

Report to:
John Hampton Jr.



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Envirotech-inc.com



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Practical Solutions for a Better Tomorrow

Analytical Report

Phoenix Hydrocarbons

Project Name: Federal E4

Work Order: E106053

Job Number: 17078-0002

Received: 6/22/2021

Revision: 1

Report Reviewed By:

Walter Hinchman
Laboratory Director
6/30/21

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.

Date Reported: 6/30/21

John Hampton Jr.
PO Box 3638
Midland, TX 79702



Project Name: Federal E4
Workorder: E106053
Date Received: 6/22/2021 3:48:00PM

John Hampton Jr.,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 6/22/2021 3:48:00PM, under the Project Name: Federal E4.

The analytical test results summarized in this report with the Project Name: Federal E4 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

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Sample Summary

Phoenix Hydrocarbons	Project Name:	Federal E4	Reported: 06/30/21 14:41
PO Box 3638	Project Number:	17078-0002	
Midland TX, 79702	Project Manager:	John Hampton Jr.	

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Casing Sample	E106053-01A	Aqueous	06/22/21	06/22/21	Poly 500mL
Braden Head Sample	E106053-02A	Aqueous	06/22/21	06/22/21	Poly 500mL



Sample Data

Phoenix Hydrocarbons PO Box 3638 Midland TX, 79702	Project Name: Federal E4 Project Number: 17078-0002 Project Manager: John Hampton Jr.	Reported: 6/30/2021 2:41:00PM
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Casing Sample

E106053-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analyst: RAS		Batch: 2126039	
Total Dissolved Solids	4820	25.0	1	06/25/21	06/28/21	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analyst: RAS		Batch: 2126031	
pH @25°C	7.22		1	06/24/21 13:23	06/24/21 14:49	H5
Wet Chemistry by SM2320B	mg/L	mg/L	Analyst: JL		Batch: 2127007	
Total Alkalinity (as CaCO ₃ at pH 4.5)	25.5	10.0	1	06/28/21	06/29/21	
Wet Chemistry by 9050A/2510B	uS/cm	uS/cm	Analyst: RAS		Batch: 2127012	
Specific Conductance (@ 25 C)	5710	10.0	1	06/29/21	06/29/21	
Dissolved Metals by EPA 6010C	mg/L	mg/L	Analyst: AC		Batch: 2126027	
Calcium	377	1.00	1	06/24/21	06/25/21	
Iron	ND	2.00	1	06/24/21	06/25/21	
Magnesium	6.81	1.00	1	06/24/21	06/25/21	
Potassium	5.43	1.00	1	06/24/21	06/25/21	C1
Sodium	1190	20.0	10	06/24/21	06/24/21	
Sodium Absorption Ratio	16.6		1	06/28/21	06/28/21	
Anions by EPA 300.0/9056A	mg/L	mg/L	Analyst: RAS		Batch: 2126024	
Fluoride	ND	5.00	20	06/23/21	06/23/21	
Chloride	ND	40.0	20	06/23/21	06/23/21	
Nitrite-N	ND	5.00	20	06/23/21 12:07	06/23/21 18:27	
Nitrate-N	ND	5.00	20	06/23/21 12:07	06/23/21 18:27	
o-Phosphate-P	ND	5.00	20	06/23/21 12:07	06/23/21 18:27	
Sulfate	3280	40.0	20	06/23/21	06/23/21	



Sample Data

Phoenix Hydrocarbons
PO Box 3638
Midland TX, 79702

Project Name: Federal E4
Project Number: 17078-0002
Project Manager: John Hampton Jr.

Reported:
6/30/2021 2:41:00PM

Braden Head Sample

E106053-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C						
	mg/L	mg/L		Analyst: RAS		Batch: 2126039
Total Dissolved Solids	1420	10.0	1	06/25/21	06/28/21	
Wet Chemistry by 9040C/4500H+B						
	pH Units	pH Units		Analyst: RAS		Batch: 2126031
pH @25°C	9.23		1	06/24/21 13:23	06/24/21 14:49	H5
Wet Chemistry by SM2320B						
	mg/L	mg/L		Analyst: JL		Batch: 2127007
Total Alkalinity (as CaCO3 at pH 4.5)	206	10.0	1	06/28/21	06/29/21	
Wet Chemistry by 9050A/2510B						
	uS/cm	uS/cm		Analyst: RAS		Batch: 2127012
Specific Conductance (@ 25 C)	2130	10.0	1	06/29/21	06/29/21	
Dissolved Metals by EPA 6010C						
	mg/L	mg/L		Analyst: AC		Batch: 2126027
Calcium	3.79	1.00	1	06/24/21	06/25/21	
Iron	ND	2.00	1	06/24/21	06/25/21	
Magnesium	ND	1.00	1	06/24/21	06/25/21	
Potassium	1.03	1.00	1	06/24/21	06/25/21	C1
Sodium	492	20.0	10	06/24/21	06/24/21	
Sodium Absorption Ratio	69.6		1	06/28/21	06/28/21	
Anions by EPA 300.0/9056A						
	mg/L	mg/L		Analyst: RAS		Batch: 2126024
Fluoride	1.90	1.25	5	06/23/21	06/23/21	
Chloride	ND	10.0	5	06/23/21	06/23/21	
Nitrite-N	ND	1.25	5	06/23/21 12:07	06/23/21 18:51	
Nitrate-N	ND	1.25	5	06/23/21 12:07	06/23/21 18:51	
o-Phosphate-P	ND	1.25	5	06/23/21 12:07	06/23/21 18:51	
Sulfate	764	10.0	5	06/23/21	06/23/21	



QC Summary Data

Phoenix Hydrocarbons	Project Name:	Federal E4	Reported:
PO Box 3638	Project Number:	17078-0002	
Midland TX, 79702	Project Manager:	John Hampton Jr.	6/30/2021 2:41:00PM

Wet Chem/Gravimetric by SM2540C

Analyst: RAS

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

Blank (2126039-BLK1)

Prepared: 06/25/21 Analyzed: 06/30/21

Total Dissolved Solids	ND	10.0							
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LCS (2126039-BS1)

Prepared: 06/25/21 Analyzed: 06/30/21

Total Dissolved Solids	96.0	10.0	100	96.0	55-134				
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Duplicate (2126039-DUP1)

Source: E106053-01 Prepared: 06/25/21 Analyzed: 06/28/21

Total Dissolved Solids	4850	25.0		4820	0.580	5			
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QC Summary Data

Phoenix Hydrocarbons	Project Name:	Federal E4	Reported:
PO Box 3638	Project Number:	17078-0002	
Midland TX, 79702	Project Manager:	John Hampton Jr.	6/30/2021 2:41:00PM

Wet Chemistry by 9040C/4500H+B

Analyst: RAS

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

LCS (2126031-BS1) Prepared: 06/24/21 Analyzed: 06/24/21

pH	7.99	8.00	99.9	98.75-101.25
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Duplicate (2126031-DUP1) Source: E106042-01 Prepared: 06/24/21 Analyzed: 06/24/21

pH	7.36	7.28	1.09	20
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QC Summary Data

Phoenix Hydrocarbons	Project Name:	Federal E4	Reported:
PO Box 3638	Project Number:	17078-0002	
Midland TX, 79702	Project Manager:	John Hampton Jr.	6/30/2021 2:41:00PM

Wet Chemistry by SM2320B

Analyst: JL

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

LCS (2127007-BS1) Prepared: 06/28/21 Analyzed: 06/29/21

Total Alkalinity (as CaCO3 at pH 4.5)	237	10.0	250	94.8	70-130
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Duplicate (2127007-DUP1) Source: E106053-02 Prepared: 06/28/21 Analyzed: 06/29/21

Total Alkalinity (as CaCO3 at pH 4.5)	187	10.0	206	9.67	20
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QC Summary Data

Phoenix Hydrocarbons	Project Name:	Federal E4	Reported:
PO Box 3638	Project Number:	17078-0002	
Midland TX, 79702	Project Manager:	John Hampton Jr.	6/30/2021 2:41:00PM

Wet Chemistry by 9050A/2510B

Analyst: RAS

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

Blank (2127012-BLK1)

Prepared: 06/29/21 Analyzed: 06/29/21

Specific Conductance (@ 25 C) ND 10.0

LCS (2127012-BS1)

Prepared: 06/29/21 Analyzed: 06/29/21

Specific Conductance (@ 25 C) 1420 10.0 1410 101 98-102

Duplicate (2127012-DUP1)

Source: E106053-02 Prepared: 06/29/21 Analyzed: 06/29/21

Specific Conductance (@ 25 C) 2160 10.0 2130 1.40 20



QC Summary Data

Phoenix Hydrocarbons	Project Name:	Federal E4	Reported:
PO Box 3638	Project Number:	17078-0002	
Midland TX, 79702	Project Manager:	John Hampton Jr.	6/30/2021 2:41:00PM

Dissolved Metals by EPA 6010C

Analyst: AC

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

Blank (2126027-BLK1)

Prepared: 06/24/21 Analyzed: 06/24/21

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

LCS (2126027-BS1)

Prepared: 06/24/21 Analyzed: 06/24/21

Calcium	50.9	1.00	50.0	102	80-120
Iron	100	2.00	100	100	80-120
Magnesium	51.7	1.00	50.0	103	80-120
Potassium	5.35	1.00	5.00	107	80-120
Sodium	19.3	2.00	20.0	96.7	80-120

Matrix Spike (2126027-MS1)

Source: E106052-01 Prepared: 06/24/21 Analyzed: 06/24/21

Calcium	93.2	1.00	50.0	36.8	113	75-125
Iron	113	2.00	100	ND	113	75-125
Magnesium	58.4	1.00	50.0	6.02	105	75-125
Potassium	7.46	1.00	5.00	2.24	104	75-125
Sodium	52.1	2.00	20.0	32.4	98.8	75-125

Matrix Spike Dup (2126027-MSD1)

Source: E106052-01 Prepared: 06/24/21 Analyzed: 06/24/21

Calcium	87.5	1.00	50.0	36.8	101	75-125	6.37	20
Iron	104	2.00	100	ND	104	75-125	7.66	20
Magnesium	59.3	1.00	50.0	6.02	107	75-125	1.61	20
Potassium	7.71	1.00	5.00	2.24	109	75-125	3.38	20
Sodium	53.5	2.00	20.0	32.4	106	75-125	2.56	20



QC Summary Data

Phoenix Hydrocarbons	Project Name:	Federal E4	Reported:
PO Box 3638	Project Number:	17078-0002	
Midland TX, 79702	Project Manager:	John Hampton Jr.	6/30/2021 2:41:00PM

Anions by EPA 300.0/9056A

Analyst: RAS

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

Blank (2126024-BLK1)

Prepared: 06/23/21 Analyzed: 06/23/21

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 (2126024-BS1)

Prepared: 06/23/21 Analyzed: 06/23/21

Fluoride	2.54	0.250	2.50	102	90-110
Chloride	24.6	2.00	25.0	98.6	90-110
Nitrite-N	2.48	0.250	2.50	99.2	90-110
Nitrate-N	2.47	0.250	2.50	98.6	90-110
o-Phosphate-P	12.3	0.250	12.5	98.1	90-110
Sulfate	23.8	2.00	25.0	95.3	90-110

LCS Dup (2126024-BSD1)

Prepared: 06/23/21 Analyzed: 06/23/21

Fluoride	2.54	0.250	2.50	102	90-110	0.0787	20
Chloride	24.6	2.00	25.0	98.5	90-110	0.0122	20
Nitrite-N	2.47	0.250	2.50	98.9	90-110	0.323	20
Nitrate-N	2.46	0.250	2.50	98.4	90-110	0.162	20
o-Phosphate-P	12.3	0.250	12.5	98.0	90-110	0.0653	20
Sulfate	23.8	2.00	25.0	95.2	90-110	0.105	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.



Definitions and Notes

Phoenix Hydrocarbons	Project Name:	Federal E4	
PO Box 3638	Project Number:	17078-0002	Reported:
Midland TX, 79702	Project Manager:	John Hampton Jr.	06/30/21 14:41

- C1 The CV recovery was above method acceptance limits.
- 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
- DNI Did Not Ignite

Note (1): Methods marked with ** are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.





Envirotech Analytical Laboratory

Printed: 6/23/2021 12:04:37PM

Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Phoenix Hydrocarbons	Date Received:	06/22/21 15:48	Work Order ID:	E106053
Phone:	(432) 686-9869	Date Logged In:	06/23/21 11:59	Logged In By:	Alexa Michaels
Email:	jdhampton@walsheng.net	Due Date:	06/29/21 17:00 (5 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: Cody Paris**Comments/Resolution****Sample Turn Around Time (TAT)**

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 - Sample ID? Yes
 - Date/Time Collected? Yes
 - Collectors name? No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: NA

Client Instruction

Email- Vern@walsheng.net/ jdhampton@walsheng.net/ cody@walsheng.net/vanessa@walsheng.net

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 34785

COMMENTS

Operator: PHOENIX HYDROCARBONS OPERATING CORP P.O. Box 3638 Midland, TX 79705	OGRID: 188483
	Action Number: 34785
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

COMMENTS

Created By	Comment	Comment Date
mkuehling	TDS 1420	8/2/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 34785

CONDITIONS

Operator: PHOENIX HYDROCARBONS OPERATING CORP P.O. Box 3638 Midland, TX 79705	OGRID: 188483
	Action Number: 34785
	Action Type: [UF-GA] Gas Analysis (GAS ANALYSIS)

CONDITIONS

Created By	Condition	Condition Date
mkuehling	None	8/2/2021