

Table 1
 Pad Background
 Summary of Soil Analytical Results - CAP and Background
 Whiting Petroleum Company
 Whiting Petroleum Colorado Pits C 27A-H3
 Rio Blanco County, Colorado

		Location	CAP	Background 1	Background 2	Background 3
		Location Description				
		Date of Sample	7/30/2015			
		Table 910-1 Concentration Levels				
Unit	Unit of Measurement	Soil Compounds	CAP-27A	BG1-27A	BG2-27A	BG3-27A
Electrical Conductivity	mmhos	<4 mmhos/cm or 2x background	0.493	0.0843	0.0946	0.119
pH	s.u.	6 - 9	9.00	8.52	8.90	8.22
SAR	Ratio	<12	6.23	1.21	1.04	1.54

TraceAnalysis, Inc., Lubbock, Texas

Table 2

Summary of Soil Analytical Results - Excavation Walls

Whiting Petroleum Company

Whiting Petroleum Colorado Pits C 27A-H3

Rio Blanco County, Colorado

		Location Description	Wall Samples			
		Date of Sample	7/23/2015			
		Table 910-1 Concentration Levels				
Unit	Unit of Measurement	Soil Compounds	SS01 - West	SS02 - East	SS03 - North	SS04 - South
Benzene	mg/kg	0.17 mg/kg	<0.038	<0.038	<0.036	<0.036
Toluene	mg/kg	85 mg/kg	<0.038	<0.038	<0.036	<0.036
Ethylbenzene	mg/kg	100 mg/kg	<0.038	<0.038	<0.036	<0.036
Xylene	mg/kg	175 mg/kg	<0.110	<0.110	<0.110	<0.110
TPH GRO	mg/kg	500 mg/kg	<3.1	<3.1	<3.0	<3.0
TPH DRO	mg/kg		<5.2	<5.2	<5.0	19
TPH	mg/kg		-	-	-	-

BTEX analysis by EPA Method 8260B

TPH Analysis by TX8015 Method and EPA Method 8015D

ALS Environmental, Holland, Michigan

Table 2 (Continued)

Summary of Soil Analytical Results - Excavation Walls and Floor

Whiting Petroleum Company

Whiting Petroleum Colorado Pits C 27A-H3

Rio Blanco County, Colorado

		Location Description	Wall Samples							
		Date of Sample	8/27/2015							
		Table 910-1 Concentration Levels								
Unit	Unit of Measurement	Soil Compounds	NEW-1	NEW-2	NWW-1	NWW-2	NWW-3	SEW-1	SEW-2	SEW-3
Benzene	mg/kg	0.17 mg/kg	<0.100	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	-
Toluene	mg/kg	85 mg/kg	<0.100	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	-
Ethylbenzene	mg/kg	100 mg/kg	<0.100	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	-
Xylene	mg/kg	175 mg/kg	0.267	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	-
TPH-GRO	mg/kg	500 mg/kg	<20.0	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
TPH DRO	mg/kg		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
TPH	mg/kg		-	-	-	-	-	-	-	-

BTEX analysis by EPA Method 8021B

TPH Analysis by TX8015 Method and EPA Method 8015D

TraceAnalysis, Inc., Lubbock, Texas

Table 2 (Continued)
Summary of Soil Analytical Results - Excavation Walls
Whiting Petroleum Company
Whiting Petroleum Colorado Pits C 27A-H3
Rio Blanco County, Colorado

		Location Description	Wall Samples						
		Date of Sample	8/27/2015						
		Table 910-1 Concentration Levels							
Unit	Unit of Measurement	Soil Compounds	P1SW	P1NE	P1NW	P1SE	P2NE	P2SE	P2NW
Benzene	mg/kg	0.17 mg/kg	<0.0200	<4.00	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
Toluene	mg/kg	85 mg/kg	<0.0200	<4.00	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
Ethylbenzene	mg/kg	100 mg/kg	<0.0200	<4.00	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
Xylene	mg/kg	175 mg/kg	<0.0200	4.68	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
TPH GRO	mg/kg	500 mg/kg	<4.00	10800	<4.00	<4.00	<4.00	<4.00	<4.00
TPH DRO	mg/kg		<50.0	450	<50.0	<50.0	<50.0	<50.0	<50.0
TPH	mg/kg		-	-	-	-	-	-	-

BTEX analysis by EPA Method 8021B

TPH Analysis by TX8015 Method and EPA Method 8015D

TraceAnalysis, Inc., Lubbock, Texas

Table 2 (Continued)
Summary of Soil Analytical Results - Excavation Walls
Whiting Petroleum Company
Whiting Petroleum Colorado Pits C 27A-H3
Rio Blanco County, Colorado

		Location Description	Wall Sample
		Date of Sample	9/14/2015
		Table 910-1 Concentration Levels	
Unit	Unit of Measurement	Soil Compounds	P1 NE1
TPH GRO	mg/kg	500 mg/kg	9.2 J
TPH DRO	mg/kg		6.3 J
TPH	mg/kg		-

BTEX analysis by EPA Method 8021B

TPH Analysis by TX8015 Method and EPA Method 8015D

J - estimated result

ALS Environmental, Kelso, Washington

Table 3

Summary of Soil Analytical Results - Excavated Stockpiles

Whiting Petroleum Company

Whiting Petroleum Colorado Pits C 27A-H3

Rio Blanco County, Colorado

		Location Description	Overburden			
		Date of Sample	8/24/2015			
		Table 910-1 Concentration Levels				
Unit	Unit of Measurement	Soil Compounds	OB-1	OB-2	OB-3	OB-4
Benzene	mg/kg	0.17 mg/kg	ND	ND	ND	ND
Toluene	mg/kg	85 mg/kg	ND	ND	ND	ND
Ethylbenzene	mg/kg	100 mg/kg	ND	ND	ND	ND
Xylene	mg/kg	175 mg/kg	ND	ND	ND	ND
TPH GRO	mg/kg	500 mg/kg	ND	ND	ND	ND
TPH DRO	mg/kg		ND	ND	ND	ND
TPH	mg/kg		-	-	-	-

BTEX analysis by EPA Method 8021B

TPH Analysis by TX8015 Method and EPA Method 8015D

Table 4

Summary of Soil Analytical Results - Treated Soil

Whiting Petroleum Company

Whiting Petroleum Colorado Pits C 27A-H3

Rio Blanco County, Colorado

		Location Description	Excavation Phase 1					
		Date of Sample	7/30/2015					
		Table 910-1 Concentration Levels						
Unit	Unit of Measurement	Soil Compounds	TS-1	TS-2	TS-3	TS-4	TS-5	TS-6
Benzene	mg/kg	0.17 mg/kg	<0.0400	<0.0400	<0.0400	<0.0400	<0.0200	<0.0400
Toluene	mg/kg	85 mg/kg	<0.0400	<0.0400	<0.0400	<0.0400	<0.0200	<0.0400
Ethylbenzene	mg/kg	100 mg/kg	<0.0400	<0.0400	<0.0400	<0.0400	<0.0200	<0.0400
Xylene	mg/kg	175 mg/kg	<0.0400	<0.0400	<0.0400	<0.0400	<0.0200	<0.0400
TPH GRO	mg/kg	500 mg/kg	<8.00	<8.00	<8.00	<8.00	<4.00	<8.00
TPH DRO	mg/kg		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
TPH	mg/kg		-	-	-	-	-	-

BTEX analysis by EPA Method 8021B

TPH Analysis by TX8015 Method and EPA Method 8015D

TraceAnalysis, Inc., Lubbock, Texas

Table 4 (continued)

Summary of Soil Analytical Results - Treated Soil

Whiting Petroleum Company

Whiting Petroleum Colorado Pits C 27A-H3

Rio Blanco County, Colorado

		Location Description	Excavation Phase 2							
		Date of Sample	9/17/2015							
		Table 910-1 Concentration Levels								
Unit	Unit of Measurement	Soil Compounds	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Section 8
Benzene	mg/kg	0.17 mg/kg	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.036	<0.036
Toluene	mg/kg	85 mg/kg	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.036	<0.036
Ethylbenzene	mg/kg	100 mg/kg	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.036	<0.036
Xylene	mg/kg	175 mg/kg	<0.100	<0.100	<0.100	<0.100	<0.100	<0.110	<0.110	<0.110
TPH GRO	mg/kg	500 mg/kg	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9	<3.0	<3.0
TPH DRO	mg/kg		260	52	91	24	49	62	86	44
TPH	mg/kg		-	-	-	-	-	-	-	-

BTEX analysis by EPA Method 8021B

TPH Analysis by TX8015 Method and EPA Method 8015D

ALS Environmental, Holland, Michigan

Table 5
 Summary of Groundwater Analytical Results
 Whiting Petroleum Company
 Whiting Petroleum Colorado Pits C 27A-H3
 Rio Blanco County, Colorado

		Location Description	Excavation Phase 1	
		Date of Sample	7/23/2015	
		Table 910-1 Concentration Levels		
Unit	Unit of Measurement	Organic Compounds in Groundwater	Excavation 01	Trench 01
Benzene	ug/L	5	< 1.0	47
Toluene	ug/L	560	< 1.0	1.5
Ethylbenzene	ug/L	700	< 1.0	34
Xylenes (Total)	ug/L	1,400	< 3.0	13
TDS	mg/L	1.25 x background	1,000	1,300
Chlorides	mg/L		32	120
Sulfate	mg/L		420	320

BTEX analysis by EPA Method 8260

Anions analysis by EPA Method 9056A

Total Dissolved Solids (TDS) by Method A2540 C-97

ALS Environmental, Holland, Michigan