



*P. O. Box 7192 (zip 71137-7192)
1000 Grimmet Dr.
Shreveport, LA 71107
Phone: (318) 222-2424
Fax: (318) 222-2425*

November 5, 2018

Ms. Sarah A. Kirkpatrick
Bradley Murchison Kelly & Shea LLC
401 Edwards St, Suite 1000
Shreveport, LA 71101-5529

Re: LDNR Required Rig Supply Water Well Sampling
Nelson-8321Z Mason #1 Rig Supply Water Well
Section 21, Township 13 N, Range 15 W
Hand Held GPS (Rig Supply Water Well): 32.098431, -93.912952

Dear Ms. Kirkpatrick,

Approach Environmental, LLC (Approach Environmental) was retained by Bradley Murchison Kelly & Shea LLC to conduct a Water Well Sampling Project at the referenced location to analyze for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) as requested by the Louisiana Department of Natural Resources (LDNR). On October 23, 2018, Approach Environmental collected a groundwater sample from the referenced water well to evaluate the specific groundwater quality parameters as requested by the LDNR. The groundwater parameters are listed below as well as in the attached analytical data table.

The water well sampling activities included photo documentation of the water well, water well purging, obtaining GPS coordinates (via hand-held GPS), groundwater sampling, and preparation of a brief letter report presenting the analytical data and geographic location. The rig supply water well, Serial number 8321Z, is registered with the LDNR and has a recorded total depth of 260' below ground surface and a depth to water of 74' below ground surface on the registration form. A 300' long, decontaminated, electric water probe was used to measure the depth to water of the mentioned well and found that the water level was at 54.81' below ground surface. The well was purged by using a downhole pump connected to a generator. Water quality parameters (temperature, specific conductivity, and pH) were taken until they were relatively stable. Laboratory supplied sample containers and new nitrile gloves were used for the collection of samples and packaged on ice in an ice chest. Proper chain-of-custody procedures were followed and are documented with the attached laboratory report. The sample was, then, delivered to SGS Accutest

Laboratories (SGS Accutest), a Louisiana Department of Environmental Quality (LDEQ) approved laboratory (LDEQ Certification # 2048), for appropriate analysis as described herein.

An analytical data table presenting the analytical data, a Google Earth map illustrating the location of the referenced water well and E&P wells, photographic documentation, and the analytical laboratory report are attached for review. For the purpose of this report, analytical parameters that have listed or established standards or limits as established by LDEQ RECAP are compared with those applicable standards in the analytical data table. It should be noted that all samples were analyzed using method detection limits set by the laboratory. BTEX was not detected in the water sample.

Should you have any questions and/or comments, please do not hesitate to contact me at (318) 222-2424.

Sincerely,

A handwritten signature in blue ink that reads "Mark S. Moore". The signature is fluid and cursive, with a stylized arrow-like flourish at the end of the name.

Mark S. Moore
Louisiana Professional Geoscientist (P.G. #490)
Approach Environmental, L.L.C.

Encl./

Attachments Table of Contents

Analytical Data Summary Table

Google Earth Map

Site Photographs

Analytical Data Report

Nelson
Mason # 1 Rig Supply Water Well
October 23, 2018 Analytical

ID	Purgeable Aromatics			
	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes (Total) mg/L
Analysis				
GW-SS	0.005	1.00	0.70	10
Mason # 1 Water Well	<0.00023	<0.00023	<0.00023	<0.00039

ND = NON DETECT

NA=NOT APPLICABLE

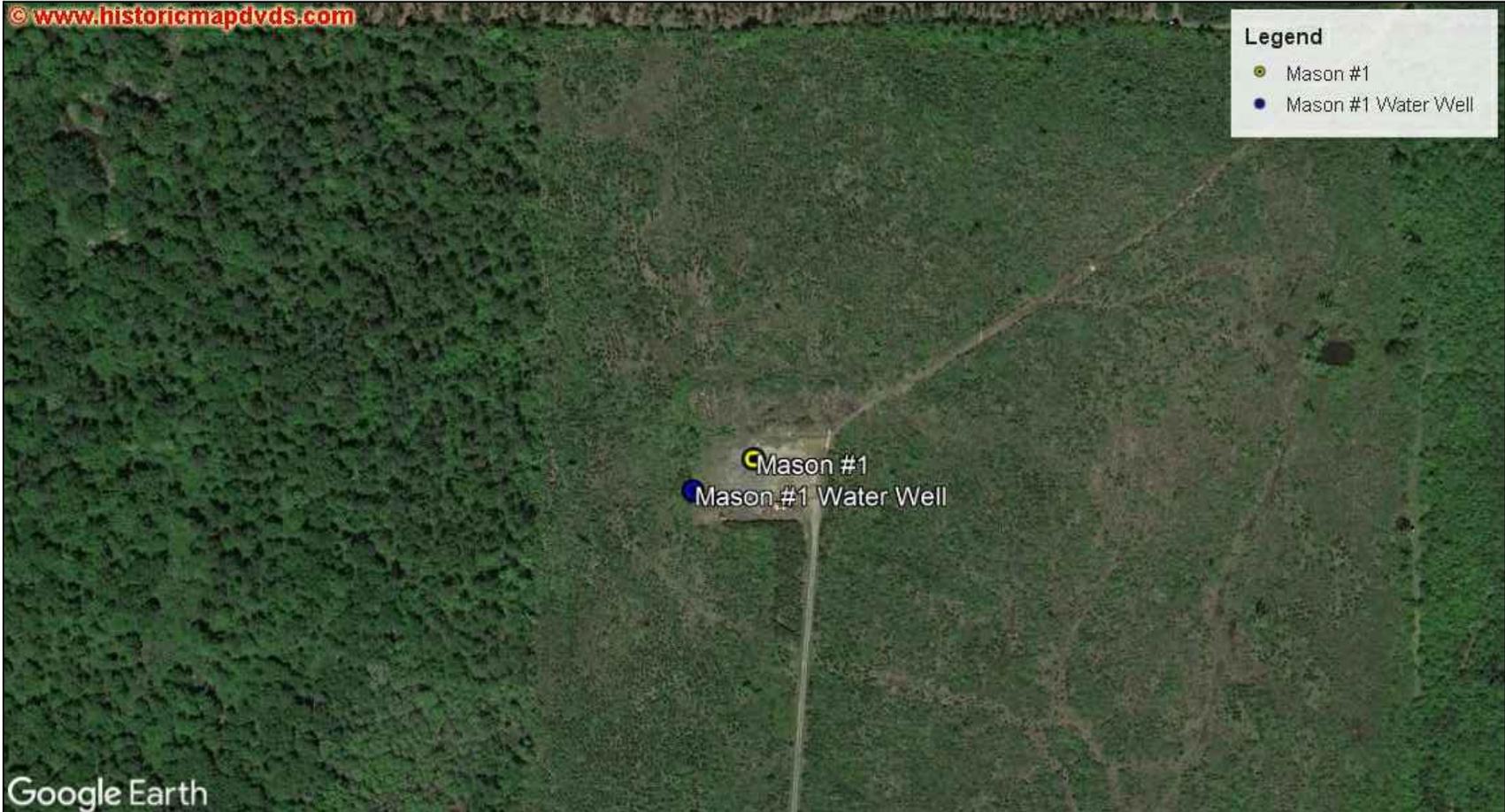
All samples analyzed at Laboratory Method Detection Limits



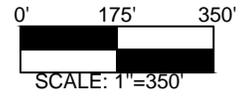
© www.historicmapdvds.com

Legend

- Mason #1
- Mason #1 Water Well



Google Earth



 **Approach Environmental**
151 Freestate Blvd., Suite B
Shreveport, Louisiana 71107
Toll Free: (866) 674-1993 Fax: (318) 222-2425

DRAWN DATE: 10/29/2018	DRAWN BY: TEM	SCALE: Approx. 1"=350'
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NELSON O&G, INC
MASON #1 WATER WELL; MASON #1-ALT
SERIAL NOS. 8321Z; 238325
BETHANY LONGSTREET FIELD

AERIAL MAP
SEC:21, TWN: 13N, RGE: 15W
MASON #1 WATER WELL (via handheld): LAT: 32.098431, LONG: -93.912952
MASON #1-ALT: LAT: 32.0986076, LONG: -93.91255933
DESOTO PARISH

FIGURE NUMBER
1

8321Z Mason #1 Rig Supply Water Well
Photos Taken by Drake Duhon on October 23, 2018



Mason Rig Supply Water Well



Mason Rig Supply Water Well

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Approach Environmental, LLC

Nelson Energy-Desoto Parish, LA

Mason #1 ALT 8321Z

SGS Job Number: LA49029

Sampling Date: 10/23/18

Report to:

**Approach Environmental, LLC
1000 Grimmatt Drive
Shreveport, LA 71107
marksm@approachenv.com**

ATTN: Mark S. Moore

Total number of pages in report: 14



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Ron Benjamin
Lab Director

Client Service contact: Amy Jackson 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), AZ(AZ0805), FL(E87657), IL(200082), KY(#31), NC(487), SC(73004001), NJ(LA007), TX(T104704186-15-7), WV(257)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Summary of Hits	4
Section 3: Sample Results	5
3.1: LA49029-1: WATER SUPPLY WELL	6
Section 4: Misc. Forms	7
4.1: Chain of Custody	8
Section 5: MS Volatiles - QC Data Summaries	11
5.1: Method Blank Summary	12
5.2: Blank Spike/Blank Spike Duplicate Summary	13
5.3: Matrix Spike/Matrix Spike Duplicate Summary	14

1

2

3

4

5



Sample Summary

Approach Environmental, LLC

Job No: LA49029

Nelson Energy-Desoto Parish, LA
Project No: Mason #1 ALT 8321Z

Sample Number	Collected		Matrix			Client Sample ID
	Date	Time By	Received	Code	Type	
LA49029-1	10/23/18	11:25 JM	10/24/18	AQ	Ground Water	WATER SUPPLY WELL

Summary of Hits

Job Number: LA49029
Account: Approach Environmental, LLC
Project: Nelson Energy-Desoto Parish, LA
Collected: 10/23/18

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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LA49029-1 **WATER SUPPLY WELL**

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

3.1
3

Client Sample ID: WATER SUPPLY WELL	
Lab Sample ID: LA49029-1	Date Sampled: 10/23/18
Matrix: AQ - Ground Water	Date Received: 10/24/18
Method: SW846 8260B	Percent Solids: n/a
Project: Nelson Energy-Desoto Parish, LA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G086516.D	1	10/25/18 15:17	AR	n/a	n/a	V1G4570
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0010	0.00023	mg/l	
108-88-3	Toluene	ND	0.0010	0.00023	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	0.00023	mg/l	
1330-20-7	Xylene (total)	ND	0.0020	0.00039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%		84-124%
2037-26-5	Toluene-D8	94%		83-115%
460-00-4	4-Bromofluorobenzene	92%		89-111%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Scott
500 Ambassador Caffery Parkway, Scott, LA 70583
TEL: 337.237.4775 FAX: 337.237.7838
www.acctest.com

FED-EX Tracking #
SGS Accutest Quote #
Bottle Order Control #
SGS Accutest Job # LA49029

Client / Reporting Information, Project Information, Requested Analysis (see TEST CODE sheet), Matrix Codes, Collection table with columns for Date, Time, Sampled By, Matrix, # of bottles, and various chemical analysis codes.

RUSH

BTEX B660
HOLD

- 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

Turnaround Time (Business days), Data Deliverable Information, Comments / Special Instructions. Includes checkboxes for Standard, 5 Day Rush, 4 Day RUSH, 3 Day RUSH, 2 Day RUSH, 1 Day RUSH, other. Approved By: YR-32 VW. Commercial "A" (Level 1), Commercial "B" (Level 2), FULT1 (Level 3+4), REDT1 (Level 3+4), Commercial "C".

LABORATORY method detection limits set by LAB is NECESSARY

Note: Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery. 9:15. Relinquished by Sampler: 10/23/18 17:00, Received By: FED Ex 1700. Relinquished By: 2, Received By: 2. Relinquished by: 3, Date Time: 10/24/18 10:15, Received By: Mark Reed. Relinquished by: 5, Date Time: 10/24/18 10:15, Received By: 5. Custody Seal # 4512. Preserved where applicable. On Ice. Cooler Temp. 2.4 AV439.

Form:SM088-02CRev.Date:04/21/17

http://www.sgs.com/en/terms-and-conditions.



1 From
 Date 10/23/18
 Sender's Name JUN = M... 318-222-2424 Phone 318-222-2424
 Company Approach Food
 Address 1000 Gimmeth Dr. Dept./Floor/Suite/Floor
 City Shreveport State LA ZIP 71107

2 Your Internal Billing Reference

3 To Recipient's Name **SAMPLE RECEIVING** Phone
 (337) 237-4775
 Company **SGS Accutest**
 Address **109 Commission Blvd** Dept./Floor/Suite/Floor
Lafayette, LA 70508
 Address Use this line for the HOLD location address or for continuation of your shipping address.
 City State ZIP

Hold Weekday
 FedEx location address required. NOT available for FedEx First Overnight.
 Hold Saturday
 FedEx location address required. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.



4 Express Package Service * To most locations. Packages up to 150 lbs. For packages over 100 lbs, see the FedEx Express Freight US Airbill.

Next Business Day	2 or 3 Business Days
<input type="checkbox"/> FedEx First Overnight Certified next business morning delivery to select locations. Friday shipments will be delivered on Monday unless Saturday Delivery is selected.	<input type="checkbox"/> FedEx 2Day A.M. Second business morning. Saturday Delivery NOT available.
<input checked="" type="checkbox"/> FedEx Priority Overnight Next business morning. Friday shipments will be delivered on Monday unless Saturday Delivery is selected.	<input type="checkbox"/> FedEx 2Day Second business afternoon. Thursday shipments will be delivered on Monday unless Saturday Delivery is selected.
<input type="checkbox"/> FedEx Standard Overnight Next business afternoon. Saturday Delivery NOT available.	<input type="checkbox"/> FedEx Express Saver Third business day. Saturday Delivery NOT available.

5 Packaging * Declared value limit \$500.
 FedEx Envelope* FedEx Pak* FedEx Box FedEx Tube Other

6 Special Handling and Delivery Signature Options Fees may apply. See the FedEx Service Guide.

Saturday Delivery
 NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

No Signature Required
 Package may be left without obtaining a signature for delivery.

Direct Signature
 Someone at recipient's address signs for delivery.

Indirect Signature
 If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only.

Does this shipment contain dangerous goods?
 No Yes (see attached Shipper's Declaration) Dry Ice (Dry Ice, 5 UN 1845) _____ kg
 Cargo Aircraft Only

Restrictions apply for dangerous goods — see the current FedEx Service Guide.

7 Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below.

Sender Recipient Third Party Credit Card Cash/Check

Total Packages _____ Total Weight _____ lbs. Credit Card Auth. _____

*Your liability is limited to US\$300 unless you declare a higher value. See the current FedEx Service Guide for details. **644**
 Rev. Data 8/15 • Form #BX0002 • ©2012-2015 FedEx • PRINTED IN U.S.A. IRDA 03/10

#1/5 = 40ml w/ HCL = 2/R-32 (vw)
 #2/3 = 40ml w/ HCL = 2/R-32 (vw)
 1/5/1

SGS Sample Receipt Summary

Job Number: LA49029

Client: APPROACH ENVIRONMENTAL

Project: NELSON ENERGY

Date / Time Received: 10/24/2018 10:15:00 AM

Delivery Method: _____

Airbill #'s: 8101 2970 7204

Cooler Temps (Initial/Adjusted): #1: (2.4/2.4);

Cooler Security

- | | |
|--|---|
| <u>Y or N</u> | <u>Y or N</u> |
| 1. Custody Seals Present: <input checked="" type="checkbox"/> <input type="checkbox"/> | 3. COC Present: <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 2. Custody Seals Intact: <input checked="" type="checkbox"/> <input type="checkbox"/> | 4. Smpl Dates/Time OK: <input checked="" type="checkbox"/> <input type="checkbox"/> |

Cooler Temperature

- | | |
|---|----------------------|
| <u>Y or N</u> | |
| 1. Temp criteria achieved: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. Thermometer ID: _____ | DV439; |
| 3. Cooler media: _____ | Ice (direct contact) |
| 4. No. Coolers: _____ | 1 |

Quality Control Preservation

- | | | |
|---------------------------------|---|------------|
| | <u>Y or N</u> | <u>N/A</u> |
| 1. Trip Blank present / cooler: | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 2. Trip Blank listed on COC: | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | |

Sample Integrity - Documentation

- | | |
|--|--|
| | <u>Y or N</u> |
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> <input type="checkbox"/> |

Sample Integrity - Condition

- | | |
|----------------------------------|--|
| | <u>Y or N</u> |
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 3. Condition of sample: | <u>Intact</u> |

Sample Integrity - Instructions

- | | | |
|---|--|-------------------------------------|
| | <u>Y or N</u> | <u>N/A</u> |
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

LA49029: Chain of Custody

Page 3 of 3

4.1
4

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA49029
Account: APPRLAS Approach Environmental, LLC
Project: Nelson Energy-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G4570-MB2	1G086500.D	1	10/25/18	AR	n/a	n/a	V1G4570

The QC reported here applies to the following samples:

Method: SW846 8260B

LA49029-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.23	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.23	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.39	ug/l	

CAS No.	Surrogate Recoveries	Limits	
17060-07-0	1,2-Dichloroethane-D4	106%	84-124%
2037-26-5	Toluene-D8	96%	83-115%
460-00-4	4-Bromofluorobenzene	94%	89-111%

5.1.1
5

Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49029
Account: APPRLAS Approach Environmental, LLC
Project: Nelson Energy-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G4570-BS1	1G086494.D	1	10/25/18	AR	n/a	n/a	V1G4570
V1G4570-BSD1	1G086496.D	1	10/25/18	AR	n/a	n/a	V1G4570

The QC reported here applies to the following samples:

Method: SW846 8260B

LA49029-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	18.3	92	18.8	94	3	82-119/30
100-41-4	Ethylbenzene	20	18.8	94	19.8	99	5	84-117/30
108-88-3	Toluene	20	18.8	94	19.7	99	5	80-121/30
1330-20-7	Xylene (total)	60	58.5	98	60.9	102	4	81-122/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	108%	84-124%
2037-26-5	Toluene-D8	96%	96%	83-115%
460-00-4	4-Bromofluorobenzene	96%	96%	89-111%

* = Outside of Control Limits.

5.2.1
5

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA49029
Account: APPRLAS Approach Environmental, LLC
Project: Nelson Energy-Desoto Parish, LA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA49030-1MS	1G086518.D	5	10/25/18	AR	n/a	n/a	V1G4570
LA49030-1MSD	1G086520.D	5	10/25/18	AR	n/a	n/a	V1G4570
LA49030-1	1G086514.D	1	10/25/18	AR	n/a	n/a	V1G4570

The QC reported here applies to the following samples:

Method: SW846 8260B

LA49029-1

CAS No.	Compound	LA49030-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	100	95.7	96	100	97.9	98	2	31-161/15
100-41-4	Ethylbenzene	ND	100	99.1	99	100	99.4	99	0	47-146/30
108-88-3	Toluene	ND	100	98.8	99	100	99.4	99	1	36-155/17
1330-20-7	Xylene (total)	ND	300	308	103	300	310	103	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA49030-1	Limits
17060-07-0	1,2-Dichloroethane-D4	111%	108%	110%	84-124%
2037-26-5	Toluene-D8	95%	95%	96%	83-115%
460-00-4	4-Bromofluorobenzene	96%	95%	95%	89-111%

* = Outside of Control Limits.

5.3.1
5