

Table 910-1		PIONEER NATURAL RESOURCES		
CONCENTRATION LEVELS		sampled 6.2.17		
Contaminant of Concern	Concentrations	Units	VIGIL 34-3 TOP OF PIT	VIGIL 34-3 BOTTOM OF PIT
Organic Compounds in Soil				
TPH (Gasoline Range Organics)	500	mg/kg		ND
TPH (Diesel Range Organics)		mg/kg		5.3
Benzene		mg/kg		ND
Toluene		mg/kg		ND
Ethylbenzene		mg/kg		ND
Xylenes (total)		mg/kg		ND
Acenaphthene		mg/kg		
Anthracene		mg/kg		
Benzo(A)anthracene		mg/kg		
Benzo(B)fluoranthene		mg/kg		
Benzo(K)fluoranthene	2.2	mg/kg		
Benzo(A)pyrene	0.022	mg/kg		
Chrysene	22	mg/kg		
Dibenzo(A,H)anthracene	0.022	mg/kg		
Fluoranthene	1000	mg/kg		
Fluorene	1000	mg/kg		
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg		
Napthalene	23	mg/kg		
Pyrene	1000	mg/kg		
Organic Compounds in Ground Water				
Benzene	5	µg/l		
Toluene	560 to 1000	µg/l		
Ethylbenzene	700	µg/l		
Xylenes (total)	1400 to 10,000	µg/l		
Inorganics in Soils				
Electrical Conductivity (EC)	<4000 or 2x background	umhos/cm	160	780
Sodium Adsorption Ratio (SAR)	<12	NA	1.5	13
pH	6.0-9.0	NA	7.1	9.5
Inorganics in Ground Water				
Total Dissolved Solids (TDS)	<1.25 x background	NA		
Chlorides	<1.25 x background	NA		
Sulfates	<1.25 x background	NA		
Metals in Soils				
Arsenic	0.39	mg/kg		NT
Barium Total	15,000	mg/kg		210
Boron	NA	mg/kg		ND
Boron (Hot Water Soluble)	2	mg/L		NT
Cadmium	70	mg/kg		ND
Chromium (III)	120,000	mg/kg		24
Chromium (VI)	23	mg/kg		ND
Copper	3,100	mg/kg		27
Lead	400	mg/kg		10
Mercury	23	mg/kg		ND
Nickel	1,600	mg/kg		22
Selenium	390	mg/kg		ND
Silver	390	mg/kg		ND
Zinc	23,000	mg/kg		79
Chromium		mg/kg		24
Liquid Hydrocarbons in Soils and Ground Water				
Liquid hydrocarbons including condensate and oil	Below detection level	NA		

NA - not applicable

NT - not tested

ND - below the method detection limit

Cr - if Total Cr is >23 mg/kg, an analysis is completed for Cr VI, to facilitate calculation of Cr III

Client Sample Results

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-98131-1

Client Sample ID: VIGIL 34-3 TOP OF PIT

Lab Sample ID: 280-98131-3

Date Collected: 06/02/17 12:36

Matrix: Solid

Date Received: 06/09/17 10:00

Method: 20B - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	1.5		1.2		No Unit		06/14/17 16:30	06/16/17 14:43	10
Sodium	46		10		mg/Kg		06/14/17 16:30	06/16/17 14:43	10
Calcium	38		2.0		mg/Kg		06/14/17 16:30	06/16/17 14:43	10
Magnesium	19		2.0		mg/Kg		06/14/17 16:30	06/16/17 14:43	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.9		0.1		%			06/12/17 12:44	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.1		0.1		SU		06/19/17 09:57	06/19/17 18:23	1
Specific Conductance (25C)	160		10		umhos/cm		06/19/17 09:57	06/19/17 15:00	1

Client Sample Results

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-98131-1

Client Sample ID: VIGIL 34-3 BOTTOM OF PIT

Lab Sample ID: 280-98131-4

Date Collected: 06/02/17 12:40

Matrix: Solid

Date Received: 06/09/17 10:00

Percent Solids: 77.9

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0067		mg/Kg	☼	06/14/17 15:00	06/15/17 03:08	1
Ethylbenzene	ND		0.0067		mg/Kg	☼	06/14/17 15:00	06/15/17 03:08	1
Toluene	ND		0.0067		mg/Kg	☼	06/14/17 15:00	06/15/17 03:08	1
Xylenes, Total	ND		0.0067		mg/Kg	☼	06/14/17 15:00	06/15/17 03:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		58 - 140	06/14/17 15:00	06/15/17 03:08	1
Toluene-d8 (Surr)	104		80 - 126	06/14/17 15:00	06/15/17 03:08	1
4-Bromofluorobenzene (Surr)	99		76 - 127	06/14/17 15:00	06/15/17 03:08	1
Dibromofluoromethane (Surr)	119		75 - 121	06/14/17 15:00	06/15/17 03:08	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		1.5		mg/Kg	☼	06/15/17 15:06	06/16/17 02:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	77		77 - 123	06/15/17 15:06	06/16/17 02:16	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5.3	*	4.9		mg/Kg	☼	06/15/17 09:58	07/03/17 12:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	59		49 - 115	06/15/17 09:58	07/03/17 12:57	1

Method: 8015B - Diesel Range Organics (DRO) (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND	H	4.9		mg/Kg	☼	06/27/17 07:42	07/03/17 13:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	56		49 - 115	06/27/17 07:42	07/03/17 13:57	1

Method: 20B - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	13		1.2		No Unit		06/14/17 16:30	06/16/17 14:46	10

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	210		0.87		mg/Kg	☼	06/13/17 13:35	06/14/17 02:44	1
Boron	ND		8.7		mg/Kg	☼	06/13/17 13:35	06/14/17 02:44	1
Cadmium	ND		0.43		mg/Kg	☼	06/13/17 13:35	06/14/17 02:44	1
Calcium	2700		43		mg/Kg	☼	06/13/17 13:35	06/14/17 02:44	1
Magnesium	3400		17		mg/Kg	☼	06/13/17 13:35	06/14/17 02:44	1
Molybdenum	ND		1.7		mg/Kg	☼	06/13/17 13:35	06/14/17 02:44	1
Silver	ND		0.87		mg/Kg	☼	06/13/17 13:35	06/14/17 02:44	1
Sodium	2500		430		mg/Kg	☼	06/13/17 13:35	06/14/17 02:44	1

Method: 6020 - Total Metals by ICP-MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	24		0.21		mg/Kg	☼	06/13/17 13:35	06/14/17 01:23	1
Copper	27		0.27		mg/Kg	☼	06/13/17 13:35	06/14/17 01:23	1

TestAmerica Denver

Client Sample Results

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-98131-1

Client Sample ID: VIGIL 34-3 BOTTOM OF PIT

Lab Sample ID: 280-98131-4

Date Collected: 06/02/17 12:40

Matrix: Solid

Date Received: 06/09/17 10:00

Percent Solids: 77.9

Method: 6020 - Total Metals by ICP-MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	10		0.11		mg/Kg	☼	06/13/17 13:35	06/14/17 01:23	1
Nickel	22		0.16		mg/Kg	☼	06/13/17 13:35	06/14/17 01:23	1
Selenium	ND		0.21		mg/Kg	☼	06/13/17 13:35	06/14/17 01:23	1
Zinc	79		1.1		mg/Kg	☼	06/13/17 13:35	06/14/17 01:23	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.025		mg/Kg	☼	06/14/17 12:49	06/14/17 15:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	ND		0.51		mg/Kg	☼	06/20/17 07:01	06/21/17 08:01	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III)	24		2.0		mg/Kg	—		06/22/17 09:19	1
Percent Moisture	22.1		0.1		%			06/12/17 12:44	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	9.5		0.1		SU	—	06/19/17 09:57	06/19/17 18:23	1
Specific Conductance (25C)	780		10		umhos/cm		06/19/17 09:57	06/19/17 15:00	1