



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

Case Narrative for:
SHAW ENVIRONMENTAL & INFRASTRUCTURE

Certificate of Analysis Number:

L0022582

<p>Report To:</p> <p>SHAW ENVIRONMENTAL & INFRASTRUCTURE LISA PULTZ 4171 ESSEN LANE</p> <p>BATON ROUGE LA 70809- ph: (225) 932-2500 fax: (225) 987-7300</p>	<p>Project Name: 147497 LDNR- BAYOU CORNE</p> <p>Site: LDNR/BAYOU CORNE</p> <p>Site Address:</p> <p>PO Number: 812666</p> <p>State: Louisiana</p> <p>State Cert. No.: 02048</p> <p>Date Reported: 11/26/2012</p>
---	---

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: SW6020B Total Metals- Batch 116796: The target metal, Sodium, was detected above the designated reporting limit in the method blank. The amount of Sodium detected in the method blank was less than ten percent of the amount in the sample indicating a negligible contribution effect from the blank contamination. Associated field sample results affected are reported with a "B" qualifier.

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.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

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

11/26/2012

Cristina Thibeaux
 Project Manager

Date

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



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

SHAW ENVIRONMENTAL & INFRASTRUCTURE

Certificate of Analysis Number:

L0022582

Report To: SHAW ENVIRONMENTAL & INFRASTRUCTURE
 LISA PULTZ
 4171 ESSEN LANE

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

Project Name: 147497 LDNR- BAYOU CORNE
Site: LDNR/BAYOU CORNE
Site Address:

PO Number: 812666
State: Louisiana
State Cert. No.: 02048
Date Reported: 11/26/2012

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
007-095-111912	L0022582-01	Water	11/19/2012 19:45	11/20/2012 10:44:00 AM		<input type="checkbox"/>
007-095-111912	L0022582-02	Water	11/19/2012 16:00	11/20/2012 10:44:00 AM		<input type="checkbox"/>

Cristina C. Thibeaux

Cristina Thibeaux
 Project Manager

11/26/2012

Date

Ron Benjamin
 Laboratory Director

Rebecca Haryett
 Quality Assurance Officer



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

Client Sample ID:007-095-111912 Collected: 11/19/2012 19:45 Lab Sample ID: L0022582-01

Site: LDNR/BAYOU CORNE

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ALKALINITY, BICARBONATE (AS CaCO3)				MCL	M2320 B	Units: mg/L CaCO3	
Alkalinity, Bicarbonate (As CaCO3)	394		5.00	1	11/20/12 15:40	RDH	4805527
ALKALINITY, CARBONATE (AS CaCO3)				MCL	M2320 B	Units: mg/L CaCO3	
Alkalinity, Carbonate (As CaCO3)	ND		5.00	1	11/20/12 15:40	RDH	4805500
ANIONS BY IC USING EPA 300.0				MCL	E300.0	Units: mg/L	
Bromide	ND		25	100	11/20/12 15:34	SM	4806451
Chloride	2380		25	100	11/20/12 15:34	SM	4806451
Sulfate	ND		25	100	11/20/12 15:34	SM	4806451
CHLORIDE BY SM4500				MCL	M4500-CL C	Units: mg/L	
Chloride	2380		100	20	11/20/12 16:00	JMR	4806115
EXTRACTABLE PETROLEUM HYDROCARBONS- RECAP				MCL	MA_VPH_EPH	Units: mg/L	
C10-C12 Aliphatics	ND		0.15	1	11/21/12 16:08	E_G	4808449
C10-C12 Aromatics	ND		0.15	1	11/21/12 16:08	E_G	4808450
C12-C16 Aliphatics	ND		0.15	1	11/21/12 16:08	E_G	4808449
C12-C16 Aromatics	ND		0.15	1	11/21/12 16:08	E_G	4808450
C16-C21 Aromatics	ND		0.15	1	11/21/12 16:08	E_G	4808450
C16-C35 Aliphatics	ND		0.15	1	11/21/12 16:08	E_G	4808449
C21-C35 Aromatics	ND		0.15	1	11/21/12 16:08	E_G	4808450
Surr: 2-Fluorobiphenyl	67.5		% 40-140	1	11/21/12 16:08	E_G	4808450
Surr: Chloro-octadecane	144	*	% 40-140	1	11/21/12 16:08	E_G	4808449
Surr: o-Terphenyl	76.2		% 40-140	1	11/21/12 16:08	E_G	4808450

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	11/20/2012 11:00	DWB	1.00

METALS BY METHOD 6020 (ICP/MS), TOTAL				MCL	SW6020	Units: mg/L	
Calcium	193		2	10	11/21/12 16:06	RJD	4808430
Iron	5.97		1	10	11/21/12 16:06	RJD	4808430
Magnesium	76.4		0.5	10	11/21/12 16:06	RJD	4808430
Manganese	0.384		0.02	10	11/21/12 16:06	RJD	4808430
Potassium	10.4		0.75	10	11/21/12 16:06	RJD	4808430
Sodium	1740	B	1	10	11/21/12 16:06	RJD	4808430

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3010A	11/20/2012 17:00	LAB	1.00

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

11/26/2012 1:56:52 PM

Version 2.2 - Modified January 16, 2012



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

Client Sample ID:007-095-111912 Collected: 11/19/2012 19:45 Lab Sample ID: L0022582-01

Site: LDNR/BAYOU CORNE

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C			MCL	SW8015C	Units: mg/L		
Diesel Range Organics (C10-C28)	ND		0.15	1	11/20/12 16:35	E_G	4806785
Surr: o-Terphenyl	72.9		% 47-125	1	11/20/12 16:35	E_G	4806785

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	11/20/2012 10:45	DGP	1.00

RECAP GASOLINE RANGE ORGANICS			MCL	SW8015C	Units: mg/L		
Gasoline Range Organics (C6-C10)	ND		0.1	1	11/20/12 17:08	JHP	4807048
Surr: 1,4-Difluorobenzene	83.9		% 70-135	1	11/20/12 17:08	JHP	4807048
Surr: 4-Bromofluorobenzene	103		% 89-126	1	11/20/12 17:08	JHP	4807048

RECAP OIL RANGE ORGANICS			MCL	SW8015C	Units: mg/L		
Oil Range Organics (C28-C35)	ND		0.15	1	11/20/12 16:35	E_G	4806940
Surr: o-Terphenyl	72.9		% 47-125	1	11/20/12 16:35	E_G	4806940

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	11/20/2012 10:45	DGP	1.00

RECAP VOLATILE PETROLEUM HYDROCARBONS BY MA-DE			MCL	MA_VPH_EPH	Units: mg/L		
C6-C8 Aliphatics	ND		0.03	1	11/20/12 21:35	RVS	4806827
C8-C10 Aliphatics	ND		0.06	1	11/20/12 21:35	RVS	4806827
C8-C10 Aromatics	ND		0.06	1	11/20/12 21:35	RVS	4806809
Surr: 2,5-Dibromotoluene	104		% 70-130	1	11/20/12 21:35	RVS	4806827
Surr: 2,5-Dibromotoluene	91.2		% 70-130	1	11/20/12 21:35	RVS	4806809

SPECIFIC CONDUCTANCE @ 25 C - SM2510B			MCL	M2510 B	Units: umhos/cm		
Specific Conductance	7260		10.0	1	11/21/12 8:30	SM	4807136

TOTAL DISSOLVED SOLIDS BY SM2540 C			MCL	M2540 C	Units: mg/L		
Total Dissolved Solids (Residue,filterable)	3820		10	1	11/20/12 14:00	SPM	4808371

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

11/26/2012 1:56:59 PM

Version 2.2 - Modified January 16, 2012



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

Client Sample ID:007-095-111912 Collected: 11/19/2012 19:45 Lab Sample ID: L0022582-01

Site: LDNR/BAYOU CORNE

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS:METHOD 8260B:BTEX - WATER				MCL	SW8260B	Units: mg/L	
Benzene	ND		0.005	1	11/20/12 14:01	CDP	4806034
Ethylbenzene	ND		0.005	1	11/20/12 14:01	CDP	4806034
Toluene	ND		0.005	1	11/20/12 14:01	CDP	4806034
m,p-Xylene	ND		0.005	1	11/20/12 14:01	CDP	4806034
o-Xylene	ND		0.005	1	11/20/12 14:01	CDP	4806034
Xylenes, Total	ND		0.005	1	11/20/12 14:01	CDP	4806034
Surr: 1,2-Dichloroethane-d4	113		% 84-124	1	11/20/12 14:01	CDP	4806034
Surr: 4-Bromofluorobenzene	105		% 89-111	1	11/20/12 14:01	CDP	4806034
Surr: Toluene-d8	98.4		% 83-115	1	11/20/12 14:01	CDP	4806034

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

11/26/2012 1:57:01 PM

Version 2.2 - Modified January 16, 2012



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

Client Sample ID:007-095-111912 Collected: 11/19/2012 16:00 Lab Sample ID: L0022582-02

Site: LDNR/BAYOU CORNE

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE BY SM4500				MCL	M4500-CL C	Units: mg/L	
Chloride	2450		100	20	11/20/12 16:00	JMR	4806119
SPECIFIC CONDUCTANCE @ 25 C - SM2510B				MCL	M2510 B	Units: umhos/cm	
Specific Conductance	7320		10.0	1	11/21/12 8:30	SM	4807137
TOTAL DISSOLVED SOLIDS BY SM2540 C				MCL	M2540 C	Units: mg/L	
Total Dissolved Solids (Residue,filterable)	3700		10	1	11/20/12 14:00	SPM	4808373

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

11/26/2012 1:57:05 PM

Version 2.2 - Modified January 16, 2012

Quality Control Documentation

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Extractable Petroleum Hydrocarbons- RECAP
Method: MA_VPH_EPH

WorkOrder: L0022582
Lab Batch ID: 116734

Method Blank

Samples in Analytical Batch:

RunID: TPHA_121121B-4808414 Units: mg/L
Analysis Date: 11/21/2012 15:04 Analyst: E_G
Preparation Date: 11/20/2012 7:42 Prep By: DW Method: SW3511

Lab Sample ID **Client Sample ID**
L0022582-01F 007-095-111912

Analyte	Result	Rep Limit
C10-C12 Aliphatics	ND	0.15
C12-C16 Aliphatics	ND	0.15
C16-C35 Aliphatics	ND	0.15
Surr: Chloro-octadecane	108.2	40-140

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

RunID: TPHA_121121B-4809139 Units: mg/L
Analysis Date: 11/21/2012 16:37 Analyst: E_G
Preparation Date: 11/20/2012 7:42 Prep By: DW Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aliphatics	0.500	0.468	93.5	0.500	0.461	92.1	1.5	25	40	140
C12-C16 Aliphatics	1.00	0.886	88.6	1.00	0.825	82.5	7.2	25	40	140
C16-C35 Aliphatics	4.50	3.67	81.5	4.50	3.75	83.3	2.1	25	40	140
Surr: Chloro-octadecane	0.400	0.369	92.3	0.400	0.360	90.0	2.5	30	40	140

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
E - Estimated Value exceeds calibration curve
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.

11/26/2012 1:57:34 PM



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

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Extractable Petroleum Hydrocarbons- RECAP
 Method: MA_VPH_EPH

WorkOrder: L0022582
 Lab Batch ID: 116734

Method Blank

Samples in Analytical Batch:

RunID: TPHA_121121A-4808411 Units: mg/L
 Analysis Date: 11/21/2012 15:04 Analyst: E_G
 Preparation Date: 11/20/2012 7:42 Prep By: DW Method: SW3511

Lab Sample ID: L0022582-01F
 Client Sample ID: 007-095-111912

Analyte	Result	Rep Limit
C10-C12 Aromatics	ND	0.15
C12-C16 Aromatics	ND	0.15
C16-C21 Aromatics	ND	0.15
C21-C35 Aromatics	ND	0.15
Surr: 2-Fluorobiphenyl	66.7	40-140
Surr: o-Terphenyl	52.3	40-140

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

RunID: TPHA_121121A-4809137 Units: mg/L
 Analysis Date: 11/21/2012 16:37 Analyst: E_G
 Preparation Date: 11/20/2012 7:42 Prep By: DW Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aromatics	0.500	0.290	58.0	0.500	0.289	57.7	0.6	25	40	140
C12-C16 Aromatics	1.00	0.594	59.4	1.00	0.587	58.7	1.2	25	40	140
C16-C21 Aromatics	2.50	1.39	55.6	2.50	1.39	55.5	0.3	25	40	140
C21-C35 Aromatics	4.00	2.29	57.2	4.00	2.18	54.6	4.7	25	40	140
Surr: 2-Fluorobiphenyl	2.00	1.21	60.7	2.00	1.24	61.9	2.0	30	40	140
Surr: o-Terphenyl	0.400	0.182	45.4	0.400	0.183	45.6	0.6	30	40	140

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
 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
 MI - Matrix Interference
 D - Recovery Unreportable due to Dilution
 * - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:35 PM

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

147497 LDNR- BAYOU CORNE

Analysis: RECAP Diesel Range Organics by Method 8015C
 Method: SW8015C

WorkOrder: L0022582
 Lab Batch ID: 116759

Method Blank

Samples in Analytical Batch:

RunID: TPHC_121120A-4806780 Units: mg/L
 Analysis Date: 11/20/2012 13:43 Analyst: E_G
 Preparation Date: 11/20/2012 10:45 Prep By: DGP Method: SW3511

Lab Sample ID: L0022582-01D
 Client Sample ID: 007-095-111912

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	0.15
Surr: o-Terphenyl	101.4	47-125

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

RunID: TPHC_121120A-4806781 Units: mg/L
 Analysis Date: 11/20/2012 14:08 Analyst: E_G
 Preparation Date: 11/20/2012 10:45 Prep By: DGP Method: SW3511

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 (C10-C28)	6.00	3.65	60.8	6.00	3.10	51.7	16.2	26	21	140
Surr: o-Terphenyl	0.100	0.0758	75.8	0.100	0.0629	62.9	18.6	30	47	125

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
 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
 MI - Matrix Interference
 D - Recovery Unreportable due to Dilution
 * - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:36 PM

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

147497 LDNR- BAYOU CORNE

Analysis: RECAP Oil Range Organics
 Method: SW8015C

WorkOrder: L0022582
 Lab Batch ID: 116760

Method Blank

Samples in Analytical Batch:

RunID: TPHC_121120B-4806935 Units: mg/L
 Analysis Date: 11/20/2012 13:43 Analyst: E_G
 Preparation Date: 11/20/2012 10:45 Prep By: DGP Method: SW3511

Lab Sample ID: L0022582-01D
 Client Sample ID: 007-095-111912

Analyte	Result	Rep Limit
Oil Range Organics (C28-C35)	ND	0.15
Surr: o-Terphenyl	101.4	47-125

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

RunID: TPHC_121120B-4806936 Units: mg/L
 Analysis Date: 11/20/2012 14:57 Analyst: E_G
 Preparation Date: 11/20/2012 10:45 Prep By: DGP Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Oil Range Organics (C28-C35)	2.79	1.25	44.6	2.79	1.26	45.3	1.4	29	40	149
Surr: o-Terphenyl	0.100	0.0543	54.3	0.100	0.0530	53.0	2.4	30	47	125

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
 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
 MI - Matrix Interference
 D - Recovery Unreportable due to Dilution
 * - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:38 PM

Version 2.1 - Modified February 11, 2011

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: RECAP Volatile Petroleum Hydrocarbons by MA-DEP
Method: MA_VPH_EPH

WorkOrder: L0022582
Lab Batch ID: R299061

Method Blank

RunID: HPEE_121120A-4806807 Units: mg/L
Analysis Date: 11/20/2012 20:33 Analyst: RVS

Samples in Analytical Batch:

Lab Sample ID **Client Sample ID**
L0022582-01E 007-095-111912

Analyte	Result	Rep Limit
C8-C10 Aromatics	ND	0.060
Surr: 2,5-Dibromotoluene	77.7	70-130

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

RunID: HPEE_121120A-4806805 Units: mg/L
Analysis Date: 11/20/2012 19:30 Analyst: RVS

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C8-C10 Aromatics	0.250	0.186	74.5	0.250	0.206	82.5	10.2	50	70	130
Surr: 2,5-Dibromotoluene	200	153	76.3	200	191	95.3	22.2	30	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: L0022582-01
RunID: HPEE_121120A-4806810 Units: mg/L
Analysis Date: 11/20/2012 22:06 Analyst: RVS

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
C8-C10 Aromatics	ND	25	25.0	100	25	18.2	72.7	31.7	50	70	130
Surr: 2,5-Dibromotoluene	ND	20000	15500	77.6	20000	15200	75.9	2.22	30	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
E - Estimated Value exceeds calibration curve
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.

11/26/2012 1:57:39 PM

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: RECAP Volatile Petroleum Hydrocarbons by MA-DEP
Method: MA_VPH_EPH

WorkOrder: L0022582
Lab Batch ID: R299062

Method Blank

Samples in Analytical Batch:

RunID: HPEE_121120B-4806825 Units: mg/L
Analysis Date: 11/20/2012 20:33 Analyst: RVS

Lab Sample ID **Client Sample ID**
L0022582-01E 007-095-111912

Analyte	Result	Rep Limit
C6-C8 Aliphatics	ND	0.030
C8-C10 Aliphatics	ND	0.060
Surr: 2,5-Dibromotoluene	87.3	70-130

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

RunID: HPEE_121120B-4806823 Units: mg/L
Analysis Date: 11/20/2012 19:30 Analyst: RVS

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C6-C8 Aliphatics	0.150	0.130	86.4	0.150	0.149	99.2	13.7	50	70	130
C8-C10 Aliphatics	0.250	0.228	91.1	0.250	0.275	110	18.8	50	70	130
Surr: 2,5-Dibromotoluene	200	171	85.7	200	210	105	20.3	30	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: L0022582-01
RunID: HPEE_121120B-4806828 Units: mg/L
Analysis Date: 11/20/2012 22:06 Analyst: RVS

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
C6-C8 Aliphatics	ND	15	12.3	82.1	15	12.1	80.7	1.67	50	70	130
C8-C10 Aliphatics	ND	25	21.4	85.7	25	22.2	88.8	3.48	50	70	130
Surr: 2,5-Dibromotoluene	ND	20000	17500	87.6	20000	17000	85.2	2.77	30	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
E - Estimated Value exceeds calibration curve
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.

11/26/2012 1:57:41 PM



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

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: RECAP Volatile Petroleum Hydrocarbons by MA-DEP
Method: MA_VPH_EPH

WorkOrder: L0022582
Lab Batch ID: R299062

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
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

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:42 PM

Version 2.1 - Modified February 11, 2011

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: RECAP Gasoline Range Organics
Method: SW8015C

WorkOrder: L0022582
Lab Batch ID: R299071

Method Blank

RunID: HPAA_121120A-4807045 Units: mg/L
Analysis Date: 11/20/2012 15:36 Analyst: JHP

Samples in Analytical Batch:

Lab Sample ID Client Sample ID
L0022582-01C 007-095-111912

Analyte	Result	Rep Limit
Gasoline Range Organics (C6-C10)	ND	0.10
Surr: 1,4-Difluorobenzene	84.4	70-135
Surr: 4-Bromofluorobenzene	101.8	89-126

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

RunID: HPAA_121120A-4807043 Units: mg/L
Analysis Date: 11/20/2012 13:36 Analyst: JHP

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Gasoline Range Organics (C6-C10)	5.00	5.32	106	5.00	5.47	109	2.8	7	77	118
Surr: 1,4-Difluorobenzene	30.0	30.0	100	30.0	30.1	100	0.4	30	70	135
Surr: 4-Bromofluorobenzene	30.0	32.7	109	30.0	33.1	110	1.1	30	89	126

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: L0022542-05
RunID: HPAA_121120A-4807049 Units: mg/L
Analysis Date: 11/20/2012 17:38 Analyst: JHP

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics (C6-C10)	ND	500	529	105	500	540	107	1.96	7	77	118
Surr: 1,4-Difluorobenzene	ND	3000	2990	99.7	3000	3000	100	0.249	30	70	135
Surr: 4-Bromofluorobenzene	ND	3000	3330	111	3000	3300	110	0.956	30	89	126

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
E - Estimated Value exceeds calibration curve
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.

11/26/2012 1:57:43 PM



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

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: RECAP Gasoline Range Organics
Method: SW8015C

WorkOrder: L0022582
Lab Batch ID: R299071

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
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

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:44 PM

Version 2.1 - Modified February 11, 2011

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Metals by Method 6020 (ICP/MS), Total
Method: SW6020

WorkOrder: L0022582
Lab Batch ID: 116796-I

Method Blank

Samples in Analytical Batch:

RunID: ICPMS_121121D-4808420 Units: mg/L
Analysis Date: 11/21/2012 15:35 Analyst: RJD
Preparation Date: 11/20/2012 17:00 Prep By: LAB Method: SW3010A

Lab Sample ID Client Sample ID
L0022582-01B 007-095-111912

Analyte	Result	Rep Limit
Calcium	ND	0.2
Iron	ND	0.1
Magnesium	ND	0.05
Manganese	ND	0.002
Potassium	ND	0.075
Sodium	0.382	0.1

Laboratory Control Sample (LCS)

RunID: ICPMS_121121D-4808421 Units: mg/L
Analysis Date: 11/21/2012 15:38 Analyst: RJD
Preparation Date: 11/20/2012 17:00 Prep By: LAB Method: SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Calcium	5.000	4.923	98.47	80	120
Iron	5.000	5.030	100.6	80	120
Magnesium	5.000	5.236	104.7	80	120
Manganese	0.1000	0.1014	101.4	80	120
Potassium	5.000	5.201	104.0	80	120
Sodium	5.000	5.708	114.2	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: L0022461-27
RunID: ICPMS_121121D-4808424 Units: mg/L
Analysis Date: 11/21/2012 15:47 Analyst: RJD
Preparation Date: 11/20/2012 17:00 Prep By: LAB Method: SW3010A

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
E - Estimated Value exceeds calibration curve
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.

11/26/2012 1:57:46 PM



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

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Metals by Method 6020 (ICP/MS), Total
 Method: SW6020

WorkOrder: L0022582
 Lab Batch ID: 116796-I

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Calcium	10.89	5	16.11	104.4	5	16.33	108.9	1.376	20	75	125
Iron	ND	5	5.034	99.06	5	4.991	98.20	0.8552	20	75	125
Magnesium	12.08	5	17.02	98.95	5	17.12	100.9	0.5788	20	75	125
Manganese	0.01961	0.1	0.1118	92.20	0.1	0.1120	92.41	0.1933	20	75	125
Potassium	39.72	5	46.41	N/C	5	46.94	N/C	N/C	20	75	125
Sodium	7.845	5	13.15	106.1	5	13.73	117.8	4.339	20	75	125

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
 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
 MI - Matrix Interference
 D - Recovery Unreportable due to Dilution
 * - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:46 PM

Version 2.1 - Modified February 11, 2011

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Volatile Organics:Method 8260B:BTEX - water
Method: SW8260B

WorkOrder: L0022582
Lab Batch ID: R299019

Method Blank

RunID: GA_121120A-4806029 Units: ug/L
Analysis Date: 11/20/2012 11:34 Analyst: CDP

Samples in Analytical Batch:

Lab Sample ID Client Sample ID
L0022582-01C 007-095-111912

Analyte	Result	Rep Limit
Benzene	ND	5.0
Ethylbenzene	ND	5.0
Toluene	ND	5.0
m,p-Xylene	ND	5.0
o-Xylene	ND	5.0
Xylenes, Total	ND	5.0
Surr: 1,2-Dichloroethane-d4	108.0	84-124
Surr: 4-Bromofluorobenzene	102.4	89-111
Surr: Toluene-d8	97.3	83-115

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

RunID: GA_121120A-4806027 Units: ug/L
Analysis Date: 11/20/2012 10:36 Analyst: CDP

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzene	20.0	19.5	97.3	20.0	19.7	98.7	1.4	10	82	119
Ethylbenzene	20.0	21.2	106	20.0	21.9	109	3.1	10	84	117
Toluene	20.0	20.8	104	20.0	21.0	105	1.0	10	80	121
m,p-Xylene	40.0	44.8	112	40.0	45.5	114	1.5	10	82	121
o-Xylene	20.0	23.2	116	20.0	23.3	116	0.5	10	84	119
Xylenes, Total	60	68	110	60	69	110	1.2	10	81	122
Surr: 1,2-Dichloroethane-d4	50.0	58.3	117	50.0	57.3	115	1.7	30	84	124
Surr: 4-Bromofluorobenzene	50.0	51.2	102	50.0	51.5	103	0.6	30	89	111
Surr: Toluene-d8	50.0	49.5	99.0	50.0	48.8	97.7	1.3	30	83	115

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
 B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
 E - Estimated Value exceeds calibration curve
 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.

11/26/2012 1:57:47 PM

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Volatile Organics:Method 8260B:BTEX - water
Method: SW8260B

WorkOrder: L0022582
Lab Batch ID: R299019

Sample Spiked: L0022450-02
RunID: GA_121120A-4806039 Units: ug/L
Analysis Date: 11/20/2012 14:31 Analyst: CDP

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	16800	2000	17500	N/C	2000	17400	N/C	N/C	10	82	119
Ethylbenzene	169	2000	2120	97.7	2000	2100	96.4	1.22	10	84	117
Toluene	ND	2000	2030	101	2000	1980	99.2	2.14	10	80	121
m,p-Xylene	1760	4000	5630	96.7	4000	5640	97.0	0.223	10	82	121
o-Xylene	ND	2000	2150	107	2000	2090	104	2.82	10	84	119
Xylenes, Total	1760	6000	7780	100	6000	7730	99.4	0.607	10	81	122
Surr: 1,2-Dichloroethane-d4	ND	5000	5900	118	5000	5890	118	0.178	30	84	124
Surr: 4-Bromofluorobenzene	ND	5000	5110	102	5000	5080	102	0.565	30	89	111
Surr: Toluene-d8	ND	5000	4870	97.3	5000	4890	97.9	0.571	30	83	115

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
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

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:48 PM

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Alkalinity, Carbonate (as CaCO3)
 Method: M2320 B

WorkOrder: L0022582
 Lab Batch ID: R299006

Method Blank

Samples in Analytical Batch:

RunID: WET_121120L-4805495 Units: mg/L CaCO3
 Analysis Date: 11/20/2012 15:40 Analyst: RDH

Lab Sample ID: L0022582-01A
 Client Sample ID: 007-095-111912

Analyte	Result	Rep Limit
Alkalinity, Carbonate (As CaCO3)	ND	5.0

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

RunID: WET_121120L-4805496 Units: mg/L CaCO3
 Analysis Date: 11/20/2012 15:40 Analyst: RDH

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Alkalinity, Carbonate (As CaCO3)	200.0	188.1	94.05	200.0	188.1	94.05	0.0	20	90	110

Sample Duplicate

Original Sample: L0022557-01
 RunID: WET_121120L-4805498 Units: mg/L CaCO3
 Analysis Date: 11/20/2012 15:40 Analyst: RDH

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Alkalinity, Carbonate (As CaCO3)	ND	ND	0	20

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
 B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
 E - Estimated Value exceeds calibration curve
 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.

11/26/2012 1:57:49 PM

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Alkalinity, Bicarbonate (as CaCO₃)
 Method: M2320 B

WorkOrder: L0022582
 Lab Batch ID: R299007

Method Blank

Samples in Analytical Batch:

RunID: WET_121120M-4805522 Units: mg/L CaCO₃
 Analysis Date: 11/20/2012 15:40 Analyst: RDH

Lab Sample ID Client Sample ID
 L0022582-01A 007-095-111912

Analyte	Result	Rep Limit
Alkalinity, Bicarbonate (As CaCO ₃)	ND	5.0

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

RunID: WET_121120M-4805523 Units: mg/L CaCO₃
 Analysis Date: 11/20/2012 15:40 Analyst: RDH

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Alkalinity, Bicarbonate (As CaCO ₃)	200.0	188.1	94.05	200.0	188.1	94.05	0.0	20	90	110

Sample Duplicate

Original Sample: L0022557-01
 RunID: WET_121120M-4805525 Units: mg/L CaCO₃
 Analysis Date: 11/20/2012 15:40 Analyst: RDH

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Alkalinity, Bicarbonate (As CaCO ₃)	394	386.1	2.03	20

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
 B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
 E - Estimated Value exceeds calibration curve
 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.

11/26/2012 1:57:50 PM

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Chloride by SM4500
Method: M4500-CL C

WorkOrder: L0022582
Lab Batch ID: R299025

Method Blank

RunID: WET_1211200-4806112 Units: mg/L
Analysis Date: 11/20/2012 16:00 Analyst: JMR

Samples in Analytical Batch:

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
L0022582-01A	007-095-111912
L0022582-02A	007-095-111912

Analyte	Result	Rep Limit
Chloride	ND	5.0

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

RunID: WET_1211200-4806113 Units: mg/L
Analysis Date: 11/20/2012 16:00 Analyst: JMR

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Chloride	150.0	149.0	99.33	150.0	147.4	98.28	1.1	10	90	110

Sample Duplicate

Original Sample: L0022582-01
RunID: WET_1211200-4806115 Units: mg/L
Analysis Date: 11/20/2012 16:00 Analyst: JMR

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Chloride	2380	2352	1.32	20

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: L0022582-01
RunID: WET_1211200-4806117 Units: mg/L
Analysis Date: 11/20/2012 16:00 Analyst: JMR

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
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

MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:52 PM



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

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Chloride by SM4500
Method: M4500-CL C

WorkOrder: L0022582
Lab Batch ID: R299025

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	2384	3000	5301	97.24	3000	5364	99.33	1.176	20	80	120

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
 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

MI - Matrix Interference
 D - Recovery Unreportable due to Dilution
 * - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:52 PM

Version 2.1 - Modified February 11, 2011

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Anions by IC using EPA 300.0
 Method: E300.0

WorkOrder: L0022582
 Lab Batch ID: R299051

Method Blank

Samples in Analytical Batch:

RunID: IC_121120A-4806446 Units: mg/L
 Analysis Date: 11/20/2012 14:30 Analyst: SM

Lab Sample ID Client Sample ID
 L0022582-01A 007-095-111912

Analyte	Result	Rep Limit
Bromide	ND	0.25
Chloride	ND	0.25
Sulfate	ND	0.25

Laboratory Control Sample (LCS)

RunID: IC_121120A-4806447 Units: mg/L
 Analysis Date: 11/20/2012 14:42 Analyst: SM

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Bromide	12.50	13.26	106.1	90	110
Chloride	12.50	12.89	103.1	90	110
Sulfate	12.50	12.84	102.7	90	110

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: L0022259-01
 RunID: IC_121120A-4806449 Units: mg/L
 Analysis Date: 11/20/2012 15:08 Analyst: SM

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Bromide	ND	250	266.5	106.6	250	267.3	106.9	0.2881	15	80	120
Chloride	180.0	250	434.2	101.7	250	433.8	101.5	0.07742	15	80	120
Sulfate	119.4	250	380.8	104.6	250	380.1	104.3	0.2029	15	80	120

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
 B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
 E - Estimated Value exceeds calibration curve
 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.

11/26/2012 1:57:53 PM



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

Quality Control Report

SHAW ENVIRONMENTAL & INFRASTRUCTURE

147497 LDNR- BAYOU CORNE

Analysis: Specific Conductance @ 25 C - SM2510B
 Method: M2510 B

WorkOrder: L0022582
 Lab Batch ID: R299075

Samples in Analytical Batch:

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
L0022582-01G	007-095-111912
L0022582-02A	007-095-111912

Laboratory Control Sample (LCS)

RunID: WET_121121B-4807155 Units: umhos/cm
 Analysis Date: 11/21/2012 8:30 Analyst: SM

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Specific Conductance	1409	1399	99.29	90	110

Sample Duplicate

Original Sample: L0022542-02
 RunID: WET_121121B-4807142 Units: umhos/cm
 Analysis Date: 11/21/2012 8:30 Analyst: SM

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Specific Conductance	16000	16020	0.250	20

Sample Duplicate

Original Sample: L0022542-12
 RunID: WET_121121B-4807153 Units: umhos/cm
 Analysis Date: 11/21/2012 8:30 Analyst: SM

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Specific Conductance	184	184	0.271	20

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
 B - Analyte Detected In The Associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated Value Between MDL And PQL * - Recovery Outside Advisable QC Limits
 E - Estimated Value exceeds calibration curve
 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.

11/26/2012 1:57:54 PM

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

147497 LDNR- BAYOU CORNE

Analysis: Specific Conductance @ 25 C - SM2510B
 Method: M2510 B

WorkOrder: L0022582
 Lab Batch ID: R299075

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
 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

MI - Matrix Interference
 D - Recovery Unreportable due to Dilution
 * - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:55 PM

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

147497 LDNR- BAYOU CORNE

Analysis: Total Dissolved Solids by SM2540 C
 Method: M2540 C

WorkOrder: L0022582
 Lab Batch ID: R299114

Method Blank

Samples in Analytical Batch:

RunID: WET_121120T-4808368 Units: mg/L
 Analysis Date: 11/20/2012 14:00 Analyst: SPM

Lab Sample ID	Client Sample ID
L0022582-01G	007-095-111912
L0022582-02A	007-095-111912

Analyte	Result	Rep Limit
Total Dissolved Solids (Residue,filterable)	ND	10

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

RunID: WET_121120T-4808369 Units: mg/L
 Analysis Date: 11/20/2012 14:00 Analyst: SPM

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Total Dissolved Solids (Residue,filterable)	200.0	193.0	96.50	200.0	197.0	98.50	2.1	20	90	110

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
 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
 MI - Matrix Interference
 D - Recovery Unreportable due to Dilution
 * - Recovery Outside Advisable QC Limits

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.

11/26/2012 1:57:56 PM

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:	L0022582	Received By:	EMB
Date and Time Received:	11/20/2012 10:44:00 AM	Carrier name:	Client Drop Off
Temperature:	4.0°C	Chilled by:	Water Ice

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

*VOA Preservation Checked After Sample Analysis

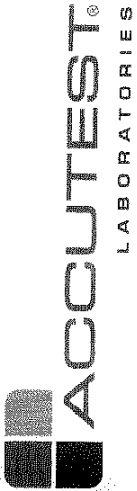
Accutest Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:



CHAIN OF CUSTODY
 Accutest Gulf Coast
 500 Ambassador Caffery Pkwy. Scott, LA 70583
 TEL: 337-237-4775 FAX: 337-237-7838
 www.acctest.com

LSR-F005.00

PAGE 1 OF 1

Client / Reporting Information		Project Information		Billing Information (if different from Report to)		Collection		Number of preserved Bottles		Data Deliverable Information		Comments / Special Instructions	
Company Name	Project Name	Street	City	State	Company Name	Date	Time	Sampled By	Matrix	# of bottles	Commercial "A" (Level 1)	Commercial "B" (Level 2)	Commercial "C" (Level 3-4)
Shaw ERI	LDR-Bayou Corne (Texas Brine WWTP)	4171 Essen Ln.	Bayou Corne	LA	Bayou Corne	11/19/12	1945	F. B. B. W. R. K. B.	WATER	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brian Rouse, LA						11/19/12	1600	F. D. M. T. W. R. I.	WATER	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lisa Pultz											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
225-987-7335											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fairall Brunet											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Field ID / Point of Collection											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
007-095-111912											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
007-095-111912											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turnaround Time (Business days)	Approved By (Accutest PM): / Date:	Standard <input type="checkbox"/> TRRP <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> EBD Format <input type="checkbox"/> 4 Day RUSH <input type="checkbox"/> FULT1 (Level 3+4) <input type="checkbox"/> Other <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> REDT1 (Level 3+4) <input type="checkbox"/> 2 Day RUSH <input type="checkbox"/> Commercial "C" <input type="checkbox"/> <input checked="" type="checkbox"/> 1 Day EMERGENCY Emergency & Rush T/A data available VIA Lablink											
Relinquished by Sample:	Received By:	Sample Custody must be documented below each time samples change possession, including courier delivery.											
1	11/19/12 2105	Relinquished By: [Signature] Received By: [Signature]											
3	11/20/12 1044	Relinquished By: [Signature] Received By: [Signature]											
5		Relinquished By: [Signature] Received By: [Signature]											
Requested Analyzes		Matrix Codes DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank											
TDS, Conductivity, Chloride (Sulfate), Sulfate Bromide, Carbonate, Bicarbonate, alkalinity		X											
Metals (As, Mn, Ni, Fe, Pb, Cr)		X											
BTEX		X											
TPH - GRO		X											
TPH - DRG/ORG		X											
VPH		X											
EPH		X											
Conductivity, TDS, Chlorides by SM4500		X											
LAB USE ONLY													