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ANALYTICAL REPORT

July 31, 2019

Utah Gas Corporation

Sample Delivery Group:	L1120327
Samples Received:	07/19/2019
Project Number:	
Description:	MFS Fed 8-1 Landfarm
Site:	MFS FED 8-1
Report To:	Mr. Steve Hale 1125 Escalante Drive Rangely, CO 81648

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

TABLE OF CONTENTS

LANDFARM 8-1 L1120327-01 Solid

Collected by: Steve Hale
Collected date/time: 07/18/19 10:05
Received date/time: 07/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1317366	1	07/23/19 13:43	07/25/19 16:02	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1317021	10	07/25/19 06:47	07/26/19 04:11	CLG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1317542	10	07/25/19 16:09	07/26/19 08:34	SNR	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	2.42		0.100	1	07/25/2019 16:02	WG1317366
(S) a,a,a-Trifluorotoluene(FID)	*89.2*		*77.0-120*		*07/25/2019 16:02*	WG1317366

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	672		40.0	10	07/26/2019 04:11	WG1317021
(S) o-Terphenyl	*141*		*18.0-148*		*07/26/2019 04:11*	WG1317021

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.333	10	07/26/2019 08:34	WG1317542
Acenaphthylene	ND		0.333	10	07/26/2019 08:34	WG1317542
Anthracene	ND		0.333	10	07/26/2019 08:34	WG1317542
Benzidine	ND		3.33	10	07/26/2019 08:34	WG1317542
Benzo(a)anthracene	ND		0.333	10	07/26/2019 08:34	WG1317542
Benzo(b)fluoranthene	ND		0.333	10	07/26/2019 08:34	WG1317542
Benzo(k)fluoranthene	ND		0.333	10	07/26/2019 08:34	WG1317542
Benzo(g,h,i)perylene	ND		0.333	10	07/26/2019 08:34	WG1317542
Benzo(a)pyrene	ND		0.333	10	07/26/2019 08:34	WG1317542
Bis(2-chlorethoxy)methane	ND		3.33	10	07/26/2019 08:34	WG1317542
Bis(2-chloroethyl)ether	ND		3.33	10	07/26/2019 08:34	WG1317542
Bis(2-chloroisopropyl)ether	ND		3.33	10	07/26/2019 08:34	WG1317542
4-Bromophenyl-phenylether	ND		3.33	10	07/26/2019 08:34	WG1317542
2-Chloronaphthalene	ND		0.333	10	07/26/2019 08:34	WG1317542
4-Chlorophenyl-phenylether	ND		3.33	10	07/26/2019 08:34	WG1317542
Chrysene	ND		0.333	10	07/26/2019 08:34	WG1317542
Dibenz(a,h)anthracene	ND		0.333	10	07/26/2019 08:34	WG1317542
3,3-Dichlorobenzidine	ND		3.33	10	07/26/2019 08:34	WG1317542
2,4-Dinitrotoluene	ND		3.33	10	07/26/2019 08:34	WG1317542
2,6-Dinitrotoluene	ND		3.33	10	07/26/2019 08:34	WG1317542
Fluoranthene	ND		0.333	10	07/26/2019 08:34	WG1317542
Fluorene	ND		0.333	10	07/26/2019 08:34	WG1317542
Hexachlorobenzene	ND		3.33	10	07/26/2019 08:34	WG1317542
Hexachloro-1,3-butadiene	ND		3.33	10	07/26/2019 08:34	WG1317542
Hexachlorocyclopentadiene	ND		3.33	10	07/26/2019 08:34	WG1317542
Hexachloroethane	ND		3.33	10	07/26/2019 08:34	WG1317542
Indeno(1,2,3-cd)pyrene	ND		0.333	10	07/26/2019 08:34	WG1317542
Isophorone	ND		3.33	10	07/26/2019 08:34	WG1317542
Naphthalene	ND		0.333	10	07/26/2019 08:34	WG1317542
Nitrobenzene	ND		3.33	10	07/26/2019 08:34	WG1317542
n-Nitrosodimethylamine	ND		3.33	10	07/26/2019 08:34	WG1317542
n-Nitrosodiphenylamine	ND		3.33	10	07/26/2019 08:34	WG1317542
n-Nitrosodi-n-propylamine	ND		3.33	10	07/26/2019 08:34	WG1317542
Phenanthrene	ND		0.333	10	07/26/2019 08:34	WG1317542
Benzylbutyl phthalate	ND		3.33	10	07/26/2019 08:34	WG1317542
Bis(2-ethylhexyl)phthalate	ND		3.33	10	07/26/2019 08:34	WG1317542
Di-n-butyl phthalate	ND		3.33	10	07/26/2019 08:34	WG1317542
Diethyl phthalate	ND		3.33	10	07/26/2019 08:34	WG1317542
Dimethyl phthalate	ND		3.33	10	07/26/2019 08:34	WG1317542
Di-n-octyl phthalate	ND		3.33	10	07/26/2019 08:34	WG1317542
Pyrene	ND		0.333	10	07/26/2019 08:34	WG1317542
1,2,4-Trichlorobenzene	ND		3.33	10	07/26/2019 08:34	WG1317542
4-Chloro-3-methylphenol	ND		3.33	10	07/26/2019 08:34	WG1317542

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
2-Chlorophenol	ND		3.33	10	07/26/2019 08:34	WG1317542
2,4-Dichlorophenol	ND		3.33	10	07/26/2019 08:34	WG1317542
2,4-Dimethylphenol	ND		3.33	10	07/26/2019 08:34	WG1317542
4,6-Dinitro-2-methylphenol	ND		3.33	10	07/26/2019 08:34	WG1317542
2,4-Dinitrophenol	ND		3.33	10	07/26/2019 08:34	WG1317542
2-Nitrophenol	ND		3.33	10	07/26/2019 08:34	WG1317542
4-Nitrophenol	ND		3.33	10	07/26/2019 08:34	WG1317542
Pentachlorophenol	ND		3.33	10	07/26/2019 08:34	WG1317542
Phenol	ND		3.33	10	07/26/2019 08:34	WG1317542
2,4,6-Trichlorophenol	ND		3.33	10	07/26/2019 08:34	WG1317542
(S) 2-Fluorophenol	*65.1*		*12.0-120*		*07/26/2019 08:34*	WG1317542
(S) Phenol-d5	*64.5*		*10.0-120*		*07/26/2019 08:34*	WG1317542
(S) Nitrobenzene-d5	*70.6*		*10.0-122*		*07/26/2019 08:34*	WG1317542
(S) 2-Fluorobiphenyl	*87.2*		*15.0-120*		*07/26/2019 08:34*	WG1317542
(S) 2,4,6-Tribromophenol	*99.8*		*10.0-127*		*07/26/2019 08:34*	WG1317542
(S) p-Terphenyl-d14	*110*		*10.0-120*		*07/26/2019 08:34*	WG1317542

Sample Narrative:

L1120327-01 WG1317542: Dilution due to matrix impact during extract concentration procedure

Method Blank (MB)

(MB) R3434631-2 07/25/19 14:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.2*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3434631-1 07/25/19 13:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.49	118	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R3434529-1 07/25/19 23:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) High Fraction	U		0.769	4.00
(S) o-Terphenyl	*67.3*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3434529-2 07/26/19 00:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	29.5	59.0	50.0-150	
(S) o-Terphenyl			*70.0*	*18.0-148*	

L1120072-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1120072-01 07/26/19 04:23 • (MS) R3434529-3 07/26/19 04:36 • (MSD) R3434529-4 07/26/19 04:49

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	55.4	U	51.6	49.8	48.6	45.4	10	50.0-150	J6	J6	3.49	20
(S) o-Terphenyl					*76.9*	*84.7*		*18.0-148*				

Sample Narrative:

OS: Cannot run at lower dilution due to viscosity of extract

Method Blank (MB)

(MB) R3434508-2 07/26/19 01:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0333
Acenaphthylene	U		0.00671	0.0333
Anthracene	U		0.00632	0.0333
Benzidine	U		0.0637	0.333
Benzo(a)anthracene	U		0.00428	0.0333
Benzo(b)fluoranthene	U		0.00695	0.0333
Benzo(k)fluoranthene	U		0.00582	0.0333
Benzo(g,h,i)perylene	U		0.00721	0.0333
Benzo(a)pyrene	U		0.00548	0.0333
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
2-Chloronaphthalene	U		0.00639	0.0333
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0333
Dibenz(a,h)anthracene	U		0.00821	0.0333
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0333
Fluorene	U		0.00682	0.0333
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0333
Isophorone	U		0.00522	0.333
Naphthalene	U		0.00889	0.0333
Nitrobenzene	U		0.00695	0.333
n-Nitrosodimethylamine	U		0.0647	0.333
n-Nitrosodiphenylamine	U		0.0900	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0333
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	0.0202	J	0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333

Method Blank (MB)

(MB) R3434508-2 07/26/19 01:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyrene	U		0.0123	0.0333
1,2,4-Trichlorobenzene	U		0.00876	0.333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	*64.9*			*10.0-122*
(S) 2-Fluorobiphenyl	*66.7*			*15.0-120*
(S) p-Terphenyl-d14	*92.5*			*10.0-120*
(S) Phenol-d5	*70.3*			*10.0-120*
(S) 2-Fluorophenol	*79.0*			*12.0-120*
(S) 2,4,6-Tribromophenol	*73.1*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3434508-1 07/26/19 01:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.506	76.0	38.0-120	
Acenaphthylene	0.666	0.522	78.4	40.0-120	
Anthracene	0.666	0.612	91.9	42.0-120	
Benzidine	1.33	0.607	45.6	10.0-120	
Benzo(a)anthracene	0.666	0.671	101	44.0-120	
Benzo(b)fluoranthene	0.666	0.717	108	43.0-120	
Benzo(k)fluoranthene	0.666	0.704	106	44.0-120	
Benzo(g,h,i)perylene	0.666	0.755	113	43.0-120	
Benzo(a)pyrene	0.666	0.708	106	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.367	55.1	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.351	52.7	16.0-120	
Bis(2-chloroisopropyl)ether	0.666	0.332	49.8	23.0-120	
4-Bromophenyl-phenylether	0.666	0.607	91.1	40.0-120	
2-Chloronaphthalene	0.666	0.463	69.5	35.0-120	

Laboratory Control Sample (LCS)

(LCS) R3434508-1 07/26/19 01:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Chlorophenyl-phenylether	0.666	0.617	92.6	40.0-120	
Chrysene	0.666	0.697	105	43.0-120	
Dibenz(a,h)anthracene	0.666	0.708	106	44.0-120	
3,3-Dichlorobenzidine	1.33	1.38	104	28.0-120	
2,4-Dinitrotoluene	0.666	0.709	106	45.0-120	
2,6-Dinitrotoluene	0.666	0.628	94.3	42.0-120	
Fluoranthene	0.666	0.674	101	44.0-120	
Fluorene	0.666	0.581	87.2	41.0-120	
Hexachlorobenzene	0.666	0.616	92.5	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.299	44.9	15.0-120	
Hexachlorocyclopentadiene	0.666	0.317	47.6	15.0-120	
Hexachloroethane	0.666	0.281	42.2	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.720	108	45.0-120	
Isophorone	0.666	0.400	60.1	23.0-120	
Naphthalene	0.666	0.326	48.9	18.0-120	
Nitrobenzene	0.666	0.333	50.0	17.0-120	
n-Nitrosodimethylamine	0.666	0.330	49.5	10.0-125	
n-Nitrosodiphenylamine	0.666	0.626	94.0	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.428	64.3	26.0-120	
Phenanthrene	0.666	0.626	94.0	42.0-120	
Benzylbutyl phthalate	0.666	0.784	118	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.779	117	41.0-120	
Di-n-butyl phthalate	0.666	0.695	104	43.0-120	
Diethyl phthalate	0.666	0.652	97.9	43.0-120	
Dimethyl phthalate	0.666	0.622	93.4	43.0-120	
Di-n-octyl phthalate	0.666	0.769	115	40.0-120	
Pyrene	0.666	0.702	105	41.0-120	
1,2,4-Trichlorobenzene	0.666	0.328	49.2	17.0-120	
4-Chloro-3-methylphenol	0.666	0.554	83.2	28.0-120	
2-Chlorophenol	0.666	0.395	59.3	28.0-120	
2,4-Dichlorophenol	0.666	0.455	68.3	25.0-120	
2,4-Dimethylphenol	0.666	0.421	63.2	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.719	108	16.0-120	
2,4-Dinitrophenol	0.666	0.632	94.9	10.0-120	
2-Nitrophenol	0.666	0.409	61.4	20.0-120	
4-Nitrophenol	0.666	0.680	102	27.0-120	
Pentachlorophenol	0.666	0.620	93.1	29.0-120	
Phenol	0.666	0.434	65.2	28.0-120	
2,4,6-Trichlorophenol	0.666	0.573	86.0	37.0-120	
(S) Nitrobenzene-d5			*53.5*	*10.0-122*	

Laboratory Control Sample (LCS)

(LCS) R3434508-1 07/26/19 01:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) 2-Fluorobiphenyl			*64.9*	*15.0-120*	
(S) p-Terphenyl-d14			*101*	*10.0-120*	
(S) Phenol-d5			*64.0*	*10.0-120*	
(S) 2-Fluorophenol			*64.1*	*12.0-120*	
(S) 2,4,6-Tribromophenol			*98.2*	*10.0-127*	

L1122085-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1122085-01 07/26/19 04:22 • (MS) R3434508-3 07/26/19 04:41 • (MSD) R3434508-4 07/26/19 05:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.666	ND	0.318	0.339	47.7	50.9	1	18.0-120			6.39	32
Acenaphthylene	0.666	ND	0.316	0.343	47.4	51.5	1	25.0-120			8.19	32
Anthracene	0.666	ND	0.455	0.458	68.3	68.8	1	22.0-120			0.657	29
Benzidine	1.33	ND	ND	ND	0.000	0.000	1	10.0-120	J6	J6	0.000	40
Benzo(a)anthracene	0.666	ND	0.522	0.554	78.4	83.2	1	25.0-120			5.95	29
Benzo(b)fluoranthene	0.666	ND	0.550	0.551	82.6	82.7	1	19.0-122			0.182	31
Benzo(k)fluoranthene	0.666	ND	0.521	0.518	78.2	77.8	1	23.0-120			0.577	30
Benzo(g,h,i)perylene	0.666	ND	0.541	0.531	81.2	79.7	1	10.0-120			1.87	33
Benzo(a)pyrene	0.666	ND	0.536	0.525	80.5	78.8	1	24.0-120			2.07	30
Bis(2-chlorethoxy)methane	0.666	ND	0.198	0.272	29.7	40.8	1	10.0-120			31.5	34
Bis(2-chloroethyl)ether	0.666	ND	0.197	0.302	29.6	45.3	1	10.0-120		J3	42.1	40
Bis(2-chloroisopropyl)ether	0.666	ND	0.171	0.282	25.7	42.3	1	10.0-120		J3	49.0	40
4-Bromophenyl-phenylether	0.666	ND	0.431	0.441	64.7	66.2	1	27.0-120			2.29	30
2-Chloronaphthalene	0.666	ND	0.267	0.313	40.1	47.0	1	20.0-120			15.9	32
4-Chlorophenyl-phenylether	0.666	ND	0.413	0.408	62.0	61.3	1	24.0-120			1.22	29
Chrysene	0.666	ND	0.541	0.565	81.2	84.8	1	21.0-120			4.34	29
Dibenz(a,h)anthracene	0.666	ND	0.506	0.502	76.0	75.4	1	10.0-120			0.794	32
3,3-Dichlorobenzidine	1.33	ND	0.563	0.499	42.3	37.5	1	10.0-120			12.1	34
2,4-Dinitrotoluene	0.666	ND	0.485	0.458	72.8	68.8	1	30.0-120			5.73	31
2,6-Dinitrotoluene	0.666	ND	0.415	0.396	62.3	59.5	1	25.0-120			4.69	31
Fluoranthene	0.666	ND	0.596	0.594	89.5	89.2	1	18.0-126			0.336	32
Fluorene	0.666	ND	0.399	0.398	59.9	59.8	1	25.0-120			0.251	30
Hexachlorobenzene	0.666	ND	0.442	0.449	66.4	67.4	1	27.0-120			1.57	28
Hexachloro-1,3-butadiene	0.666	ND	0.170	0.266	25.5	39.9	1	10.0-120		J3	44.0	38
Hexachlorocyclopentadiene	0.666	ND	0.106	0.147	15.9	22.1	1	10.0-120			32.4	40
Hexachloroethane	0.666	ND	0.149	0.260	22.4	39.0	1	10.0-120		J3	54.3	40
Indeno(1,2,3-cd)pyrene	0.666	ND	0.535	0.532	80.3	79.9	1	10.0-120			0.562	32
Isophorone	0.666	ND	0.213	0.291	32.0	43.7	1	13.0-120			31.0	34

L1122085-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1122085-01 07/26/19 04:22 • (MS) R3434508-3 07/26/19 04:41 • (MSD) R3434508-4 07/26/19 05:01

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.666	ND	0.182	0.266	27.3	39.9	1	10.0-120		J3	37.5	35
Nitrobenzene	0.666	ND	0.187	0.274	28.1	41.1	1	10.0-120		J3	37.7	36
n-Nitrosodimethylamine	0.666	ND	0.211	0.315	31.7	47.3	1	10.0-127			39.5	40
n-Nitrosodiphenylamine	0.666	ND	0.393	0.395	59.0	59.3	1	17.0-120			0.508	29
n-Nitrosodi-n-propylamine	0.666	ND	0.219	0.310	32.9	46.5	1	10.0-120			34.4	37
Phenanthrene	0.666	ND	0.461	0.475	69.2	71.3	1	17.0-120			2.99	31
Benzylbutyl phthalate	0.666	ND	0.660	0.680	99.1	102	1	23.0-120			2.99	30
Bis(2-ethylhexyl)phthalate	0.666	ND	0.646	0.659	97.0	98.9	1	17.0-126			1.99	30
Di-n-butyl phthalate	0.666	ND	0.580	0.541	87.1	81.2	1	30.0-120			6.96	29
Diethyl phthalate	0.666	ND	0.467	0.432	70.1	64.9	1	26.0-120			7.79	28
Dimethyl phthalate	0.666	ND	0.402	0.386	60.4	58.0	1	25.0-120			4.06	29
Di-n-octyl phthalate	0.666	ND	0.653	0.673	98.0	101	1	21.0-123			3.02	29
Pyrene	0.666	ND	0.560	0.627	84.1	94.1	1	16.0-121			11.3	32
1,2,4-Trichlorobenzene	0.666	ND	0.190	0.286	28.5	42.9	1	12.0-120		J3	40.3	37
4-Chloro-3-methylphenol	0.666	ND	0.404	0.423	60.7	63.5	1	15.0-120			4.59	30
2-Chlorophenol	0.666	ND	0.224	0.320	33.6	48.0	1	15.0-120			35.3	37
2,4-Dichlorophenol	0.666	ND	0.297	0.342	44.6	51.4	1	20.0-120			14.1	31
2,4-Dimethylphenol	0.666	ND	0.190	0.214	28.5	32.1	1	10.0-120			11.9	33
4,6-Dinitro-2-methylphenol	0.666	ND	0.361	0.425	54.2	63.8	1	10.0-120			16.3	39
2,4-Dinitrophenol	0.666	ND	0.311	0.323	46.7	48.5	1	10.0-121			3.79	40
2-Nitrophenol	0.666	ND	0.226	0.316	33.9	47.4	1	12.0-120			33.2	39
4-Nitrophenol	0.666	ND	0.594	0.520	89.2	78.1	1	10.0-137			13.3	32
Pentachlorophenol	0.666	ND	0.541	0.517	81.2	77.6	1	10.0-160			4.54	31
Phenol	0.666	ND	0.229	0.319	34.4	47.9	1	12.0-120			32.8	38
2,4,6-Trichlorophenol	0.666	ND	0.369	0.358	55.4	53.8	1	19.0-120			3.03	32
(S) Nitrobenzene-d5					*27.9*	*42.0*		*10.0-122*				
(S) 2-Fluorobiphenyl					*36.6*	*44.1*		*15.0-120*				
(S) p-Terphenyl-d14					*82.3*	*85.0*		*10.0-120*				
(S) Phenol-d5					*35.3*	*47.6*		*10.0-120*				
(S) 2-Fluorophenol					*36.8*	*52.1*		*12.0-120*				
(S) 2,4,6-Tribromophenol					*77.5*	*72.7*		*10.0-127*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

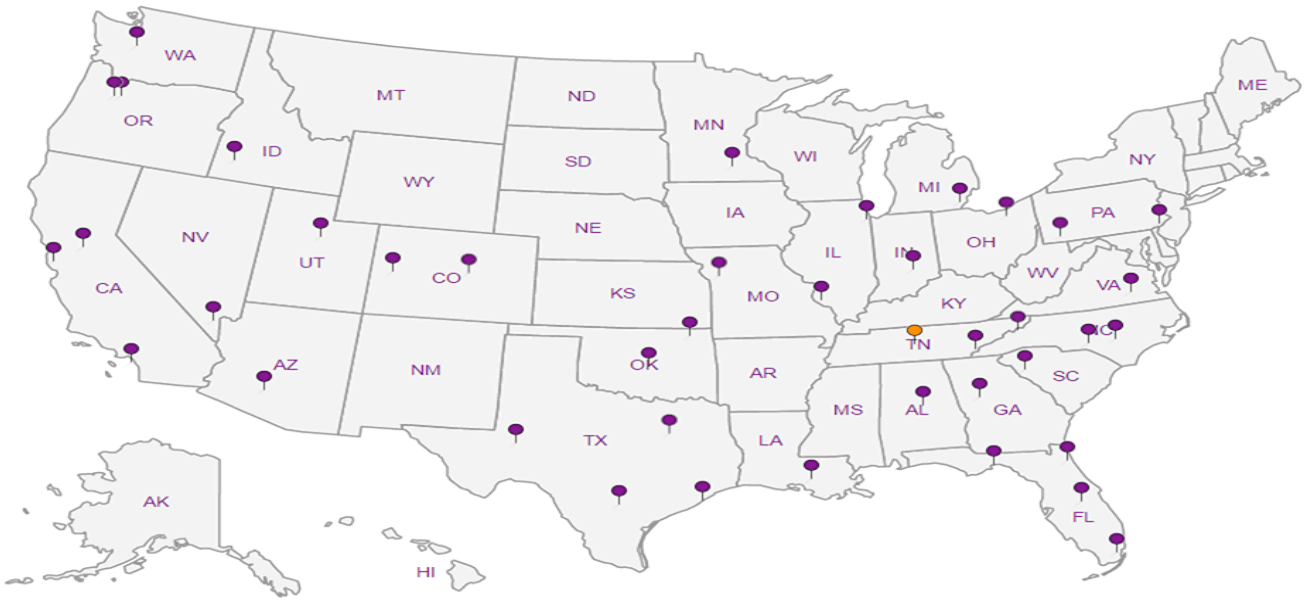
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Utah Gas Corp
1125 Escalante Dr
Rangely CO 81648

Billing Information: Same

Report to: Steve Hale

Email To: shale@utahgascorp.com

Project Description: MFS Fed 8-1 Landform

City/State Collected: Rangely CO

Phone:
Fax: 970-290-2912

Client Project #

Lab Project #

Collected by (print): Steve Hale

Site/Facility ID # MFS Fed 8-1

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	Analysis / Container / Preservative: TPH (GRO/DRO) + Sani-Volths	Remarks	Sample # (lab only)
Landform 8-1	Comp	SS	6"	7/18/19	10:05	2		X		-01

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L120327
D067

Acctnum:
Template:
Prelogin:
TSR:
PB:
Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # FedEx 4515016632047

Sample Receipt Checklist
COC Seal Present/Intact: ✓NP __Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR	If preservation required by Login: Date/Time
Steve Hale	7/18/19	4:30pm		0	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
	7/18/19	1730		2.1-2.1=2.2 45 2	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: / Condition: NCF / (OK)
				7/19/19 8:45	