

Analytical Report

NMOCD REC'D
10/12/20

Report Summary

Client: BP America Production Co.

Samples Received: 7/21/2020

Job Number: 03143-0424

Work Order: P007054

Project Name/Location: BHD South

Report Reviewed By:



Date: 7/28/20

Walter Hinchman, Laboratory Director



Envirotech Inc. certifies the test results meet all requirements of TNi unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
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Envirotech, Inc, holds the Utah TNi certification NM009792018-1 for the data reported.
Envirotech, Inc, holds the Texas TNi certification T104704557-19-2 for the data reported.



BP America Production Co. PO Box 22024 Tulsa OK, 74121-2024	Project Name: BHD South Project Number: 03143-0424 Project Manager: Sabre Beebe	Reported: 07/28/20 16:24
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Sample Summary

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Neil LS 3	P007054-01A	Aqueous	07/21/20	07/21/20	Poly 500mL

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**Neil LS 3
P007054-01 (Water)**

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
Total Dissolved Solids	10900	50.0	1	07/27/20	07/28/20	Batch: 2031006
Wet Chemistry by 9040C/4500H+B						
pH @25°C	10.0		1	07/24/20 07:13	07/24/20 08:37	Batch: 2030027 H5
Wet Chemistry by SM2320B						
Total Alkalinity (as CaCO3 at pH 4.5)	81.0	10.0	1	07/24/20	07/24/20	Batch: 2030031
Wet Chemistry by 9050A/2510B						
Specific Conductance (@ 25 C)	13900	10.0	1	07/24/20	07/24/20	Batch: 2030028
Dissolved Metals by EPA 6010C						
Calcium	194	1.00	1	07/21/20	07/27/20	Batch: 2030011
Iron	ND	2.00	1	07/21/20	07/27/20	
Magnesium	ND	1.00	1	07/21/20	07/27/20	
Potassium	12.1	1.00	1	07/21/20	07/27/20	
Sodium	3780	200	100	07/21/20	07/27/20	
Sodium Absorption Ratio	74.8		1	07/27/20	07/27/20	
Anions by EPA 300.0/9056A						
Fluoride	ND	5.00	20	07/22/20	07/22/20	Batch: 2030018
Chloride	1250	40.0	20	07/22/20	07/22/20	
Nitrite-N	ND	5.00	20	07/22/20 10:53	07/22/20 14:02	
Nitrate-N	ND	5.00	20	07/22/20 10:53	07/22/20 14:02	
o-Phosphate-P	ND	5.00	20	07/22/20 10:53	07/22/20 14:02	
Sulfate	6610	40.0	20	07/22/20	07/22/20	

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Wet Chem/Gravimetric by SM2540C - Quality Control

Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2031006-BLK1) Prepared: 07/27/20 0 Analyzed: 07/28/20 1

Total Dissolved Solids	ND	10.0							
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LCS (2031006-BS1) Prepared: 07/27/20 0 Analyzed: 07/28/20 1

Total Dissolved Solids	117	10.0	100		117	55-134			
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LCS Dup (2031006-BSD1) Prepared: 07/27/20 0 Analyzed: 07/28/20 1

Total Dissolved Solids	118	10.0	100		118	55-134	0.851	5	
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Wet Chemistry by 9040C/4500H+B - Quality Control

Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes
	pH Units	pH Units	pH Units	pH Units	%	%	%	%	

LCS (2030027-BS1)

Prepared & Analyzed: 07/24/20 0

pH	8.00		8.00		100	98.75-101.25			
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Duplicate (2030027-DUP1)

Source: P007057-01

Prepared & Analyzed: 07/24/20 0

pH	8.37			8.07			3.65	20	
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Wet Chemistry by SM2320B - Quality Control

Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

LCS (2030031-BS1) Prepared & Analyzed: 07/24/20 1

Total Alkalinity (as CaCO3 at pH 4.5)	262	10.0	250		105	70-130			
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Duplicate (2030031-DUP1) Source: P007041-01 Prepared & Analyzed: 07/24/20 1

Total Alkalinity (as CaCO3 at pH 4.5)	446	10.0		454			1.78	20	
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Wet Chemistry by 9050A/2510B - Quality Control

Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes
	uS/cm	uS/cm	uS/cm	uS/cm	%	%	%	%	

Blank (2030028-BLK1) Prepared: 07/24/20 0 Analyzed: 07/24/20 1

Specific Conductance (@ 25 C)	ND	10.0							
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LCS (2030028-BS1) Prepared: 07/24/20 0 Analyzed: 07/24/20 1

Specific Conductance (@ 25 C)	1430	10.0	1410		101	98-102			
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Duplicate (2030028-DUP1) **Source: P007057-01** Prepared: 07/24/20 0 Analyzed: 07/24/20 1

Specific Conductance (@ 25 C)	1270	10.0		1320			4.48	20	
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Dissolved Metals by EPA 6010C - Quality Control

Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2030011-BLK1)

Prepared & Analyzed: 07/21/20 1

Calcium	ND	1.00							
Iron	ND	2.00							
Magnesium	ND	1.00							
Potassium	ND	1.00							
Sodium	ND	2.00							

LCS (2030011-BS1)

Prepared & Analyzed: 07/21/20 1

Calcium	51.4	1.00	50.0		103	80-120			
Iron	103	2.00	100		103	80-120			
Magnesium	50.3	1.00	50.0		101	80-120			
Potassium	5.07	1.00	5.00		101	80-120			
Sodium	18.4	2.00	20.0		92.2	80-120			

Matrix Spike (2030011-MS1)

Source: P007050-02

Prepared & Analyzed: 07/21/20 1

Calcium	338	1.00	50.0	283	109	75-125			
Iron	103	2.00	100	ND	103	75-125			
Magnesium	113	1.00	50.0	65.8	93.6	75-125			
Potassium	53.2	20.0	5.00	46.6	132	75-125			M2
Sodium	2770	40.0	20.0	2740	180	75-125			M2

Matrix Spike Dup (2030011-MSD1)

Source: P007050-02

Prepared & Analyzed: 07/21/20 1

Calcium	334	1.00	50.0	283	102	75-125	1.01	20	
Iron	102	2.00	100	ND	102	75-125	1.18	20	
Magnesium	115	1.00	50.0	65.8	98.4	75-125	2.11	20	
Potassium	54.1	20.0	5.00	46.6	150	75-125	1.72	20	M2
Sodium	2830	40.0	20.0	2740	480	75-125	2.14	20	M2



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Anions by EPA 300.0/9056A - Quality Control

Analyte	Result	Reporting Limit	Spike Level	Source Result	REC	REC Limits	RPD	RPD Limit	Notes
	mg/L	mg/L	mg/L	mg/L	%	%	%	%	

Blank (2030018-BLK1)

Prepared & Analyzed: 07/22/20 1

Fluoride	ND	0.250							
Chloride	ND	2.00							
Nitrite-N	ND	0.250							
Nitrate-N	ND	0.250							
o-Phosphate-P	ND	0.250							
Sulfate	ND	2.00							

LCS (2030018-BS1)

Prepared & Analyzed: 07/22/20 1

Fluoride	2.61	0.250	2.50		104	90-110			
Chloride	25.3	2.00	25.0		101	90-110			
Nitrite-N	2.57	0.250	2.50		103	90-110			
Nitrate-N	2.62	0.250	2.50		105	90-110			
o-Phosphate-P	12.8	0.250	12.5		102	90-110			
Sulfate	24.8	2.00	25.0		99.1	90-110			

LCS Dup (2030018-BSD1)

Prepared & Analyzed: 07/22/20 1

Fluoride	2.62	0.250	2.50		105	90-110	0.536	20	
Chloride	25.1	2.00	25.0		100	90-110	0.850	20	
Nitrite-N	2.60	0.250	2.50		104	90-110	1.43	20	
Nitrate-N	2.63	0.250	2.50		105	90-110	0.648	20	
o-Phosphate-P	12.8	0.250	12.5		103	90-110	0.571	20	
Sulfate	24.9	2.00	25.0		99.8	90-110	0.708	20	

QC Summary Report Comment:

Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

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PO Box 22024
Tulsa OK, 74121-2024

Project Name: BHD South
Project Number: 03143-0424
Project Manager: Sabre Beebe

Reported:
07/28/20 16:24

Notes and Definitions

- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- H5 pH is specified to be performed in the field within 15 minutes of sampling. The sample was performed as quickly as possible.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- ** Methods marked with ** are non-accredited methods.

Soil data is reported on an "as received" weight basis, unless reported otherwise.

Client: <u>BP</u>	Bill To Attention: <u>Sabra Beebe</u> Address: City, State, Zip Phone: <u>970-779-9398</u> Email:	Lab Use Only		TAT		EPA Program					
Project: <u>BHD South</u>		Lab WO#	Job Number	1D	3D	RCRA	CWA	SDWA			
Project Manager: <u>Sabra Beebe</u>		<u>P007054</u>	<u>0343-0424</u>								
Address:		Analysis and Method							State		
City, State, Zip		DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	C/A PKG	NM	CO	UT
Phone: <u>970-779-9398</u>								TX	OK		
Email:											
Report due by:											

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	DRO/DRO by 8015	GRO/DRO by 8015	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	C/A PKG	Remarks
7:40am	7-21-20	A	1	Neil LS 3	1							X	

Additional Instructions: Erik Scaw

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: X Erik Scaw

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature) <u>[Signature]</u>	Date <u>7-21-20</u>	Time <u>2:45 pm</u>	Received by: (Signature) <u>[Signature]</u>	Date <u>7/21/20</u>	Time <u>14:47</u>	Lab Use Only Received on ice: Y / <u>(N)</u> T1 <u>28.4</u> T2 <u>25.7</u> T3 <u>26.0</u> AVG Temp °C <u>26.7</u>
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other _____ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.