



*P. O. Box 7192 (zip 71137-7192)
1000 Grimmer 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-7776Z Johnson # 3Rig Supply Water Well
Section 21, Township 13 N, Range 15 W
GPS Via SONRIS (Rig Supply Water Well): 32.103333, -93.903333

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 7776Z, is registered with the LDNR and has a recorded total depth of 340' below ground surface and a depth to water of 186' 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 74.45' 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,



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

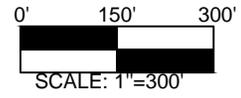
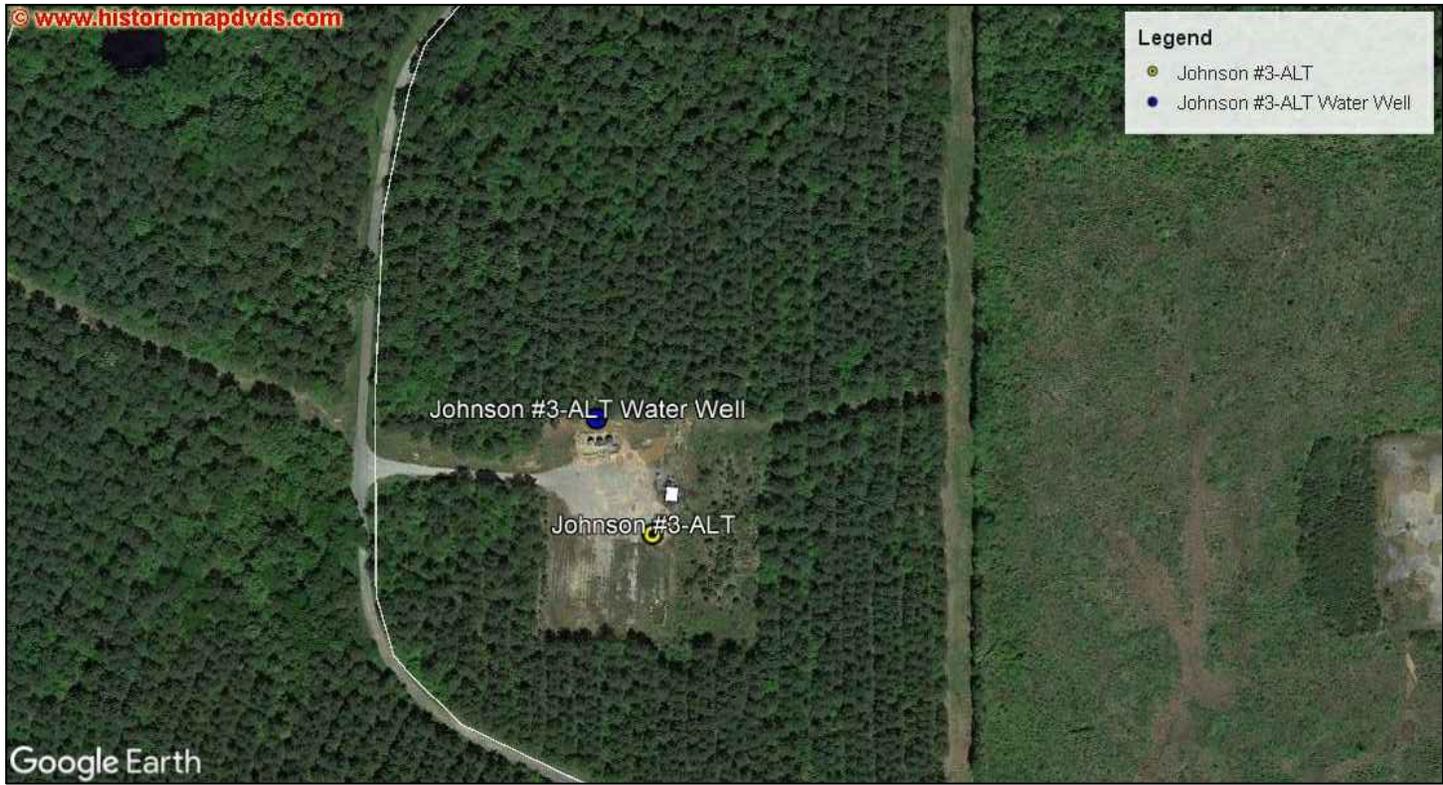
Nelson
Johnson # 3 Rig Supply Water Well
October 23, 2018 Analytical

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
Johnson # 3 Water Well	<0.00023	<0.00023	<0.00023	<0.00039

ND = NON DETECT

NA=NOT APPLICABLE

All samples analyzed at Labarotory Method Detection Limits



 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"=300'

NELSON O&G, INC JOHNSON #3 WATER WELL; JOHNSON #3-ALT SERIAL NOS. 7776Z; 233453 BETHANY LONGSTREET FIELD
--

AERIAL MAP SEC:21, TWN: 13N, RGE: 15W JOHNSON #3 WATER WELL: LAT: 32.103333, LONG: -93.903333 JOHNSON #3-ALT: LAT: 32.10285011, LONG: -93.90305761 DESOTO PARISH
--

FIGURE NUMBER 1

7776Z Johnson # 3 Rig Supply Water Well
Photos taken by Drake Duhon on October 23, 2018



Location sign



Water well before taking off top



Purging of well



Taking field water quality readings

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

7776Z Johnson #3

SGS Job Number: LA49030

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.

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Sample Summary

Approach Environmental, LLC

Job No: LA49030

Nelson Energy-Desoto Parish, LA
Project No: 7776Z Johnson #3

Sample Number	Collected		Matrix			Client Sample ID
	Date	Time By	Received	Code	Type	
LA49030-1	10/23/18	00:00 JM	10/24/18	AQ	Ground Water	WATER SUPPLY WELL

Summary of Hits

Job Number: LA49030
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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LA49030-1 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: LA49030-1	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	1G086514.D	1	10/25/18 14:47	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	96%		83-115%
460-00-4	4-Bromofluorobenzene	95%		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 Inc.-Lafayette
500 Ambassador Caffery Pkwy, Scott, LA 70583
TEL:337-237-4775 FAX: 337-237-7838
www.accutest.com

FED-EX Tracking #
Bottle Order Control #
Accutest Quote #
Accutest Job # LA49030

Client / Reporting Information
Project Name: Nelson Erdely
Street Address: 1000 Gimmeth Dr.
City: Shreveport, LA
Project Contact: Mark Moize
Phone: 318-222-2424
Project Manager: John Macchio
Project Information: Desoto Parish, Project # 116Z Johnson #3
Requested Analyses: DW, GW, SW, SO, SL, SED, LIQ, AIR, SOL, WP, FB, EB, RB, TB
Matrix Codes: 5

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RUSH

0968
BTEX 8260

Turnaround Time (Business days)
Data Deliverable Information
Comments / Special Instructions: LABORATORY method detection limits set by LAB IS NECESSARY

Sample Custody must be documented below each time samples change possession, including courier delivery.
1 Relinquished by: [Signature] Date Time: 10/23/18 17:00 Received By: FEDEX 1200
2 Relinquished By: FedEx Date Time: 10/24/18 9:15 Received By: [Signature]
3 Relinquished by: [Signature] Date Time: 10/24/18 10:15 Received By: Mark Reed
4 Relinquished By: [Signature] Date Time: [] Received By: [Signature]
5 Relinquished by: [Signature] Date Time: [] Received By: [Signature]



1 From
 Date: 10/23/18
 Sender's Name: JON Marnio Phone: 318 222-2424
 Company: APPROACH ENV.
 Address: 1000 GIZIMNETT DR.
 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
Lafayette, LA 70508
 City: _____ State: _____ ZIP: _____



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

Next Business Day
 FedEx First Overnight
 FedEx Priority Overnight
 FedEx Standard Overnight

2 or 3 Business Days
 FedEx 2Day A.M.
 FedEx 2Day
 FedEx Express Saver

5 Packaging *Declared value limit \$50K
 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
 No Signature Required
 Direct Signature
 Indirect Signature
 Signature Required

Does this shipment contain dangerous goods?
 No Yes Dry Ice Cargo Aircraft Only

7 Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No.
 Sender Acct. No. in Section 7 will be billed Recipient Third Party Credit Card Cash/Check

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

Your liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide for details. **644**

5 = 40lb w/ HCL (45-36 VW) 1/5/1

SGS Sample Receipt Summary

Job Number: LA49030

Client: APPROACH ENVIRONMENTAL

Project: NELSON ENERGY

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

Delivery Method: FedEx

Airbill #'s: 8101 2970 7204

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

Cooler Security

- | | | | | | | | |
|---------------------------|-------------------------------------|-----------|--------------------------|-----------------------|-------------------------------------|-----------|--------------------------|
| | <u>Y</u> | <u>or</u> | <u>N</u> | | <u>Y</u> | <u>or</u> | <u>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. SmpI Dates/Time OK | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |

Cooler Temperature

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

Quality Control Preservation

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

Sample Integrity - Documentation

- | | | | |
|--|-------------------------------------|-----------|--------------------------|
| | <u>Y</u> | <u>or</u> | <u>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</u> | <u>or</u> | <u>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</u> | <u>or</u> | <u>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

LA49030: Chain of Custody

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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: LA49030
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

LA49030-1

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
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Blank Spike/Blank Spike Duplicate Summary

Job Number: LA49030
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

LA49030-1

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: LA49030
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

LA49030-1

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
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