

GW – 028

**Background
Groundwater
Investigation Report**

PART 6 OF 9

September 2015

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Anions by Method 9056MOD			Matrix:	Water - mg/L
Project No:	TX000836.0008.00004			EPA ID:	TN00003
Project:	Navajo Refining Company - Artesia, NM			Analytic Batch:	WG764385
Collection Date:	1/7/2015			Analyst:	577
Analysis Date:	1/13/2015 9:04:00 PM				
Instrument ID:	IC-8				
Sample Numbers:	L742605-01, -02, -03, -04, -05				

Sample Duplicate

L742511-06

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Sulfate	2	108.87	111.01	2	20	

Sample Duplicate

L742696-36

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Sulfate	1	2.4487	2.4438	0	20	

Matrix Spike / Matrix Spike Duplicate

L742256-20

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Sulfate	1	50	<0.0774	49.574	99	49.959	100	80 - 120		1	20	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Cyanide by Method 9012B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764270
Analysis Date:	1/13/2015 4:42:00 PM	Analyst:	183
Instrument ID:	LACHAT4		
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Cyanide	57-12-5	< 0.00500	< 0.00180	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Cyanide	1	0.1	0.102	102	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Cyanide	1	0.1	0.0963	96.3	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	% RPD	Control RPD Limits	Qual
Cyanide	1	0.1	0.102	102	0.0963	96.3	90 - 110	5.75	20			

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Cyanide by Method 9012B			Matrix:	Water - mg/L
Project No:	TX000836.0008.00004			EPA ID:	TN00003
Project:	Navajo Refining Company - Artesia, NM			Analytic Batch:	WG764270
Collection Date:	1/7/2015			Analyst:	183
Analysis Date:	1/13/2015 4:42:00 PM				
Instrument ID:	LACHAT4				
Sample Numbers:	L742605-01, -02, -03, -04, -05				

Sample Duplicate

L742615-05

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Cyanide	1	<0.0018	<0.0018		20	

Sample Duplicate

L742120-02

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Cyanide	1	0.012	0.0125	0	20	

Matrix Spike / Matrix Spike Duplicate

L742605-03

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Cyanide	1	0.2	<0.0018	0.2	100	0.199	99.5	90 - 110		0.5	20	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Nitrate-Nitrite by Method 353.2		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764296
Analysis Date:	1/15/2015 10:55:00 AM	Analyst:	578
Instrument ID:	LACHAT5		
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Nitrate-Nitrite	7727-37-9	< 0.100	< 0.0197	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Nitrate-Nitrite	1	5	5.2	104	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Nitrate-Nitrite	1	5	5.34	107	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Limits	Qual
Nitrate-Nitrite	1	5	5.2	104	5.34	107	90 - 110	2.66	20		

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Nitrate-Nitrite by Method 353.2			Matrix:	Water - mg/L
Project No:	TX000836.0008.00004			EPA ID:	TN00003
Project:	Navajo Refining Company - Artesia, NM			Analytic Batch:	WG764296
Collection Date:	1/7/2015			Analyst:	578
Analysis Date:	1/15/2015 10:55:00 AM				
Instrument ID:	LACHAT5				
Sample Numbers:	L742605-01, -02, -03, -04, -05				

Sample Duplicate

L742571-09

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Nitrate-Nitrite	1	0.022	0.0316	37	20	P1

Sample Duplicate

L742606-03

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Nitrate-Nitrite	1	9.4	9.35	0	20	

Matrix Spike / Matrix Spike Duplicate

L742605-05

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Nitrate-Nitrite	1	5	0.17	4.22	81	4.48	86.2	90 - 110	J6	5.98	20	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764306
Analysis Date:	1/14/2015 2:29:00 PM	Analyst:	519
Instrument ID:	WETBAL2		
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Dissolved Solids	DSOLIDS	< 10.0	< 2.82	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8680	98.6	85 - 115	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8370	95.1	85 - 115	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD % RPD	Control RPD Limits	Control RPD Qual
Dissolved Solids	1	8800	8680	98.6	8370	95.1	85 - 115	3.64	5		

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764306
Analysis Date:	1/14/2015 2:29:00 PM	Analyst:	519
Instrument ID:	WETBAL2		
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Sample Duplicate

L742571-01

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	1572.5	1600	1.73	5	

Sample Duplicate

L742605-04

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	1865	1960	4.97	5	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Mercury by Method 7470A		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG763995
Analysis Date:	1/12/2015 12:30:00 PM	Analyst:	657
Instrument ID:	CVAA4	Prep Date:	1/9/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Mercury	7439-97-6	< 0.200	< 0.0490	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Mercury	1	3	3.1070	104	85 - 115	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Mercury	1	3	2.9444	98	85 - 115	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec	Control RPD	% RPD	Control RPD	Qual
Mercury	1	3	3.1070	104	2.9444	98	85 - 115	5	20			

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Mercury by Method 7470A		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG763995
Analysis Date:	1/12/2015 12:30:00 PM	Analyst:	657
Instrument ID:	CVAA4	Prep Date:	1/9/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Serial Dilution

L742334-08

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Mercury	5	<0.049	<0.245		10	

Matrix Spike / Matrix Spike Duplicate

L742334-08

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Mercury	1	3	<0.049	3.2041	107	3.0169	100	80 - 120		6	20	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:00:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Aluminum,Dissolved	7429-90-5	< 100	5.52	
Arsenic,Dissolved	7440-38-2	< 2.00	< 0.250	
Barium,Dissolved	7440-39-3	< 5.00	< 0.360	
Boron,Dissolved	7440-42-8	< 20.0	3.02	
Cadmium,Dissolved	7440-43-9	< 1.00	< 0.160	
Calcium,Dissolved	7440-70-2	< 1000	68.5	
Chromium,Dissolved	7440-47-3	1.04	1.04	B
Cobalt,Dissolved	7440-48-4	< 2.00	< 0.260	
Copper,Dissolved	7440-50-8	< 5.00	0.748	
Iron,Dissolved	7439-89-6	< 100	< 15.0	
Lead,Dissolved	7439-92-1	< 2.00	0.291	
Manganese,Dissolved	7439-96-5	< 5.00	0.876	
Molybdenum,Dissolved	7439-98-7	< 5.00	< 0.140	
Nickel,Dissolved	7440-02-0	< 2.00	< 0.350	
Potassium,Dissolved	7440-09-7	< 1000	< 37.0	
Selenium,Dissolved	7782-49-2	< 2.00	< 0.380	
Silver,Dissolved	7440-22-4	< 2.00	< 0.310	
Sodium,Dissolved	7440-23-5	< 1000	< 110	
Uranium,Dissolved	7440-61-1	< 10.0	< 0.330	
Vanadium,Dissolved	7440-62-2	< 5.00	< 0.180	
Zinc,Dissolved	7440-66-6	< 25.0	< 2.56	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 10:40:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Aluminum	7429-90-5	< 100	14.1	
Arsenic	7440-38-2	< 2.00	< 0.250	
Barium	7440-39-3	< 5.00	< 0.360	
Boron	7440-42-8	< 20.0	3.8	
Cadmium	7440-43-9	< 1.00	< 0.160	
Calcium	7440-70-2	< 1000	< 46.0	
Chromium	7440-47-3	< 1.00	0.645	B
Cobalt	7440-48-4	< 2.00	< 0.260	
Copper	7440-50-8	< 5.00	0.783	
Iron	7439-89-6	< 100	< 15.0	
Lead	7439-92-1	< 2.00	< 0.240	
Manganese	7439-96-5	< 5.00	0.267	
Molybdenum	7439-98-7	< 5.00	< 0.140	
Nickel	7440-02-0	< 2.00	0.462	
Potassium	7440-09-7	< 1000	< 37.0	
Selenium	7782-49-2	< 2.00	< 0.380	
Silver	7440-22-4	< 2.00	< 0.310	
Sodium	7440-23-5	< 1000	< 110	
Uranium	7440-61-1	< 10.0	< 0.330	
Vanadium	7440-62-2	< 5.00	< 0.180	
Zinc	7440-66-6	< 25.0	< 2.56	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:00:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum,Dissolved	1	500	501.18	100	70 - 130	
Arsenic,Dissolved	1	50	49.545	99	85 - 115	
Barium,Dissolved	1	50	48.833	98	85 - 115	
Boron,Dissolved	1	50	57.237	114	70 - 130	
Cadmium,Dissolved	1	50	53.196	106	85 - 115	
Calcium,Dissolved	1	5000	5106.7	102	70 - 130	
Chromium,Dissolved	1	50	49.622	99	85 - 115	
Cobalt,Dissolved	1	50	50.558	101	85 - 115	
Copper,Dissolved	1	50	56.307	113	85 - 115	
Iron,Dissolved	1	500	499.59	100	85 - 115	
Lead,Dissolved	1	50	50.780	102	85 - 115	
Manganese,Dissolved	1	50	49.004	98	85 - 115	
Molybdenum,Dissolved	1	50	47.727	95	85 - 115	
Nickel,Dissolved	1	50	51.204	102	85 - 115	
Potassium,Dissolved	1	5000	4822.8	96	70 - 130	
Selenium,Dissolved	1	50	51.086	102	85 - 115	
Silver,Dissolved	1	50	46.210	92	85 - 115	
Sodium,Dissolved	1	5000	5110.4	102	70 - 130	
Uranium,Dissolved	1	50	51.119	102	70 - 130	
Vanadium,Dissolved	1	50	47.682	95	85 - 115	
Zinc,Dissolved	1	50	56.830	114	85 - 115	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:00:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum,Dissolved	1	500	537.67	108	70 - 130	
Arsenic,Dissolved	1	50	50.527	101	85 - 115	
Barium,Dissolved	1	50	48.146	96	85 - 115	
Boron,Dissolved	1	50	61.427	123	70 - 130	
Cadmium,Dissolved	1	50	55.021	110	85 - 115	
Calcium,Dissolved	1	5000	5188.6	104	70 - 130	
Chromium,Dissolved	1	50	49.536	99	85 - 115	
Cobalt,Dissolved	1	50	50.138	100	85 - 115	
Copper,Dissolved	1	50	52.926	106	85 - 115	
Iron,Dissolved	1	500	502.91	101	85 - 115	
Lead,Dissolved	1	50	49.164	98	85 - 115	
Manganese,Dissolved	1	50	48.326	97	85 - 115	
Molybdenum,Dissolved	1	50	48.723	97	85 - 115	
Nickel,Dissolved	1	50	49.361	99	85 - 115	
Potassium,Dissolved	1	5000	4892.2	98	70 - 130	
Selenium,Dissolved	1	50	51.051	102	85 - 115	
Silver,Dissolved	1	50	46.835	94	85 - 115	
Sodium,Dissolved	1	5000	5228.8	105	70 - 130	
Uranium,Dissolved	1	50	50.181	100	70 - 130	
Vanadium,Dissolved	1	50	47.455	95	85 - 115	
Zinc,Dissolved	1	50	50.940	102	85 - 115	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:00:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
Aluminum,Dissolved	1	500	501.18	100	537.67	108	70 - 130	7	20	
Arsenic,Dissolved	1	50	49.545	99	50.527	101	85 - 115	2	20	
Barium,Dissolved	1	50	48.833	98	48.146	96	85 - 115	1	20	
Boron,Dissolved	1	50	57.237	114	61.427	123	70 - 130	7	20	
Cadmium,Dissolved	1	50	53.196	106	55.021	110	85 - 115	3	20	
Calcium,Dissolved	1	5000	5106.7	102	5188.6	104	70 - 130	2	20	
Chromium,Dissolved	1	50	49.622	99	49.536	99	85 - 115	0	20	
Cobalt,Dissolved	1	50	50.558	101	50.138	100	85 - 115	1	20	
Copper,Dissolved	1	50	56.307	113	52.926	106	85 - 115	6	20	
Iron,Dissolved	1	500	499.59	100	502.91	101	85 - 115	1	20	
Lead,Dissolved	1	50	50.780	102	49.164	98	85 - 115	3	20	
Manganese,Dissolved	1	50	49.004	98	48.326	97	85 - 115	1	20	
Molybdenum,Dissolved	1	50	47.727	95	48.723	97	85 - 115	2	20	
Nickel,Dissolved	1	50	51.204	102	49.361	99	85 - 115	4	20	
Potassium,Dissolved	1	5000	4822.8	96	4892.2	98	70 - 130	1	20	
Selenium,Dissolved	1	50	51.086	102	51.051	102	85 - 115	0	20	
Silver,Dissolved	1	50	46.210	92	46.835	94	85 - 115	1	20	
Sodium,Dissolved	1	5000	5110.4	102	5228.8	105	70 - 130	2	20	
Uranium,Dissolved	1	50	51.119	102	50.181	100	70 - 130	2	20	
Vanadium,Dissolved	1	50	47.682	95	47.455	95	85 - 115	0	20	
Zinc,Dissolved	1	50	56.830	114	50.940	102	85 - 115	11	20	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 10:40:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum	1	500	498.44	100	70 - 130	
Arsenic	1	50	47.600	95	85 - 115	
Barium	1	50	49.997	100	85 - 115	
Boron	1	50	51.079	102	70 - 130	
Cadmium	1	50	53.538	107	85 - 115	
Calcium	1	5000	5173.5	103	70 - 130	
Chromium	1	50	49.758	100	85 - 115	
Cobalt	1	50	50.447	101	85 - 115	
Copper	1	50	52.708	105	85 - 115	
Iron	1	500	492.47	98	85 - 115	
Lead	1	50	50.028	100	85 - 115	
Manganese	1	50	47.281	95	85 - 115	
Molybdenum	1	50	48.721	97	85 - 115	
Nickel	1	50	50.969	102	85 - 115	
Potassium	1	5000	4861.3	97	70 - 130	
Selenium	1	50	48.813	98	85 - 115	
Silver	1	50	47.236	94	85 - 115	
Sodium	1	5000	5162.6	103	70 - 130	
Uranium	1	50	51.630	103	70 - 130	
Vanadium	1	50	47.506	95	85 - 115	
Zinc	1	50	48.910	98	85 - 115	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 10:40:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum	1	500	508.03	102	70 - 130	
Arsenic	1	50	47.931	96	85 - 115	
Barium	1	50	49.920	100	85 - 115	
Boron	1	50	51.468	103	70 - 130	
Cadmium	1	50	53.620	107	85 - 115	
Calcium	1	5000	4966.5	99	70 - 130	
Chromium	1	50	49.073	98	85 - 115	
Cobalt	1	50	50.574	101	85 - 115	
Copper	1	50	53.028	106	85 - 115	
Iron	1	500	519.43	104	85 - 115	
Lead	1	50	49.577	99	85 - 115	
Manganese	1	50	47.337	95	85 - 115	
Molybdenum	1	50	48.050	96	85 - 115	
Nickel	1	50	49.996	100	85 - 115	
Potassium	1	5000	4879.1	98	70 - 130	
Selenium	1	50	46.953	94	85 - 115	
Silver	1	50	47.835	96	85 - 115	
Sodium	1	5000	5137.4	103	70 - 130	
Uranium	1	50	51.089	102	70 - 130	
Vanadium	1	50	47.271	95	85 - 115	
Zinc	1	50	50.900	102	85 - 115	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 10:40:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Qual
Aluminum	1	500	498.44	100	508.03	102	70 - 130	2	20	
Arsenic	1	50	47.600	95	47.931	96	85 - 115	1	20	
Barium	1	50	49.997	100	49.920	100	85 - 115	0	20	
Boron	1	50	51.079	102	51.468	103	70 - 130	1	20	
Cadmium	1	50	53.538	107	53.620	107	85 - 115	0	20	
Calcium	1	5000	5173.5	103	4966.5	99	70 - 130	4	20	
Chromium	1	50	49.758	100	49.073	98	85 - 115	1	20	
Cobalt	1	50	50.447	101	50.574	101	85 - 115	0	20	
Copper	1	50	52.708	105	53.028	106	85 - 115	1	20	
Iron	1	500	492.47	98	519.43	104	85 - 115	5	20	
Lead	1	50	50.028	100	49.577	99	85 - 115	1	20	
Manganese	1	50	47.281	95	47.337	95	85 - 115	0	20	
Molybdenum	1	50	48.721	97	48.050	96	85 - 115	1	20	
Nickel	1	50	50.969	102	49.996	100	85 - 115	2	20	
Potassium	1	5000	4861.3	97	4879.1	98	70 - 130	0	20	
Selenium	1	50	48.813	98	46.953	94	85 - 115	4	20	
Silver	1	50	47.236	94	47.835	96	85 - 115	1	20	
Sodium	1	5000	5162.6	103	5137.4	103	70 - 130	0	20	
Uranium	1	50	51.630	103	51.089	102	70 - 130	1	20	
Vanadium	1	50	47.506	95	47.271	95	85 - 115	0	20	
Zinc	1	50	48.910	98	50.900	102	85 - 115	4	20	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:00:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Serial Dilution

L742605-01

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Aluminum,Dissolved	5	19.527	27.680	42	10	
Arsenic,Dissolved	5	1.5774	1.9550	24	10	
Barium,Dissolved	5	24.092	24.936	4	10	
Boron,Dissolved	5	787.86	947.99	20	10	O1
Cadmium,Dissolved	5	<0.16	<0.8		10	
Chromium,Dissolved	5	1.0936	<2.7	98	10	
Cobalt,Dissolved	5	<0.26	<1.3		10	
Copper,Dissolved	5	3.2075	4.0378	26	10	
Iron,Dissolved	5	20.652	<75	110	10	
Lead,Dissolved	5	<0.24	<1.2		10	
Manganese,Dissolved	5	47.371	48.102	2	10	
Molybdenum,Dissolved	5	4.5147	4.6261	2	10	
Nickel,Dissolved	5	1.2579	3.9639	215	10	
Potassium,Dissolved	5	5316.2	5204.9	2	10	
Selenium,Dissolved	5	9.8069	9.3164	5	10	
Silver,Dissolved	5	0.6825	<1.55	5	10	
Uranium,Dissolved	5	14.419	14.680	2	10	
Vanadium,Dissolved	5	4.4413	4.6043	4	10	
Zinc,Dissolved	5	24.987	31.237	25	10	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020			Matrix:	Water - ug/L
Project No:	TX000836.0008.00004			EPA ID:	TN00003
Project:	Navajo Refining Company - Artesia, NM			Analytic Batch:	WG764055
Collection Date:	1/7/2015			Analyst:	428
Analysis Date:	1/12/2015 8:00:00 PM			Prep Date:	1/10/2015
Instrument ID:	ICPMS8				
Sample Numbers:	L742605-01, -02, -03, -04, -05				

Matrix Spike / Matrix Spike Duplicate

L742605-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Aluminum,Dissolved	1	500	19.527	509.40	98	508.90	98	70 - 130		0	20	
Arsenic,Dissolved	1	50	1.5774	55.056	107	57.376	112	75 - 125		4	20	
Barium,Dissolved	1	50	24.092	76.832	105	78.780	109	75 - 125		3	20	
Boron,Dissolved	1	50	787.86	863.29	151	925.37	275	70 - 130	V	7	20	
Cadmium,Dissolved	1	50	<0.16	53.033	106	55.806	112	75 - 125		5	20	
Chromium,Dissolved	1	50	1.0936	50.128	98	50.739	99	75 - 125		1	20	
Cobalt,Dissolved	1	50	<0.26	50.590	101	51.327	102	75 - 125		1	20	
Copper,Dissolved	1	50	3.2075	53.598	101	53.847	101	75 - 125		0	20	
Iron,Dissolved	1	500	20.652	498.31	96	506.46	97	75 - 125		2	20	
Lead,Dissolved	1	50	<0.24	51.196	102	50.373	100	75 - 125		2	20	
Manganese,Dissolved	1	50	47.371	95.144	96	96.292	98	75 - 125		1	20	
Molybdenum,Dissolved	1	50	4.5147	57.008	105	58.528	108	75 - 125		3	20	
Nickel,Dissolved	1	50	1.2579	50.980	99	51.738	101	75 - 125		1	20	
Potassium,Dissolved	1	5000	5316.2	10067	95	9949.3	93	70 - 130		1	20	
Selenium,Dissolved	1	50	9.8069	65.567	112	66.819	114	75 - 125		2	20	
Silver,Dissolved	1	50	0.6825	50.196	99	51.132	101	75 - 125		2	20	
Uranium,Dissolved	1	50	14.419	68.909	109	67.752	107	70 - 130		2	20	
Vanadium,Dissolved	1	50	4.4413	54.636	100	56.109	103	75 - 125		3	20	
Zinc,Dissolved	1	50	24.987	60.487	71	60.932	72	75 - 125	J6	1	20	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 10:40:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Serial Dilution

L742605-01

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Arsenic	5	4.0453	4.0424	0	10	
Barium	5	33.447	34.614	3	10	
Boron	5	690.77	786.26	14	10	O1
Cadmium	5	<0.16	<0.8		10	
Chromium	5	1.1140	<2.7	115	10	
Cobalt	5	1.0517	<1.3	4	10	
Copper	5	2.5198	4.8109	91	10	
Iron	5	2016.4	2413.9	20	10	
Lead	5	1.5327	3.0029	96	10	
Manganese	5	633.34	650.49	3	10	
Molybdenum	5	3.1830	3.5362	11	10	
Nickel	5	1.6219	34.630	2035	10	
Selenium	5	9.6598	9.3080	4	10	
Silver	5	0.5637	<1.55	17	10	
Uranium	5	14.923	15.081	1	10	
Vanadium	5	10.501	10.776	3	10	
Zinc	5	4.5197	67.734	1399	10	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 10:40:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Matrix Spike / Matrix Spike Duplicate

L742605-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Aluminum	1	500	36.634	517.99	96	535.37	100	70 - 130		3	20	
Arsenic	1	50	4.0453	56.550	105	54.221	100	75 - 125		4	20	
Barium	1	50	33.447	80.656	94	83.173	99	75 - 125		3	20	
Boron	1	50	690.77	759.52	138	760.84	140	70 - 130	V	0	20	
Cadmium	1	50	<0.16	55.192	110	52.442	105	75 - 125		5	20	
Chromium	1	50	1.1140	47.998	94	48.073	94	75 - 125		0	20	
Cobalt	1	50	1.0517	50.112	98	50.171	98	75 - 125		0	20	
Copper	1	50	2.5198	50.780	97	52.391	100	75 - 125		3	20	
Iron	1	500	2016.4	2471.5	91	2522.5	101	75 - 125		2	20	
Lead	1	50	1.5327	48.608	94	49.181	95	75 - 125		1	20	
Manganese	1	50	633.34	683.18	100	859.60	453	75 - 125	V	23	20	J3
Molybdenum	1	50	3.1830	53.724	101	55.646	105	75 - 125		4	20	
Nickel	1	50	1.6219	48.818	94	49.040	95	75 - 125		0	20	
Potassium	1	5000	5069.3	9783.5	94	9862.9	96	70 - 130		1	20	
Selenium	1	50	9.6598	58.552	98	60.826	102	75 - 125		4	20	
Silver	1	50	0.5637	48.081	95	49.030	97	75 - 125		2	20	
Uranium	1	50	14.923	68.074	106	67.113	104	70 - 130		1	20	
Vanadium	1	50	10.501	58.236	95	59.079	97	75 - 125		1	20	
Zinc	1	50	4.5197	49.951	91	50.554	92	75 - 125		1	20	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG763968
Analysis Date:	1/10/2015 2:38:00 PM	Analyst:	585
Instrument ID:	VOCGC7		
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
TPH (GC/FID) Low Fraction	8006-61-9	< 0.100	< 0.0314	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.3472	79	67 - 132	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.0255	73.2	67 - 132	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	% RPD	Control RPD Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.3472	79	4.0255	73.2	67 - 132	7.68	20			

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG763968
Analysis Date:	1/10/2015 2:38:00 PM	Analyst:	585
Instrument ID:	VOCGC7		
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Matrix Spike / Matrix Spike Duplicate

L742501-02

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
TPH (GC/FID) Low Fraction	1	5.5	0.0368	4.6920	84.6	4.6327	83.6	50 - 143		1.27		20

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG763968
Analysis Date:	1/10/2015 2:38:00 PM	Analyst:	585
Instrument ID:	VOCGC7		
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Surrogate Summary

Laboratory

Sample ID	Instrument	File ID	ppm	% Rec
L742605-01	VOCGC7	0110_15	0.197	98.6
L742605-02	VOCGC7	0110_16	0.197	98.6
L742605-03	VOCGC7	0110_17	0.197	98.5
L742605-04	VOCGC7	0110_18	0.198	98.8
L742605-05	VOCGC7	0110_19	0.198	99.1
LCS WG763968	VOCGC7	0110_04	0.211	105
LCSD WG763968	VOCGC7	0110_05	0.210	105
MS WG763968	VOCGC7	0110_06	0.214	107
MSD WG763968	VOCGC7	0110_07	0.214	107
BLANK WG763968	VOCGC7	0110_09	0.198	99.0

--A,A,A-TRIFLUOROTOLUENE(FID)

True Value: 0.2 ppm Limits: 62 - 128

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 1:22:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742605-01, -02, -03, -04, -05, -06		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
1,1,1,2-Tetrachloroethane	630-20-6	< 0.00100	< 0.000385	
1,1,1-Trichloroethane	71-55-6	< 0.00100	< 0.000319	
1,1,2,2-Tetrachloroethane	79-34-5	< 0.00100	< 0.000130	
1,1,2-Trichloroethane	79-00-5	< 0.00100	< 0.000383	
1,1-Dichloroethane	75-34-3	< 0.00100	< 0.000259	
1,1-Dichloroethene	75-35-4	< 0.00100	< 0.000398	
1,2-Dibromoethane	106-93-4	< 0.00100	< 0.000381	
1,2-Dichloroethane	107-06-2	< 0.00100	< 0.000361	
Benzene	71-43-2	< 0.00100	< 0.000331	
Carbon tetrachloride	56-23-5	< 0.00100	< 0.000379	
Chloroform	67-66-3	< 0.00500	< 0.000324	
Ethylbenzene	100-41-4	< 0.00100	< 0.000384	
m&p-Xylenes	1330-20-7	< 0.00200	< 0.000719	
Methylene Chloride	75-09-2	< 0.00500	0.00181	
o-Xylene	95-47-6	< 0.00100	< 0.000341	
Tetrachloroethene	127-18-4	< 0.00100	< 0.000372	
Toluene	108-88-3	< 0.00500	< 0.000780	
Vinyl chloride	75-01-4	< 0.00100	< 0.000259	
Xylenes, Total	1330-20-7	< 0.00300	< 0.00106	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 1:22:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742605-01, -02, -03, -04, -05, -06		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0270	108	74.2 - 124	
1,1,1-Trichloroethane	1	0.025	0.0264	106	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0262	105	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0255	102	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0258	103	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0254	102	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0274	110	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0249	99.8	68.8 - 124	
Benzene	1	0.025	0.0251	100	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0268	107	70.2 - 123	
Chloroform	1	0.025	0.0243	97	76 - 121	
Ethylbenzene	1	0.025	0.0271	108	78.8 - 122	
m&p-Xylenes	1	0.05	0.0536	107	78.8 - 121	
Methylene Chloride	1	0.025	0.0248	99.2	70.3 - 120	
o-Xylene	1	0.025	0.0269	107	77.6 - 122	
Tetrachloroethene	1	0.025	0.0271	108	72.6 - 126	
Toluene	1	0.025	0.0251	100	79.7 - 116	
Vinyl chloride	1	0.025	0.0278	111	65.9 - 128	
Xylenes, Total	1	0.075	0.0804	107	78.7 - 121	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 1:22:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742605-01, -02, -03, -04, -05, -06		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0267	107	74.2 - 124	
1,1,1-Trichloroethane	1	0.025	0.0260	104	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0280	112	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0257	103	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0256	103	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0251	101	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0274	110	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0261	105	68.8 - 124	
Benzene	1	0.025	0.0248	99.1	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0261	104	70.2 - 123	
Chloroform	1	0.025	0.0237	94.8	76 - 121	
Ethylbenzene	1	0.025	0.0262	105	78.8 - 122	
m&p-Xylenes	1	0.05	0.0528	106	78.8 - 121	
Methylene Chloride	1	0.025	0.0252	101	70.3 - 120	
o-Xylene	1	0.025	0.0268	107	77.6 - 122	
Tetrachloroethene	1	0.025	0.0261	104	72.6 - 126	
Toluene	1	0.025	0.0250	100	79.7 - 116	
Vinyl chloride	1	0.025	0.0275	110	65.9 - 128	
Xylenes, Total	1	0.075	0.0796	106	78.7 - 121	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 1:22:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742605-01, -02, -03, -04, -05, -06		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control	% Rec	Control RPD	
							Limits	Qual	% RPD	Limits Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0270	108	0.0267	107	74.2 - 124		1.26	20
1,1,1-Trichloroethane	1	0.025	0.0264	106	0.0260	104	73.2 - 123		1.45	20
1,1,2,2-Tetrachloroethane	1	0.025	0.0262	105	0.0280	112	70.7 - 122		6.87	20
1,1,2-Trichloroethane	1	0.025	0.0255	102	0.0257	103	77.7 - 118		0.76	20
1,1-Dichloroethane	1	0.025	0.0258	103	0.0256	103	70.7 - 126		0.76	20
1,1-Dichloroethene	1	0.025	0.0254	102	0.0251	101	67.8 - 129		1.11	20
1,2-Dibromoethane	1	0.025	0.0274	110	0.0274	110	76.6 - 121		0.09	20
1,2-Dichloroethane	1	0.025	0.0249	99.8	0.0261	105	68.8 - 124		4.66	20
Benzene	1	0.025	0.0251	100	0.0248	99.1	74.8 - 121		1.16	20
Carbon tetrachloride	1	0.025	0.0268	107	0.0261	104	70.2 - 123		2.8	20
Chloroform	1	0.025	0.0243	97	0.0237	94.8	76 - 121		2.36	20
Ethylbenzene	1	0.025	0.0271	108	0.0262	105	78.8 - 122		3.21	20
m&p-Xylenes	1	0.05	0.0536	107	0.0528	106	78.8 - 121		1.33	20
Methylene Chloride	1	0.025	0.0248	99.2	0.0252	101	70.3 - 120		1.59	20
o-Xylene	1	0.025	0.0269	107	0.0268	107	77.6 - 122		0.22	20
Tetrachloroethene	1	0.025	0.0271	108	0.0261	104	72.6 - 126		3.84	20
Toluene	1	0.025	0.0251	100	0.0250	100	79.7 - 116		0.22	20
Vinyl chloride	1	0.025	0.0278	111	0.0275	110	65.9 - 128		1.09	20
Xylenes, Total	1	0.075	0.0804	107	0.0796	106	78.7 - 121		0.96	20

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 1:22:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742605-01, -02, -03, -04, -05, -06		

Matrix Spike / Matrix Spike Duplicate

L742643-02

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
1,1,1,2-Tetrachloroethane	1	0.025	<0.0004	0.0281	112	0.0264	106	64 - 128		5.99	20	
1,1,1-Trichloroethane	1	0.025	<0.0003	0.0267	107	0.0259	104	58.7 - 134		2.85	20	
1,1,2,2-Tetrachloroethane	1	0.025	<0.0001	0.0284	114	0.0269	108	56 - 132		5.54	22.2	
1,1,2-Trichloroethane	1	0.025	<0.0004	0.0261	105	0.0256	103	66.3 - 125		2.01	20	
1,1-Dichloroethane	1	0.025	<0.0003	0.0255	102	0.0248	99.2	58.5 - 132		2.69	20	
1,1-Dichloroethene	1	0.025	<0.0004	0.0254	102	0.0251	101	51.1 - 140		1.26	20.2	
1,2-Dibromoethane	1	0.025	<0.0004	0.0288	115	0.0271	108	67.1 - 125		6.22	20	
1,2-Dichloroethane	1	0.025	<0.0004	0.0260	104	0.0251	101	60 - 126		3.44	20	
Benzene	1	0.025	<0.0003	0.0250	100	0.0242	96.7	54.3 - 133		3.54	20	
Carbon tetrachloride	1	0.025	<0.0004	0.0262	105	0.0260	104	55.7 - 134		0.91	20	
Chloroform	1	0.025	<0.0003	0.0240	95.8	0.0229	91.6	63 - 129		4.46	20	
Ethylbenzene	1	0.025	<0.0004	0.0280	112	0.0265	106	61.4 - 133		5.26	20	
m&p-Xylenes	1	0.05	<0.0007	0.0543	109	0.0519	104	61.7 - 133		4.41	20	
Methylene Chloride	1	0.025	<0.001	0.0236	94.3	0.0234	93.6	58.1 - 122		0.78	20	
o-Xylene	1	0.025	<0.0003	0.0274	109	0.0264	106	63.3 - 130		3.62	20	
Tetrachloroethene	1	0.025	<0.0004	0.0279	112	0.0257	103	53 - 139		8.1	20	
Toluene	1	0.025	<0.0008	0.0259	102	0.0252	99.3	61.4 - 130		2.76	20	
Vinyl chloride	1	0.025	<0.0003	0.0277	111	0.0271	108	47.8 - 137		2.37	20	
Xylenes, Total	1	0.075	<0.0011	0.0816	109	0.0783	104	63.3 - 131		4.14	20	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 1:22:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742605-01, -02, -03, -04, -05, -06		

Internal Standard Response and Retention Time Summary

File ID: 0110_31

Analyzed: 01/10/15 180600

	IS1		IS2		IS3		DCB	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	425595	4.27	754129	4.59	124087	5.73	313970	8.10
Upper Limit	851000	4.77	1510000	5.09	248000	6.23	628000	8.60
Lower Limit	213000	3.77	377000	4.09	62000	5.23	157000	7.60
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L742605-06	447988	4.27	796135	4.59	124065	5.74	313968	8.10
L742605-01	440066	4.27	789345	4.59	123796	5.74	316683	8.10
L742605-02	434587	4.27	775038	4.59	119943	5.74	307823	8.10
L742605-03	444646	4.27	766200	4.59	127269	5.74	305018	8.10
L742605-04	444952	4.27	786438	4.59	124906	5.74	315718	8.10
L742605-05	438033	4.27	778108	4.59	121304	5.74	315357	8.10
MSD WG764014	432440	4.27	774231	4.59	124181	5.74	317130	8.10
MS WG764014	427661	4.27	766354	4.59	121356	5.74	310825	8.10
LCSD WG764014	424068	4.27	768997	4.59	124021	5.74	315224	8.10
LCS WG764014	422476	4.27	773987	4.59	122309	5.73	311888	8.10
BLANK WG764014	446368	4.27	792877	4.59	125605	5.74	315301	8.10

Legend:

IS1 -- PENTAFLUOROBENZENE
IS2 -- 1,4-DIFLUOROBENZENE
IS3 -- 2-BROMO-1-CHLOROPROPANE
DCB -- 1,4-DICHLOROBENZENE-D4

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 1:22:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742605-01, -02, -03, -04, -05, -06		

Surrogate Summary

		BFB		DFM		TD8		TFT	
Laboratory									
Sample ID	Instrument File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L742605-01	VOCMS16 0110_50	0.0393	98.3	0.0392	98.0	0.0398	99.6		
L742605-02	VOCMS16 0110_51	0.0403	101	0.0387	96.8	0.0396	99.1		
L742605-03	VOCMS16 0110_52	0.0376	93.9	0.0376	94.0	0.0399	99.8		
L742605-04	VOCMS16 0110_53	0.0390	97.4	0.0389	97.3	0.0395	98.7		
L742605-05	VOCMS16 0110_54	0.0403	101	0.0387	96.7	0.0394	98.6		
L742605-06	VOCMS16 0110_41	0.0394	98.5	0.0390	97.6	0.0395	98.7		
LCS WG764014	VOCMS16 0110_32	0.0411	103	0.0394	98.4	0.0400	100	0.0408	102
LCSD WG764014	VOCMS16 0110_33	0.0404	101	0.0392	98.0	0.0403	101	0.0408	102
BLANK WG764014	VOCMS16 0110_36	0.0389	97.3	0.0392	98.0	0.0396	99.1	0.0406	101
MS WG764014	VOCMS16 0110_37	0.0407	102	0.0391	97.7	0.0406	101	0.0410	103
MSD WG764014	VOCMS16 0110_38	0.0395	98.8	0.0391	97.8	0.0403	101	0.0413	103

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 80.1 - 120

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 79 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 90 - 115

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Diesel Range Organics by Method 8015			Matrix:	Water - mg/L
Project No:	TX000836.0008.00004			EPA ID:	TN00003
Project:	Navajo Refining Company - Artesia, NM			Analytic Batch:	WG764078
Collection Date:	1/7/2015			Analyst:	546
Analysis Date:	1/12/2015 10:07:00 PM			Prep Date:	1/10/2015
Instrument ID:	SVGC31				
Sample Numbers:	L742605-01, -02, -03, -04, -05				

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
C10-C28 Diesel Range		< 0.100	< 0.0222	
C28-C40 Oil Range		< 0.100	< 0.0118	
Extractable Petroleum Hydrocarbon		< 0.100	< 0.0330	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.5202	101	70 - 130	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.5195	101	70 - 130	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.5202	101	1.5195	101	70 - 130	0.04	20		

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Diesel Range Organics by Method 8015		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764078
Analysis Date:	1/12/2015 10:07:00 PM	Analyst:	546
Instrument ID:	SVGC31	Prep Date:	1/10/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Surrogate Summary

o-Terphenyl

Laboratory

Sample ID	Instrument	File ID	ppm	% Rec
L742605-01	SVGC31	0112_35	0.0189	94.4
L742605-02	SVGC31	0112_36	0.0190	95.0
L742605-03	SVGC31	0112_37	0.0197	98.5
L742605-04	SVGC31	0112_38	0.0195	97.4
L742605-05	SVGC31	0112_39	0.0194	96.8
BLANK WG764078	SVGC31	0112_05	0.0193	96.6
LCS WG764078	SVGC31	0112_06	0.0197	98.3
LCSD WG764078	SVGC31	0112_07	0.0197	98.4

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764482
Analysis Date:	1/14/2015 5:39:00 PM	Analyst:	377
Instrument ID:	BNAMS19	Prep Date:	1/13/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
1-Methylnaphthalene	90-12-0	< 1.00	< 0.330	
2-Methylnaphthalene	91-57-6	< 1.00	< 0.311	
Benzo(a)pyrene	50-32-8	< 1.00	< 0.340	
Naphthalene	91-20-3	< 1.00	< 0.372	

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764482
Analysis Date:	1/14/2015 5:39:00 PM	Analyst:	377
Instrument ID:	BNAMS19	Prep Date:	1/13/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1-Methylnaphthalene	1	25	18.765	75.1	34.7 - 102	
2-Methylnaphthalene	1	25	16.375	65.5	33.8 - 98.6	
Benzo(a)pyrene	1	25	19.329	77.3	45.6 - 106	
Naphthalene	1	25	16.416	65.7	32.2 - 101	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1-Methylnaphthalene	1	25	18.906	75.6	34.7 - 102	
2-Methylnaphthalene	1	25	16.726	66.9	33.8 - 98.6	
Benzo(a)pyrene	1	25	20.043	80.2	45.6 - 106	
Naphthalene	1	25	16.424	65.7	32.2 - 101	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	Control RPD Limits	Qual
1-Methylnaphthalene	1	25	18.765	75.1	18.906	75.6	34.7 - 102	0.75	24.9		
2-Methylnaphthalene	1	25	16.375	65.5	16.726	66.9	33.8 - 98.6	2.12	24.2		
Benzo(a)pyrene	1	25	19.329	77.3	20.043	80.2	45.6 - 106	3.63	20		
Naphthalene	1	25	16.416	65.7	16.424	65.7	32.2 - 101	0.05	23.8		

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764482
Analysis Date:	1/14/2015 5:39:00 PM	Analyst:	377
Instrument ID:	BNAMS19	Prep Date:	1/13/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Internal Standard Response and Retention Time Summary

File ID: 0114_02
Analyzed: 01/14/15 120000

	DCB		NAP		ACE		PHEN	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	238153	5.50	919815	6.79	628306	8.68	1115948	10.32
Upper Limit	476000	6.00	1840000	7.29	1260000	9.18	2230000	10.82
Lower Limit	119000	5.00	460000	6.29	314000	8.18	558000	9.82
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L742605-01	275680	5.50	1092662	6.79	735932	8.68	1318329	10.31
L742605-02	265841	5.50	1055089	6.79	705071	8.68	1287077	10.31
L742605-03	275848	5.50	1068404	6.79	710993	8.68	1288044	10.31
L742605-04	276135	5.50	1072594	6.79	703430	8.68	1283545	10.31
L742605-05	274185	5.50	1082485	6.79	732872	8.68	1341032	10.31
LCSD WG764482	267229	5.50	1049276	6.79	720106	8.68	1281632	10.32
LCS WG764482	260590	5.50	1011391	6.79	684550	8.68	1227735	10.32
BLANK WG764482	265056	5.50	1061410	6.79	699510	8.68	1255040	10.31

Legend:

DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764482
Analysis Date:	1/14/2015 5:39:00 PM	Analyst:	377
Instrument ID:	BNAMS19	Prep Date:	1/13/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Internal Standard Response and Retention Time Summary

File ID: 0114_02
Analyzed: 01/14/15 120000

	DCB		CHR		PER	
	Response	RT	Response	RT	Response	RT
12 Hr. Std	238153	5.50	1244752	13.23	1192936	15.17
Upper Limit	476000	6.00	2490000	13.73	2390000	15.67
Lower Limit	119000	5.00	622000	12.73	596000	14.67
Sample ID	Response	RT	Response	RT	Response	RT
L742605-01	275680	5.50	1463815	13.22	1455007	15.17
L742605-02	265841	5.50	1410329	13.22	1437822	15.17
L742605-03	275848	5.50	1418059	13.22	1442859	15.17
L742605-04	276135	5.50	1394671	13.22	1393724	15.17
L742605-05	274185	5.50	1483139	13.22	1485885	15.17
LCSD WG764482	267229	5.50	1438019	13.22	1413327	15.17
LCS WG764482	260590	5.50	1377009	13.23	1357349	15.17
BLANK WG764482	265056	5.50	1379785	13.22	1366189	15.17

Legend:

DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764482
Analysis Date:	1/14/2015 5:39:00 PM	Analyst:	377
Instrument ID:	BNAMS19	Prep Date:	1/13/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Surrogate Summary

		TBP			FBP		2FP		NBZ	
Laboratory										
Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L742605-01	BNAMS19	0114_16	0.0143	71.3	0.00660	66.0	0.00996	49.8	0.00568	56.8
L742605-02	BNAMS19	0114_17	0.0138	69.1	0.00734	73.4	0.00755	37.8	0.00608	60.8
L742605-03	BNAMS19	0114_18	0.0129	64.7	0.00659	65.9	0.00465	23.3	0.00549	54.9
L742605-04	BNAMS19	0114_19	0.0127	63.7	0.00611	61.1	0.00936	46.8	0.00529	52.9
L742605-05	BNAMS19	0114_20	0.0126	62.8	0.00662	66.2	0.00990	49.5	0.00572	57.2
LCS WG764482	BNAMS19	0114_04-3	0.0144	72.1	0.00695	69.5	0.00970	48.5	0.00582	58.2
LCSD WG764482	BNAMS19	0114_05-3	0.0146	72.8	0.00632	63.2	0.00954	47.7	0.00575	57.5
BLANK WG764482	BNAMS19	0114_06-3	0.0120	59.8	0.00599	59.9	0.00971	48.6	0.00512	51.2

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



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Quality Control Summary

SDG: L742605

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/7/2015	Analytic Batch:	WG764482
Analysis Date:	1/14/2015 5:39:00 PM	Analyst:	377
Instrument ID:	BNAMS19	Prep Date:	1/13/2015
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Surrogate Summary

		TPH		PHL	
Laboratory					
Sample ID	Instrument File ID	ppm	% Rec	ppm	% Rec
L742605-01	BNAMS19 0114_16	0.00653	65.3	0.00720	36.0
L742605-02	BNAMS19 0114_17	0.00684	68.4	0.00536	26.8
L742605-03	BNAMS19 0114_18	0.00612	61.2	0.00289	14.4
L742605-04	BNAMS19 0114_19	0.00626	62.6	0.00700	35.0
L742605-05	BNAMS19 0114_20	0.00588	58.8	0.00707	35.3
LCS WG764482	BNAMS19 0114_04-3	0.00606	60.6	0.00744	37.2
LCSD WG764482	BNAMS19 0114_05-3	0.00635	63.5	0.00731	36.5
BLANK WG764482	BNAMS19 0114_06-3	0.00594	59.4	0.00706	35.3

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1

CHAIN OF CUSTODY LABORATORY
ANALYSIS REQUEST FORM

Lab Work Order #

D092

Send Results to:	Contact & Company Name:	Telephone:		PARAMETER ANALYSIS & METHOD 9015 - DRO 8015 - GRO 6020 - Field Filtered Metals 6020 - Total Metals 9014 - Cyanide 353.2 - Anions (Cl, F, SO ₄ , NO ₂ , NO ₃) 2540 - Total Dissolved Solids 8260 - VOCs (List 2) 8270 - SVOCs (List 3) 903.1 - Radium 226/Radium 228 Preservation Key: A. H ₂ SO ₄ B. HCL C. HNO ₃ D. NaOH E. None F. G. H. Container Information Key: 1. 40 mL Vial 2. 1 L Amber 3. 250 mL Plastic 4. 500 mL Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. 125 mL Plastic 10. 4 oz. Amber Matrix Key: SO- Soil W- Water T- Tissue SE- Sediment SL- Sludge A- Air NL- NAPL/Oil SW- Sample Wipe													
	ARCADIS US - TX	(713) 953-4800															
	Address:	Billing Information:															
	2929 Briarpark Dr. Suite 300	Attn: Accounts Payable 630 Plaza Drive, Suite 600 Highlands Ranch, CO 80129															
City	State	Zip	E-mail to:														
Houston	TX	77042	maisha.turner@arcadis-us.com, melissa.osborne@arcadis-us.com, pam.krueger@arcadis-us.com														
Project Name/Location (City, State):			Client Project #:	Lab Project #:													
Background Groundwater, Artesia, NM			TX000836.0008	ARCADHTX-NAVAJO													
Sampler's Printed Name:			Sampler's Signature:														
Ron Wood																	
Sample ID	Collection	Type	Matrix	No. of Cntrs													
	Date	Time	Comp	Grab													
MW-13-0115-BG	1/7/15	0900		X	GW	17	X	X	X	X	X	X	X	X	X	X	
MW-12-0115-BG		1000		X	GW	17											
MW-25-0115-BG		1140		X	GW	17											
MW-17-0115-BG		1320		X	GW	17											
EB-19-0115-BG		1430		X	GW	17											
Trip Blank					GW	1											
					GW												
					GW												
					GW												
					GW												
					GW												
					GW												
					GW												
					GW												
Special Instructions/Comments:																	
☐ Special QA/QC Instructions (✓)																	
Laboratory Information and Receipt																	
Lab Name:	Cooler Custody Seal (✓)		Relinquished By		Received By		Relinquished By		Laboratory Received By								
			Printed Name:		Printed Name:		Printed Name:		Printed Name:								
			Signature:		Signature:		Signature:		Signature:								
			Firm:		Firm:		Firm:		Firm:								
			ARCADIS		ARCADIS		ARCADIS		ARCADIS								
			Date/Time:		Date/Time:		Date/Time:		Date/Time:								
			1/7/15 1545		1/7/15 1545		1/7/15 1545		1/7/15 1545								
			09W		09W		09W		09W								
			86=Total		86=Total		86=Total		86=Total								
			1/7/15 0900		1/7/15 0900		1/7/15 0900		1/7/15 0900								
			6200 8048 3687		6200 8048 3687		6200 8048 3687		6200 8048 3687								
			6200 8048 3698		6200 8048 3698		6200 8048 3698		6200 8048 3698								

6200 8048 3687
6200 8048 3698



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Tax I.D. 62-0814289

Est. 1970

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Report Summary

Monday March 09, 2015

Report Number: L742608

Samples Received: 01/09/15

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/B10041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

March 09,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 09:00

ESC Sample # : L742608-01

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/23/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/23/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 03/09/15 16:03 Printed: 03/09/15 16:04

L742608-01 (RA228) - subcontracted to Environmental Health Labs

L742608-01 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 09,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-12-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 10:00

ESC Sample # : L742608-02

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/23/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/23/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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L742608-02 (RA228) - subcontracted to Environmental Health Labs

L742608-02 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 09,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 11:40

ESC Sample # : L742608-03

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/23/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/23/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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L742608-03 (RA228) - subcontracted to Environmental Health Labs

L742608-03 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 09,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 13:20

ESC Sample # : L742608-04

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/23/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/23/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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L742608-04 (RA228) - subcontracted to Environmental Health Labs

L742608-04 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 09,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-19-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 14:30

ESC Sample # : L742608-05

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/23/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/23/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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Reported: 03/09/15 16:03 Printed: 03/09/15 16:04

L742608-05 (RA228) - subcontracted to Environmental Health Labs

L742608-05 (RA226) - subcontracted to Environmental Health Labs



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Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Report Summary

Tuesday August 11, 2015

Report Number: L742615

Samples Received: 01/09/15

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Pam Langford , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BI0041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-01

Sample ID : NP-5-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/05/15 15:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	400000	5200	100000	ug/l		9056MOD	01/16/15	100
Fluoride	1800	9.9	100	ug/l		9056MOD	01/16/15	1
Sulfate	4200000	7700	500000	ug/l		9056MOD	01/16/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	1300	20.	100	ug/l		353.2	01/14/15	1
Dissolved Solids	5300000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	28.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	33.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	3.4	0.25	2.0	ug/l		6020	01/12/15	1
Arsenic, Dissolved	3.6	0.25	2.0	ug/l		6020	01/12/15	1
Barium	8.1	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	8.0	0.36	5.0	ug/l		6020	01/12/15	1
Boron	1900	15.	200	ug/l		6020	01/15/15	10
Boron, Dissolved	2100	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	580000	460	10000	ug/l		6020	01/14/15	10
Calcium, Dissolved	560000	460	10000	ug/l		6020	01/14/15	10
Chromium	0.90	0.54	1.0	ug/l	JB	6020	01/12/15	1
Chromium, Dissolved	1.3	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	1.1	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	2.0	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/12/15	1
Iron	17.	15.	100	ug/l	J	6020	01/12/15	1
Iron, Dissolved	56.	15.	100	ug/l	J	6020	01/12/15	1
Lead	U	0.24	2.0	ug/l		6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	0.40	0.25	5.0	ug/l	J	6020	01/12/15	1
Manganese, Dissolved	0.49	0.25	5.0	ug/l	J	6020	01/12/15	1
Molybdenum	33.	0.14	5.0	ug/l		6020	01/12/15	1
Molybdenum, Dissolved	34.	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	1.1	0.35	2.0	ug/l	J	6020	01/12/15	1
Nickel, Dissolved	1.3	0.35	2.0	ug/l	J	6020	01/12/15	1
Potassium	310	37.	1000	ug/l	J	6020	01/14/15	1
Potassium, Dissolved	360	37.	1000	ug/l	J	6020	01/13/15	1
Selenium	10.	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	11.	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

Note:

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-01

Sample ID : NP-5-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/05/15 15:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	280000	1100	10000	ug/l		6020	01/14/15	10
Sodium, Dissolved	250000	550	5000	ug/l		6020	01/14/15	5
Uranium	200	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	200	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	18.	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	19.	0.18	5.0	ug/l		6020	01/12/15	1
Zinc	U	2.6	25.	ug/l		6020	01/12/15	1
Zinc, Dissolved	23.	2.6	25.	ug/l	J	6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	01/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/11/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/11/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/11/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/11/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/11/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/11/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/11/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/11/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/11/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/11/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/11/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/11/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/11/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/11/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/11/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/11/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/11/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/11/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/11/15	1
Surrogate Recovery								
Toluene-d8	98.9			% Rec.		8260B	01/11/15	1
Dibromofluoromethane	96.1			% Rec.		8260B	01/11/15	1
4-Bromofluorobenzene	100.			% Rec.		8260B	01/11/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	01/12/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-0115-BG
Collected By : Ron Wood
Collection Date : 01/05/15 15:00

ESC Sample # : L742615-01
Site ID : BACKGROUND
Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	23.	12.	100	ug/l	J	8015	01/12/15	1
Surrogate Recovery								
o-Terphenyl	98.8			% Rec.		8015	01/12/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	43.8			% Rec.		8270C	01/12/15	1
Phenol-d5	31.3			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	59.1			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	70.9			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	97.2			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	56.8			% Rec.		8270C	01/12/15	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL
MDL = Minimum Detection Limit = LOD = TRRP SDL
Note:
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-02

Sample ID : EB-17-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/05/15 16:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	U	52.	1000	ug/l		9056MOD	01/16/15	1
Fluoride	U	9.9	100	ug/l		9056MOD	01/16/15	1
Sulfate	1000	77.	5000	ug/l	J	9056MOD	01/16/15	1
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	01/14/15	1
Dissolved Solids	U	2800	10000	ug/l	T4	2540 C-	01/14/15	1
Aluminum	12.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	14.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	U	0.25	2.0	ug/l		6020	01/12/15	1
Arsenic, Dissolved	U	0.25	2.0	ug/l		6020	01/12/15	1
Barium	U	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	1.7	0.36	5.0	ug/l	J	6020	01/12/15	1
Boron	100	15.	200	ug/l	J	6020	01/15/15	10
Boron, Dissolved	66.	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	140	46.	1000	ug/l	J	6020	01/14/15	1
Calcium, Dissolved	250	46.	1000	ug/l	J	6020	01/13/15	1
Chromium	0.57	0.54	1.0	ug/l	JB	6020	01/12/15	1
Chromium, Dissolved	0.64	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	1.0	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	1.2	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/12/15	1
Iron	U	15.	100	ug/l		6020	01/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/12/15	1
Lead	U	0.24	2.0	ug/l		6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	U	0.25	5.0	ug/l		6020	01/12/15	1
Manganese, Dissolved	U	0.25	5.0	ug/l		6020	01/12/15	1
Molybdenum	U	0.14	5.0	ug/l		6020	01/12/15	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	U	0.35	2.0	ug/l		6020	01/12/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	01/12/15	1
Potassium	U	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	01/13/15	1
Selenium	U	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	U	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-02

Sample ID : EB-17-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/05/15 16:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	1600	110	1000	ug/l		6020	01/14/15	1
Sodium, Dissolved	1300	110	1000	ug/l		6020	01/13/15	1
Uranium	U	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	U	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	U	0.18	5.0	ug/l		6020	01/12/15	1
Zinc	U	2.6	25.	ug/l		6020	01/12/15	1
Zinc, Dissolved	20.	2.6	25.	ug/l	J	6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.2			% Rec.		8015D/G	01/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/11/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/11/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/11/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/11/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/11/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/11/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/11/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/11/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/11/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/11/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/11/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/11/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/11/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/11/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/11/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/11/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/11/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/11/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/11/15	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	01/11/15	1
Dibromofluoromethane	96.7			% Rec.		8260B	01/11/15	1
4-Bromofluorobenzene	97.2			% Rec.		8260B	01/11/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	01/12/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-17-0115-BG
Collected By : Ron Wood
Collection Date : 01/05/15 16:30

ESC Sample # : L742615-02

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	U	12.	100	ug/l		8015	01/12/15	1
Surrogate Recovery								
o-Terphenyl	97.4			% Rec.		8015	01/12/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	39.1			% Rec.		8270C	01/12/15	1
Phenol-d5	24.3			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	61.4			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	78.5			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	78.5			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	67.9			% Rec.		8270C	01/12/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

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ARCADIS US - TX
2929 Briarpark Dr., Suite 300
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August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-03

Sample ID : MW-55-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 09:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	250000	5200	100000	ug/l		9056MOD	01/16/15	100
Fluoride	1500	9.9	100	ug/l		9056MOD	01/16/15	1
Sulfate	3000000	7700	500000	ug/l		9056MOD	01/16/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	9300	20.	100	ug/l		353.2	01/14/15	1
Dissolved Solids	4300000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	30.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	21.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	4.4	0.25	2.0	ug/l		6020	01/12/15	1
Arsenic, Dissolved	4.8	0.25	2.0	ug/l		6020	01/12/15	1
Barium	10.	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	10.	0.36	5.0	ug/l		6020	01/12/15	1
Boron	1200	15.	200	ug/l		6020	01/14/15	10
Boron, Dissolved	1100	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	650000	460	10000	ug/l		6020	01/14/15	10
Calcium, Dissolved	570000	460	10000	ug/l		6020	01/14/15	10
Chromium	1.7	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	2.2	0.54	2.0	ug/l	B	6020	01/12/15	1
Copper	1.6	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	1.7	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	0.50	0.26	2.0	ug/l	J	6020	01/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/12/15	1
Iron	18.	15.	100	ug/l	J	6020	01/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/12/15	1
Lead	U	0.24	2.0	ug/l		6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	70.	0.25	5.0	ug/l		6020	01/12/15	1
Manganese, Dissolved	13.	0.25	5.0	ug/l		6020	01/12/15	1
Molybdenum	20.	0.14	5.0	ug/l		6020	01/12/15	1
Molybdenum, Dissolved	21.	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	2.2	0.35	2.0	ug/l		6020	01/12/15	1
Nickel, Dissolved	1.7	0.35	2.0	ug/l	J	6020	01/12/15	1
Potassium	850	37.	1000	ug/l	J	6020	01/14/15	1
Potassium, Dissolved	820	37.	1000	ug/l	J	6020	01/13/15	1
Selenium	18.	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	20.	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-03

Sample ID : MW-55-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 09:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	200000	1100	10000	ug/l		6020	01/14/15	10
Sodium, Dissolved	180000	550	5000	ug/l		6020	01/14/15	5
Uranium	42.	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	42.	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	15.	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	16.	0.18	5.0	ug/l		6020	01/12/15	1
Zinc	U	2.6	25.	ug/l		6020	01/12/15	1
Zinc, Dissolved	24.	2.6	25.	ug/l	J	6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/14/15	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	102.			% Rec.		8015D/G	01/14/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/12/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/12/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/12/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/12/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/12/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/12/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/12/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/12/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/12/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/12/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/12/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/12/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/12/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/12/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/12/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	01/12/15	1
Dibromofluoromethane	101.			% Rec.		8260B	01/12/15	1
4-Bromofluorobenzene	100.			% Rec.		8260B	01/12/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	92.	22.	100	ug/l	J	8015	01/13/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 09:15

ESC Sample # : L742615-03

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	74.	12.	100	ug/l	J	8015	01/13/15	1
Surrogate Recovery								
o-Terphenyl	96.0			% Rec.		8015	01/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	41.4			% Rec.		8270C	01/12/15	1
Phenol-d5	30.8			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	67.6			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	82.2			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	77.9			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	62.3			% Rec.		8270C	01/12/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-04

Sample ID : UG-2-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 10:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	87000	52.	1000	ug/l		9056MOD	01/16/15	1
Fluoride	1400	9.9	100	ug/l		9056MOD	01/16/15	1
Sulfate	1300000	7700	500000	ug/l		9056MOD	01/16/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	6800	20.	100	ug/l		353.2	01/14/15	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	27.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	15.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	2.1	0.25	2.0	ug/l		6020	01/12/15	1
Arsenic, Dissolved	2.1	0.25	2.0	ug/l		6020	01/12/15	1
Barium	16.	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	15.	0.36	5.0	ug/l		6020	01/12/15	1
Boron	360	7.5	100	ug/l		6020	01/14/15	5
Boron, Dissolved	360	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	360000	230	5000	ug/l		6020	01/14/15	5
Calcium, Dissolved	390000	230	5000	ug/l		6020	01/14/15	5
Chromium	0.67	0.54	1.0	ug/l	JB	6020	01/12/15	1
Chromium, Dissolved	1.1	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	1.7	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	2.0	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	0.71	0.26	2.0	ug/l	J	6020	01/12/15	1
Cobalt, Dissolved	0.54	0.26	2.0	ug/l	J	6020	01/12/15	1
Iron	24.	15.	100	ug/l	J	6020	01/12/15	1
Iron, Dissolved	47.	15.	100	ug/l	J	6020	01/12/15	1
Lead	0.25	0.24	2.0	ug/l	J	6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	110	0.25	5.0	ug/l		6020	01/12/15	1
Manganese, Dissolved	97.	0.25	5.0	ug/l		6020	01/12/15	1
Molybdenum	6.9	0.14	5.0	ug/l		6020	01/12/15	1
Molybdenum, Dissolved	7.1	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	7.6	0.35	2.0	ug/l		6020	01/12/15	1
Nickel, Dissolved	7.8	0.35	2.0	ug/l		6020	01/12/15	1
Potassium	1700	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	1700	37.	1000	ug/l		6020	01/13/15	1
Selenium	3.3	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	3.2	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

U = ND (Not Detected)

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Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 10:45

ESC Sample # : L742615-04

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	95000	110	1000	ug/l		6020	01/14/15	1
Sodium, Dissolved	93000	110	1000	ug/l		6020	01/13/15	1
Uranium	14.	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	14.	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	13.	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	13.	0.18	5.0	ug/l		6020	01/12/15	1
Zinc	5.9	2.6	25.	ug/l	J	6020	01/12/15	1
Zinc, Dissolved	28.	2.6	25.	ug/l		6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.1			% Rec.		8015D/G	01/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/12/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/12/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/12/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/12/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/12/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/12/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/12/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/12/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/12/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/12/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/12/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/12/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/12/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/12/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/12/15	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	01/12/15	1
Dibromofluoromethane	102.			% Rec.		8260B	01/12/15	1
4-Bromofluorobenzene	99.4			% Rec.		8260B	01/12/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	01/13/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 10:45

ESC Sample # : L742615-04

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	U	12.	100	ug/l		8015	01/13/15	1
Surrogate Recovery								
o-Terphenyl	96.1			% Rec.		8015	01/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	32.6			% Rec.		8270C	01/12/15	1
Phenol-d5	24.5			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	57.3			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	68.7			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	84.1			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	64.2			% Rec.		8270C	01/12/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-05

Sample ID : UG-4-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 12:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	50000	52.	1000	ug/l		9056MOD	01/16/15	1
Fluoride	500	9.9	100	ug/l		9056MOD	01/16/15	1
Sulfate	3400000	7700	500000	ug/l		9056MOD	01/16/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	460	20.	100	ug/l		353.2	01/14/15	1
Dissolved Solids	4000000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	350	2.0	100	ug/l		6020	01/14/15	1
Aluminum, Dissolved	18.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	0.88	0.25	2.0	ug/l	J	6020	01/12/15	1
Arsenic, Dissolved	0.83	0.25	2.0	ug/l	J	6020	01/12/15	1
Barium	27.	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	25.	0.36	5.0	ug/l		6020	01/12/15	1
Boron	1100	7.5	100	ug/l		6020	01/14/15	5
Boron, Dissolved	1200	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	600000	460	10000	ug/l		6020	01/14/15	10
Calcium, Dissolved	650000	460	10000	ug/l		6020	01/14/15	10
Chromium	1.4	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	1.4	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	2.6	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	1.6	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	0.44	0.26	2.0	ug/l	J	6020	01/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/12/15	1
Iron	170	15.	100	ug/l		6020	01/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/12/15	1
Lead	0.65	0.24	2.0	ug/l	J	6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	81.	0.25	5.0	ug/l		6020	01/12/15	1
Manganese, Dissolved	70.	0.25	5.0	ug/l		6020	01/12/15	1
Molybdenum	4.4	0.14	5.0	ug/l	J	6020	01/12/15	1
Molybdenum, Dissolved	5.1	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	2.2	0.35	2.0	ug/l		6020	01/12/15	1
Nickel, Dissolved	2.1	0.35	2.0	ug/l		6020	01/12/15	1
Potassium	2700	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	2600	37.	1000	ug/l		6020	01/13/15	1
Selenium	5.9	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	6.5	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-05

Sample ID : UG-4-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 12:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	250000	550	5000	ug/l		6020	01/14/15	5
Sodium, Dissolved	250000	550	5000	ug/l		6020	01/14/15	5
Uranium	35.	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	36.	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	5.4	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	5.0	0.18	5.0	ug/l		6020	01/12/15	1
Zinc	9.1	2.6	25.	ug/l	J	6020	01/12/15	1
Zinc, Dissolved	32.	2.6	25.	ug/l		6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	99.0			% Rec.		8015D/G	01/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/12/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/12/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/12/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/12/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/12/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/12/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/12/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/12/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/12/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/12/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/12/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/12/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/12/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/12/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/12/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	01/12/15	1
Dibromofluoromethane	101.			% Rec.		8260B	01/12/15	1
4-Bromofluorobenzene	97.8			% Rec.		8260B	01/12/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	01/13/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 12:20

ESC Sample # : L742615-05

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	13.	12.	100	ug/l	J	8015	01/13/15	1
Surrogate Recovery								
o-Terphenyl	93.7			% Rec.		8015	01/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	20.6			% Rec.		8270C	01/12/15	1
Phenol-d5	15.3			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	62.0			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	76.8			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	71.7			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	73.0			% Rec.		8270C	01/12/15	1

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-06

Sample ID : MW-136-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 13:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	250000	5200	100000	ug/l		9056MOD	01/16/15	100
Fluoride	1300	9.9	100	ug/l		9056MOD	01/16/15	1
Sulfate	2900000	7700	500000	ug/l		9056MOD	01/16/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	660	20.	100	ug/l		353.2	01/14/15	1
Dissolved Solids	4100000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	340	2.0	100	ug/l		6020	01/14/15	1
Aluminum, Dissolved	46.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	2.4	0.25	2.0	ug/l		6020	01/12/15	1
Arsenic, Dissolved	2.6	0.25	2.0	ug/l		6020	01/12/15	1
Barium	12.	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	11.	0.36	5.0	ug/l		6020	01/12/15	1
Boron	800	15.	200	ug/l		6020	01/14/15	10
Boron, Dissolved	660	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	780000	460	10000	ug/l		6020	01/14/15	10
Calcium, Dissolved	710000	460	10000	ug/l		6020	01/14/15	10
Chromium	1.6	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	1.3	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	2.0	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	2.0	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	1.0	0.26	2.0	ug/l	J	6020	01/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/12/15	1
Iron	180	15.	100	ug/l		6020	01/12/15	1
Iron, Dissolved	54.	15.	100	ug/l	J	6020	01/12/15	1
Lead	0.61	0.24	2.0	ug/l	J	6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	43.	0.25	5.0	ug/l		6020	01/12/15	1
Manganese, Dissolved	10.	0.25	5.0	ug/l		6020	01/12/15	1
Molybdenum	5.9	0.14	5.0	ug/l		6020	01/12/15	1
Molybdenum, Dissolved	6.3	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	1.3	0.35	2.0	ug/l	J	6020	01/12/15	1
Nickel, Dissolved	1.2	0.35	2.0	ug/l	J	6020	01/12/15	1
Potassium	2800	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	2800	37.	1000	ug/l		6020	01/13/15	1
Selenium	3.8	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	6.0	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-06

Sample ID : MW-136-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 13:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	120000	1100	10000	ug/l		6020	01/14/15	10
Sodium, Dissolved	100000	110	1000	ug/l		6020	01/13/15	1
Uranium	78.	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	77.	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	18.	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	17.	0.18	5.0	ug/l		6020	01/12/15	1
Zinc	4.9	2.6	25.	ug/l	J	6020	01/12/15	1
Zinc, Dissolved	24.	2.6	25.	ug/l	J	6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	01/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/12/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/12/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/12/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/12/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/12/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/12/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/12/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/12/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/12/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/12/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/12/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/12/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/12/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/12/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/12/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	01/12/15	1
Dibromofluoromethane	102.			% Rec.		8260B	01/12/15	1
4-Bromofluorobenzene	98.7			% Rec.		8260B	01/12/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	01/13/15	1

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-136-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 13:50

ESC Sample # : L742615-06

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	U	12.	100	ug/l		8015	01/13/15	1
Surrogate Recovery								
o-Terphenyl	94.9			% Rec.		8015	01/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	30.9			% Rec.		8270C	01/12/15	1
Phenol-d5	25.0			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	55.9			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	81.9			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	88.7			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	65.7			% Rec.		8270C	01/12/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-07

Sample ID : UG-3R-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 15:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	24000	52.	1000	ug/l		9056MOD	01/16/15	1
Fluoride	560	9.9	100	ug/l		9056MOD	01/16/15	1
Sulfate	1800000	7700	500000	ug/l		9056MOD	01/16/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	1000	20.	100	ug/l		353.2	01/14/15	1
Dissolved Solids	2200000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	90.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	61.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	1.4	0.25	2.0	ug/l	J	6020	01/12/15	1
Arsenic, Dissolved	1.6	0.25	2.0	ug/l	J	6020	01/12/15	1
Barium	18.	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	18.	0.36	5.0	ug/l		6020	01/12/15	1
Boron	380	15.	200	ug/l		6020	01/14/15	10
Boron, Dissolved	250	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	470000	460	10000	ug/l		6020	01/14/15	10
Calcium, Dissolved	810000	460	10000	ug/l		6020	01/14/15	10
Chromium	1.2	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	1.4	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	1.4	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	1.2	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/12/15	1
Iron	44.	15.	100	ug/l	J	6020	01/12/15	1
Iron, Dissolved	33.	15.	100	ug/l	J	6020	01/12/15	1
Lead	0.25	0.24	2.0	ug/l	J	6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	2.4	0.25	5.0	ug/l	J	6020	01/12/15	1
Manganese, Dissolved	1.5	0.25	5.0	ug/l	J	6020	01/12/15	1
Molybdenum	3.6	0.14	5.0	ug/l	J	6020	01/12/15	1
Molybdenum, Dissolved	3.6	0.14	5.0	ug/l	J	6020	01/12/15	1
Nickel	0.91	0.35	2.0	ug/l	J	6020	01/12/15	1
Nickel, Dissolved	0.92	0.35	2.0	ug/l	J	6020	01/12/15	1
Potassium	1700	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	1600	37.	1000	ug/l		6020	01/13/15	1
Selenium	3.4	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	3.7	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-07

Sample ID : UG-3R-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 15:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	64000	110	1000	ug/l		6020	01/14/15	1
Sodium, Dissolved	60000	110	1000	ug/l		6020	01/13/15	1
Uranium	11.	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	11.	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	8.8	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	8.8	0.18	5.0	ug/l		6020	01/12/15	1
Zinc	U	2.6	25.	ug/l		6020	01/12/15	1
Zinc, Dissolved	26.	2.6	25.	ug/l		6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.0			% Rec.		8015D/G	01/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/12/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/12/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/12/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/12/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/12/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/12/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/12/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/12/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/12/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/12/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/12/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/12/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/12/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/12/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/12/15	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	01/12/15	1
Dibromofluoromethane	99.9			% Rec.		8260B	01/12/15	1
4-Bromofluorobenzene	98.1			% Rec.		8260B	01/12/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	01/13/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 15:40

ESC Sample # : L742615-07
Site ID : BACKGROUND
Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	U	12.	100	ug/l		8015	01/13/15	1
Surrogate Recovery								
o-Terphenyl	96.0			% Rec.		8015	01/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	49.5			% Rec.		8270C	01/12/15	1
Phenol-d5	31.7			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	59.5			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	72.0			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	103.			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	58.9			% Rec.		8270C	01/12/15	1

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-08

Sample ID : UG-1-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 16:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	96000	52.	1000	ug/l		9056MOD	01/16/15	1
Fluoride	680	9.9	100	ug/l		9056MOD	01/16/15	1
Sulfate	1900000	7700	500000	ug/l		9056MOD	01/16/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	14000	99.	500	ug/l		353.2	01/14/15	5
Dissolved Solids	3000000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	60.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	16.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	1.2	0.25	2.0	ug/l	J	6020	01/12/15	1
Arsenic, Dissolved	1.2	0.25	2.0	ug/l	J	6020	01/12/15	1
Barium	14.	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	14.	0.36	5.0	ug/l		6020	01/12/15	1
Boron	650	15.	200	ug/l		6020	01/14/15	10
Boron, Dissolved	550	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	540000	460	10000	ug/l		6020	01/14/15	10
Calcium, Dissolved	500000	460	10000	ug/l		6020	01/14/15	10
Chromium	1.4	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	2.0	0.54	2.0	ug/l	B	6020	01/12/15	1
Copper	2.3	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	2.1	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/12/15	1
Iron	23.	15.	100	ug/l	J	6020	01/12/15	1
Iron, Dissolved	45.	15.	100	ug/l	J	6020	01/12/15	1
Lead	0.27	0.24	2.0	ug/l	J	6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	1.4	0.25	5.0	ug/l	J	6020	01/12/15	1
Manganese, Dissolved	0.28	0.25	5.0	ug/l	J	6020	01/12/15	1
Molybdenum	5.3	0.14	5.0	ug/l		6020	01/12/15	1
Molybdenum, Dissolved	5.4	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	1.5	0.35	2.0	ug/l	J	6020	01/12/15	1
Nickel, Dissolved	1.4	0.35	2.0	ug/l	J	6020	01/12/15	1
Potassium	1300	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	1200	37.	1000	ug/l		6020	01/13/15	1
Selenium	8.8	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	8.8	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-08

Sample ID : UG-1-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 16:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	90000	110	1000	ug/l		6020	01/14/15	1
Sodium, Dissolved	88000	110	1000	ug/l		6020	01/13/15	1
Uranium	23.	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	22.	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	11.	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	12.	0.18	5.0	ug/l		6020	01/12/15	1
Zinc	3.9	2.6	25.	ug/l	J	6020	01/12/15	1
Zinc, Dissolved	25.	2.6	25.	ug/l		6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.0			% Rec.		8015D/G	01/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/12/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/12/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/12/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/12/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/12/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/12/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/12/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/12/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/12/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/12/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/12/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/12/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/12/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/12/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/12/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	01/12/15	1
Dibromofluoromethane	103.			% Rec.		8260B	01/12/15	1
4-Bromofluorobenzene	99.5			% Rec.		8260B	01/12/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	01/13/15	1

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 16:40

ESC Sample # : L742615-08

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	U	12.	100	ug/l		8015	01/13/15	1
Surrogate Recovery								
o-Terphenyl	92.1			% Rec.		8015	01/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	45.7			% Rec.		8270C	01/12/15	1
Phenol-d5	28.8			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	65.6			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	79.4			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	91.1			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	73.6			% Rec.		8270C	01/12/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-09

Sample ID : EB-18-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 17:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	U	52.	1000	ug/l		9056MOD	01/16/15	1
Fluoride	U	9.9	100	ug/l		9056MOD	01/16/15	1
Sulfate	U	77.	5000	ug/l		9056MOD	01/16/15	1
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	01/14/15	1
Dissolved Solids	U	2800	10000	ug/l	T4	2540 C-	01/14/15	1
Aluminum	25.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	18.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	U	0.25	2.0	ug/l		6020	01/12/15	1
Arsenic, Dissolved	U	0.25	2.0	ug/l		6020	01/12/15	1
Barium	U	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	2.6	0.36	5.0	ug/l	J	6020	01/12/15	1
Boron	54.	15.	200	ug/l	J	6020	01/15/15	10
Boron, Dissolved	42.	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	140	46.	1000	ug/l	J	6020	01/14/15	1
Calcium, Dissolved	1000	46.	1000	ug/l		6020	01/13/15	1
Chromium	U	0.54	1.0	ug/l		6020	01/12/15	1
Chromium, Dissolved	0.60	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	0.85	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	0.69	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/12/15	1
Iron	U	15.	100	ug/l		6020	01/12/15	1
Iron, Dissolved	18.	15.	100	ug/l	J	6020	01/12/15	1
Lead	U	0.24	2.0	ug/l		6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	0.96	0.25	5.0	ug/l	J	6020	01/12/15	1
Manganese, Dissolved	0.33	0.25	5.0	ug/l	J	6020	01/12/15	1
Molybdenum	U	0.14	5.0	ug/l		6020	01/12/15	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	U	0.35	2.0	ug/l		6020	01/12/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	01/12/15	1
Potassium	U	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	01/13/15	1
Selenium	U	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	U	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-09

Sample ID : EB-18-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/06/15 17:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	780	110	1000	ug/l	J	6020	01/14/15	1
Sodium, Dissolved	2100	110	1000	ug/l		6020	01/13/15	1
Uranium	U	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	U	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	U	0.18	5.0	ug/l		6020	01/12/15	1
Zinc	U	2.6	25.	ug/l		6020	01/12/15	1
Zinc, Dissolved	29.	2.6	25.	ug/l		6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.3			% Rec.		8015D/G	01/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/12/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/12/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/12/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/12/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/12/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/12/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/12/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/12/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/12/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/12/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/12/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/12/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/12/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/12/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/12/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/12/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/12/15	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	01/12/15	1
Dibromofluoromethane	101.			% Rec.		8260B	01/12/15	1
4-Bromofluorobenzene	99.5			% Rec.		8260B	01/12/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	01/13/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-18-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 17:20

ESC Sample # : L742615-09
Site ID : BACKGROUND
Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	U	12.	100	ug/l		8015	01/13/15	1
Surrogate Recovery								
o-Terphenyl	95.8			% Rec.		8015	01/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	35.2			% Rec.		8270C	01/12/15	1
Phenol-d5	25.4			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	44.9			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	53.5			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	83.4			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	52.5			% Rec.		8270C	01/12/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-10

Sample ID : DUP-07-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/05/15 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	51000	52.	1000	ug/l		9056MOD	01/21/15	1
Fluoride	700	9.9	100	ug/l		9056MOD	01/21/15	1
Sulfate	3300000	7700	500000	ug/l		9056MOD	01/16/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	500	20.	100	ug/l		353.2	01/14/15	1
Dissolved Solids	4200000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	940	2.0	100	ug/l		6020	01/14/15	1
Aluminum, Dissolved	37.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	0.93	0.25	2.0	ug/l	J	6020	01/12/15	1
Arsenic, Dissolved	0.83	0.25	2.0	ug/l	J	6020	01/12/15	1
Barium	27.	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	24.	0.36	5.0	ug/l		6020	01/12/15	1
Boron	1300	15.	200	ug/l		6020	01/14/15	10
Boron, Dissolved	1100	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	660000	460	10000	ug/l		6020	01/14/15	10
Calcium, Dissolved	640000	460	10000	ug/l		6020	01/14/15	10
Chromium	1.6	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	1.2	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	2.0	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	2.0	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	0.52	0.26	2.0	ug/l	J	6020	01/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/12/15	1
Iron	580	15.	100	ug/l		6020	01/12/15	1
Iron, Dissolved	18.	15.	100	ug/l	J	6020	01/12/15	1
Lead	0.61	0.24	2.0	ug/l	J	6020	01/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/12/15	1
Manganese	83.	0.25	5.0	ug/l		6020	01/12/15	1
Manganese, Dissolved	69.	0.25	5.0	ug/l		6020	01/12/15	1
Molybdenum	4.7	0.14	5.0	ug/l	J	6020	01/12/15	1
Molybdenum, Dissolved	4.8	0.14	5.0	ug/l	J	6020	01/12/15	1
Nickel	2.4	0.35	2.0	ug/l		6020	01/12/15	1
Nickel, Dissolved	2.3	0.35	2.0	ug/l		6020	01/12/15	1
Potassium	2700	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	2700	37.	1000	ug/l		6020	01/13/15	1
Selenium	6.1	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	6.1	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-10

Sample ID : DUP-07-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/05/15 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/12/15	1
Sodium	280000	1100	10000	ug/l		6020	01/14/15	10
Sodium, Dissolved	260000	550	5000	ug/l		6020	01/14/15	5
Uranium	36.	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	36.	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	5.8	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	5.0	0.18	5.0	ug/l	J	6020	01/12/15	1
Zinc	9.5	2.6	25.	ug/l	J	6020	01/12/15	1
Zinc, Dissolved	29.	2.6	25.	ug/l		6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/13/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	98.6			% Rec.		8015D/G	01/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	01/11/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	01/11/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	01/11/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	01/11/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	01/11/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	01/11/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	01/11/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	01/11/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	01/11/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	01/11/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	01/11/15	1
Toluene	U	0.78	5.0	ug/l		8260B	01/11/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	01/11/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	01/11/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	01/11/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	01/11/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	01/11/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	01/11/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	01/11/15	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	01/11/15	1
Dibromofluoromethane	98.1			% Rec.		8260B	01/11/15	1
4-Bromofluorobenzene	95.5			% Rec.		8260B	01/11/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	01/13/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : DUP-07-0115-BG
Collected By : Ron Wood
Collection Date : 01/05/15 00:00

ESC Sample # : L742615-10

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	U	12.	100	ug/l		8015	01/13/15	1
Surrogate Recovery								
o-Terphenyl	96.5			% Rec.		8015	01/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/12/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/12/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/12/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/12/15	1
Surrogate Recovery								
2-Fluorophenol	20.9			% Rec.		8270C	01/12/15	1
Phenol-d5	17.1			% Rec.		8270C	01/12/15	1
Nitrobenzene-d5	42.9			% Rec.		8270C	01/12/15	1
2-Fluorobiphenyl	47.6			% Rec.		8270C	01/12/15	1
2,4,6-Tribromophenol	59.2			% Rec.		8270C	01/12/15	1
p-Terphenyl-d14	45.2			% Rec.		8270C	01/12/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742615-11

Sample ID : TRIPBLANK

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/05/15 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.00033	0.0010	mg/l		8260B	01/10/15	1
Carbon tetrachloride	U	0.00038	0.0010	mg/l		8260B	01/10/15	1
Chloroform	U	0.00032	0.0050	mg/l		8260B	01/10/15	1
1,2-Dibromoethane	U	0.00038	0.0010	mg/l		8260B	01/10/15	1
1,1-Dichloroethane	U	0.00026	0.0010	mg/l		8260B	01/10/15	1
1,2-Dichloroethane	U	0.00036	0.0010	mg/l		8260B	01/10/15	1
1,1-Dichloroethene	U	0.00040	0.0010	mg/l		8260B	01/10/15	1
Ethylbenzene	U	0.00038	0.0010	mg/l		8260B	01/10/15	1
Methylene Chloride	U	0.0010	0.0050	mg/l		8260B	01/10/15	1
1,1,1,2-Tetrachloroethane	U	0.00038	0.0010	mg/l		8260B	01/10/15	1
1,1,2,2-Tetrachloroethane	U	0.00013	0.0010	mg/l		8260B	01/10/15	1
Toluene	U	0.00078	0.0050	mg/l		8260B	01/10/15	1
1,1,1-Trichloroethane	U	0.00032	0.0010	mg/l		8260B	01/10/15	1
Tetrachloroethene	U	0.00037	0.0010	mg/l		8260B	01/10/15	1
1,1,2-Trichloroethane	U	0.00038	0.0010	mg/l		8260B	01/10/15	1
Vinyl chloride	U	0.00026	0.0010	mg/l		8260B	01/10/15	1
o-Xylene	U	0.00034	0.0010	mg/l		8260B	01/10/15	1
m&p-Xylene	U	0.00072	0.0020	mg/l		8260B	01/10/15	1
Xylenes, Total	U	0.0011	0.0030	mg/l		8260B	01/10/15	1
Surrogate Recovery								
Toluene-d8	98.6			% Rec.		8260B	01/10/15	1
Dibromofluoromethane	96.5			% Rec.		8260B	01/10/15	1
4-Bromofluorobenzene	98.0			% Rec.		8260B	01/10/15	1

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L742615-01	WG764078	SAMP	C28-C40 Oil Range	R3014280	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Chromium	R3014405	JB
	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764202	SAMP	Iron	R3014405	J
	WG764055	SAMP	Iron, Dissolved	R3014351	J
	WG764202	SAMP	Manganese	R3014405	J
	WG764055	SAMP	Manganese, Dissolved	R3014351	J
	WG764202	SAMP	Nickel	R3014405	J
	WG764055	SAMP	Nickel, Dissolved	R3014351	J
	WG764202	SAMP	Potassium	R3014524	J
	WG764055	SAMP	Potassium, Dissolved	R3014415	J
	WG764055	SAMP	Zinc, Dissolved	R3014351	J
	WG764508	SAMP	Sulfate	R3015040	J
	WG763967	SAMP	Dissolved Solids	R3014458	T4
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
L742615-02	WG764055	SAMP	Barium, Dissolved	R3014351	J
	WG764202	SAMP	Boron	R3014713	J
	WG764202	SAMP	Calcium	R3014524	J
	WG764055	SAMP	Calcium, Dissolved	R3014415	J
	WG764202	SAMP	Chromium	R3014405	JB
	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764055	SAMP	Zinc, Dissolved	R3014351	J
	WG764078	SAMP	C10-C28 Diesel Range	R3014280	J
	WG764078	SAMP	C28-C40 Oil Range	R3014280	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Chromium	R3014405	B
	WG764055	SAMP	Chromium, Dissolved	R3014351	B
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764202	SAMP	Cobalt	R3014405	J
	WG764202	SAMP	Iron	R3014405	J
	WG764055	SAMP	Nickel, Dissolved	R3014351	J
L742615-03	WG764202	SAMP	Potassium	R3014524	J
	WG764055	SAMP	Potassium, Dissolved	R3014415	J
	WG764055	SAMP	Zinc, Dissolved	R3014351	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Chromium	R3014405	JB
	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764202	SAMP	Cobalt	R3014405	J
	WG764202	SAMP	Iron	R3014405	J
	WG764055	SAMP	Nickel, Dissolved	R3014351	J
	WG764202	SAMP	Potassium	R3014524	J
	WG764055	SAMP	Potassium, Dissolved	R3014415	J
	WG764055	SAMP	Zinc, Dissolved	R3014351	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Chromium	R3014405	JB
	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
L742615-04	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764202	SAMP	Cobalt	R3014405	J
	WG764055	SAMP	Cobalt, Dissolved	R3014351	J
	WG764202	SAMP	Iron	R3014405	J
	WG764055	SAMP	Iron, Dissolved	R3014351	J
	WG764202	SAMP	Lead	R3014405	J
	WG764202	SAMP	Zinc	R3014405	J
	WG764078	SAMP	C28-C40 Oil Range	R3014280	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Arsenic	R3014405	J
	WG764055	SAMP	Arsenic, Dissolved	R3014351	J
	WG764202	SAMP	Chromium	R3014405	B
	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764202	SAMP	Cobalt	R3014405	J
	WG764202	SAMP	Lead	R3014405	J
	WG764202	SAMP	Molybdenum	R3014405	J
	WG764202	SAMP	Zinc	R3014405	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Chromium	R3014405	B
L742615-05	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Chromium	R3014405	B
L742615-06	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Chromium	R3014405	B

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L742615-07	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764202	SAMP	Cobalt	R3014405	J
	WG764055	SAMP	Iron, Dissolved	R3014351	J
	WG764202	SAMP	Lead	R3014405	J
	WG764202	SAMP	Nickel	R3014405	J
	WG764055	SAMP	Nickel, Dissolved	R3014351	J
	WG764202	SAMP	Zinc	R3014405	J
	WG764055	SAMP	Zinc, Dissolved	R3014351	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Arsenic	R3014405	J
	WG764055	SAMP	Arsenic, Dissolved	R3014351	J
	WG764202	SAMP	Chromium	R3014405	B
	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764202	SAMP	Iron	R3014405	J
	WG764055	SAMP	Iron, Dissolved	R3014351	J
	WG764202	SAMP	Lead	R3014405	J
	WG764202	SAMP	Manganese	R3014405	J
	WG764055	SAMP	Manganese, Dissolved	R3014351	J
	WG764202	SAMP	Molybdenum	R3014405	J
L742615-08	WG764055	SAMP	Molybdenum, Dissolved	R3014351	J
	WG764202	SAMP	Nickel	R3014405	J
	WG764055	SAMP	Nickel, Dissolved	R3014351	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Arsenic	R3014405	J
	WG764055	SAMP	Arsenic, Dissolved	R3014351	J
	WG764202	SAMP	Chromium	R3014405	B
	WG764055	SAMP	Chromium, Dissolved	R3014351	B
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764202	SAMP	Iron	R3014405	J
	WG764055	SAMP	Iron, Dissolved	R3014351	J
	WG764202	SAMP	Lead	R3014405	J
	WG764202	SAMP	Manganese	R3014405	J
	WG764055	SAMP	Manganese, Dissolved	R3014351	J
	WG764202	SAMP	Nickel	R3014405	J
	WG764055	SAMP	Nickel, Dissolved	R3014351	J
	WG764202	SAMP	Zinc	R3014405	J
	WG763967	SAMP	Dissolved Solids	R3014458	T4
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764055	SAMP	Barium, Dissolved	R3014351	J
L742615-09	WG764202	SAMP	Boron	R3014713	J
	WG764202	SAMP	Calcium	R3014524	J
	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764055	SAMP	Iron, Dissolved	R3014351	J
	WG764202	SAMP	Manganese	R3014405	J
	WG764055	SAMP	Manganese, Dissolved	R3014351	J
	WG764202	SAMP	Sodium	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Arsenic	R3014405	J
	WG764055	SAMP	Arsenic, Dissolved	R3014351	J
	WG764202	SAMP	Chromium	R3014405	B
	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764202	SAMP	Cobalt	R3014405	J
	WG764055	SAMP	Iron, Dissolved	R3014351	J
	WG764202	SAMP	Lead	R3014405	J
	WG764202	SAMP	Molybdenum	R3014405	J
	WG764055	SAMP	Molybdenum, Dissolved	R3014351	J
	WG764055	SAMP	Vanadium, Dissolved	R3014351	J
	WG764202	SAMP	Zinc	R3014405	J
	WG764202	SAMP			
	WG764202	SAMP			
L742615-10	WG764055	SAMP			
	WG764202	SAMP			
	WG764055	SAMP			
	WG764202	SAMP			
	WG764055	SAMP			
	WG764202	SAMP			
	WG764055	SAMP			
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	WG764202	SAMP			
	WG764055	SAMP			
	WG764202	SAMP			
	WG764055	SAMP			
	WG764202	SAMP			

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
B	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
T4	(ESC) - Additional method/sample information: QNS - Quantity Not Sufficient

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test: Anions by Method 9056MOD
 Project No: TX000836.0008.00004 Matrix: Water - mg/L
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
 Collection Date: 1/5/2015 **Analytic Batch: WG764508**
 Analysis Date: 1/16/2015 11:48:00 AM Analyst: 577
 Instrument ID: IC-9
 Sample Numbers: L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Chloride	16887-00-6	< 1.00	< 0.0519	
Fluoride	16984-48-8	< 0.100	< 0.00990	
Sulfate	14808-79-8	< 5.00	< 0.0774	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.541	99	90 - 110	
Fluoride	1	8	7.7813	97	90 - 110	
Sulfate	1	40	39.161	98	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.661	99	90 - 110	
Fluoride	1	8	7.8256	98	90 - 110	
Sulfate	1	40	39.188	98	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec	Control RPD
Chloride	1	40	39.541	99	39.661	99	90 - 110	0	20
Fluoride	1	8	7.7813	97	7.8256	98	90 - 110	1	20
Sulfate	1	40	39.161	98	39.188	98	90 - 110	0	20

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Anions by Method 9056MOD		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG765797
Analysis Date:	1/21/2015 10:01:00 AM	Analyst:	577
Instrument ID:	IC-10		
Sample Numbers:	L742615-10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Chloride	16887-00-6	< 1.00	< 0.0519	
Fluoride	16984-48-8	< 0.100	< 0.00990	
Sulfate	14808-79-8	< 5.00	< 0.0774	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	40.100	100	90 - 110	
Fluoride	1	8	8.1191	101	90 - 110	
Sulfate	1	40	40.286	101	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	40.073	100	90 - 110	
Fluoride	1	8	8.1183	101	90 - 110	
Sulfate	1	40	40.198	100	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	RPD Qual
Chloride	1	40	40.100	100	40.073	100	90 - 110	0	20	
Fluoride	1	8	8.1191	101	8.1183	101	90 - 110	0	20	
Sulfate	1	40	40.286	101	40.198	100	90 - 110	0	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Anions by Method 9056MOD			Matrix:	Water - mg/L
Project No:	TX000836.0008.00004			EPA ID:	TN00003
Project:	Navajo Refining Company - Artesia, NM			Analytic Batch:	WG764508
Collection Date:	1/5/2015			Analyst:	577
Analysis Date:	1/16/2015 11:48:00 AM				
Instrument ID:	IC-9				
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10				

Sample Duplicate

L742731-01

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	10	64.127	65.692	2	20	

Sample Duplicate

L742615-08

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	1	96.350	96.063	0	20	
Fluoride	1	0.6775	0.6941	2	20	
Sulfate	100	1934.2	1916.1	1	20	

Matrix Spike / Matrix Spike Duplicate

L742767-05

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Chloride	1	50	13.941	50.635	73	46.696	66	80 - 120	J6	8	20	
Fluoride	1	5	0.291	3.7573	69	3.8348	71	80 - 120	J6	2	20	
Sulfate	1	50	26.090	63.863	76	60.154	68	80 - 120	J6	6	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Anions by Method 9056MOD		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG765797
Analysis Date:	1/21/2015 10:01:00 AM	Analyst:	577
Instrument ID:	IC-10		
Sample Numbers:	L742615-10		

Sample Duplicate

L744406-04

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	1	6.6704	6.7917	2	20	
Sulfate	1	12.605	12.606	0	20	

Matrix Spike / Matrix Spike Duplicate

L744406-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Chloride	1	50	3.6439	52.379	97	52.689	98	80 - 120		1	20	
Sulfate	1	50	0.771	49.620	98	49.921	98	80 - 120		1	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Cyanide by Method 9012B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764270
Analysis Date:	1/13/2015 4:49:00 PM	Analyst:	183
Instrument ID:	LACHAT4		
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Cyanide	57-12-5	< 0.00500	< 0.00180	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Cyanide	1	0.1	0.102	102	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Cyanide	1	0.1	0.0963	96.3	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
Cyanide	1	0.1	0.102	102	0.0963	96.3	90 - 110	5.75	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Cyanide by Method 9012B			Matrix:	Water - mg/L
Project No:	TX000836.0008.00004			EPA ID:	TN00003
Project:	Navajo Refining Company - Artesia, NM			Analytic Batch:	WG764270
Collection Date:	1/5/2015			Analyst:	183
Analysis Date:	1/13/2015 4:49:00 PM				
Instrument ID:	LACHAT4				
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10				

Sample Duplicate

L742615-05

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Cyanide	1	<0.0018	<0.0018		20	

Sample Duplicate

L742120-02

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Cyanide	1	0.012	0.0125	0	20	

Matrix Spike / Matrix Spike Duplicate

L742605-03

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Cyanide	1	0.2	<0.0018	0.2	100	0.199	99.5	90 - 110		0.5	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Nitrate-Nitrite by Method 353.2		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764297
Analysis Date:	1/14/2015 6:45:00 AM	Analyst:	578
Instrument ID:	LACHAT5		
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Nitrate-Nitrite	7727-37-9	< 0.100	< 0.0197	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Nitrate-Nitrite	1	5	4.93	98.6	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Nitrate-Nitrite	1	5	5.13	103	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Limits	Qual
Nitrate-Nitrite	1	5	4.93	98.6	5.13	103	90 - 110	3.98	20		

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Nitrate-Nitrite by Method 353.2			Matrix:	Water - mg/L
Project No:	TX000836.0008.00004			EPA ID:	TN00003
Project:	Navajo Refining Company - Artesia, NM			Analytic Batch:	WG764297
Collection Date:	1/5/2015			Analyst:	578
Analysis Date:	1/14/2015 6:45:00 AM				
Instrument ID:	LACHAT5				
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10				

Sample Duplicate

L742615-10

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Nitrate-Nitrite	1	0.5	0.507	1.98	20	

Sample Duplicate

L742684-02

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Nitrate-Nitrite	1	6.2	6.19	0	20	

Matrix Spike / Matrix Spike Duplicate

L742767-05

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Nitrate-Nitrite	1	5	15	20.35	107	20.25	105	90 - 110		0.49	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG763967
Analysis Date:	1/14/2015 3:52:00 AM	Analyst:	36
Instrument ID:	WETBAL2		
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Dissolved Solids	DSOLIDS	< 10.0	< 2.82	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8630	98.1	85 - 115	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	9020	102	85 - 115	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Limits	Qual
Dissolved Solids	1	8800	8630	98.1	9020	102	85 - 115	4.42	5		

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG763967
Analysis Date:	1/14/2015 3:52:00 AM	Analyst:	36
Instrument ID:	WETBAL2		
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Sample Duplicate

L742615-10

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	4165	4175	0.24	5	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Mercury by Method 7470A		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764240
Analysis Date:	1/13/2015 4:27:00 PM	Analyst:	572
Instrument ID:	CVAA3	Prep Date:	1/12/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Mercury	7439-97-6	< 0.200	< 0.0490	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Mercury	1	3	2.8944	96	85 - 115	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Mercury	1	3	2.9356	98	85 - 115	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Limits	Qual
Mercury	1	3	2.8944	96	2.9356	98	85 - 115	1	20		

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Mercury by Method 7470A		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764240
Analysis Date:	1/13/2015 4:27:00 PM	Analyst:	572
Instrument ID:	CVAA3	Prep Date:	1/12/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Serial Dilution

L742615-01

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Mercury	5	<0.049	<0.245		10	

Matrix Spike / Matrix Spike Duplicate

L742615-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Mercury	1	3	<0.049	3.0617	101	3.0691	101	80 - 120		0	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:18:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Aluminum,Dissolved	7429-90-5	< 100	5.52	
Arsenic,Dissolved	7440-38-2	< 2.00	< 0.250	
Barium,Dissolved	7440-39-3	< 5.00	< 0.360	
Boron,Dissolved	7440-42-8	< 20.0	3.02	
Cadmium,Dissolved	7440-43-9	< 1.00	< 0.160	
Calcium,Dissolved	7440-70-2	< 1000	68.5	
Chromium,Dissolved	7440-47-3	1.04	1.04	B
Cobalt,Dissolved	7440-48-4	< 2.00	< 0.260	
Copper,Dissolved	7440-50-8	< 5.00	0.748	
Iron,Dissolved	7439-89-6	< 100	< 15.0	
Lead,Dissolved	7439-92-1	< 2.00	0.291	
Manganese,Dissolved	7439-96-5	< 5.00	0.876	
Molybdenum,Dissolved	7439-98-7	< 5.00	< 0.140	
Nickel,Dissolved	7440-02-0	< 2.00	< 0.350	
Potassium,Dissolved	7440-09-7	< 1000	< 37.0	
Selenium,Dissolved	7782-49-2	< 2.00	< 0.380	
Silver,Dissolved	7440-22-4	< 2.00	< 0.310	
Sodium,Dissolved	7440-23-5	< 1000	< 110	
Uranium,Dissolved	7440-61-1	< 10.0	< 0.330	
Vanadium,Dissolved	7440-62-2	< 5.00	< 0.180	
Zinc,Dissolved	7440-66-6	< 25.0	< 2.56	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 11:02:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Aluminum	7429-90-5	< 100	14.1	
Arsenic	7440-38-2	< 2.00	< 0.250	
Barium	7440-39-3	< 5.00	< 0.360	
Boron	7440-42-8	< 20.0	3.8	
Cadmium	7440-43-9	< 1.00	< 0.160	
Calcium	7440-70-2	< 1000	< 46.0	
Chromium	7440-47-3	< 1.00	0.645	B
Cobalt	7440-48-4	< 2.00	< 0.260	
Copper	7440-50-8	< 5.00	0.783	
Iron	7439-89-6	< 100	< 15.0	
Lead	7439-92-1	< 2.00	< 0.240	
Manganese	7439-96-5	< 5.00	0.267	
Molybdenum	7439-98-7	< 5.00	< 0.140	
Nickel	7440-02-0	< 2.00	0.462	
Potassium	7440-09-7	< 1000	< 37.0	
Selenium	7782-49-2	< 2.00	< 0.380	
Silver	7440-22-4	< 2.00	< 0.310	
Sodium	7440-23-5	< 1000	< 110	
Uranium	7440-61-1	< 10.0	< 0.330	
Vanadium	7440-62-2	< 5.00	< 0.180	
Zinc	7440-66-6	< 25.0	< 2.56	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:18:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum,Dissolved	1	500	501.18	100	70 - 130	
Arsenic,Dissolved	1	50	49.545	99	85 - 115	
Barium,Dissolved	1	50	48.833	98	85 - 115	
Boron,Dissolved	1	50	57.237	114	70 - 130	
Cadmium,Dissolved	1	50	53.196	106	85 - 115	
Calcium,Dissolved	1	5000	5106.7	102	70 - 130	
Chromium,Dissolved	1	50	49.622	99	85 - 115	
Cobalt,Dissolved	1	50	50.558	101	85 - 115	
Copper,Dissolved	1	50	56.307	113	85 - 115	
Iron,Dissolved	1	500	499.59	100	85 - 115	
Lead,Dissolved	1	50	50.780	102	85 - 115	
Manganese,Dissolved	1	50	49.004	98	85 - 115	
Molybdenum,Dissolved	1	50	47.727	95	85 - 115	
Nickel,Dissolved	1	50	51.204	102	85 - 115	
Potassium,Dissolved	1	5000	4822.8	96	70 - 130	
Selenium,Dissolved	1	50	51.086	102	85 - 115	
Silver,Dissolved	1	50	46.210	92	85 - 115	
Sodium,Dissolved	1	5000	5110.4	102	70 - 130	
Uranium,Dissolved	1	50	51.119	102	70 - 130	
Vanadium,Dissolved	1	50	47.682	95	85 - 115	
Zinc,Dissolved	1	50	56.830	114	85 - 115	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:18:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum,Dissolved	1	500	537.67	108	70 - 130	
Arsenic,Dissolved	1	50	50.527	101	85 - 115	
Barium,Dissolved	1	50	48.146	96	85 - 115	
Boron,Dissolved	1	50	61.427	123	70 - 130	
Cadmium,Dissolved	1	50	55.021	110	85 - 115	
Calcium,Dissolved	1	5000	5188.6	104	70 - 130	
Chromium,Dissolved	1	50	49.536	99	85 - 115	
Cobalt,Dissolved	1	50	50.138	100	85 - 115	
Copper,Dissolved	1	50	52.926	106	85 - 115	
Iron,Dissolved	1	500	502.91	101	85 - 115	
Lead,Dissolved	1	50	49.164	98	85 - 115	
Manganese,Dissolved	1	50	48.326	97	85 - 115	
Molybdenum,Dissolved	1	50	48.723	97	85 - 115	
Nickel,Dissolved	1	50	49.361	99	85 - 115	
Potassium,Dissolved	1	5000	4892.2	98	70 - 130	
Selenium,Dissolved	1	50	51.051	102	85 - 115	
Silver,Dissolved	1	50	46.835	94	85 - 115	
Sodium,Dissolved	1	5000	5228.8	105	70 - 130	
Uranium,Dissolved	1	50	50.181	100	70 - 130	
Vanadium,Dissolved	1	50	47.455	95	85 - 115	
Zinc,Dissolved	1	50	50.940	102	85 - 115	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:18:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
Aluminum,Dissolved	1	500	501.18	100	537.67	108	70 - 130	7	20	
Arsenic,Dissolved	1	50	49.545	99	50.527	101	85 - 115	2	20	
Barium,Dissolved	1	50	48.833	98	48.146	96	85 - 115	1	20	
Boron,Dissolved	1	50	57.237	114	61.427	123	70 - 130	7	20	
Cadmium,Dissolved	1	50	53.196	106	55.021	110	85 - 115	3	20	
Calcium,Dissolved	1	5000	5106.7	102	5188.6	104	70 - 130	2	20	
Chromium,Dissolved	1	50	49.622	99	49.536	99	85 - 115	0	20	
Cobalt,Dissolved	1	50	50.558	101	50.138	100	85 - 115	1	20	
Copper,Dissolved	1	50	56.307	113	52.926	106	85 - 115	6	20	
Iron,Dissolved	1	500	499.59	100	502.91	101	85 - 115	1	20	
Lead,Dissolved	1	50	50.780	102	49.164	98	85 - 115	3	20	
Manganese,Dissolved	1	50	49.004	98	48.326	97	85 - 115	1	20	
Molybdenum,Dissolved	1	50	47.727	95	48.723	97	85 - 115	2	20	
Nickel,Dissolved	1	50	51.204	102	49.361	99	85 - 115	4	20	
Potassium,Dissolved	1	5000	4822.8	96	4892.2	98	70 - 130	1	20	
Selenium,Dissolved	1	50	51.086	102	51.051	102	85 - 115	0	20	
Silver,Dissolved	1	50	46.210	92	46.835	94	85 - 115	1	20	
Sodium,Dissolved	1	5000	5110.4	102	5228.8	105	70 - 130	2	20	
Uranium,Dissolved	1	50	51.119	102	50.181	100	70 - 130	2	20	
Vanadium,Dissolved	1	50	47.682	95	47.455	95	85 - 115	0	20	
Zinc,Dissolved	1	50	56.830	114	50.940	102	85 - 115	11	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 11:02:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum	1	500	498.44	100	70 - 130	
Arsenic	1	50	47.600	95	85 - 115	
Barium	1	50	49.997	100	85 - 115	
Boron	1	50	51.079	102	70 - 130	
Cadmium	1	50	53.538	107	85 - 115	
Calcium	1	5000	5173.5	103	70 - 130	
Chromium	1	50	49.758	100	85 - 115	
Cobalt	1	50	50.447	101	85 - 115	
Copper	1	50	52.708	105	85 - 115	
Iron	1	500	492.47	98	85 - 115	
Lead	1	50	50.028	100	85 - 115	
Manganese	1	50	47.281	95	85 - 115	
Molybdenum	1	50	48.721	97	85 - 115	
Nickel	1	50	50.969	102	85 - 115	
Potassium	1	5000	4861.3	97	70 - 130	
Selenium	1	50	48.813	98	85 - 115	
Silver	1	50	47.236	94	85 - 115	
Sodium	1	5000	5162.6	103	70 - 130	
Uranium	1	50	51.630	103	70 - 130	
Vanadium	1	50	47.506	95	85 - 115	
Zinc	1	50	48.910	98	85 - 115	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 11:02:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum	1	500	508.03	102	70 - 130	
Arsenic	1	50	47.931	96	85 - 115	
Barium	1	50	49.920	100	85 - 115	
Boron	1	50	51.468	103	70 - 130	
Cadmium	1	50	53.620	107	85 - 115	
Calcium	1	5000	4966.5	99	70 - 130	
Chromium	1	50	49.073	98	85 - 115	
Cobalt	1	50	50.574	101	85 - 115	
Copper	1	50	53.028	106	85 - 115	
Iron	1	500	519.43	104	85 - 115	
Lead	1	50	49.577	99	85 - 115	
Manganese	1	50	47.337	95	85 - 115	
Molybdenum	1	50	48.050	96	85 - 115	
Nickel	1	50	49.996	100	85 - 115	
Potassium	1	5000	4879.1	98	70 - 130	
Selenium	1	50	46.953	94	85 - 115	
Silver	1	50	47.835	96	85 - 115	
Sodium	1	5000	5137.4	103	70 - 130	
Uranium	1	50	51.089	102	70 - 130	
Vanadium	1	50	47.271	95	85 - 115	
Zinc	1	50	50.900	102	85 - 115	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 11:02:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	RPD Qual
Aluminum	1	500	498.44	100	508.03	102	70 - 130	2	20	
Arsenic	1	50	47.600	95	47.931	96	85 - 115	1	20	
Barium	1	50	49.997	100	49.920	100	85 - 115	0	20	
Boron	1	50	51.079	102	51.468	103	70 - 130	1	20	
Cadmium	1	50	53.538	107	53.620	107	85 - 115	0	20	
Calcium	1	5000	5173.5	103	4966.5	99	70 - 130	4	20	
Chromium	1	50	49.758	100	49.073	98	85 - 115	1	20	
Cobalt	1	50	50.447	101	50.574	101	85 - 115	0	20	
Copper	1	50	52.708	105	53.028	106	85 - 115	1	20	
Iron	1	500	492.47	98	519.43	104	85 - 115	5	20	
Lead	1	50	50.028	100	49.577	99	85 - 115	1	20	
Manganese	1	50	47.281	95	47.337	95	85 - 115	0	20	
Molybdenum	1	50	48.721	97	48.050	96	85 - 115	1	20	
Nickel	1	50	50.969	102	49.996	100	85 - 115	2	20	
Potassium	1	5000	4861.3	97	4879.1	98	70 - 130	0	20	
Selenium	1	50	48.813	98	46.953	94	85 - 115	4	20	
Silver	1	50	47.236	94	47.835	96	85 - 115	1	20	
Sodium	1	5000	5162.6	103	5137.4	103	70 - 130	0	20	
Uranium	1	50	51.630	103	51.089	102	70 - 130	1	20	
Vanadium	1	50	47.506	95	47.271	95	85 - 115	0	20	
Zinc	1	50	48.910	98	50.900	102	85 - 115	4	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:18:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Serial Dilution

L742605-01

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Aluminum,Dissolved	5	19.527	27.680	42	10	
Arsenic,Dissolved	5	1.5774	1.9550	24	10	
Barium,Dissolved	5	24.092	24.936	4	10	
Boron,Dissolved	5	787.86	947.99	20	10	O1
Cadmium,Dissolved	5	<0.16	<0.8		10	
Chromium,Dissolved	5	1.0936	<2.7	98	10	
Cobalt,Dissolved	5	<0.26	<1.3		10	
Copper,Dissolved	5	3.2075	4.0378	26	10	
Iron,Dissolved	5	20.652	<75	110	10	
Lead,Dissolved	5	<0.24	<1.2		10	
Manganese,Dissolved	5	47.371	48.102	2	10	
Molybdenum,Dissolved	5	4.5147	4.6261	2	10	
Nickel,Dissolved	5	1.2579	3.9639	215	10	
Potassium,Dissolved	5	5316.2	5204.9	2	10	
Selenium,Dissolved	5	9.8069	9.3164	5	10	
Silver,Dissolved	5	0.6825	<1.55	5	10	
Uranium,Dissolved	5	14.419	14.680	2	10	
Vanadium,Dissolved	5	4.4413	4.6043	4	10	
Zinc,Dissolved	5	24.987	31.237	25	10	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764055
Analysis Date:	1/12/2015 8:18:00 PM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Matrix Spike / Matrix Spike Duplicate

L742605-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Aluminum,Dissolved	1	500	19.527	509.40	98	508.90	98	70 - 130		0	20	
Arsenic,Dissolved	1	50	1.5774	55.056	107	57.376	112	75 - 125		4	20	
Barium,Dissolved	1	50	24.092	76.832	105	78.780	109	75 - 125		3	20	
Boron,Dissolved	1	50	787.86	863.29	151	925.37	275	70 - 130	V	7	20	
Cadmium,Dissolved	1	50	<0.16	53.033	106	55.806	112	75 - 125		5	20	
Chromium,Dissolved	1	50	1.0936	50.128	98	50.739	99	75 - 125		1	20	
Cobalt,Dissolved	1	50	<0.26	50.590	101	51.327	102	75 - 125		1	20	
Copper,Dissolved	1	50	3.2075	53.598	101	53.847	101	75 - 125		0	20	
Iron,Dissolved	1	500	20.652	498.31	96	506.46	97	75 - 125		2	20	
Lead,Dissolved	1	50	<0.24	51.196	102	50.373	100	75 - 125		2	20	
Manganese,Dissolved	1	50	47.371	95.144	96	96.292	98	75 - 125		1	20	
Molybdenum,Dissolved	1	50	4.5147	57.008	105	58.528	108	75 - 125		3	20	
Nickel,Dissolved	1	50	1.2579	50.980	99	51.738	101	75 - 125		1	20	
Potassium,Dissolved	1	5000	5316.2	10067	95	9949.3	93	70 - 130		1	20	
Selenium,Dissolved	1	50	9.8069	65.567	112	66.819	114	75 - 125		2	20	
Silver,Dissolved	1	50	0.6825	50.196	99	51.132	101	75 - 125		2	20	
Uranium,Dissolved	1	50	14.419	68.909	109	67.752	107	70 - 130		2	20	
Vanadium,Dissolved	1	50	4.4413	54.636	100	56.109	103	75 - 125		3	20	
Zinc,Dissolved	1	50	24.987	60.487	71	60.932	72	75 - 125	J6	1	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 11:02:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Serial Dilution

L742605-01

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Arsenic	5	4.0453	4.0424	0	10	
Barium	5	33.447	34.614	3	10	
Boron	5	690.77	786.26	14	10	O1
Cadmium	5	<0.16	<0.8		10	
Chromium	5	1.1140	<2.7	115	10	
Cobalt	5	1.0517	<1.3	4	10	
Copper	5	2.5198	4.8109	91	10	
Iron	5	2016.4	2413.9	20	10	
Lead	5	1.5327	3.0029	96	10	
Manganese	5	633.34	650.49	3	10	
Molybdenum	5	3.1830	3.5362	11	10	
Nickel	5	1.6219	34.630	2035	10	
Selenium	5	9.6598	9.3080	4	10	
Silver	5	0.5637	<1.55	17	10	
Uranium	5	14.923	15.081	1	10	
Vanadium	5	10.501	10.776	3	10	
Zinc	5	4.5197	67.734	1399	10	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764202
Analysis Date:	1/12/2015 11:02:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	1/12/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Matrix Spike / Matrix Spike Duplicate

L742605-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Aluminum	1	500	36.634	517.99	96	535.37	100	70 - 130		3	20	
Arsenic	1	50	4.0453	56.550	105	54.221	100	75 - 125		4	20	
Barium	1	50	33.447	80.656	94	83.173	99	75 - 125		3	20	
Boron	1	50	690.77	759.52	138	760.84	140	70 - 130	V	0	20	
Cadmium	1	50	<0.16	55.192	110	52.442	105	75 - 125		5	20	
Chromium	1	50	1.1140	47.998	94	48.073	94	75 - 125		0	20	
Cobalt	1	50	1.0517	50.112	98	50.171	98	75 - 125		0	20	
Copper	1	50	2.5198	50.780	97	52.391	100	75 - 125		3	20	
Iron	1	500	2016.4	2471.5	91	2522.5	101	75 - 125		2	20	
Lead	1	50	1.5327	48.608	94	49.181	95	75 - 125		1	20	
Manganese	1	50	633.34	683.18	100	859.60	453	75 - 125	V	23	20	J3
Molybdenum	1	50	3.1830	53.724	101	55.646	105	75 - 125		4	20	
Nickel	1	50	1.6219	48.818	94	49.040	95	75 - 125		0	20	
Potassium	1	5000	5069.3	9783.5	94	9862.9	96	70 - 130		1	20	
Selenium	1	50	9.6598	58.552	98	60.826	102	75 - 125		4	20	
Silver	1	50	0.5637	48.081	95	49.030	97	75 - 125		2	20	
Uranium	1	50	14.923	68.074	106	67.113	104	70 - 130		1	20	
Vanadium	1	50	10.501	58.236	95	59.079	97	75 - 125		1	20	
Zinc	1	50	4.5197	49.951	91	50.554	92	75 - 125		1	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG763968
Analysis Date:	1/10/2015 6:33:00 PM	Analyst:	585
Instrument ID:	VOCGC7		
Sample Numbers:	L742615-01, -02, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
TPH (GC/FID) Low Fraction	8006-61-9	< 0.100	< 0.0314	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.3472	79	67 - 132	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.0255	73.2	67 - 132	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	% RPD Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.3472	79	4.0255	73.2	67 - 132	7.68	20		

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764568
Analysis Date:	1/14/2015 3:36:00 PM	Analyst:	621
Instrument ID:	VOCGC6		
Sample Numbers:	L742615-03		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
TPH (GC/FID) Low Fraction	8006-61-9	< 0.100	< 0.0314	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.7799	86.9	67 - 132	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	5.7781	105	67 - 132	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.7799	86.9	5.7781	105	67 - 132	18.9	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG763968
Analysis Date:	1/10/2015 6:33:00 PM	Analyst:	585
Instrument ID:	VOCGC7		
Sample Numbers:	L742615-01, -02, -04, -05, -06, -07, -08, -09, -10		

Matrix Spike / Matrix Spike Duplicate

L742501-02

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
TPH (GC/FID) Low Fraction	1	5.5	0.0368	4.6920	84.6	4.6327	83.6	50 - 143		1.27	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764568
Analysis Date:	1/14/2015 3:36:00 PM	Analyst:	621
Instrument ID:	VOCGC6		
Sample Numbers:	L742615-03		

Matrix Spike / Matrix Spike Duplicate

L742941-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
TPH (GC/FID) Low Fraction	1	5.5	<0.0314	5.4567	98.8	6.1470	111	50 - 143		11.9	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG763968
Analysis Date:	1/10/2015 6:33:00 PM	Analyst:	585
Instrument ID:	VOCGC7		
Sample Numbers:	L742615-01, -02, -04, -05, -06, -07, -08, -09, -10		

Surrogate Summary

Laboratory

Sample ID	Instrument	File ID	ppm	% Rec
L742615-01	VOCGC7	0110_24	0.198	98.9
L742615-02	VOCGC7	0110_25	0.198	99.2
L742615-04	VOCGC7	0110_27	0.198	99.1
L742615-05	VOCGC7	0110_28	0.198	99.0
L742615-06	VOCGC7	0110_29	0.198	98.8
L742615-07	VOCGC7	0110_30	0.198	99.0
L742615-08	VOCGC7	0110_31	0.198	99.0
L742615-09	VOCGC7	0110_32	0.199	99.3
L742615-10	VOCGC7	0110_33	0.197	98.6
LCS WG763968	VOCGC7	0110_04	0.211	105
LCSD WG763968	VOCGC7	0110_05	0.210	105
MS WG763968	VOCGC7	0110_06	0.214	107
MSD WG763968	VOCGC7	0110_07	0.214	107
BLANK WG763968	VOCGC7	0110_09	0.198	99.0

--A,A,A-TRIFLUOROTOLUENE(FID)

True Value: 0.2 ppm Limits: 62 - 128

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764568
Analysis Date:	1/14/2015 3:36:00 PM	Analyst:	621
Instrument ID:	VOCGC6		
Sample Numbers:	L742615-03		

Surrogate Summary

Laboratory

Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec
L742615-03	VOCGC6	0114_16	0.204	102		
LCS WG764568	VOCGC6	0114_07	0.205	102		
LCSD WG764568	VOCGC6	0114_08	0.205	103		
MS WG764568	VOCGC6	0114_11	0.204	102		
MSD WG764568	VOCGC6	0114_12	0.205	103		
BLANK WG764568	VOCGC6	0114_14	0.205	102	0.206	103
LCS WG764568	VOCGC6	0114_05			0.207	104
LCSD WG764568	VOCGC6	0114_06			0.211	105
MS WG764568	VOCGC6	0114_09			0.202	101
MSD WG764568	VOCGC6	0114_10			0.204	102

--A,A,A-TRIFLUOROTOLUENE(FID)

True Value: 0.2 ppm Limits: 62 - 128

--A,A,A-TRIFLUOROTOLUENE(PID)

True Value: 0.2 ppm Limits: 55 - 122

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 3:09:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742615-01, -02, -10, -11		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
1,1,1,2-Tetrachloroethane	630-20-6	< 0.00100	< 0.000385	
1,1,1-Trichloroethane	71-55-6	< 0.00100	< 0.000319	
1,1,2,2-Tetrachloroethane	79-34-5	< 0.00100	< 0.000130	
1,1,2-Trichloroethane	79-00-5	< 0.00100	< 0.000383	
1,1-Dichloroethane	75-34-3	< 0.00100	< 0.000259	
1,1-Dichloroethene	75-35-4	< 0.00100	< 0.000398	
1,2-Dibromoethane	106-93-4	< 0.00100	< 0.000381	
1,2-Dichloroethane	107-06-2	< 0.00100	< 0.000361	
Benzene	71-43-2	< 0.00100	< 0.000331	
Carbon tetrachloride	56-23-5	< 0.00100	< 0.000379	
Chloroform	67-66-3	< 0.00500	< 0.000324	
Ethylbenzene	100-41-4	< 0.00100	< 0.000384	
m&p-Xylenes	1330-20-7	< 0.00200	< 0.000719	
Methylene Chloride	75-09-2	< 0.00500	0.00181	
o-Xylene	95-47-6	< 0.00100	< 0.000341	
Tetrachloroethene	127-18-4	< 0.00100	< 0.000372	
Toluene	108-88-3	< 0.00500	< 0.000780	
Vinyl chloride	75-01-4	< 0.00100	< 0.000259	
Xylenes, Total	1330-20-7	< 0.00300	< 0.00106	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764130
Analysis Date:	1/12/2015 12:16:00 PM	Analyst:	585
Instrument ID:	VOCMS18		
Sample Numbers:	L742615-03, -04, -05, -06, -07, -08, -09		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
1,1,1,2-Tetrachloroethane	630-20-6	< 0.00100	< 0.000385	
1,1,1-Trichloroethane	71-55-6	< 0.00100	< 0.000319	
1,1,2,2-Tetrachloroethane	79-34-5	< 0.00100	< 0.000130	
1,1,2-Trichloroethane	79-00-5	< 0.00100	< 0.000383	
1,1-Dichloroethane	75-34-3	< 0.00100	< 0.000259	
1,1-Dichloroethene	75-35-4	< 0.00100	< 0.000398	
1,2-Dibromoethane	106-93-4	< 0.00100	< 0.000381	
1,2-Dichloroethane	107-06-2	< 0.00100	< 0.000361	
Benzene	71-43-2	< 0.00100	< 0.000331	
Carbon tetrachloride	56-23-5	< 0.00100	< 0.000379	
Chloroform	67-66-3	< 0.00500	< 0.000324	
Ethylbenzene	100-41-4	< 0.00100	< 0.000384	
m&p-Xylenes	1330-20-7	< 0.00200	< 0.000719	
Methylene Chloride	75-09-2	< 0.00500	< 0.00100	
o-Xylene	95-47-6	< 0.00100	< 0.000341	
Tetrachloroethene	127-18-4	< 0.00100	< 0.000372	
Toluene	108-88-3	< 0.00500	< 0.000780	
Vinyl chloride	75-01-4	< 0.00100	< 0.000259	
Xylenes, Total	1330-20-7	< 0.00300	< 0.00106	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 3:09:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742615-01, -02, -10, -11		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0270	108	74.2 - 124	
1,1,1-Trichloroethane	1	0.025	0.0264	106	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0262	105	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0255	102	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0258	103	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0254	102	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0274	110	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0249	99.8	68.8 - 124	
Benzene	1	0.025	0.0251	100	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0268	107	70.2 - 123	
Chloroform	1	0.025	0.0243	97	76 - 121	
Ethylbenzene	1	0.025	0.0271	108	78.8 - 122	
m&p-Xylenes	1	0.05	0.0536	107	78.8 - 121	
Methylene Chloride	1	0.025	0.0248	99.2	70.3 - 120	
o-Xylene	1	0.025	0.0269	107	77.6 - 122	
Tetrachloroethene	1	0.025	0.0271	108	72.6 - 126	
Toluene	1	0.025	0.0251	100	79.7 - 116	
Vinyl chloride	1	0.025	0.0278	111	65.9 - 128	
Xylenes, Total	1	0.075	0.0804	107	78.7 - 121	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 3:09:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742615-01, -02, -10, -11		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0267	107	74.2 - 124	
1,1,1-Trichloroethane	1	0.025	0.0260	104	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0280	112	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0257	103	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0256	103	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0251	101	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0274	110	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0261	105	68.8 - 124	
Benzene	1	0.025	0.0248	99.1	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0261	104	70.2 - 123	
Chloroform	1	0.025	0.0237	94.8	76 - 121	
Ethylbenzene	1	0.025	0.0262	105	78.8 - 122	
m&p-Xylenes	1	0.05	0.0528	106	78.8 - 121	
Methylene Chloride	1	0.025	0.0252	101	70.3 - 120	
o-Xylene	1	0.025	0.0268	107	77.6 - 122	
Tetrachloroethene	1	0.025	0.0261	104	72.6 - 126	
Toluene	1	0.025	0.0250	100	79.7 - 116	
Vinyl chloride	1	0.025	0.0275	110	65.9 - 128	
Xylenes, Total	1	0.075	0.0796	106	78.7 - 121	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 3:09:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742615-01, -02, -10, -11		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0270	108	0.0267	107	74.2 - 124	1.26	20	
1,1,1-Trichloroethane	1	0.025	0.0264	106	0.0260	104	73.2 - 123	1.45	20	
1,1,2,2-Tetrachloroethane	1	0.025	0.0262	105	0.0280	112	70.7 - 122	6.87	20	
1,1,2-Trichloroethane	1	0.025	0.0255	102	0.0257	103	77.7 - 118	0.76	20	
1,1-Dichloroethane	1	0.025	0.0258	103	0.0256	103	70.7 - 126	0.76	20	
1,1-Dichloroethene	1	0.025	0.0254	102	0.0251	101	67.8 - 129	1.11	20	
1,2-Dibromoethane	1	0.025	0.0274	110	0.0274	110	76.6 - 121	0.09	20	
1,2-Dichloroethane	1	0.025	0.0249	99.8	0.0261	105	68.8 - 124	4.66	20	
Benzene	1	0.025	0.0251	100	0.0248	99.1	74.8 - 121	1.16	20	
Carbon tetrachloride	1	0.025	0.0268	107	0.0261	104	70.2 - 123	2.8	20	
Chloroform	1	0.025	0.0243	97	0.0237	94.8	76 - 121	2.36	20	
Ethylbenzene	1	0.025	0.0271	108	0.0262	105	78.8 - 122	3.21	20	
m&p-Xylenes	1	0.05	0.0536	107	0.0528	106	78.8 - 121	1.33	20	
Methylene Chloride	1	0.025	0.0248	99.2	0.0252	101	70.3 - 120	1.59	20	
o-Xylene	1	0.025	0.0269	107	0.0268	107	77.6 - 122	0.22	20	
Tetrachloroethene	1	0.025	0.0271	108	0.0261	104	72.6 - 126	3.84	20	
Toluene	1	0.025	0.0251	100	0.0250	100	79.7 - 116	0.22	20	
Vinyl chloride	1	0.025	0.0278	111	0.0275	110	65.9 - 128	1.09	20	
Xylenes, Total	1	0.075	0.0804	107	0.0796	106	78.7 - 121	0.96	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764130
Analysis Date:	1/12/2015 12:16:00 PM	Analyst:	585
Instrument ID:	VOCMS18		
Sample Numbers:	L742615-03, -04, -05, -06, -07, -08, -09		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0254	102	74.2 - 124	
1,1,1-Trichloroethane	1	0.025	0.0261	104	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0279	112	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0254	102	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0255	102	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0256	103	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0258	103	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0257	103	68.8 - 124	
Benzene	1	0.025	0.0248	99.1	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0253	101	70.2 - 123	
Chloroform	1	0.025	0.0236	94.4	76 - 121	
Ethylbenzene	1	0.025	0.0255	102	78.8 - 122	
m&p-Xylenes	1	0.05	0.0495	98.9	78.8 - 121	
Methylene Chloride	1	0.025	0.0234	93.7	70.3 - 120	
o-Xylene	1	0.025	0.0256	102	77.6 - 122	
Tetrachloroethene	1	0.025	0.0252	101	72.6 - 126	
Toluene	1	0.025	0.0241	96.5	79.7 - 116	
Vinyl chloride	1	0.025	0.0266	106	65.9 - 128	
Xylenes, Total	1	0.075	0.0750	100	78.7 - 121	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764130
Analysis Date:	1/12/2015 12:16:00 PM	Analyst:	585
Instrument ID:	VOCMS18		
Sample Numbers:	L742615-03, -04, -05, -06, -07, -08, -09		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0248	99	74.2 - 124	
1,1,1-Trichloroethane	1	0.025	0.0252	101	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0283	113	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0253	101	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0247	98.8	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0243	97.1	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0254	102	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0249	99.6	68.8 - 124	
Benzene	1	0.025	0.0239	95.7	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0252	101	70.2 - 123	
Chloroform	1	0.025	0.0231	92.5	76 - 121	
Ethylbenzene	1	0.025	0.0246	98.4	78.8 - 122	
m&p-Xylenes	1	0.05	0.0472	94.5	78.8 - 121	
Methylene Chloride	1	0.025	0.0227	90.8	70.3 - 120	
o-Xylene	1	0.025	0.0245	98.2	77.6 - 122	
Tetrachloroethene	1	0.025	0.0243	97.2	72.6 - 126	
Toluene	1	0.025	0.0229	91.5	79.7 - 116	
Vinyl chloride	1	0.025	0.0255	102	65.9 - 128	
Xylenes, Total	1	0.075	0.0718	95.7	78.7 - 121	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764130
Analysis Date:	1/12/2015 12:16:00 PM	Analyst:	585
Instrument ID:	VOCMS18		
Sample Numbers:	L742615-03, -04, -05, -06, -07, -08, -09		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control	% Rec	Control RPD	
							Limits	Qual	% RPD	Limits Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0254	102	0.0248	99	74.2 - 124		2.62	20
1,1,1-Trichloroethane	1	0.025	0.0261	104	0.0252	101	73.2 - 123		3.38	20
1,1,2,2-Tetrachloroethane	1	0.025	0.0279	112	0.0283	113	70.7 - 122		1.25	20
1,1,2-Trichloroethane	1	0.025	0.0254	102	0.0253	101	77.7 - 118		0.6	20
1,1-Dichloroethane	1	0.025	0.0255	102	0.0247	98.8	70.7 - 126		2.96	20
1,1-Dichloroethene	1	0.025	0.0256	103	0.0243	97.1	67.8 - 129		5.48	20
1,2-Dibromoethane	1	0.025	0.0258	103	0.0254	102	76.6 - 121		1.6	20
1,2-Dichloroethane	1	0.025	0.0257	103	0.0249	99.6	68.8 - 124		3.2	20
Benzene	1	0.025	0.0248	99.1	0.0239	95.7	74.8 - 121		3.55	20
Carbon tetrachloride	1	0.025	0.0253	101	0.0252	101	70.2 - 123		0.48	20
Chloroform	1	0.025	0.0236	94.4	0.0231	92.5	76 - 121		1.94	20
Ethylbenzene	1	0.025	0.0255	102	0.0246	98.4	78.8 - 122		3.75	20
m&p-Xylenes	1	0.05	0.0495	98.9	0.0472	94.5	78.8 - 121		4.61	20
Methylene Chloride	1	0.025	0.0234	93.7	0.0227	90.8	70.3 - 120		3.12	20
o-Xylene	1	0.025	0.0256	102	0.0245	98.2	77.6 - 122		4.05	20
Tetrachloroethene	1	0.025	0.0252	101	0.0243	97.2	72.6 - 126		3.5	20
Toluene	1	0.025	0.0241	96.5	0.0229	91.5	79.7 - 116		5.27	20
Vinyl chloride	1	0.025	0.0266	106	0.0255	102	65.9 - 128		4.32	20
Xylenes, Total	1	0.075	0.0750	100	0.0718	95.7	78.7 - 121		4.42	20

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 3:09:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742615-01, -02, -10, -11		

Matrix Spike / Matrix Spike Duplicate

L742643-02

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
1,1,1,2-Tetrachloroethane	1	0.025	<0.0004	0.0281	112	0.0264	106	64 - 128		5.99	20	
1,1,1-Trichloroethane	1	0.025	<0.0003	0.0267	107	0.0259	104	58.7 - 134		2.85	20	
1,1,2,2-Tetrachloroethane	1	0.025	<0.0001	0.0284	114	0.0269	108	56 - 132		5.54	22.2	
1,1,2-Trichloroethane	1	0.025	<0.0004	0.0261	105	0.0256	103	66.3 - 125		2.01	20	
1,1-Dichloroethane	1	0.025	<0.0003	0.0255	102	0.0248	99.2	58.5 - 132		2.69	20	
1,1-Dichloroethene	1	0.025	<0.0004	0.0254	102	0.0251	101	51.1 - 140		1.26	20.2	
1,2-Dibromoethane	1	0.025	<0.0004	0.0288	115	0.0271	108	67.1 - 125		6.22	20	
1,2-Dichloroethane	1	0.025	<0.0004	0.0260	104	0.0251	101	60 - 126		3.44	20	
Benzene	1	0.025	<0.0003	0.0250	100	0.0242	96.7	54.3 - 133		3.54	20	
Carbon tetrachloride	1	0.025	<0.0004	0.0262	105	0.0260	104	55.7 - 134		0.91	20	
Chloroform	1	0.025	<0.0003	0.0240	95.8	0.0229	91.6	63 - 129		4.46	20	
Ethylbenzene	1	0.025	<0.0004	0.0280	112	0.0265	106	61.4 - 133		5.26	20	
m&p-Xylenes	1	0.05	<0.0007	0.0543	109	0.0519	104	61.7 - 133		4.41	20	
Methylene Chloride	1	0.025	<0.001	0.0236	94.3	0.0234	93.6	58.1 - 122		0.78	20	
o-Xylene	1	0.025	<0.0003	0.0274	109	0.0264	106	63.3 - 130		3.62	20	
Tetrachloroethene	1	0.025	<0.0004	0.0279	112	0.0257	103	53 - 139		8.1	20	
Toluene	1	0.025	<0.0008	0.0259	102	0.0252	99.3	61.4 - 130		2.76	20	
Vinyl chloride	1	0.025	<0.0003	0.0277	111	0.0271	108	47.8 - 137		2.37	20	
Xylenes, Total	1	0.075	<0.0011	0.0816	109	0.0783	104	63.3 - 131		4.14	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B
 Project No: TX000836.0008.00004 Matrix: Water - mg/L
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
 Collection Date: 1/5/2015 Analytic Batch: **WG764130**
 Analysis Date: 1/12/2015 12:16:00 PM Analyst: 585
 Instrument ID: VOCMS18
 Sample Numbers: L742615-03, -04, -05, -06, -07, -08, -09

Matrix Spike / Matrix Spike Duplicate

L742615-03

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
1,1,1,2-Tetrachloroethane	1	0.025	<0.0004	0.0251	100	0.0235	94.1	70.5 - 132		6.53	20	
1,1,1-Trichloroethane	1	0.025	<0.0003	0.0269	107	0.0256	103	58.7 - 134		4.65	20	
1,1,2,2-Tetrachloroethane	1	0.025	<0.0001	0.0291	116	0.0263	105	64.9 - 145		9.81	20	
1,1,2-Trichloroethane	1	0.025	<0.0004	0.0256	102	0.0234	93.6	74.1 - 130		8.8	20	
1,1-Dichloroethane	1	0.025	<0.0003	0.0261	104	0.0246	98.2	64 - 134		5.93	20	
1,1-Dichloroethene	1	0.025	<0.0004	0.0269	108	0.0254	102	48.8 - 144		5.85	20	
1,2-Dibromoethane	1	0.025	<0.0004	0.0259	103	0.0240	95.9	73.8 - 131		7.63	20	
1,2-Dichloroethane	1	0.025	<0.0004	0.0257	103	0.0240	96.1	60.7 - 132		6.89	20	
Benzene	1	0.025	<0.0003	0.0256	102	0.0237	94.7	58.6 - 133		7.7	20	
Carbon tetrachloride	1	0.025	<0.0004	0.0270	108	0.0252	101	60.6 - 139		7.03	20	
Chloroform	1	0.025	<0.0003	0.0241	96.5	0.0227	91	66.1 - 133		5.87	20	
Ethylbenzene	1	0.025	<0.0004	0.0256	102	0.0237	94.8	62.7 - 136		7.71	20	
m&p-Xylenes	1	0.05	<0.0007	0.0488	97.7	0.0455	90.9	64.1 - 133		7.19	20	
Methylene Chloride	1	0.025	<0.001	0.0236	94.5	0.0218	87.1	61.5 - 125		8.13	20	
o-Xylene	1	0.025	<0.0003	0.0254	102	0.0234	93.5	67.1 - 133		8.32	20	
Tetrachloroethene	1	0.025	<0.0004	0.0256	102	0.0237	94.7	57.4 - 141		7.73	20	
Toluene	1	0.025	<0.0008	0.0246	98.5	0.0232	93	67.8 - 124		5.79	20	
Vinyl chloride	1	0.025	<0.0003	0.0282	113	0.0265	106	44.3 - 143		6.31	20	
Xylenes, Total	1	0.075	<0.0011	0.0743	99	0.0688	91.8	65.6 - 133		7.57	20	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 3:09:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742615-01, -02, -10, -11		

Internal Standard Response and Retention Time Summary

File ID: 0110_31

Analyzed: 01/10/15 180600

	IS1		IS2		IS3		DCB	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	425595	4.27	754129	4.59	124087	5.73	313970	8.10
Upper Limit	851000	4.77	1510000	5.09	248000	6.23	628000	8.60
Lower Limit	213000	3.77	377000	4.09	62000	5.23	157000	7.60
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L742615-11	445220	4.27	788248	4.59	122967	5.74	312576	8.10
L742615-01	447416	4.27	789775	4.59	121793	5.74	312357	8.10
L742615-02	442886	4.27	784433	4.59	123333	5.74	306164	8.10
L742615-10	442873	4.27	776830	4.59	126604	5.74	312317	8.10
MSD WG764014	432440	4.27	774231	4.59	124181	5.74	317130	8.10
MS WG764014	427661	4.27	766354	4.59	121356	5.74	310825	8.10
LCSD WG764014	424068	4.27	768997	4.59	124021	5.74	315224	8.10
LCS WG764014	422476	4.27	773987	4.59	122309	5.73	311888	8.10
BLANK WG764014	446368	4.27	792877	4.59	125605	5.74	315301	8.10

Legend:

IS1 -- PENTAFLUOROBENZENE
IS2 -- 1,4-DIFLUOROBENZENE
IS3 -- 2-BROMO-1-CHLOROPROPANE
DCB -- 1,4-DICHLOROBENZENE-D4

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764130
Analysis Date:	1/12/2015 12:16:00 PM	Analyst:	585
Instrument ID:	VOCMS18		
Sample Numbers:	L742615-03, -04, -05, -06, -07, -08, -09		

Internal Standard Response and Retention Time Summary

File ID: 0112_02
Analyzed: 01/12/15 080100

	IS1		IS2		IS3		DCB	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	441319	4.18	837695	4.50	134898	5.66	329971	8.05
Upper Limit	883000	4.68	1680000	5.00	270000	6.16	660000	8.55
Lower Limit	221000	3.68	419000	4.00	67400	5.16	165000	7.55
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L742615-03	378690	4.18	699104	4.50	107194	5.66	251939	8.06
L742615-04	386457	4.18	716303	4.50	112162	5.66	262650	8.06
L742615-05	400221	4.18	742520	4.50	114861	5.66	271761	8.06
L742615-06	360454	4.18	677997	4.50	107076	5.66	253416	8.06
L742615-07	386689	4.18	714897	4.50	110326	5.66	262426	8.06
L742615-08	373418	4.18	703402	4.50	109891	5.66	256357	8.06
L742615-09	365911	4.18	679038	4.50	104082	5.66	246688	8.06
MSD WG764130	375975	4.18	694679	4.50	113778	5.66	268246	8.05
MS WG764130	376490	4.18	698145	4.50	113269	5.66	273095	8.05
LCSD WG764130	414682	4.18	775473	4.50	122288	5.66	302400	8.05
LCS WG764130	410948	4.18	769019	4.50	120966	5.66	302345	8.06
BLANK WG764130	383588	4.18	710336	4.50	111746	5.66	263709	8.06

Legend:

IS1 -- PENTAFLUOROBENZENE
IS2 -- 1,4-DIFLUOROBENZENE
IS3 -- 2-BROMO-1-CHLOROPROPANE
DCB -- 1,4-DICHLOROBENZENE-D4

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764014
Analysis Date:	1/11/2015 3:09:00 AM	Analyst:	644
Instrument ID:	VOCMS16		
Sample Numbers:	L742615-01, -02, -10, -11		

Surrogate Summary

		BFB		DFM		TD8		TFT		
Laboratory										
Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L742615-01	VOCMS16	0110_55	0.0401	100	0.0384	96.1	0.0396	98.9		
L742615-02	VOCMS16	0110_56	0.0389	97.2	0.0387	96.7	0.0400	100		
L742615-10	VOCMS16	0110_57	0.0382	95.5	0.0392	98.1	0.0406	101		
L742615-11	VOCMS16	0110_43	0.0392	98.0	0.0386	96.5	0.0394	98.6		
LCS WG764014	VOCMS16	0110_32	0.0411	103	0.0394	98.4	0.0400	100	0.0408	102
LCSD WG764014	VOCMS16	0110_33	0.0404	101	0.0392	98.0	0.0403	101	0.0408	102
BLANK WG764014	VOCMS16	0110_36	0.0389	97.3	0.0392	98.0	0.0396	99.1	0.0406	101
MS WG764014	VOCMS16	0110_37	0.0407	102	0.0391	97.7	0.0406	101	0.0410	103
MSD WG764014	VOCMS16	0110_38	0.0395	98.8	0.0391	97.8	0.0403	101	0.0413	103

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 80.1 - 120

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 79 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 90 - 115

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764130
Analysis Date:	1/12/2015 12:16:00 PM	Analyst:	585
Instrument ID:	VOCMS18		
Sample Numbers:	L742615-03, -04, -05, -06, -07, -08, -09		

Surrogate Summary

		BFB		DFM		TD8		TFT	
Laboratory									
Sample ID	Instrument File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L742615-03	VOCMS18 0112_12	0.0400	100	0.0405	101	0.0408	102		
L742615-04	VOCMS18 0112_13	0.0398	99.4	0.0410	102	0.0412	103		
L742615-05	VOCMS18 0112_14	0.0391	97.8	0.0404	101	0.0407	102		
L742615-06	VOCMS18 0112_15	0.0395	98.7	0.0407	102	0.0408	102		
L742615-07	VOCMS18 0112_16	0.0392	98.1	0.0400	99.9	0.0405	101		
L742615-08	VOCMS18 0112_17	0.0398	99.5	0.0410	103	0.0409	102		
L742615-09	VOCMS18 0112_18	0.0398	99.5	0.0404	101	0.0404	101		
BLANK WG764130	VOCMS18 0112_09-2	0.0397	99.2	0.0401	100	0.0409	102	0.0417	104
LCS WG764130	VOCMS18 0112_03-2	0.0411	103	0.0408	102	0.0411	103	0.0410	103
LCSD WG764130	VOCMS18 0112_04-2	0.0414	103	0.0403	101	0.0409	102	0.0415	104
MS WG764130	VOCMS18 0112_06	0.0410	102	0.0410	103	0.0409	102		
MSD WG764130	VOCMS18 0112_07	0.0407	102	0.0403	101	0.0409	102		

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 80.1 - 120

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 79 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 90 - 115

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Diesel Range Organics by Method 8015		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764078
Analysis Date:	1/12/2015 11:39:00 PM	Analyst:	546
Instrument ID:	SVGC31	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
C10-C28 Diesel Range		< 0.100	< 0.0222	
C28-C40 Oil Range		< 0.100	< 0.0118	
Extractable Petroleum Hydrocarbon		< 0.100	< 0.0330	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.5202	101	70 - 130	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.5195	101	70 - 130	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.5202	101	1.5195	101	70 - 130	0.04	20		

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Diesel Range Organics by Method 8015		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764078
Analysis Date:	1/12/2015 11:39:00 PM	Analyst:	546
Instrument ID:	SVGC31	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Surrogate Summary

o-Terphenyl

Laboratory

Sample ID	Instrument	File ID	ppm	% Rec
L742615-01	SVGC31	0112_40	0.0198	98.8
L742615-02	SVGC31	0112_41	0.0195	97.4
L742615-03	SVGC31	0112_42	0.0192	96.0
L742615-04	SVGC31	0112_43	0.0192	96.1
L742615-05	SVGC31	0112_44	0.0187	93.7
L742615-06	SVGC31	0112_49	0.0190	94.9
L742615-07	SVGC31	0112_50	0.0192	96.0
L742615-08	SVGC31	0112_51	0.0184	92.1
L742615-09	SVGC31	0112_52	0.0192	95.8
L742615-10	SVGC31	0112_53	0.0193	96.5
BLANK WG764078	SVGC31	0112_05	0.0193	96.6
LCS WG764078	SVGC31	0112_06	0.0197	98.3
LCSD WG764078	SVGC31	0112_07	0.0197	98.4

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764081
Analysis Date:	1/12/2015 3:24:00 PM	Analyst:	280
Instrument ID:	BNAMS2	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
1-Methylnaphthalene	90-12-0	< 1.00	< 0.330	
2-Methylnaphthalene	91-57-6	< 1.00	< 0.311	
Benzo(a)pyrene	50-32-8	< 1.00	< 0.340	
Naphthalene	91-20-3	< 1.00	< 0.372	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764081
Analysis Date:	1/12/2015 3:24:00 PM	Analyst:	280
Instrument ID:	BNAMS2	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1-Methylnaphthalene	1	25	20.503	82	34.7 - 102	
2-Methylnaphthalene	1	25	19.064	76.3	33.8 - 98.6	
Benzo(a)pyrene	1	25	19.469	77.9	45.6 - 106	
Naphthalene	1	25	17.949	71.8	32.2 - 101	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1-Methylnaphthalene	1	25	19.696	78.8	34.7 - 102	
2-Methylnaphthalene	1	25	17.438	69.8	33.8 - 98.6	
Benzo(a)pyrene	1	25	17.629	70.5	45.6 - 106	
Naphthalene	1	25	16.557	66.2	32.2 - 101	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
1-Methylnaphthalene	1	25	20.503	82	19.696	78.8	34.7 - 102	4.02	24.9	
2-Methylnaphthalene	1	25	19.064	76.3	17.438	69.8	33.8 - 98.6	8.91	24.2	
Benzo(a)pyrene	1	25	19.469	77.9	17.629	70.5	45.6 - 106	9.92	20	
Naphthalene	1	25	17.949	71.8	16.557	66.2	32.2 - 101	8.07	23.8	

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764081
Analysis Date:	1/12/2015 3:24:00 PM	Analyst:	280
Instrument ID:	BNAMS2	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Internal Standard Response and Retention Time Summary

File ID: 0112_02
Analyzed: 01/12/15 133300

	DCB		NAP		ACE		PHEN	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	75836	5.45	297414	6.72	215991	8.61	436409	10.23
Upper Limit	152000	5.95	595000	7.22	432000	9.11	873000	10.73
Lower Limit	37900	4.95	149000	6.22	108000	8.11	218000	9.73
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L742615-01	74222	5.45	310072	6.72	204829	8.61	416361	10.23
L742615-02	80580	5.45	301845	6.72	207368	8.61	424632	10.23
L742615-03	78269	5.45	295301	6.72	202698	8.61	417237	10.23
L742615-04	81362	5.45	315209	6.72	214990	8.61	436422	10.23
L742615-05	79179	5.45	301565	6.72	210090	8.61	431922	10.23
L742615-06	78918	5.45	306272	6.72	198004	8.61	423947	10.23
L742615-07	72742	5.45	297408	6.72	206466	8.61	423382	10.23
L742615-08	80195	5.45	315740	6.72	223211	8.61	440133	10.23
L742615-09	78941	5.45	305635	6.72	209319	8.61	431119	10.23
L742615-10	80392	5.45	324715	6.72	222209	8.60	447865	10.23
LCSD WG764081	84073	5.45	343669	6.72	226537	8.61	458768	10.23
LCS WG764081	82602	5.45	306422	6.72	211121	8.61	439637	10.23
BLANK WG764081	77887	5.45	292477	6.72	207955	8.61	406978	10.23

Legend:

DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	1/5/2015	Analytic Batch:	WG764081
Analysis Date:	1/12/2015 3:24:00 PM	Analyst:	280
Instrument ID:	BNAMS2	Prep Date:	1/10/2015
Sample Numbers:	L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Internal Standard Response and Retention Time Summary

File ID: 0112_02
Analyzed: 01/12/15 133300

	DCB		CHR		PER	
	Response	RT	Response	RT	Response	RT
12 Hr. Std	75836	5.45	551086	13.12	682025	14.65
Upper Limit	152000	5.95	1100000	13.62	1360000	15.15
Lower Limit	37900	4.95	276000	12.62	341000	14.15
Sample ID	Response	RT	Response	RT	Response	RT
L742615-01	74222	5.45	526709	13.11	682763	14.62
L742615-02	80580	5.45	528045	13.11	688791	14.62
L742615-03	78269	5.45	523205	13.11	683634	14.63
L742615-04	81362	5.45	541770	13.11	699947	14.62
L742615-05	79179	5.45	521610	13.11	696563	14.63
L742615-06	78918	5.45	530706	13.11	688884	14.63
L742615-07	72742	5.45	515428	13.11	696865	14.63
L742615-08	80195	5.45	539415	13.11	688793	14.62
L742615-09	78941	5.45	537252	13.11	682351	14.62
L742615-10	80392	5.45	587079	13.11	763050	14.63
LCSD WG764081	84073	5.45	588631	13.11	750443	14.62
LCS WG764081	82602	5.45	553629	13.11	696007	14.62
BLANK WG764081	77887	5.45	503201	13.11	658933	14.62

Legend:

DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12



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Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test: Semi-Volatile Organic Compounds by Method 8270C
Project No: TX000836.0008.00004 Matrix: Water - ug/L
Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
Collection Date: 1/5/2015 Analytic Batch: **WG764081**
Analysis Date: 1/12/2015 3:24:00 PM Analyst: 280
Instrument ID: BNAMS2 Prep Date: 1/10/2015
Sample Numbers: L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10

Surrogate Summary

			TBP		FBP		2FP		NBZ	
Laboratory										
Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L742615-01	BNAMS2	0112_07	0.0194	97.2	0.00709	70.9	0.00876	43.8	0.00591	59.1
L742615-02	BNAMS2	0112_08	0.0157	78.5	0.00785	78.5	0.00781	39.1	0.00614	61.4
L742615-03	BNAMS2	0112_09	0.0156	77.9	0.00822	82.2	0.00828	41.4	0.00676	67.6
L742615-04	BNAMS2	0112_10	0.0168	84.1	0.00687	68.7	0.00652	32.6	0.00573	57.3
L742615-05	BNAMS2	0112_11	0.0143	71.7	0.00768	76.8	0.00412	20.6	0.00620	62.0
L742615-06	BNAMS2	0112_12	0.0177	88.7	0.00819	81.9	0.00618	30.9	0.00559	55.9
L742615-07	BNAMS2	0112_13	0.0206	103	0.00720	72.0	0.00989	49.5	0.00595	59.5
L742615-08	BNAMS2	0112_14	0.0182	91.1	0.00794	79.4	0.00914	45.7	0.00656	65.6
L742615-09	BNAMS2	0112_15	0.0167	83.4	0.00535	53.5	0.00705	35.2	0.00449	44.9
L742615-10	BNAMS2	0112_16	0.0118	59.2	0.00476	47.6	0.00418	20.9	0.00429	42.9
LCS WG764081	BNAMS2	0112_04	0.0216	108	0.00840	84.0	0.00860	43.0	0.00728	72.8
LCSD WG764081	BNAMS2	0112_05	0.0187	93.5	0.00750	75.0	0.00875	43.8	0.00600	60.0
BLANK WG764081	BNAMS2	0112_06	0.0239	120	0.00900	90.0	0.0113	56.7	0.00717	71.7

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



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Quality Control Summary

SDG: L742615

ARCADIS US - TX

Test: Semi-Volatile Organic Compounds by Method 8270C
Project No: TX000836.0008.00004 Matrix: Water - ug/L
Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
Collection Date: 1/5/2015 Analytic Batch: **WG764081**
Analysis Date: 1/12/2015 3:24:00 PM Analyst: 280
Instrument ID: BNAMS2 Prep Date: 1/10/2015
Sample Numbers: L742615-01, -02, -03, -04, -05, -06, -07, -08, -09, -10

Surrogate Summary

			TPH		PHL	
Laboratory						
Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec
L742615-01	BNAMS2	0112_07	0.00568	56.8	0.00627	31.3
L742615-02	BNAMS2	0112_08	0.00679	67.9	0.00486	24.3
L742615-03	BNAMS2	0112_09	0.00623	62.3	0.00616	30.8
L742615-04	BNAMS2	0112_10	0.00642	64.2	0.00490	24.5
L742615-05	BNAMS2	0112_11	0.00730	73.0	0.00306	15.3
L742615-06	BNAMS2	0112_12	0.00657	65.7	0.00500	25.0
L742615-07	BNAMS2	0112_13	0.00589	58.9	0.00634	31.7
L742615-08	BNAMS2	0112_14	0.00736	73.6	0.00576	28.8
L742615-09	BNAMS2	0112_15	0.00525	52.5	0.00509	25.4
L742615-10	BNAMS2	0112_16	0.00452	45.2	0.00341	17.1
LCS WG764081	BNAMS2	0112_04	0.00702	70.2	0.00574	28.7
LCSD WG764081	BNAMS2	0112_05	0.00589	58.9	0.00589	29.4
BLANK WG764081	BNAMS2	0112_06	0.00780	78.0	0.00784	39.2

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1

CHAIN OF CUSTODY LABORATORY
ANALYSIS REQUEST FORM

Lab Work Order #

D093

Send Results to:	Contact & Company Name:	Telephone:													
	ARCADIS US - TX	(713) 953-4800													
	Address:	Billing Information:													
	2929 Briarpark Dr. Suite 300	Attn: Accounts Payable 630 Plaza Drive, Suite 600 Highlands Ranch, CO 80129													
	City State Zip	E-mail to: maisha.turner@arcadis-us.com, melissa.osborne@arcadis-us.com, pam.krueger@arcadis-us.com													
	Houston TX 77042														
Project Name/Location (City, State):		Client Project #:	Lab Project #:												
Background Groundwater, Artesia, NM		TX000836.0008	ARCADHTX-NAVAJO												
Sampler's Printed Name:		Sampler's Signature:													
Ron Wood															
Sample ID	Collection		Type	Matrix	No. of	PARAMETER ANALYSIS & METHOD									
	Date	Time	Comp	Grab	Concs	8015 - DRO	8015 - GRO	6020 - Field Filtered Metals	6020 - Total Metals	9014 - Cyanide	353.2 - Anions (Cl, F, SO4, NO2, NO3)	2540 - Total Dissolved Solids	8260 - VOCs (List 2)	8270 - SVOCs (List 3)	903.1 - Radium 226/Radium 228
NP-5-0115-BG	1/5/15	1500		X	GW	16	X	X	X	X	X	X	X	X	X
EB-17-0115-BG	1/5/15	1630		X	GW	17									
MW-55-0115-BG	1/6/15	0915		X	GW	17									
UG-2-0115-BG	1/6/15	1045		X	GW	17									
UG-4-0115-BG	1/6/15	1220		X	GW	17									
MW-136-0115-BG	1/6/15	1350		X	GW	17									
UG-3R-0115-BG	1/6/15	1540		X	GW	17									
UG-1-0115-BG	1/6/15	1640		X	GW	17									
EB-18-0115-BG	1/6/15	1720		X	GW	17									
DUP-07-0115-BG				X	GW	17									
Trip Blank					GW	1									
					GW								X		
					GW										
					GW										
					GW										
Special Instructions/Comments:						☐ Special QA/QC Instructions (✓)									
Laboratory Information and Receipt						Relinquished By		Received By		Relinquished By		Laboratory Received By			
Lab Name:		Cooler Custody Seal (✓)		Printed Name:		Printed Name:		Printed Name:		Printed Name:		Printed Name:			
✓ Cooler packed with ice (✓)		✓ Intact ☐ Not Intact		Ron Wood											
Specify Turnaround Requirements		Sample Receipt:		Signature:		Signature:		Signature:		Signature:		Signature:			
Standard															
		Condition/Cooler Temp:		Firm:		Firm:		Firm:		Firm:		Firm:			
		34°		ARCADIS											
				Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:			
				1/7/15 1545		094W		170=Total		1/7/15 0900					

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620080483676
620080483654
88 of 88
3665



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Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Report Summary

Monday March 02, 2015

Report Number: L742618

Samples Received: 01/09/15

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Pam Langford , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/B10041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-0115-BG
Collected By : Ron Wood
Collection Date : 01/05/15 15:00

ESC Sample # : L742618-01

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 03/02/15 16:19 Printed: 03/02/15 16:43

L742618-01 (RA228) - subcontracted to Environmental Health Labs

L742618-01 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-17-0115-BG
Collected By : Ron Wood
Collection Date : 01/05/15 16:30

ESC Sample # : L742618-02

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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L742618-02 (RA228) - subcontracted to Environmental Health Labs

L742618-02 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 09:15

ESC Sample # : L742618-03

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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Reported: 03/02/15 16:19 Printed: 03/02/15 16:43

L742618-03 (RA226) - subcontracted to Environmental Health Labs

L742618-03 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 10:45

ESC Sample # : L742618-04

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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Reported: 03/02/15 16:19 Printed: 03/02/15 16:43

L742618-04 (RA226) - subcontracted to Environmental Health Labs

L742618-04 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 12:20

ESC Sample # : L742618-05

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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Reported: 03/02/15 16:19 Printed: 03/02/15 16:43

L742618-05 (RA228) - subcontracted to Environmental Health Labs

L742618-05 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-136-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 13:50

ESC Sample # : L742618-06

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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Reported: 03/02/15 16:19 Printed: 03/02/15 16:43

L742618-06 (RA226) - subcontracted to Environmental Health Labs

L742618-06 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 15:40

ESC Sample # : L742618-07

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/02/15 16:19 Printed: 03/02/15 16:43

L742618-07 (RA226) - subcontracted to Environmental Health Labs

L742618-07 (RA228) - subcontracted to Environmental Health Labs



12065 Lebanon Rd.
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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 16:40

ESC Sample # : L742618-08

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

The reported analytical results relate only to the sample submitted.

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L742618-08 (RA228) - subcontracted to Environmental Health Labs

L742618-08 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-18-0115-BG
Collected By : Ron Wood
Collection Date : 01/06/15 17:20

ESC Sample # : L742618-09

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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Reported: 03/02/15 16:19 Printed: 03/02/15 16:43

L742618-09 (RA226) - subcontracted to Environmental Health Labs

L742618-09 (RA228) - subcontracted to Environmental Health Labs



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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

March 02,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

Sample ID : DUP-07-0115-BG

Collected By : Ron Wood
Collection Date : 01/06/15 00:00

ESC Sample # : L742618-10

Site ID : BACKGROUND

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/27/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/27/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

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L742618-10 (RA228) - subcontracted to Environmental Health Labs

L742618-10 (RA226) - subcontracted to Environmental Health Labs

Quality Control Summary

SDG: L747445

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 11, 2015

Sample Receiving and Handling

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

Anions by Method 9056MOD

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, and -15 were analyzed in analytical batch WG768937. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample Duplicate Analysis

For analytical batch WG768937 sample duplicate analysis was performed on sample L747445-03. The relative percent difference exceeded the method limits for Chloride and Sulfate.

For analytical batch WG768937 sample duplicate analysis was performed on sample L747445-14. The relative percent difference exceeded the method limits for Chloride and Sulfate.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG768937 matrix spike/matrix spike duplicate analysis was performed on sample L747445-10. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Total Dissolved Solids by Method 2540 C-2011

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, and -10 were analyzed in analytical batch WG768935. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L747445-11, -12, -13, and -15 were analyzed in analytical batch WG769110. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L747445-14 was analyzed in analytical batch WG769682. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample Duplicate Analysis

For analytical batch WG768935 sample duplicate analysis was performed on sample L747021-01. The relative percent differences were within the method limits for target analytes reported from this batch.

Quality Control Summary

SDG: L747445

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 11, 2015

For analytical batch WG768935 sample duplicate analysis was performed on sample L747445-10. The relative percent difference exceeded the method limits for Dissolved Solids.

For analytical batch WG769110 sample duplicate analysis was performed on sample L747021-05. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG769110 sample duplicate analysis was performed on sample L747445-15. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG769682 sample duplicate analysis was performed on sample L747445-14. The relative percent differences were within the method limits for target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

Precision for batch WG768935 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG769110 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG769682 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Cyanide by Method 9012B

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG769495. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L747445-15 was analyzed in analytical batch WG769776. The laboratory control sample associated with this sample was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample Duplicate Analysis

For analytical batch WG769495 sample duplicate analysis was performed on sample L747445-09. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG769495 sample duplicate analysis was performed on sample L746393-01. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG769776 sample duplicate analysis was performed on sample L747998-26. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG769776 sample duplicate analysis was performed on sample L747445-15. The relative percent differences were within the method limits for target analytes reported from this batch.

Quality Control Summary

SDG: L747445

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 11, 2015

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG769495 matrix spike/matrix spike duplicate analysis was performed on sample L747445-03. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG769776 matrix spike/matrix spike duplicate analysis was performed on sample L747740-04. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Nitrate-Nitrite by Method 353.2

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, and -15 were analyzed in analytical batch WG769945. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample Duplicate Analysis

For analytical batch WG769945 sample duplicate analysis was performed on sample L747445-10. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG769945 sample duplicate analysis was performed on sample L747445-15. The relative percent differences were within the method limits for target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG769945 matrix spike/matrix spike duplicate analysis was performed on sample L747459-05. The matrix spike recoveries were below laboratory control limits for Nitrate-Nitrite. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Mercury by Method 7470A

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, and -15 were analyzed in analytical batch WG768991. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG768991 matrix spike/matrix spike duplicate analysis was performed on sample L747445-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

Quality Control Summary

SDG: L747445

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 11, 2015

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Trace Metals by Method 6020

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, and -15 were analyzed in analytical batch WG769423. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, and -15 were analyzed in analytical batch WG769425. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG769423 matrix spike/matrix spike duplicate analysis was performed on sample L747445-01. The matrix spike recoveries were above laboratory control limits for Sodium,Dissolved. The matrix spike recoveries were below laboratory control limits for Calcium,Dissolved. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch. Calcium,Dissolved and Sodium,Dissolved did not meet the method limit criteria for the serial dilution.

For analytical batch WG769425 matrix spike/matrix spike duplicate analysis was performed on sample L747445-07. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

Blank Analysis

For batch WG769423, the concentration of Copper,Dissolved was above the method reporting limit.

The remaining method blank, the initial calibration blank, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Volatile TPH by Method 8015D/GRO

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, and -15 were analyzed in analytical batch WG769141. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG769141 matrix spike/matrix spike duplicate analysis was performed on sample L747170-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

Quality Control Summary

SDG: L747445

For: ARCADIS US - TX

**Project: Navajo Refining Company - Artesia,
August 11, 2015**

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Volatile Organic Compounds by Method 8260B

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, and -13 were analyzed in analytical batch WG769001. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Samples L747445-14, -15, and -16 were analyzed in analytical batch WG770400. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG769001 matrix spike/matrix spike duplicate analysis was performed on sample L747445-05. The matrix spike recoveries were above laboratory control limits for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2-Dibromoethane, 1,2-Dichloroethane, Benzene, Carbon tetrachloride, Chloroform, Ethylbenzene, m&p-Xylenes, Methylene Chloride, o-Xylene, Tetrachloroethene, Toluene, Vinyl chloride, and Xylenes, Total. The relative percent difference exceeded laboratory limits for 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethene, o-Xylene, Tetrachloroethene, Vinyl chloride, and Xylenes, Total.

For analytical batch WG770400 matrix spike/matrix spike duplicate analysis was performed on sample L747491-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Semi-Volatile Organic Compounds by Method 8270C

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, and -15 were analyzed in analytical batch WG769195. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

Precision for batch WG769195 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Quality Control Summary

SDG: L747445

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 11, 2015

Diesel Range Organics by Method 8015

Laboratory Control Sample

Samples L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, and -15 were analyzed in analytical batch WG769168. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG769168 matrix spike/matrix spike duplicate analysis was performed on sample L747683-03. The spiked sample was evaluated only for the parameters requested on that sample and did not require the parameters reported in this SDG. Therefore, no data is included in this report for this MS/D sample.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Nancy F. McLain
ESC Representative
ESC Lab Sciences



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Est. 1970

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Report Summary

Tuesday August 11, 2015

Report Number: L747445

Samples Received: 02/06/15

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Pam Langford , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/B10041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-01

Sample ID : MW-55-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/02/15 15:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	290000	2600	50000	ug/l		9056MOD	02/07/15	50
Fluoride	1900	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	2600000	3900	250000	ug/l		9056MOD	02/07/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	9900	39.	200	ug/l		353.2	02/13/15	2
Dissolved Solids	3900000	2800	10000	ug/l		2540 C-	02/09/15	1
Arsenic	5.8	0.25	2.0	ug/l		6020	02/12/15	1
Barium	10.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	1.4	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	20.	15.	100	ug/l	J	6020	02/12/15	1
Lead	1.3	0.24	2.0	ug/l	J	6020	02/12/15	1
Manganese	66.	0.25	5.0	ug/l		6020	02/12/15	1
Nickel	2.8	0.35	2.0	ug/l		6020	02/12/15	1
Selenium	21.	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	17.	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	20.	2.0	100	ug/l	J	6020	02/11/15	1
Arsenic, Dissolved	5.5	0.25	2.0	ug/l		6020	02/11/15	1
Barium, Dissolved	10.	0.36	5.0	ug/l		6020	02/11/15	1
Boron, Dissolved	940	1.5	20.	ug/l		6020	02/11/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/11/15	1
Calcium, Dissolved	590000	46.	1000	ug/l	01V	6020	02/11/15	1
Chromium, Dissolved	1.3	0.54	2.0	ug/l	J	6020	02/11/15	1
Copper, Dissolved	1.8	0.52	5.0	ug/l	JB	6020	02/11/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/11/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/11/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	02/11/15	1
Manganese, Dissolved	25.	0.25	5.0	ug/l		6020	02/11/15	1
Molybdenum, Dissolved	21.	0.14	5.0	ug/l		6020	02/11/15	1
Nickel, Dissolved	2.5	0.35	2.0	ug/l		6020	02/11/15	1
Potassium, Dissolved	870	37.	1000	ug/l	J	6020	02/11/15	1
Selenium, Dissolved	22.	0.38	2.0	ug/l		6020	02/11/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/11/15	1
Sodium, Dissolved	180000	110	1000	ug/l	01V	6020	02/11/15	1
Uranium, Dissolved	49.	0.33	10.	ug/l		6020	02/11/15	1
Vanadium, Dissolved	17.	0.18	5.0	ug/l		6020	02/11/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	02/11/15	1
Mercury	0.056	0.049	0.20	ug/l	J	7470A	02/09/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 08/11/15 10:44 Printed: 08/11/15 10:46



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-01

Sample ID : MW-55-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/02/15 15:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.0			% Rec.		8015D/G	02/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	94.7			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	101.			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	160	22.	100	ug/l		8015	02/10/15	1
C28-C40 Oil Range	98.	12.	100	ug/l	J	8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	98.8			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	41.1			% Rec.		8270C	02/09/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

MDL = Minimum Detection Limit = LOD = TRRP SDL

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-0215-BG
Collected By : Ron Wood
Collection Date : 02/02/15 15:20

ESC Sample # : L747445-01

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	29.8			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	57.8			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	74.8			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	78.0			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	69.5			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-0215-BG
Collected By : Ron Wood
Collection Date : 02/02/15 16:30

ESC Sample # : L747445-02

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	390000	2600	50000	ug/l		9056MOD	02/07/15	50
Fluoride	2600	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	3100000	3900	250000	ug/l		9056MOD	02/07/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	880	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	4300000	2800	10000	ug/l		2540 C-	02/09/15	1
Arsenic	4.7	0.25	2.0	ug/l		6020	02/12/15	1
Barium	9.2	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	0.58	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	31.	15.	100	ug/l	J	6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	0.33	0.25	5.0	ug/l	J	6020	02/12/15	1
Nickel	1.1	0.35	2.0	ug/l	J	6020	02/12/15	1
Selenium	9.4	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	21.	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	18.	2.0	100	ug/l	J	6020	02/11/15	1
Arsenic, Dissolved	4.6	0.25	2.0	ug/l		6020	02/11/15	1
Barium, Dissolved	7.9	0.36	5.0	ug/l		6020	02/11/15	1
Boron, Dissolved	1700	1.5	20.	ug/l		6020	02/11/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/11/15	1
Calcium, Dissolved	500000	46.	1000	ug/l		6020	02/11/15	1
Chromium, Dissolved	0.66	0.54	2.0	ug/l	J	6020	02/11/15	1
Copper, Dissolved	2.1	0.52	5.0	ug/l	JB	6020	02/11/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/11/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/11/15	1
Lead, Dissolved	0.55	0.24	2.0	ug/l	J	6020	02/11/15	1
Manganese, Dissolved	U	0.25	5.0	ug/l		6020	02/11/15	1
Molybdenum, Dissolved	33.	0.14	5.0	ug/l		6020	02/11/15	1
Nickel, Dissolved	1.4	0.35	2.0	ug/l	J	6020	02/11/15	1
Potassium, Dissolved	300	37.	1000	ug/l	J	6020	02/11/15	1
Selenium, Dissolved	8.8	0.38	2.0	ug/l		6020	02/11/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/11/15	1
Sodium, Dissolved	230000	110	1000	ug/l		6020	02/11/15	1
Uranium, Dissolved	200	0.33	10.	ug/l		6020	02/11/15	1
Vanadium, Dissolved	20.	0.18	5.0	ug/l		6020	02/11/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	02/11/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-02

Sample ID : NP-5-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/02/15 16:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.0			% Rec.		8015D/G	02/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	103.			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	99.8			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	50.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	27.	12.	100	ug/l	J	8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	99.7			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	41.2			% Rec.		8270C	02/09/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-0215-BG
Collected By : Ron Wood
Collection Date : 02/02/15 16:30

ESC Sample # : L747445-02

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	27.5			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	54.7			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	73.0			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	70.7			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	72.1			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-03

Sample ID : EB-20-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/02/15 17:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	350	52.	1000	ug/l	JP1	9056MOD	02/07/15	1
Fluoride	U	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	660	77.	5000	ug/l	JP1	9056MOD	02/07/15	1
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	160	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	10000	2800	10000	ug/l	JT4	2540 C-	02/09/15	1
Arsenic	0.79	0.25	2.0	ug/l	J	6020	02/12/15	1
Barium	U	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	1.0	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	86.	15.	100	ug/l	J	6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	0.74	0.25	5.0	ug/l	J	6020	02/12/15	1
Nickel	0.57	0.35	2.0	ug/l	J	6020	02/12/15	1
Selenium	U	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	U	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	130	2.0	100	ug/l		6020	02/11/15	1
Arsenic, Dissolved	0.72	0.25	2.0	ug/l	J	6020	02/11/15	1
Barium, Dissolved	0.77	0.36	5.0	ug/l	J	6020	02/11/15	1
Boron, Dissolved	86.	1.5	20.	ug/l		6020	02/11/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/11/15	1
Calcium, Dissolved	2000	46.	1000	ug/l		6020	02/11/15	1
Chromium, Dissolved	1.1	0.54	2.0	ug/l	J	6020	02/11/15	1
Copper, Dissolved	2.3	0.52	5.0	ug/l	JB	6020	02/11/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/11/15	1
Iron, Dissolved	95.	15.	100	ug/l	J	6020	02/11/15	1
Lead, Dissolved	0.53	0.24	2.0	ug/l	J	6020	02/11/15	1
Manganese, Dissolved	3.5	0.25	5.0	ug/l	J	6020	02/11/15	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	02/11/15	1
Nickel, Dissolved	0.82	0.35	2.0	ug/l	J	6020	02/11/15	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	02/11/15	1
Selenium, Dissolved	U	0.38	2.0	ug/l		6020	02/11/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/11/15	1
Sodium, Dissolved	370	110	1000	ug/l	J	6020	02/11/15	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	02/11/15	1
Vanadium, Dissolved	U	0.18	5.0	ug/l		6020	02/11/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	02/11/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-03

Sample ID : EB-20-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/02/15 17:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.5			% Rec.		8015D/G	02/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	96.7			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	98.2			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	99.7			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	02/10/15	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	103.			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	44.1			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-20-0215-BG
Collected By : Ron Wood
Collection Date : 02/02/15 17:40

ESC Sample # : L747445-03

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	27.8			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	56.2			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	78.9			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	72.1			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	75.0			% Rec.		8270C	02/09/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-04

Sample ID : MW-25-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 09:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	5900000	5200	100000	ug/l		9056MOD	02/07/15	100
Fluoride	1000	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	4100000	7700	500000	ug/l		9056MOD	02/07/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	340	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	12000000	2800	10000	ug/l		2540 C-	02/09/15	1
Arsenic	8.4	0.25	2.0	ug/l		6020	02/12/15	1
Barium	24.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	0.81	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	U	15.	100	ug/l		6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	700	0.25	5.0	ug/l		6020	02/12/15	1
Nickel	5.8	0.35	2.0	ug/l		6020	02/12/15	1
Selenium	33.	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	14.	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	54.	20.	1000	ug/l	J	6020	02/12/15	10
Arsenic, Dissolved	8.3	2.5	20.	ug/l	J	6020	02/12/15	10
Barium, Dissolved	23.	3.6	50.	ug/l	J	6020	02/12/15	10
Boron, Dissolved	420	15.	200	ug/l		6020	02/12/15	10
Cadmium, Dissolved	U	1.6	10.	ug/l		6020	02/12/15	10
Calcium, Dissolved	1000000	460	10000	ug/l		6020	02/12/15	10
Chromium, Dissolved	U	5.4	20.	ug/l		6020	02/12/15	10
Copper, Dissolved	U	5.2	50.	ug/l		6020	02/12/15	10
Cobalt, Dissolved	U	2.6	20.	ug/l		6020	02/12/15	10
Iron, Dissolved	160	150	1000	ug/l	J	6020	02/12/15	10
Lead, Dissolved	U	2.4	20.	ug/l		6020	02/12/15	10
Manganese, Dissolved	430	2.5	50.	ug/l		6020	02/12/15	10
Molybdenum, Dissolved	24.	1.4	50.	ug/l	J	6020	02/12/15	10
Nickel, Dissolved	7.1	3.5	20.	ug/l	J	6020	02/12/15	10
Potassium, Dissolved	7800	370	10000	ug/l	J	6020	02/12/15	10
Selenium, Dissolved	26.	3.8	20.	ug/l		6020	02/12/15	10
Silver, Dissolved	U	3.1	20.	ug/l		6020	02/12/15	10
Sodium, Dissolved	3400000	1100	10000	ug/l		6020	02/12/15	10
Uranium, Dissolved	26.	3.3	100	ug/l	J	6020	02/12/15	10
Vanadium, Dissolved	14.	1.8	50.	ug/l	J	6020	02/12/15	10
Zinc, Dissolved	U	26.	250	ug/l		6020	02/12/15	10
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 09:30

ESC Sample # : L747445-04

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	02/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	101.			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	93.1			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	1100	22.	100	ug/l		8015	02/10/15	1
C28-C40 Oil Range	900	12.	100	ug/l		8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	98.5			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	6.40			% Rec.	J2	8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 09:30

ESC Sample # : L747445-04

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	5.10			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	62.2			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	80.9			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	41.7			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	73.0			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-05

Sample ID : MW-17-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 11:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	140000	2600	50000	ug/l		9056MOD	02/07/15	50
Fluoride	1100	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	1100000	3900	250000	ug/l		9056MOD	02/07/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	2000	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	2000000	2800	10000	ug/l		2540 C-	02/09/15	1
Arsenic	0.94	0.25	2.0	ug/l	J	6020	02/12/15	1
Barium	16.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	1.8	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	15.	15.	100	ug/l	J	6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	2.2	0.25	5.0	ug/l	J	6020	02/12/15	1
Nickel	0.56	0.35	2.0	ug/l	J	6020	02/12/15	1
Selenium	8.4	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	6.8	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	20.	2.0	100	ug/l	J	6020	02/12/15	1
Arsenic, Dissolved	1.6	0.25	2.0	ug/l	J	6020	02/12/15	1
Barium, Dissolved	14.	0.36	5.0	ug/l		6020	02/12/15	1
Boron, Dissolved	120	1.5	20.	ug/l		6020	02/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/12/15	1
Calcium, Dissolved	380000	46.	1000	ug/l		6020	02/12/15	1
Chromium, Dissolved	1.5	0.54	2.0	ug/l	J	6020	02/12/15	1
Copper, Dissolved	U	0.52	5.0	ug/l		6020	02/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese, Dissolved	1.3	0.25	5.0	ug/l	J	6020	02/12/15	1
Molybdenum, Dissolved	11.	0.14	5.0	ug/l		6020	02/12/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	02/12/15	1
Potassium, Dissolved	2000	37.	1000	ug/l		6020	02/12/15	1
Selenium, Dissolved	7.8	0.38	2.0	ug/l		6020	02/12/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/12/15	1
Sodium, Dissolved	74000	110	1000	ug/l		6020	02/12/15	1
Uranium, Dissolved	2.9	0.33	10.	ug/l	J	6020	02/12/15	1
Vanadium, Dissolved	6.5	0.18	5.0	ug/l		6020	02/12/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	02/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-05

Sample ID : MW-17-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 11:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.2			% Rec.		8015D/G	02/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l	J5	8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l	J5	8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l	J5	8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l	J5	8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l	J5	8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l	J5	8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l	J5J3	8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l	J5	8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l	J5	8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l	J5	8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l	J5J3	8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l	J5	8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J5	8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l	J5J3	8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l	J5	8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l	J5J3	8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l	J5J3	8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l	J5	8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l	J3J5	8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	96.1			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	100.			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	47.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	13.	12.	100	ug/l	J	8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	104.			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	42.9			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 11:15

ESC Sample # : L747445-05

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	27.7			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	60.7			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	79.8			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	73.2			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	73.0			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-06

Sample ID : UG-1-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 13:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	98000	52.	1000	ug/l		9056MOD	02/07/15	1
Fluoride	850	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	1600000	3900	250000	ug/l		9056MOD	02/07/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	14000	98.	500	ug/l		353.2	02/13/15	5
Dissolved Solids	2800000	2800	10000	ug/l		2540 C-	02/09/15	1
Arsenic	1.3	0.25	2.0	ug/l	J	6020	02/12/15	1
Barium	15.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	1.4	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	49.	15.	100	ug/l	J	6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	0.87	0.25	5.0	ug/l	J	6020	02/12/15	1
Nickel	1.4	0.35	2.0	ug/l	J	6020	02/12/15	1
Selenium	9.7	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	12.	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	17.	2.0	100	ug/l	J	6020	02/12/15	1
Arsenic, Dissolved	2.0	0.25	2.0	ug/l		6020	02/12/15	1
Barium, Dissolved	15.	0.36	5.0	ug/l		6020	02/12/15	1
Boron, Dissolved	480	1.5	20.	ug/l		6020	02/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/12/15	1
Calcium, Dissolved	490000	46.	1000	ug/l		6020	02/12/15	1
Chromium, Dissolved	1.3	0.54	2.0	ug/l	J	6020	02/12/15	1
Copper, Dissolved	1.0	0.52	5.0	ug/l	JB	6020	02/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese, Dissolved	0.33	0.25	5.0	ug/l	J	6020	02/12/15	1
Molybdenum, Dissolved	5.7	0.14	5.0	ug/l		6020	02/12/15	1
Nickel, Dissolved	1.1	0.35	2.0	ug/l	J	6020	02/12/15	1
Potassium, Dissolved	1300	37.	1000	ug/l		6020	02/12/15	1
Selenium, Dissolved	9.4	0.38	2.0	ug/l		6020	02/12/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/12/15	1
Sodium, Dissolved	90000	110	1000	ug/l		6020	02/12/15	1
Uranium, Dissolved	23.	0.33	10.	ug/l		6020	02/12/15	1
Vanadium, Dissolved	12.	0.18	5.0	ug/l		6020	02/12/15	1
Zinc, Dissolved	3.8	2.6	25.	ug/l	J	6020	02/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL = TRRP MQL

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-06

Sample ID : UG-1-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 13:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.0			% Rec.		8015D/G	02/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	101.			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	97.5			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	50.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	20.	12.	100	ug/l	J	8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	101.			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	43.1			% Rec.		8270C	02/09/15	1

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 13:00

ESC Sample # : L747445-06

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	28.6			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	62.5			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	73.9			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	70.9			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	67.6			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-07

Sample ID : UG-4-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 14:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	50000	52.	1000	ug/l		9056MOD	02/07/15	1
Fluoride	640	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	2500000	3900	250000	ug/l		9056MOD	02/07/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	430	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	3700000	2800	10000	ug/l		2540 C-	02/09/15	1
Arsenic	1.6	0.25	2.0	ug/l	J	6020	02/12/15	1
Barium	26.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	1.1	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	250	15.	100	ug/l		6020	02/12/15	1
Lead	0.42	0.24	2.0	ug/l	J	6020	02/12/15	1
Manganese	58.	0.25	5.0	ug/l		6020	02/12/15	1
Nickel	2.4	0.35	2.0	ug/l		6020	02/12/15	1
Selenium	6.6	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	6.3	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	8.4	2.0	100	ug/l	J	6020	02/12/15	1
Arsenic, Dissolved	0.88	0.25	2.0	ug/l	J	6020	02/12/15	1
Barium, Dissolved	23.	0.36	5.0	ug/l		6020	02/12/15	1
Boron, Dissolved	970	1.5	20.	ug/l		6020	02/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/12/15	1
Calcium, Dissolved	580000	46.	1000	ug/l		6020	02/12/15	1
Chromium, Dissolved	0.96	0.54	2.0	ug/l	J	6020	02/12/15	1
Copper, Dissolved	1.7	0.52	5.0	ug/l	JB	6020	02/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese, Dissolved	49.	0.25	5.0	ug/l		6020	02/12/15	1
Molybdenum, Dissolved	4.7	0.14	5.0	ug/l	J	6020	02/12/15	1
Nickel, Dissolved	1.9	0.35	2.0	ug/l	J	6020	02/12/15	1
Potassium, Dissolved	2600	37.	1000	ug/l		6020	02/12/15	1
Selenium, Dissolved	6.2	0.38	2.0	ug/l		6020	02/12/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/12/15	1
Sodium, Dissolved	230000	110	1000	ug/l		6020	02/12/15	1
Uranium, Dissolved	35.	0.33	10.	ug/l		6020	02/12/15	1
Vanadium, Dissolved	5.3	0.18	5.0	ug/l		6020	02/12/15	1
Zinc, Dissolved	6.7	2.6	25.	ug/l	J	6020	02/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-07

Sample ID : UG-4-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 14:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	02/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	103.			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	94.5			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	52.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	20.	12.	100	ug/l	J	8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	99.3			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	29.1			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 14:00

ESC Sample # : L747445-07

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	18.7			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	67.2			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	81.5			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	56.3			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	79.6			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 15:30

ESC Sample # : L747445-08

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	27000	52.	1000	ug/l		9056MOD	02/07/15	1
Fluoride	660	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	1300000	3900	250000	ug/l		9056MOD	02/07/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	1000	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	2000000	2800	10000	ug/l		2540 C-	02/09/15	1
Arsenic	2.4	0.25	2.0	ug/l		6020	02/12/15	1
Barium	20.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	0.99	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	45.	15.	100	ug/l	J	6020	02/12/15	1
Lead	0.32	0.24	2.0	ug/l	J	6020	02/12/15	1
Manganese	1.5	0.25	5.0	ug/l	J	6020	02/12/15	1
Nickel	1.1	0.35	2.0	ug/l	J	6020	02/12/15	1
Selenium	3.8	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	9.7	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	17.	2.0	100	ug/l	J	6020	02/12/15	1
Arsenic, Dissolved	2.3	0.25	2.0	ug/l		6020	02/12/15	1
Barium, Dissolved	19.	0.36	5.0	ug/l		6020	02/12/15	1
Boron, Dissolved	240	1.5	20.	ug/l		6020	02/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/12/15	1
Calcium, Dissolved	400000	46.	1000	ug/l		6020	02/12/15	1
Chromium, Dissolved	0.70	0.54	2.0	ug/l	J	6020	02/12/15	1
Copper, Dissolved	3.4	0.52	5.0	ug/l	JB	6020	02/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese, Dissolved	0.44	0.25	5.0	ug/l	J	6020	02/12/15	1
Molybdenum, Dissolved	3.7	0.14	5.0	ug/l	J	6020	02/12/15	1
Nickel, Dissolved	1.0	0.35	2.0	ug/l	J	6020	02/12/15	1
Potassium, Dissolved	1700	37.	1000	ug/l		6020	02/12/15	1
Selenium, Dissolved	3.6	0.38	2.0	ug/l		6020	02/12/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/12/15	1
Sodium, Dissolved	62000	110	1000	ug/l		6020	02/12/15	1
Uranium, Dissolved	11.	0.33	10.	ug/l		6020	02/12/15	1
Vanadium, Dissolved	9.2	0.18	5.0	ug/l		6020	02/12/15	1
Zinc, Dissolved	7.5	2.6	25.	ug/l	J	6020	02/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 15:30

ESC Sample # : L747445-08

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.3			% Rec.		8015D/G	02/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	95.8			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	100.			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	02/10/15	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	102.			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	39.1			% Rec.		8270C	02/09/15	1

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 15:30

ESC Sample # : L747445-08

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	26.3			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	57.8			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	77.5			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	65.8			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	65.7			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-09

Sample ID : UG-2-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 16:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	88000	52.	1000	ug/l		9056MOD	02/07/15	1
Fluoride	1700	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	920000	3900	250000	ug/l		9056MOD	02/07/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	5100	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	1900000	2800	10000	ug/l		2540 C-	02/09/15	1
Arsenic	2.2	0.25	2.0	ug/l		6020	02/12/15	1
Barium	17.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	U	0.54	2.0	ug/l		6020	02/12/15	1
Iron	17.	15.	100	ug/l	J	6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	66.	0.25	5.0	ug/l		6020	02/12/15	1
Nickel	7.1	0.35	2.0	ug/l		6020	02/12/15	1
Selenium	2.8	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	12.	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	34.	2.0	100	ug/l	J	6020	02/12/15	1
Arsenic, Dissolved	2.9	0.25	2.0	ug/l		6020	02/12/15	1
Barium, Dissolved	16.	0.36	5.0	ug/l		6020	02/12/15	1
Boron, Dissolved	290	1.5	20.	ug/l		6020	02/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/12/15	1
Calcium, Dissolved	360000	46.	1000	ug/l		6020	02/12/15	1
Chromium, Dissolved	0.61	0.54	2.0	ug/l	J	6020	02/12/15	1
Copper, Dissolved	2.2	0.52	5.0	ug/l	JB	6020	02/12/15	1
Cobalt, Dissolved	0.46	0.26	2.0	ug/l	J	6020	02/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese, Dissolved	65.	0.25	5.0	ug/l		6020	02/12/15	1
Molybdenum, Dissolved	7.6	0.14	5.0	ug/l		6020	02/12/15	1
Nickel, Dissolved	6.9	0.35	2.0	ug/l		6020	02/12/15	1
Potassium, Dissolved	1800	37.	1000	ug/l		6020	02/12/15	1
Selenium, Dissolved	2.7	0.38	2.0	ug/l		6020	02/12/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/12/15	1
Sodium, Dissolved	92000	110	1000	ug/l		6020	02/12/15	1
Uranium, Dissolved	14.	0.33	10.	ug/l		6020	02/12/15	1
Vanadium, Dissolved	13.	0.18	5.0	ug/l		6020	02/12/15	1
Zinc, Dissolved	3.8	2.6	25.	ug/l	J	6020	02/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 16:40

ESC Sample # : L747445-09

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	02/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	101.			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	96.4			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	40.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	102.			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	36.3			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 16:40

ESC Sample # : L747445-09

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	24.5			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	58.3			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	75.1			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	67.0			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	68.5			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-10

Sample ID : EB-21-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 17:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	370	52.	1000	ug/l	J	9056MOD	02/07/15	1
Fluoride	U	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	860	77.	5000	ug/l	J	9056MOD	02/07/15	1
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	160	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	15000	2800	10000	ug/l	P1T4	2540 C-	02/09/15	1
Arsenic	0.75	0.25	2.0	ug/l	J	6020	02/12/15	1
Barium	U	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	0.92	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	27.	15.	100	ug/l	J	6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	0.34	0.25	5.0	ug/l	J	6020	02/12/15	1
Nickel	0.48	0.35	2.0	ug/l	J	6020	02/12/15	1
Selenium	U	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	U	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	22.	2.0	100	ug/l	J	6020	02/12/15	1
Arsenic, Dissolved	0.74	0.25	2.0	ug/l	J	6020	02/12/15	1
Barium, Dissolved	U	0.36	5.0	ug/l		6020	02/12/15	1
Boron, Dissolved	55.	1.5	20.	ug/l		6020	02/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/12/15	1
Calcium, Dissolved	150	46.	1000	ug/l	J	6020	02/12/15	1
Chromium, Dissolved	1.0	0.54	2.0	ug/l	J	6020	02/12/15	1
Copper, Dissolved	2.1	0.52	5.0	ug/l	JB	6020	02/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese, Dissolved	U	0.25	5.0	ug/l		6020	02/12/15	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	02/12/15	1
Nickel, Dissolved	0.37	0.35	2.0	ug/l	J	6020	02/12/15	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	02/12/15	1
Selenium, Dissolved	U	0.38	2.0	ug/l		6020	02/12/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/12/15	1
Sodium, Dissolved	140	110	1000	ug/l	J	6020	02/12/15	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	02/12/15	1
Vanadium, Dissolved	U	0.18	5.0	ug/l		6020	02/12/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	02/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

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ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-10

Sample ID : EB-21-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/03/15 17:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/11/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.5			% Rec.		8015D/G	02/11/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	96.6			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	101.			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	02/10/15	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	106.			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	38.4			% Rec.		8270C	02/09/15	1

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-21-0215-BG
Collected By : Ron Wood
Collection Date : 02/03/15 17:30

ESC Sample # : L747445-10

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	25.5			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	57.6			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	75.7			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	63.2			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	69.5			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-11

Sample ID : MW-136-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/04/15 11:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	250000	2600	50000	ug/l		9056MOD	02/07/15	50
Fluoride	1700	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	2300000	3900	250000	ug/l		9056MOD	02/07/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	690	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	3800000	2800	10000	ug/l		2540 C-	02/10/15	1
Arsenic	3.6	0.25	2.0	ug/l		6020	02/12/15	1
Barium	15.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	1.1	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	310	15.	100	ug/l		6020	02/12/15	1
Lead	0.68	0.24	2.0	ug/l	J	6020	02/12/15	1
Manganese	19.	0.25	5.0	ug/l		6020	02/12/15	1
Nickel	1.8	0.35	2.0	ug/l	J	6020	02/12/15	1
Selenium	4.3	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	19.	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	17.	10.	500	ug/l	J	6020	02/12/15	5
Arsenic, Dissolved	2.4	1.2	10.	ug/l	J	6020	02/12/15	5
Barium, Dissolved	11.	1.8	25.	ug/l	J	6020	02/12/15	5
Boron, Dissolved	620	7.5	100	ug/l		6020	02/12/15	5
Cadmium, Dissolved	U	0.80	5.0	ug/l		6020	02/12/15	5
Calcium, Dissolved	730000	230	5000	ug/l		6020	02/12/15	5
Chromium, Dissolved	U	2.7	10.	ug/l		6020	02/12/15	5
Copper, Dissolved	U	2.6	25.	ug/l		6020	02/12/15	5
Cobalt, Dissolved	U	1.3	10.	ug/l		6020	02/12/15	5
Iron, Dissolved	U	75.	500	ug/l		6020	02/12/15	5
Lead, Dissolved	U	1.2	10.	ug/l		6020	02/12/15	5
Manganese, Dissolved	4.1	1.2	25.	ug/l	J	6020	02/12/15	5
Molybdenum, Dissolved	6.7	0.70	25.	ug/l	J	6020	02/12/15	5
Nickel, Dissolved	U	1.8	10.	ug/l		6020	02/12/15	5
Potassium, Dissolved	2900	180	5000	ug/l	J	6020	02/12/15	5
Selenium, Dissolved	4.1	1.9	10.	ug/l	J	6020	02/12/15	5
Silver, Dissolved	U	1.6	10.	ug/l		6020	02/12/15	5
Sodium, Dissolved	110000	550	5000	ug/l		6020	02/12/15	5
Uranium, Dissolved	81.	1.6	50.	ug/l		6020	02/12/15	5
Vanadium, Dissolved	19.	0.90	25.	ug/l	J	6020	02/12/15	5
Zinc, Dissolved	U	13.	130	ug/l		6020	02/12/15	5
Mercury	0.061	0.049	0.20	ug/l	J	7470A	02/09/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-136-0215-BG
Collected By : Ron Wood
Collection Date : 02/04/15 11:35

ESC Sample # : L747445-11

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/11/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	02/11/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	95.1			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	98.2			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	25.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	14.	12.	100	ug/l	J	8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	95.6			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	27.1			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-136-0215-BG
Collected By : Ron Wood
Collection Date : 02/04/15 11:35

ESC Sample # : L747445-11

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	22.5			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	47.9			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	65.4			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	40.4			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	71.6			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-12

Sample ID : MW-13-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/04/15 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	2000000	5200	100000	ug/l		9056MOD	02/07/15	100
Fluoride	640	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	2400000	7700	500000	ug/l		9056MOD	02/07/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	1400	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	7200000	2800	10000	ug/l		2540 C-	02/10/15	1
Arsenic	2.2	0.25	2.0	ug/l		6020	02/12/15	1
Barium	26.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	0.70	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	50.	15.	100	ug/l	J	6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	49.	0.25	5.0	ug/l		6020	02/12/15	1
Nickel	0.77	0.35	2.0	ug/l	J	6020	02/12/15	1
Selenium	6.0	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	4.1	0.18	5.0	ug/l	J	6020	02/12/15	1
Aluminum, Dissolved	17.	10.	500	ug/l	J	6020	02/12/15	5
Arsenic, Dissolved	1.8	1.2	10.	ug/l	J	6020	02/12/15	5
Barium, Dissolved	25.	1.8	25.	ug/l	J	6020	02/12/15	5
Boron, Dissolved	620	7.5	100	ug/l		6020	02/12/15	5
Cadmium, Dissolved	U	0.80	5.0	ug/l		6020	02/12/15	5
Calcium, Dissolved	690000	230	5000	ug/l		6020	02/12/15	5
Chromium, Dissolved	U	2.7	10.	ug/l		6020	02/12/15	5
Copper, Dissolved	U	2.6	25.	ug/l		6020	02/12/15	5
Cobalt, Dissolved	U	1.3	10.	ug/l		6020	02/12/15	5
Iron, Dissolved	360	75.	500	ug/l	J	6020	02/12/15	5
Lead, Dissolved	U	1.2	10.	ug/l		6020	02/12/15	5
Manganese, Dissolved	160	1.2	25.	ug/l		6020	02/12/15	5
Molybdenum, Dissolved	3.4	0.70	25.	ug/l	J	6020	02/12/15	5
Nickel, Dissolved	3.3	1.8	10.	ug/l	J	6020	02/12/15	5
Potassium, Dissolved	5000	180	5000	ug/l		6020	02/12/15	5
Selenium, Dissolved	5.7	1.9	10.	ug/l	J	6020	02/12/15	5
Silver, Dissolved	U	1.6	10.	ug/l		6020	02/12/15	5
Sodium, Dissolved	1300000	550	5000	ug/l		6020	02/12/15	5
Uranium, Dissolved	11.	1.6	50.	ug/l	J	6020	02/12/15	5
Vanadium, Dissolved	4.8	0.90	25.	ug/l	J	6020	02/12/15	5
Zinc, Dissolved	U	13.	130	ug/l		6020	02/12/15	5
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-12

Sample ID : MW-13-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/04/15 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/11/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.4			% Rec.		8015D/G	02/11/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	97.1			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	97.9			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	31.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	19.	12.	100	ug/l	J	8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	97.2			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	39.8			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-0215-BG
Collected By : Ron Wood
Collection Date : 02/04/15 13:20

ESC Sample # : L747445-12

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	25.0			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	59.1			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	76.9			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	69.7			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	77.3			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-13

Sample ID : MW-12-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/04/15 14:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	2100000	5200	100000	ug/l		9056MOD	02/08/15	100
Fluoride	820	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	2700000	7700	500000	ug/l		9056MOD	02/08/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	2000	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	7800000	2800	10000	ug/l		2540 C-	02/10/15	1
Arsenic	2.3	0.25	2.0	ug/l		6020	02/12/15	1
Barium	22.	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	U	0.54	2.0	ug/l		6020	02/12/15	1
Iron	400	15.	100	ug/l		6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	240	0.25	5.0	ug/l		6020	02/12/15	1
Nickel	2.3	0.35	2.0	ug/l		6020	02/12/15	1
Selenium	2.9	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	1.9	0.18	5.0	ug/l	J	6020	02/12/15	1
Aluminum, Dissolved	28.	10.	500	ug/l	J	6020	02/12/15	5
Arsenic, Dissolved	U	1.2	10.	ug/l		6020	02/12/15	5
Barium, Dissolved	23.	1.8	25.	ug/l	J	6020	02/12/15	5
Boron, Dissolved	520	7.5	100	ug/l		6020	02/12/15	5
Cadmium, Dissolved	U	0.80	5.0	ug/l		6020	02/12/15	5
Calcium, Dissolved	800000	230	5000	ug/l		6020	02/12/15	5
Chromium, Dissolved	U	2.7	10.	ug/l		6020	02/12/15	5
Copper, Dissolved	U	2.6	25.	ug/l		6020	02/12/15	5
Cobalt, Dissolved	U	1.3	10.	ug/l		6020	02/12/15	5
Iron, Dissolved	96.	75.	500	ug/l	J	6020	02/12/15	5
Lead, Dissolved	U	1.2	10.	ug/l		6020	02/12/15	5
Manganese, Dissolved	260	1.2	25.	ug/l		6020	02/12/15	5
Molybdenum, Dissolved	4.8	0.70	25.	ug/l	J	6020	02/12/15	5
Nickel, Dissolved	3.0	1.8	10.	ug/l	J	6020	02/12/15	5
Potassium, Dissolved	5800	180	5000	ug/l		6020	02/12/15	5
Selenium, Dissolved	2.8	1.9	10.	ug/l	J	6020	02/12/15	5
Silver, Dissolved	U	1.6	10.	ug/l		6020	02/12/15	5
Sodium, Dissolved	1500000	550	5000	ug/l		6020	02/12/15	5
Uranium, Dissolved	4.3	1.6	50.	ug/l	J	6020	02/12/15	5
Vanadium, Dissolved	1.4	0.90	25.	ug/l	J	6020	02/12/15	5
Zinc, Dissolved	U	13.	130	ug/l		6020	02/12/15	5
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

U = ND (Not Detected)

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-12-0215-BG
Collected By : Ron Wood
Collection Date : 02/04/15 14:20

ESC Sample # : L747445-13

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/11/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.1			% Rec.		8015D/G	02/11/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/10/15	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	02/10/15	1
Dibromofluoromethane	96.6			% Rec.		8260B	02/10/15	1
4-Bromofluorobenzene	106.			% Rec.		8260B	02/10/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	45.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	22.	12.	100	ug/l	J	8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	99.2			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	19.6			% Rec.		8270C	02/09/15	1

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-12-0215-BG
Collected By : Ron Wood
Collection Date : 02/04/15 14:20

ESC Sample # : L747445-13

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	13.9			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	56.2			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	73.2			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	38.8			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	64.1			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-14

Sample ID : EB-22-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/04/15 14:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	520	52.	1000	ug/l	JP1	9056MOD	02/07/15	1
Fluoride	U	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	1300	77.	5000	ug/l	JP1	9056MOD	02/07/15	1
Cyanide	U	1.8	5.0	ug/l		9012B	02/11/15	1
Nitrate-Nitrite	78.	20.	100	ug/l	J	353.2	02/13/15	1
Dissolved Solids	U	2800	10000	ug/l	T4	2540 C-	02/12/15	1
Arsenic	U	0.25	2.0	ug/l		6020	02/12/15	1
Barium	0.45	0.36	5.0	ug/l	J	6020	02/12/15	1
Chromium	0.83	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	16.	15.	100	ug/l	J	6020	02/12/15	1
Lead	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese	0.50	0.25	5.0	ug/l	J	6020	02/12/15	1
Nickel	U	0.35	2.0	ug/l		6020	02/12/15	1
Selenium	U	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	U	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	24.	2.0	100	ug/l	J	6020	02/12/15	1
Arsenic, Dissolved	U	0.25	2.0	ug/l		6020	02/12/15	1
Barium, Dissolved	0.44	0.36	5.0	ug/l	J	6020	02/12/15	1
Boron, Dissolved	28.	1.5	20.	ug/l		6020	02/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/12/15	1
Calcium, Dissolved	99.	46.	1000	ug/l	J	6020	02/12/15	1
Chromium, Dissolved	U	0.54	2.0	ug/l		6020	02/12/15	1
Copper, Dissolved	U	0.52	5.0	ug/l		6020	02/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese, Dissolved	0.52	0.25	5.0	ug/l	J	6020	02/12/15	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	02/12/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	02/12/15	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	02/12/15	1
Selenium, Dissolved	U	0.38	2.0	ug/l		6020	02/12/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/12/15	1
Sodium, Dissolved	U	110	1000	ug/l		6020	02/12/15	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	02/12/15	1
Vanadium, Dissolved	U	0.18	5.0	ug/l		6020	02/12/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	02/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-14

Sample ID : EB-22-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/04/15 14:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/11/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.3			% Rec.		8015D/G	02/11/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/15/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/15/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/15/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/15/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/15/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/15/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/15/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/15/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/15/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/15/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/15/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/15/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/15/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/15/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/15/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/15/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/15/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/15/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/15/15	1
Surrogate Recovery								
Toluene-d8	99.8			% Rec.		8260B	02/15/15	1
Dibromofluoromethane	95.9			% Rec.		8260B	02/15/15	1
4-Bromofluorobenzene	106.			% Rec.		8260B	02/15/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	30.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	104.			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	0.43	0.37	1.0	ug/l	J	8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	42.1			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-22-0215-BG
Collected By : Ron Wood
Collection Date : 02/04/15 14:45

ESC Sample # : L747445-14

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	27.5			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	61.5			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	78.5			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	73.3			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	70.5			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-15

Sample ID : DUP-08-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/04/15 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	380000	2600	50000	ug/l		9056MOD	02/08/15	50
Fluoride	2500	9.9	100	ug/l		9056MOD	02/07/15	1
Sulfate	3000000	3900	250000	ug/l		9056MOD	02/08/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	02/12/15	1
Nitrate-Nitrite	900	20.	100	ug/l		353.2	02/13/15	1
Dissolved Solids	5400000	2800	10000	ug/l		2540 C-	02/10/15	1
Arsenic	4.4	0.25	2.0	ug/l		6020	02/12/15	1
Barium	8.5	0.36	5.0	ug/l		6020	02/12/15	1
Chromium	0.74	0.54	2.0	ug/l	J	6020	02/12/15	1
Iron	40.	15.	100	ug/l	J	6020	02/12/15	1
Lead	0.25	0.24	2.0	ug/l	J	6020	02/12/15	1
Manganese	0.52	0.25	5.0	ug/l	J	6020	02/12/15	1
Nickel	1.2	0.35	2.0	ug/l	J	6020	02/12/15	1
Selenium	9.1	0.38	2.0	ug/l		6020	02/12/15	1
Vanadium	21.	0.18	5.0	ug/l		6020	02/12/15	1
Aluminum, Dissolved	22.	2.0	100	ug/l	J	6020	02/12/15	1
Arsenic, Dissolved	4.2	0.25	2.0	ug/l		6020	02/12/15	1
Barium, Dissolved	8.3	0.36	5.0	ug/l		6020	02/12/15	1
Boron, Dissolved	1700	1.5	20.	ug/l		6020	02/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	02/12/15	1
Calcium, Dissolved	510000	46.	1000	ug/l		6020	02/12/15	1
Chromium, Dissolved	U	0.54	2.0	ug/l		6020	02/12/15	1
Copper, Dissolved	U	0.52	5.0	ug/l		6020	02/12/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	02/12/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	02/12/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	02/12/15	1
Manganese, Dissolved	U	0.25	5.0	ug/l		6020	02/12/15	1
Molybdenum, Dissolved	33.	0.14	5.0	ug/l		6020	02/12/15	1
Nickel, Dissolved	0.94	0.35	2.0	ug/l	J	6020	02/12/15	1
Potassium, Dissolved	300	37.	1000	ug/l	J	6020	02/12/15	1
Selenium, Dissolved	8.6	0.38	2.0	ug/l		6020	02/12/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	02/12/15	1
Sodium, Dissolved	220000	110	1000	ug/l		6020	02/12/15	1
Uranium, Dissolved	210	0.33	10.	ug/l		6020	02/12/15	1
Vanadium, Dissolved	20.	0.18	5.0	ug/l		6020	02/12/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	02/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	02/09/15	1

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Est. 1970

REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-15

Sample ID : DUP-08-0215-BG

Site ID :

Collected By : Ron Wood
Collection Date : 02/04/15 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	02/11/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	02/11/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	02/15/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	02/15/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	02/15/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	02/15/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	02/15/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	02/15/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	02/15/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	02/15/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	02/15/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	02/15/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	02/15/15	1
Toluene	U	0.78	5.0	ug/l		8260B	02/15/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	02/15/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	02/15/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	02/15/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	02/15/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	02/15/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	02/15/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	02/15/15	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	02/15/15	1
Dibromofluoromethane	98.4			% Rec.		8260B	02/15/15	1
4-Bromofluorobenzene	107.			% Rec.		8260B	02/15/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	35.	22.	100	ug/l	J	8015	02/10/15	1
C28-C40 Oil Range	21.	12.	100	ug/l	J	8015	02/10/15	1
Surrogate Recovery								
o-Terphenyl	98.6			% Rec.		8015	02/10/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	02/09/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	02/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	02/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	02/09/15	1
Surrogate Recovery								
2-Fluorophenol	47.6			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : DUP-08-0215-BG
Collected By : Ron Wood
Collection Date : 02/04/15 00:00

ESC Sample # : L747445-15

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	31.0			% Rec.		8270C	02/09/15	1
Nitrobenzene-d5	59.3			% Rec.		8270C	02/09/15	1
2-Fluorobiphenyl	79.1			% Rec.		8270C	02/09/15	1
2,4,6-Tribromophenol	75.7			% Rec.		8270C	02/09/15	1
p-Terphenyl-d14	68.0			% Rec.		8270C	02/09/15	1

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REPORT OF ANALYSIS

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 11, 2015

Date Received : February 06, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L747445-16

Sample ID : TRIPBLANK

Site ID :

Collected By : Ron Wood
Collection Date : 02/04/15 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.00033	0.0010	mg/l		8260B	02/15/15	1
Carbon tetrachloride	U	0.00038	0.0010	mg/l		8260B	02/15/15	1
Chloroform	U	0.00032	0.0050	mg/l		8260B	02/15/15	1
1,2-Dibromoethane	U	0.00038	0.0010	mg/l		8260B	02/15/15	1
1,1-Dichloroethane	U	0.00026	0.0010	mg/l		8260B	02/15/15	1
1,2-Dichloroethane	U	0.00036	0.0010	mg/l		8260B	02/15/15	1
1,1-Dichloroethene	U	0.00040	0.0010	mg/l		8260B	02/15/15	1
Ethylbenzene	U	0.00038	0.0010	mg/l		8260B	02/15/15	1
Methylene Chloride	U	0.0010	0.0050	mg/l		8260B	02/15/15	1
1,1,1,2-Tetrachloroethane	U	0.00038	0.0010	mg/l		8260B	02/15/15	1
1,1,2,2-Tetrachloroethane	U	0.00013	0.0010	mg/l		8260B	02/15/15	1
Toluene	U	0.00078	0.0050	mg/l		8260B	02/15/15	1
1,1,1-Trichloroethane	U	0.00032	0.0010	mg/l		8260B	02/15/15	1
Tetrachloroethene	U	0.00037	0.0010	mg/l		8260B	02/15/15	1
1,1,2-Trichloroethane	U	0.00038	0.0010	mg/l		8260B	02/15/15	1
Vinyl chloride	U	0.00026	0.0010	mg/l		8260B	02/15/15	1
o-Xylene	U	0.00034	0.0010	mg/l		8260B	02/15/15	1
m&p-Xylene	U	0.00072	0.0020	mg/l		8260B	02/15/15	1
Xylenes, Total	U	0.0011	0.0030	mg/l		8260B	02/15/15	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	02/15/15	1
Dibromofluoromethane	97.7			% Rec.		8260B	02/15/15	1
4-Bromofluorobenzene	105.			% Rec.		8260B	02/15/15	1

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L747445-01	WG769168	SAMP	C28-C40 Oil Range	R3019046	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Iron	R3019709	J
	WG769425	SAMP	Lead	R3019709	J
	WG768991	SAMP	Mercury	R3018836	J
	WG769423	SAMP	Aluminum, Dissolved	R3019467	J
	WG769423	SAMP	Calcium, Dissolved	R3019467	01V
	WG769423	SAMP	Chromium, Dissolved	R3019467	J
	WG769423	SAMP	Copper, Dissolved	R3019467	JB
	WG769423	SAMP	Potassium, Dissolved	R3019467	J
	WG769423	SAMP	Sodium, Dissolved	R3019467	01V
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG769168	SAMP	C28-C40 Oil Range	R3019046	J
	WG769425	SAMP	Chromium	R3019709	J
L747445-02	WG769425	SAMP	Iron	R3019709	J
	WG769425	SAMP	Manganese	R3019709	J
	WG769425	SAMP	Nickel	R3019709	J
	WG769423	SAMP	Aluminum, Dissolved	R3019467	J
	WG769423	SAMP	Chromium, Dissolved	R3019467	J
	WG769423	SAMP	Copper, Dissolved	R3019467	JB
	WG769423	SAMP	Lead, Dissolved	R3019467	J
	WG769423	SAMP	Nickel, Dissolved	R3019467	J
	WG769423	SAMP	Potassium, Dissolved	R3019467	J
	WG768937	SAMP	Chloride	R3018807	JP1
	WG768937	SAMP	Sulfate	R3018807	JP1
	WG768935	SAMP	Dissolved Solids	R3018932	JT4
	WG769425	SAMP	Arsenic	R3019709	J
	WG769425	SAMP	Chromium	R3019709	J
L747445-03	WG769425	SAMP	Iron	R3019709	J
	WG769425	SAMP	Manganese	R3019709	J
	WG769425	SAMP	Nickel	R3019709	J
	WG769423	SAMP	Arsenic, Dissolved	R3019467	J
	WG769423	SAMP	Barium, Dissolved	R3019467	J
	WG769423	SAMP	Chromium, Dissolved	R3019467	J
	WG769423	SAMP	Copper, Dissolved	R3019467	JB
	WG769423	SAMP	Iron, Dissolved	R3019467	J
	WG769423	SAMP	Lead, Dissolved	R3019467	J
	WG769423	SAMP	Manganese, Dissolved	R3019467	J
	WG769423	SAMP	Nickel, Dissolved	R3019467	J
	WG769423	SAMP	Sodium, Dissolved	R3019467	J
	WG769195	SAMP	2-Fluorophenol	R3019062	J2
	WG769425	SAMP	Chromium	R3019709	J
L747445-04	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Arsenic, Dissolved	R3019570	J
	WG769423	SAMP	Barium, Dissolved	R3019570	J
	WG769423	SAMP	Iron, Dissolved	R3019570	J
	WG769423	SAMP	Molybdenum, Dissolved	R3019570	J
	WG769423	SAMP	Nickel, Dissolved	R3019570	J
	WG769423	SAMP	Potassium, Dissolved	R3019570	J
	WG769423	SAMP	Uranium, Dissolved	R3019570	J
	WG769423	SAMP	Vanadium, Dissolved	R3019570	J
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG769168	SAMP	C28-C40 Oil Range	R3019046	J
	WG769425	SAMP	Arsenic	R3019709	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Iron	R3019709	J
L747445-05	WG769425	SAMP	Manganese	R3019709	J
	WG769425	SAMP	Nickel	R3019709	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Arsenic, Dissolved	R3019570	J
	WG769423	SAMP	Chromium, Dissolved	R3019570	J
	WG769423	SAMP	Manganese, Dissolved	R3019570	J
	WG769423	SAMP	Uranium, Dissolved	R3019570	J
	WG769001	SAMP	Benzene	R3019106	J5
	WG769001	SAMP	Carbon tetrachloride	R3019106	J5
	WG769001	SAMP	Chloroform	R3019106	J5
	WG769001	SAMP	1,2-Dibromoethane	R3019106	J5
	WG769001	SAMP	1,1-Dichloroethane	R3019106	J5
	WG769001	SAMP	1,2-Dichloroethane	R3019106	J5

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L747445-06	WG769001	SAMP	1,1-Dichloroethene	R3019106	J5J3
	WG769001	SAMP	Ethylbenzene	R3019106	J5
	WG769001	SAMP	Methylene Chloride	R3019106	J5
	WG769001	SAMP	1,1,1,2-Tetrachloroethane	R3019106	J5
	WG769001	SAMP	1,1,2,2-Tetrachloroethane	R3019106	J5J3
	WG769001	SAMP	Toluene	R3019106	J5
	WG769001	SAMP	1,1,1-Trichloroethane	R3019106	J5
	WG769001	SAMP	Tetrachloroethene	R3019106	J5J3
	WG769001	SAMP	1,1,2-Trichloroethane	R3019106	J5
	WG769001	SAMP	Vinyl chloride	R3019106	J5J3
	WG769001	SAMP	o-Xylene	R3019106	J5J3
	WG769001	SAMP	m&p-Xylene	R3019106	J5
	WG769001	SAMP	Xylenes, Total	R3019106	J3J5
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG769168	SAMP	C28-C40 Oil Range	R3019046	J
	WG769425	SAMP	Arsenic	R3019709	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Iron	R3019709	J
	WG769425	SAMP	Manganese	R3019709	J
	WG769425	SAMP	Nickel	R3019709	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Chromium, Dissolved	R3019570	J
	WG769423	SAMP	Copper, Dissolved	R3019570	JB
	WG769423	SAMP	Manganese, Dissolved	R3019570	J
	WG769423	SAMP	Nickel, Dissolved	R3019570	J
L747445-07	WG769423	SAMP	Zinc, Dissolved	R3019570	J
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG769168	SAMP	C28-C40 Oil Range	R3019046	J
	WG769425	SAMP	Arsenic	R3019709	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Lead	R3019709	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Arsenic, Dissolved	R3019570	J
	WG769423	SAMP	Chromium, Dissolved	R3019570	J
	WG769423	SAMP	Copper, Dissolved	R3019570	JB
	WG769423	SAMP	Molybdenum, Dissolved	R3019570	J
	WG769423	SAMP	Nickel, Dissolved	R3019570	J
L747445-08	WG769423	SAMP	Zinc, Dissolved	R3019570	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Iron	R3019709	J
	WG769425	SAMP	Lead	R3019709	J
	WG769425	SAMP	Manganese	R3019709	J
	WG769425	SAMP	Nickel	R3019709	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Chromium, Dissolved	R3019570	J
	WG769423	SAMP	Copper, Dissolved	R3019570	JB
	WG769423	SAMP	Manganese, Dissolved	R3019570	J
	WG769423	SAMP	Molybdenum, Dissolved	R3019570	J
	WG769423	SAMP	Nickel, Dissolved	R3019570	J
L747445-09	WG769423	SAMP	Zinc, Dissolved	R3019570	J
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG769425	SAMP	Iron	R3019709	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Chromium, Dissolved	R3019570	J
	WG769423	SAMP	Copper, Dissolved	R3019570	JB
	WG769423	SAMP	Cobalt, Dissolved	R3019570	J
	WG769423	SAMP	Zinc, Dissolved	R3019570	J
L747445-10	WG768937	SAMP	Chloride	R3018807	J
	WG768937	SAMP	Sulfate	R3018807	J
	WG768935	SAMP	Dissolved Solids	R3018932	P1T4
	WG769425	SAMP	Arsenic	R3019709	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Iron	R3019709	J
	WG769425	SAMP	Manganese	R3019709	J
	WG769425	SAMP	Nickel	R3019709	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Arsenic, Dissolved	R3019570	J
	WG769423	SAMP	Calcium, Dissolved	R3019570	J
	WG769423	SAMP	Chromium, Dissolved	R3019570	J
	WG769423	SAMP	Copper, Dissolved	R3019570	JB

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L747445-11	WG769423	SAMP	Nickel, Dissolved	R3019570	J
	WG769423	SAMP	Sodium, Dissolved	R3019570	J
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG769168	SAMP	C28-C40 Oil Range	R3019046	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Lead	R3019709	J
	WG769425	SAMP	Nickel	R3019709	J
	WG768991	SAMP	Mercury	R3018836	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Arsenic, Dissolved	R3019570	J
	WG769423	SAMP	Barium, Dissolved	R3019570	J
L747445-12	WG769423	SAMP	Manganese, Dissolved	R3019570	J
	WG769423	SAMP	Molybdenum, Dissolved	R3019570	J
	WG769423	SAMP	Potassium, Dissolved	R3019570	J
	WG769423	SAMP	Selenium, Dissolved	R3019570	J
	WG769423	SAMP	Vanadium, Dissolved	R3019570	J
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG769168	SAMP	C28-C40 Oil Range	R3019046	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Iron	R3019709	J
	WG769425	SAMP	Nickel	R3019709	J
	WG769425	SAMP	Vanadium	R3019709	J
L747445-13	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Arsenic, Dissolved	R3019570	J
	WG769423	SAMP	Barium, Dissolved	R3019570	J
	WG769423	SAMP	Iron, Dissolved	R3019570	J
	WG769423	SAMP	Molybdenum, Dissolved	R3019570	J
	WG769423	SAMP	Nickel, Dissolved	R3019570	J
	WG769423	SAMP	Selenium, Dissolved	R3019570	J
	WG769423	SAMP	Uranium, Dissolved	R3019570	J
	WG769423	SAMP	Vanadium, Dissolved	R3019570	J
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG769168	SAMP	C28-C40 Oil Range	R3019046	J
L747445-14	WG769425	SAMP	Vanadium	R3019709	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Barium, Dissolved	R3019570	J
	WG769423	SAMP	Iron, Dissolved	R3019570	J
	WG769423	SAMP	Molybdenum, Dissolved	R3019570	J
	WG769423	SAMP	Nickel, Dissolved	R3019570	J
	WG769423	SAMP	Selenium, Dissolved	R3019570	J
	WG769423	SAMP	Uranium, Dissolved	R3019570	J
	WG769423	SAMP	Vanadium, Dissolved	R3019570	J
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG768937	SAMP	Chloride	R3018807	JP1
L747445-15	WG768937	SAMP	Sulfate	R3018807	JP1
	WG769682	SAMP	Dissolved Solids	R3019603	T4
	WG769195	SAMP	Naphthalene	R3019062	J
	WG769425	SAMP	Barium	R3019709	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Iron	R3019709	J
	WG769425	SAMP	Manganese	R3019709	J
	WG769945	SAMP	Nitrate-Nitrite	R3019893	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Barium, Dissolved	R3019570	J
	WG769423	SAMP	Calcium, Dissolved	R3019570	J
L747445-15	WG769423	SAMP	Manganese, Dissolved	R3019570	J
	WG769168	SAMP	C10-C28 Diesel Range	R3019046	J
	WG769168	SAMP	C28-C40 Oil Range	R3019046	J
	WG769425	SAMP	Chromium	R3019709	J
	WG769425	SAMP	Iron	R3019709	J
	WG769425	SAMP	Lead	R3019709	J
	WG769425	SAMP	Manganese	R3019709	J
	WG769425	SAMP	Nickel	R3019709	J
	WG769423	SAMP	Aluminum, Dissolved	R3019570	J
	WG769423	SAMP	Nickel, Dissolved	R3019570	J
	WG769423	SAMP	Potassium, Dissolved	R3019570	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
B	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
01	(ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T4	(ESC) - Additional method/sample information: QNS - Quantity Not Sufficient
V	(ESC) - Additional QC Info: The sample concentration is too high to evaluate accurate spike recoveries.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Anions by Method 9056MOD
Project No: TX000836.0008.00004
Project: Navajo Refining Company - Artesia, NM
Collection Date: 2/2/2015
Analysis Date: 2/7/2015 8:53:00 PM
Instrument ID: IC-5
Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15

Matrix: Water - mg/L
EPA ID: TN00003
Analytic Batch: WG768937
Analyst: 236

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Chloride	16887-00-6	< 1.00	< 0.0519	
Fluoride	16984-48-8	< 0.100	< 0.00990	
Sulfate	14808-79-8	< 5.00	< 0.0774	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.948	100	90 - 110	
Fluoride	1	8	8.1928	102	90 - 110	
Sulfate	1	40	39.83	100	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.731	99	90 - 110	
Fluoride	1	8	8.1988	102	90 - 110	
Sulfate	1	40	39.806	100	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec	Control RPD
Chloride	1	40	39.948	100	39.731	99	90 - 110	1	20
Fluoride	1	8	8.1928	102	8.1988	102	90 - 110	0	20
Sulfate	1	40	39.83	100	39.806	100	90 - 110	0	20

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Anions by Method 9056MOD
Project No: TX000836.0008.00004
Project: Navajo Refining Company - Artesia, NM
Collection Date: 2/2/2015
Analysis Date: 2/7/2015 8:53:00 PM
Instrument ID: IC-5
Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15

Matrix: Water - mg/L
EPA ID: TN00003
Analytic Batch: **WG768937**
Analyst: 236

Sample Duplicate

L747445-03

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	1	0.3514	0.4907	33	20	P1
Fluoride	1	<0.0099	<0.0099		20	
Sulfate	1	0.6597	2.0772	104	20	P1

Sample Duplicate

L747445-14

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	1	0.5211	0.4027	26	20	P1
Fluoride	1	<0.0099	<0.0099		20	
Sulfate	1	1.2768	0.6301	68	20	P1

Matrix Spike / Matrix Spike Duplicate

L747445-10

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Chloride	1	50	0.3679	49.327	98	49.609	98	80 - 120		1	20	
Fluoride	1	5	<0.0099	4.9813	100	5.0329	101	80 - 120		1	20	
Sulfate	1	50	0.8647	49.625	98	49.777	98	80 - 120		0	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Cyanide by Method 9012B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769495
Analysis Date:	2/11/2015 1:46:00 PM	Analyst:	578
Instrument ID:	LACHAT4		
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Cyanide	57-12-5	< 0.00500	< 0.00180	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Cyanide	1	0.1	0.11	110	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Cyanide	1	0.1	0.106	106	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Limits	Qual
Cyanide	1	0.1	0.11	110	0.106	106	90 - 110	3.7	20		

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Cyanide by Method 9012B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769776
Analysis Date:	2/12/2015 5:07:00 PM	Analyst:	183
Instrument ID:	LACHAT4		
Sample Numbers:	L747445-15		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Cyanide	57-12-5	< 0.00500	< 0.00180	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Cyanide	1	0.1	0.105	105	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Cyanide	1	0.1	0.0953	95.3	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD % RPD	Control RPD Limits	Control RPD Qual
Cyanide	1	0.1	0.105	105	0.0953	95.3	90 - 110	9.69	20		

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Cyanide by Method 9012B
Project No: TX000836.0008.00004
Project: Navajo Refining Company - Artesia, NM
Collection Date: 2/2/2015
Analysis Date: 2/11/2015 1:46:00 PM
Instrument ID: LACHAT4
Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Matrix: Water - mg/L
EPA ID: TN00003
Analytic Batch: WG769495
Analyst: 578

Sample Duplicate

L747445-09

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Cyanide	1	<0.0018	<0.0018		20	

Sample Duplicate

L746393-01

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Cyanide	100	1.1	1.19	8.7	20	

Matrix Spike / Matrix Spike Duplicate

L747445-03

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Cyanide	1	0.2	<0.0018	0.212	106	0.209	104	90 - 110		1.43	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Cyanide by Method 9012B			Matrix:	Water - mg/L
Project No:	TX000836.0008.00004			EPA ID:	TN00003
Project:	Navajo Refining Company - Artesia, NM			Analytic Batch:	WG769776
Collection Date:	2/2/2015			Analyst:	183
Analysis Date:	2/12/2015 5:07:00 PM				
Instrument ID:	LACHAT4				
Sample Numbers:	L747445-15				

Sample Duplicate

L747998-26

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Cyanide	1	<0.0018	<0.0018		20	

Sample Duplicate

L747445-15

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Cyanide	1	<0.0018	<0.0018		20	

Matrix Spike / Matrix Spike Duplicate

L747740-04

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Cyanide	1	0.2	<0.0018	0.181	90.5	0.199	99.5	90 - 110		9.47	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Nitrate-Nitrite by Method 353.2
Project No: TX000836.0008.00004
Project: Navajo Refining Company - Artesia, NM
Collection Date: 2/2/2015
Analysis Date: 2/13/2015 3:05:00 AM
Instrument ID: LACHAT5
Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15

Matrix: Water - mg/L
EPA ID: TN00003
Analytic Batch: WG769945
Analyst: 578

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Nitrate-Nitrite	7727-37-9	< 0.100	< 0.0197	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Nitrate-Nitrite	1	5	4.77	95.4	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Nitrate-Nitrite	1	5	4.91	98.2	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD % RPD	Control RPD Limits	Control RPD Qual
Nitrate-Nitrite	1	5	4.77	95.4	4.91	98.2	90 - 110	2.89	20		

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Nitrate-Nitrite by Method 353.2
 Project No: TX000836.0008.00004
 Project: Navajo Refining Company - Artesia, NM
 Collection Date: 2/2/2015
 Analysis Date: 2/13/2015 3:05:00 AM
 Instrument ID: LACHAT5
 Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15

Matrix: Water - mg/L
 EPA ID: TN00003
Analytic Batch: WG769945
 Analyst: 578

Sample Duplicate

L747445-10

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Nitrate-Nitrite	1	0.16	0.159	0	20	

Sample Duplicate

L747445-15

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Nitrate-Nitrite	1	0.9	0.898	0	20	

Matrix Spike / Matrix Spike Duplicate

L747459-05

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Nitrate-Nitrite	1	5	0.03	4.09	81.2	3.77	74.8	90 - 110	J6	8.14	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG768935
Analysis Date:	2/9/2015 5:07:00 PM	Analyst:	519
Instrument ID:	WETBAL2		
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Dissolved Solids	DSOLIDS	< 10.0	< 2.82	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8680	98.6	85 - 115	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8810	100	85 - 115	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Limits	Qual
Dissolved Solids	1	8800	8680	98.6	8810	100	85 - 115	1.49	5		

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769110
Analysis Date:	2/10/2015 4:24:00 PM	Analyst:	36
Instrument ID:	WETBAL1		
Sample Numbers:	L747445-11, -12, -13, -15		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Dissolved Solids	DSOLIDS	< 10.0	< 2.82	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8730	99.2	85 - 115	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8640	98.2	85 - 115	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD % RPD	Control RPD Limits	Control RPD Qual
Dissolved Solids	1	8800	8730	99.2	8640	98.2	85 - 115	1.04	5		

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769682
Analysis Date:	2/12/2015 2:45:00 PM	Analyst:	36
Instrument ID:	WETBAL1		
Sample Numbers:	L747445-14		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Dissolved Solids	DSOLIDS	< 10.0	< 2.82	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8750	99.4	85 - 115	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8780	99.8	85 - 115	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD % RPD	Control RPD Limits	Control RPD Qual
Dissolved Solids	1	8800	8750	99.4	8780	99.8	85 - 115	0.34	5		

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG768935
Analysis Date:	2/9/2015 5:07:00 PM	Analyst:	519
Instrument ID:	WETBAL2		
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10		

Sample Duplicate

L747021-01

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	1262.5	1240	1.8	5	

Sample Duplicate

L747445-10

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	15	16	6.45	5	P1

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769110
Analysis Date:	2/10/2015 4:24:00 PM	Analyst:	36
Instrument ID:	WETBAL1		
Sample Numbers:	L747445-11, -12, -13, -15		

Sample Duplicate

L747021-05

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	1088	1080	0.74	5	

Sample Duplicate

L747445-15

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	5380	5340	0.75	5	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Total Dissolved Solids by Method 2540 C-2011		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769682
Analysis Date:	2/12/2015 2:45:00 PM	Analyst:	36
Instrument ID:	WETBAL1		
Sample Numbers:	L747445-14		

Sample Duplicate

L747445-14

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	<2.82	<2.82		5	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Mercury by Method 7470A		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG768991
Analysis Date:	2/9/2015 8:51:00 AM	Analyst:	657
Instrument ID:	CVAA4	Prep Date:	2/6/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Mercury	7439-97-6	< 0.200	< 0.0490	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Mercury	1	3	2.8747	96	85 - 115	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Mercury	1	3	2.8485	95	85 - 115	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
Mercury	1	3	2.8747	96	2.8485	95	85 - 115	1	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Mercury by Method 7470A		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG768991
Analysis Date:	2/9/2015 8:51:00 AM	Analyst:	657
Instrument ID:	CVAA4	Prep Date:	2/6/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Matrix Spike / Matrix Spike Duplicate

L747445-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Mercury	1	3	0.0561	2.9460	96	2.9511	97	80 - 120		0	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769423
Analysis Date:	2/11/2015 9:19:00 PM	Analyst:	428
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Aluminum,Dissolved	7429-90-5	< 100	5.16	
Arsenic,Dissolved	7440-38-2	< 2.00	< 0.250	
Barium,Dissolved	7440-39-3	< 5.00	< 0.360	
Boron,Dissolved	7440-42-8	< 20.0	< 1.5	
Cadmium,Dissolved	7440-43-9	< 1.00	< 0.160	
Calcium,Dissolved	7440-70-2	< 1000	< 46.0	
Chromium,Dissolved	7440-47-3	< 2.00	< 0.540	
Cobalt,Dissolved	7440-48-4	< 2.00	< 0.260	
Copper,Dissolved	7440-50-8	< 5.00	4.12	J
Iron,Dissolved	7439-89-6	< 100	< 15.0	
Lead,Dissolved	7439-92-1	< 2.00	0.823	
Manganese,Dissolved	7439-96-5	< 5.00	< 0.250	
Molybdenum,Dissolved	7439-98-7	< 5.00	< 0.140	
Nickel,Dissolved	7440-02-0	< 2.00	< 0.350	
Potassium,Dissolved	7440-09-7	< 1000	< 37.0	
Selenium,Dissolved	7782-49-2	< 2.00	< 0.380	
Silver,Dissolved	7440-22-4	< 2.00	< 0.310	
Sodium,Dissolved	7440-23-5	< 1000	< 110	
Uranium,Dissolved	7440-61-1	< 10.0	< 0.330	
Vanadium,Dissolved	7440-62-2	< 5.00	< 0.180	
Zinc,Dissolved	7440-66-6	< 25.0	< 2.56	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769425
Analysis Date:	2/12/2015 8:27:00 PM	Analyst:	117
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Arsenic	7440-38-2	< 2.00	< 0.250	
Barium	7440-39-3	< 5.00	< 0.360	
Chromium	7440-47-3	< 2.00	< 0.540	
Iron	7439-89-6	< 100	< 15.0	
Lead	7439-92-1	< 2.00	0.283	
Manganese	7439-96-5	< 5.00	< 0.250	
Nickel	7440-02-0	< 2.00	< 0.350	
Selenium	7782-49-2	< 2.00	< 0.380	
Vanadium	7440-62-2	< 5.00	< 0.180	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769423
Analysis Date:	2/11/2015 9:19:00 PM	Analyst:	428
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum,Dissolved	1	500	512.24	102	80 - 120	
Arsenic,Dissolved	1	50	50.745	101	80 - 120	
Barium,Dissolved	1	50	50.501	101	80 - 120	
Boron,Dissolved	1	50	50.038	100	80 - 120	
Cadmium,Dissolved	1	50	52.054	104	80 - 120	
Calcium,Dissolved	1	5000	5024.8	100	80 - 120	
Chromium,Dissolved	1	50	50.674	101	80 - 120	
Cobalt,Dissolved	1	50	50.857	102	80 - 120	
Copper,Dissolved	1	50	51.743	103	80 - 120	
Iron,Dissolved	1	500	498.99	99.8	80 - 120	
Lead,Dissolved	1	50	49.667	99	80 - 120	
Manganese,Dissolved	1	50	50.708	101	80 - 120	
Molybdenum,Dissolved	1	50	50.354	101	80 - 120	
Nickel,Dissolved	1	50	51.168	102	80 - 120	
Potassium,Dissolved	1	5000	4897.8	98	80 - 120	
Selenium,Dissolved	1	50	51.591	103	80 - 120	
Silver,Dissolved	1	50	46.498	93	80 - 120	
Sodium,Dissolved	1	5000	5167.0	103	80 - 120	
Uranium,Dissolved	1	50	49.219	98	80 - 120	
Vanadium,Dissolved	1	50	50.597	101	80 - 120	
Zinc,Dissolved	1	50	49.534	99	80 - 120	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769423
Analysis Date:	2/11/2015 9:19:00 PM	Analyst:	428
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum,Dissolved	1	500	501.46	100	80 - 120	
Arsenic,Dissolved	1	50	51.392	103	80 - 120	
Barium,Dissolved	1	50	51.246	102	80 - 120	
Boron,Dissolved	1	50	48.681	97	80 - 120	
Cadmium,Dissolved	1	50	52.273	105	80 - 120	
Calcium,Dissolved	1	5000	5038.8	101	80 - 120	
Chromium,Dissolved	1	50	49.016	98	80 - 120	
Cobalt,Dissolved	1	50	50.118	100	80 - 120	
Copper,Dissolved	1	50	51.158	102	80 - 120	
Iron,Dissolved	1	500	487.87	97.6	80 - 120	
Lead,Dissolved	1	50	48.796	98	80 - 120	
Manganese,Dissolved	1	50	49.798	100	80 - 120	
Molybdenum,Dissolved	1	50	49.477	99	80 - 120	
Nickel,Dissolved	1	50	49.686	99	80 - 120	
Potassium,Dissolved	1	5000	4808.9	96	80 - 120	
Selenium,Dissolved	1	50	50.015	100	80 - 120	
Silver,Dissolved	1	50	44.706	89	80 - 120	
Sodium,Dissolved	1	5000	5107.7	102	80 - 120	
Uranium,Dissolved	1	50	48.302	97	80 - 120	
Vanadium,Dissolved	1	50	49.146	98	80 - 120	
Zinc,Dissolved	1	50	47.948	96	80 - 120	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769423
Analysis Date:	2/11/2015 9:19:00 PM	Analyst:	428
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
Aluminum,Dissolved	1	500	512.24	102	501.46	100	80 - 120	2.13	20	
Arsenic,Dissolved	1	50	50.745	101	51.392	103	80 - 120	1	20	
Barium,Dissolved	1	50	50.501	101	51.246	102	80 - 120	1	20	
Boron,Dissolved	1	50	50.038	100	48.681	97	80 - 120	3	20	
Cadmium,Dissolved	1	50	52.054	104	52.273	105	80 - 120	0	20	
Calcium,Dissolved	1	5000	5024.8	100	5038.8	101	80 - 120	0	20	
Chromium,Dissolved	1	50	50.674	101	49.016	98	80 - 120	3	20	
Cobalt,Dissolved	1	50	50.857	102	50.118	100	80 - 120	1	20	
Copper,Dissolved	1	50	51.743	103	51.158	102	80 - 120	1	20	
Iron,Dissolved	1	500	498.99	99.8	487.87	97.6	80 - 120	2.25	20	
Lead,Dissolved	1	50	49.667	99	48.796	98	80 - 120	2	20	
Manganese,Dissolved	1	50	50.708	101	49.798	100	80 - 120	2	20	
Molybdenum,Dissolved	1	50	50.354	101	49.477	99	80 - 120	2	20	
Nickel,Dissolved	1	50	51.168	102	49.686	99	80 - 120	3	20	
Potassium,Dissolved	1	5000	4897.8	98	4808.9	96	80 - 120	2	20	
Selenium,Dissolved	1	50	51.591	103	50.015	100	80 - 120	3	20	
Silver,Dissolved	1	50	46.498	93	44.706	89	80 - 120	4	20	
Sodium,Dissolved	1	5000	5167.0	103	5107.7	102	80 - 120	1	20	
Uranium,Dissolved	1	50	49.219	98	48.302	97	80 - 120	2	20	
Vanadium,Dissolved	1	50	50.597	101	49.146	98	80 - 120	3	20	
Zinc,Dissolved	1	50	49.534	99	47.948	96	80 - 120	3	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769425
Analysis Date:	2/12/2015 8:27:00 PM	Analyst:	117
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Arsenic	1	50	57.358	115	80 - 120	
Barium	1	50	58.478	117	80 - 120	
Chromium	1	50	56.010	112	80 - 120	
Iron	1	500	574.62	115	80 - 120	
Lead	1	50	56.349	113	80 - 120	
Manganese	1	50	57.736	115	80 - 120	
Nickel	1	50	56.396	113	80 - 120	
Selenium	1	50	57.154	114	80 - 120	
Vanadium	1	50	56.989	114	80 - 120	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Arsenic	1	50	55.728	111	80 - 120	
Barium	1	50	58.266	117	80 - 120	
Chromium	1	50	56.491	113	80 - 120	
Iron	1	500	573.66	115	80 - 120	
Lead	1	50	56.451	113	80 - 120	
Manganese	1	50	57.233	114	80 - 120	
Nickel	1	50	57.188	114	80 - 120	
Selenium	1	50	56.921	114	80 - 120	
Vanadium	1	50	56.909	114	80 - 120	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769425
Analysis Date:	2/12/2015 8:27:00 PM	Analyst:	117
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	% RPD	Control RPD Limits	Qual
Arsenic	1	50	57.358	115	55.728	111	80 - 120		3		20
Barium	1	50	58.478	117	58.266	117	80 - 120		0		20
Chromium	1	50	56.010	112	56.491	113	80 - 120		1		20
Iron	1	500	574.62	115	573.66	115	80 - 120		0		20
Lead	1	50	56.349	113	56.451	113	80 - 120		0		20
Manganese	1	50	57.736	115	57.233	114	80 - 120		1		20
Nickel	1	50	56.396	113	57.188	114	80 - 120		1		20
Selenium	1	50	57.154	114	56.921	114	80 - 120		0		20
Vanadium	1	50	56.989	114	56.909	114	80 - 120		0		20

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769423
Analysis Date:	2/11/2015 9:19:00 PM	Analyst:	428
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Serial Dilution

L747445-01

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Aluminum,Dissolved	5	20.099	22.920	14	10	
Arsenic,Dissolved	5	5.5093	6.2917	14	10	
Barium,Dissolved	5	10.112	11.342	12	10	
Boron,Dissolved	5	944.63	1107.8	17	10	
Cadmium,Dissolved	5	<0.16	<0.8		10	
Calcium,Dissolved	5	586731	649291	11	10	O1
Chromium,Dissolved	5	1.3294	<2.7	5	10	
Cobalt,Dissolved	5	<0.26	<1.3		10	
Copper,Dissolved	5	1.8130	<2.6	19	10	
Iron,Dissolved	5	<15	<75		10	
Lead,Dissolved	5	<0.24	<1.2		10	
Manganese,Dissolved	5	25.290	27.844	10	10	
Molybdenum,Dissolved	5	20.769	22.532	8	10	
Nickel,Dissolved	5	2.4751	3.4182	38	10	
Potassium,Dissolved	5	873.53	889.96	2	10	
Selenium,Dissolved	5	21.553	27.025	25	10	
Silver,Dissolved	5	<0.31	<1.55		10	
Sodium,Dissolved	5	185474	209448	13	10	O1
Uranium,Dissolved	5	48.922	53.026	8	10	
Vanadium,Dissolved	5	17.050	18.774	10	10	
Zinc,Dissolved	5	<2.56	<12.8		10	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769423
Analysis Date:	2/11/2015 9:19:00 PM	Analyst:	428
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Matrix Spike / Matrix Spike Duplicate

L747445-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Aluminum,Dissolved	1	500	20.099	498.21	95.6	496.46	95.3	75 - 125		0.35	20	
Arsenic,Dissolved	1	50	5.5093	59.759	108	60.575	110	75 - 125		1	20	
Barium,Dissolved	1	50	10.112	60.541	101	60.789	101	75 - 125		0	20	
Boron,Dissolved	1	50	944.63	998.81	108	1005.7	122	75 - 125		1	20	
Cadmium,Dissolved	1	50	<0.16	51.280	103	52.563	105	75 - 125		2	20	
Calcium,Dissolved	1	5000	586731	582668	0	578960	0	75 - 125	V	1	20	
Chromium,Dissolved	1	50	1.3294	51.773	101	51.902	101	75 - 125		0	20	
Cobalt,Dissolved	1	50	<0.26	50.104	100	50.453	101	75 - 125		1	20	
Copper,Dissolved	1	50	1.8130	51.147	99	51.931	100	75 - 125		2	20	
Iron,Dissolved	1	500	<15	493.77	98.1	496.08	98.6	75 - 125		0.47	20	
Lead,Dissolved	1	50	<0.24	48.776	97	49.173	98	75 - 125		1	20	
Manganese,Dissolved	1	50	25.290	75.466	100	75.403	100	75 - 125		0	20	
Molybdenum,Dissolved	1	50	20.769	73.658	106	72.565	104	75 - 125		1	20	
Nickel,Dissolved	1	50	2.4751	50.952	97	51.004	97	75 - 125		0	20	
Potassium,Dissolved	1	5000	873.53	5555.7	94	5591.6	94	75 - 125		1	20	
Selenium,Dissolved	1	50	21.553	73.902	105	74.213	105	75 - 125		0	20	
Silver,Dissolved	1	50	<0.31	47.367	95	47.737	95	75 - 125		1	20	
Sodium,Dissolved	1	5000	185474	189594	82	191849	128	75 - 125	V	1	20	
Uranium,Dissolved	1	50	48.922	98.529	99	98.980	100	75 - 125		0	20	
Vanadium,Dissolved	1	50	17.050	68.377	103	68.798	103	75 - 125		1	20	
Zinc,Dissolved	1	50	<2.56	48.160	95	48.605	96	75 - 125		1	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Trace Metals by Method 6020		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769425
Analysis Date:	2/12/2015 8:27:00 PM	Analyst:	117
Instrument ID:	ICPMS9	Prep Date:	2/10/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Serial Dilution

L747445-07

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Arsenic	5	1.6483	1.8630	13	10	
Barium	5	26.393	28.445	8	10	
Chromium	5	1.1016	<2.7	41	10	
Iron	5	252.52	561.65	122	10	
Lead	5	0.4165	2.1276	411	10	
Manganese	5	58.030	63.901	10	10	
Nickel	5	2.4114	35.664	1379	10	
Selenium	5	6.5753	6.8864	5	10	
Vanadium	5	6.2755	6.4678	3	10	

Matrix Spike / Matrix Spike Duplicate

L747445-07

Analyte	Dil	Spike Value	Sample MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Arsenic	1	50	1.6483	61.713	120	62.600	122	75 - 125	1	20	
Barium	1	50	26.393	84.103	115	84.118	115	75 - 125	0	20	
Chromium	1	50	1.1016	57.321	112	57.813	113	75 - 125	1	20	
Iron	1	500	252.52	800.46	110	863.06	122	75 - 125	8	20	
Lead	1	50	0.4165	57.298	114	56.968	113	75 - 125	1	20	
Manganese	1	50	58.030	114.56	113	114.48	113	75 - 125	0	20	
Nickel	1	50	2.4114	57.502	110	58.082	111	75 - 125	1	20	
Selenium	1	50	6.5753	65.847	119	67.062	121	75 - 125	2	20	
Vanadium	1	50	6.2755	63.267	114	63.940	115	75 - 125	1	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769141
Analysis Date:	2/10/2015 4:11:00 PM	Analyst:	621
Instrument ID:	VOCGC7		
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
TPH (GC/FID) Low Fraction	8006-61-9	< 0.100	< 0.0314	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.3258	78.7	67 - 132	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.5480	82.7	67 - 132	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	4.3258	78.7	4.5480	82.7	67 - 132	5.01	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769141
Analysis Date:	2/10/2015 4:11:00 PM	Analyst:	621
Instrument ID:	VOCGC7		
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Matrix Spike / Matrix Spike Duplicate

L747170-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
TPH (GC/FID) Low Fraction	1	5.5	0.3601	4.9416	83.3	4.7462	79.7	50 - 143		4.03	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile TPH by Method 8015D/GRO		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769141
Analysis Date:	2/10/2015 4:11:00 PM	Analyst:	621
Instrument ID:	VOCGC7		
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Surrogate Summary

Laboratory

Sample ID	Instrument	File ID	ppm	% Rec
L747445-01	VOCGC7	0210_14	0.198	99.0
L747445-02	VOCGC7	0210_15	0.198	99.0
L747445-03	VOCGC7	0210_16	0.199	99.5
L747445-04	VOCGC7	0210_17	0.198	98.8
L747445-05	VOCGC7	0210_18	0.198	99.2
L747445-06	VOCGC7	0210_19	0.198	99.0
L747445-07	VOCGC7	0210_24	0.198	98.9
L747445-08	VOCGC7	0210_25	0.199	99.3
L747445-09	VOCGC7	0210_26	0.198	98.9
L747445-10	VOCGC7	0210_27	0.199	99.5
L747445-11	VOCGC7	0210_28	0.197	98.7
L747445-12	VOCGC7	0210_29	0.197	98.4
L747445-13	VOCGC7	0210_30	0.198	99.1
L747445-14	VOCGC7	0210_31	0.199	99.3
L747445-15	VOCGC7	0210_32	0.198	98.8
LCS WG769141	VOCGC7	0210_04	0.212	106
LCSD WG769141	VOCGC7	0210_05	0.212	106
MS WG769141	VOCGC7	0210_06	0.214	107
MSD WG769141	VOCGC7	0210_07	0.212	106
BLANK WG769141	VOCGC7	0210_09	0.199	99.3

--A,A,A-TRIFLUOROTOLUENE(FID)

True Value: 0.2 ppm Limits: 62 - 128

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B
 Project No: TX000836.0008.00004 Matrix: Water - mg/L
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
 Collection Date: 2/2/2015 **Analytic Batch: WG769001**
 Analysis Date: 2/10/2015 4:21:00 PM Analyst: 644
 Instrument ID: VOCMS23
 Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
1,1,1,2-Tetrachloroethane	630-20-6	< 0.00100	< 0.000385	
1,1,1-Trichloroethane	71-55-6	< 0.00100	< 0.000319	
1,1,2,2-Tetrachloroethane	79-34-5	< 0.00100	< 0.000130	
1,1,2-Trichloroethane	79-00-5	< 0.00100	< 0.000383	
1,1-Dichloroethane	75-34-3	< 0.00100	< 0.000259	
1,1-Dichloroethene	75-35-4	< 0.00100	< 0.000398	
1,2-Dibromoethane	106-93-4	< 0.00100	< 0.000381	
1,2-Dichloroethane	107-06-2	< 0.00100	< 0.000361	
Benzene	71-43-2	< 0.00100	< 0.000331	
Carbon tetrachloride	56-23-5	< 0.00100	< 0.000379	
Chloroform	67-66-3	< 0.00500	< 0.000324	
Ethylbenzene	100-41-4	< 0.00100	< 0.000384	
m&p-Xylenes	1330-20-7	< 0.00200	< 0.000719	
Methylene Chloride	75-09-2	< 0.00500	< 0.00100	
o-Xylene	95-47-6	< 0.00100	< 0.000341	
Tetrachloroethene	127-18-4	< 0.00100	< 0.000372	
Toluene	108-88-3	< 0.00500	< 0.000780	
Vinyl chloride	75-01-4	< 0.00100	< 0.000259	
Xylenes, Total	1330-20-7	< 0.00300	< 0.00106	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG770400
Analysis Date:	2/15/2015 2:03:00 AM	Analyst:	621
Instrument ID:	VOCMS24		
Sample Numbers:	L747445-14, -15, -16		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
1,1,1,2-Tetrachloroethane	630-20-6	< 0.00100	< 0.000385	
1,1,1-Trichloroethane	71-55-6	< 0.00100	< 0.000319	
1,1,2,2-Tetrachloroethane	79-34-5	< 0.00100	< 0.000130	
1,1,2-Trichloroethane	79-00-5	< 0.00100	< 0.000383	
1,1-Dichloroethane	75-34-3	< 0.00100	< 0.000259	
1,1-Dichloroethene	75-35-4	< 0.00100	< 0.000398	
1,2-Dibromoethane	106-93-4	< 0.00100	< 0.000381	
1,2-Dichloroethane	107-06-2	< 0.00100	< 0.000361	
Benzene	71-43-2	< 0.00100	< 0.000331	
Carbon tetrachloride	56-23-5	< 0.00100	< 0.000379	
Chloroform	67-66-3	< 0.00500	< 0.000324	
Ethylbenzene	100-41-4	< 0.00100	< 0.000384	
m&p-Xylenes	1330-20-7	< 0.00200	< 0.000719	
Methylene Chloride	75-09-2	< 0.00500	< 0.00100	
o-Xylene	95-47-6	< 0.00100	< 0.000341	
Tetrachloroethene	127-18-4	< 0.00100	< 0.000372	
Toluene	108-88-3	< 0.00500	< 0.000780	
Vinyl chloride	75-01-4	< 0.00100	< 0.000259	
Xylenes, Total	1330-20-7	< 0.00300	< 0.00106	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769001
Analysis Date:	2/10/2015 4:21:00 PM	Analyst:	644
Instrument ID:	VOCMS23		
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0255	102	74.2 - 124	
1,1,1-Trichloroethane	1	0.025	0.0233	93.1	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0238	95.4	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0253	101	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0227	90.9	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0282	113	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0247	98.8	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0222	88.9	68.8 - 124	
Benzene	1	0.025	0.0225	89.8	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0228	91.2	70.2 - 123	
Chloroform	1	0.025	0.0212	84.7	76 - 121	
Ethylbenzene	1	0.025	0.0249	99.6	78.8 - 122	
m&p-Xylenes	1	0.05	0.0506	101	78.8 - 121	
Methylene Chloride	1	0.025	0.0211	84.6	70.3 - 120	
o-Xylene	1	0.025	0.0246	98.2	77.6 - 122	
Tetrachloroethene	1	0.025	0.0261	104	72.6 - 126	
Toluene	1	0.025	0.0242	96.7	79.7 - 116	
Vinyl chloride	1	0.025	0.0279	112	65.9 - 128	
Xylenes, Total	1	0.075	0.0751	100	78.7 - 121	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B
 Project No: TX000836.0008.00004 Matrix: Water - mg/L
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
 Collection Date: 2/2/2015 **Analytic Batch: WG769001**
 Analysis Date: 2/10/2015 4:21:00 PM Analyst: 644
 Instrument ID: VOCMS23
 Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0245	97.8	74.2 - 124	
1,1,1-Trichloroethane	1	0.025	0.0256	102	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0229	91.7	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0252	101	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0242	96.9	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0279	112	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0248	99.3	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0243	97.3	68.8 - 124	
Benzene	1	0.025	0.0243	97.1	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0249	99.8	70.2 - 123	
Chloroform	1	0.025	0.0231	92.3	76 - 121	
Ethylbenzene	1	0.025	0.0247	98.9	78.8 - 122	
m&p-Xylenes	1	0.05	0.0496	99.2	78.8 - 121	
Methylene Chloride	1	0.025	0.0224	89.8	70.3 - 120	
o-Xylene	1	0.025	0.0237	94.9	77.6 - 122	
Tetrachloroethene	1	0.025	0.0254	101	72.6 - 126	
Toluene	1	0.025	0.0247	99	79.7 - 116	
Vinyl chloride	1	0.025	0.0283	113	65.9 - 128	
Xylenes, Total	1	0.075	0.0733	97.8	78.7 - 121	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769001
Analysis Date:	2/10/2015 4:21:00 PM	Analyst:	644
Instrument ID:	VOCMS23		
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control	% Rec	Control RPD	
							Limits	Qual	% RPD	Limits Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0255	102	0.0245	97.8	74.2 - 124		4.1	20
1,1,1-Trichloroethane	1	0.025	0.0233	93.1	0.0256	102	73.2 - 123		9.44	20
1,1,2,2-Tetrachloroethane	1	0.025	0.0238	95.4	0.0229	91.7	70.7 - 122		3.95	20
1,1,2-Trichloroethane	1	0.025	0.0253	101	0.0252	101	77.7 - 118		0.48	20
1,1-Dichloroethane	1	0.025	0.0227	90.9	0.0242	96.9	70.7 - 126		6.38	20
1,1-Dichloroethene	1	0.025	0.0282	113	0.0279	112	67.8 - 129		0.96	20
1,2-Dibromoethane	1	0.025	0.0247	98.8	0.0248	99.3	76.6 - 121		0.52	20
1,2-Dichloroethane	1	0.025	0.0222	88.9	0.0243	97.3	68.8 - 124		9.05	20
Benzene	1	0.025	0.0225	89.8	0.0243	97.1	74.8 - 121		7.82	20
Carbon tetrachloride	1	0.025	0.0228	91.2	0.0249	99.8	70.2 - 123		9.02	20
Chloroform	1	0.025	0.0212	84.7	0.0231	92.3	76 - 121		8.51	20
Ethylbenzene	1	0.025	0.0249	99.6	0.0247	98.9	78.8 - 122		0.71	20
m&p-Xylenes	1	0.05	0.0506	101	0.0496	99.2	78.8 - 121		1.95	20
Methylene Chloride	1	0.025	0.0211	84.6	0.0224	89.8	70.3 - 120		5.99	20
o-Xylene	1	0.025	0.0246	98.2	0.0237	94.9	77.6 - 122		3.45	20
Tetrachloroethene	1	0.025	0.0261	104	0.0254	101	72.6 - 126		2.95	20
Toluene	1	0.025	0.0242	96.7	0.0247	99	79.7 - 116		2.35	20
Vinyl chloride	1	0.025	0.0279	112	0.0283	113	65.9 - 128		1.29	20
Xylenes, Total	1	0.075	0.0751	100	0.0733	97.8	78.7 - 121		2.43	20

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG770400
Analysis Date:	2/15/2015 2:03:00 AM	Analyst:	621
Instrument ID:	VOCMS24		
Sample Numbers:	L747445-14, -15, -16		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0283	113	70 - 130	
1,1,1-Trichloroethane	1	0.025	0.0254	102	70 - 130	
1,1,2,2-Tetrachloroethane	1	0.025	0.0262	105	70 - 130	
1,1,2-Trichloroethane	1	0.025	0.0252	101	70 - 130	
1,1-Dichloroethane	1	0.025	0.0247	98.9	70 - 130	
1,1-Dichloroethene	1	0.025	0.0234	93.6	70 - 130	
1,2-Dibromoethane	1	0.025	0.0260	104	70 - 130	
1,2-Dichloroethane	1	0.025	0.0235	94.1	70 - 130	
Benzene	1	0.025	0.0239	95.6	70 - 130	
Carbon tetrachloride	1	0.025	0.0263	105	70 - 130	
Chloroform	1	0.025	0.0234	93.4	70 - 130	
Ethylbenzene	1	0.025	0.0269	108	70 - 130	
m&p-Xylenes	1	0.05	0.0540	108	70 - 130	
Methylene Chloride	1	0.025	0.0245	98.1	70 - 130	
o-Xylene	1	0.025	0.0273	109	70 - 130	
Tetrachloroethene	1	0.025	0.0272	109	70 - 130	
Toluene	1	0.025	0.0252	101	70 - 130	
Vinyl chloride	1	0.025	0.0235	93.8	70 - 130	
Xylenes, Total	1	0.075	0.0813	108	70 - 130	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG770400
Analysis Date:	2/15/2015 2:03:00 AM	Analyst:	621
Instrument ID:	VOCMS24		
Sample Numbers:	L747445-14, -15, -16		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0264	106	70 - 130	
1,1,1-Trichloroethane	1	0.025	0.0235	94.1	70 - 130	
1,1,2,2-Tetrachloroethane	1	0.025	0.0241	96.4	70 - 130	
1,1,2-Trichloroethane	1	0.025	0.0269	108	70 - 130	
1,1-Dichloroethane	1	0.025	0.0231	92.4	70 - 130	
1,1-Dichloroethene	1	0.025	0.0214	85.6	70 - 130	
1,2-Dibromoethane	1	0.025	0.0272	109	70 - 130	
1,2-Dichloroethane	1	0.025	0.0235	94	70 - 130	
Benzene	1	0.025	0.0237	94.9	70 - 130	
Carbon tetrachloride	1	0.025	0.0244	97.5	70 - 130	
Chloroform	1	0.025	0.0221	88.5	70 - 130	
Ethylbenzene	1	0.025	0.0269	108	70 - 130	
m&p-Xylenes	1	0.05	0.0535	107	70 - 130	
Methylene Chloride	1	0.025	0.0223	89.1	70 - 130	
o-Xylene	1	0.025	0.0260	104	70 - 130	
Tetrachloroethene	1	0.025	0.0274	110	70 - 130	
Toluene	1	0.025	0.0255	102	70 - 130	
Vinyl chloride	1	0.025	0.0212	84.8	70 - 130	
Xylenes, Total	1	0.075	0.0794	106	70 - 130	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG770400
Analysis Date:	2/15/2015 2:03:00 AM	Analyst:	621
Instrument ID:	VOCMS24		
Sample Numbers:	L747445-14, -15, -16		

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0283	113	0.0264	106	70 - 130	6.71	20	
1,1,1-Trichloroethane	1	0.025	0.0254	102	0.0235	94.1	70 - 130	7.74	20	
1,1,2,2-Tetrachloroethane	1	0.025	0.0262	105	0.0241	96.4	70 - 130	8.49	20	
1,1,2-Trichloroethane	1	0.025	0.0252	101	0.0269	108	70 - 130	6.77	20	
1,1-Dichloroethane	1	0.025	0.0247	98.9	0.0231	92.4	70 - 130	6.83	20	
1,1-Dichloroethene	1	0.025	0.0234	93.6	0.0214	85.6	70 - 130	8.89	20	
1,2-Dibromoethane	1	0.025	0.0260	104	0.0272	109	70 - 130	4.54	20	
1,2-Dichloroethane	1	0.025	0.0235	94.1	0.0235	94	70 - 130	0.14	20	
Benzene	1	0.025	0.0239	95.6	0.0237	94.9	70 - 130	0.76	20	
Carbon tetrachloride	1	0.025	0.0263	105	0.0244	97.5	70 - 130	7.55	20	
Chloroform	1	0.025	0.0234	93.4	0.0221	88.5	70 - 130	5.48	20	
Ethylbenzene	1	0.025	0.0269	108	0.0269	108	70 - 130	0.07	20	
m&p-Xylenes	1	0.05	0.0540	108	0.0535	107	70 - 130	1	20	
Methylene Chloride	1	0.025	0.0245	98.1	0.0223	89.1	70 - 130	9.62	20	
o-Xylene	1	0.025	0.0273	109	0.0260	104	70 - 130	4.98	20	
Tetrachloroethene	1	0.025	0.0272	109	0.0274	110	70 - 130	0.89	20	
Toluene	1	0.025	0.0252	101	0.0255	102	70 - 130	1.27	20	
Vinyl chloride	1	0.025	0.0235	93.8	0.0212	84.8	70 - 130	10.1	20	
Xylenes, Total	1	0.075	0.0813	108	0.0794	106	70 - 130	2.32	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B
 Project No: TX000836.0008.00004 Matrix: Water - mg/L
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
 Collection Date: 2/2/2015 Analytic Batch: **WG769001**
 Analysis Date: 2/10/2015 4:21:00 PM Analyst: 644
 Instrument ID: VOCMS23
 Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

Matrix Spike / Matrix Spike Duplicate

L747445-05

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
1,1,1,2-Tetrachloroethane	1	0.025	<0.0004	0.0537	215	0.0439	176	70.5 - 132	J5	20	20	
1,1,1-Trichloroethane	1	0.025	<0.0003	0.0521	208	0.0472	189	58.7 - 134	J5	9.87	20	
1,1,2,2-Tetrachloroethane	1	0.025	<0.0001	0.0533	213	0.0399	160	64.9 - 145	J5	28.9	20	J3
1,1,2-Trichloroethane	1	0.025	<0.0004	0.0537	215	0.0452	181	74.1 - 130	J5	17.1	20	
1,1-Dichloroethane	1	0.025	<0.0003	0.0499	199	0.0445	178	64 - 134	J5	11.3	20	
1,1-Dichloroethene	1	0.025	<0.0004	0.0638	255	0.0498	199	48.8 - 144	J5	24.6	20	J3
1,2-Dibromoethane	1	0.025	<0.0004	0.0538	215	0.0444	178	73.8 - 131	J5	19.1	20	
1,2-Dichloroethane	1	0.025	<0.0004	0.0495	198	0.0452	181	60.7 - 132	J5	9.06	20	
Benzene	1	0.025	<0.0003	0.0496	198	0.0440	176	54.3 - 133	J5	12	20	
Carbon tetrachloride	1	0.025	<0.0004	0.0520	208	0.0458	183	55.7 - 134	J5	12.6	20	
Chloroform	1	0.025	<0.0003	0.0467	187	0.0418	167	63 - 129	J5	11.2	20	
Ethylbenzene	1	0.025	<0.0004	0.0538	215	0.0442	177	61.4 - 133	J5	19.6	20	
m&p-Xylenes	1	0.05	<0.0007	0.1074	215	0.0885	177	64.1 - 133	J5	19.4	20	
Methylene Chloride	1	0.025	<0.001	0.0478	191	0.0407	163	58.1 - 122	J5	16	20	
o-Xylene	1	0.025	<0.0003	0.0517	207	0.0406	162	67.1 - 133	J5	24	20	J3
Tetrachloroethene	1	0.025	<0.0004	0.0556	222	0.0440	176	53 - 139	J5	23.1	20	J3
Toluene	1	0.025	<0.0008	0.0532	213	0.0443	177	61.4 - 130	J5	18.2	20	
Vinyl chloride	1	0.025	<0.0003	0.0634	254	0.0485	194	44.3 - 143	J5	26.6	20	J3
Xylenes, Total	1	0.075	<0.0011	0.1591	212	0.1291	172	65.6 - 133	J5	20.8	20	J3

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG770400
Analysis Date:	2/15/2015 2:03:00 AM	Analyst:	621
Instrument ID:	VOCMS24		
Sample Numbers:	L747445-14, -15, -16		

Matrix Spike / Matrix Spike Duplicate

L747491-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
1,1,1,2-Tetrachloroethane	1	0.025	<0.0004	0.0282	113	0.0280	112	64 - 128		0.73	20	
1,1,1-Trichloroethane	1	0.025	<0.0003	0.0254	102	0.0247	98.8	58.7 - 134		2.79	20	
1,1,2,2-Tetrachloroethane	1	0.025	<0.0001	0.0290	116	0.0287	115	56 - 132		1	22.2	
1,1,2-Trichloroethane	1	0.025	<0.0004	0.0262	105	0.0266	106	66.3 - 125		1.5	20	
1,1-Dichloroethane	1	0.025	<0.0003	0.0249	99.7	0.0245	98	58.5 - 132		1.71	20	
1,1-Dichloroethene	1	0.025	<0.0004	0.0236	94.5	0.0235	93.9	51.1 - 140		0.56	20.2	
1,2-Dibromoethane	1	0.025	<0.0004	0.0270	108	0.0278	111	67.1 - 125		2.87	20	
1,2-Dichloroethane	1	0.025	<0.0004	0.0251	100	0.0253	101	60 - 126		0.88	20	
Benzene	1	0.025	0.0004	0.0246	97	0.0244	96.1	54.3 - 133		0.9	20	
Carbon tetrachloride	1	0.025	<0.0004	0.0262	105	0.0256	102	55.7 - 134		2.69	20	
Chloroform	1	0.025	<0.0003	0.0240	96.1	0.0238	95.4	63 - 129		0.74	20	
Ethylbenzene	1	0.025	<0.0004	0.0266	106	0.0272	109	61.4 - 133		2.2	20	
m&p-Xylenes	1	0.05	0.0008	0.0541	107	0.0546	108	61.7 - 133		0.97	20	
Methylene Chloride	1	0.025	<0.001	0.0244	97.7	0.0237	94.9	58.1 - 122		2.94	20	
o-Xylene	1	0.025	<0.0003	0.0271	108	0.0273	109	63.3 - 130		0.89	20	
Tetrachloroethene	1	0.025	<0.0004	0.0266	106	0.0267	107	53 - 139		0.46	20	
Toluene	1	0.025	0.0009	0.0257	99.1	0.0261	101	61.4 - 130		1.56	20	
Vinyl chloride	1	0.025	<0.0003	0.0236	94.4	0.0231	92.2	47.8 - 137		2.32	20	
Xylenes, Total	1	0.075	<0.0011	0.0812	107	0.0819	108	63.3 - 131		0.95	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Volatile Organic Compounds by Method 8260B
 Project No: TX000836.0008.00004 Matrix: Water - mg/L
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
 Collection Date: 2/2/2015 Analytic Batch: WG769001
 Analysis Date: 2/10/2015 4:21:00 PM Analyst: 644
 Instrument ID: VOCMS23
 Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13

Internal Standard Response and Retention Time Summary

File ID: 0210_02
 Analyzed: 02/10/15 081000

	IS1		IS2		IS3		DCB	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	423575	3.91	776638	4.23	135775	5.38	387915	7.78
Upper Limit	847000	4.41	1550000	4.73	272000	5.88	776000	8.28
Lower Limit	212000	3.41	388000	3.73	67900	4.88	194000	7.28
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L747445-05	406683	3.91	748202	4.23	131240	5.38	357915	7.79
L747445-01	509253	3.91	935109	4.23	165459	5.38	453573	7.79
L747445-02	430218	3.91	839632	4.23	151454	5.38	389213	7.79
L747445-03	518236	3.91	946196	4.23	158905	5.38	433449	7.79
L747445-04	512376	3.91	997829	4.23	180075	5.38	445465	7.79
L747445-06	398739	3.91	768302	4.23	137092	5.38	349974	7.79
L747445-07	389783	3.91	747290	4.23	138323	5.38	331344	7.79
L747445-08	490301	3.91	904899	4.23	159752	5.38	442006	7.79
L747445-09	402693	3.91	779564	4.23	139865	5.38	350107	7.79
L747445-10	367652	3.91	680105	4.23	119440	5.38	327929	7.79
L747445-11	391851	3.91	722453	4.23	127359	5.38	344698	7.79
L747445-12	382761	3.91	708821	4.23	126776	5.38	344100	7.79
L747445-13	390029	3.91	722458	4.23	125490	5.38	361861	7.79
MSD WG769001	516150	3.91	988003	4.23	178783	5.38	447127	7.79
MSD WG769001	516150	3.91	988003	4.23	178783	5.38	447127	7.79
MS WG769001	409096	3.91	751223	4.23	136220	5.38	378145	7.79
MS WG769001	409096	3.91	751223	4.23	136220	5.38	378145	7.79
LCSD WG769001	425796	3.91	798471	4.23	144210	5.38	369182	7.78
LCS WG769001	426063	3.91	774067	4.23	135410	5.38	382906	7.78
BLANK WG769001	415777	3.91	805493	4.23	143047	5.38	366778	7.78

Legend:

IS1 -- PENTAFLUOROBENZENE
 IS2 -- 1,4-DIFLUOROBENZENE
 IS3 -- 2-BROMO-1-CHLOROPROPANE
 DCB -- 1,4-DICHLOROBENZENE-D4

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG770400
Analysis Date:	2/15/2015 2:03:00 AM	Analyst:	621
Instrument ID:	VOCMS24		
Sample Numbers:	L747445-14, -15, -16		

Internal Standard Response and Retention Time Summary

File ID: 0214_02A
Analyzed: 02/14/15 212400

	IS1		IS2		IS3		DCB	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	531115	4.29	982033	4.61	149738	5.77	387689	8.14
Upper Limit	1060000	4.79	1960000	5.11	299000	6.27	775000	8.64
Lower Limit	266000	3.79	491000	4.11	74900	5.27	194000	7.64
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L747445-16	499560	4.29	916538	4.61	142303	5.77	412107	8.14
L747445-14	518433	4.29	943100	4.61	147135	5.77	420529	8.14
L747445-15	508778	4.29	939211	4.61	147678	5.77	440231	8.14
MSD WG770400	489439	4.29	925394	4.61	144565	5.77	396864	8.14
MS WG770400	498981	4.29	936770	4.61	148663	5.77	405037	8.14
LCSD WG770400	546353	4.29	1033098	4.61	159851	5.77	392604	8.14
LCSD WG770400	546353	4.29	1033098	4.61	159851	5.77	392604	8.14
LCS WG770400	515461	4.29	948171	4.61	147468	5.77	399548	8.14
LCS WG770400	515461	4.29	948171	4.61	147468	5.77	399548	8.14
BLANK WG770400	501763	4.29	917547	4.61	141936	5.77	403321	8.14
BLANK WG770400	501763	4.29	917547	4.61	141936	5.77	403321	8.14

Legend:

IS1 -- PENTAFLUOROBENZENE
IS2 -- 1,4-DIFLUOROBENZENE
IS3 -- 2-BROMO-1-CHLOROPROPANE
DCB -- 1,4-DICHLOROBENZENE-D4

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769001
Analysis Date:	2/10/2015 4:21:00 PM	Analyst:	644
Instrument ID:	VOCMS23		
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13		

Surrogate Summary

		BFB		DFM		TD8		TFT	
Laboratory									
Sample ID	Instrument File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L747445-01	VOCMS23 0210_18	0.0404	101	0.0379	94.7	0.0404	101		
L747445-02	VOCMS23 0210_19	0.0399	99.8	0.0414	103	0.0408	102		
L747445-03	VOCMS23 0210_20	0.0399	99.7	0.0393	98.2	0.0387	96.7		
L747445-04	VOCMS23 0210_21	0.0372	93.1	0.0405	101	0.0407	102		
L747445-05	VOCMS23 0210_14	0.0401	100	0.0384	96.1	0.0406	102		
L747445-06	VOCMS23 0210_22	0.0390	97.5	0.0403	101	0.0409	102		
L747445-07	VOCMS23 0210_23	0.0378	94.5	0.0411	103	0.0413	103		
L747445-08	VOCMS23 0210_24	0.0402	100	0.0383	95.8	0.0409	102		
L747445-09	VOCMS23 0210_25	0.0385	96.4	0.0405	101	0.0408	102		
L747445-10	VOCMS23 0210_26	0.0402	101	0.0386	96.6	0.0405	101		
L747445-11	VOCMS23 0210_27	0.0393	98.2	0.0381	95.1	0.0403	101		
L747445-12	VOCMS23 0210_28	0.0392	97.9	0.0388	97.1	0.0408	102		
L747445-13	VOCMS23 0210_29	0.0425	106	0.0386	96.6	0.0401	100		
MSD WG769001	VOCMS23 0210_16	0.0357	89.3	0.0394	98.6	0.0407	102	0.0406	102
MSD WG769001	VOCMS23 0210_16-2	0.0357	89.3	0.0394	98.6	0.0407	102	0.0406	102
LCS WG769001	VOCMS23 0210_03-2	0.0401	100	0.0367	91.7	0.0404	101	0.0423	106
LCSD WG769001	VOCMS23 0210_04-2	0.0371	92.7	0.0384	95.9	0.0406	101	0.0415	104
BLANK WG769001	VOCMS23 0210_07-2	0.0402	100	0.0406	102	0.0409	102	0.0409	102
MS WG769001	VOCMS23 0210_15	0.0388	97.1	0.0378	94.4	0.0401	100	0.0417	104
MS WG769001	VOCMS23 0210_15-2	0.0388	97.1	0.0378	94.4	0.0401	100	0.0417	104

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 80.1 - 120

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 79 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 90 - 115

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG770400
Analysis Date:	2/15/2015 2:03:00 AM	Analyst:	621
Instrument ID:	VOCMS24		
Sample Numbers:	L747445-14, -15, -16		

Surrogate Summary

Laboratory Sample ID	Instrument	File ID	BFB		DFM		TD8		TFT	
			ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L747445-14	VOCMS24	0214_15A	0.0423	106	0.0384	95.9	0.0399	99.8		
L747445-15	VOCMS24	0214_16A	0.0428	107	0.0394	98.4	0.0405	101		
L747445-16	VOCMS24	0214_11A	0.0421	105	0.0391	97.7	0.0406	101		
MSD WG770400	VOCMS24	0214_09A-	0.0416	104	0.0391	97.8	0.0404	101	0.0417	104
LCS WG770400	VOCMS24	0214_03A-	0.0405	101	0.0381	95.3	0.0406	102	0.0429	107
LCSD WG770400	VOCMS24	0214_04A-	0.0395	98.7	0.0356	88.9	0.0410	103	0.0415	104
BLANK WG770400	VOCMS24	0214_07A-	0.0421	105	0.0378	94.4	0.0405	101	0.0433	108
MS WG770400	VOCMS24	0214_08A-	0.0408	102	0.0396	98.9	0.0409	102	0.0423	106

BFB --4-BROMOFLUOROBENZENE

True Value: 0.04 ppm Limits: 80.1 - 120

DFM --DIBROMOFLUOROMETHANE

True Value: 0.04 ppm Limits: 79 - 121

TD8 --TOLUENE-D8

True Value: 0.04 ppm Limits: 90 - 115

TFT --A,A,A-TRIFLUOROTOLUENE

True Value: 0.04 ppm Limits: 85 - 114

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Diesel Range Organics by Method 8015		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769168
Analysis Date:	2/10/2015 10:13:00 AM	Analyst:	546
Instrument ID:	SVGC31	Prep Date:	2/8/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
C10-C28 Diesel Range		< 0.100	< 0.0222	
C28-C40 Oil Range		< 0.100	< 0.0118	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.6113	107	70 - 130	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.6765	112	70 - 130	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.6113	107	1.6765	112	70 - 130	3.96	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Diesel Range Organics by Method 8015		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769168
Analysis Date:	2/10/2015 10:13:00 AM	Analyst:	546
Instrument ID:	SVGC31	Prep Date:	2/8/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Surrogate Summary

o-Terphenyl

Laboratory

Sample ID	Instrument	File ID	ppm	% Rec
L747445-01	SVGC31	0209A_66	0.0198	98.8
L747445-02	SVGC31	0209A_67	0.0199	99.7
L747445-03	SVGC31	0209A_68	0.0207	103
L747445-04	SVGC31	0209A_69	0.0197	98.5
L747445-05	SVGC31	0209A_70	0.0208	104
L747445-06	SVGC31	0209A_71	0.0203	101
L747445-07	SVGC31	0209A_72	0.0199	99.3
L747445-08	SVGC31	0209A_73	0.0204	102
L747445-09	SVGC31	0209A_74	0.0205	102
L747445-10	SVGC31	0209A_75	0.0211	106
L747445-11	SVGC31	0209A_80	0.0191	95.6
L747445-12	SVGC31	0209A_81	0.0194	97.2
L747445-13	SVGC31	0209A_82	0.0198	99.2
L747445-14	SVGC31	0209A_83	0.0208	104
L747445-15	SVGC31	0209A_84	0.0197	98.6
BLANK WG769168	SVGC31	0209A_19	0.0206	103
LCS WG769168	SVGC31	0209A_20	0.0208	104
LCSD WG769168	SVGC31	0209A_21	0.0211	106
MS WG769168	SVGC31	0209A_88	0.0205	102
MSD WG769168	SVGC31	0209A_89	0.0205	102

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Diesel Range Organics by Method 8015		
Project No:	TX000836.0008.00004	Matrix:	Water - mg/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769168
Analysis Date:	2/10/2015 10:13:00 AM	Analyst:	546
Instrument ID:	SVGC31	Prep Date:	2/8/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Matrix Spike / Matrix Spike Duplicate

L747683-03

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Extractable Petroleum Hydrocarbon	1	1.5	0.0904	1.7224	109	1.7379	110	70 - 130		0.9	20	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test:	Semi-Volatile Organic Compounds by Method 8270C		
Project No:	TX000836.0008.00004	Matrix:	Water - ug/L
Project:	Navajo Refining Company - Artesia, NM	EPA ID:	TN00003
Collection Date:	2/2/2015	Analytic Batch:	WG769195
Analysis Date:	2/9/2015 3:05:00 PM	Analyst:	377
Instrument ID:	BNAMS19	Prep Date:	2/8/2015
Sample Numbers:	L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
1-Methylnaphthalene	90-12-0	< 1.00	< 0.330	
2-Methylnaphthalene	91-57-6	< 1.00	< 0.311	
Benzo(a)pyrene	50-32-8	< 1.00	< 0.340	
Naphthalene	91-20-3	< 1.00	< 0.372	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Semi-Volatile Organic Compounds by Method 8270C
Project No: TX000836.0008.00004 Matrix: Water - ug/L
Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
Collection Date: 2/2/2015 **Analytic Batch: WG769195**
Analysis Date: 2/9/2015 3:05:00 PM Analyst: 377
Instrument ID: BNAMS19 Prep Date: 2/8/2015
Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1-Methylnaphthalene	1	25	19.593	78.4	34.7 - 102	
2-Methylnaphthalene	1	25	17.162	68.6	33.8 - 98.6	
Benzo(a)pyrene	1	25	18.617	74.5	45.6 - 106	
Naphthalene	1	25	16.201	64.8	32.2 - 101	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1-Methylnaphthalene	1	25	20.605	82.4	34.7 - 102	
2-Methylnaphthalene	1	25	18.778	75.1	33.8 - 98.6	
Benzo(a)pyrene	1	25	19.913	79.7	45.6 - 106	
Naphthalene	1	25	17.001	68	32.2 - 101	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
1-Methylnaphthalene	1	25	19.593	78.4	20.605	82.4	34.7 - 102	5.04	24.9	
2-Methylnaphthalene	1	25	17.162	68.6	18.778	75.1	33.8 - 98.6	8.99	24.2	
Benzo(a)pyrene	1	25	18.617	74.5	19.913	79.7	45.6 - 106	6.73	20	
Naphthalene	1	25	16.201	64.8	17.001	68	32.2 - 101	4.82	23.8	

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Semi-Volatile Organic Compounds by Method 8270C
 Project No: TX000836.0008.00004 Matrix: Water - ug/L
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
 Collection Date: 2/2/2015 Analytic Batch: **WG769195**
 Analysis Date: 2/9/2015 3:05:00 PM Analyst: 377
 Instrument ID: BNAMS19 Prep Date: 2/8/2015
 Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15

Internal Standard Response and Retention Time Summary

File ID: 0209_02
 Analyzed: 02/09/15 112600

	DCB		NAP		ACE		PHEN	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	193485	5.39	732075	6.67	505838	8.55	916956	10.18
Upper Limit	387000	5.89	1460000	7.17	1010000	9.05	1830000	10.68
Lower Limit	96700	4.89	366000	6.17	253000	8.05	458000	9.68
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L747445-01	164218	5.39	619778	6.67	422138	8.55	745938	10.18
L747445-02	165177	5.39	625778	6.67	419282	8.55	773740	10.18
L747445-03	154156	5.39	589006	6.67	400033	8.55	735765	10.18
L747445-05	164013	5.39	610228	6.67	408732	8.55	773064	10.18
L747445-06	167215	5.39	619557	6.67	424018	8.55	770014	10.18
L747445-07	158839	5.39	610690	6.67	412632	8.55	742835	10.18
L747445-08	175567	5.39	641210	6.67	424486	8.55	788520	10.18
L747445-09	165271	5.39	611421	6.67	416767	8.55	755051	10.18
L747445-10	171863	5.39	650064	6.67	435597	8.55	810709	10.18
L747445-11	164733	5.39	623687	6.67	422499	8.55	774873	10.18
L747445-12	164736	5.39	623297	6.67	420295	8.55	760562	10.18
L747445-13	171129	5.39	640120	6.67	428856	8.55	787430	10.18
L747445-14	169000	5.39	633091	6.67	421674	8.55	770603	10.18
L747445-15	167074	5.39	629309	6.67	424257	8.55	773741	10.18
L747445-04	157872	5.39	589940	6.67	395110	8.55	710502	10.18
LCSD WG769195	177589	5.39	676737	6.67	461171	8.55	853394	10.18
LCS WG769195	179117	5.39	670222	6.67	465446	8.55	848512	10.18
BLANK WG769195	163840	5.39	619182	6.67	412609	8.55	752947	10.18

Legend:

DCB -- 1,4-Dichlorobenzene-d4
 NAP -- Naphthalene-d8
 ACE -- Acenaphthene-d10
 PHEN -- Phenanthrene-d10
 CHR -- Chrysene-d12
 PER -- Perylene-d12

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Semi-Volatile Organic Compounds by Method 8270C
 Project No: TX000836.0008.00004 Matrix: Water - ug/L
 Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
 Collection Date: 2/2/2015 Analytic Batch: WG769195
 Analysis Date: 2/9/2015 3:05:00 PM Analyst: 377
 Instrument ID: BNAMS19 Prep Date: 2/8/2015
 Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15

Internal Standard Response and Retention Time Summary

File ID: 0209_02
 Analyzed: 02/09/15 112600

	DCB		CHR		PER	
	Response	RT	Response	RT	Response	RT
12 Hr. Std	193485	5.39	1114207	13.08	1164820	14.95
Upper Limit	387000	5.89	2230000	13.58	2330000	15.45
Lower Limit	96700	4.89	557000	12.58	582000	14.45
Sample ID	Response	RT	Response	RT	Response	RT
L747445-01	164218	5.39	927827	13.08	986478	14.94
L747445-02	165177	5.39	934138	13.08	1021626	14.94
L747445-03	154156	5.39	883507	13.08	961035	14.95
L747445-05	164013	5.39	927364	13.08	989679	14.94
L747445-06	167215	5.39	943124	13.08	997143	14.95
L747445-07	158839	5.39	897095	13.08	964031	14.94
L747445-08	175567	5.39	960172	13.08	1035156	14.94
L747445-09	165271	5.39	927248	13.08	995255	14.94
L747445-10	171863	5.39	966776	13.08	1040370	14.94
L747445-11	164733	5.39	943011	13.08	1004325	14.94
L747445-12	164736	5.39	932642	13.08	998430	14.94
L747445-13	171129	5.39	958872	13.08	1045686	14.94
L747445-14	169000	5.39	912787	13.08	1004268	14.94
L747445-15	167074	5.39	962727	13.08	1013081	14.94
L747445-04	157872	5.39	858303	13.08	944352	14.94
LCSD WG769195	177589	5.39	1015832	13.08	1100146	14.95
LCS WG769195	179117	5.39	1056194	13.08	1109162	14.94
BLANK WG769195	163840	5.39	923786	13.08	999511	14.95

Legend:

DCB -- 1,4-Dichlorobenzene-d4
 NAP -- Naphthalene-d8
 ACE -- Acenaphthene-d10
 PHEN -- Phenanthrene-d10
 CHR -- Chrysene-d12
 PER -- Perylene-d12



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Est. 1970

YOUR LAB OF CHOICE

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Semi-Volatile Organic Compounds by Method 8270C
Project No: TX000836.0008.00004 Matrix: Water - ug/L
Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
Collection Date: 2/2/2015 Analytic Batch: WG769195
Analysis Date: 2/9/2015 3:05:00 PM Analyst: 377
Instrument ID: BNAMS19 Prep Date: 2/8/2015
Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15

Surrogate Summary

		TBP		FBP		2FP		NBZ		
Laboratory										
Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L747445-01	BNAMS19	0209_10	0.0156	78.0	0.00748	74.8	0.00821	41.1	0.00578	57.8
L747445-02	BNAMS19	0209_11	0.0141	70.7	0.00730	73.0	0.00823	41.2	0.00547	54.7
L747445-03	BNAMS19	0209_12	0.0144	72.1	0.00789	78.9	0.00881	44.1	0.00562	56.2
L747445-04	BNAMS19	0209_13	0.00834	41.7	0.00809	80.9	0.00128	6.4 J2	0.00622	62.2
L747445-05	BNAMS19	0209_14	0.0146	73.2	0.00798	79.8	0.00858	42.9	0.00607	60.7
L747445-06	BNAMS19	0209_15	0.0142	70.9	0.00739	73.9	0.00862	43.1	0.00625	62.5
L747445-07	BNAMS19	0209_16	0.0113	56.3	0.00815	81.5	0.00582	29.1	0.00672	67.2
L747445-08	BNAMS19	0209_17	0.0132	65.8	0.00775	77.5	0.00783	39.1	0.00578	57.8
L747445-09	BNAMS19	0209_18	0.0134	67.0	0.00751	75.1	0.00725	36.3	0.00583	58.3
L747445-10	BNAMS19	0209_19	0.0126	63.2	0.00757	75.7	0.00769	38.4	0.00576	57.6
L747445-11	BNAMS19	0209_20	0.00809	40.4	0.00654	65.4	0.00542	27.1	0.00479	47.9
L747445-12	BNAMS19	0209_21	0.0139	69.7	0.00769	76.9	0.00796	39.8	0.00591	59.1
L747445-13	BNAMS19	0209_22	0.00776	38.8	0.00732	73.2	0.00391	19.6	0.00562	56.2
L747445-14	BNAMS19	0209_23	0.0147	73.3	0.00785	78.5	0.00842	42.1	0.00615	61.5
L747445-15	BNAMS19	0209_24	0.0151	75.7	0.00791	79.1	0.00952	47.6	0.00593	59.3
LCS WG769195	BNAMS19	0209_04	0.0171	85.7	0.00684	68.4	0.00760	38.0	0.00559	55.9
LCSD WG769195	BNAMS19	0209_05	0.0176	88.0	0.00752	75.2	0.00802	40.1	0.00581	58.1
BLANK WG769195	BNAMS19	0209_06	0.0132	66.1	0.00772	77.2	0.00887	44.4	0.00605	60.5

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1



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Est. 1970

Quality Control Summary

SDG: L747445

ARCADIS US - TX

Test: Semi-Volatile Organic Compounds by Method 8270C
Project No: TX000836.0008.00004 Matrix: Water - ug/L
Project: Navajo Refining Company - Artesia, NM EPA ID: TN00003
Collection Date: 2/2/2015 Analytic Batch: WG769195
Analysis Date: 2/9/2015 3:05:00 PM Analyst: 377
Instrument ID: BNAMS19 Prep Date: 2/8/2015
Sample Numbers: L747445-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14, -15

Surrogate Summary

Laboratory	TPH				PHL	
	Sample ID	Instrument	File ID	ppm % Rec	ppm % Rec	
	L747445-01	BNAMS19	0209_10	0.00695 69.5	0.00596 29.8	
	L747445-02	BNAMS19	0209_11	0.00721 72.1	0.00549 27.5	
	L747445-03	BNAMS19	0209_12	0.00750 75.0	0.00556 27.8	
	L747445-04	BNAMS19	0209_13	0.00730 73.0	0.00102 5.1	
	L747445-05	BNAMS19	0209_14	0.00730 73.0	0.00553 27.7	
	L747445-06	BNAMS19	0209_15	0.00676 67.6	0.00572 28.6	
	L747445-07	BNAMS19	0209_16	0.00796 79.6	0.00373 18.7	
	L747445-08	BNAMS19	0209_17	0.00657 65.7	0.00525 26.3	
	L747445-09	BNAMS19	0209_18	0.00685 68.5	0.00490 24.5	
	L747445-10	BNAMS19	0209_19	0.00695 69.5	0.00510 25.5	
	L747445-11	BNAMS19	0209_20	0.00716 71.6	0.00450 22.5	
	L747445-12	BNAMS19	0209_21	0.00773 77.3	0.00500 25.0	
	L747445-13	BNAMS19	0209_22	0.00641 64.1	0.00278 13.9	
	L747445-14	BNAMS19	0209_23	0.00705 70.5	0.00551 27.5	
	L747445-15	BNAMS19	0209_24	0.00680 68.0	0.00621 31.0	
	LCS WG769195	BNAMS19	0209_04	0.00603 60.3	0.00509 25.5	
	LCSD WG769195	BNAMS19	0209_05	0.00715 71.5	0.00549 27.4	
	BLANK WG769195	BNAMS19	0209_06	0.00718 71.8	0.00573 28.6	

TBP --2,4,6-TRIBROMOPHENOL

True Value: 0.02 ppm Limits: 11.2 - 130

FBP --2-FLUOROBIPHENYL

True Value: 0.01 ppm Limits: 29.5 - 131

2FP --2-FLUOROPHENOL

True Value: 0.02 ppm Limits: 10 - 77.9

NBZ --NITROBENZENE-D5

True Value: 0.01 ppm Limits: 21.8 - 123

TPH --P-TERPHENYL-D14

True Value: 0.01 ppm Limits: 29.3 - 137

PHL --PHENOL-D5

True Value: 0.02 ppm Limits: 5 - 70.1