Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 15, 2019

Utah Gas Corporation

Sample Delivery Group:	L1158919
Samples Received:	11/08/2019
Project Number:	
Description:	MFS Federal 8-1 Pit
Site:	8-1 LANDFARM
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 L1158919-01 Solid

Collected by	Collected date/time	Received date/time
Steven H.	11/07/19 09:35	11/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1379437	1	11/09/19 12:40	11/13/19 18:13	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1378835	5	11/12/19 07:07	11/12/19 22:01	KME	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1378396	2	11/11/19 10:27	11/12/19 05:36	JNJ	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	0.285		0.100	1	11/13/2019 18:13	WG1379437
(S) a,a,a-Trifluorotoluene(FID)	*94.1*		*77.0-120*		*11/13/2019 18:13*	WG1379437

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	635		20.0	5	11/12/2019 22:01	WG1378835
(S) o-Terphenyl	*106*		*18.0-148*		*11/12/2019 22:01*	WG1378835

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Acenaphthylene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Anthracene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Benzidine	ND		0.666	2	11/12/2019 05:36	WG1378396
Benzo(a)anthracene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Benzo(b)fluoranthene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Benzo(k)fluoranthene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Benzo(g,h,i)perylene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Benzo(a)pyrene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Bis(2-chlorethoxy)methane	ND		0.666	2	11/12/2019 05:36	WG1378396
Bis(2-chloroethyl)ether	ND		0.666	2	11/12/2019 05:36	WG1378396
Bis(2-chloroisopropyl)ether	ND		0.666	2	11/12/2019 05:36	WG1378396
4-Bromophenyl-phenylether	ND		0.666	2	11/12/2019 05:36	WG1378396
2-Chloronaphthalene	ND		0.0666	2	11/12/2019 05:36	WG1378396
4-Chlorophenyl-phenylether	ND		0.666	2	11/12/2019 05:36	WG1378396
Chrysene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Dibenz(a,h)anthracene	ND		0.0666	2	11/12/2019 05:36	WG1378396
1,2-Dichlorobenzene	ND		0.666	2	11/12/2019 05:36	WG1378396
1,3-Dichlorobenzene	ND		0.666	2	11/12/2019 05:36	WG1378396
1,4-Dichlorobenzene	ND		0.666	2	11/12/2019 05:36	WG1378396
3,3-Dichlorobenzidine	ND		0.666	2	11/12/2019 05:36	WG1378396
2,4-Dinitrotoluene	ND		0.666	2	11/12/2019 05:36	WG1378396
2,6-Dinitrotoluene	ND		0.666	2	11/12/2019 05:36	WG1378396
Fluoranthene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Fluorene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Hexachlorobenzene	ND		0.666	2	11/12/2019 05:36	WG1378396
Hexachloro-1,3-butadiene	ND		0.666	2	11/12/2019 05:36	WG1378396
Hexachlorocyclopentadiene	ND		0.666	2	11/12/2019 05:36	WG1378396
Hexachloroethane	ND		0.666	2	11/12/2019 05:36	WG1378396
Indeno(1,2,3-cd)pyrene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Isophorone	ND		0.666	2	11/12/2019 05:36	WG1378396
Naphthalene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Nitrobenzene	ND		0.666	2	11/12/2019 05:36	WG1378396
n-Nitrosodimethylamine	ND		0.666	2	11/12/2019 05:36	WG1378396
n-Nitrosodiphenylamine	ND		0.666	2	11/12/2019 05:36	WG1378396
n-Nitrosodi-n-propylamine	ND		0.666	2	11/12/2019 05:36	WG1378396
Phenanthrene	ND		0.0666	2	11/12/2019 05:36	WG1378396
Benzylbutyl phthalate	ND		0.666	2	11/12/2019 05:36	WG1378396
Bis(2-ethylhexyl)phthalate	ND		0.666	2	11/12/2019 05:36	WG1378396
Di-n-butyl phthalate	ND		0.666	2	11/12/2019 05:36	WG1378396
Diethyl phthalate	ND		0.666	2	11/12/2019 05:36	WG1378396
Dimethyl phthalate	ND		0.666	2	11/12/2019 05:36	WG1378396
Di-n-octyl phthalate	ND		0.666	2	11/12/2019 05:36	WG1378396

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

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Pyrene	ND		0.0666	2	11/12/2019 05:36	WG1378396
1,2,4-Trichlorobenzene	ND		0.666	2	11/12/2019 05:36	WG1378396
4-Chloro-3-methylphenol	ND		0.666	2	11/12/2019 05:36	WG1378396
2-Chlorophenol	ND		0.666	2	11/12/2019 05:36	WG1378396
2,4-Dichlorophenol	ND		0.666	2	11/12/2019 05:36	WG1378396
2,4-Dimethylphenol	ND		0.666	2	11/12/2019 05:36	WG1378396
4,6-Dinitro-2-methylphenol	ND		0.666	2	11/12/2019 05:36	WG1378396
2,4-Dinitrophenol	ND		0.666	2	11/12/2019 05:36	WG1378396
2-Nitrophenol	ND		0.666	2	11/12/2019 05:36	WG1378396
4-Nitrophenol	ND		0.666	2	11/12/2019 05:36	WG1378396
Pentachlorophenol	ND		0.666	2	11/12/2019 05:36	WG1378396
Phenol	ND		0.666	2	11/12/2019 05:36	WG1378396
2,4,6-Trichlorophenol	ND		0.666	2	11/12/2019 05:36	WG1378396
(S) 2-Fluorophenol	*85.3*		*12.0-120*		*11/12/2019 05:36*	WG1378396
(S) Phenol-d5	*82.4*		*10.0-120*		*11/12/2019 05:36*	WG1378396
(S) Nitrobenzene-d5	*74.5*		*10.0-122*		*11/12/2019 05:36*	WG1378396
(S) 2-Fluorobiphenyl	*83.9*		*15.0-120*		*11/12/2019 05:36*	WG1378396
(S) 2,4,6-Tribromophenol	*101*		*10.0-127*		*11/12/2019 05:36*	WG1378396
(S) p-Terphenyl-d14	*93.0*		*10.0-120*		*11/12/2019 05:36*	WG1378396

Method Blank (MB)

(MB) R3472321-2 11/13/19 10:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0261	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.7*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3472321-1 11/13/19 09:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.95	108	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

Method Blank (MB)

(MB) R3471310-1 11/12/19 18:41

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	*71.0*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3471310-2 11/12/19 18:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	50.0	39.3	78.6	50.0-150	
(S) o-Terphenyl			*92.5*	*18.0-148*	

L1158770-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1158770-01 11/12/19 19:06 • (MS) R3471310-3 11/12/19 19:18 • (MSD) R3471310-4 11/12/19 19:31

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 %
TPH (GC/FID) High Fraction	48.8	U	35.6	38.7	73.0	77.9	1	50.0-150			8.34	20
(S) o-Terphenyl					*73.2*	*75.8*		*18.0-148*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3470884-2 11/11/19 22:23

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
1,2-Dichlorobenzene	U		0.00921	0.333
1,3-Dichlorobenzene	U		0.0100	0.333
1,4-Dichlorobenzene	U		0.0100	0.333
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

Method Blank (MB)

(MB) R3470884-2 11/11/19 22:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333
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	*62.5*			*10.0-122*
(S) 2-Fluorobiphenyl	*66.4*			*15.0-120*
(S) p-Terphenyl-d14	*74.8*			*10.0-120*
(S) Phenol-d5	*69.8*			*10.0-120*
(S) 2-Fluorophenol	*72.5*			*12.0-120*
(S) 2,4,6-Tribromophenol	*77.5*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3470884-1 11/11/19 22:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.446	67.0	38.0-120	
Acenaphthylene	0.666	0.470	70.6	40.0-120	
Anthracene	0.666	0.513	77.0	42.0-120	
Benzidine	1.33	0.218	16.4	10.0-120	
Benzo(a)anthracene	0.666	0.540	81.1	44.0-120	
Benzo(b)fluoranthene	0.666	0.544	81.7	43.0-120	
Benzo(k)fluoranthene	0.666	0.541	81.2	44.0-120	
Benzo(g,h,i)perylene	0.666	0.507	76.1	43.0-120	
Benzo(a)pyrene	0.666	0.578	86.8	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.356	53.5	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.418	62.8	16.0-120	

Laboratory Control Sample (LCS)

(LCS) R3470884-1 11/11/19 22:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bis(2-chloroisopropyl)ether	0.666	0.382	57.4	23.0-120	
4-Bromophenyl-phenylether	0.666	0.537	80.6	40.0-120	
2-Chloronaphthalene	0.666	0.429	64.4	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.513	77.0	40.0-120	
Chrysene	0.666	0.506	76.0	43.0-120	
Dibenz(a,h)anthracene	0.666	0.533	80.0	44.0-120	
1,2-Dichlorobenzene	0.666	0.379	56.9	32.0-120	
1,3-Dichlorobenzene	0.666	0.370	55.6	30.0-120	
1,4-Dichlorobenzene	0.666	0.364	54.7	31.0-120	
3,3-Dichlorobenzidine	1.33	0.999	75.1	28.0-120	
2,4-Dinitrotoluene	0.666	0.607	91.1	45.0-120	
2,6-Dinitrotoluene	0.666	0.546	82.0	42.0-120	
Fluoranthene	0.666	0.540	81.1	44.0-120	
Fluorene	0.666	0.496	74.5	41.0-120	
Hexachlorobenzene	0.666	0.540	81.1	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.357	53.6	15.0-120	
Hexachlorocyclopentadiene	0.666	0.444	66.7	15.0-120	
Hexachloroethane	0.666	0.372	55.9	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.534	80.2	45.0-120	
Isophorone	0.666	0.369	55.4	23.0-120	
Naphthalene	0.666	0.332	49.8	18.0-120	
Nitrobenzene	0.666	0.349	52.4	17.0-120	
n-Nitrosodimethylamine	0.666	0.336	50.5	10.0-125	
n-Nitrosodiphenylamine	0.666	0.508	76.3	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.423	63.5	26.0-120	
Phenanthrene	0.666	0.508	76.3	42.0-120	
Benzylbutyl phthalate	0.666	0.578	86.8	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.581	87.2	41.0-120	
Di-n-butyl phthalate	0.666	0.572	85.9	43.0-120	
Diethyl phthalate	0.666	0.541	81.2	43.0-120	
Dimethyl phthalate	0.666	0.517	77.6	43.0-120	
Di-n-octyl phthalate	0.666	0.615	92.3	40.0-120	
Pyrene	0.666	0.516	77.5	41.0-120	
1,2,4-Trichlorobenzene	0.666	0.339	50.9	17.0-120	
4-Chloro-3-methylphenol	0.666	0.472	70.9	28.0-120	
2-Chlorophenol	0.666	0.424	63.7	28.0-120	
2,4-Dichlorophenol	0.666	0.416	62.5	25.0-120	
2,4-Dimethylphenol	0.666	0.388	58.3	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.434	65.2	16.0-120	
2,4-Dinitrophenol	0.666	0.389	58.4	10.0-120	

Laboratory Control Sample (LCS)

(LCS) R3470884-1 11/11/19 22:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2-Nitrophenol	0.666	0.397	59.6	20.0-120	
4-Nitrophenol	0.666	0.486	73.0	27.0-120	
Pentachlorophenol	0.666	0.446	67.0	29.0-120	
Phenol	0.666	0.434	65.2	28.0-120	
2,4,6-Trichlorophenol	0.666	0.516	77.5	37.0-120	
(S) Nitrobenzene-d5			*56.5*	*10.0-122*	
(S) 2-Fluorobiphenyl			*67.0*	*15.0-120*	
(S) p-Terphenyl-d14			*83.5*	*10.0-120*	
(S) Phenol-d5			*69.7*	*10.0-120*	
(S) 2-Fluorophenol			*69.8*	*12.0-120*	
(S) 2,4,6-Tribromophenol			*95.8*	*10.0-127*	

L1158902-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1158902-04 11/12/19 04:14 • (MS) R3470884-3 11/12/19 04:34 • (MSD) R3470884-4 11/12/19 04:55

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	0.0713	0.470	0.526	59.9	68.3	2	18.0-120			11.2	32
Acenaphthylene	0.666	ND	0.442	0.482	66.4	72.4	2	25.0-120			8.66	32
Anthracene	0.666	0.168	0.606	0.692	65.8	78.7	2	22.0-120			13.3	29
Benzidine	1.33	ND	0.203	0.237	15.3	17.8	2	10.0-120			15.5	40
Benzo(a)anthracene	0.666	0.514	0.924	1.09	61.6	86.5	2	25.0-120			16.5	29
Benzo(b)fluoranthene	0.666	0.573	0.959	1.11	58.0	80.6	2	19.0-122			14.6	31
Benzo(k)fluoranthene	0.666	0.206	0.603	0.706	59.6	75.1	2	23.0-120			15.7	30
Benzo(g,h,i)perylene	0.666	0.321	0.658	0.764	50.6	66.5	2	10.0-120			14.9	33
Benzo(a)pyrene	0.666	0.522	0.930	1.08	61.3	83.8	2	24.0-120			14.9	30
Bis(2-chlorethoxy)methane	0.666	ND	0.381	0.383	57.2	57.5	2	10.0-120			0.524	34
Bis(2-chloroethyl)ether	0.666	ND	0.423	0.435	63.5	65.3	2	10.0-120			2.80	40
Bis(2-chloroisopropyl)ether	0.666	ND	0.400	0.433	60.1	65.0	2	10.0-120			7.92	40
4-Bromophenyl-phenylether	0.666	ND	0.470	0.532	70.6	79.9	2	27.0-120			12.4	30
2-Chloronaphthalene	0.666	ND	0.410	0.453	61.6	68.0	2	20.0-120			9.97	32
4-Chlorophenyl-phenylether	0.666	ND	0.426	0.488	64.0	73.3	2	24.0-120			13.6	29
Chrysene	0.666	0.465	0.838	0.972	56.0	76.1	2	21.0-120			14.8	29
Dibenz(a,h)anthracene	0.666	0.0829	0.482	0.546	59.9	69.5	2	10.0-120			12.5	32
3,3-Dichlorobenzidine	1.33	ND	0.850	0.992	63.9	74.6	2	10.0-120			15.4	34
2,4-Dinitrotoluene	0.666	ND	0.448	0.519	67.3	77.9	2	30.0-120			14.7	31
2,6-Dinitrotoluene	0.666	ND	0.417	0.483	62.6	72.5	2	25.0-120			14.7	31
Fluoranthene	0.666	0.964	1.40	1.54	65.5	86.5	2	18.0-126			9.52	32
Fluorene	0.666	ND	0.461	0.528	69.2	79.3	2	25.0-120			13.5	30

L1158902-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1158902-04 11/12/19 04:14 • (MS) R3470884-3 11/12/19 04:34 • (MSD) R3470884-4 11/12/19 04:55

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 %
Hexachlorobenzene	0.666	ND	0.444	0.510	66.7	76.6	2	27.0-120			13.8	28
Hexachloro-1,3-butadiene	0.666	ND	0.380	0.406	57.1	61.0	2	10.0-120			6.62	38
Hexachlorocyclopentadiene	0.666	ND	ND	ND	0.000	0.000	2	10.0-120	J6	J6	0.000	40
Hexachloroethane	0.666	ND	0.351	0.359	52.7	53.9	2	10.0-120			2.25	40
Indeno(1,2,3-cd)pyrene	0.666	0.325	0.701	0.792	56.5	70.1	2	10.0-120			12.2	32
1,2-Dichlorobenzene	0.666	ND	0.386	0.406	58.0	61.0	2	10.0-120			5.05	38
Isophorone	0.666	ND	0.389	0.401	58.4	60.2	2	13.0-120			3.04	34
1,3-Dichlorobenzene	0.666	ND	0.357	0.392	53.6	58.9	2	10.0-120			9.35	40
1,4-Dichlorobenzene	0.666	ND	0.366	0.398	55.0	59.8	2	10.0-120			8.38	39
Naphthalene	0.666	0.124	0.443	0.459	47.9	50.3	2	10.0-120			3.55	35
Nitrobenzene	0.666	ND	0.382	0.383	57.4	57.5	2	10.0-120			0.261	36
n-Nitrosodimethylamine	0.666	ND	0.362	0.384	54.4	57.7	2	10.0-127			5.90	40
n-Nitrosodiphenylamine	0.666	ND	0.465	0.534	69.8	80.2	2	17.0-120			13.8	29
n-Nitrosodi-n-propylamine	0.666	ND	0.419	0.457	62.9	68.6	2	10.0-120			8.68	37
Phenanthrene	0.666	0.732	1.17	1.30	65.8	85.3	2	17.0-120			10.5	31
Benzylbutyl phthalate	0.666	ND	0.495	0.556	74.3	83.5	2	23.0-120			11.6	30
Bis(2-ethylhexyl)phthalate	0.666	ND	0.482	0.554	72.4	83.2	2	17.0-126			13.9	30
Di-n-butyl phthalate	0.666	ND	0.453	0.508	68.0	76.3	2	30.0-120			11.4	29
Diethyl phthalate	0.666	ND	0.441	0.538	66.2	80.8	2	26.0-120			19.8	28
Dimethyl phthalate	0.666	ND	0.422	0.475	63.4	71.3	2	25.0-120			11.8	29
Di-n-octyl phthalate	0.666	ND	0.491	0.574	73.7	86.2	2	21.0-123			15.6	29
Pyrene	0.666	0.962	1.36	1.56	59.8	89.8	2	16.0-121			13.7	32
1,2,4-Trichlorobenzene	0.666	ND	0.370	0.389	55.6	58.4	2	12.0-120			5.01	37
4-Chloro-3-methylphenol	0.666	ND	0.450	0.486	67.6	73.0	2	15.0-120			7.69	30
2-Chlorophenol	0.666	ND	0.431	0.457	64.7	68.6	2	15.0-120			5.86	37
2,4-Dichlorophenol	0.666	ND	0.445	0.466	66.8	70.0	2	20.0-120			4.61	31
2,4-Dimethylphenol	0.666	ND	0.417	0.440	62.6	66.1	2	10.0-120			5.37	33
4,6-Dinitro-2-methylphenol	0.666	ND	0.405	0.422	60.8	63.4	2	10.0-120			4.11	39
2,4-Dinitrophenol	0.666	ND	0.317	0.326	47.6	48.9	2	10.0-121			2.80	40
2-Nitrophenol	0.666	ND	0.422	0.422	63.4	63.4	2	12.0-120			0.000	39
4-Nitrophenol	0.666	ND	0.374	0.426	56.2	64.0	2	10.0-137			13.0	32
Pentachlorophenol	0.666	ND	0.242	0.302	36.3	45.3	2	10.0-160			22.1	31
Phenol	0.666	ND	0.447	0.477	67.1	71.6	2	12.0-120			6.49	38
2,4,6-Trichlorophenol	0.666	ND	0.431	0.469	64.7	70.4	2	19.0-120			8.44	32
(S) Nitrobenzene-d5					*61.0*	*63.1*		*10.0-122*				
(S) 2-Fluorobiphenyl					*62.2*	*70.6*		*15.0-120*				
(S) p-Terphenyl-d14					*71.2*	*84.7*		*10.0-120*				
(S) Phenol-d5					*69.4*	*76.6*		*10.0-120*				
(S) 2-Fluorophenol					*72.3*	*79.5*		*12.0-120*				
(S) 2,4,6-Tribromophenol					*73.2*	*82.6*		*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

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.
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

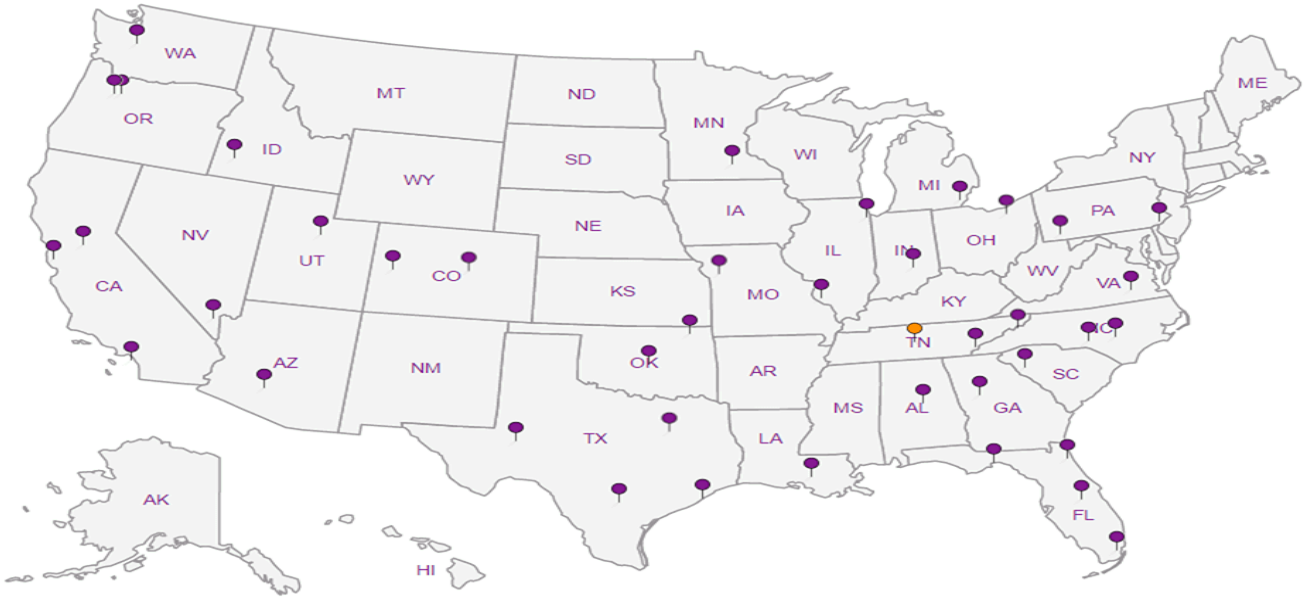
Third Party Federal Accreditations

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:
Attn: Accounts Payable

Pres Chk

Report to: Steven Hale

Email To: shale@utahgascorp.com

Project Description: MFS Federal 8-1 Pit

City/State Collected: Rangely CO

Phone: 970-675-4400
Fax:

Client Project #

Lab Project #

Collected by (print): Steven Hale

Site/Facility ID #: 8-1 Landfarm

P.O. #

Collected by (signature): Steven Hale
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

Analysis / Container / Preservative

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# L1158919

C187

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

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPH (GRO/DRO) + SVOCs	Remarks	Sample # (lab only)
Landfarm	Comp	Soil	6"	11/7/19	9:35 AM	3	X		-01

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

Remarks: 3 jars 1 Sample

pH _____ Temp _____
Flow _____ Other _____

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

Tracking # 7e7ep 4570 1663 3460

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)
	11/7/19	4:10	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	11/7/19	1700	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 1.3 °C Bottles Received: 3

Date: 11/8/19 Time: 8:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)