ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Case Narrative for:

SHAW ENVIRONMENTAL & INFRASTRUCTURE

Certificate of Analysis Number:

L0020718

Report To:		Project Name:	BAYOU CORNE
SHAW ENVIRONMENTAL & INFRASTRUCTURE		Site:	LDNR/BAYOU CORNE
DEBORAH SAXTON		Site Address:	
4171 ESSEN LANE			
BATON ROUGE		PO Number:	
LA		State:	Louisiana
70809-		State Cert. No.:	02048
ph: (225) 932-2500	fax: (225) 987-7300	Date Reported:	10/5/2012

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data for those samples spiked by the laboratory and may be applicable to other samples of similar matrix from the site. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process. If insufficient sample is supplied for MS/MSD, a Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) are reported with the analytical batch and serve as the batch quality control (QC).

Exception: SW8270D: Client Sample ID, 100112-SW-SH15-20, had the extraction surrogates recoveries below the lab generated LCL due to suspected matrix interference. A reanalysis of the sample extract confirmed the low recovery.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

Accutest Gulf Coast is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Cristina C. Thibeaux

10/9/2012

Cristina Thibeaux
Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

Version 2.1 - Modified February 11, 2011

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(337) 237-4775

SHAW ENVIRONMENTAL & INFRASTRUCTURE

Certificate of Analysis Number:

L0020718

Report To: SHAW ENVIRONMENTAL & INFRASTRUCTURE
DEBORAH SAXTON
4171 ESSEN LANE

BATON ROUGE
LA
70809-
ph: (225) 932-2500 fax: (225) 987-7300

Fax To:

Project Name: BAYOU CORNE
Site: LDNR/BAYOU CORNE
Site Address:

PO Number:
State: Louisiana
State Cert. No.: 02048
Date Reported: 10/5/2012

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
100112-SW-SH15-20	L0020718-01	Water	10/01/2012 10:40	10/2/2012 4:30:00 PM		☐
100112-SW-SH01	L0020718-02	Oil	10/01/2012 11:05	10/2/2012 4:30:00 PM		☐
100112-W-FRAC	L0020718-03	Oil	10/01/2012 12:40	10/2/2012 4:30:00 PM		☐

Cristina Thibeaux
Project Manager

10/9/2012
Date

Ron Benjamin
Laboratory Director

Rebecca Haryett
Quality Assurance Officer

Version 2.1 - Modified February 11, 2011

10/9/2012 10:28:09 AM

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: 100112-SW-SH15-20 **Collected:** 10/01/2012 10:40 **Lab Sample ID:** L0020718-01

Site: LDNR/BAYOU CORNE

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
PAHS BY EPA 8270D				**MCL**	**SW8270D**	**Units: mg/L**		
1-Methylnaphthalene	ND			0.018	1	10/03/12 21:20	CH	4742267
2-Methylnaphthalene	ND			0.018	1	10/03/12 21:20	CH	4742267
Acenaphthene	ND			0.018	1	10/03/12 21:20	CH	4742267
Acenaphthylene	ND			0.018	1	10/03/12 21:20	CH	4742267
Anthracene	ND			0.018	1	10/03/12 21:20	CH	4742267
Benz(a)anthracene	ND			0.018	1	10/03/12 21:20	CH	4742267
Benzo(a)pyrene	ND			0.018	1	10/03/12 21:20	CH	4742267
Benzo(b)fluoranthene	ND			0.018	1	10/03/12 21:20	CH	4742267
Benzo(g,h,i)perylene	ND			0.018	1	10/03/12 21:20	CH	4742267
Benzo(k)fluoranthene	ND			0.018	1	10/03/12 21:20	CH	4742267
Chrysene	ND			0.018	1	10/03/12 21:20	CH	4742267
Dibenz(a,h)anthracene	ND			0.018	1	10/03/12 21:20	CH	4742267
Fluoranthene	ND			0.018	1	10/03/12 21:20	CH	4742267
Fluorene	ND			0.018	1	10/03/12 21:20	CH	4742267
Indeno(1,2,3-cd)pyrene	ND			0.018	1	10/03/12 21:20	CH	4742267
Naphthalene	ND			0.018	1	10/03/12 21:20	CH	4742267
Phenanthrene	ND			0.018	1	10/03/12 21:20	CH	4742267
Pyrene	ND			0.018	1	10/03/12 21:20	CH	4742267
Surr: 2-Fluorobiphenyl	28.2	*	%	41-124	1	10/03/12 21:20	CH	4742267
Surr: 4-Terphenyl-d14	24.7	*	%	36-129	1	10/03/12 21:20	CH	4742267
Surr: Nitrobenzene-d5	24.7	*	%	40-143	1	10/03/12 21:20	CH	4742267

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	10/03/2012 14:11	JT	3.64

TOTAL PETROLEUM HYDROCARBONS- COMPONENT ID				**MCL**	**SW8015C**	**Units: mg/L**		
Diesel Range Organics	3.7			0.36	1	10/03/12 20:26	DF	4742106
Motor Oil	ND			0.36	1	10/03/12 20:26	DF	4742106
Surr: o-Terphenyl	66.5		%	47-125	1	10/03/12 20:26	DF	4742106

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	10/03/2012 14:09	JT	3.64

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

10/9/2012 10:28:14 AM

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: 100112-SW-SH01 **Collected:** 10/01/2012 11:05 **Lab Sample ID:** L0020718-02

Site: LDNR/BAYOU CORNE

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE ORGANICS BY EPA 8270D- WASTE DILUTION			**MCL**	**SW8270D**	**Units: mg/Kg**		
1-Methylnaphthalene	ND		100	10	10/03/12 22:02	CH	4742206
2-Methylnaphthalene	ND		100	10	10/03/12 22:02	CH	4742206
Acenaphthene	ND		100	10	10/03/12 22:02	CH	4742206
Acenaphthylene	ND		100	10	10/03/12 22:02	CH	4742206
Anthracene	ND		100	10	10/03/12 22:02	CH	4742206
Benz(a)anthracene	ND		100	10	10/03/12 22:02	CH	4742206
Benzo(a)pyrene	ND		100	10	10/03/12 22:02	CH	4742206
Benzo(b)fluoranthene	ND		100	10	10/03/12 22:02	CH	4742206
Benzo(g,h,i)perylene	ND		100	10	10/03/12 22:02	CH	4742206
Benzo(k)fluoranthene	ND		100	10	10/03/12 22:02	CH	4742206
Chrysene	ND		100	10	10/03/12 22:02	CH	4742206
Dibenz(a,h)anthracene	ND		100	10	10/03/12 22:02	CH	4742206
Fluoranthene	ND		100	10	10/03/12 22:02	CH	4742206
Fluorene	ND		100	10	10/03/12 22:02	CH	4742206
Indeno(1,2,3-cd)pyrene	ND		100	10	10/03/12 22:02	CH	4742206
Naphthalene	ND		100	10	10/03/12 22:02	CH	4742206
Phenanthrene	ND		100	10	10/03/12 22:02	CH	4742206
Pyrene	ND		100	10	10/03/12 22:02	CH	4742206
Surr: 2-Fluorobiphenyl	97.3		% 32-160	10	10/03/12 22:02	CH	4742206
Surr: 4-Terphenyl-d14	127		% 44-168	10	10/03/12 22:02	CH	4742206
Surr: Nitrobenzene-d5	95.2		% 30-187	10	10/03/12 22:02	CH	4742206

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3580A	10/03/2012 14:15	DGP	1.00

TOTAL PETROLEUM HYDROCARBONS- COMPONENT ID				**MCL**	**SW8015C**	**Units: mg/L**	
Diesel Range Organics	640000		1	10	10/04/12 15:19	DF	4743276
Motor Oil	120000		1	10	10/04/12 15:19	DF	4743276
Surr: o-Terphenyl	163	MI	% 43-138	10	10/04/12 15:19	DF	4743276

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3580A	10/04/2012 8:14	DGP	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

10/9/2012 10:28:16 AM

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500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: 100112-W-FRAC **Collected:** 10/01/2012 12:40 **Lab Sample ID:** L0020718-03

Site: LDNR/BAYOU CORNE

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE ORGANICS BY EPA 8270D- WASTE DILUTION				**MCL**	**SW8270D**	**Units: mg/Kg**		
1-Methylnaphthalene	ND			100	10	10/03/12 21:41	CH	4742205
2-Methylnaphthalene	320			100	10	10/03/12 21:41	CH	4742205
Acenaphthene	ND			100	10	10/03/12 21:41	CH	4742205
Acenaphthylene	ND			100	10	10/03/12 21:41	CH	4742205
Anthracene	ND			100	10	10/03/12 21:41	CH	4742205
Benz(a)anthracene	ND			100	10	10/03/12 21:41	CH	4742205
Benzo(a)pyrene	ND			100	10	10/03/12 21:41	CH	4742205
Benzo(b)fluoranthene	ND			100	10	10/03/12 21:41	CH	4742205
Benzo(g,h,i)perylene	ND			100	10	10/03/12 21:41	CH	4742205
Benzo(k)fluoranthene	ND			100	10	10/03/12 21:41	CH	4742205
Chrysene	ND			100	10	10/03/12 21:41	CH	4742205
Dibenz(a,h)anthracene	ND			100	10	10/03/12 21:41	CH	4742205
Fluoranthene	ND			100	10	10/03/12 21:41	CH	4742205
Fluorene	ND			100	10	10/03/12 21:41	CH	4742205
Indeno(1,2,3-cd)pyrene	ND			100	10	10/03/12 21:41	CH	4742205
Naphthalene	130			100	10	10/03/12 21:41	CH	4742205
Phenanthrene	110			100	10	10/03/12 21:41	CH	4742205
Pyrene	ND			100	10	10/03/12 21:41	CH	4742205
Surr: 2-Fluorobiphenyl	95.2		%	32-160	10	10/03/12 21:41	CH	4742205
Surr: 4-Terphenyl-d14	123		%	44-168	10	10/03/12 21:41	CH	4742205
Surr: Nitrobenzene-d5	149		%	30-187	10	10/03/12 21:41	CH	4742205

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3580A	10/03/2012 14:15	DGP	1.00

TOTAL PETROLEUM HYDROCARBONS- COMPONENT ID				**MCL**	**SW8015C**	**Units: mg/L**		
Diesel Range Organics	660000			1	10	10/04/12 16:05	DF	4743277
Motor Oil	40000			1	10	10/04/12 16:05	DF	4743277
Surr: o-Terphenyl	168	MI	%	43-138	10	10/04/12 16:05	DF	4743277

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3580A	10/04/2012 8:14	DGP	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

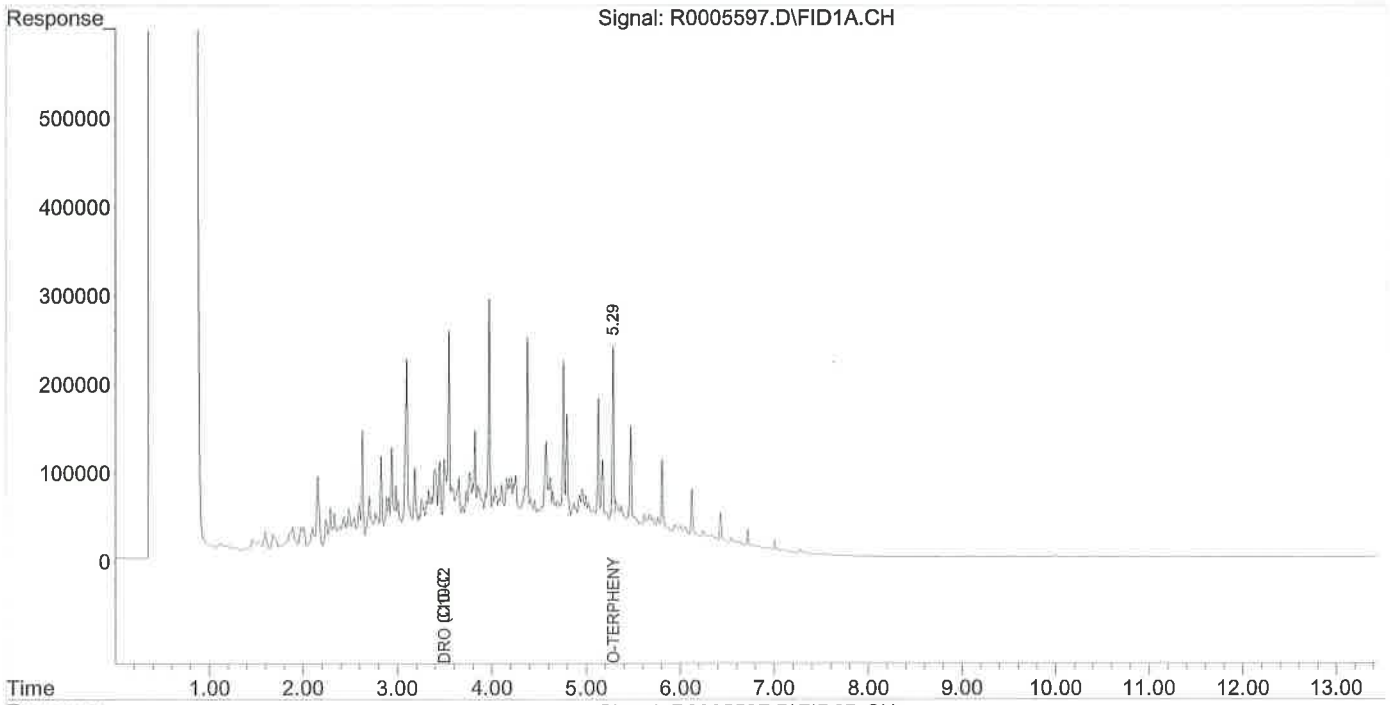
10/9/2012 10:28:17 AM

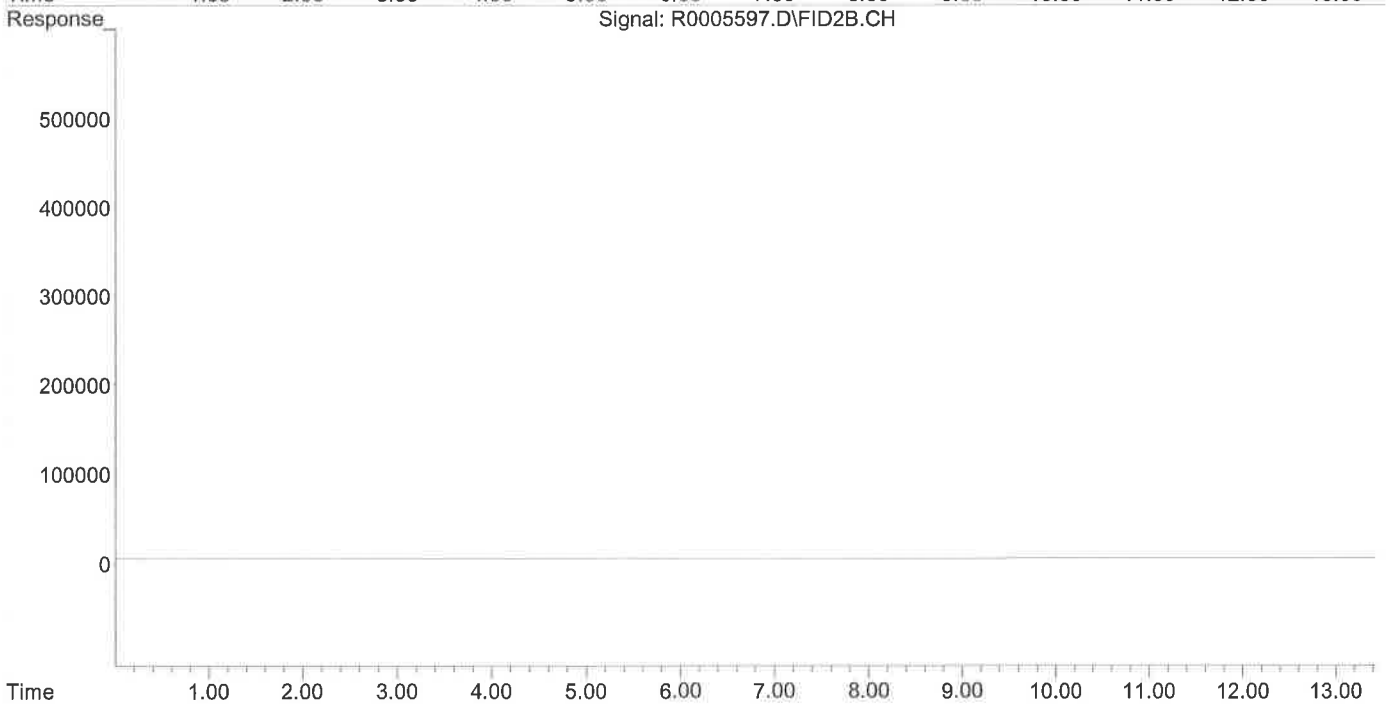
Quantitation Report (QT Reviewed)

Signal #1 : E:\CS\TPHB\DATA\100312\R0005597.D\FID1A.CH Vial: 5
Signal #2 : E:\CS\TPHB\DATA\100312\R0005597.D\FID2B.CH
Acq On : 04 Oct 2012 11:32 am Operator: DF
Sample : DRO-5000 Inst : HP G1530A
Misc : 1:1:DRO_S_LA:CCV Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Oct 4 11:50 2012 Quant Results File: 092812DRO(A) .RES

Quant Method : E:\CS\T...\092812DRO(A) .M (Chemstation Integrator)
Title : Diesel range organics by method 8015.
Last Update : Fri Sep 28 14:24:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : NORACER.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



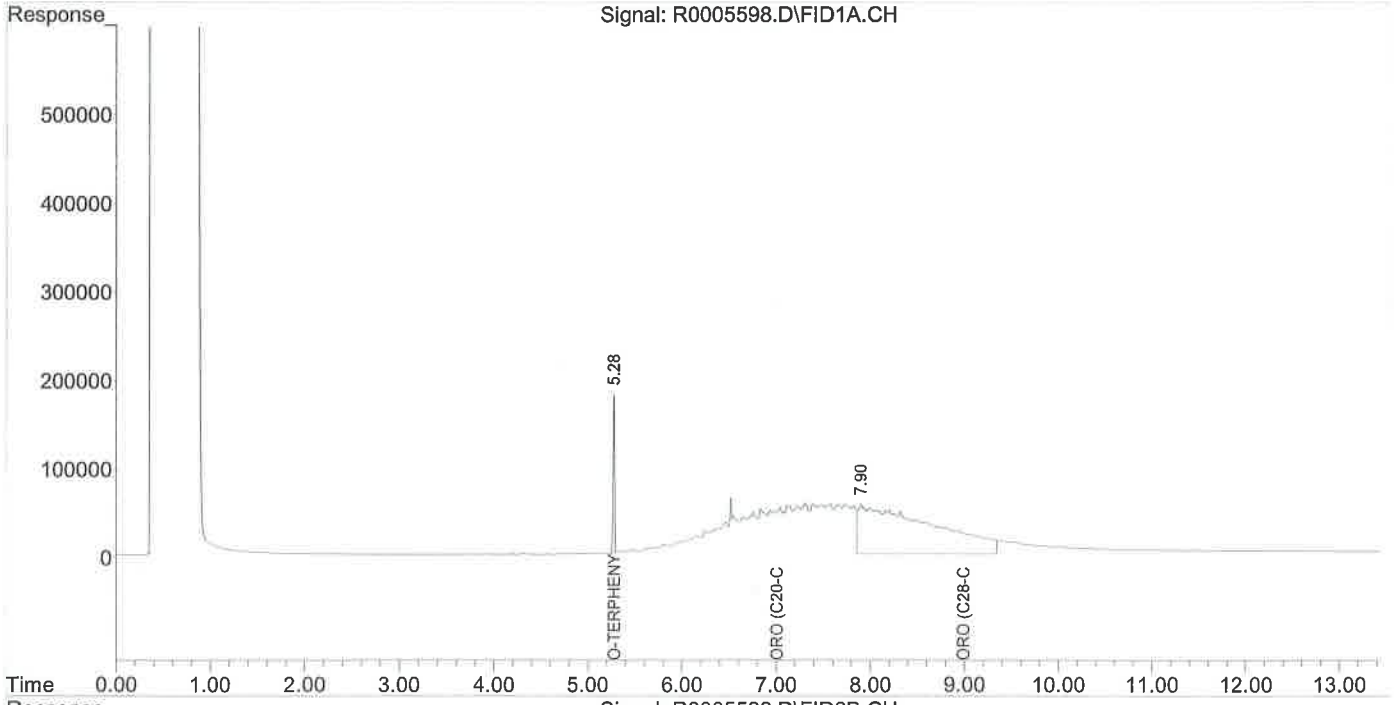


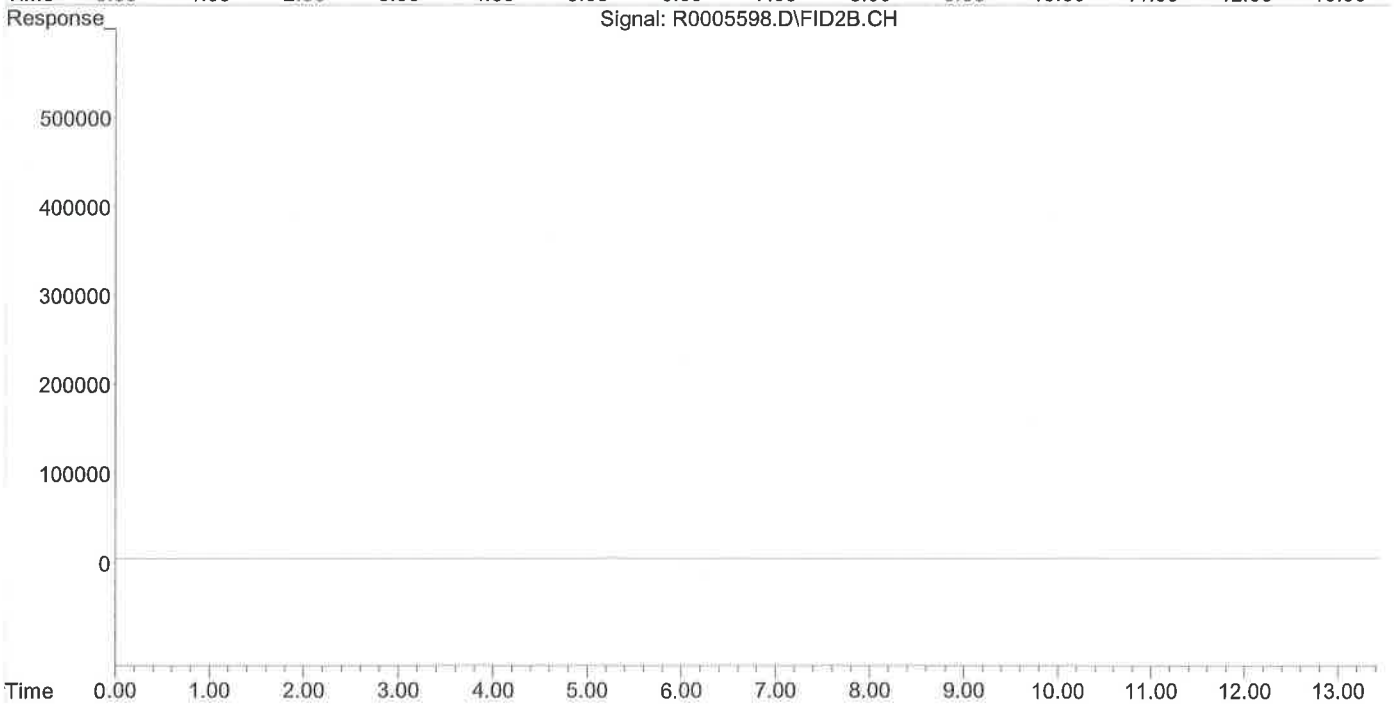
Quantitation Report (QT Reviewed)

Signal #1 : E:\CS\TPHB\DATA\100312\R0005598.D\FID1A.CH Vial: 6
Signal #2 : E:\CS\TPHB\DATA\100312\R0005598.D\FID2B.CH
Acq On : 04 Oct 2012 11:55 am Operator: DF
Sample : ORO-5000 Inst : HP G1530A
Misc : 1:1:ORO_S_LA:CCV Multiplr: 1.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Oct 4 16:23 2012 Quant Results File: 092812DRO(A) .RES

Quant Method : E:\CS\T...\092812DRO(A) .M (Chemstation Integrator)
Title : Diesel range organics by method 8015.
Last Update : Fri Sep 28 14:24:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : NORACER.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



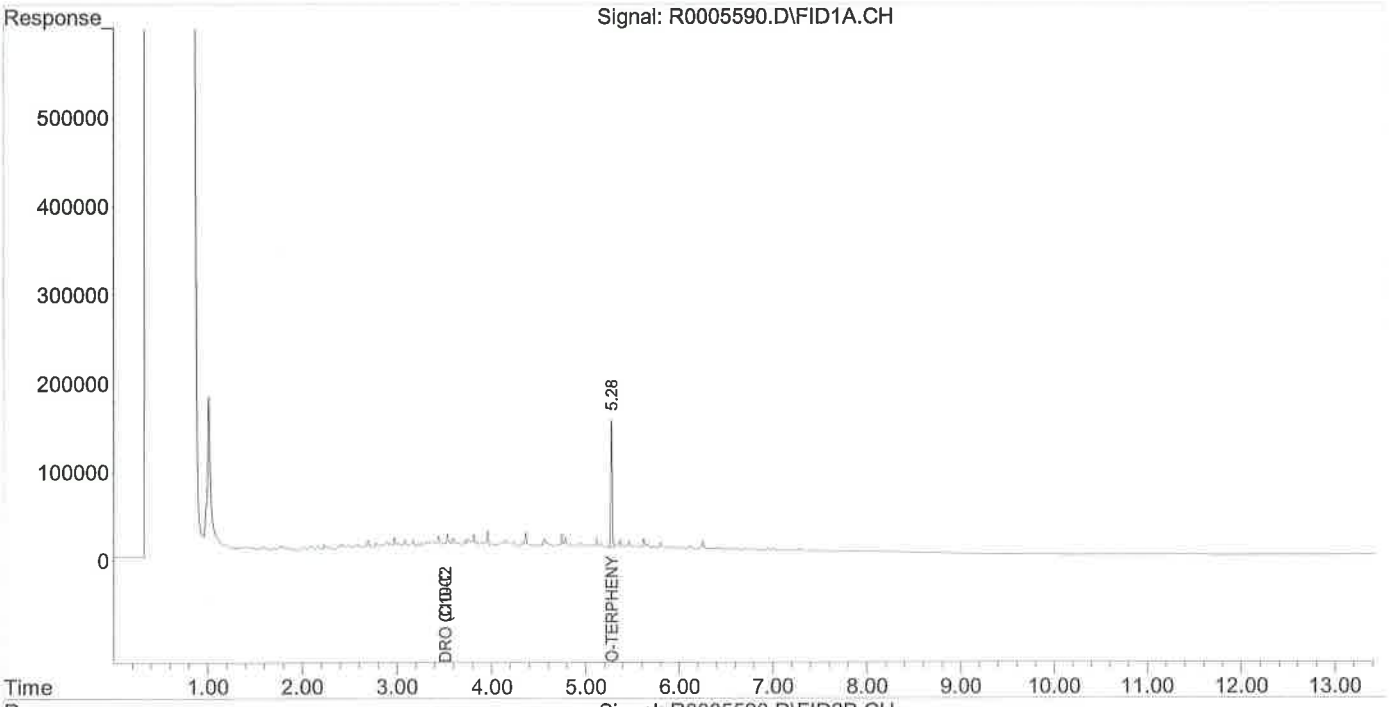


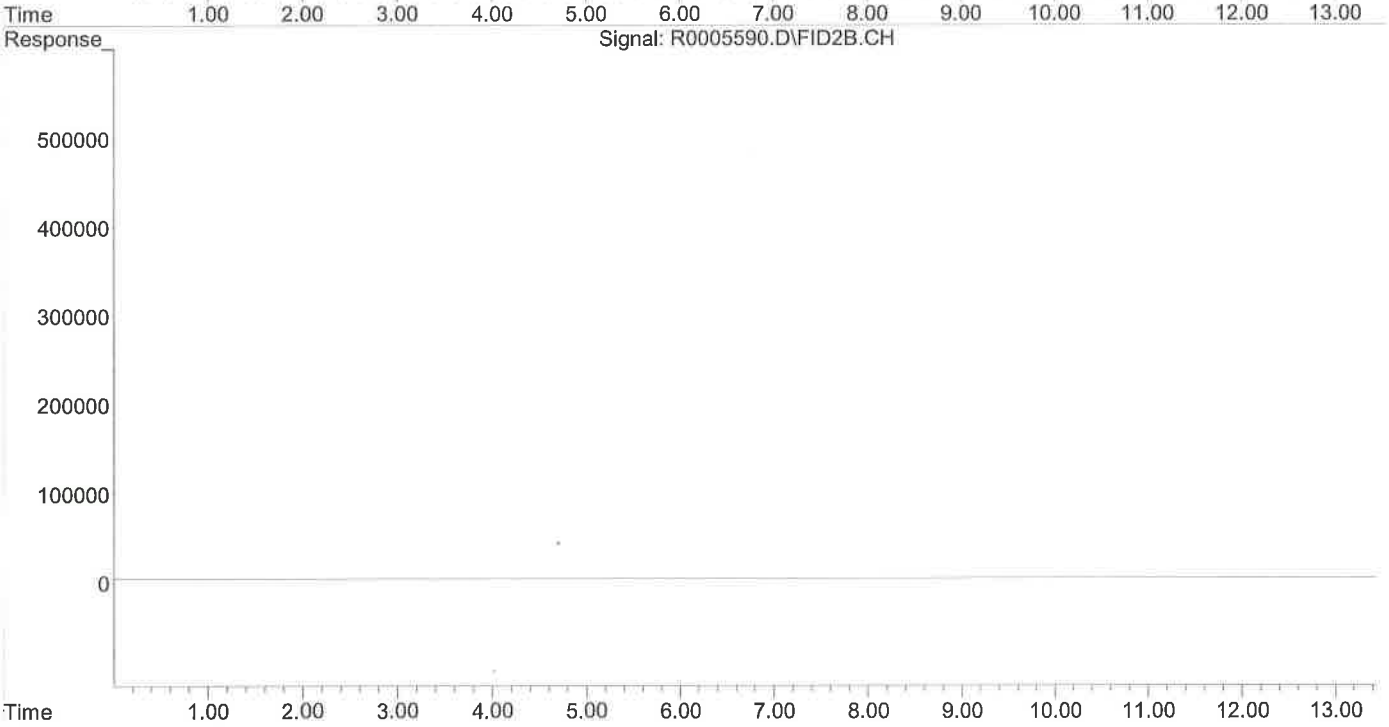
Quantitation Report (QT Reviewed)

Signal #1 : E:\CS\TPHB\DATA\100312\R0005590.D\FID1A.CH Vial: 10
Signal #2 : E:\CS\TPHB\DATA\100312\R0005590.D\FID2B.CH
Acq On : 03 Oct 2012 8:26 pm Operator: DF
Sample : L0020718-01A Inst : HP G1530A
Misc : .003:1:8015_W_ID:SAMP Multiplr: 0.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Oct 4 8:50 2012 Quant Results File: 092812DRO(A) .RES

Quant Method : E:\CS\T...\092812DRO(A) .M (Chemstation Integrator)
Title : Diesel range organics by method 8015.
Last Update : Fri Sep 28 14:24:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : NORACER.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



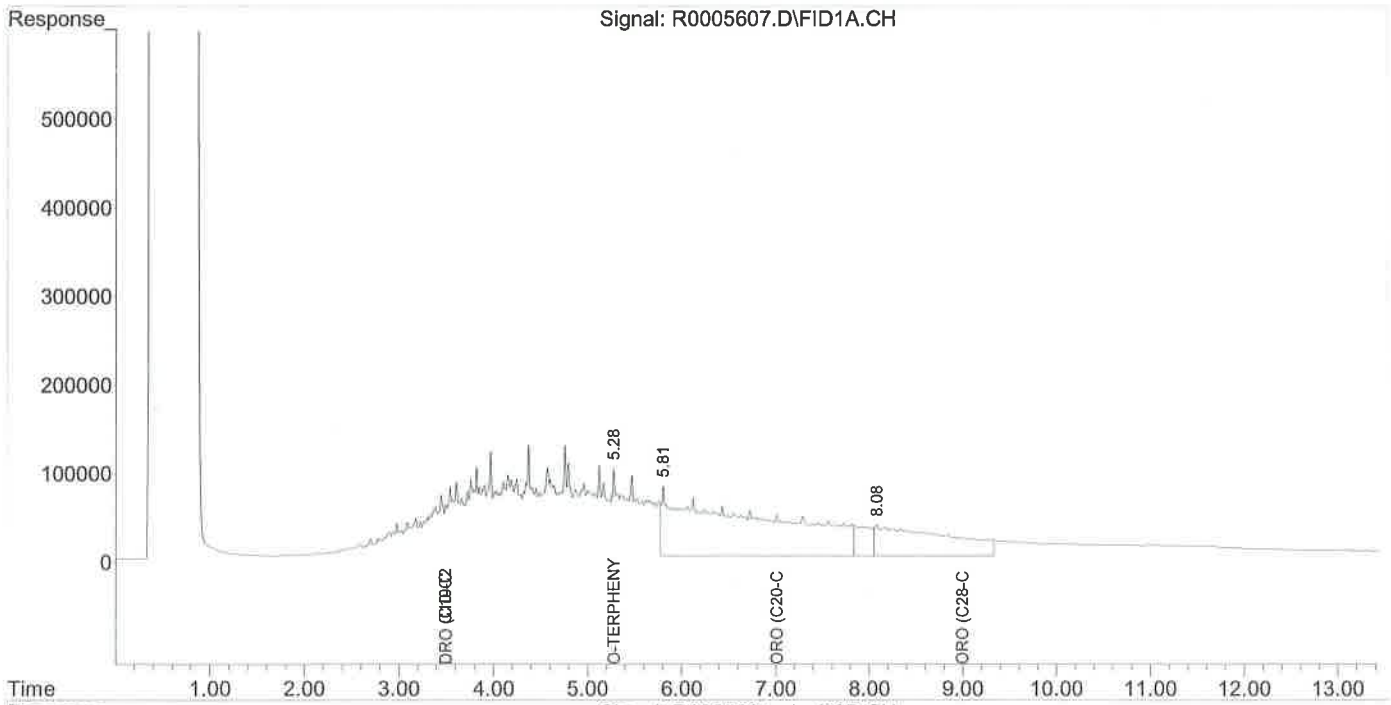


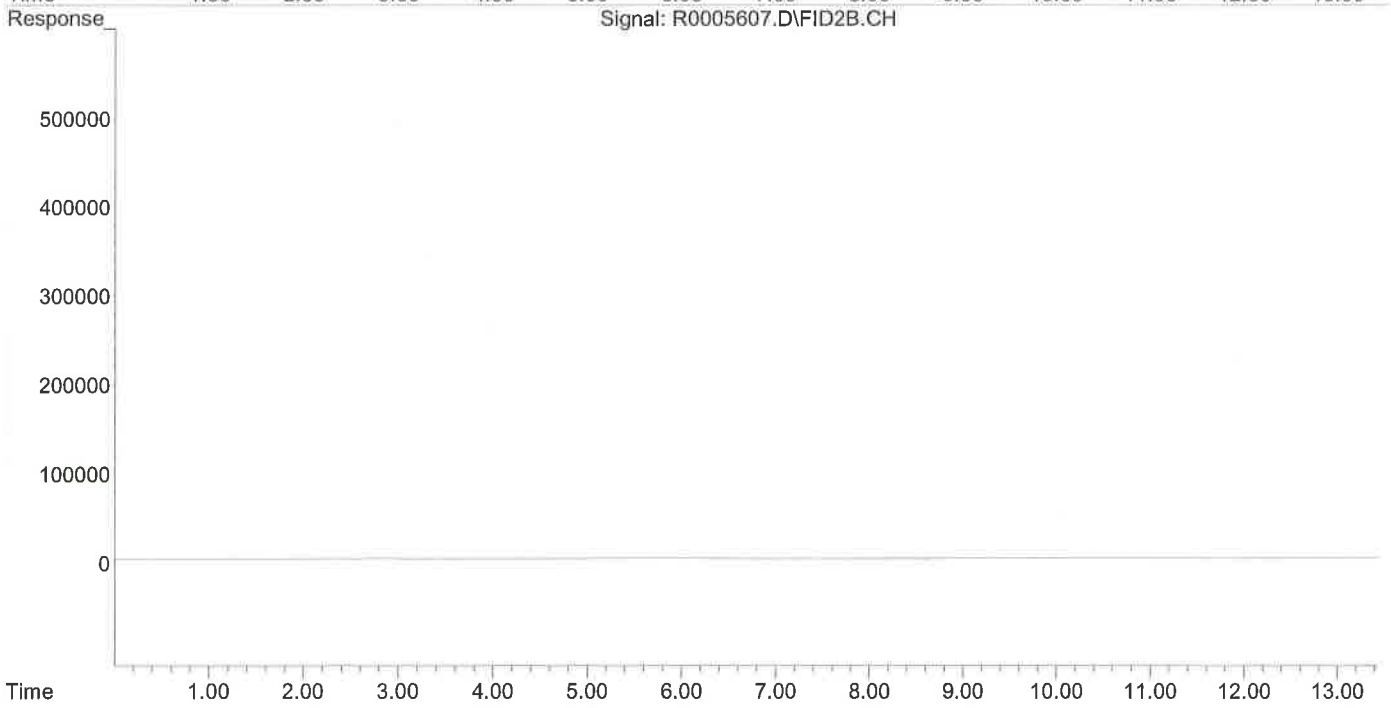
Quantitation Report (QT Reviewed)

Signal #1 : E:\CS\TPHB\DATA\100312\R0005607.D\FID1A.CH Vial: 15
Signal #2 : E:\CS\TPHB\DATA\100312\R0005607.D\FID2B.CH
Acq On : 04 Oct 2012 3:19 pm Operator: DF
Sample : L0020718-02A Inst : HP G1530A
Misc : 10:10:8015_O_ID:SAMP Multiplr: 100.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Oct 4 16:47 2012 Quant Results File: 092812DRO(A) .RES

Quant Method : E:\CS\T...\092812DRO(A) .M (Chemstation Integrator)
Title : Diesel range organics by method 8015.
Last Update : Fri Sep 28 14:24:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : NORACER.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



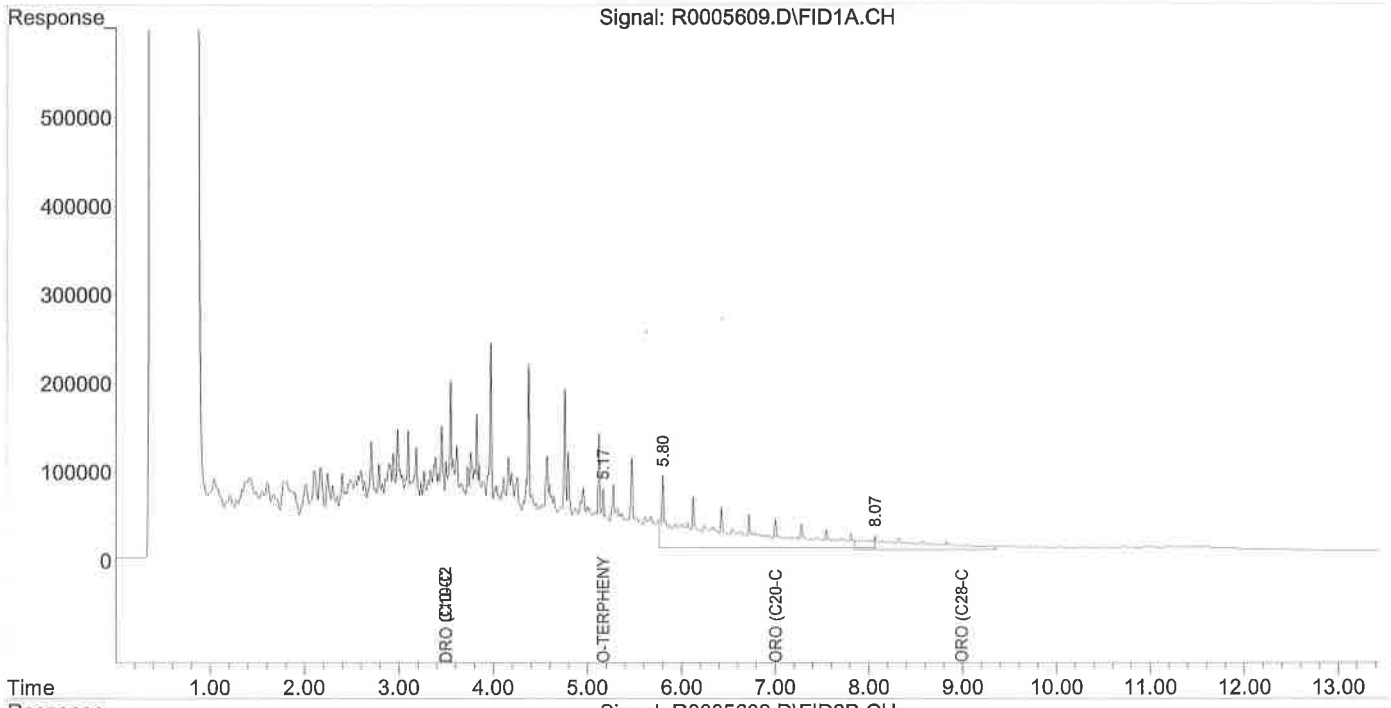


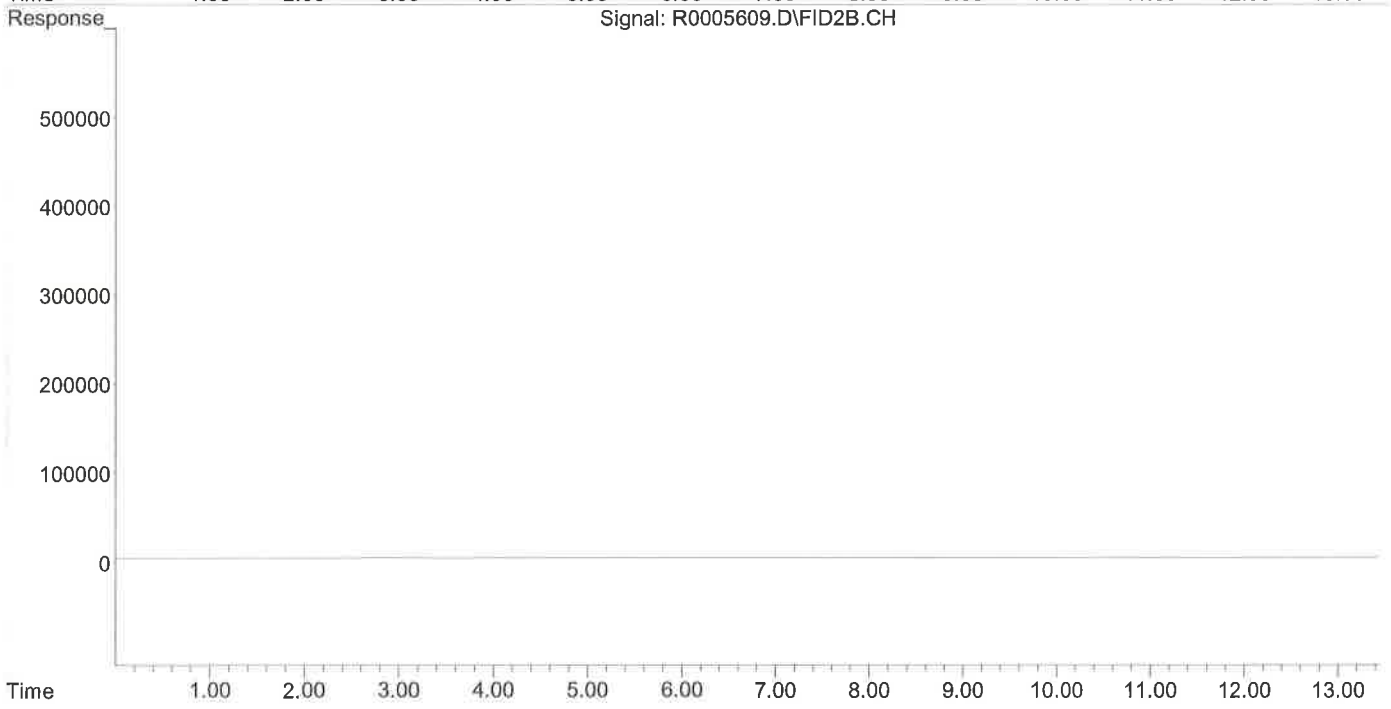
Quantitation Report (QT Reviewed)

Signal #1 : E:\CS\TPHB\DATA\100312\R0005609.D\FID1A.CH Vial: 17
Signal #2 : E:\CS\TPHB\DATA\100312\R0005609.D\FID2B.CH
Acq On : 04 Oct 2012 4:05 pm Operator: DF
Sample : L0020718-03A Inst : HP G1530A
Misc : 10:10:8015_O_ID:SAMP Multiplr: 100.00
IntFile Signal #1: autoint1.e IntFile Signal #2: autoint2.e
Quant Time: Oct 4 16:48 2012 Quant Results File: 092812DRO(A) .RES

Quant Method : E:\CS\T...\092812DRO(A) .M (Chemstation Integrator)
Title : Diesel range organics by method 8015.
Last Update : Fri Sep 28 14:24:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : NORACER.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





Quality Control Documentation

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

BAYOU CORNE

Analysis: Total Petroleum Hydrocarbons- Component ID
Method: SW8015C
WorkOrder: L0020718
Lab Batch ID: 115499

Method Blank

RunID: TPHB_121003A-4742080 Units: mg/L
Analysis Date: 10/03/2012 19:20 Analyst: DF
Preparation Date: 10/03/2012 14:09 Prep By: JT Method: SW3510C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0020718-01A	100112-SW-SH15-20

Analyte	Result	Rep Limit
Diesel Range Organics	ND	0.10
Surr: o-Terphenyl	74.9	30-122

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: TPHB_121003A-4742081 Units: mg/L
Analysis Date: 10/03/2012 19:42 Analyst: DF
Preparation Date: 10/03/2012 14:09 Prep By: JT Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics	3.00	1.52	50.7	3.00	2.07	69.2	30.7	33	44	120
Surr: o-Terphenyl	0.0500	0.0332	66.3	0.0500	0.0390	78.1	16.3	30	30	122

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

10/9/2012 10:28:27 AM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

BAYOU CORNE

Analysis: Total Petroleum Hydrocarbons- Component ID
Method: SW8015C
WorkOrder: L0020718
Lab Batch ID: 115521

Method Blank

RunID: TPHB_121004A-4743273 Units: mg/L
Analysis Date: 10/04/2012 12:40 Analyst: DF
Preparation Date: 10/04/2012 8:14 Prep By: DGP Method: SW3580A

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0020718-02A	100112-SW-SH01
L0020718-03A	100112-W-FRAC

Analyte	Result	Rep Limit
Diesel Range Organics	ND	0.10
Motor Oil	ND	0.10
Surr: o-Terphenyl	125.9	43-138

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: TPHB_121004A-4743274 Units: mg/L
Analysis Date: 10/04/2012 13:25 Analyst: DF
Preparation Date: 10/04/2012 8:14 Prep By: DGP Method: SW3580A

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics	30000	24300	80.9	30000	24200	80.6	0.3	30	50	150
Surr: o-Terphenyl	500	679	136	500	684	137	0.9	30	43	138

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

10/9/2012 10:28:28 AM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

BAYOU CORNE

Analysis: PAHs by EPA 8270D **WorkOrder:** L0020718
Method: SW8270D **Lab Batch ID:** 115501

Method Blank

RunID: F_121003A-4742264 Units: mg/L
Analysis Date: 10/03/2012 18:11 Analyst: CH
Preparation Date: 10/03/2012 14:11 Prep By: JT Method: SW3510C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0020718-01A	100112-SW-SH15-20

Analyte	Result	Rep Limit
1-Methylnaphthalene	ND	0.0050
2-Methylnaphthalene	ND	0.0050
Acenaphthene	ND	0.0050
Acenaphthylene	ND	0.0050
Anthracene	ND	0.0050
Benz(a)anthracene	ND	0.0050
Benzo(a)pyrene	ND	0.0050
Benzo(b)fluoranthene	ND	0.0050
Benzo(g,h,i)perylene	ND	0.0050
Benzo(k)fluoranthene	ND	0.0050
Chrysene	ND	0.0050
Dibenz(a,h)anthracene	ND	0.0050
Fluoranthene	ND	0.0050
Fluorene	ND	0.0050
Indeno(1,2,3-cd)pyrene	ND	0.0050
Naphthalene	ND	0.0050
Phenanthrene	ND	0.0050
Pyrene	ND	0.0050
Surr: 2-Fluorobiphenyl	104.5	41-124
Surr: 4-Terphenyl-d14	94.9	36-129
Surr: Nitrobenzene-d5	93.7	40-143

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: F_121003A-4742265 Units: mg/L
Analysis Date: 10/03/2012 18:32 Analyst: CH
Preparation Date: 10/03/2012 14:11 Prep By: JT Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1-Methylnaphthalene	0.0500	0.0478	95.7	0.0500	0.0466	93.2	2.6	23	59	118
2-Methylnaphthalene	0.0500	0.0503	101	0.0500	0.0484	96.9	3.8	37	50	109
Acenaphthene	0.0500	0.0467	93.3	0.0500	0.0468	93.5	0.2	28	62	110
Acenaphthylene	0.0500	0.0474	94.8	0.0500	0.0474	94.9	0.1	24	62	124

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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10/9/2012 10:28:29 AM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

BAYOU CORNE

Analysis: PAHs by EPA 8270D **WorkOrder:** L0020718
Method: SW8270D **Lab Batch ID:** 115501

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: F_121003A-4742265 Units: mg/L
Analysis Date: 10/03/2012 18:32 Analyst: CH
Preparation Date: 10/03/2012 14:11 Prep By: JT Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Anthracene	0.0500	0.0514	103	0.0500	0.0485	97.0	5.8	25	59	113
Benz(a)anthracene	0.0500	0.0441	88.3	0.0500	0.0444	88.8	0.5	32	50	108
Benzo(a)pyrene	0.0500	0.0457	91.4	0.0500	0.0461	92.2	0.9	24	56	125
Benzo(b)fluoranthene	0.0500	0.0461	92.3	0.0500	0.0443	88.7	4.0	36	52	120
Benzo(g,h,i)perylene	0.0500	0.0492	98.3	0.0500	0.0493	98.6	0.3	31	53	128
Benzo(k)fluoranthene	0.0500	0.0477	95.4	0.0500	0.0497	99.3	4.0	33	58	122
Chrysene	0.0500	0.0388	77.6	0.0500	0.0378	75.6	2.5	22	56	115
Dibenz(a,h)anthracene	0.0500	0.0467	93.3	0.0500	0.0467	93.3	0.0	23	50	116
Fluoranthene	0.0500	0.0507	101	0.0500	0.0481	96.2	5.1	39	58	124
Fluorene	0.0500	0.0498	99.7	0.0500	0.0471	94.2	5.7	27	56	116
Indeno(1,2,3-cd)pyrene	0.0500	0.0455	91.0	0.0500	0.0457	91.3	0.4	24	52	130
Naphthalene	0.0500	0.0483	96.6	0.0500	0.0465	92.9	3.9	32	61	111
Phenanthrene	0.0500	0.0491	98.1	0.0500	0.0474	94.9	3.4	27	58	114
Pyrene	0.0500	0.0433	86.6	0.0500	0.0436	87.2	0.8	25	54	122
Surr: 2-Fluorobiphenyl	50.0	52.5	105	50.0	50.3	101	4.2	30	50	116
Surr: 4-Terphenyl-d14	50.0	48.3	96.6	50.0	47.6	95.1	1.6	30	55	117
Surr: Nitrobenzene-d5	50.0	48.5	97.0	50.0	46.2	92.4	4.9	30	58	115

Qualifiers:
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B - Analyte Detected In The Associated Method Blank
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* - Recovery Outside Advisable QC Limits
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TNTC - Too numerous to count

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10/9/2012 10:28:29 AM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

BAYOU CORNE

Analysis: Semivolatile Organics by EPA 8270D- Waste Dilution **WorkOrder:** L0020718
Method: SW8270D **Lab Batch ID:** 115508

Method Blank

RunID: F_121003A-4742202 Units: mg/Kg
Analysis Date: 10/03/2012 19:14 Analyst: CH
Preparation Date: 10/03/2012 14:15 Prep By: DGP Method: SW3580A

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0020718-02A	100112-SW-SH01
L0020718-03A	100112-W-FRAC

Analyte	Result	Rep Limit
1-Methylnaphthalene	ND	10
2-Methylnaphthalene	ND	10
Acenaphthene	ND	10
Acenaphthylene	ND	10
Anthracene	ND	10
Benz(a)anthracene	ND	10
Benzo(a)pyrene	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(g,h,i)perylene	ND	10
Benzo(k)fluoranthene	ND	10
Chrysene	ND	10
Dibenz(a,h)anthracene	ND	10
Fluoranthene	ND	10
Fluorene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Naphthalene	ND	10
Phenanthrene	ND	10
Pyrene	ND	10
Surr: 2-Fluorobiphenyl	100.0	32-160
Surr: 4-Terphenyl-d14	121.3	44-168
Surr: Nitrobenzene-d5	104.0	30-187

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: F_121003A-4742203 Units: mg/Kg
Analysis Date: 10/03/2012 19:35 Analyst: CH
Preparation Date: 10/03/2012 14:15 Prep By: DGP Method: SW3580A

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1-Methylnaphthalene	100	82.8	82.8	100	86.8	86.8	4.6	14	55	147
2-Methylnaphthalene	100	90.3	90.3	100	92.4	92.4	2.3	12	68	136
Acenaphthene	100	81.4	81.4	100	86.9	86.9	6.5	12	66	133
Acenaphthylene	100	86.9	86.9	100	91.7	91.7	5.4	16	70	138

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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10/9/2012 10:28:30 AM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

BAYOU CORNE

Analysis: Semivolatile Organics by EPA 8270D- Waste Dilution **WorkOrder:** L0020718
Method: SW8270D **Lab Batch ID:** 115508

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: F_121003A-4742203 Units: mg/Kg
Analysis Date: 10/03/2012 19:35 Analyst: CH
Preparation Date: 10/03/2012 14:15 Prep By: DGP Method: SW3580A

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Anthracene	100	84.5	84.5	100	84.2	84.2	0.4	13	66	138
Benz(a)anthracene	100	107	107	100	109	109	2.5	12	71	124
Benzo(a)pyrene	100	99.7	99.7	100	105	105	5.3	12	68	135
Benzo(b)fluoranthene	100	98.4	98.4	100	105	105	6.5	13	73	125
Benzo(g,h,i)perylene	100	115	115	100	120	120	4.8	13	69	128
Benzo(k)fluoranthene	100	123	123	100	127	127	3.3	18	62	144
Chrysene	100	102	102	100	107	107	4.8	13	70	131
Dibenz(a,h)anthracene	100	101	101	100	105	105	3.7	11	67	132
Fluoranthene	100	128	128	100	128	128	0.3	13	72	130
Fluorene	100	90.0	90.0	100	96.3	96.3	6.7	12	62	139
Indeno(1,2,3-cd)pyrene	100	101	101	100	105	105	3.6	11	68	129
Naphthalene	100	80.8	80.8	100	83.2	83.2	2.9	12	64	134
Phenanthrene	100	90.4	90.4	100	94.7	94.7	4.7	11	65	136
Pyrene	100	110	110	100	115	115	4.0	12	65	138
Surr: 2-Fluorobiphenyl	100000	101000	101	100000	105000	105	4.2	30	32	160
Surr: 4-Terphenyl-d14	100000	124000	124	100000	124000	124	0.1	30	44	168
Surr: Nitrobenzene-d5	100000	101000	101	100000	104000	104	2.6	30	30	187

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
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10/9/2012 10:28:31 AM

Version 2.1 - Modified February 11, 2011

Sample Receipt Checklist

And

Chain of Custody

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Sample Receipt Checklist

Workorder:	**L0020718**	Received By:	**EMB**
Date and Time Received:	**10/2/2012 4:30:00 PM**	Carrier name:	**Accutest-Delivery**
Temperature:	**3.5°C**	Chilled by:	**Water Ice**

1.	**Shipping container/cooler in good condition?**	Yes	☑	No	☐	Not Present ☐
2.	**Custody seals intact on shippping container/cooler?**	Yes	☐	No	☐	Not Present ☑
3.	**Custody seals intact on sample bottles?**	Yes	☐	No	☐	Not Present ☑
4.	**Chain of custody present?**	Yes	☑	No	☐	
5.	**Chain of custody signed when relinquished and received?**	Yes	☑	No	☐	
6.	**Chain of custody agrees with sample labels?**	Yes	☑	No	☐	
7.	**Samples in proper container/bottle?**	Yes	☑	No	☐	
8.	**Sample containers intact?**	Yes	☑	No	☐	
9.	**Sufficient sample volume for indicated test?**	Yes	☑	No	☐	
10.	**All samples received within holding time?**	Yes	☑	No	☐	
11.	**Container/Temp Blank temperature in compliance?**	Yes	☑	No	☐	
12.	**Water - VOA vials have zero headspace?**	Yes	☐	No	☐	VOA Vials Not Present ☑
13.	**Water - Preservation checked upon receipt (except VOA*)?**	Yes	☐	No	☐	Not Applicable ☑

***VOA Preservation Checked After Sample Analysis**

Accutest Representative: _____ **Contact Date & Time:** _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

L0020718

Shaw Shaw Environmental & Infrastructure, Inc.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 596051
Page 1 of 1

Project Name/No. [1] LDNR/Bayou Corne
Sample Team Members [2] L Pultz, G. Perodyea
Profit Center No. [3] Baton Rouge
Project Manager [4] Deborah Sapton
Purchase Order No. [6] TBA
Required Report Date [11] 10/5/12 or sooner

Samples Shipment Date [7] 10/01/12
Lab Destination [8] Accutest-Lafayette
Lab Contact [9] Dwayne LaCo
Project Contact /Phone [12] Lisa Pultz / 225-987-7335
Carrier / Waybill No. [13] Accutest Courier

Bill To: [5] Shaw Environmental + Infrastructure
4171 Essen Lane
Baton Rouge, LA 70809
Attn: Lisa Pultz

Report To: [10] Same as above

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description / Type [15]	Date / Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-Servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
100112-SW-SH15-20	Surface water 15-20 ft dup	100112/1040	poly bot.	1 Liter	none	Whole Oil Fingerprinting by Modified 8015 + PAH by Method 8270	FOR LAB USE ONLY	(1)
100112-SW-SH01	0.1 on surface	100112/1105	poly bot	1 Liter	none	Whole Oil Fingerprinting by Mod. Method 8015 + PAH by Method 8270 Oil Analyte fraction only	FOR LAB USE ONLY	(1)
100112-W-FRAC	Frac Tank fluids from Cavern	100112/1240	Amber glass	1 liter	none	Whole Oil Fingerprinting by Mod Method 8015 + PAH by Method 8270	FOR LAB USE ONLY	(1)

PRESS Lisa M Pultz 10/01/12

Special Instructions: [23]

Possible Hazard Identification: [24]
No-hazard ☐ Flammable ☒ Skin Irritant ☒ Poison B ☐ Unknown ☒

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☐ Archive Hold at lab - 12 mo (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☒

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (Specify):

1. Relinquished by [28] (Signature/Affiliation)	Lisa M Pultz/Shaw	Date: 10/01/12 Time: 1645	1. Relinquished by (Signature/Affiliation) ECVALLY	Date: 10/01/12 Time: 1645
2. Relinquished by (Signature/Affiliation)	ECVALLY	Date: 10/01/12 Time: 1645	2. Relinquished by (Signature/Affiliation) R.E. Guillot	Date: 10.2.12 Time: 1340
3. Relinquished by (Signature/Affiliation)	R.E. Guillot	Date: 10/2 Time: 0650	3. Relinquished by (Signature/Affiliation) Accutest Courier	Date: 10/2 Time: 1650

Comments: [29]
Received at Baton Rouge Service Center
Accutest P/U
T3.5 (15?) NOCS
(16) (?)

MCA 3/15/91

White: To accompany Samples
Yellow: Field Copy
* See back of form for special instructions.