

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

May 6, 2019

Mr. Todd Emmert Elm Springs, Inc. P. O. Box 58 Shongaloo, LA 71072-0058

Re: LDNR – April 13, 2019 Air Sampling Project

Davis Property Israelite Road DeSoto Parish, LA

Dear Mr. Emmert:

Approach Environmental, LLC (Approach Environmental) was retained by the Louisiana Department of Natural Resources (LDNR) to collect air samples at the referenced property due to reported "bubbling" at the ground surface after rainfall during the afternoon of April 13, 2019. Please refer to the following GoogleEarth aerial photo depicting the location of the Davis Property.



**Davis Property** 

The sampling activities included observation and documentation of site conditions (observations were made with flashlight and truck headlights due to darkness), obtaining GPS Coordinates (via hand-held GPS) and air sampling. Upon arrival on-site, one (1) sample point was determined based on observation of bubbles seeping from the ground surface. The sample point was basically the same as the "South" sample location from the March 24, 2019, sampling event. Duplicate samples were collected from the sampling point using laboratory-specific containers in accordance with laboratory and method-specific sampling protocol. The samples were collected by an experienced Environmental Scientist that was present and assisted with the March 24, 2019, sampling event. The sample locations are depicted on the previous GoogleEarth aerial photograph.

A new 5-gallon bucket with pre-drilled holes in the base was placed over the bubbles seeping from the surface water and allowed to fill with the gas for approximately 5 minutes to be sure that an adequate amount of sample was to be obtained. A new, decontaminated, hand pump was attached to the pre-drilled hole in the bucket and pumped for approximately 30 seconds to purge the pump. A sample bag was, then, attached to the end of the pump and pumped until the gas bag was properly filled with enough sample. This process was completed with new tubing, bucket and pump. Each gas bag was labeled with the proper sampling documentation. Samples were submitted to IsoTech Laboratory for Hydrocarbon analysis according to GPA method 2261-13. The analytical laboratory report is included herein for review and future reference.

Should you have any questions and/or comments, please do not hesitate to contact me at (318) 222-2424, via my cell at (318) 401-0085, or via e-mail at marksm@approachenv.com.

Moore

Sincerely,

Mark S. Moore

Approach Environmental, L.L.C.

Encl./



## ANALYSIS REPORT

Lab #: 715530 Job #: 41340 IS-99404 Co. Job#: Sample Name: Davis South - 4.13.19 Co. Lab#:

Company: Approach Environmental, LLC

API/Well:

Container: IsoBag

Field/Site Name: Davis Property Location: Israelite Rd

Formation:

Sampling Point:

Date Sampled: 4/13/2019 20:48 Date Received: 4/16/2019 Date Reported: 4/29/2019

Component	Chemical	$\delta^{13}$ C	δD	$\delta^{15}N$
Component	mol. %	%	%	%
Carbon Monoxide	nd			
Helium	nd			
Hydrogen	nd			
Argon	0.933			
Oxygen	20.75			
Nitrogen	78.15			
Carbon Dioxide	0.17			
Methane	0.0018			
Ethane	nd			
Ethylene	nd			
Propane	nd			
Propylene	nd			
Iso-butane	nd			
N-butane	nd			
Iso-pentane	nd			
N-pentane	nd			
Hexanes +	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.73psia, calculated: 0

Specific gravity, calculated: 1.001

nd = not detected. na = not analyzed. Isotopic composition of hydrogen is relative to VSMOW. Isotopic composition of carbon is relative to VPDB. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.



1308 Parkland Court Champaign, IL 61821-1826 | 877.362.4190 217.398.3490 217.398.3493 Fax

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