

**PERMIAN BASIN  
ENVIRONMENTAL LAB, LP  
1400 Rankin Hwy  
Midland, TX 79701**



# Analytical Report

**Prepared for:**

Tim McMinn  
E Tech Environmental & Safety Solutions, Inc.  
13000 West County Road 100  
Odessa, TX 79765

Project: Stakeholder Midstream

Project Number: 9021

Location: Pollos Hermanos

Lab Order Number: 8B27007



**NELAP/TCEQ # T104704516-17-8**

Report Date: 03/02/18

E Tech Environmental & Safety Solutions, Inc.  
13000 West County Road 100  
Odessa TX, 79765

Project: Stakeholder Midstream  
Project Number: 9021  
Project Manager: Tim McMinn

Fax: (432) 563-2213

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
01-North 0"- 6"	8B27007-01	Soil	02/26/18 11:35	02-27-2018 10:50
02-North 6" - 12"	8B27007-02	Soil	02/26/18 11:40	02-27-2018 10:50
03-North 1'-2'	8B27007-03	Soil	02/26/18 11:45	02-27-2018 10:50

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**01-North 0'' - 6''**  
**8B27007-01 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00105	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B
<b>Toluene</b>	<b>0.0118</b>	0.0105	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B
Ethylbenzene	ND	0.00526	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B
Xylene (p/m)	ND	0.0211	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B
Xylene (o)	ND	0.0105	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>114 %</i>	<i>75-125</i>		<i>P8C0102</i>	<i>03/01/18</i>	<i>03/01/18</i>	<i>EPA 8021B</i>
<i>Surrogate: 1,4-Difluorobenzene</i>		<i>98.0 %</i>	<i>75-125</i>		<i>P8C0102</i>	<i>03/01/18</i>	<i>03/01/18</i>	<i>EPA 8021B</i>

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>312</b>	1.05	mg/kg dry	1	P8B2710	02/27/18	02/28/18	EPA 300.0
<b>% Moisture</b>	<b>5.0</b>	0.1	%	1	P8B2801	02/28/18	02/28/18	ASTM D2216

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.3	mg/kg dry	1	P8B2708	02/27/18	02/27/18	TPH 8015M
<b>&gt;C12-C28</b>	<b>92.9</b>	26.3	mg/kg dry	1	P8B2708	02/27/18	02/27/18	TPH 8015M
>C28-C35	ND	26.3	mg/kg dry	1	P8B2708	02/27/18	02/27/18	TPH 8015M
<i>Surrogate: 1-Chlorooctane</i>		<i>88.7 %</i>	<i>70-130</i>		<i>P8B2708</i>	<i>02/27/18</i>	<i>02/27/18</i>	<i>TPH 8015M</i>
<i>Surrogate: o-Terphenyl</i>		<i>94.6 %</i>	<i>70-130</i>		<i>P8B2708</i>	<i>02/27/18</i>	<i>02/27/18</i>	<i>TPH 8015M</i>
<b>Total Petroleum Hydrocarbon C6-C35</b>	<b>92.9</b>	26.3	mg/kg dry	1	[CALC]	02/27/18	02/27/18	calc

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**02-North 6" - 12"**  
**8B27007-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.00108	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B	
<b>Toluene</b>	<b>0.0114</b>	0.0108	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B	
Ethylbenzene	ND	0.00538	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B	
Xylene (p/m)	ND	0.0215	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B	
Xylene (o)	ND	0.0108	mg/kg dry	1	P8C0102	03/01/18	03/01/18	EPA 8021B	
<i>Surrogate: 1,4-Difluorobenzene</i>		88.6 %	75-125		P8C0102	03/01/18	03/01/18	EPA 8021B	
<i>Surrogate: 4-Bromofluorobenzene</i>		108 %	75-125		P8C0102	03/01/18	03/01/18	EPA 8021B	

**General Chemistry Parameters by EPA / Standard Methods**

<b>Chloride</b>	<b>265</b>	1.08	mg/kg dry	1	P8B2710	02/27/18	02/28/18	EPA 300.0	
<b>% Moisture</b>	<b>7.0</b>	0.1	%	1	P8B2801	02/28/18	02/28/18	ASTM D2216	

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.9	mg/kg dry	1	P8B2708	02/27/18	02/27/18	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P8B2708	02/27/18	02/27/18	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P8B2708	02/27/18	02/27/18	TPH 8015M	
<i>Surrogate: 1-Chlorooctane</i>		76.2 %	70-130		P8B2708	02/27/18	02/27/18	TPH 8015M	
<i>Surrogate: o-Terphenyl</i>		81.3 %	70-130		P8B2708	02/27/18	02/27/18	TPH 8015M	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	02/27/18	02/27/18	calc	

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**03-North 1'-2'**  
**8B27007-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Permian Basin Environmental Lab, L.P.**

**Organics by GC**

Benzene	ND	0.0213	mg/kg dry	20	P8C0102	03/01/18	03/01/18	EPA 8021B
Toluene	ND	0.213	mg/kg dry	20	P8C0102	03/01/18	03/01/18	EPA 8021B
Ethylbenzene	ND	0.106	mg/kg dry	20	P8C0102	03/01/18	03/01/18	EPA 8021B
Xylene (p/m)	ND	0.426	mg/kg dry	20	P8C0102	03/01/18	03/01/18	EPA 8021B
Xylene (o)	ND	0.213	mg/kg dry	20	P8C0102	03/01/18	03/01/18	EPA 8021B
Surrogate: 4-Bromofluorobenzene		111 %	75-125		P8C0102	03/01/18	03/01/18	EPA 8021B
Surrogate: 1,4-Difluorobenzene		98.4 %	75-125		P8C0102	03/01/18	03/01/18	EPA 8021B

**General Chemistry Parameters by EPA / Standard Methods**

Chloride	385	1.06	mg/kg dry	1	P8B2710	02/27/18	02/28/18	EPA 300.0
% Moisture	6.0	0.1	%	1	P8B2801	02/28/18	02/28/18	ASTM D2216

**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M**

C6-C12	ND	26.6	mg/kg dry	1	P8B2708	02/27/18	02/27/18	TPH 8015M
>C12-C28	35.9	26.6	mg/kg dry	1	P8B2708	02/27/18	02/27/18	TPH 8015M
>C28-C35	ND	26.6	mg/kg dry	1	P8B2708	02/27/18	02/27/18	TPH 8015M
Surrogate: 1-Chlorooctane		87.1 %	70-130		P8B2708	02/27/18	02/27/18	TPH 8015M
Surrogate: o-Terphenyl		93.1 %	70-130		P8B2708	02/27/18	02/27/18	TPH 8015M
Total Petroleum Hydrocarbon C6-C35	35.9	26.6	mg/kg dry	1	[CALC]	02/27/18	02/27/18	calc

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**Organics by GC - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P8C0102 - General Preparation (GC)**

**Blank (P8C0102-BLK1)**

Prepared & Analyzed: 03/01/18

Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.0100	"							
Ethylbenzene	ND	0.00500	"							
Xylene (p/m)	ND	0.0200	"							
Xylene (o)	ND	0.0100	"							
Surrogate: 1,4-Difluorobenzene	0.0594		"	0.0600		98.9	75-125			
Surrogate: 4-Bromofluorobenzene	0.0647		"	0.0600		108	75-125			

**LCS (P8C0102-BS1)**

Prepared & Analyzed: 03/01/18

Benzene	0.0997	0.00100	mg/kg wet	0.100		99.7	70-130			
Toluene	0.106	0.0100	"	0.100		106	70-130			
Ethylbenzene	0.105	0.00500	"	0.100		105	70-130			
Xylene (p/m)	0.188	0.0200	"				70-130			
Xylene (o)	ND	0.0100	"				70-130			
Surrogate: 4-Bromofluorobenzene	0.0628		"	0.0600		105	75-125			
Surrogate: 1,4-Difluorobenzene	0.0489		"	0.0600		81.5	75-125			

**LCS Dup (P8C0102-BSD1)**

Prepared & Analyzed: 03/01/18

Benzene	0.0892	0.00100	mg/kg wet	0.100		89.2	70-130	11.1	20	
Toluene	0.0983	0.0100	"	0.100		98.3	70-130	7.60	20	
Ethylbenzene	0.114	0.00500	"	0.100		114	70-130	7.81	20	
Xylene (p/m)	0.217	0.0200	"				70-130		20	
Xylene (o)	ND	0.0100	"				70-130		20	
Surrogate: 4-Bromofluorobenzene	0.0565		"	0.0600		94.2	75-125			
Surrogate: 1,4-Difluorobenzene	0.0519		"	0.0600		86.5	75-125			

**Duplicate (P8C0102-DUP1)**

Source: 8B27007-03

Prepared & Analyzed: 03/01/18

Benzene	ND	0.0213	mg/kg dry		ND				20	
Toluene	ND	0.213	"		0.0691				20	
Ethylbenzene	ND	0.106	"		ND				20	
Xylene (p/m)	ND	0.426	"		ND				20	
Xylene (o)	ND	0.213	"		ND				20	
Surrogate: 1,4-Difluorobenzene	0.0538		"	0.0638		84.3	75-125			
Surrogate: 4-Bromofluorobenzene	0.0576		"	0.0638		90.3	75-125			

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**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P8B2710 - \*\*\* DEFAULT PREP \*\*\***

**Blank (P8B2710-BLK1)**

Prepared: 02/27/18 Analyzed: 02/28/18

Chloride	ND	1.00	mg/kg wet							
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**LCS (P8B2710-BS1)**

Prepared: 02/27/18 Analyzed: 02/28/18

Chloride	415	1.00	mg/kg wet	400		104	80-120			
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**LCS Dup (P8B2710-BSD1)**

Prepared: 02/27/18 Analyzed: 02/28/18

Chloride	414	1.00	mg/kg wet	400		104	80-120	0.130	20	
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**Duplicate (P8B2710-DUP1)**

Source: 8B24010-02

Prepared: 02/27/18 Analyzed: 02/28/18

Chloride	17200	53.8	mg/kg dry		17100			1.04	20	
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**Duplicate (P8B2710-DUP2)**

Source: 8B26004-05

Prepared: 02/27/18 Analyzed: 02/28/18

Chloride	179	1.08	mg/kg dry		247			32.1	20	
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**Matrix Spike (P8B2710-MS1)**

Source: 8B24010-02

Prepared: 02/27/18 Analyzed: 02/28/18

Chloride	22900	53.8	mg/kg dry	5380	17100	109	80-120			
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**Batch P8B2801 - \*\*\* DEFAULT PREP \*\*\***

**Blank (P8B2801-BLK1)**

Prepared & Analyzed: 02/28/18

% Moisture	ND	0.1	%							
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**Duplicate (P8B2801-DUP1)**

Source: 8B26004-26

Prepared & Analyzed: 02/28/18

% Moisture	11.0	0.1	%		11.0			0.00	20	
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**Duplicate (P8B2801-DUP2)**

Source: 8B27007-03

Prepared & Analyzed: 02/28/18

% Moisture	6.0	0.1	%		6.0			0.00	20	
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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P8B2708 - General Preparation (GC)**

**Blank (P8B2708-BLK1)**

Prepared & Analyzed: 02/27/18

C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	99.1		"	100		99.1	70-130			
Surrogate: o-Terphenyl	54.7		"	50.0		109	70-130			

**LCS (P8B2708-BS1)**

Prepared & Analyzed: 02/27/18

C6-C12	1110	25.0	mg/kg wet	1000		111	75-125			
>C12-C28	1140	25.0	"	1000		114	75-125			
Surrogate: 1-Chlorooctane	125		"	100		125	70-130			
Surrogate: o-Terphenyl	54.2		"	50.0		108	70-130			

**LCS Dup (P8B2708-BSD1)**

Prepared & Analyzed: 02/27/18

C6-C12	1120	25.0	mg/kg wet	1000		112	75-125	0.127	20	
>C12-C28	1140	25.0	"	1000		114	75-125	0.0272	20	
Surrogate: 1-Chlorooctane	125		"	100		125	70-130			
Surrogate: o-Terphenyl	54.6		"	50.0		109	70-130			

**Calibration Blank (P8B2708-CCB1)**

Prepared & Analyzed: 02/27/18

C6-C12	23.2		mg/kg wet							
>C12-C28	14.4		"							
Surrogate: 1-Chlorooctane	97.7		"	100		97.7	70-130			
Surrogate: o-Terphenyl	52.8		"	50.0		106	70-130			

**Calibration Check (P8B2708-CCV1)**

Prepared & Analyzed: 02/27/18

C6-C12	495	25.0	mg/kg wet	500		99.0	85-115			
>C12-C28	509	25.0	"	500		102	85-115			
Surrogate: 1-Chlorooctane	103		"	100		103	70-130			
Surrogate: o-Terphenyl	49.0		"	50.0		98.1	70-130			



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**Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control**  
**Permian Basin Environmental Lab, L.P.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch P8B2708 - General Preparation (GC)**

**Calibration Check (P8B2708-CCV3)**

Prepared: 02/27/18 Analyzed: 02/28/18

C6-C12	487	25.0	mg/kg wet	500		97.3	85-115			
>C12-C28	517	25.0	"	500		103	85-115			
Surrogate: 1-Chlorooctane	107		"	100		107	70-130			
Surrogate: o-Terphenyl	49.3		"	50.0		98.6	70-130			

**Matrix Spike (P8B2708-MS1)**

Source: 8B26004-33

Prepared: 02/27/18 Analyzed: 02/28/18

C6-C12	990	27.2	mg/kg dry	1090	25.9	88.7	75-125			
>C12-C28	1020	27.2	"	1090	13.5	92.1	75-125			
Surrogate: 1-Chlorooctane	120		"	109		111	70-130			
Surrogate: o-Terphenyl	50.9		"	54.3		93.7	70-130			

**Matrix Spike Dup (P8B2708-MSD1)**

Source: 8B26004-33

Prepared: 02/27/18 Analyzed: 02/28/18

C6-C12	1060	27.2	mg/kg dry	1090	25.9	95.5	75-125	7.32	20	
>C12-C28	1080	27.2	"	1090	13.5	98.2	75-125	6.42	20	
Surrogate: 1-Chlorooctane	127		"	109		117	70-130			
Surrogate: o-Terphenyl	51.8		"	54.3		95.2	70-130			

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### Notes and Definitions

BULK Samples received in Bulk soil containers  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:



Date:

3/2/2018

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

