water	500-2644989	500-73840-A-2	Voa Vial 40ml - Hydrochloric Acid					
500-73840	2	6 Sep Outlet	Water	500-2644990	500-73840-B-2	Voa Vial 40ml - Hydrochloric Acid					
500-73840	2	6 Sep Outlet	Water	500-2644991	500-73840-C-2	Voa Vial 40ml - Hydrochloric Acid					
500-73840	2	6 Sep Outlet	Water	500-2645172	500-73840-D-2	Amber Glass 1 liter Wide -					
500-73840	2	6 Sep Outlet	Water	500-2645405	500-73840-D-2-A		CHI_GCMS BNA_Extract_Refrig.	Dillman, Jessica D	I	500-47018	03/26/14 07:37
500-73840	2	6 Sep Outlet	Water	500-2645173	500-73840-E-2	Amber Glass 1 liter Wide -					
500-73840	2	6 Sep Outlet	Water	500-2645380	500-73840-E-2-A						

Login Sample Receipt Checklist

Client: BP Products North America Inc

Job Number: 500-73840-1

Login Number: 73840
List Number: 1
Creator: Lunt, Jeff T

List Source: TestAmerica Chicago

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	3.5
Cooler Temperature is acceptable.	True	BP LaMP temp checks per 3.1.3; Samples rec'd = 6C; Temp maintained during login.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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