

GW – 028

**Background
Groundwater
Investigation Report**

PART 5 OF 9

September 2015

Eurofins Eaton Analytical Run Log

Run ID: **196799** Method: **7500-Ra B**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3131853	L730440-07	GW	CI	11/11/2014 11:27	
FS	3131854	L730440-08	GW	CI	11/11/2014 11:27	
FS	3131855	L730440-09	GW	CI	11/11/2014 11:27	
FS	3131856	L730440-10	GW	CI	11/11/2014 11:27	
LRB	3136497		RW	CI	11/11/2014 11:27	
LFB	3136498		RW	CI	11/11/2014 11:27	
FS	3131857	L730440-11	GW	CI	11/11/2014 12:29	
FS	3131858	L730440-12	GW	CI	11/11/2014 12:29	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-226	7500-Ra B	0.36	L730440-07		0.52		pCi/L	---	---	---	---	1.0	11/06/2014 10:35	11/11/2014 11:27	3131853
FS	Radium-226	7500-Ra B	0.3	L730440-08		1.1		pCi/L	---	---	---	---	1.0	11/06/2014 10:35	11/11/2014 11:27	3131854
FS	Radium-226	7500-Ra B	0.2	L730440-09		1.7		pCi/L	---	---	---	---	1.0	11/06/2014 10:35	11/11/2014 11:27	3131855
FS	Radium-226	7500-Ra B	0.26	L730440-10		0.33		pCi/L	---	---	---	---	1.0	11/06/2014 10:35	11/11/2014 11:27	3131856
LRB	Radium-226	7500-Ra B	0.17	---		0.30		pCi/L	---	---	---	---	1.0	11/06/2014 10:35	11/11/2014 11:27	3136497
LFB	Radium-226	7500-Ra B	0.2	---		18.6900	18.0	% Recovery	104	30 - 160	---	---	1.0	11/06/2014 10:35	11/11/2014 11:27	3136498
FS	Radium-226	7500-Ra B	0.35	L730440-11		0.21		pCi/L	---	---	---	---	1.0	11/06/2014 10:35	11/11/2014 12:29	3131857
FS	Radium-226	7500-Ra B	0.29	L730440-12		0.98		pCi/L	---	---	---	---	1.0	11/06/2014 10:35	11/11/2014 12:29	3131858

Eurofins Eaton Analytical
Run Log

Run ID: **196821** Method: **7500-Ra B**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3131848	L730440-02	GW	DU	11/07/2014 10:58	
FS	3131849	L730440-03	GW	DU	11/07/2014 10:58	
FS	3131851	L730440-05	GW	DU	11/07/2014 10:58	
FS	3131852	L730440-06	GW	DU	11/07/2014 10:58	
LRB	3136806		RW	DU	11/07/2014 10:58	
LFB	3136807		RW	DU	11/07/2014 10:58	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-226	7500-Ra B	0.6	L730440-02		2.2		pCi/L	---	---	---	---	1.0	11/05/2014 12:56	11/07/2014 10:58	3131848
FS	Radium-226	7500-Ra B	0.5	L730440-03		1.3		pCi/L	---	---	---	---	1.0	11/05/2014 12:56	11/07/2014 10:58	3131849
FS	Radium-226	7500-Ra B	0.57	L730440-05		0.60		pCi/L	---	---	---	---	1.0	11/05/2014 12:56	11/07/2014 10:58	3131851
FS	Radium-226	7500-Ra B	0.5	L730440-06		1.3		pCi/L	---	---	---	---	1.0	11/05/2014 12:56	11/07/2014 10:58	3131852
LRB	Radium-226	7500-Ra B	0.27	---		0.24		pCi/L	---	---	---	---	1.0	---	11/07/2014 10:58	3136806
LFB	Radium-226	7500-Ra B	0.2	---		20.3800	18.0	% Recovery	113	30 - 160	---	---	1.0	---	11/07/2014 10:58	3136807

Eurofins Eaton Analytical
Run Log

Run ID: **196830** Method: **7500-Ra B**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3131847	L730440-01	GW	CI	11/11/2014 16:01	
FS	3131850	L730440-04	GW	CI	11/11/2014 16:01	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-226	7500-Ra B	0.6	L730440-01		1.1		pCi/L	---	---	---	---	1.0	11/05/2014 12:56	11/11/2014 16:01	3131847
FS	Radium-226	7500-Ra B	0.55	L730440-04		0.00		pCi/L	---	---	---	---	1.0	11/05/2014 12:56	11/11/2014 16:01	3131850

Eurofins Eaton Analytical Run Log

Run ID: **197179** Method: **7500-Ra D**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3131847	L730440-01	GW	DU	11/24/2014 12:17	
FS	3131848	L730440-02	GW	DU	11/24/2014 12:17	
FS	3131849	L730440-03	GW	DU	11/24/2014 12:17	
FS	3131850	L730440-04	GW	DU	11/24/2014 12:17	
FS	3131851	L730440-05	GW	DU	11/24/2014 12:17	
FS	3131852	L730440-06	GW	DU	11/24/2014 12:17	
FS	3131853	L730440-07	GW	DU	11/24/2014 12:17	
FS	3131854	L730440-08	GW	DU	11/24/2014 12:17	
FS	3131855	L730440-09	GW	DU	11/24/2014 12:17	
LRB	3144572		RW	DU	11/24/2014 12:17	
LFB	3144573		RW	DU	11/24/2014 12:17	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-228	7500-Ra D	0.5	L730440-01		1.8		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3131847
FS	Radium-228	7500-Ra D	0.3	L730440-02		1.1		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3131848
FS	Radium-228	7500-Ra D	0.37	L730440-03		0.58		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3131849
FS	Radium-228	7500-Ra D	0.29	L730440-04		0.29		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3131850
FS	Radium-228	7500-Ra D	0.28	L730440-05		0.58		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3131851
FS	Radium-228	7500-Ra D	0.3	L730440-06		1.4		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3131852
FS	Radium-228	7500-Ra D	0.30	L730440-07		0.32		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3131853
FS	Radium-228	7500-Ra D	0.27	L730440-08		0.49		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3131854
FS	Radium-228	7500-Ra D	0.34	L730440-09		0.94		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3131855
LRB	Radium-228	7500-Ra D	0.30	---		0.22		pCi/L	---	---	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3144572
LFB	Radium-228	7500-Ra D	0.33	---		7.4700	8.36	% Recovery	89	48 - 139	---	---	1.0	11/06/2014 12:10	11/24/2014 12:17	3144573

Eurofins Eaton Analytical
Run Log

Run ID: **197180** Method: **7500-Ra D**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3131856	L730440-10	GW	CI	11/24/2014 12:17	
FS	3131857	L730440-11	GW	CI	11/24/2014 12:17	
FS	3131858	L730440-12	GW	CI	11/24/2014 12:17	
LRB	3144574		RW	CI	11/24/2014 12:17	
LFB	3144575		RW	CI	11/24/2014 12:17	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-228	7500-Ra D	0.22	L730440-10		0.46		pCi/L	---	---	---	---	1.0	11/11/2014 12:44	11/24/2014 12:17	3131856
FS	Radium-228	7500-Ra D	0.27	L730440-11		0.67		pCi/L	---	---	---	---	1.0	11/11/2014 12:44	11/24/2014 12:17	3131857
FS	Radium-228	7500-Ra D	0.24	L730440-12		0.67		pCi/L	---	---	---	---	1.0	11/11/2014 12:44	11/24/2014 12:17	3131858
LRB	Radium-228	7500-Ra D	0.24	---		0.42		pCi/L	---	---	---	---	1.0	11/11/2014 12:44	11/24/2014 12:17	3144574
LFB	Radium-228	7500-Ra D	0.25	---		6.9900	8.36	% Recovery	84	48 - 139	---	---	1.0	11/11/2014 12:44	11/24/2014 12:17	3144575

Sample Type Key

<u>Type (Abbr.)</u>	<u>Sample Type</u>
FS	Field Sample
LFB	Laboratory Fortified Blank
LRB	Laboratory Reagent Blank



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

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

Report Summary

Wednesday August 26, 2015

Report Number: L733743

Samples Received: 11/14/14

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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Case Narrative

Wednesday August 26, 2015

Report Number: L733743

Samples Received: 11/14/14

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

Other Comments

Concentrations above the laboratory reporting limit for DRO/ORO were noted in the method blank associated with samples -01 through -05. These samples were reextracted and reanalyzed, although samples -02 through -05 were below the laboratory detection limit in the initial analysis. The confirmation analysis performed outside of the method specified holding time confirms the initial in-hold results. Re-extraction was also performed for the DRO/ORO analysis of sample -88 due to the exceedingly high surrogate recovery in the initial analysis. The re-extraction/reanalysis was performed outside holding time for the method, and the surrogate recovery was within range. However, while concentrations were seen and chromatographic comparisons consistent in both analyses for sample -88, a greater than 40% difference was seen between the two results. The results obtained within holding time for DRO/ORO analysis is reported as primary for all samples discussed above.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-01

Sample ID : MW-25-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/11/14 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	4500000	5200	100000	ug/l		9056MOD	11/22/14	100
Fluoride	1000	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	3100000	7700	500000	ug/l		9056MOD	11/22/14	100
Cyanide	U	1.8	5.0	ug/l		9012B	11/19/14	1
Nitrate-Nitrite	220	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	11000000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	U	10.	500	ug/l		6020	11/20/14	5
Arsenic	6.0	1.2	10.	ug/l	J	6020	11/18/14	5
Arsenic, Dissolved	5.0	1.2	10.	ug/l	J	6020	11/20/14	5
Barium	28.	1.8	25.	ug/l		6020	11/18/14	5
Barium, Dissolved	28.	1.8	25.	ug/l		6020	11/20/14	5
Boron, Dissolved	310	7.5	100	ug/l	V	6020	11/23/14	5
Cadmium, Dissolved	U	0.80	5.0	ug/l		6020	11/20/14	5
Calcium, Dissolved	1200000	2300	50000	ug/l	V	6020	11/24/14	50
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Chromium, Dissolved	U	2.7	5.0	ug/l		6020	11/20/14	5
Copper, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	5
Cobalt, Dissolved	U	1.3	10.	ug/l		6020	11/20/14	5
Iron	U	250	500	ug/l		6020	11/18/14	5
Iron, Dissolved	U	250	500	ug/l	J6	6020	11/20/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Lead, Dissolved	U	1.2	10.	ug/l		6020	11/23/14	5
Manganese	900	1.2	25.	ug/l		6020	11/18/14	5
Manganese, Dissolved	130	1.2	25.	ug/l	01J6	6020	11/20/14	5
Molybdenum, Dissolved	12.	0.70	25.	ug/l	J	6020	11/20/14	5
Nickel	5.0	1.8	10.	ug/l	JB	6020	11/18/14	5
Nickel, Dissolved	2.9	1.8	10.	ug/l	J	6020	11/20/14	5
Potassium, Dissolved	7200	180	5000	ug/l		6020	11/20/14	5
Selenium	33.	1.9	10.	ug/l		6020	11/18/14	5
Selenium, Dissolved	29.	1.9	10.	ug/l		6020	11/20/14	5
Silver, Dissolved	U	1.6	10.	ug/l		6020	11/20/14	5
Sodium, Dissolved	2600000	5500	50000	ug/l	V	6020	11/24/14	50
Uranium, Dissolved	16.	1.6	50.	ug/l	J	6020	11/23/14	5
Vanadium	13.	0.90	25.	ug/l	J	6020	11/18/14	5
Vanadium, Dissolved	11.	0.90	5.0	ug/l		6020	11/20/14	5
Zinc, Dissolved	20.	13.	130	ug/l	JJ6	6020	11/20/14	5
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	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.

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

Reported: 01/23/15 14:45 Revised: 08/26/15 10:13

L733743-01 (GFAA METALS) - Target compounds too high to run at a lower dilution.

L733743-01 (GFAA METALS) - Diluted due to matrix.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-1114-BG
Collected By : Ron Wood
Collection Date : 11/11/14 12:00

ESC Sample # : L733743-01

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	38.	31.	100	ug/l	J	8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	108.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	108.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	99.4			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	95.7			% Rec.		8260B	11/18/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	270	22.	100	ug/l	B	8015	11/19/14	1
C28-C40 Oil Range	70.	12.	100	ug/l	JB	8015	11/19/14	1
Surrogate Recovery o-Terphenyl	118.			% Rec.		8015	11/19/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l	J3	8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	41.8			% Rec.		8270C	11/18/14	1
Phenol-d5	32.0			% Rec.		8270C	11/18/14	1

U = ND (Not Detected)

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13

L733743-01 (GFAA METALS) - Target compounds too high to run at a lower dilution.

L733743-01 (GFAA METALS) - Diluted due to matrix.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-1114-BG
Collected By : Ron Wood
Collection Date : 11/11/14 12:00

ESC Sample # : L733743-01

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	73.9			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	76.2			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	77.4			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	69.7			% Rec.		8270C	11/18/14	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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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13

L733743-01 (GFAA METALS) - Target compounds too high to run at a lower dilution.

L733743-01 (GFAA METALS) - Diluted due to matrix.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-02

Sample ID : MW-17-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/11/14 13:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	150000	2600	50000	ug/l		9056MOD	11/22/14	50
Fluoride	1100	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	1200000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	29.	1.8	5.0	ug/l		9012B	11/19/14	1
Nitrate-Nitrite	1900	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	2000000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	9.9	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	0.88	0.25	2.0	ug/l	J	6020	11/19/14	1
Arsenic, Dissolved	0.89	0.25	2.0	ug/l	J	6020	11/20/14	1
Barium	13.	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	13.	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	130	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	440000	460	10000	ug/l		6020	11/24/14	10
Chromium	1.6	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	1.7	0.54	1.0	ug/l	B	6020	11/20/14	1
Copper, Dissolved	U	0.52	5.0	ug/l		6020	11/20/14	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l		6020	11/20/14	1
Lead	0.87	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	2.0	0.25	5.0	ug/l	J	6020	11/19/14	1
Manganese, Dissolved	0.28	0.25	5.0	ug/l	J	6020	11/20/14	1
Molybdenum, Dissolved	9.7	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	U	1.8	10.	ug/l		6020	11/18/14	5
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	11/20/14	1
Potassium, Dissolved	2200	37.	1000	ug/l		6020	11/20/14	1
Selenium	7.4	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	7.4	0.38	2.0	ug/l		6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	81000	110	1000	ug/l		6020	11/23/14	1
Uranium, Dissolved	3.1	0.33	10.	ug/l	J	6020	11/23/14	1
Vanadium	6.6	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	6.9	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	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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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13
L733743-02 (GFAA METALS) - Diluted due to matrix.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-1114-BG
Collected By : Ron Wood
Collection Date : 11/11/14 13:40

ESC Sample # : L733743-02

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/19/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	112.			% Rec.		8015D/G	11/19/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	109.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	98.5			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	92.3			% Rec.		8260B	11/18/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	115.			% Rec.		8015	11/19/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l	J3	8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	56.6			% Rec.		8270C	11/18/14	1
Phenol-d5	40.6			% Rec.		8270C	11/18/14	1

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13
L733743-02 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-1114-BG
Collected By : Ron Wood
Collection Date : 11/11/14 13:40

ESC Sample # : L733743-02

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	85.9			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	76.1			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	86.2			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	77.7			% Rec.		8270C	11/18/14	1

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L733743-02 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-03

Sample ID : NP-5-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/11/14 15:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	380000	2600	50000	ug/l		9056MOD	11/22/14	50
Fluoride	2600	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	3100000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	11/19/14	1
Nitrate-Nitrite	1200	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	5100000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	17.	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	3.1	0.25	2.0	ug/l		6020	11/19/14	1
Arsenic, Dissolved	3.3	0.25	2.0	ug/l		6020	11/20/14	1
Barium	12.	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	8.4	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	1600	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	590000	920	20000	ug/l		6020	11/24/14	20
Chromium	1.0	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	0.76	0.54	1.0	ug/l	JB	6020	11/20/14	1
Copper, Dissolved	1.2	0.52	5.0	ug/l	J	6020	11/20/14	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	11/20/14	1
Iron	170	50.	100	ug/l		6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l		6020	11/20/14	1
Lead	1.0	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	1.8	0.25	5.0	ug/l	J	6020	11/19/14	1
Manganese, Dissolved	0.52	0.25	5.0	ug/l	J	6020	11/20/14	1
Molybdenum, Dissolved	34.	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	2.2	1.8	10.	ug/l	JB	6020	11/18/14	5
Nickel, Dissolved	1.0	0.35	2.0	ug/l	J	6020	11/20/14	1
Potassium, Dissolved	460	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	9.6	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	10.	0.38	2.0	ug/l		6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium	250000	550	5000	ug/l		6020	11/18/14	5
Sodium, Dissolved	250000	550	5000	ug/l		6020	11/24/14	5
Uranium, Dissolved	200	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	20.	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	21.	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

U = ND (Not Detected)

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

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13
L733743-03 (GFAA METALS) - Diluted due to matrix.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-03

Sample ID : NP-5-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/11/14 15:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	109.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	99.6			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	92.1			% Rec.		8260B	11/18/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/19/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l	J3	8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	53.9			% Rec.		8270C	11/18/14	1

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L733743-03 (GFAA METALS) - Diluted due to matrix.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-1114-BG
Collected By : Ron Wood
Collection Date : 11/11/14 15:00

ESC Sample # : L733743-03

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Phenol-d5	37.8			% Rec.		8270C	11/18/14	1
Nitrobenzene-d5	72.7			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	82.0			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	82.1			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	88.0			% Rec.		8270C	11/18/14	1

U = ND (Not Detected)

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

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L733743-03 (GFAA METALS) - Diluted due to matrix.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-04

Sample ID : MW-136-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/11/14 16:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	220000	2600	50000	ug/l		9056MOD	11/22/14	50
Fluoride	1700	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	2200000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	U	1.8	5.0	ug/l	J6	9012B	11/21/14	1
Nitrate-Nitrite	620	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	3900000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	57.	10.	500	ug/l	J	6020	11/20/14	5
Arsenic	2.3	1.2	10.	ug/l	J	6020	11/18/14	5
Arsenic, Dissolved	2.5	1.2	10.	ug/l	J	6020	11/20/14	5
Barium	30.	1.8	25.	ug/l		6020	11/18/14	5
Barium, Dissolved	10.	1.8	25.	ug/l	J	6020	11/20/14	5
Boron, Dissolved	740	7.5	100	ug/l		6020	11/23/14	5
Cadmium, Dissolved	U	0.80	5.0	ug/l		6020	11/20/14	5
Calcium, Dissolved	760000	920	20000	ug/l		6020	11/24/14	20
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Chromium, Dissolved	U	2.7	5.0	ug/l		6020	11/20/14	5
Copper, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	5
Cobalt, Dissolved	U	1.3	10.	ug/l		6020	11/20/14	5
Iron	590	250	500	ug/l		6020	11/18/14	5
Iron, Dissolved	U	250	500	ug/l		6020	11/20/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Lead, Dissolved	U	1.2	10.	ug/l		6020	11/23/14	5
Manganese	70.	1.2	25.	ug/l		6020	11/18/14	5
Manganese, Dissolved	21.	1.2	25.	ug/l	J	6020	11/20/14	5
Molybdenum, Dissolved	6.0	0.70	25.	ug/l	J	6020	11/20/14	5
Nickel	2.8	1.8	10.	ug/l	JB	6020	11/18/14	5
Nickel, Dissolved	U	1.8	10.	ug/l		6020	11/20/14	5
Potassium, Dissolved	2700	180	5000	ug/l	J	6020	11/20/14	5
Selenium	7.5	1.9	10.	ug/l	J	6020	11/18/14	5
Selenium, Dissolved	4.2	1.9	10.	ug/l	J	6020	11/20/14	5
Silver, Dissolved	U	1.6	10.	ug/l		6020	11/20/14	5
Sodium, Dissolved	110000	550	5000	ug/l		6020	11/23/14	5
Uranium, Dissolved	73.	1.6	50.	ug/l		6020	11/23/14	5
Vanadium	21.	0.90	25.	ug/l	J	6020	11/18/14	5
Vanadium, Dissolved	18.	0.90	5.0	ug/l		6020	11/20/14	5
Zinc, Dissolved	U	13.	130	ug/l		6020	11/20/14	5
Mercury	0.085	0.049	0.20	ug/l	J	7470A	11/18/14	1

U = ND (Not Detected)

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13

L733743-04 (GFAA METALS) - Diluted due to matrix.

L733743-04 (GFAA METALS) - Target compounds too high to run at a lower dilution.



12065 Lebanon Rd.
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-04

Sample ID : MW-136-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/11/14 16:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.1			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	99.2			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	93.2			% Rec.		8260B	11/18/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	116.			% Rec.		8015	11/19/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l	J3	8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	12.1			% Rec.		8270C	11/18/14	1
Phenol-d5	18.1			% Rec.		8270C	11/18/14	1

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13

L733743-04 (GFAA METALS) - Diluted due to matrix.

L733743-04 (GFAA METALS) - Target compounds too high to run at a lower dilution.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-136-1114-BG
Collected By : Ron Wood
Collection Date : 11/11/14 16:10

ESC Sample # : L733743-04

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	72.6			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	81.8			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	72.3			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	84.7			% Rec.		8270C	11/18/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-05

Sample ID : EB-12-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/11/14 17:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	320	52.	1000	ug/l	JP1	9056MOD	11/22/14	1
Fluoride	U	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	450	77.	5000	ug/l	JP1	9056MOD	11/22/14	1
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	U	2800	10000	ug/l	T4	2540 C-	11/18/14	1
Aluminum, Dissolved	20.	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	U	0.25	2.0	ug/l		6020	11/19/14	1
Arsenic, Dissolved	U	0.25	2.0	ug/l		6020	11/20/14	1
Barium	U	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	0.57	0.36	5.0	ug/l	J	6020	11/20/14	1
Boron, Dissolved	37.	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	210	46.	1000	ug/l	J	6020	11/20/14	1
Chromium	U	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	U	0.54	1.0	ug/l		6020	11/20/14	1
Copper, Dissolved	U	0.52	5.0	ug/l		6020	11/20/14	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l		6020	11/20/14	1
Lead	0.96	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	U	0.25	5.0	ug/l		6020	11/19/14	1
Manganese, Dissolved	0.32	0.25	5.0	ug/l	J	6020	11/20/14	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	U	0.35	2.0	ug/l		6020	11/19/14	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	11/20/14	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	11/20/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	0.92	0.38	2.0	ug/l	J	6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	120	110	1000	ug/l	J	6020	11/23/14	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	U	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	U	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

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L733743-05 (GFAA METALS) - Diluted due to matrix.



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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-12-1114-BG
Collected By : Ron Wood
Collection Date : 11/11/14 17:00

ESC Sample # : L733743-05

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.2			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	94.5			% Rec.		8260B	11/18/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	110.			% Rec.		8015	11/19/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l	J3	8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	54.6			% Rec.		8270C	11/18/14	1
Phenol-d5	41.9			% Rec.		8270C	11/18/14	1

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L733743-05 (GFAA METALS) - Diluted due to matrix.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-12-1114-BG
Collected By : Ron Wood
Collection Date : 11/11/14 17:00

ESC Sample # : L733743-05

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	74.7			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	71.5			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	75.0			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	74.9			% Rec.		8270C	11/18/14	1

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L733743-05 (GFAA METALS) - Diluted due to matrix.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 09:45

ESC Sample # : L733743-06

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	2500000	2600	50000	ug/l		9056MOD	11/22/14	50
Fluoride	820	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	3000000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	5300	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	8400000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	U	10.	500	ug/l		6020	11/20/14	5
Arsenic	2.3	1.2	10.	ug/l	J	6020	11/18/14	5
Arsenic, Dissolved	1.4	1.2	10.	ug/l	J	6020	11/20/14	5
Barium	27.	1.8	25.	ug/l		6020	11/18/14	5
Barium, Dissolved	21.	1.8	25.	ug/l	J	6020	11/20/14	5
Boron, Dissolved	930	7.5	100	ug/l		6020	11/23/14	5
Cadmium, Dissolved	U	0.80	5.0	ug/l		6020	11/20/14	5
Calcium, Dissolved	840000	920	20000	ug/l		6020	11/24/14	20
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Chromium, Dissolved	U	2.7	5.0	ug/l		6020	11/20/14	5
Copper, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	5
Cobalt, Dissolved	U	1.3	10.	ug/l		6020	11/20/14	5
Iron	520	250	500	ug/l		6020	11/18/14	5
Iron, Dissolved	U	250	500	ug/l		6020	11/20/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Lead, Dissolved	U	1.2	10.	ug/l		6020	11/23/14	5
Manganese	210	1.2	25.	ug/l		6020	11/18/14	5
Manganese, Dissolved	57.	1.2	25.	ug/l		6020	11/20/14	5
Molybdenum, Dissolved	3.8	0.70	25.	ug/l	J	6020	11/20/14	5
Nickel	U	1.8	10.	ug/l		6020	11/18/14	5
Nickel, Dissolved	U	1.8	10.	ug/l		6020	11/20/14	5
Potassium, Dissolved	4300	180	5000	ug/l	J	6020	11/20/14	5
Selenium	13.	1.9	10.	ug/l		6020	11/18/14	5
Selenium, Dissolved	19.	1.9	10.	ug/l		6020	11/20/14	5
Silver, Dissolved	U	1.6	10.	ug/l		6020	11/20/14	5
Sodium, Dissolved	1900000	2200	20000	ug/l		6020	11/24/14	20
Uranium, Dissolved	20.	1.6	50.	ug/l	J	6020	11/23/14	5
Vanadium	7.7	0.90	25.	ug/l	J	6020	11/18/14	5
Vanadium, Dissolved	5.1	0.90	5.0	ug/l		6020	11/20/14	5
Zinc, Dissolved	U	13.	130	ug/l		6020	11/20/14	5
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

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MDL = Minimum Detection Limit = LOD = TRRP SDL

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13

L733743-06 (GFAA METALS) - Diluted due to matrix.

L733743-06 (GFAA METALS) - Target compounds too high to run at a lower dilution.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 09:45

ESC Sample # : L733743-06

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	98.7			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	107.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	63.	26.	120	ug/l	J	8015	11/20/14	1.17
C28-C40 Oil Range	36.	14.	120	ug/l	J	8015	11/20/14	1.17
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	11/20/14	1.17
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	48.7			% Rec.		8270C	11/18/14	1
Phenol-d5	35.8			% Rec.		8270C	11/18/14	1

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13

L733743-06 (GFAA METALS) - Diluted due to matrix.

L733743-06 (GFAA METALS) - Target compounds too high to run at a lower dilution.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 09:45

ESC Sample # : L733743-06

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	71.5			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	88.5			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	78.1			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	85.7			% Rec.		8270C	11/18/14	1

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L733743-06 (GFAA METALS) - Target compounds too high to run at a lower dilution.



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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-07

Sample ID : MW-12-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/12/14 10:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	1200000	2600	50000	ug/l		9056MOD	11/22/14	50
Fluoride	1300	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	2900000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	9300	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	6400000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	12.	10.	500	ug/l	J	6020	11/20/14	5
Arsenic	2.5	1.2	10.	ug/l	J	6020	11/18/14	5
Arsenic, Dissolved	U	1.2	10.	ug/l		6020	11/20/14	5
Barium	19.	1.8	25.	ug/l	J	6020	11/18/14	5
Barium, Dissolved	18.	1.8	25.	ug/l	J	6020	11/20/14	5
Boron, Dissolved	630	7.5	100	ug/l		6020	11/23/14	5
Cadmium, Dissolved	U	0.80	5.0	ug/l		6020	11/20/14	5
Calcium, Dissolved	700000	920	20000	ug/l		6020	11/24/14	20
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Chromium, Dissolved	U	2.7	5.0	ug/l		6020	11/20/14	5
Copper, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	5
Cobalt, Dissolved	U	1.3	10.	ug/l		6020	11/20/14	5
Iron	1100	250	500	ug/l		6020	11/18/14	5
Iron, Dissolved	U	250	500	ug/l		6020	11/20/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Lead, Dissolved	U	1.2	10.	ug/l		6020	11/23/14	5
Manganese	68.	1.2	25.	ug/l		6020	11/18/14	5
Manganese, Dissolved	55.	1.2	25.	ug/l		6020	11/20/14	5
Molybdenum, Dissolved	5.2	0.70	25.	ug/l	J	6020	11/20/14	5
Nickel	2.0	1.8	10.	ug/l	JB	6020	11/18/14	5
Nickel, Dissolved	U	1.8	10.	ug/l		6020	11/20/14	5
Potassium, Dissolved	3900	180	5000	ug/l	J	6020	11/20/14	5
Selenium	8.6	1.9	10.	ug/l	J	6020	11/18/14	5
Selenium, Dissolved	12.	1.9	10.	ug/l		6020	11/20/14	5
Silver, Dissolved	U	1.6	10.	ug/l		6020	11/20/14	5
Sodium, Dissolved	1300000	2200	20000	ug/l		6020	11/24/14	20
Uranium, Dissolved	5.5	1.6	50.	ug/l	J	6020	11/23/14	5
Vanadium	3.2	0.90	25.	ug/l	J	6020	11/18/14	5
Vanadium, Dissolved	2.2	0.90	5.0	ug/l	J	6020	11/20/14	5
Zinc, Dissolved	U	13.	130	ug/l		6020	11/20/14	5
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

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L733743-07 (GFAA METALS) - Target compounds too high to run at a lower dilution.

L733743-07 (GFAA METALS) - Diluted due to matrix.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-12-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 10:40

ESC Sample # : L733743-07

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	97.1			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	108.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	58.	26.	120	ug/l	J	8015	11/20/14	1.17
C28-C40 Oil Range	30.	14.	120	ug/l	J	8015	11/20/14	1.17
Surrogate Recovery o-Terphenyl	119.			% Rec.		8015	11/20/14	1.17
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	50.0			% Rec.		8270C	11/18/14	1
Phenol-d5	39.7			% Rec.		8270C	11/18/14	1

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L733743-07 (GFAA METALS) - Target compounds too high to run at a lower dilution.

L733743-07 (GFAA METALS) - Diluted due to matrix.



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REPORT OF ANALYSIS

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Houston, TX 77042

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-12-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 10:40

ESC Sample # : L733743-07

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	63.0			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	85.2			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	75.5			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	84.7			% Rec.		8270C	11/18/14	1

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L733743-07 (GFAA METALS) - Diluted due to matrix.



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August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-08

Sample ID : MW-55-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/12/14 12:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	120000	2600	50000	ug/l		9056MOD	11/22/14	50
Fluoride	2800	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	2100000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	4100	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	3300000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	14.	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	4.8	0.25	2.0	ug/l		6020	11/19/14	1
Arsenic, Dissolved	4.8	0.25	2.0	ug/l		6020	11/20/14	1
Barium	13.	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	12.	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	760	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	600000	920	20000	ug/l		6020	11/24/14	20
Chromium	1.7	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	1.7	0.54	1.0	ug/l	B	6020	11/20/14	1
Copper, Dissolved	1.3	0.52	5.0	ug/l	J	6020	11/20/14	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	11/20/14	1
Iron	67.	50.	100	ug/l	J	6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l		6020	11/20/14	1
Lead	0.83	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	170	0.25	5.0	ug/l		6020	11/19/14	1
Manganese, Dissolved	13.	0.25	5.0	ug/l		6020	11/20/14	1
Molybdenum, Dissolved	28.	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	2.3	0.35	2.0	ug/l	B	6020	11/19/14	1
Nickel, Dissolved	1.2	0.35	2.0	ug/l	J	6020	11/20/14	1
Potassium, Dissolved	1100	37.	1000	ug/l		6020	11/20/14	1
Selenium	12.	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	12.	0.38	2.0	ug/l		6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	130000	550	5000	ug/l		6020	11/24/14	5
Uranium, Dissolved	26.	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	18.	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	18.	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

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August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 12:45

ESC Sample # : L733743-08

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.9			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	160	25.	110	ug/l		8015	11/20/14	1.11
C28-C40 Oil Range	100	13.	110	ug/l	J	8015	11/20/14	1.11
Surrogate Recovery								
o-Terphenyl	119.			% Rec.		8015	11/20/14	1.11
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	45.2			% Rec.		8270C	11/18/14	1
Phenol-d5	35.1			% Rec.		8270C	11/18/14	1

U = ND (Not Detected)

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

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13
L733743-08 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 12:45

ESC Sample # : L733743-08

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	56.3			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	79.4			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	76.7			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	87.7			% Rec.		8270C	11/18/14	1

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-09

Sample ID : UG-2-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/12/14 14:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	89000	52.	1000	ug/l		9056MOD	11/22/14	1
Fluoride	1600	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	1100000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	3300	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	12.	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	2.1	0.25	2.0	ug/l		6020	11/19/14	1
Arsenic, Dissolved	2.2	0.25	2.0	ug/l		6020	11/20/14	1
Barium	15.	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	110	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	290	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	420000	460	10000	ug/l		6020	11/24/14	10
Chromium	U	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	0.64	0.54	1.0	ug/l	JB	6020	11/20/14	1
Copper, Dissolved	1.0	0.52	5.0	ug/l	J	6020	11/20/14	1
Cobalt, Dissolved	1.0	0.26	2.0	ug/l	J	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Iron, Dissolved	100	50.	100	ug/l		6020	11/20/14	1
Lead	0.81	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	150	0.25	5.0	ug/l		6020	11/19/14	1
Manganese, Dissolved	150	0.25	5.0	ug/l		6020	11/20/14	1
Molybdenum, Dissolved	7.4	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	9.7	0.35	2.0	ug/l	B	6020	11/19/14	1
Nickel, Dissolved	9.2	0.35	2.0	ug/l		6020	11/20/14	1
Potassium, Dissolved	1900	37.	1000	ug/l		6020	11/20/14	1
Selenium	2.4	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	3.4	0.38	2.0	ug/l		6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	95000	110	1000	ug/l		6020	11/23/14	1
Uranium, Dissolved	14.	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	14.	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	15.	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	4.2	2.6	25.	ug/l	J	6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 14:35

ESC Sample # : L733743-09

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	97.0			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	108.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	140	25.	110	ug/l		8015	11/20/14	1.11
C28-C40 Oil Range	70.	13.	110	ug/l	J	8015	11/20/14	1.11
Surrogate Recovery								
o-Terphenyl	121.			% Rec.		8015	11/20/14	1.11
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	50.5			% Rec.		8270C	11/18/14	1
Phenol-d5	37.1			% Rec.		8270C	11/18/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 14:35

ESC Sample # : L733743-09

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	70.0			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	96.4			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	84.4			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	90.8			% Rec.		8270C	11/18/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-10

Sample ID : UG-1-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/13/14 15:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	91000	52.	1000	ug/l		9056MOD	11/22/14	1
Fluoride	820	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	1800000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	13000	99.	500	ug/l		353.2	11/17/14	5
Dissolved Solids	3400000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	12.	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	1.3	0.25	2.0	ug/l	J	6020	11/19/14	1
Arsenic, Dissolved	1.2	0.25	2.0	ug/l	J	6020	11/20/14	1
Barium	15.	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	14.	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	470	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	540000	920	20000	ug/l		6020	11/24/14	20
Chromium	1.4	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	1.2	0.54	1.0	ug/l	B	6020	11/20/14	1
Copper, Dissolved	0.96	0.52	5.0	ug/l	J	6020	11/20/14	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	11/20/14	1
Iron	60.	50.	100	ug/l	J	6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l		6020	11/20/14	1
Lead	1.6	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	1.6	0.25	5.0	ug/l	J	6020	11/19/14	1
Manganese, Dissolved	U	0.25	5.0	ug/l		6020	11/20/14	1
Molybdenum, Dissolved	5.4	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	2.0	0.35	2.0	ug/l		6020	11/19/14	1
Nickel, Dissolved	1.1	0.35	2.0	ug/l	J	6020	11/20/14	1
Potassium, Dissolved	1300	37.	1000	ug/l		6020	11/20/14	1
Selenium	9.6	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	8.1	0.38	2.0	ug/l		6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	96000	110	1000	ug/l		6020	11/23/14	1
Uranium, Dissolved	22.	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	14.	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	14.	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-1114-BG
Collected By : Ron Wood
Collection Date : 11/13/14 15:50

ESC Sample # : L733743-10

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	109.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	99.6			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	107.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	88.	25.	110	ug/l	J	8015	11/20/14	1.11
C28-C40 Oil Range	67.	13.	110	ug/l	J	8015	11/20/14	1.11
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/20/14	1.11
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/19/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/19/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/19/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/19/14	1
Surrogate Recovery								
2-Fluorophenol	60.8			% Rec.		8270C	11/19/14	1
Phenol-d5	37.0			% Rec.		8270C	11/19/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-1114-BG
Collected By : Ron Wood
Collection Date : 11/13/14 15:50

ESC Sample # : L733743-10

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	56.8			% Rec.		8270C	11/19/14	1
2-Fluorobiphenyl	74.3			% Rec.		8270C	11/19/14	1
2,4,6-Tribromophenol	72.8			% Rec.		8270C	11/19/14	1
p-Terphenyl-d14	80.9			% Rec.		8270C	11/19/14	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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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-11

Sample ID : EB-13-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/12/14 16:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	290	52.	1000	ug/l	J	9056MOD	11/22/14	1
Fluoride	U	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	360	77.	5000	ug/l	J	9056MOD	11/22/14	1
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	58000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	8.3	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	U	0.25	2.0	ug/l		6020	11/19/14	1
Arsenic, Dissolved	U	0.25	2.0	ug/l		6020	11/20/14	1
Barium	U	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	U	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	25.	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	U	46.	1000	ug/l		6020	11/20/14	1
Chromium	U	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	U	0.54	1.0	ug/l		6020	11/20/14	1
Copper, Dissolved	U	0.52	5.0	ug/l		6020	11/20/14	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l		6020	11/20/14	1
Lead	0.80	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	0.49	0.25	5.0	ug/l	J	6020	11/19/14	1
Manganese, Dissolved	U	0.25	5.0	ug/l		6020	11/20/14	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	U	0.35	2.0	ug/l		6020	11/19/14	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	11/20/14	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	11/20/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	1.2	0.38	2.0	ug/l	J	6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	U	110	1000	ug/l		6020	11/23/14	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	U	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	U	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

U = ND (Not Detected)

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

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L733743-11 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-13-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 16:55

ESC Sample # : L733743-11

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	109.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.2			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	107.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	25.	110	ug/l		8015	11/20/14	1.11
C28-C40 Oil Range	U	13.	110	ug/l		8015	11/20/14	1.11
Surrogate Recovery								
o-Terphenyl	118.			% Rec.		8015	11/20/14	1.11
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/18/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/18/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/18/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/18/14	1
Surrogate Recovery								
2-Fluorophenol	39.9			% Rec.		8270C	11/18/14	1
Phenol-d5	31.6			% Rec.		8270C	11/18/14	1

U = ND (Not Detected)

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L733743-11 (GFAA METALS) - Diluted due to matrix.



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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-13-1114-BG
Collected By : Ron Wood
Collection Date : 11/12/14 16:55

ESC Sample # : L733743-11

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	66.9			% Rec.		8270C	11/18/14	1
2-Fluorobiphenyl	87.7			% Rec.		8270C	11/18/14	1
2,4,6-Tribromophenol	73.6			% Rec.		8270C	11/18/14	1
p-Terphenyl-d14	83.0			% Rec.		8270C	11/18/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-12

Sample ID : UG-4-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/13/14 09:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	49000	52.	1000	ug/l		9056MOD	11/22/14	1
Fluoride	660	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	2500000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	580	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	4400000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	100	2.0	100	ug/l		6020	11/20/14	1
Arsenic	1.0	0.25	2.0	ug/l	J	6020	11/19/14	1
Arsenic, Dissolved	0.83	0.25	2.0	ug/l	J	6020	11/20/14	1
Barium	35.	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	31.	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	950	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	620000	920	20000	ug/l		6020	11/24/14	20
Chromium	2.1	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	1.0	0.54	1.0	ug/l	B	6020	11/20/14	1
Copper, Dissolved	1.4	0.52	5.0	ug/l	J	6020	11/20/14	1
Cobalt, Dissolved	0.30	0.26	2.0	ug/l	J	6020	11/20/14	1
Iron	630	50.	100	ug/l		6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l	J	6020	11/20/14	1
Lead	1.7	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	120	0.25	5.0	ug/l		6020	11/19/14	1
Manganese, Dissolved	100	0.25	5.0	ug/l		6020	11/20/14	1
Molybdenum, Dissolved	5.9	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	3.1	0.35	2.0	ug/l	B	6020	11/19/14	1
Nickel, Dissolved	2.3	0.35	2.0	ug/l		6020	11/20/14	1
Potassium, Dissolved	3300	37.	1000	ug/l		6020	11/20/14	1
Selenium	6.1	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	5.5	0.38	2.0	ug/l		6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	250000	2200	20000	ug/l		6020	11/24/14	20
Uranium, Dissolved	35.	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	6.1	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	4.7	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	8.3	2.6	25.	ug/l	J	6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

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L733743-12 (GFAA METALS) - Diluted due to matrix.



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1-800-767-5859
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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-1114-BG
Collected By : Ron Wood
Collection Date : 11/13/14 09:50

ESC Sample # : L733743-12

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	109.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.1			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	108.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	59.	25.	110	ug/l	J	8015	11/20/14	1.11
C28-C40 Oil Range	32.	13.	110	ug/l	J	8015	11/20/14	1.11
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	11/20/14	1.11
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/19/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/19/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/19/14	1
Naphthalene	0.39	0.37	1.0	ug/l	J	8270C	11/19/14	1
Surrogate Recovery								
2-Fluorophenol	42.4			% Rec.		8270C	11/19/14	1
Phenol-d5	26.4			% Rec.		8270C	11/19/14	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 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-1114-BG
Collected By : Ron Wood
Collection Date : 11/13/14 09:50

ESC Sample # : L733743-12

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	61.1			% Rec.		8270C	11/19/14	1
2-Fluorobiphenyl	76.4			% Rec.		8270C	11/19/14	1
2,4,6-Tribromophenol	70.8			% Rec.		8270C	11/19/14	1
p-Terphenyl-d14	76.5			% Rec.		8270C	11/19/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-13

Sample ID : UG-3R-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/13/14 11:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	25000	52.	1000	ug/l		9056MOD	11/22/14	1
Fluoride	660	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	1300000	3900	250000	ug/l		9056MOD	11/22/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	760	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	2400000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	10.	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	1.6	0.25	2.0	ug/l	J	6020	11/19/14	1
Arsenic, Dissolved	1.5	0.25	2.0	ug/l	J	6020	11/20/14	1
Barium	22.	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	20.	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	240	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	440000	460	10000	ug/l		6020	11/24/14	10
Chromium	1.3	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	0.70	0.54	1.0	ug/l	JB	6020	11/20/14	1
Copper, Dissolved	0.61	0.52	5.0	ug/l	J	6020	11/20/14	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	11/20/14	1
Iron	320	50.	100	ug/l		6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l		6020	11/20/14	1
Lead	1.2	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	18.	0.25	5.0	ug/l		6020	11/19/14	1
Manganese, Dissolved	9.5	0.25	5.0	ug/l		6020	11/20/14	1
Molybdenum, Dissolved	3.8	0.14	5.0	ug/l	J	6020	11/20/14	1
Nickel	1.3	0.35	2.0	ug/l	JB	6020	11/19/14	1
Nickel, Dissolved	0.73	0.35	2.0	ug/l	J	6020	11/20/14	1
Potassium, Dissolved	1900	37.	1000	ug/l		6020	11/20/14	1
Selenium	3.6	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	4.0	0.38	2.0	ug/l		6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	64000	1100	10000	ug/l		6020	11/24/14	10
Uranium, Dissolved	12.	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	9.6	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	9.2	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	7.6	2.6	25.	ug/l	J	6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

U = ND (Not Detected)

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

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13
L733743-13 (GFAA METALS) - Diluted due to matrix.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-13

Sample ID : UG-3R-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/13/14 11:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	109.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Benzene	U	0.331	1.00	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.379	1.00	ug/l		8260B	11/22/14	1
Chloroform	U	0.324	5.00	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.381	1.00	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.259	1.00	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.361	1.00	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.398	1.00	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.384	1.00	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.00	5.00	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.385	1.00	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.130	1.00	ug/l		8260B	11/22/14	1
Toluene	U	0.780	5.00	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.319	1.00	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.372	1.00	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.383	1.00	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.259	1.00	ug/l		8260B	11/22/14	1
o-Xylene	U	0.341	1.00	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.719	2.00	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.06	3.00	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	97.9			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	71.	25.	110	ug/l	J	8015	11/20/14	1.11
C28-C40 Oil Range	23.	13.	110	ug/l	J	8015	11/20/14	1.11
Surrogate Recovery o-Terphenyl	126.			% Rec.		8015	11/20/14	1.11
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/19/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/19/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/19/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/19/14	1
Surrogate Recovery								
2-Fluorophenol	45.7			% Rec.		8270C	11/19/14	1
Phenol-d5	31.0			% Rec.		8270C	11/19/14	1

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L733743-13 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-1114-BG
Collected By : Ron Wood
Collection Date : 11/13/14 11:30

ESC Sample # : L733743-13

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	67.5			% Rec.		8270C	11/19/14	1
2-Fluorobiphenyl	76.6			% Rec.		8270C	11/19/14	1
2,4,6-Tribromophenol	66.8			% Rec.		8270C	11/19/14	1
p-Terphenyl-d14	69.6			% Rec.		8270C	11/19/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-14

Sample ID : EB-14-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/13/14 12:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	260	52.	1000	ug/l	JP1	9056MOD	11/22/14	1
Fluoride	U	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	310	77.	5000	ug/l	J	9056MOD	11/22/14	1
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	50000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	6.7	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	U	0.25	2.0	ug/l		6020	11/19/14	1
Arsenic, Dissolved	U	0.25	2.0	ug/l		6020	11/20/14	1
Barium	U	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	U	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	36.	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	130	46.	1000	ug/l	J	6020	11/20/14	1
Chromium	U	0.54	1.0	ug/l		6020	11/19/14	1
Chromium, Dissolved	U	0.54	1.0	ug/l		6020	11/20/14	1
Copper, Dissolved	U	0.52	5.0	ug/l		6020	11/20/14	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l		6020	11/20/14	1
Lead	0.61	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	U	0.25	5.0	ug/l		6020	11/19/14	1
Manganese, Dissolved	U	0.25	5.0	ug/l		6020	11/20/14	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	U	0.35	2.0	ug/l		6020	11/19/14	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	11/20/14	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	11/20/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	U	0.38	2.0	ug/l		6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	U	110	1000	ug/l		6020	11/23/14	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	U	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	U	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

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L733743-14 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-14

Sample ID : EB-14-1114-BG

Site ID :

Collected By : Ron Wood
Collection Date : 11/13/14 12:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	109.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Benzene	U	0.331	1.00	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.379	1.00	ug/l		8260B	11/22/14	1
Chloroform	U	0.324	5.00	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.381	1.00	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.259	1.00	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.361	1.00	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.398	1.00	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.384	1.00	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.00	5.00	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.385	1.00	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.130	1.00	ug/l		8260B	11/22/14	1
Toluene	U	0.780	5.00	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.319	1.00	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.372	1.00	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.383	1.00	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.259	1.00	ug/l		8260B	11/22/14	1
o-Xylene	U	0.341	1.00	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.719	2.00	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.06	3.00	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.4			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	25.	110	ug/l		8015	11/20/14	1.11
C28-C40 Oil Range	U	13.	110	ug/l		8015	11/20/14	1.11
Surrogate Recovery o-Terphenyl	123.			% Rec.		8015	11/20/14	1.11
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/19/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/19/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/19/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/19/14	1
Surrogate Recovery								
2-Fluorophenol	52.8			% Rec.		8270C	11/19/14	1
Phenol-d5	40.3			% Rec.		8270C	11/19/14	1

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L733743-14 (GFAA METALS) - Diluted due to matrix.



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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-14-1114-BG
Collected By : Ron Wood
Collection Date : 11/13/14 12:30

ESC Sample # : L733743-14

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	71.8			% Rec.		8270C	11/19/14	1
2-Fluorobiphenyl	86.5			% Rec.		8270C	11/19/14	1
2,4,6-Tribromophenol	75.8			% Rec.		8270C	11/19/14	1
p-Terphenyl-d14	72.6			% Rec.		8270C	11/19/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-15

Sample ID : DUP-5-1114

Site ID :

Collected By : Ron Wood
Collection Date : 11/13/14 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	89000	52.	1000	ug/l		9056MOD	11/22/14	1
Fluoride	1600	9.9	100	ug/l		9056MOD	11/22/14	1
Sulfate	1200000	1500	100000	ug/l		9056MOD	11/22/14	20
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	3300	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	2400000	2800	10000	ug/l		2540 C-	11/18/14	1
Aluminum, Dissolved	14.	2.0	100	ug/l	J	6020	11/20/14	1
Arsenic	2.2	0.25	2.0	ug/l		6020	11/19/14	1
Arsenic, Dissolved	2.2	0.25	2.0	ug/l		6020	11/20/14	1
Barium	15.	0.36	5.0	ug/l		6020	11/19/14	1
Barium, Dissolved	16.	0.36	5.0	ug/l		6020	11/20/14	1
Boron, Dissolved	280	1.5	20.	ug/l		6020	11/23/14	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	11/20/14	1
Calcium, Dissolved	380000	920	20000	ug/l		6020	11/24/14	20
Chromium	0.54	0.54	1.0	ug/l	J	6020	11/19/14	1
Chromium, Dissolved	0.54	0.54	1.0	ug/l	JB	6020	11/20/14	1
Copper, Dissolved	0.67	0.52	5.0	ug/l	J	6020	11/20/14	1
Cobalt, Dissolved	0.97	0.26	2.0	ug/l	J	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Iron, Dissolved	U	50.	100	ug/l		6020	11/20/14	1
Lead	0.59	0.24	2.0	ug/l	J	6020	11/19/14	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	11/23/14	1
Manganese	150	0.25	5.0	ug/l		6020	11/19/14	1
Manganese, Dissolved	150	0.25	5.0	ug/l		6020	11/20/14	1
Molybdenum, Dissolved	7.5	0.14	5.0	ug/l		6020	11/20/14	1
Nickel	9.6	0.35	2.0	ug/l	B	6020	11/19/14	1
Nickel, Dissolved	9.0	0.35	2.0	ug/l		6020	11/20/14	1
Potassium, Dissolved	1800	37.	1000	ug/l		6020	11/20/14	1
Selenium	2.4	0.38	2.0	ug/l		6020	11/19/14	1
Selenium, Dissolved	3.1	0.38	2.0	ug/l		6020	11/20/14	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	11/20/14	1
Sodium, Dissolved	94000	2200	20000	ug/l		6020	11/24/14	20
Uranium, Dissolved	22.	0.33	10.	ug/l		6020	11/23/14	1
Vanadium	14.	0.18	5.0	ug/l		6020	11/19/14	1
Vanadium, Dissolved	16.	0.18	1.0	ug/l		6020	11/20/14	1
Zinc, Dissolved	3.2	2.6	25.	ug/l	J	6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1

U = ND (Not Detected)

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

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13
L733743-15 (GFAA METALS) - Diluted due to matrix.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-15

Sample ID : DUP-5-1114

Site ID :

Collected By : Ron Wood
Collection Date : 11/13/14 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	109.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Benzene	U	0.331	1.00	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.379	1.00	ug/l		8260B	11/22/14	1
Chloroform	U	0.324	5.00	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.381	1.00	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.259	1.00	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.361	1.00	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.398	1.00	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.384	1.00	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.00	5.00	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.385	1.00	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.130	1.00	ug/l		8260B	11/22/14	1
Toluene	U	0.780	5.00	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.319	1.00	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.372	1.00	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.383	1.00	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.259	1.00	ug/l		8260B	11/22/14	1
o-Xylene	U	0.341	1.00	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.719	2.00	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.06	3.00	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.7			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	110.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	63.	25.	110	ug/l	J	8015	11/20/14	1.11
C28-C40 Oil Range	14.	13.	110	ug/l	J	8015	11/20/14	1.11
Surrogate Recovery								
o-Terphenyl	121.			% Rec.		8015	11/20/14	1.11
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	11/19/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	11/19/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	11/19/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	11/19/14	1
Surrogate Recovery								
2-Fluorophenol	56.2			% Rec.		8270C	11/19/14	1
Phenol-d5	35.0			% Rec.		8270C	11/19/14	1

U = ND (Not Detected)

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

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:13
L733743-15 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : DUP-5-1114
Collected By : Ron Wood
Collection Date : 11/13/14 00:00

ESC Sample # : L733743-15

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrobenzene-d5	56.3			% Rec.		8270C	11/19/14	1
2-Fluorobiphenyl	67.7			% Rec.		8270C	11/19/14	1
2,4,6-Tribromophenol	64.5			% Rec.		8270C	11/19/14	1
p-Terphenyl-d14	77.4			% Rec.		8270C	11/19/14	1

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L733743-15 (GFAA METALS) - Diluted due to matrix.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : TRIP BLANK 20

Collected By : Ron Wood
Collection Date : 11/13/14 00:00

ESC Sample # : L733743-16

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	98.0			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	98.6			% Rec.		8260B	11/18/14	1

U = ND (Not Detected)

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

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1-800-767-5859
Fax (615) 758-5859

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : TRIP BLANK 21

Collected By : Ron Wood
Collection Date : 11/13/14 00:00

ESC Sample # : L733743-17

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	98.7			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	95.1			% Rec.		8260B	11/18/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : TRIP BLANK 22

Collected By : Ron Wood
Collection Date : 11/13/14 00:00

ESC Sample # : L733743-18

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	97.6			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	96.2			% Rec.		8260B	11/18/14	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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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : TRIP BLANK 23
Collected By : Ron Wood
Collection Date : 11/13/14 00:00

ESC Sample # : L733743-19

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	96.1			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	94.6			% Rec.		8260B	11/18/14	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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1-800-767-5859
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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : TRIP BLANK 24
Collected By : Ron Wood
Collection Date : 11/13/14 00:00

ESC Sample # : L733743-20

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/18/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/18/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/18/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/18/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/18/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/18/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/18/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/18/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/18/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/18/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/18/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/18/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/18/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/18/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/18/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/18/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/18/14	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	11/18/14	1
Dibromofluoromethane	99.4			% Rec.		8260B	11/18/14	1
4-Bromofluorobenzene	96.8			% Rec.		8260B	11/18/14	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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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 14, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-21

Sample ID : TRIP BLANK 25

Site ID :

Collected By : Ron Wood
Collection Date : 11/13/14 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	96.5			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	95.0			% Rec.		8260B	11/19/14	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: 01/23/15 14:45 Revised: 08/26/15 10:14

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-01	WG755177	SAMP	C10-C28 Diesel Range	R3005575	B
	WG755177	SAMP	C28-C40 Oil Range	R3005575	JB
	WG754898	SAMP	Benzo(a)pyrene	R3005173	J3
	WG754942	SAMP	TPH (GC/FID) Low Fraction	R3005123	J
	WG755200	SAMP	Arsenic	R3005226	J
	WG755434	SAMP	Arsenic, Dissolved	R3005770	J
	WG755434	SAMP	Boron, Dissolved	R3006322	V
	WG755434	SAMP	Calcium, Dissolved	R3006322	V
	WG755434	SAMP	Iron, Dissolved	R3005770	J6
	WG755434	SAMP	Manganese, Dissolved	R3005770	01J6
	WG755434	SAMP	Molybdenum, Dissolved	R3005770	J
	WG755200	SAMP	Nickel	R3005226	JB
	WG755434	SAMP	Nickel, Dissolved	R3005770	J
	WG755434	SAMP	Sodium, Dissolved	R3006322	V
	WG755434	SAMP	Uranium, Dissolved	R3006322	J
	WG755200	SAMP	Vanadium	R3005226	J
	WG755434	SAMP	Zinc, Dissolved	R3005770	JJ6
L733743-02	WG754898	SAMP	Benzo(a)pyrene	R3005173	J3
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755200	SAMP	Arsenic	R3005473	J
	WG755434	SAMP	Arsenic, Dissolved	R3005770	J
	WG755434	SAMP	Chromium, Dissolved	R3005770	B
	WG755200	SAMP	Lead	R3005473	J
	WG755200	SAMP	Manganese	R3005473	J
	WG755434	SAMP	Manganese, Dissolved	R3005770	J
	WG755434	SAMP	Uranium, Dissolved	R3006322	J
	WG754898	SAMP	Benzo(a)pyrene	R3005173	J3
L733743-03	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755434	SAMP	Chromium, Dissolved	R3005770	JB
	WG755434	SAMP	Copper, Dissolved	R3005770	J
	WG755200	SAMP	Lead	R3005473	J
	WG755200	SAMP	Manganese	R3005473	J
	WG755434	SAMP	Manganese, Dissolved	R3005770	J
	WG755200	SAMP	Nickel	R3005226	JB
	WG755434	SAMP	Nickel, Dissolved	R3005770	J
	WG755434	SAMP	Potassium, Dissolved	R3005770	J
	WG754885	SAMP	Mercury	R3005084	J
L733743-04	WG755292	SAMP	Cyanide	R3005748	J6
	WG754898	SAMP	Benzo(a)pyrene	R3005173	J3
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755200	SAMP	Arsenic	R3005226	J
	WG755434	SAMP	Arsenic, Dissolved	R3005770	J
	WG755434	SAMP	Barium, Dissolved	R3005770	J
	WG755434	SAMP	Manganese, Dissolved	R3005770	J
	WG755434	SAMP	Molybdenum, Dissolved	R3005770	J
	WG755200	SAMP	Nickel	R3005226	JB
	WG755434	SAMP	Potassium, Dissolved	R3005770	J
L733743-05	WG755200	SAMP	Selenium	R3005226	J
	WG755434	SAMP	Selenium, Dissolved	R3005770	J
	WG755200	SAMP	Vanadium	R3005226	J
	WG755284	SAMP	Chloride	R3006053	JP1
	WG755284	SAMP	Sulfate	R3006053	JP1
	WG754846	SAMP	Dissolved Solids	R3005137	T4
	WG754898	SAMP	Benzo(a)pyrene	R3005173	J3
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755434	SAMP	Barium, Dissolved	R3005770	J
	WG755434	SAMP	Calcium, Dissolved	R3005770	J
L733743-06	WG755200	SAMP	Lead	R3005473	J
	WG755434	SAMP	Manganese, Dissolved	R3005770	J
	WG755434	SAMP	Selenium, Dissolved	R3005770	J
	WG755434	SAMP	Sodium, Dissolved	R3006322	J
	WG755545	SAMP	C10-C28 Diesel Range	R3005780	J
	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755200	SAMP	Arsenic	R3005226	J
	WG755434	SAMP	Arsenic, Dissolved	R3005770	J
	WG755434	SAMP	Barium, Dissolved	R3005770	J
	WG755434	SAMP	Molybdenum, Dissolved	R3005770	J
	WG755434	SAMP	Potassium, Dissolved	R3005770	J
	WG755434	SAMP	Uranium, Dissolved	R3006322	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-07	WG755200	SAMP	Vanadium	R3005226	J
	WG755545	SAMP	C10-C28 Diesel Range	R3005780	J
	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755200	SAMP	Arsenic	R3005226	J
	WG755200	SAMP	Barium	R3005226	J
	WG755434	SAMP	Barium, Dissolved	R3005770	J
	WG755434	SAMP	Molybdenum, Dissolved	R3005770	J
	WG755200	SAMP	Nickel	R3005226	JB
	WG755434	SAMP	Potassium, Dissolved	R3005770	J
	WG755200	SAMP	Selenium	R3005226	J
	WG755434	SAMP	Uranium, Dissolved	R3006322	J
	WG755200	SAMP	Vanadium	R3005226	J
	WG755434	SAMP	Vanadium, Dissolved	R3005770	J
L733743-08	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755434	SAMP	Chromium, Dissolved	R3005770	B
	WG755434	SAMP	Copper, Dissolved	R3005770	J
	WG755200	SAMP	Iron	R3005473	J
	WG755200	SAMP	Lead	R3005473	J
	WG755200	SAMP	Nickel	R3005473	B
	WG755434	SAMP	Nickel, Dissolved	R3005770	J
	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755434	SAMP	Chromium, Dissolved	R3005770	JB
	WG755434	SAMP	Copper, Dissolved	R3005770	J
	WG755434	SAMP	Cobalt, Dissolved	R3005770	J
	WG755200	SAMP	Lead	R3005473	J
L733743-09	WG755200	SAMP	Nickel	R3005473	B
	WG755434	SAMP	Zinc, Dissolved	R3005770	J
	WG755545	SAMP	C10-C28 Diesel Range	R3005780	J
	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755434	SAMP	Chromium, Dissolved	R3005770	JB
	WG755434	SAMP	Copper, Dissolved	R3005770	J
	WG755434	SAMP	Cobalt, Dissolved	R3005770	J
	WG755200	SAMP	Lead	R3005473	J
	WG755200	SAMP	Nickel	R3005473	B
	WG755434	SAMP	Zinc, Dissolved	R3005770	J
	WG755545	SAMP	C10-C28 Diesel Range	R3005780	J
	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
L733743-10	WG755200	SAMP	Arsenic	R3005473	J
	WG755434	SAMP	Arsenic, Dissolved	R3005770	J
	WG755434	SAMP	Chromium, Dissolved	R3005770	B
	WG755434	SAMP	Copper, Dissolved	R3005770	J
	WG755200	SAMP	Iron	R3005473	J
	WG755200	SAMP	Lead	R3005473	J
	WG755200	SAMP	Manganese	R3005473	J
	WG755434	SAMP	Nickel, Dissolved	R3005770	J
	WG755284	SAMP	Chloride	R3006053	J
	WG755284	SAMP	Sulfate	R3006053	J
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755200	SAMP	Lead	R3005473	J
	WG755200	SAMP	Manganese	R3005473	J
	WG755434	SAMP	Selenium, Dissolved	R3005770	J
L733743-11	WG755545	SAMP	C10-C28 Diesel Range	R3005780	J
	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755104	SAMP	Naphthalene	R3005343	J
	WG755200	SAMP	Arsenic	R3005473	J
	WG755434	SAMP	Arsenic, Dissolved	R3005770	J
	WG755434	SAMP	Chromium, Dissolved	R3005770	B
	WG755434	SAMP	Copper, Dissolved	R3005770	J
	WG755434	SAMP	Cobalt, Dissolved	R3005770	J
	WG755434	SAMP	Iron, Dissolved	R3005770	J
	WG755200	SAMP	Lead	R3005473	J
	WG755200	SAMP	Nickel	R3005473	B
	WG755434	SAMP	Zinc, Dissolved	R3005770	J
	WG755545	SAMP	C10-C28 Diesel Range	R3005780	J
	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
L733743-12	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755200	SAMP	Arsenic	R3005473	J
	WG755434	SAMP	Arsenic, Dissolved	R3005770	J
	WG755434	SAMP	Chromium, Dissolved	R3005770	JB
	WG755434	SAMP	Copper, Dissolved	R3005770	J
	WG755434	SAMP	Cobalt, Dissolved	R3005770	J
	WG755434	SAMP	Iron, Dissolved	R3005770	J
	WG755200	SAMP	Lead	R3005473	J
	WG755200	SAMP	Nickel	R3005473	B
	WG755434	SAMP	Zinc, Dissolved	R3005770	J
	WG755545	SAMP	C10-C28 Diesel Range	R3005780	J
	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755434	SAMP	Aluminum, Dissolved	R3005770	J
	WG755200	SAMP	Arsenic	R3005473	J
L733743-13	WG755434	SAMP	Arsenic, Dissolved	R3005770	J
	WG755434	SAMP	Chromium, Dissolved	R3005770	JB
	WG755434	SAMP	Copper, Dissolved	R3005770	J
	WG755200	SAMP	Lead	R3005473	J
	WG755434	SAMP	Molybdenum, Dissolved	R3005770	J
	WG755200	SAMP	Nickel	R3005473	JB
	WG755434	SAMP	Nickel, Dissolved	R3005770	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-14	WG755434	SAMP	Zinc,Dissolved	R3005770	J
	WG755284	SAMP	Chloride	R3006053	JP1
	WG755284	SAMP	Sulfate	R3006053	J
	WG755434	SAMP	Aluminum,Dissolved	R3005770	J
	WG755434	SAMP	Calcium,Dissolved	R3005770	J
L733743-15	WG755200	SAMP	Lead	R3005473	J
	WG755545	SAMP	C10-C28 Diesel Range	R3005780	J
	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755434	SAMP	Aluminum,Dissolved	R3005770	J
	WG755200	SAMP	Chromium	R3005473	J
	WG755434	SAMP	Chromium,Dissolved	R3005770	JB
	WG755434	SAMP	Copper,Dissolved	R3005770	J
	WG755434	SAMP	Cobalt,Dissolved	R3005770	J
	WG755200	SAMP	Lead	R3005473	J
	WG755200	SAMP	Nickel	R3005473	B
	WG755434	SAMP	Zinc,Dissolved	R3005770	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.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-25

Sample ID : MW-2A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	1300	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	13000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	48.	1.2	10.	ug/l		6020	11/18/14	5
Barium	26.	1.8	25.	ug/l		6020	11/18/14	5
Chromium	7.8	2.7	5.0	ug/l		6020	11/18/14	5
Iron	3100	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	1500	1.2	25.	ug/l		6020	11/18/14	5
Potassium	5800	180	5000	ug/l		6020	11/18/14	5
Selenium	5.1	1.9	10.	ug/l	J	6020	11/18/14	5
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	109.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	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.

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

Reported: 01/23/15 14:45 Revised: 08/26/15 10:46
L733743-25 (GFAA METALS) - Diluted due to matrix.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-25

Sample ID : MW-2A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l	J5	8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l	J5	8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	92.5			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	90.5			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	250	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	22.	12.	100	ug/l	J	8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	134.			% Rec.		8015	11/20/14	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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L733743-25 (GFAA METALS) - Diluted due to matrix.



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(615) 758-5858
1-800-767-5859
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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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-26

Sample ID : MW-3

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 08:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	4800	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	7200000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	35.	1.2	10.	ug/l		6020	11/18/14	5
Barium	22.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	760000	920	20000	ug/l		6020	11/18/14	20
Chromium	8.1	2.7	5.0	ug/l		6020	11/18/14	5
Iron	570	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	2200	1.2	25.	ug/l		6020	11/18/14	5
Potassium	6800	180	5000	ug/l		6020	11/18/14	5
Selenium	19.	1.9	10.	ug/l		6020	11/18/14	5
Sodium	1200000	2200	20000	ug/l		6020	11/18/14	20
TPH (GC/FID) Low Fraction	540	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	111.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:46
L733743-26 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-26

Sample ID : MW-3

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 08:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Isopropylbenzene	0.34	0.33	1.0	ug/l	J	8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.4			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	105.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	9100	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	3200	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	99.1			% Rec.		8015	11/20/14	1

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L733743-26 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-27

Sample ID : MW-4A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	960	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	5700000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	57.	1.2	10.	ug/l		6020	11/18/14	5
Barium	14.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	690000	920	20000	ug/l		6020	11/18/14	20
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Iron	820	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	2700	1.2	25.	ug/l		6020	11/18/14	5
Potassium	5100	180	5000	ug/l		6020	11/18/14	5
Selenium	U	1.9	10.	ug/l		6020	11/18/14	5
Sodium	1000000	2200	20000	ug/l		6020	11/18/14	20
TPH (GC/FID) Low Fraction	350	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	110.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	1.3	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	0.41	0.36	1.0	ug/l	J	8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1

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L733743-27 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-27

Sample ID : MW-4A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Isopropylbenzene	2.6	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	0.44	0.37	1.0	ug/l	J	8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.8			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	105.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	3800	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	680	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	121.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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L733743-27 (GFAA METALS) - Diluted due to matrix.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-28

Sample ID : MW-5A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/17/14	1
Dissolved Solids	16000000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	64.	1.2	10.	ug/l		6020	11/18/14	5
Barium	14.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	580000	920	20000	ug/l		6020	11/18/14	20
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Iron	4400	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	2000	1.2	25.	ug/l		6020	11/18/14	5
Potassium	6400	180	5000	ug/l		6020	11/18/14	5
Selenium	4.0	1.9	10.	ug/l	J	6020	11/18/14	5
Sodium	4200000	5500	50000	ug/l		6020	11/18/14	50
TPH (GC/FID) Low Fraction	900	31.	100	ug/l		8015D/G	11/18/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	109.			% Rec.		8015D/G	11/18/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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L733743-28 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-28

Sample ID : MW-5A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	0.81	0.37	1.0	ug/l	J	8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.5			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	108.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2000	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	340	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	115.			% Rec.		8015	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-29

Sample ID : MW-7A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l	J6	353.2	11/17/14	1
Dissolved Solids	11000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	21.	1.2	10.	ug/l		6020	11/18/14	5
Barium	18.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	760000	920	20000	ug/l		6020	11/18/14	20
Chromium	2.7	2.7	5.0	ug/l	J	6020	11/18/14	5
Iron	1300	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	1500	1.2	25.	ug/l		6020	11/18/14	5
Potassium	5200	180	5000	ug/l		6020	11/18/14	5
Selenium	U	1.9	10.	ug/l		6020	11/18/14	5
Sodium	2600000	5500	50000	ug/l		6020	11/18/14	50
TPH (GC/FID) Low Fraction	360	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1

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L733743-29 (GFAA METALS) - Diluted due to matrix.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-29

Sample ID : MW-7A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	2.0	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	93.5			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	94.5			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	1100	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	330	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	121.			% Rec.		8015	11/20/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-10

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:05

ESC Sample # : L733743-30

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	230	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	5900000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	19.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	21.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	750000	920	20000	ug/l	V	6020	12/02/14	20
Chromium	0.92	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	140	50.	100	ug/l		6020	11/20/14	1
Lead	0.98	0.24	2.0	ug/l	J	6020	11/20/14	1
Manganese	2400	0.25	5.0	ug/l	V	6020	11/20/14	1
Potassium	4300	37.	1000	ug/l		6020	11/20/14	1
Selenium	1.5	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	1200000	2200	20000	ug/l	V	6020	12/02/14	20
TPH (GC/FID) Low Fraction	910	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.5			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-30

Sample ID : MW-10

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	1.8	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	92.3			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	93.6			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2200	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	300	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	124.			% Rec.		8015	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-31

Sample ID : MW-18A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	32000000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	3.4	0.25	2.0	ug/l		6020	11/20/14	1
Barium	16.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	850000	4600	100000	ug/l		6020	12/02/14	100
Chromium	0.80	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	1100	50.	100	ug/l		6020	11/20/14	1
Lead	0.30	0.24	2.0	ug/l	J	6020	11/20/14	1
Manganese	76.	0.25	5.0	ug/l		6020	11/20/14	1
Nickel	6.5	0.35	2.0	ug/l	B	6020	11/20/14	1
Potassium	54000	37.	1000	ug/l		6020	11/20/14	1
Selenium	6.9	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	7500000	11000	100000	ug/l		6020	12/02/14	100
Vanadium	4.7	0.18	5.0	ug/l	J	6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-31

Sample ID : MW-18A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	99.6			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	92.6			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	89.5			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	74.	22.	100	ug/l	J	8015	11/19/14	1
C28-C40 Oil Range	90.	12.	100	ug/l	J	8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	11/19/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-22A

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:10

ESC Sample # : L733743-32

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	6600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	60.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	19.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	610000	920	20000	ug/l		6020	12/02/14	20
Chromium	0.81	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	6900	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/20/14	1
Manganese	6000	5.0	100	ug/l		6020	12/02/14	20
Potassium	3900	37.	1000	ug/l		6020	11/20/14	1
Selenium	1.6	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	1400000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	3300	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.2			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-22A

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:10

ESC Sample # : L733743-32

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	8.0	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	91.5			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	91.5			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	5600	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	710	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	118.			% Rec.		8015	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-33

Sample ID : MW-70

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Arsenic	21.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	20.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	700000	920	20000	ug/l		6020	12/02/14	20
Chromium	0.55	0.54	1.0	ug/l	J	6020	11/24/14	1
Iron	2500	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/20/14	1
Manganese	730	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	5500	37.	1000	ug/l		6020	11/20/14	1
Selenium	0.44	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	730000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	1200	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.2			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-33

Sample ID : MW-70

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	92.8			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	92.7			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	720	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	120	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	120.			% Rec.		8015	11/19/14	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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Mt. Juliet, TN 37122
(615) 758-5858
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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-34

Sample ID : MW-74

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	420000	990	5000	ug/l		353.2	11/18/14	50
Dissolved Solids	8700000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	62.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	14.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	670000	2300	50000	ug/l		6020	12/02/14	50
Chromium	0.74	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	110	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/20/14	1
Manganese	880	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	45000	37.	1000	ug/l		6020	11/20/14	1
Selenium	250	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	2300000	5500	50000	ug/l		6020	12/02/14	50
TPH (GC/FID) Low Fraction	680	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.1			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	11.	10.	50.	ug/l	J	8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-74

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:10

ESC Sample # : L733743-34

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	0.53	0.37	1.0	ug/l	J	8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	1.2	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	93.2			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	92.5			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	30000	440	2000	ug/l		8015	11/21/14	20
C28-C40 Oil Range	3400	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	118.			% Rec.	J7	8015	11/21/14	20

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-35

Sample ID : MW-75

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	5700000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	350	0.25	2.0	ug/l		6020	11/20/14	1
Barium	16.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	410000	920	20000	ug/l		6020	12/02/14	20
Chromium	1.9	0.54	1.0	ug/l		6020	11/24/14	1
Iron	4200	50.	100	ug/l		6020	11/20/14	1
Lead	0.29	0.24	2.0	ug/l	J	6020	11/20/14	1
Manganese	960	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	20000	37.	1000	ug/l		6020	11/20/14	1
Selenium	2.5	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	1500000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	2500	160	500	ug/l		8015D/G	11/20/14	5
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.0			% Rec.		8015D/G	11/20/14	5
Volatile Organics								
Acetone	U	50.	250	ug/l		8260B	11/21/14	5
Benzene	U	1.6	5.0	ug/l		8260B	11/21/14	5
Bromodichloromethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
Bromoform	U	2.3	5.0	ug/l		8260B	11/21/14	5
Bromomethane	U	4.3	25.	ug/l	J4	8260B	11/21/14	5
n-Butylbenzene	U	1.8	5.0	ug/l		8260B	11/21/14	5
sec-Butylbenzene	U	1.8	5.0	ug/l		8260B	11/21/14	5
Carbon disulfide	U	1.4	5.0	ug/l		8260B	11/21/14	5
Carbon tetrachloride	U	1.9	5.0	ug/l		8260B	11/21/14	5
Chlorobenzene	U	1.7	5.0	ug/l		8260B	11/21/14	5
Chlorodibromomethane	U	1.6	5.0	ug/l		8260B	11/21/14	5
Chloroethane	U	2.3	25.	ug/l		8260B	11/21/14	5
Chloroform	U	1.6	25.	ug/l		8260B	11/21/14	5
Chloromethane	U	1.4	13.	ug/l		8260B	11/21/14	5
1,2-Dibromoethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
1,1-Dichloroethane	U	1.3	5.0	ug/l		8260B	11/21/14	5
1,2-Dichloroethane	U	1.8	5.0	ug/l		8260B	11/21/14	5
1,1-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/21/14	5
cis-1,2-Dichloroethene	U	1.3	5.0	ug/l		8260B	11/21/14	5
trans-1,2-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/21/14	5
1,2-Dichloropropane	U	1.5	5.0	ug/l		8260B	11/21/14	5
cis-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/21/14	5
trans-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/21/14	5

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-35

Sample ID : MW-75

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	1.9	5.0	ug/l		8260B	11/21/14	5
Isopropylbenzene	12.	1.6	5.0	ug/l		8260B	11/21/14	5
p-Isopropyltoluene	U	1.8	5.0	ug/l		8260B	11/21/14	5
2-Butanone (MEK)	U	20.	50.	ug/l		8260B	11/21/14	5
2-Hexanone	U	19.	50.	ug/l		8260B	11/21/14	5
Methylene Chloride	U	5.0	25.	ug/l		8260B	11/21/14	5
4-Methyl-2-pentanone (MIBK)	U	11.	50.	ug/l		8260B	11/21/14	5
Methyl tert-butyl ether	2.8	1.8	5.0	ug/l	J	8260B	11/21/14	5
Naphthalene	U	5.0	25.	ug/l		8260B	11/21/14	5
n-Propylbenzene	U	1.7	5.0	ug/l		8260B	11/21/14	5
Styrene	U	1.5	5.0	ug/l		8260B	11/21/14	5
1,1,1,2-Tetrachloroethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
1,1,2,2-Tetrachloroethane	U	0.65	5.0	ug/l		8260B	11/21/14	5
Tetrachloroethene	U	1.9	5.0	ug/l		8260B	11/21/14	5
Toluene	U	3.9	25.	ug/l		8260B	11/21/14	5
1,1,1-Trichloroethane	U	1.6	5.0	ug/l		8260B	11/21/14	5
1,1,2-Trichloroethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
Trichloroethene	U	2.0	5.0	ug/l		8260B	11/21/14	5
1,2,4-Trimethylbenzene	U	1.9	5.0	ug/l		8260B	11/21/14	5
1,3,5-Trimethylbenzene	U	1.9	5.0	ug/l		8260B	11/21/14	5
Vinyl chloride	U	1.3	5.0	ug/l		8260B	11/21/14	5
o-Xylene	U	1.7	5.0	ug/l		8260B	11/21/14	5
m&p-Xylene	U	3.6	10.	ug/l		8260B	11/21/14	5
Xylenes, Total	U	5.3	15.	ug/l		8260B	11/21/14	5
Surrogate Recovery								
Toluene-d8	99.9			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	90.5			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	91.5			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	13000	440	2000	ug/l		8015	11/21/14	20
C28-C40 Oil Range	3400	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	128.			% Rec.		8015	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-36

Sample ID : MW-76

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	6000000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	100	0.25	2.0	ug/l		6020	11/20/14	1
Barium	18.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	610000	920	20000	ug/l		6020	12/02/14	20
Chromium	2.7	0.54	1.0	ug/l		6020	11/24/14	1
Iron	5100	50.	100	ug/l		6020	11/20/14	1
Lead	0.46	0.24	2.0	ug/l	J	6020	11/20/14	1
Manganese	1800	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	31000	37.	1000	ug/l		6020	11/20/14	1
Selenium	4.9	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	1100000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	1100	160	500	ug/l		8015D/G	11/20/14	5
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.2			% Rec.		8015D/G	11/20/14	5
Volatile Organics								
Acetone	U	50.	250	ug/l		8260B	11/21/14	5
Benzene	4.9	1.6	5.0	ug/l	J	8260B	11/21/14	5
Bromodichloromethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
Bromoform	U	2.3	5.0	ug/l		8260B	11/21/14	5
Bromomethane	U	4.3	25.	ug/l	J4	8260B	11/21/14	5
n-Butylbenzene	U	1.8	5.0	ug/l		8260B	11/21/14	5
sec-Butylbenzene	U	1.8	5.0	ug/l		8260B	11/21/14	5
Carbon disulfide	U	1.4	5.0	ug/l		8260B	11/21/14	5
Carbon tetrachloride	U	1.9	5.0	ug/l		8260B	11/21/14	5
Chlorobenzene	U	1.7	5.0	ug/l		8260B	11/21/14	5
Chlorodibromomethane	U	1.6	5.0	ug/l		8260B	11/21/14	5
Chloroethane	U	2.3	25.	ug/l		8260B	11/21/14	5
Chloroform	U	1.6	25.	ug/l		8260B	11/21/14	5
Chloromethane	U	1.4	13.	ug/l		8260B	11/21/14	5
1,2-Dibromoethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
1,1-Dichloroethane	U	1.3	5.0	ug/l		8260B	11/21/14	5
1,2-Dichloroethane	U	1.8	5.0	ug/l		8260B	11/21/14	5
1,1-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/21/14	5
cis-1,2-Dichloroethene	U	1.3	5.0	ug/l		8260B	11/21/14	5
trans-1,2-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/21/14	5
1,2-Dichloropropane	U	1.5	5.0	ug/l		8260B	11/21/14	5
cis-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/21/14	5
trans-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/21/14	5

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-76

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:05

ESC Sample # : L733743-36

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	1.9	5.0	ug/l		8260B	11/21/14	5
Isopropylbenzene	20.	1.6	5.0	ug/l		8260B	11/21/14	5
p-Isopropyltoluene	U	1.8	5.0	ug/l		8260B	11/21/14	5
2-Butanone (MEK)	U	20.	50.	ug/l		8260B	11/21/14	5
2-Hexanone	U	19.	50.	ug/l		8260B	11/21/14	5
Methylene Chloride	U	5.0	25.	ug/l		8260B	11/21/14	5
4-Methyl-2-pentanone (MIBK)	U	11.	50.	ug/l		8260B	11/21/14	5
Methyl tert-butyl ether	13.	1.8	5.0	ug/l		8260B	11/21/14	5
Naphthalene	U	5.0	25.	ug/l		8260B	11/21/14	5
n-Propylbenzene	U	1.7	5.0	ug/l		8260B	11/21/14	5
Styrene	U	1.5	5.0	ug/l		8260B	11/21/14	5
1,1,1,2-Tetrachloroethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
1,1,2,2-Tetrachloroethane	U	0.65	5.0	ug/l		8260B	11/21/14	5
Tetrachloroethene	U	1.9	5.0	ug/l		8260B	11/21/14	5
Toluene	U	3.9	25.	ug/l		8260B	11/21/14	5
1,1,1-Trichloroethane	U	1.6	5.0	ug/l		8260B	11/21/14	5
1,1,2-Trichloroethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
Trichloroethene	U	2.0	5.0	ug/l		8260B	11/21/14	5
1,2,4-Trimethylbenzene	2.6	1.9	5.0	ug/l	J	8260B	11/21/14	5
1,3,5-Trimethylbenzene	U	1.9	5.0	ug/l		8260B	11/21/14	5
Vinyl chloride	U	1.3	5.0	ug/l		8260B	11/21/14	5
o-Xylene	U	1.7	5.0	ug/l		8260B	11/21/14	5
m&p-Xylene	U	3.6	10.	ug/l		8260B	11/21/14	5
Xylenes, Total	U	5.3	15.	ug/l		8260B	11/21/14	5
Surrogate Recovery								
Toluene-d8	99.8			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	89.6			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	91.3			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	23000	440	2000	ug/l		8015	11/21/14	20
C28-C40 Oil Range	7100	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	142.			% Rec.		8015	11/19/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-37

Sample ID : MW-77

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	8200000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	54.	1.2	10.	ug/l		6020	11/20/14	5
Barium	13.	1.8	25.	ug/l	J	6020	11/20/14	5
Calcium	630000	920	20000	ug/l		6020	12/02/14	20
Chromium	9.7	0.54	1.0	ug/l		6020	11/24/14	1
Iron	9800	250	500	ug/l		6020	11/20/14	5
Lead	1.3	1.2	10.	ug/l	J	6020	11/20/14	5
Manganese	770	1.2	25.	ug/l		6020	11/20/14	5
Potassium	84000	180	5000	ug/l		6020	11/20/14	5
Selenium	21.	1.9	10.	ug/l		6020	11/20/14	5
Sodium	1300000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	1300	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	56.	50.	250	ug/l	J	8260B	11/21/14	5
Benzene	19.	1.6	5.0	ug/l		8260B	11/21/14	5
Bromodichloromethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
Bromoform	U	2.3	5.0	ug/l		8260B	11/21/14	5
Bromomethane	U	4.3	25.	ug/l	J4	8260B	11/21/14	5
n-Butylbenzene	U	1.8	5.0	ug/l		8260B	11/21/14	5
sec-Butylbenzene	4.6	1.8	5.0	ug/l	J	8260B	11/21/14	5
Carbon disulfide	U	1.4	5.0	ug/l		8260B	11/21/14	5
Carbon tetrachloride	U	1.9	5.0	ug/l		8260B	11/21/14	5
Chlorobenzene	U	1.7	5.0	ug/l		8260B	11/21/14	5
Chlorodibromomethane	U	1.6	5.0	ug/l		8260B	11/21/14	5
Chloroethane	U	2.3	25.	ug/l		8260B	11/21/14	5
Chloroform	U	1.6	25.	ug/l		8260B	11/21/14	5
Chloromethane	U	1.4	13.	ug/l		8260B	11/21/14	5
1,2-Dibromoethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
1,1-Dichloroethane	U	1.3	5.0	ug/l		8260B	11/21/14	5
1,2-Dichloroethane	U	1.8	5.0	ug/l		8260B	11/21/14	5
1,1-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/21/14	5
cis-1,2-Dichloroethene	U	1.3	5.0	ug/l		8260B	11/21/14	5
trans-1,2-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/21/14	5
1,2-Dichloropropane	U	1.5	5.0	ug/l		8260B	11/21/14	5
cis-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/21/14	5
trans-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/21/14	5

U = ND (Not Detected)

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L733743-37 (GFAA METALS) - Diluted due to color.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-77

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:20

ESC Sample # : L733743-37

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	7.2	1.9	5.0	ug/l		8260B	11/21/14	5
Isopropylbenzene	31.	1.6	5.0	ug/l		8260B	11/21/14	5
p-Isopropyltoluene	3.6	1.8	5.0	ug/l	J	8260B	11/21/14	5
2-Butanone (MEK)	U	20.	50.	ug/l		8260B	11/21/14	5
2-Hexanone	U	19.	50.	ug/l		8260B	11/21/14	5
Methylene Chloride	U	5.0	25.	ug/l		8260B	11/21/14	5
4-Methyl-2-pentanone (MIBK)	U	11.	50.	ug/l		8260B	11/21/14	5
Methyl tert-butyl ether	9.1	1.8	5.0	ug/l		8260B	11/21/14	5
Naphthalene	U	5.0	25.	ug/l		8260B	11/21/14	5
n-Propylbenzene	22.	1.7	5.0	ug/l		8260B	11/21/14	5
Styrene	U	1.5	5.0	ug/l		8260B	11/21/14	5
1,1,1,2-Tetrachloroethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
1,1,2,2-Tetrachloroethane	U	0.65	5.0	ug/l		8260B	11/21/14	5
Tetrachloroethene	U	1.9	5.0	ug/l		8260B	11/21/14	5
Toluene	7.3	3.9	25.	ug/l	J	8260B	11/21/14	5
1,1,1-Trichloroethane	U	1.6	5.0	ug/l		8260B	11/21/14	5
1,1,2-Trichloroethane	U	1.9	5.0	ug/l		8260B	11/21/14	5
Trichloroethene	U	2.0	5.0	ug/l		8260B	11/21/14	5
1,2,4-Trimethylbenzene	5.3	1.9	5.0	ug/l		8260B	11/21/14	5
1,3,5-Trimethylbenzene	4.4	1.9	5.0	ug/l	J	8260B	11/21/14	5
Vinyl chloride	U	1.3	5.0	ug/l		8260B	11/21/14	5
o-Xylene	3.6	1.7	5.0	ug/l	J	8260B	11/21/14	5
m&p-Xylene	6.6	3.6	10.	ug/l	J	8260B	11/21/14	5
Xylenes, Total	10.	5.3	15.	ug/l	J	8260B	11/21/14	5
Surrogate Recovery								
Toluene-d8	98.2			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	89.2			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	96.3			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	91000	440	2000	ug/l		8015	11/21/14	20
C28-C40 Oil Range	20000	240	2000	ug/l		8015	11/21/14	20
Surrogate Recovery								
o-Terphenyl	0.00			% Rec.	J7	8015	11/21/14	20

U = ND (Not Detected)

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L733743-37 (GFAA METALS) - Diluted due to color.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-38

Sample ID : MW-79

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	2900	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	5600000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	7.3	0.25	2.0	ug/l		6020	11/20/14	1
Barium	20.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	650000	920	20000	ug/l		6020	12/02/14	20
Chromium	0.65	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	230	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/20/14	1
Manganese	4000	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	8600	37.	1000	ug/l		6020	11/20/14	1
Selenium	1.7	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	1100000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	55.	31.	100	ug/l	J	8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-38

Sample ID : MW-79

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	91.7			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	93.6			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	590	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	330	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	123.			% Rec.		8015	11/20/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-83

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:50

ESC Sample # : L733743-39

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	6400000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	30.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	46.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	520000	920	20000	ug/l		6020	12/02/14	20
Chromium	8.9	0.54	1.0	ug/l		6020	11/24/14	1
Iron	12000	50.	100	ug/l		6020	11/20/14	1
Lead	0.37	0.24	2.0	ug/l	J	6020	11/20/14	1
Manganese	700	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	56000	37.	1000	ug/l		6020	11/20/14	1
Selenium	7.5	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	410000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	430	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	19.	10.	50.	ug/l	J	8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	0.75	0.36	1.0	ug/l	J	8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1

U = ND (Not Detected)

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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-39

Sample ID : MW-83

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	0.44	0.38	1.0	ug/l	J	8260B	11/21/14	1
Isopropylbenzene	2.8	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	1.6	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	1.1	0.78	5.0	ug/l	J	8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	0.87	0.34	1.0	ug/l	J	8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	91.2			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	93.1			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	22000	440	2000	ug/l		8015	11/21/14	20
C28-C40 Oil Range	6500	24.	200	ug/l		8015	11/19/14	2
Surrogate Recovery								
o-Terphenyl	127.			% Rec.		8015	11/19/14	2

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-40

Sample ID : MW-84

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	140	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	11000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	83.	1.2	10.	ug/l		6020	11/20/14	5
Barium	29.	1.8	25.	ug/l		6020	11/20/14	5
Calcium	610000	920	20000	ug/l		6020	12/02/14	20
Chromium	19.	2.7	5.0	ug/l	B	6020	11/20/14	5
Iron	1600	250	500	ug/l		6020	11/20/14	5
Lead	U	0.24	2.0	ug/l		6020	11/24/14	1
Manganese	3600	1.2	25.	ug/l		6020	11/20/14	5
Potassium	14000	180	5000	ug/l		6020	11/20/14	5
Selenium	14.	1.9	10.	ug/l		6020	11/20/14	5
Sodium	1600000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	610	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.2			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	37.	10.	50.	ug/l	J	8260B	11/21/14	1
Benzene	0.70	0.33	1.0	ug/l	J	8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1

U = ND (Not Detected)

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

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L733743-40 (GFAA METALS) - Diluted due to color.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-40

Sample ID : MW-84

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	0.98	0.38	1.0	ug/l	J	8260B	11/21/14	1
Isopropylbenzene	0.52	0.33	1.0	ug/l	J	8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	4.2	3.9	10.	ug/l	J	8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	2.5	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	0.55	0.34	1.0	ug/l	J	8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	99.9			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	90.4			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	93.4			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	75000	890	4000	ug/l		8015	11/21/14	40
C28-C40 Oil Range	38000	470	4000	ug/l		8015	11/21/14	40
Surrogate Recovery								
o-Terphenyl	0.00			% Rec.	J7	8015	11/21/14	40

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L733743-40 (GFAA METALS) - Diluted due to color.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-41

Sample ID : MW-87

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Arsenic	2.4	0.25	2.0	ug/l		6020	11/20/14	1
Barium	27.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	750000	2300	50000	ug/l		6020	12/02/14	50
Chromium	0.82	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	200	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/24/14	1
Manganese	1500	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	26000	37.	1000	ug/l		6020	11/20/14	1
Selenium	1.4	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	2700000	5500	50000	ug/l		6020	12/02/14	50
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.2			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-41

Sample ID : MW-87

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	91.4			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	93.4			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	120	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	33.	12.	100	ug/l	J	8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	11/21/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-42

Sample ID : MW-88

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Arsenic	12.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	21.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	570000	920	20000	ug/l		6020	12/02/14	20
Chromium	U	0.54	1.0	ug/l		6020	11/20/14	1
Iron	1400	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/24/14	1
Manganese	1600	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	3000	37.	1000	ug/l		6020	11/20/14	1
Selenium	1.5	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	1300000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	48.	31.	100	ug/l	J	8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-42

Sample ID : MW-88

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	99.1			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	90.8			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	95.9			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	570	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	100	12.	100	ug/l		8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	120.			% Rec.		8015	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-120

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:25

ESC Sample # : L733743-43

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	1800	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	8700000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	26.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	18.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	850000	2300	50000	ug/l		6020	12/02/14	50
Chromium	1.0	0.54	1.0	ug/l		6020	11/24/14	1
Iron	12000	50.	100	ug/l		6020	11/20/14	1
Lead	0.64	0.24	2.0	ug/l	J	6020	11/24/14	1
Manganese	1500	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	5000	37.	1000	ug/l		6020	11/20/14	1
Selenium	38.	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	1900000	5500	50000	ug/l		6020	12/02/14	50
TPH (GC/FID) Low Fraction	57.	31.	100	ug/l	J	8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.2			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-43

Sample ID : MW-120

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	93.5			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	91.9			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2400	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	900	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	130.			% Rec.		8015	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-121

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:10

ESC Sample # : L733743-44

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	3800	20.	100	ug/l	J6	353.2	11/18/14	1
Dissolved Solids	6100000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	71.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	19.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	720000	920	20000	ug/l		6020	12/02/14	20
Chromium	1.4	0.54	1.0	ug/l		6020	11/24/14	1
Iron	2000	50.	100	ug/l		6020	11/20/14	1
Lead	0.70	0.24	2.0	ug/l	J	6020	11/24/14	1
Manganese	3800	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	3400	37.	1000	ug/l		6020	11/20/14	1
Selenium	12.	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	940000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	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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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-44

Sample ID : MW-121

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	92.3			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	91.7			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	510	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	170	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	131.			% Rec.		8015	11/19/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-122

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:15

ESC Sample # : L733743-45

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	940	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	16000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	18.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	34.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	860000	2300	50000	ug/l		6020	12/02/14	50
Chromium	1.5	0.54	1.0	ug/l		6020	11/24/14	1
Iron	2600	50.	100	ug/l		6020	11/20/14	1
Lead	0.36	0.24	2.0	ug/l	J	6020	11/24/14	1
Manganese	1100	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	5900	37.	1000	ug/l		6020	11/20/14	1
Selenium	40.	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	3900000	5500	50000	ug/l		6020	12/02/14	50
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-122

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:15

ESC Sample # : L733743-45

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	106.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	5500	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	3800	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	136.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-123
Collected By : SU/HMI Team
Collection Date : 11/13/14 09:45

ESC Sample # : L733743-46

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	5600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	23.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	27.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	580000	2300	50000	ug/l		6020	12/02/14	50
Chromium	0.93	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	300	50.	100	ug/l		6020	11/20/14	1
Lead	0.75	0.24	2.0	ug/l	J	6020	11/24/14	1
Manganese	2700	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	3900	37.	1000	ug/l		6020	11/20/14	1
Selenium	1.3	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	1100000	5500	50000	ug/l		6020	12/02/14	50
TPH (GC/FID) Low Fraction	1600	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.2			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	10.	10.	50.	ug/l	J	8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-123

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:45

ESC Sample # : L733743-46

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	1.7	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	98.2			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	105.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	97.4			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2700	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	340	12.	100	ug/l		8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	120.			% Rec.		8015	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

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REPORT OF ANALYSIS

August 26, 2015

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

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-124

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:25

ESC Sample # : L733743-47

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	9500000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	5.2	0.25	2.0	ug/l		6020	11/20/14	1
Barium	27.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	820000	920	20000	ug/l		6020	12/02/14	20
Chromium	0.86	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	2700	50.	100	ug/l		6020	11/20/14	1
Lead	0.51	0.24	2.0	ug/l	J	6020	11/24/14	1
Manganese	1100	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	7100	37.	1000	ug/l		6020	11/20/14	1
Selenium	0.93	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	1700000	2200	20000	ug/l		6020	12/02/14	20
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.0			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-47

Sample ID : MW-124

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	99.4			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	105.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	41.	12.	100	ug/l	J	8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : OCD-1R
Collected By : SU/HMI Team
Collection Date : 11/12/14 08:25

ESC Sample # : L733743-48

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	1100	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	11000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	7.1	0.25	2.0	ug/l		6020	11/20/14	1
Barium	20.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	840000	2300	50000	ug/l		6020	12/02/14	50
Chromium	0.81	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	340	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/24/14	1
Manganese	410	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	4100	37.	1000	ug/l		6020	11/20/14	1
Selenium	19.	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	4700000	5500	50000	ug/l		6020	12/02/14	50
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.2			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : OCD-1R

Collected By : SU/HMI Team
Collection Date : 11/12/14 08:25

ESC Sample # : L733743-48

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	107.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	230	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	210	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	126.			% Rec.		8015	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-49

Sample ID : OCD-2A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Arsenic	2.1	0.25	2.0	ug/l		6020	11/20/14	1
Barium	23.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	840000	2300	50000	ug/l		6020	12/02/14	50
Chromium	0.89	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	710	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/24/14	1
Manganese	590	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	4500	37.	1000	ug/l		6020	11/20/14	1
Selenium	7.5	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	2700000	5500	50000	ug/l		6020	12/02/14	50
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.4			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-49

Sample ID : OCD-2A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	97.9			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	101.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	97.0			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	93.	22.	100	ug/l	J	8015	11/19/14	1
C28-C40 Oil Range	160	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	127.			% Rec.		8015	11/19/14	1

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1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-50

Sample ID : OCD-3

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Arsenic	5.5	1.2	10.	ug/l	J	6020	11/18/14	5
Barium	19.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	760000	920	20000	ug/l	V	6020	11/18/14	20
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Iron	2200	250	500	ug/l	V	6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	160	1.2	25.	ug/l	01J5	6020	11/18/14	5
Potassium	13000	180	5000	ug/l	01J5	6020	11/18/14	5
Selenium	4.0	1.9	10.	ug/l	J	6020	11/18/14	5
Sodium	1700000	2200	20000	ug/l	01V	6020	11/18/14	20
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1

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L733743-50 (GFAA METALS) - Targets too high to run lower.



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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-50

Sample ID : OCD-3

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	97.4			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	105.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	103.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	70.	22.	100	ug/l	J	8015	11/19/14	1
C28-C40 Oil Range	120	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	131.			% Rec.		8015	11/19/14	1

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-51

Sample ID : OCD-4

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Arsenic	3.6	1.2	10.	ug/l	J	6020	11/18/14	5
Barium	25.	1.8	25.	ug/l		6020	11/18/14	5
Calcium	1100000	2300	50000	ug/l		6020	11/18/14	50
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Iron	3800	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	310	1.2	25.	ug/l		6020	11/18/14	5
Potassium	36000	180	5000	ug/l		6020	11/18/14	5
Selenium	U	1.9	10.	ug/l		6020	11/18/14	5
Sodium	3400000	5500	50000	ug/l		6020	11/18/14	50
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1

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L733743-51 (GFAA METALS) - Targets too high to run lower.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : OCD-4
Collected By : SU/HMI Team
Collection Date : 11/12/14 11:00

ESC Sample # : L733743-51

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	97.9			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	107.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	101.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	65.	22.	100	ug/l	J	8015	11/19/14	1
C28-C40 Oil Range	100	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	136.			% Rec.		8015	11/19/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : OCD-5
Collected By : SU/HMI Team
Collection Date : 11/12/14 11:50

ESC Sample # : L733743-52

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	12000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	9.9	1.2	10.	ug/l	J	6020	11/18/14	5
Barium	28.	1.8	25.	ug/l		6020	11/18/14	5
Calcium	1000000	2300	50000	ug/l		6020	11/18/14	50
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Iron	4800	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	360	1.2	25.	ug/l		6020	11/18/14	5
Potassium	35000	180	5000	ug/l		6020	11/18/14	5
Selenium	U	1.9	10.	ug/l		6020	11/18/14	5
Sodium	3500000	5500	50000	ug/l		6020	11/18/14	50
TPH (GC/FID) Low Fraction	260	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.6			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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L733743-52 (GFAA METALS) - Targets too high to run lower.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-52

Sample ID : OCD-5

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	95.6			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	111.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	105.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	540	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	120	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	133.			% Rec.		8015	11/19/14	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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L733743-52 (GFAA METALS) - Targets too high to run lower.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-53

Sample ID : OCD-6

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 15:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	7700000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	14.	1.2	10.	ug/l		6020	11/18/14	5
Barium	24.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	780000	920	20000	ug/l		6020	11/18/14	20
Chromium	2.7	2.7	5.0	ug/l	J	6020	11/18/14	5
Iron	7600	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	1200	1.2	25.	ug/l		6020	11/18/14	5
Potassium	11000	180	5000	ug/l		6020	11/18/14	5
Selenium	U	1.9	10.	ug/l		6020	11/18/14	5
Sodium	1700000	2200	20000	ug/l		6020	11/18/14	20
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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L733743-53 (GFAA METALS) - Targets too high to run lower.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-53

Sample ID : OCD-6

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/12/14 15:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	97.5			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	111.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	540	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	140	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	142.			% Rec.		8015	11/19/14	1

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L733743-53 (GFAA METALS) - Targets too high to run lower.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-54

Sample ID : OCD-7AR

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	150	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	9100000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	110	1.2	10.	ug/l		6020	11/18/14	5
Barium	15.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	700000	920	20000	ug/l		6020	11/18/14	20
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Iron	4300	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	2400	1.2	25.	ug/l		6020	11/18/14	5
Potassium	6600	180	5000	ug/l		6020	11/18/14	5
Selenium	2.0	1.9	10.	ug/l	J	6020	11/18/14	5
Sodium	2500000	5500	50000	ug/l		6020	11/18/14	50
TPH (GC/FID) Low Fraction	760	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.5			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	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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L733743-54 (GFAA METALS) - Targets too high to run lower.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-54

Sample ID : OCD-7AR

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	2.2	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	0.54	0.37	1.0	ug/l	J	8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	99.0			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	102.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	3500	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	340	12.	100	ug/l		8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	118.			% Rec.		8015	11/21/14	1

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L733743-54 (GFAA METALS) - Targets too high to run lower.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-55

Sample ID : OCD-8A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	13000000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	50.	1.2	10.	ug/l		6020	11/18/14	5
Barium	80.	1.8	25.	ug/l		6020	11/18/14	5
Calcium	1200000	2300	50000	ug/l		6020	11/18/14	50
Chromium	7.2	2.7	5.0	ug/l		6020	11/18/14	5
Iron	13000	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	4700	1.2	25.	ug/l		6020	11/18/14	5
Nickel	62.	1.8	10.	ug/l		6020	11/18/14	5
Potassium	13000	180	5000	ug/l		6020	11/18/14	5
Selenium	U	1.9	10.	ug/l		6020	11/18/14	5
Sodium	3500000	5500	50000	ug/l		6020	11/18/14	50
Vanadium	6.5	0.90	25.	ug/l	J	6020	11/18/14	5
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	660	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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

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L733743-55 (GFAA METALS) - Targets too high to run lower.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-55

Sample ID : OCD-8A

Site ID : EVAPORATION PONDS

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	4.0	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	98.0			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	102.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	97.9			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	1800	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	160	12.	100	ug/l		8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	121.			% Rec.		8015	11/21/14	1

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L733743-55 (GFAA METALS) - Targets too high to run lower.



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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-11A
Collected By : SU/HMI Team
Collection Date : 11/13/14 07:55

ESC Sample # : L733743-56

Site ID : EVAPORATION PONDS

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	17000000	10000	200000	ug/l		9056MOD	11/20/14	200
Fluoride	U	9.9	100	ug/l		9056MOD	11/20/14	1
Sulfate	3000000	15000	1000000	ug/l		9056MOD	11/20/14	200
Nitrate-Nitrite	15000	99.	500	ug/l		353.2	11/18/14	5
Dissolved Solids	30000000	2800	10000	ug/l		2540 C-	11/20/14	1
Calcium	2600000	4600	100000	ug/l		6020	11/18/14	100
Potassium	21000	180	5000	ug/l		6020	11/18/14	5
Sodium	8300000	11000	100000	ug/l		6020	11/18/14	100

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-57

Sample ID : DUP-EP-01

Site ID : EVAPORATION PONDS (QA/

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	11000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	20.	1.2	10.	ug/l		6020	11/18/14	5
Barium	17.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	770000	920	20000	ug/l		6020	11/18/14	20
Chromium	U	2.7	5.0	ug/l		6020	11/18/14	5
Iron	1500	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	1600	1.2	25.	ug/l		6020	11/18/14	5
Potassium	5200	180	5000	ug/l		6020	11/18/14	5
Selenium	U	1.9	10.	ug/l		6020	11/18/14	5
Sodium	2500000	5500	50000	ug/l		6020	11/18/14	50
TPH (GC/FID) Low Fraction	370	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.5			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

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L733743-57 (GFAA METALS) - Targets too high to run lower.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-57

Sample ID : DUP-EP-01

Site ID : EVAPORATION PONDS (QA/

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	2.5	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	99.0			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	101.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	99.4			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	1100	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	310	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	136.			% Rec.		8015	11/19/14	1

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L733743-57 (GFAA METALS) - Targets too high to run lower.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-58

Sample ID : DUP-EP-02

Site ID : EVAPORATION PONDS (QA/

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	6600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	64.	1.2	10.	ug/l		6020	11/18/14	5
Barium	18.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	720000	2300	50000	ug/l		6020	11/18/14	50
Chromium	3.0	2.7	5.0	ug/l	J	6020	11/18/14	5
Iron	8100	250	500	ug/l		6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	6300	1.2	25.	ug/l		6020	11/18/14	5
Potassium	3900	180	5000	ug/l	J	6020	11/18/14	5
Selenium	U	1.9	10.	ug/l		6020	11/18/14	5
Sodium	1700000	5500	50000	ug/l		6020	11/18/14	50
TPH (GC/FID) Low Fraction	4300	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

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L733743-58 (GFAA METALS) - Targets too high to run lower.



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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-58

Sample ID : DUP-EP-02

Site ID : EVAPORATION PONDS (QA/

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	9.9	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	96.6			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	107.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	97.1			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	5300	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	650	12.	100	ug/l		8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	120.			% Rec.		8015	11/21/14	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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L733743-58 (GFAA METALS) - Targets too high to run lower.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-59

Sample ID : DUP-EP-03

Site ID : EVAPORATION PONDS (QA/

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	5200	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	7100000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	29.	1.2	10.	ug/l		6020	11/18/14	5
Barium	22.	1.8	25.	ug/l	J	6020	11/18/14	5
Calcium	780000	920	20000	ug/l		6020	11/18/14	20
Chromium	6.0	2.7	5.0	ug/l		6020	11/18/14	5
Iron	340	250	500	ug/l	J	6020	11/18/14	5
Lead	U	1.2	10.	ug/l		6020	11/18/14	5
Manganese	2500	1.2	25.	ug/l		6020	11/18/14	5
Potassium	7000	180	5000	ug/l		6020	11/18/14	5
Selenium	23.	1.9	10.	ug/l		6020	11/18/14	5
Sodium	1200000	2200	20000	ug/l		6020	11/18/14	20
TPH (GC/FID) Low Fraction	520	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.1			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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

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L733743-59 (GFAA METALS) - Targets too high to run lower.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-59

Sample ID : DUP-EP-03

Site ID : EVAPORATION PONDS (QA/

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	0.46	0.33	1.0	ug/l	J	8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	106.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	95.5			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	9200	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	2100	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	131.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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

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L733743-59 (GFAA METALS) - Targets too high to run lower.



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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : EB-EP-01

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:25

ESC Sample # : L733743-60

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	U	2800	10000	ug/l	T4	2540 C-	11/19/14	1
Arsenic	U	0.25	2.0	ug/l		6020	11/18/14	1
Barium	48.	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	930	46.	1000	ug/l	J	6020	11/18/14	1
Chromium	U	0.54	1.0	ug/l		6020	11/18/14	1
Iron	U	50.	100	ug/l		6020	11/18/14	1
Lead	U	0.24	2.0	ug/l		6020	11/18/14	1
Manganese	6.0	0.25	5.0	ug/l		6020	11/18/14	1
Potassium	65.	37.	1000	ug/l	J	6020	11/18/14	1
Selenium	0.94	0.38	2.0	ug/l	J	6020	11/18/14	1
Sodium	1400	110	1000	ug/l		6020	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : EB-EP-01

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:25

ESC Sample # : L733743-60

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	102.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	88.	22.	100	ug/l	J	8015	11/19/14	1
C28-C40 Oil Range	210	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	139.			% Rec.		8015	11/19/14	1

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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

August 26, 2015

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

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : EB-EP-02

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:35

ESC Sample # : L733743-61

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	60000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	1.1	0.25	2.0	ug/l	J	6020	11/18/14	1
Barium	5.7	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	4100	46.	1000	ug/l		6020	11/18/14	1
Chromium	0.55	0.54	1.0	ug/l	J	6020	11/18/14	1
Iron	U	50.	100	ug/l		6020	11/18/14	1
Lead	U	0.24	2.0	ug/l		6020	11/18/14	1
Manganese	12.	0.25	5.0	ug/l		6020	11/18/14	1
Potassium	320	37.	1000	ug/l	J	6020	11/18/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/18/14	1
Sodium	5200	110	1000	ug/l		6020	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-61

Sample ID : EB-EP-02

Site ID : EVAPORATION PONDS (QA/

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	99.4			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	103.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	101.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	62.	12.	100	ug/l	J	8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	123.			% Rec.		8015	11/21/14	1

U = ND (Not Detected)

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Fax (615) 758-5859

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REPORT OF ANALYSIS

August 26, 2015

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

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : EB-EP-03

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:20

ESC Sample # : L733743-62

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	5000	2800	10000	ug/l	J	2540 C-	11/20/14	1
Arsenic	U	0.25	2.0	ug/l		6020	11/18/14	1
Barium	U	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	110	46.	1000	ug/l	J	6020	11/18/14	1
Chromium	U	0.54	1.0	ug/l		6020	11/18/14	1
Iron	U	50.	100	ug/l		6020	11/18/14	1
Lead	U	0.24	2.0	ug/l		6020	11/18/14	1
Manganese	U	0.25	5.0	ug/l		6020	11/18/14	1
Potassium	U	37.	1000	ug/l		6020	11/18/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/18/14	1
Sodium	390	110	1000	ug/l	J	6020	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : EB-EP-03

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:20

ESC Sample # : L733743-62

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	98.1			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	107.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	98.0			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	25.	22.	100	ug/l	J	8015	11/21/14	1
C28-C40 Oil Range	76.	12.	100	ug/l	J	8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	124.			% Rec.		8015	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : EB-EP-04

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:40

ESC Sample # : L733743-63

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	13000	2800	10000	ug/l	T4	2540 C-	11/19/14	1
Arsenic	1.2	0.25	2.0	ug/l	J	6020	11/18/14	1
Barium	6.0	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	4200	46.	1000	ug/l		6020	11/18/14	1
Chromium	0.56	0.54	1.0	ug/l	J	6020	11/18/14	1
Iron	U	50.	100	ug/l		6020	11/18/14	1
Lead	U	0.24	2.0	ug/l		6020	11/18/14	1
Manganese	9.3	0.25	5.0	ug/l		6020	11/18/14	1
Potassium	340	37.	1000	ug/l	J	6020	11/18/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/18/14	1
Sodium	5400	110	1000	ug/l		6020	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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(615) 758-5858
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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : EB-EP-04

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:40

ESC Sample # : L733743-63

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	97.3			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	109.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/17/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	56.	22.	100	ug/l	J	8015	11/19/14	1
C28-C40 Oil Range	140	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	140.			% Rec.		8015	11/19/14	1

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Reported: 01/23/15 14:45 Revised: 08/26/15 10:48



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : TRIP BLANK-EP-01

Collected By : SU/HMI Team
Collection Date : 11/12/14 00:00

ESC Sample # : L733743-64

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1

U = ND (Not Detected)

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MDL = Minimum Detection Limit = LOD = TRRP SDL

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : TRIP BLANK-EP-01
Collected By : SU/HMI Team
Collection Date : 11/12/14 00:00

ESC Sample # : L733743-64

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	101.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/17/14	1

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Houston, TX 77042

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : TRIP BLANK-EP-02

Collected By : SU/HMI Team
Collection Date : 11/13/14 00:00

ESC Sample # : L733743-65

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/17/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/17/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/17/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/17/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/17/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/17/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/17/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/17/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/17/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/17/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/17/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/17/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/17/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/17/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/17/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/17/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/17/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/17/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/17/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/17/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/17/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/17/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/17/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/17/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/17/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/17/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/17/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/17/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/17/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/17/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/17/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/17/14	1

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REPORT OF ANALYSIS

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2929 Briarpark Dr., Suite 300
Houston, TX 77042

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : TRIP BLANK-EP-02
Collected By : SU/HMI Team
Collection Date : 11/13/14 00:00

ESC Sample # : L733743-65

Site ID : EVAPORATION PONDS (QA/

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/17/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/17/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/17/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/17/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/17/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/17/14	1
Dibromofluoromethane	101.			% Rec.		8260B	11/17/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/17/14	1

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-25	WG755545	SAMP	C28-C40 Oil Range	R3005780	J
	WG755200	SAMP	Selenium	R3005226	J
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG754909	SAMP	2-Hexanone	R3005871	J5
	WG754909	SAMP	4-Methyl-2-pentanone (MIBK)	R3005871	J5
L733743-26	WG755200	SAMP	Barium	R3005226	J
	WG756231	SAMP	Chloroethane	R3006056	J4
	WG756231	SAMP	Isopropylbenzene	R3006056	J
L733743-27	WG755200	SAMP	Barium	R3005226	J
	WG756231	SAMP	sec-Butylbenzene	R3006056	J
	WG756231	SAMP	Chloroethane	R3006056	J4
	WG756231	SAMP	Methyl tert-butyl ether	R3006056	J
L733743-28	WG755200	SAMP	Barium	R3005226	J
	WG755200	SAMP	Selenium	R3005226	J
	WG756231	SAMP	Chloroethane	R3006056	J4
	WG756231	SAMP	Methyl tert-butyl ether	R3006056	J
L733743-29	WG755200	SAMP	Barium	R3005226	J
	WG755200	SAMP	Chromium	R3005226	J
	WG755162	SAMP	Nitrate-Nitrite	R3004978	J6
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG755201	SAMP	Calcium	R3007735	V
L733743-30	WG755201	SAMP	Chromium	R3005767	JB
	WG755201	SAMP	Lead	R3005767	J
	WG755201	SAMP	Manganese	R3005767	V
	WG755201	SAMP	Selenium	R3005767	J
	WG755201	SAMP	Sodium	R3007735	V
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG755119	SAMP	C10-C28 Diesel Range	R3005573	J
	WG755119	SAMP	C28-C40 Oil Range	R3005573	J
	WG755201	SAMP	Chromium	R3005767	JB
	WG755201	SAMP	Lead	R3005767	J
L733743-31	WG755201	SAMP	Nickel	R3005767	B
	WG755201	SAMP	Vanadium	R3005767	J
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG755201	SAMP	Chromium	R3005767	JB
	WG755201	SAMP	Selenium	R3005767	J
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG756145	SAMP	Chromium	R3006379	J
L733743-32	WG755201	SAMP	Selenium	R3005767	J
	WG755201	SAMP	Selenium	R3005767	J
	WG754909	SAMP	Bromomethane	R3005871	J4
L733743-33	WG755201	SAMP	Chromium	R3005767	JB
	WG755201	SAMP	Selenium	R3005767	J
	WG754909	SAMP	Bromomethane	R3005871	J4
L733743-34	WG755545	SAMP	o-Terphenyl	R3005967	J7
	WG755201	SAMP	Chromium	R3005767	JB
	WG754909	SAMP	Acetone	R3005871	J
	WG754909	SAMP	Bromomethane	R3005871	J4
L733743-35	WG754909	SAMP	Methyl tert-butyl ether	R3005871	J
	WG755201	SAMP	Lead	R3005767	J
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG754909	SAMP	Methyl tert-butyl ether	R3005871	J
L733743-36	WG755201	SAMP	Lead	R3005767	J
	WG754909	SAMP	Benzene	R3005871	J
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG754909	SAMP	1,2,4-Trimethylbenzene	R3005871	J
L733743-37	WG755119	SAMP	o-Terphenyl	R3005966	J7
	WG755201	SAMP	Barium	R3005767	J
	WG755201	SAMP	Lead	R3005767	J
	WG754909	SAMP	Acetone	R3005871	J
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG754909	SAMP	sec-Butylbenzene	R3005871	J
	WG754909	SAMP	p-Isopropyltoluene	R3005871	J
	WG754909	SAMP	Toluene	R3005871	J
	WG754909	SAMP	1,3,5-Trimethylbenzene	R3005871	J
	WG754909	SAMP	o-Xylene	R3005871	J
	WG754909	SAMP	m&p-Xylene	R3005871	J
	WG754909	SAMP	Xylenes, Total	R3005871	J
L733743-38	WG754943	SAMP	TPH (GC/FID) Low Fraction	R3005655	J
	WG755201	SAMP	Chromium	R3005767	JB
	WG755201	SAMP	Selenium	R3005767	J
L733743-39	WG754909	SAMP	Bromomethane	R3005871	J4
	WG755201	SAMP	Lead	R3005767	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-40	WG754909	SAMP	Acetone	R3005871	J
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG754909	SAMP	sec-Butylbenzene	R3005871	J
	WG754909	SAMP	Ethylbenzene	R3005871	J
	WG754909	SAMP	Toluene	R3005871	J
	WG754909	SAMP	o-Xylene	R3005871	J
	WG755117	SAMP	o-Terphenyl	R3005970	J7
	WG755201	SAMP	Chromium	R3005767	B
	WG754909	SAMP	Acetone	R3005871	J
	WG754909	SAMP	Benzene	R3005871	J
	WG754909	SAMP	Bromomethane	R3005871	J4
	WG754909	SAMP	Ethylbenzene	R3005871	J
	WG754909	SAMP	Isopropylbenzene	R3005871	J
	WG754909	SAMP	2-Butanone (MEK)	R3005871	J
L733743-41	WG754909	SAMP	o-Xylene	R3005871	J
	WG755119	SAMP	C28-C40 Oil Range	R3005966	J
	WG755201	SAMP	Chromium	R3005767	JB
	WG755201	SAMP	Selenium	R3005767	J
L733743-42	WG754909	SAMP	Bromomethane	R3005871	J4
	WG754943	SAMP	TPH (GC/FID) Low Fraction	R3005655	J
	WG755201	SAMP	Selenium	R3005767	J
L733743-43	WG754909	SAMP	Bromomethane	R3005871	J4
	WG754943	SAMP	TPH (GC/FID) Low Fraction	R3005655	J
	WG755201	SAMP	Lead	R3006331	J
L733743-44	WG754909	SAMP	Bromomethane	R3005871	J4
	WG755201	SAMP	Lead	R3006331	J
	WG755168	SAMP	Nitrate-Nitrite	R3005105	J6
L733743-45	WG754909	SAMP	Bromomethane	R3005871	J4
L733743-46	WG755201	SAMP	Lead	R3006331	J
	WG755201	SAMP	Chromium	R3005767	JB
L733743-47	WG755201	SAMP	Lead	R3006331	J
	WG755201	SAMP	Selenium	R3005767	J
	WG754914	SAMP	Acetone	R3005411	J
	WG755119	SAMP	C28-C40 Oil Range	R3005966	J
	WG755201	SAMP	Chromium	R3005767	JB
	WG755201	SAMP	Lead	R3006331	J
	WG755201	SAMP	Selenium	R3005767	J
L733743-48	WG755201	SAMP	Chromium	R3005767	JB
L733743-49	WG755117	SAMP	C10-C28 Diesel Range	R3005510	J
	WG755201	SAMP	Chromium	R3005767	JB
L733743-50	WG755117	SAMP	C10-C28 Diesel Range	R3005510	J
	WG755208	SAMP	Arsenic	R3005302	J
	WG755208	SAMP	Barium	R3005302	J
	WG755208	SAMP	Calcium	R3005302	V
	WG755208	SAMP	Iron	R3005302	V
	WG755208	SAMP	Manganese	R3005302	01J5
	WG755208	SAMP	Potassium	R3005302	01J5
	WG755208	SAMP	Selenium	R3005302	J
	WG755208	SAMP	Sodium	R3005302	01V
	WG755117	SAMP	C10-C28 Diesel Range	R3005510	J
	WG755208	SAMP	Arsenic	R3005302	J
L733743-52	WG755208	SAMP	Arsenic	R3005302	J
L733743-53	WG755208	SAMP	Barium	R3005302	J
	WG755208	SAMP	Chromium	R3005302	J
L733743-54	WG755208	SAMP	Barium	R3005302	J
	WG755208	SAMP	Selenium	R3005302	J
	WG754914	SAMP	1,2,4-Trimethylbenzene	R3005411	J
L733743-55	WG755208	SAMP	Vanadium	R3005302	J
L733743-57	WG755208	SAMP	Barium	R3005302	J
L733743-58	WG755208	SAMP	Barium	R3005302	J
	WG755208	SAMP	Chromium	R3005302	J
	WG755208	SAMP	Potassium	R3005302	J
L733743-59	WG755208	SAMP	Barium	R3005302	J
	WG755208	SAMP	Iron	R3005302	J
	WG754914	SAMP	Isopropylbenzene	R3005411	J
L733743-60	WG755117	SAMP	C10-C28 Diesel Range	R3005510	J
	WG755137	SAMP	Dissolved Solids	R3005387	T4
	WG755208	SAMP	Calcium	R3005302	J
	WG755208	SAMP	Potassium	R3005302	J
	WG755208	SAMP	Selenium	R3005302	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-61	WG755119	SAMP	C28-C40 Oil Range	R3005966	J
	WG755208	SAMP	Arsenic	R3005302	J
	WG755208	SAMP	Chromium	R3005302	J
	WG755208	SAMP	Potassium	R3005302	J
L733743-62	WG755119	SAMP	C10-C28 Diesel Range	R3005966	J
	WG755119	SAMP	C28-C40 Oil Range	R3005966	J
	WG755344	SAMP	Dissolved Solids	R3005636	J
	WG755208	SAMP	Calcium	R3005302	J
L733743-63	WG755208	SAMP	Sodium	R3005302	J
	WG755117	SAMP	C10-C28 Diesel Range	R3005510	J
	WG755137	SAMP	Dissolved Solids	R3005387	T4
	WG755208	SAMP	Arsenic	R3005302	J
	WG755208	SAMP	Chromium	R3005302	J
	WG755208	SAMP	Potassium	R3005302	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.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
01	(ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
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.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-66

Sample ID : MW-21

Site ID : TMD

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	450000	2600	50000	ug/l		9056MOD	11/22/14	50
Fluoride	2400	9.9	100	ug/l		9056MOD	12/02/14	1
Sulfate	2900000	3900	250000	ug/l		9056MOD	11/22/14	50
Nitrate-Nitrite	17000	99.	500	ug/l		353.2	11/18/14	5
Dissolved Solids	5200000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	5.4	0.25	2.0	ug/l		6020	11/18/14	1
Barium	8.0	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	600000	920	20000	ug/l		6020	11/18/14	20
Chromium	0.78	0.54	1.0	ug/l	J	6020	11/18/14	1
Iron	U	50.	100	ug/l		6020	11/18/14	1
Lead	U	0.24	2.0	ug/l		6020	11/18/14	1
Manganese	820	0.25	5.0	ug/l		6020	11/18/14	1
Potassium	1900	37.	1000	ug/l		6020	11/18/14	1
Selenium	18.	0.38	2.0	ug/l		6020	11/18/14	1
Sodium	430000	550	5000	ug/l		6020	11/18/14	5
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1

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

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Note:

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-66

Sample ID : MW-21

Site ID : TMD

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	6.0	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.3			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	92.	22.	100	ug/l	J	8015	11/19/14	1
C28-C40 Oil Range	110	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	135.			% Rec.		8015	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-46R
Collected By : SU/HMI Team
Collection Date : 11/13/14 16:40

ESC Sample # : L733743-67

Site ID : TMD

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	290000	520	10000	ug/l		9056MOD	11/22/14	10
Fluoride	1900	99.	1000	ug/l		9056MOD	11/22/14	10
Sulfate	2300000	3900	250000	ug/l		9056MOD	12/05/14	50
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	3800000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	4.2	0.25	2.0	ug/l		6020	11/18/14	1
Barium	24.	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	650000	920	20000	ug/l		6020	11/18/14	20
Chromium	2.8	0.54	1.0	ug/l		6020	11/18/14	1
Iron	1100	50.	100	ug/l		6020	11/18/14	1
Lead	0.83	0.24	2.0	ug/l	J	6020	11/18/14	1
Manganese	140	0.25	5.0	ug/l		6020	11/18/14	1
Potassium	2300	37.	1000	ug/l		6020	11/18/14	1
Selenium	3.4	0.38	2.0	ug/l		6020	11/18/14	1
Sodium	170000	550	5000	ug/l		6020	11/18/14	5
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l	J5	8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l	J3	8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l	J5	8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l	J3	8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-46R

Collected By : SU/HMI Team
Collection Date : 11/13/14 16:40

ESC Sample # : L733743-67

Site ID : TMD

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l	J3	8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	104.			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	107.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	42.	22.	100	ug/l	J	8015	11/21/14	1
C28-C40 Oil Range	32.	12.	100	ug/l	J	8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	124.			% Rec.		8015	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-68

Sample ID : NP-1

Site ID : TMD

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	84.	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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

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1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-1
Collected By : SU/HMI Team
Collection Date : 11/12/14 13:50

ESC Sample # : L733743-68

Site ID : TMD

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	103.			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	105.			% Rec.		8260B	11/19/14	1

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-69

Sample ID : MW-49

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 16:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	380000	1000	20000	ug/l		9056MOD	11/22/14	20
Fluoride	1600	9.9	100	ug/l		9056MOD	12/02/14	1
Sulfate	500000	1500	100000	ug/l		9056MOD	11/22/14	20
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	5.5	0.25	2.0	ug/l		6020	11/18/14	1
Barium	100	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	280000	230	5000	ug/l		6020	11/18/14	5
Chromium	8.2	0.54	1.0	ug/l		6020	11/18/14	1
Iron	3400	50.	100	ug/l		6020	11/18/14	1
Lead	12.	0.24	2.0	ug/l		6020	11/18/14	1
Manganese	330	0.25	5.0	ug/l		6020	11/18/14	1
Nickel	20.	0.35	2.0	ug/l		6020	11/18/14	1
Potassium	3300	37.	1000	ug/l		6020	11/18/14	1
Selenium	1.9	0.38	2.0	ug/l	J	6020	11/18/14	1
Sodium	320000	550	5000	ug/l		6020	11/18/14	5
Vanadium	11.	0.18	5.0	ug/l		6020	11/18/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	1000	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	92.0			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	20.	100	ug/l		8260B	11/20/14	2
Benzene	170	0.66	2.0	ug/l		8260B	11/20/14	2
Bromodichloromethane	U	0.76	2.0	ug/l		8260B	11/20/14	2
Bromoform	U	0.94	2.0	ug/l		8260B	11/20/14	2
Bromomethane	U	1.7	10.	ug/l	J4	8260B	11/20/14	2
n-Butylbenzene	2.6	0.72	2.0	ug/l		8260B	11/20/14	2
sec-Butylbenzene	4.4	0.73	2.0	ug/l		8260B	11/20/14	2
Carbon disulfide	3.5	0.55	2.0	ug/l		8260B	11/20/14	2
Carbon tetrachloride	U	0.76	2.0	ug/l		8260B	11/20/14	2
Chlorobenzene	U	0.70	2.0	ug/l		8260B	11/20/14	2
Chlorodibromomethane	U	0.65	2.0	ug/l		8260B	11/20/14	2
Chloroethane	U	0.91	10.	ug/l		8260B	11/20/14	2
Chloroform	U	0.65	10.	ug/l		8260B	11/20/14	2

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-69

Sample ID : MW-49

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 16:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloromethane	U	0.55	5.0	ug/l		8260B	11/20/14	2
1,2-Dibromoethane	U	0.76	2.0	ug/l		8260B	11/20/14	2
1,1-Dichloroethane	U	0.52	2.0	ug/l		8260B	11/20/14	2
1,2-Dichloroethane	U	0.72	2.0	ug/l		8260B	11/20/14	2
1,1-Dichloroethene	U	0.80	2.0	ug/l		8260B	11/20/14	2
cis-1,2-Dichloroethene	U	0.52	2.0	ug/l		8260B	11/20/14	2
trans-1,2-Dichloroethene	U	0.79	2.0	ug/l		8260B	11/20/14	2
1,2-Dichloropropane	U	0.61	2.0	ug/l		8260B	11/20/14	2
cis-1,3-Dichloropropene	U	0.84	2.0	ug/l		8260B	11/20/14	2
trans-1,3-Dichloropropene	U	0.84	2.0	ug/l		8260B	11/20/14	2
Ethylbenzene	3.6	0.77	2.0	ug/l		8260B	11/20/14	2
Isopropylbenzene	22.	0.65	2.0	ug/l		8260B	11/20/14	2
p-Isopropyltoluene	0.95	0.70	2.0	ug/l	J	8260B	11/20/14	2
2-Butanone (MEK)	U	7.9	20.	ug/l		8260B	11/20/14	2
2-Hexanone	U	7.6	20.	ug/l		8260B	11/20/14	2
Methylene Chloride	U	2.0	10.	ug/l		8260B	11/20/14	2
4-Methyl-2-pentanone (MIBK)	U	4.3	20.	ug/l		8260B	11/20/14	2
Methyl tert-butyl ether	55.	0.73	2.0	ug/l		8260B	11/20/14	2
Naphthalene	3.1	2.0	10.	ug/l	J	8260B	11/20/14	2
n-Propylbenzene	19.	0.70	2.0	ug/l		8260B	11/20/14	2
Styrene	U	0.61	2.0	ug/l		8260B	11/20/14	2
1,1,1,2-Tetrachloroethane	U	0.77	2.0	ug/l		8260B	11/20/14	2
1,1,2,2-Tetrachloroethane	U	0.26	2.0	ug/l		8260B	11/20/14	2
Tetrachloroethene	U	0.74	2.0	ug/l		8260B	11/20/14	2
Toluene	2.9	1.6	10.	ug/l	J	8260B	11/20/14	2
1,1,1-Trichloroethane	U	0.64	2.0	ug/l		8260B	11/20/14	2
1,1,2-Trichloroethane	U	0.77	2.0	ug/l		8260B	11/20/14	2
Trichloroethene	U	0.80	2.0	ug/l		8260B	11/20/14	2
1,2,4-Trimethylbenzene	17.	0.75	2.0	ug/l		8260B	11/20/14	2
1,3,5-Trimethylbenzene	1.8	0.77	2.0	ug/l	J	8260B	11/20/14	2
Vinyl chloride	U	0.52	2.0	ug/l		8260B	11/20/14	2
o-Xylene	U	0.68	2.0	ug/l		8260B	11/20/14	2
m&p-Xylene	26.	1.4	4.0	ug/l		8260B	11/20/14	2
Xylenes, Total	26.	2.1	6.0	ug/l		8260B	11/20/14	2
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	96.1			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	7000	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	1100	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-49
Collected By : SU/HMI Team
Collection Date : 11/12/14 16:00

ESC Sample # : L733743-69

Site ID : TEL

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	130.			% Rec.		8015	11/19/14	1

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-70

Sample ID : TEL-1

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	150000	2600	50000	ug/l		9056MOD	11/22/14	50
Fluoride	3100	9.9	100	ug/l		9056MOD	12/02/14	1
Sulfate	1900000	3900	250000	ug/l		9056MOD	11/22/14	50
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	3600000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	2.6	0.25	2.0	ug/l		6020	11/18/14	1
Barium	11.	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	600000	920	20000	ug/l		6020	11/18/14	20
Chromium	0.90	0.54	1.0	ug/l	J	6020	11/18/14	1
Iron	U	50.	100	ug/l		6020	11/18/14	1
Lead	U	0.24	2.0	ug/l		6020	11/18/14	1
Manganese	140	0.25	5.0	ug/l		6020	11/18/14	1
Potassium	1900	37.	1000	ug/l		6020	11/18/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/18/14	1
Sodium	340000	550	5000	ug/l		6020	11/18/14	5
TPH (GC/FID) Low Fraction	200	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/20/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/20/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	1.2	0.36	1.0	ug/l		8260B	11/20/14	1
Carbon disulfide	1.9	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-70

Sample ID : TEL-1

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
Ethylbenzene	0.47	0.38	1.0	ug/l	J	8260B	11/20/14	1
Isopropylbenzene	1.3	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	1.8	0.37	1.0	ug/l		8260B	11/20/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/20/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	0.99	0.78	5.0	ug/l	J	8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	0.86	0.37	1.0	ug/l	J	8260B	11/20/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	2.2	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	2.2	1.1	3.0	ug/l	J	8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	92.9			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	6000	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	1100	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	149.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-71

Sample ID : TEL-2

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	300000	1000	20000	ug/l		9056MOD	11/22/14	20
Fluoride	1400	9.9	100	ug/l		9056MOD	12/02/14	1
Sulfate	580000	1500	100000	ug/l		9056MOD	11/22/14	20
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	2400000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	12.	0.25	2.0	ug/l		6020	11/18/14	1
Barium	110	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	250000	230	5000	ug/l		6020	11/18/14	5
Chromium	1.7	0.54	1.0	ug/l		6020	11/18/14	1
Iron	U	50.	100	ug/l		6020	11/18/14	1
Lead	2.4	0.24	2.0	ug/l		6020	11/18/14	1
Manganese	13.	0.25	5.0	ug/l		6020	11/18/14	1
Potassium	1300	37.	1000	ug/l		6020	11/18/14	1
Selenium	1.1	0.38	2.0	ug/l	J	6020	11/18/14	1
Sodium	390000	550	5000	ug/l		6020	11/18/14	5
TPH (GC/FID) Low Fraction	1700	780	2500	ug/l	J	8015D/G	11/20/14	25
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.3			% Rec.		8015D/G	11/20/14	25
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/20/14	10
Benzene	870	3.3	10.	ug/l		8260B	11/20/14	10
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/20/14	10
Bromomethane	U	8.7	50.	ug/l	J4	8260B	11/20/14	10
n-Butylbenzene	4.0	3.6	10.	ug/l	J	8260B	11/20/14	10
sec-Butylbenzene	6.1	3.6	10.	ug/l	J	8260B	11/20/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/20/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/20/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/20/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/20/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/20/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/20/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/20/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/20/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/20/14	10

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1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-71

Sample ID : TEL-2

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/20/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10
Ethylbenzene	9.9	3.8	10.	ug/l	J	8260B	11/20/14	10
Isopropylbenzene	43.	3.3	10.	ug/l		8260B	11/20/14	10
p-Isopropyltoluene	4.3	3.5	10.	ug/l	J	8260B	11/20/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/20/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/20/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/20/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/20/14	10
Methyl tert-butyl ether	12.	3.7	10.	ug/l		8260B	11/20/14	10
Naphthalene	17.	10.	50.	ug/l	J	8260B	11/20/14	10
n-Propylbenzene	51.	3.5	10.	ug/l		8260B	11/20/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/20/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/20/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/20/14	10
Toluene	34.	7.8	50.	ug/l	J	8260B	11/20/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/20/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2,4-Trimethylbenzene	140	3.7	10.	ug/l		8260B	11/20/14	10
1,3,5-Trimethylbenzene	26.	3.9	10.	ug/l		8260B	11/20/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/20/14	10
o-Xylene	16.	3.4	10.	ug/l		8260B	11/20/14	10
m&p-Xylene	180	7.2	20.	ug/l		8260B	11/20/14	10
Xylenes, Total	200	11.	30.	ug/l		8260B	11/20/14	10
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	94.0			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	18000	110	500	ug/l		8015	11/21/14	5
C28-C40 Oil Range	4800	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	11/19/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-72

Sample ID : TEL-3

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	50000	52.	1000	ug/l		9056MOD	12/02/14	1
Fluoride	3700	9.9	100	ug/l		9056MOD	12/02/14	1
Sulfate	1600000	1500	100000	ug/l		9056MOD	11/22/14	20
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	2900000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	1.3	0.25	2.0	ug/l	J	6020	11/18/14	1
Barium	12.	0.36	5.0	ug/l		6020	11/18/14	1
Calcium	710000	920	20000	ug/l		6020	11/18/14	20
Chromium	5.3	0.54	1.0	ug/l		6020	11/18/14	1
Iron	76.	50.	100	ug/l	J	6020	11/18/14	1
Lead	U	0.24	2.0	ug/l		6020	11/18/14	1
Manganese	15.	0.25	5.0	ug/l		6020	11/18/14	1
Potassium	6600	37.	1000	ug/l		6020	11/18/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/18/14	1
Sodium	49000	110	1000	ug/l		6020	11/18/14	1
TPH (GC/FID) Low Fraction	450	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	91.5			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/20/14	1
Benzene	23.	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l	J4	8260B	11/20/14	1
n-Butylbenzene	1.6	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	9.3	0.36	1.0	ug/l		8260B	11/20/14	1
Carbon disulfide	4.7	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-72

Sample ID : TEL-3

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
Ethylbenzene	0.68	0.38	1.0	ug/l	J	8260B	11/20/14	1
Isopropylbenzene	50.	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	0.88	0.35	1.0	ug/l	J	8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/20/14	1
Naphthalene	1.0	1.0	5.0	ug/l	J	8260B	11/20/14	1
n-Propylbenzene	8.7	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	1.0	0.78	5.0	ug/l	J	8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	16.	0.37	1.0	ug/l		8260B	11/20/14	1
1,3,5-Trimethylbenzene	1.7	0.39	1.0	ug/l		8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	2.3	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	12.	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	14.	1.1	3.0	ug/l		8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	104.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	95.5			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	6300	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	1900	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	102.			% Rec.		8015	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-73

Sample ID : TEL-4

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	440000	2600	50000	ug/l		9056MOD	11/22/14	50
Fluoride	1900	9.9	100	ug/l		9056MOD	12/02/14	1
Sulfate	1800000	3900	250000	ug/l		9056MOD	11/22/14	50
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	4200000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	10.	0.25	2.0	ug/l		6020	11/19/14	1
Barium	43.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	380000	230	5000	ug/l	01V	6020	11/19/14	5
Chromium	380	0.54	1.0	ug/l	B	6020	11/19/14	1
Iron	93.	50.	100	ug/l	J	6020	11/19/14	1
Lead	3.5	0.24	2.0	ug/l	B	6020	11/19/14	1
Manganese	290	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	620	37.	1000	ug/l	J	6020	11/19/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	530000	1100	10000	ug/l	01V	6020	11/19/14	10
TPH (GC/FID) Low Fraction	3300	160	500	ug/l		8015D/G	11/21/14	5
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	88.1			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	200	1000	ug/l		8260B	11/20/14	20
Benzene	1200	6.6	20.	ug/l		8260B	11/20/14	20
Bromodichloromethane	U	7.6	20.	ug/l		8260B	11/20/14	20
Bromoform	U	9.4	20.	ug/l		8260B	11/20/14	20
Bromomethane	U	17.	100	ug/l	J4	8260B	11/20/14	20
n-Butylbenzene	U	7.2	20.	ug/l		8260B	11/20/14	20
sec-Butylbenzene	13.	7.3	20.	ug/l	J	8260B	11/20/14	20
Carbon disulfide	42.	5.5	20.	ug/l		8260B	11/20/14	20
Carbon tetrachloride	U	7.6	20.	ug/l		8260B	11/20/14	20
Chlorobenzene	U	7.0	20.	ug/l		8260B	11/20/14	20
Chlorodibromomethane	U	6.5	20.	ug/l		8260B	11/20/14	20
Chloroethane	U	9.1	100	ug/l		8260B	11/20/14	20
Chloroform	U	6.5	100	ug/l		8260B	11/20/14	20
Chloromethane	U	5.5	50.	ug/l		8260B	11/20/14	20
1,2-Dibromoethane	U	7.6	20.	ug/l		8260B	11/20/14	20
1,1-Dichloroethane	U	5.2	20.	ug/l		8260B	11/20/14	20
1,2-Dichloroethane	U	7.2	20.	ug/l		8260B	11/20/14	20
1,1-Dichloroethene	U	8.0	20.	ug/l		8260B	11/20/14	20
cis-1,2-Dichloroethene	U	5.2	20.	ug/l		8260B	11/20/14	20

U = ND (Not Detected)

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-73

Sample ID : TEL-4

Site ID : TEL

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
trans-1,2-Dichloroethene	U	7.9	20.	ug/l		8260B	11/20/14	20
1,2-Dichloropropane	U	6.1	20.	ug/l		8260B	11/20/14	20
cis-1,3-Dichloropropene	U	8.4	20.	ug/l		8260B	11/20/14	20
trans-1,3-Dichloropropene	U	8.4	20.	ug/l		8260B	11/20/14	20
Ethylbenzene	8.7	7.7	20.	ug/l	J	8260B	11/20/14	20
Isopropylbenzene	48.	6.5	20.	ug/l		8260B	11/20/14	20
p-Isopropyltoluene	U	7.0	20.	ug/l		8260B	11/20/14	20
2-Butanone (MEK)	U	79.	200	ug/l		8260B	11/20/14	20
2-Hexanone	U	76.	200	ug/l		8260B	11/20/14	20
Methylene Chloride	U	20.	100	ug/l		8260B	11/20/14	20
4-Methyl-2-pentanone (MIBK)	U	43.	200	ug/l		8260B	11/20/14	20
Methyl tert-butyl ether	64.	7.3	20.	ug/l		8260B	11/20/14	20
Naphthalene	U	20.	100	ug/l		8260B	11/20/14	20
n-Propylbenzene	68.	7.0	20.	ug/l		8260B	11/20/14	20
Styrene	U	6.1	20.	ug/l		8260B	11/20/14	20
1,1,1,2-Tetrachloroethane	U	7.7	20.	ug/l		8260B	11/20/14	20
1,1,2,2-Tetrachloroethane	U	2.6	20.	ug/l		8260B	11/20/14	20
Tetrachloroethene	U	7.4	20.	ug/l		8260B	11/20/14	20
Toluene	U	16.	100	ug/l		8260B	11/20/14	20
1,1,1-Trichloroethane	U	6.4	20.	ug/l		8260B	11/20/14	20
1,1,2-Trichloroethane	U	7.7	20.	ug/l		8260B	11/20/14	20
Trichloroethene	U	8.0	20.	ug/l		8260B	11/20/14	20
1,2,4-Trimethylbenzene	110	7.5	20.	ug/l		8260B	11/20/14	20
1,3,5-Trimethylbenzene	U	7.7	20.	ug/l		8260B	11/20/14	20
Vinyl chloride	U	5.2	20.	ug/l		8260B	11/20/14	20
o-Xylene	U	6.8	20.	ug/l		8260B	11/20/14	20
m&p-Xylene	120	14.	40.	ug/l		8260B	11/20/14	20
Xylenes, Total	120	21.	60.	ug/l		8260B	11/20/14	20
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	104.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	96.8			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	7400	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	1300	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	136.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-74

Sample ID : DUP-TEL-01

Site ID : TEL (QA/AC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	480000	5200	100000	ug/l		9056MOD	11/20/14	100
Fluoride	1300	9.9	100	ug/l		9056MOD	11/20/14	1
Sulfate	2100000	7700	500000	ug/l		9056MOD	11/20/14	100
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	4100000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	10.	0.25	2.0	ug/l		6020	11/19/14	1
Barium	42.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	360000	230	5000	ug/l		6020	11/19/14	5
Chromium	510	0.54	1.0	ug/l	B	6020	11/19/14	1
Iron	130	50.	100	ug/l		6020	11/19/14	1
Lead	3.4	0.24	2.0	ug/l	B	6020	11/19/14	1
Manganese	280	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	620	37.	1000	ug/l	J	6020	11/19/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	520000	1100	10000	ug/l		6020	11/19/14	10
TPH (GC/FID) Low Fraction	2800	160	500	ug/l		8015D/G	11/21/14	5
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	89.9			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	200	1000	ug/l		8260B	11/20/14	20
Benzene	1200	6.6	20.	ug/l		8260B	11/20/14	20
Bromodichloromethane	U	7.6	20.	ug/l		8260B	11/20/14	20
Bromoform	U	9.4	20.	ug/l		8260B	11/20/14	20
Bromomethane	U	17.	100	ug/l	J4	8260B	11/20/14	20
n-Butylbenzene	U	7.2	20.	ug/l		8260B	11/20/14	20
sec-Butylbenzene	12.	7.3	20.	ug/l	J	8260B	11/20/14	20
Carbon disulfide	38.	5.5	20.	ug/l		8260B	11/20/14	20
Carbon tetrachloride	U	7.6	20.	ug/l		8260B	11/20/14	20
Chlorobenzene	U	7.0	20.	ug/l		8260B	11/20/14	20
Chlorodibromomethane	U	6.5	20.	ug/l		8260B	11/20/14	20
Chloroethane	U	9.1	100	ug/l		8260B	11/20/14	20
Chloroform	U	6.5	100	ug/l		8260B	11/20/14	20
Chloromethane	U	5.5	50.	ug/l		8260B	11/20/14	20
1,2-Dibromoethane	U	7.6	20.	ug/l		8260B	11/20/14	20
1,1-Dichloroethane	U	5.2	20.	ug/l		8260B	11/20/14	20
1,2-Dichloroethane	U	7.2	20.	ug/l		8260B	11/20/14	20
1,1-Dichloroethene	U	8.0	20.	ug/l		8260B	11/20/14	20
cis-1,2-Dichloroethene	U	5.2	20.	ug/l		8260B	11/20/14	20

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-74

Sample ID : DUP-TEL-01

Site ID : TEL (QA/AC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
trans-1,2-Dichloroethene	U	7.9	20.	ug/l		8260B	11/20/14	20
1,2-Dichloropropane	U	6.1	20.	ug/l		8260B	11/20/14	20
cis-1,3-Dichloropropene	U	8.4	20.	ug/l		8260B	11/20/14	20
trans-1,3-Dichloropropene	U	8.4	20.	ug/l		8260B	11/20/14	20
Ethylbenzene	8.5	7.7	20.	ug/l	J	8260B	11/20/14	20
Isopropylbenzene	48.	6.5	20.	ug/l		8260B	11/20/14	20
p-Isopropyltoluene	U	7.0	20.	ug/l		8260B	11/20/14	20
2-Butanone (MEK)	U	79.	200	ug/l		8260B	11/20/14	20
2-Hexanone	U	76.	200	ug/l		8260B	11/20/14	20
Methylene Chloride	U	20.	100	ug/l		8260B	11/20/14	20
4-Methyl-2-pentanone (MIBK)	U	43.	200	ug/l		8260B	11/20/14	20
Methyl tert-butyl ether	66.	7.3	20.	ug/l		8260B	11/20/14	20
Naphthalene	U	20.	100	ug/l		8260B	11/20/14	20
n-Propylbenzene	67.	7.0	20.	ug/l		8260B	11/20/14	20
Styrene	U	6.1	20.	ug/l		8260B	11/20/14	20
1,1,1,2-Tetrachloroethane	U	7.7	20.	ug/l		8260B	11/20/14	20
1,1,2,2-Tetrachloroethane	U	2.6	20.	ug/l		8260B	11/20/14	20
Tetrachloroethene	U	7.4	20.	ug/l		8260B	11/20/14	20
Toluene	U	16.	100	ug/l		8260B	11/20/14	20
1,1,1-Trichloroethane	U	6.4	20.	ug/l		8260B	11/20/14	20
1,1,2-Trichloroethane	U	7.7	20.	ug/l		8260B	11/20/14	20
Trichloroethene	U	8.0	20.	ug/l		8260B	11/20/14	20
1,2,4-Trimethylbenzene	110	7.5	20.	ug/l		8260B	11/20/14	20
1,3,5-Trimethylbenzene	U	7.7	20.	ug/l		8260B	11/20/14	20
Vinyl chloride	U	5.2	20.	ug/l		8260B	11/20/14	20
o-Xylene	U	6.8	20.	ug/l		8260B	11/20/14	20
m&p-Xylene	120	14.	40.	ug/l		8260B	11/20/14	20
Xylenes, Total	120	21.	60.	ug/l		8260B	11/20/14	20
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	105.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	96.2			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	5700	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	1600	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	111.			% Rec.		8015	11/20/14	5

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-75

Sample ID : EB-TEL-01

Site ID : TEL (QA/AC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	570	52.	1000	ug/l	J	9056MOD	11/20/14	1
Fluoride	U	9.9	100	ug/l		9056MOD	11/20/14	1
Sulfate	350	77.	5000	ug/l	J	9056MOD	11/20/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	U	2800	10000	ug/l	QT4	2540 C-	11/22/14	1
Arsenic	U	0.25	2.0	ug/l		6020	11/19/14	1
Barium	0.86	0.36	5.0	ug/l	J	6020	11/19/14	1
Calcium	460	46.	1000	ug/l	J	6020	11/19/14	1
Chromium	0.66	0.54	1.0	ug/l	JB	6020	11/19/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Lead	0.54	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	U	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	U	37.	1000	ug/l		6020	11/19/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	980	110	1000	ug/l	J	6020	11/19/14	1
Zinc	U	2.6	25.	ug/l		6020	11/19/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-75

Sample ID : EB-TEL-01

Site ID : TEL (QA/AC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	1.2	1.0	5.0	ug/l	J	8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	103.			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	106.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	150	110	500	ug/l	J	8015	11/20/14	5
C28-C40 Oil Range	240	59.	500	ug/l	J	8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	125.			% Rec.		8015	11/20/14	5

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : TRIP BLANK-TEL-01

Collected By : SU/HMI Team
Collection Date : 11/12/14 00:00

ESC Sample # : L733743-76

Site ID : TEL (QA/AC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	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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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : TRIP BLANK-TEL-01

Collected By : SU/HMI Team
Collection Date : 11/12/14 00:00

ESC Sample # : L733743-76

Site ID : TEL (QA/AC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	104.			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	108.			% Rec.		8260B	11/19/14	1

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-45
Collected By : SU/HMI Team
Collection Date : 11/12/14 08:15

ESC Sample # : L733743-77

Site ID : NCL

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/18/14	1
Dissolved Solids	4300000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	2.8	0.25	2.0	ug/l		6020	11/19/14	1
Barium	18.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	590000	920	20000	ug/l		6020	11/19/14	20
Chromium	1.1	0.54	1.0	ug/l	B	6020	11/19/14	1
Iron	820	50.	100	ug/l		6020	11/19/14	1
Lead	4.7	0.24	2.0	ug/l	B	6020	11/19/14	1
Manganese	600	0.25	5.0	ug/l		6020	11/19/14	1
Nickel	8.3	0.35	2.0	ug/l		6020	11/19/14	1
Potassium	4600	37.	1000	ug/l		6020	11/19/14	1
Selenium	0.71	0.38	2.0	ug/l	J	6020	11/19/14	1
Sodium	360000	550	5000	ug/l		6020	11/19/14	5
Vanadium	0.30	0.18	5.0	ug/l	J	6020	11/19/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-77

Sample ID : MW-45

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 08:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	4.8	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	103.			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	106.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	860	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	480	59.	500	ug/l	J	8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	120.			% Rec.		8015	11/20/14	5

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August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-78

Sample ID : MW-54A

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	850	20.	100	ug/l	J3	353.2	11/18/14	1
Dissolved Solids	1900000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	4.5	0.25	2.0	ug/l		6020	11/19/14	1
Barium	19.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	370000	230	5000	ug/l		6020	11/19/14	5
Chromium	0.69	0.54	1.0	ug/l	JB	6020	11/19/14	1
Iron	79.	50.	100	ug/l	J	6020	11/19/14	1
Lead	0.77	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	450	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	380	37.	1000	ug/l	J	6020	11/19/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	74000	110	1000	ug/l		6020	11/19/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	0.79	0.36	1.0	ug/l	J	8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1

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August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-78

Sample ID : MW-54A

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	108.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2600	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	990	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	11/18/14	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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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-79

Sample ID : MW-55

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	6500	20.	100	ug/l	J6	353.2	11/18/14	1
Dissolved Solids	3600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	4.5	0.25	2.0	ug/l		6020	11/19/14	1
Barium	13.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	610000	920	20000	ug/l		6020	11/19/14	20
Chromium	2.3	0.54	1.0	ug/l	B	6020	11/19/14	1
Iron	56.	50.	100	ug/l	J	6020	11/19/14	1
Lead	1.0	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	93.	0.25	5.0	ug/l		6020	11/19/14	1
Nickel	2.5	0.35	2.0	ug/l		6020	11/19/14	1
Potassium	900	37.	1000	ug/l	J	6020	11/19/14	1
Selenium	13.	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	130000	550	5000	ug/l		6020	11/19/14	5
Vanadium	17.	0.18	5.0	ug/l		6020	11/19/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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(615) 758-5858
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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-79

Sample ID : MW-55

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	0.49	0.37	1.0	ug/l	J	8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	102.			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	105.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	120	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	64.	12.	100	ug/l	J	8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	11/18/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-80

Sample ID : MW-56

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	3500000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	6.7	0.25	2.0	ug/l		6020	11/19/14	1
Barium	14.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	540000	920	20000	ug/l		6020	11/19/14	20
Chromium	0.78	0.54	1.0	ug/l	JB	6020	11/19/14	1
Iron	61.	50.	100	ug/l	J	6020	11/19/14	1
Lead	1.5	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	350	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	2100	37.	1000	ug/l		6020	11/19/14	1
Selenium	3.1	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	250000	550	5000	ug/l		6020	11/19/14	5
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-80

Sample ID : MW-56

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	4.0	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	102.			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	107.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	800	110	500	ug/l		8015	11/21/14	5
C28-C40 Oil Range	180	59.	500	ug/l	J	8015	11/21/14	5
Surrogate Recovery								
o-Terphenyl	115.			% Rec.		8015	11/21/14	5

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-81

Sample ID : MW-108

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	190	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	2500000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	6.1	0.25	2.0	ug/l		6020	11/19/14	1
Barium	49.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	350000	230	5000	ug/l		6020	11/19/14	5
Chromium	5.5	0.54	1.0	ug/l	B	6020	11/19/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Lead	2.3	0.24	2.0	ug/l	B	6020	11/19/14	1
Manganese	45.	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	3200	37.	1000	ug/l		6020	11/19/14	1
Selenium	1.2	0.38	2.0	ug/l	J	6020	11/19/14	1
Sodium	110000	550	5000	ug/l		6020	11/19/14	5
Volatile Organics								
Acetone	U	50.	250	ug/l		8260B	11/20/14	5
Benzene	410	1.6	5.0	ug/l		8260B	11/20/14	5
Bromodichloromethane	U	1.9	5.0	ug/l		8260B	11/20/14	5
Bromoform	U	2.3	5.0	ug/l		8260B	11/20/14	5
Bromomethane	U	4.3	25.	ug/l	J4	8260B	11/20/14	5
n-Butylbenzene	2.7	1.8	5.0	ug/l	J	8260B	11/20/14	5
sec-Butylbenzene	5.1	1.8	5.0	ug/l		8260B	11/20/14	5
Carbon disulfide	14.	1.4	5.0	ug/l		8260B	11/20/14	5
Carbon tetrachloride	U	1.9	5.0	ug/l		8260B	11/20/14	5
Chlorobenzene	U	1.7	5.0	ug/l		8260B	11/20/14	5
Chlorodibromomethane	U	1.6	5.0	ug/l		8260B	11/20/14	5
Chloroethane	U	2.3	25.	ug/l		8260B	11/20/14	5
Chloroform	U	1.6	25.	ug/l		8260B	11/20/14	5
Chloromethane	U	1.4	13.	ug/l		8260B	11/20/14	5
1,2-Dibromoethane	U	1.9	5.0	ug/l		8260B	11/20/14	5
1,1-Dichloroethane	U	1.3	5.0	ug/l		8260B	11/20/14	5
1,2-Dichloroethane	U	1.8	5.0	ug/l		8260B	11/20/14	5
1,1-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/20/14	5
cis-1,2-Dichloroethene	U	1.3	5.0	ug/l		8260B	11/20/14	5
trans-1,2-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/20/14	5
1,2-Dichloropropane	U	1.5	5.0	ug/l		8260B	11/20/14	5
cis-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/20/14	5
trans-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/20/14	5
Ethylbenzene	5.6	1.9	5.0	ug/l		8260B	11/20/14	5
Isopropylbenzene	24.	1.6	5.0	ug/l		8260B	11/20/14	5
p-Isopropyltoluene	2.8	1.8	5.0	ug/l	J	8260B	11/20/14	5
2-Butanone (MEK)	U	20.	50.	ug/l		8260B	11/20/14	5

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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Houston, TX 77042

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-81

Sample ID : MW-108

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	19.	50.	ug/l		8260B	11/20/14	5
Methylene Chloride	U	5.0	25.	ug/l		8260B	11/20/14	5
4-Methyl-2-pentanone (MIBK)	U	11.	50.	ug/l		8260B	11/20/14	5
Methyl tert-butyl ether	U	1.8	5.0	ug/l		8260B	11/20/14	5
Naphthalene	12.	5.0	25.	ug/l	J	8260B	11/20/14	5
n-Propylbenzene	25.	1.7	5.0	ug/l		8260B	11/20/14	5
Styrene	U	1.5	5.0	ug/l		8260B	11/20/14	5
1,1,1,2-Tetrachloroethane	U	1.9	5.0	ug/l		8260B	11/20/14	5
1,1,2,2-Tetrachloroethane	U	0.65	5.0	ug/l		8260B	11/20/14	5
Tetrachloroethene	U	1.9	5.0	ug/l		8260B	11/20/14	5
Toluene	7.8	3.9	25.	ug/l	J	8260B	11/20/14	5
1,1,1-Trichloroethane	U	1.6	5.0	ug/l		8260B	11/20/14	5
1,1,2-Trichloroethane	U	1.9	5.0	ug/l		8260B	11/20/14	5
Trichloroethene	U	2.0	5.0	ug/l		8260B	11/20/14	5
1,2,4-Trimethylbenzene	39.	1.9	5.0	ug/l		8260B	11/20/14	5
1,3,5-Trimethylbenzene	4.6	1.9	5.0	ug/l	J	8260B	11/20/14	5
Vinyl chloride	U	1.3	5.0	ug/l		8260B	11/20/14	5
o-Xylene	3.1	1.7	5.0	ug/l	J	8260B	11/20/14	5
m&p-Xylene	56.	3.6	10.	ug/l		8260B	11/20/14	5
Xylenes, Total	59.	5.3	15.	ug/l		8260B	11/20/14	5
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	102.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	93.4			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	7700	440	2000	ug/l		8015	11/21/14	20
C28-C40 Oil Range	4300	240	2000	ug/l		8015	11/21/14	20
Surrogate Recovery								
o-Terphenyl	140.			% Rec.		8015	11/21/14	20

U = ND (Not Detected)

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

MDL = Minimum Detection Limit = LOD = TRRP SDL

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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-82

Sample ID : NCL-31

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	110	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	2600000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	26.	0.25	2.0	ug/l		6020	11/19/14	1
Barium	21.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	380000	230	5000	ug/l		6020	11/19/14	5
Chromium	0.71	0.54	1.0	ug/l	JB	6020	11/19/14	1
Iron	950	50.	100	ug/l		6020	11/19/14	1
Lead	1.2	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	2000	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	430	37.	1000	ug/l	J	6020	11/19/14	1
Selenium	0.59	0.38	2.0	ug/l	J	6020	11/19/14	1
Sodium	150000	550	5000	ug/l		6020	11/19/14	5
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	2.0	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	8.7	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-82

Sample ID : NCL-31

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	0.78	0.37	1.0	ug/l	J	8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	0.41	0.35	1.0	ug/l	J	8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	99.2			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	107.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2000	110	500	ug/l		8015	11/21/14	5
C28-C40 Oil Range	570	59.	500	ug/l		8015	11/21/14	5
Surrogate Recovery								
o-Terphenyl	119.			% Rec.		8015	11/21/14	5

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-83

Sample ID : NCL-32

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	570	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	2000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	13.	0.25	2.0	ug/l		6020	11/19/14	1
Barium	200	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	440000	230	5000	ug/l		6020	11/19/14	5
Chromium	8.4	0.54	1.0	ug/l	B	6020	11/19/14	1
Iron	1400	50.	100	ug/l		6020	11/19/14	1
Lead	7.6	0.24	2.0	ug/l	B	6020	11/19/14	1
Manganese	470	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	19000	37.	1000	ug/l		6020	11/19/14	1
Selenium	0.44	0.38	2.0	ug/l	J	6020	11/19/14	1
Sodium	82000	110	1000	ug/l		6020	11/19/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-83

Sample ID : NCL-32

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	99.5			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	106.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2300	220	1000	ug/l		8015	11/21/14	10
C28-C40 Oil Range	1900	120	1000	ug/l		8015	11/21/14	10
Surrogate Recovery								
o-Terphenyl	121.			% Rec.		8015	11/21/14	10

U = ND (Not Detected)

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1-800-767-5859
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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-84

Sample ID : NCL-33

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 15:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	1.9	0.25	2.0	ug/l	J	6020	11/19/14	1
Barium	32.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	450000	230	5000	ug/l		6020	11/19/14	5
Chromium	1.1	0.54	1.0	ug/l	B	6020	11/20/14	1
Iron	3600	50.	100	ug/l		6020	11/19/14	1
Lead	1.2	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	110	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	5000	37.	1000	ug/l		6020	11/20/14	1
Selenium	0.67	0.38	2.0	ug/l	J	6020	11/19/14	1
Sodium	110000	550	5000	ug/l		6020	11/19/14	5
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	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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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : NCL-33
Collected By : SU/HMI Team
Collection Date : 11/12/14 15:45

ESC Sample # : L733743-84

Site ID : NCL

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	3700	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	1400	12.	100	ug/l		8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	115.			% Rec.		8015	11/21/14	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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-85

Sample ID : NCL-44

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	1500000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	42.	0.25	2.0	ug/l		6020	11/19/14	1
Barium	31.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	290000	230	5000	ug/l		6020	11/19/14	5
Chromium	1.6	0.54	1.0	ug/l	B	6020	11/20/14	1
Iron	1200	50.	100	ug/l		6020	11/19/14	1
Lead	0.64	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	680	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	2200	37.	1000	ug/l		6020	11/20/14	1
Selenium	0.65	0.38	2.0	ug/l	J	6020	11/19/14	1
Sodium	70000	110	1000	ug/l		6020	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	0.48	0.36	1.0	ug/l	J	8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	1.8	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-85

Sample ID : NCL-44

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	0.58	0.37	1.0	ug/l	J	8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	99.4			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	110.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	3900	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	1400	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	127.			% Rec.		8015	11/20/14	5

U = ND (Not Detected)

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

MDL = Minimum Detection Limit = LOD = TRRP SDL

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-86

Sample ID : NCL-49

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	4300	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	2600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	1.4	0.25	2.0	ug/l	J	6020	11/19/14	1
Barium	12.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	440000	230	5000	ug/l		6020	11/19/14	5
Chromium	0.72	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Lead	0.57	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	1.1	0.25	5.0	ug/l	J	6020	11/19/14	1
Potassium	720	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	3.2	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	120000	550	5000	ug/l		6020	11/19/14	5
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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MDL = Minimum Detection Limit = LOD = TRRP SDL

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-86

Sample ID : NCL-49

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	99.0			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	107.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	42.	22.	100	ug/l	J	8015	11/18/14	1
C28-C40 Oil Range	65.	12.	100	ug/l	J	8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	11/18/14	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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Mt. Juliet, TN 37122
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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-87

Sample ID : DUP-NCL-01

Site ID : NCL (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	4500	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	2600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	1.6	0.25	2.0	ug/l	J	6020	11/19/14	1
Barium	11.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	430000	230	5000	ug/l		6020	11/19/14	5
Chromium	0.86	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Lead	0.67	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	1.5	0.25	5.0	ug/l	J	6020	11/19/14	1
Potassium	750	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	2.6	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	120000	550	5000	ug/l		6020	11/19/14	5
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-87

Sample ID : DUP-NCL-01

Site ID : NCL (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	94.8			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	105.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	28.	22.	100	ug/l	J	8015	11/18/14	1
C28-C40 Oil Range	34.	12.	100	ug/l	J	8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	11/18/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-88

Sample ID : EB-NCL-01

Site ID : NCL (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	14000	2800	10000	ug/l	T4	2540 C-	11/19/14	1
Arsenic	0.40	0.25	2.0	ug/l	J	6020	11/19/14	1
Barium	3.5	0.36	5.0	ug/l	J	6020	11/19/14	1
Calcium	1800	46.	1000	ug/l		6020	11/20/14	1
Chromium	1.0	0.54	1.0	ug/l	B	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Lead	1.2	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	0.62	0.25	5.0	ug/l	J	6020	11/19/14	1
Potassium	110	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	2100	110	1000	ug/l		6020	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-88

Sample ID : EB-NCL-01

Site ID : NCL (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.1			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	640	110	500	ug/l		8015	11/21/14	5
C28-C40 Oil Range	130	59.	500	ug/l	J	8015	11/21/14	5
Surrogate Recovery								
o-Terphenyl	553.			% Rec.	J1	8015	11/21/14	5

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : TRIP BLANK-NCL-01

Collected By : SU/HMI Team
Collection Date : 11/12/14 00:00

ESC Sample # : L733743-89

Site ID : NCL (QA/QC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : TRIP BLANK-NCL-01
Collected By : SU/HMI Team
Collection Date : 11/12/14 00:00

ESC Sample # : L733743-89

Site ID : NCL (QA/QC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	99.6			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.6			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	103.			% Rec.		8260B	11/22/14	1

U = ND (Not Detected)

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

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1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-90

Sample ID : NCL-34A

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	1200000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	0.42	0.25	2.0	ug/l	J	6020	11/19/14	1
Barium	260	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	250000	230	5000	ug/l		6020	11/19/14	5
Chromium	0.78	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Lead	0.66	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	53.	0.25	5.0	ug/l		6020	11/19/14	1
Potassium	860	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	120000	550	5000	ug/l		6020	11/19/14	5
Volatile Organics								
Acetone	U	50.	250	ug/l		8260B	11/22/14	5
Benzene	270	1.6	5.0	ug/l		8260B	11/22/14	5
Bromodichloromethane	U	1.9	5.0	ug/l		8260B	11/22/14	5
Bromoform	U	2.3	5.0	ug/l		8260B	11/22/14	5
Bromomethane	U	4.3	25.	ug/l		8260B	11/22/14	5
n-Butylbenzene	6.6	1.8	5.0	ug/l		8260B	11/22/14	5
sec-Butylbenzene	17.	1.8	5.0	ug/l		8260B	11/22/14	5
Carbon disulfide	U	1.4	5.0	ug/l		8260B	11/22/14	5
Carbon tetrachloride	U	1.9	5.0	ug/l		8260B	11/22/14	5
Chlorobenzene	U	1.7	5.0	ug/l		8260B	11/22/14	5
Chlorodibromomethane	U	1.6	5.0	ug/l		8260B	11/22/14	5
Chloroethane	U	2.3	25.	ug/l		8260B	11/22/14	5
Chloroform	U	1.6	25.	ug/l		8260B	11/22/14	5
Chloromethane	U	1.4	13.	ug/l		8260B	11/22/14	5
1,2-Dibromoethane	U	1.9	5.0	ug/l		8260B	11/22/14	5
1,1-Dichloroethane	U	1.3	5.0	ug/l		8260B	11/22/14	5
1,2-Dichloroethane	U	1.8	5.0	ug/l		8260B	11/22/14	5
1,1-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/22/14	5
cis-1,2-Dichloroethene	U	1.3	5.0	ug/l		8260B	11/22/14	5
trans-1,2-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/22/14	5
1,2-Dichloropropane	U	1.5	5.0	ug/l		8260B	11/22/14	5
cis-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/22/14	5
trans-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/22/14	5
Ethylbenzene	4.8	1.9	5.0	ug/l	J	8260B	11/22/14	5
Isopropylbenzene	91.	1.6	5.0	ug/l		8260B	11/22/14	5
p-Isopropyltoluene	8.2	1.8	5.0	ug/l		8260B	11/22/14	5
2-Butanone (MEK)	U	20.	50.	ug/l		8260B	11/22/14	5

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: 01/23/15 14:45 Revised: 08/26/15 10:52



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-90

Sample ID : NCL-34A

Site ID : NCL

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	19.	50.	ug/l		8260B	11/22/14	5
Methylene Chloride	U	5.0	25.	ug/l		8260B	11/22/14	5
4-Methyl-2-pentanone (MIBK)	U	11.	50.	ug/l		8260B	11/22/14	5
Methyl tert-butyl ether	U	1.8	5.0	ug/l		8260B	11/22/14	5
Naphthalene	U	5.0	25.	ug/l		8260B	11/22/14	5
n-Propylbenzene	91.	1.7	5.0	ug/l		8260B	11/22/14	5
Styrene	U	1.5	5.0	ug/l		8260B	11/22/14	5
1,1,1,2-Tetrachloroethane	U	1.9	5.0	ug/l		8260B	11/22/14	5
1,1,2,2-Tetrachloroethane	U	0.65	5.0	ug/l		8260B	11/22/14	5
Tetrachloroethene	U	1.9	5.0	ug/l		8260B	11/22/14	5
Toluene	U	3.9	25.	ug/l		8260B	11/22/14	5
1,1,1-Trichloroethane	U	1.6	5.0	ug/l		8260B	11/22/14	5
1,1,2-Trichloroethane	U	1.9	5.0	ug/l		8260B	11/22/14	5
Trichloroethene	U	2.0	5.0	ug/l		8260B	11/22/14	5
1,2,4-Trimethylbenzene	110	1.9	5.0	ug/l		8260B	11/22/14	5
1,3,5-Trimethylbenzene	U	1.9	5.0	ug/l		8260B	11/22/14	5
Vinyl chloride	U	1.3	5.0	ug/l		8260B	11/22/14	5
o-Xylene	U	1.7	5.0	ug/l		8260B	11/22/14	5
m&p-Xylene	100	3.6	10.	ug/l		8260B	11/22/14	5
Xylenes, Total	100	5.3	15.	ug/l		8260B	11/22/14	5
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	94.5			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	103.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	5300	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	1100	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	123.			% Rec.		8015	11/18/14	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: 01/23/15 14:45 Revised: 08/26/15 10:52

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-66	WG755117	SAMP	C10-C28 Diesel Range	R3005510	J
	WG755208	SAMP	Chromium	R3005302	J
L733743-67	WG755119	SAMP	C10-C28 Diesel Range	R3005966	J
	WG755119	SAMP	C28-C40 Oil Range	R3005966	J
	WG755208	SAMP	Lead	R3005302	J
	WG754915	SAMP	Bromoform	R3005557	J5
	WG754915	SAMP	Carbon disulfide	R3005557	J3
	WG754915	SAMP	Chlorodibromomethane	R3005557	J5
	WG754915	SAMP	1,1-Dichloroethene	R3005557	J3
	WG754915	SAMP	Vinyl chloride	R3005557	J3
L733743-69	WG755208	SAMP	Selenium	R3005302	J
	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	p-Isopropyltoluene	R3005627	J
	WG755736	SAMP	Naphthalene	R3005627	J
	WG755736	SAMP	Toluene	R3005627	J
	WG755736	SAMP	1,3,5-Trimethylbenzene	R3005627	J
L733743-70	WG755208	SAMP	Chromium	R3005302	J
	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	Ethylbenzene	R3005627	J
	WG755736	SAMP	Toluene	R3005627	J
	WG755736	SAMP	1,2,4-Trimethylbenzene	R3005627	J
	WG755736	SAMP	Xylenes, Total	R3005627	J
L733743-71	WG754944	SAMP	TPH (GC/FID) Low Fraction	R3005681	J
	WG755208	SAMP	Selenium	R3005302	J
	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	n-Butylbenzene	R3005627	J
	WG755736	SAMP	sec-Butylbenzene	R3005627	J
	WG755736	SAMP	Ethylbenzene	R3005627	J
	WG755736	SAMP	p-Isopropyltoluene	R3005627	J
	WG755736	SAMP	Naphthalene	R3005627	J
L733743-72	WG755736	SAMP	Toluene	R3005627	J
	WG755208	SAMP	Arsenic	R3005302	J
	WG755208	SAMP	Iron	R3005302	J
	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	Ethylbenzene	R3005627	J
	WG755736	SAMP	p-Isopropyltoluene	R3005627	J
	WG755736	SAMP	Naphthalene	R3005627	J
	WG755736	SAMP	Toluene	R3005627	J
L733743-73	WG755209	SAMP	Calcium	R3005553	01V
	WG755209	SAMP	Chromium	R3005553	B
	WG755209	SAMP	Iron	R3005553	J
	WG755209	SAMP	Lead	R3005553	B
	WG755209	SAMP	Potassium	R3005553	J
	WG755209	SAMP	Sodium	R3005553	01V
	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	sec-Butylbenzene	R3005627	J
L733743-74	WG755736	SAMP	Ethylbenzene	R3005627	J
	WG755209	SAMP	Chromium	R3005553	B
	WG755209	SAMP	Lead	R3005553	B
	WG755209	SAMP	Potassium	R3005553	J
	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	sec-Butylbenzene	R3005627	J
	WG755736	SAMP	Ethylbenzene	R3005627	J
L733743-75	WG755118	SAMP	C10-C28 Diesel Range	R3005752	J
	WG755118	SAMP	C28-C40 Oil Range	R3005752	J
	WG755463	SAMP	Chloride	R3005534	J
	WG755463	SAMP	Sulfate	R3005534	J
	WG756114	SAMP	Dissolved Solids	R3006022	QT4
	WG755209	SAMP	Barium	R3005553	J
	WG755209	SAMP	Calcium	R3005553	J
	WG755209	SAMP	Chromium	R3005553	JB
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Sodium	R3005553	J
	WG754915	SAMP	Methylene Chloride	R3005557	J
L733743-77	WG755118	SAMP	C28-C40 Oil Range	R3005752	J
	WG755209	SAMP	Chromium	R3005553	B
	WG755209	SAMP	Lead	R3005553	B
	WG755209	SAMP	Selenium	R3005553	J
	WG755209	SAMP	Vanadium	R3005553	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-78	WG755209	SAMP	Chromium	R3005553	JB
	WG755209	SAMP	Iron	R3005553	J
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Potassium	R3005553	J
	WG755260	SAMP	Nitrate-Nitrite	R3005196	J3
	WG754915	SAMP	sec-Butylbenzene	R3005557	J
L733743-79	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
	WG755209	SAMP	Chromium	R3005553	B
	WG755209	SAMP	Iron	R3005553	J
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Potassium	R3005553	J
	WG755260	SAMP	Nitrate-Nitrite	R3005196	J6
L733743-80	WG754915	SAMP	Methyl tert-butyl ether	R3005557	J
	WG755118	SAMP	C28-C40 Oil Range	R3005752	J
	WG755209	SAMP	Chromium	R3005553	JB
	WG755209	SAMP	Iron	R3005553	J
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Chromium	R3005553	B
L733743-81	WG755209	SAMP	Lead	R3005553	B
	WG755209	SAMP	Selenium	R3005553	J
	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	n-Butylbenzene	R3005627	J
	WG755736	SAMP	p-Isopropyltoluene	R3005627	J
	WG755736	SAMP	Naphthalene	R3005627	J
	WG755736	SAMP	Toluene	R3005627	J
	WG755736	SAMP	1,3,5-Trimethylbenzene	R3005627	J
	WG755736	SAMP	o-Xylene	R3005627	J
	WG755209	SAMP	Chromium	R3005553	JB
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Potassium	R3005553	J
L733743-82	WG755209	SAMP	Selenium	R3005553	J
	WG754915	SAMP	Methyl tert-butyl ether	R3005557	J
	WG754915	SAMP	n-Propylbenzene	R3005557	J
	WG755209	SAMP	Chromium	R3005553	B
	WG755209	SAMP	Lead	R3005553	B
	WG755209	SAMP	Selenium	R3005553	J
L733743-83	WG754915	SAMP	Methyl tert-butyl ether	R3005557	J
	WG755209	SAMP	Chromium	R3005553	B
	WG755209	SAMP	Lead	R3005553	B
	WG755209	SAMP	Selenium	R3005553	J
	WG755209	SAMP	Arsenic	R3005553	J
	WG755209	SAMP	Chromium	R3005672	B
L733743-84	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Selenium	R3005553	J
	WG755209	SAMP	Chromium	R3005672	B
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Selenium	R3005553	J
	WG755209	SAMP	Chromium	R3005672	B
L733743-85	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Selenium	R3005553	J
	WG754915	SAMP	sec-Butylbenzene	R3005557	J
	WG754915	SAMP	Methyl tert-butyl ether	R3005557	J
	WG755121	SAMP	C10-C28 Diesel Range	R3005267	J
	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
L733743-86	WG755209	SAMP	Arsenic	R3005553	J
	WG755209	SAMP	Chromium	R3005672	JB
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Manganese	R3005553	J
	WG755209	SAMP	Potassium	R3005672	J
	WG755121	SAMP	C10-C28 Diesel Range	R3005267	J
	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
	WG755209	SAMP	Arsenic	R3005553	J
	WG755209	SAMP	Chromium	R3005672	JB
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Manganese	R3005553	J
	WG755209	SAMP	Potassium	R3005672	J
L733743-87	WG755121	SAMP	C10-C28 Diesel Range	R3005267	J
	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
	WG755209	SAMP	Arsenic	R3005553	J
	WG755209	SAMP	Chromium	R3005672	JB
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Manganese	R3005553	J
L733743-88	WG755209	SAMP	Potassium	R3005672	J
	WG755118	SAMP	C28-C40 Oil Range	R3005752	J
	WG755118	SAMP	o-Terphenyl	R3005752	J1
	WG755139	SAMP	Dissolved Solids	R3005403	T4
	WG755209	SAMP	Arsenic	R3005553	J
	WG755209	SAMP	Barium	R3005553	J
	WG755209	SAMP	Chromium	R3005672	B
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Manganese	R3005553	J
	WG755209	SAMP	Potassium	R3005672	J
	WG755209	SAMP	Arsenic	R3005553	J
	WG755209	SAMP	Chromium	R3005672	JB
L733743-90	WG755209	SAMP	Chromium	R3005672	JB

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Potassium	R3005672	J
	WG754916	SAMP	Ethylbenzene	R3006052	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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
01	(ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
Q	(ESC) Sample held beyond the accepted holding time.
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.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : KWB-1A
Collected By : SU/HMI Team
Collection Date : 11/12/14 16:25

ESC Sample # : L733743-91

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	1400	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	4500000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	3.5	0.25	2.0	ug/l		6020	11/19/14	1
Barium	8.7	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	590000	920	20000	ug/l		6020	11/19/14	20
Chromium	0.69	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Lead	0.29	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	420	0.25	5.0	ug/l		6020	11/19/14	1
Nickel	8.2	0.35	2.0	ug/l		6020	11/19/14	1
Potassium	990	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	0.76	0.38	2.0	ug/l	J	6020	11/19/14	1
Sodium	220000	550	5000	ug/l		6020	11/19/14	5
Vanadium	37.	0.18	5.0	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-91

Sample ID : KWB-1A

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 16:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	93.6			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	150	110	500	ug/l	J	8015	11/21/14	5
C28-C40 Oil Range	U	59.	500	ug/l		8015	11/21/14	5
Surrogate Recovery								
o-Terphenyl	115.			% Rec.		8015	11/21/14	5

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : KWB-7
Collected By : SU/HMI Team
Collection Date : 11/12/14 15:15

ESC Sample # : L733743-92

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	2800000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	20.	0.25	2.0	ug/l		6020	11/19/14	1
Barium	79.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	360000	230	5000	ug/l		6020	11/19/14	5
Chromium	0.82	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	810	50.	100	ug/l		6020	11/19/14	1
Lead	1.5	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	4900	0.25	5.0	ug/l		6020	11/19/14	1
Nickel	37.	0.35	2.0	ug/l		6020	11/19/14	1
Potassium	260	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	0.64	0.38	2.0	ug/l	J	6020	11/19/14	1
Sodium	280000	550	5000	ug/l		6020	11/19/14	5
Vanadium	1.2	0.18	5.0	ug/l	J	6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/22/14	10
Benzene	77.	3.3	10.	ug/l		8260B	11/22/14	10
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/22/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/22/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/22/14	10
n-Butylbenzene	3.7	3.6	10.	ug/l	J	8260B	11/22/14	10
sec-Butylbenzene	10.	3.6	10.	ug/l	J	8260B	11/22/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/22/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/22/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/22/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/22/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/22/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/22/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/22/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/22/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/22/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/22/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/22/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/22/14	10

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-92

Sample ID : KWB-7

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 15:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/22/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/22/14	10
Ethylbenzene	73.	3.8	10.	ug/l		8260B	11/22/14	10
Isopropylbenzene	42.	3.3	10.	ug/l		8260B	11/22/14	10
p-Isopropyltoluene	6.6	3.5	10.	ug/l	J	8260B	11/22/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/22/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/22/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/22/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/22/14	10
Methyl tert-butyl ether	13.	3.7	10.	ug/l		8260B	11/22/14	10
Naphthalene	30.	10.	50.	ug/l	J	8260B	11/22/14	10
n-Propylbenzene	48.	3.5	10.	ug/l		8260B	11/22/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/22/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/22/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/22/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/22/14	10
Toluene	U	7.8	50.	ug/l		8260B	11/22/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/22/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/22/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
1,2,4-Trimethylbenzene	210	3.7	10.	ug/l		8260B	11/22/14	10
1,3,5-Trimethylbenzene	8.5	3.9	10.	ug/l	J	8260B	11/22/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/22/14	10
o-Xylene	15.	3.4	10.	ug/l		8260B	11/22/14	10
m&p-Xylene	36.	7.2	20.	ug/l		8260B	11/22/14	10
Xylenes, Total	51.	11.	30.	ug/l		8260B	11/22/14	10
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	92.4			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	101.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	1000	110	500	ug/l		8015	11/21/14	5
C28-C40 Oil Range	82.	59.	500	ug/l	J	8015	11/21/14	5
Surrogate Recovery								
o-Terphenyl	108.			% Rec.		8015	11/21/14	5

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-93

Sample ID : KWB-11A

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	47000	200	1000	ug/l		353.2	11/19/14	10
Dissolved Solids	4700000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	2.0	0.25	2.0	ug/l		6020	11/19/14	1
Barium	28.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	720000	920	20000	ug/l		6020	11/19/14	20
Chromium	0.76	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/19/14	1
Lead	6.1	0.24	2.0	ug/l	B	6020	11/19/14	1
Manganese	160	0.25	5.0	ug/l		6020	11/19/14	1
Nickel	3.9	0.35	2.0	ug/l		6020	11/19/14	1
Potassium	790	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	7.9	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	400000	550	5000	ug/l		6020	11/19/14	5
Vanadium	13.	0.18	5.0	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	7.8	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	0.94	0.36	1.0	ug/l	J	8260B	11/22/14	1
sec-Butylbenzene	2.7	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-93

Sample ID : KWB-11A

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	2.9	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	0.62	0.35	1.0	ug/l	J	8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	1.2	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	15.	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	52.	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	1.3	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	0.76	0.34	1.0	ug/l	J	8260B	11/22/14	1
m&p-Xylene	1.7	0.72	2.0	ug/l	J	8260B	11/22/14	1
Xylenes, Total	2.5	1.1	3.0	ug/l	J	8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.5			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	103.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	710	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	50.	12.	100	ug/l	J	8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/18/14	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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : KWB-11B
Collected By : SU/HMI Team
Collection Date : 11/13/14 09:05

ESC Sample # : L733743-94

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	2400	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	1.1	0.25	2.0	ug/l	J	6020	11/19/14	1
Barium	13.	0.36	5.0	ug/l		6020	11/19/14	1
Calcium	450000	230	5000	ug/l		6020	11/19/14	5
Chromium	U	2.7	5.0	ug/l		6020	11/19/14	5
Iron	U	50.	100	ug/l		6020	11/19/14	1
Lead	0.90	0.24	2.0	ug/l	JB	6020	11/19/14	1
Manganese	3.0	0.25	5.0	ug/l	J	6020	11/19/14	1
Nickel	U	0.35	2.0	ug/l		6020	11/19/14	1
Potassium	2200	37.	1000	ug/l		6020	11/20/14	1
Selenium	7.3	0.38	2.0	ug/l		6020	11/19/14	1
Sodium	86000	110	1000	ug/l		6020	11/20/14	1
Vanadium	8.1	0.18	5.0	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	115.			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-94

Sample ID : KWB-11B

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.9			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	38.	12.	100	ug/l	J	8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	116.			% Rec.		8015	11/18/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : KWB-12A

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:05

ESC Sample # : L733743-95

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	4300	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	3400000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	1.4	0.25	2.0	ug/l	J	6020	11/20/14	1
Barium	17.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	590000	920	20000	ug/l		6020	11/21/14	20
Chromium	0.86	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/20/14	1
Manganese	1.1	0.25	5.0	ug/l	J	6020	11/20/14	1
Nickel	0.74	0.35	2.0	ug/l	J	6020	11/20/14	1
Potassium	890	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	5.2	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	140000	2200	20000	ug/l		6020	11/21/14	20
Vanadium	13.	0.18	5.0	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	115.			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-95

Sample ID : KWB-12A

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	99.6			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	94.0			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	18.	12.	100	ug/l	J	8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	115.			% Rec.		8015	11/18/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-96

Sample ID : KWB-12B

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	4500	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	3600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	1.5	0.25	2.0	ug/l	J	6020	11/20/14	1
Barium	13.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	650000	920	20000	ug/l		6020	11/21/14	20
Chromium	0.86	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/20/14	1
Manganese	2.7	0.25	5.0	ug/l	J	6020	11/20/14	1
Nickel	0.71	0.35	2.0	ug/l	J	6020	11/20/14	1
Potassium	720	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	4.2	0.38	2.0	ug/l		6020	11/20/14	1
Sodium	170000	2200	20000	ug/l		6020	11/21/14	20
Vanadium	13.	0.18	5.0	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	115.			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-96

Sample ID : KWB-12B

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	99.3			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	93.9			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/18/14	1

U = ND (Not Detected)

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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-97

Sample ID : MW-23

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	4000000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	22.	0.25	2.0	ug/l		6020	11/20/14	1
Barium	100	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	260000	460	10000	ug/l		6020	11/21/14	10
Chromium	1.4	0.54	1.0	ug/l	B	6020	11/21/14	1
Iron	59.	50.	100	ug/l	J	6020	11/20/14	1
Lead	0.75	0.24	2.0	ug/l	J	6020	11/20/14	1
Manganese	210	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	1300	37.	1000	ug/l		6020	11/20/14	1
Selenium	2.0	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	740000	1100	10000	ug/l		6020	11/21/14	10
TPH (GC/FID) Low Fraction	39000	3100	10000	ug/l		8015D/G	11/20/14	100
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	115.			% Rec.		8015D/G	11/20/14	100
Volatile Organics								
Acetone	U	500	2500	ug/l		8260B	11/22/14	50
Benzene	15000	160	500	ug/l		8260B	11/23/14	500
Bromodichloromethane	U	19.	50.	ug/l		8260B	11/22/14	50
Bromoform	U	23.	50.	ug/l		8260B	11/22/14	50
Bromomethane	U	43.	250	ug/l		8260B	11/22/14	50
n-Butylbenzene	U	18.	50.	ug/l		8260B	11/22/14	50
sec-Butylbenzene	U	18.	50.	ug/l		8260B	11/22/14	50
Carbon disulfide	U	14.	50.	ug/l		8260B	11/22/14	50
Carbon tetrachloride	U	19.	50.	ug/l		8260B	11/22/14	50
Chlorobenzene	U	17.	50.	ug/l		8260B	11/22/14	50
Chlorodibromomethane	U	16.	50.	ug/l		8260B	11/22/14	50
Chloroethane	U	23.	250	ug/l		8260B	11/22/14	50
Chloroform	U	16.	250	ug/l		8260B	11/22/14	50
Chloromethane	U	14.	130	ug/l		8260B	11/22/14	50
1,2-Dibromoethane	U	19.	50.	ug/l		8260B	11/22/14	50
1,1-Dichloroethane	U	13.	50.	ug/l		8260B	11/22/14	50
1,2-Dichloroethane	U	18.	50.	ug/l		8260B	11/22/14	50
1,1-Dichloroethene	U	20.	50.	ug/l		8260B	11/22/14	50
cis-1,2-Dichloroethene	U	13.	50.	ug/l		8260B	11/22/14	50
trans-1,2-Dichloroethene	U	20.	50.	ug/l		8260B	11/22/14	50
1,2-Dichloropropane	U	15.	50.	ug/l		8260B	11/22/14	50
cis-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/22/14	50
trans-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/22/14	50

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-97

Sample ID : MW-23

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	190	19.	50.	ug/l		8260B	11/22/14	50
Isopropylbenzene	48.	16.	50.	ug/l	J	8260B	11/22/14	50
p-Isopropyltoluene	U	18.	50.	ug/l		8260B	11/22/14	50
2-Butanone (MEK)	U	200	500	ug/l		8260B	11/22/14	50
2-Hexanone	U	190	500	ug/l		8260B	11/22/14	50
Methylene Chloride	U	50.	250	ug/l		8260B	11/22/14	50
4-Methyl-2-pentanone (MIBK)	U	110	500	ug/l		8260B	11/22/14	50
Methyl tert-butyl ether	19.	18.	50.	ug/l	J	8260B	11/22/14	50
Naphthalene	120	50.	250	ug/l	J	8260B	11/22/14	50
n-Propylbenzene	68.	17.	50.	ug/l		8260B	11/22/14	50
Styrene	U	15.	50.	ug/l		8260B	11/22/14	50
1,1,1,2-Tetrachloroethane	U	19.	50.	ug/l		8260B	11/22/14	50
1,1,2,2-Tetrachloroethane	U	6.5	50.	ug/l		8260B	11/22/14	50
Tetrachloroethene	U	19.	50.	ug/l		8260B	11/22/14	50
Toluene	520	39.	250	ug/l		8260B	11/22/14	50
1,1,1-Trichloroethane	U	16.	50.	ug/l		8260B	11/22/14	50
1,1,2-Trichloroethane	U	19.	50.	ug/l		8260B	11/22/14	50
Trichloroethene	U	20.	50.	ug/l		8260B	11/22/14	50
1,2,4-Trimethylbenzene	370	19.	50.	ug/l		8260B	11/22/14	50
1,3,5-Trimethylbenzene	69.	19.	50.	ug/l		8260B	11/22/14	50
Vinyl chloride	U	13.	50.	ug/l		8260B	11/22/14	50
o-Xylene	170	17.	50.	ug/l		8260B	11/22/14	50
m&p-Xylene	900	36.	100	ug/l		8260B	11/22/14	50
Xylenes, Total	1100	53.	150	ug/l		8260B	11/22/14	50
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.5			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	6000	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	670	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	109.			% Rec.		8015	11/18/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-98

Sample ID : MW-28

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 16:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	3000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	6.7	0.25	2.0	ug/l		6020	11/20/14	1
Barium	100	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	590000	920	20000	ug/l		6020	11/21/14	20
Chromium	1.7	0.54	1.0	ug/l	B	6020	11/20/14	1
Iron	73.	50.	100	ug/l	J	6020	11/20/14	1
Lead	4.5	0.24	2.0	ug/l		6020	11/20/14	1
Manganese	100	0.25	5.0	ug/l		6020	11/20/14	1
Nickel	5.6	0.35	2.0	ug/l		6020	11/20/14	1
Potassium	920	37.	1000	ug/l	J	6020	11/20/14	1
Selenium	2.0	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	96000	110	1000	ug/l		6020	11/20/14	1
Vanadium	9.9	0.18	5.0	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	16000	310	1000	ug/l		8015D/G	11/20/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	122.			% Rec.		8015D/G	11/20/14	10
Volatile Organics								
Acetone	560	250	1300	ug/l	J	8260B	11/22/14	25
Benzene	3300	8.3	25.	ug/l		8260B	11/22/14	25
Bromodichloromethane	U	9.5	25.	ug/l		8260B	11/22/14	25
Bromoform	U	12.	25.	ug/l		8260B	11/22/14	25
Bromomethane	U	22.	130	ug/l		8260B	11/22/14	25
n-Butylbenzene	U	9.0	25.	ug/l		8260B	11/22/14	25
sec-Butylbenzene	11.	9.1	25.	ug/l	J	8260B	11/22/14	25
Carbon disulfide	U	6.9	25.	ug/l		8260B	11/22/14	25
Carbon tetrachloride	U	9.5	25.	ug/l		8260B	11/22/14	25
Chlorobenzene	U	8.7	25.	ug/l		8260B	11/22/14	25
Chlorodibromomethane	U	8.2	25.	ug/l		8260B	11/22/14	25
Chloroethane	U	11.	130	ug/l		8260B	11/22/14	25
Chloroform	U	8.1	130	ug/l		8260B	11/22/14	25
Chloromethane	U	6.9	63.	ug/l		8260B	11/22/14	25
1,2-Dibromoethane	U	9.5	25.	ug/l		8260B	11/22/14	25
1,1-Dichloroethane	U	6.5	25.	ug/l		8260B	11/22/14	25
1,2-Dichloroethane	U	9.0	25.	ug/l		8260B	11/22/14	25

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-98

Sample ID : MW-28

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 16:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	10.	25.	ug/l		8260B	11/22/14	25
cis-1,2-Dichloroethene	U	6.5	25.	ug/l		8260B	11/22/14	25
trans-1,2-Dichloroethene	U	9.9	25.	ug/l		8260B	11/22/14	25
1,2-Dichloropropane	U	7.6	25.	ug/l		8260B	11/22/14	25
cis-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/22/14	25
trans-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/22/14	25
Ethylbenzene	150	9.6	25.	ug/l		8260B	11/22/14	25
Isopropylbenzene	66.	8.2	25.	ug/l		8260B	11/22/14	25
p-Isopropyltoluene	U	8.8	25.	ug/l		8260B	11/22/14	25
2-Butanone (MEK)	U	98.	250	ug/l		8260B	11/22/14	25
2-Hexanone	U	96.	250	ug/l		8260B	11/22/14	25
Methylene Chloride	U	25.	130	ug/l		8260B	11/22/14	25
4-Methyl-2-pentanone (MIBK)	U	54.	250	ug/l		8260B	11/22/14	25
Methyl tert-butyl ether	2000	9.2	25.	ug/l		8260B	11/22/14	25
Naphthalene	60.	25.	130	ug/l	J	8260B	11/22/14	25
n-Propylbenzene	81.	8.7	25.	ug/l		8260B	11/22/14	25
Styrene	U	7.7	25.	ug/l		8260B	11/22/14	25
1,1,1,2-Tetrachloroethane	U	9.6	25.	ug/l		8260B	11/22/14	25
1,1,2,2-Tetrachloroethane	U	3.2	25.	ug/l		8260B	11/22/14	25
Tetrachloroethene	U	9.3	25.	ug/l		8260B	11/22/14	25
Toluene	54.	20.	130	ug/l	J	8260B	11/22/14	25
1,1,1-Trichloroethane	U	8.0	25.	ug/l		8260B	11/22/14	25
1,1,2-Trichloroethane	U	9.6	25.	ug/l		8260B	11/22/14	25
Trichloroethene	U	10.	25.	ug/l		8260B	11/22/14	25
1,2,4-Trimethylbenzene	120	9.3	25.	ug/l		8260B	11/22/14	25
1,3,5-Trimethylbenzene	11.	9.7	25.	ug/l	J	8260B	11/22/14	25
Vinyl chloride	U	6.5	25.	ug/l		8260B	11/22/14	25
o-Xylene	U	8.5	25.	ug/l		8260B	11/22/14	25
m&p-Xylene	220	18.	50.	ug/l		8260B	11/22/14	25
Xylenes, Total	220	26.	75.	ug/l		8260B	11/22/14	25
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	94.9			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	104.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	3700	220	1000	ug/l		8015	11/21/14	10
C28-C40 Oil Range	U	120	1000	ug/l		8015	11/21/14	10
Surrogate Recovery								
o-Terphenyl	81.5			% Rec.		8015	11/21/14	10

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-29
Collected By : SU/HMI Team
Collection Date : 11/13/14 10:55

ESC Sample # : L733743-99

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l	J6	353.2	11/19/14	1
Dissolved Solids	4100000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	0.93	0.25	2.0	ug/l	J	6020	11/20/14	1
Barium	20.	0.36	5.0	ug/l		6020	11/20/14	1
Calcium	570000	920	20000	ug/l		6020	11/21/14	20
Chromium	0.62	0.54	1.0	ug/l	JB	6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/20/14	1
Lead	0.37	0.24	2.0	ug/l	J	6020	11/20/14	1
Manganese	470	0.25	5.0	ug/l		6020	11/20/14	1
Potassium	4600	37.	1000	ug/l		6020	11/20/14	1
Selenium	0.63	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	300000	2200	20000	ug/l		6020	11/21/14	20
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.4			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l	J3	8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	0.73	0.36	1.0	ug/l	J	8260B	11/22/14	1
Carbon disulfide	0.30	0.28	1.0	ug/l	J	8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-99

Sample ID : MW-29

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	2.0	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	2.2	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	94.3			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	1200	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	180	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	124.			% Rec.		8015	11/18/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-100

Sample ID : MW-43

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	2.5	1.8	5.0	ug/l	J	9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/19/14	1
Dissolved Solids	2300000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	9.0	0.25	2.0	ug/l		6020	11/25/14	1
Barium	420	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	200000	460	10000	ug/l	V	6020	12/02/14	10
Chromium	1.3	0.54	1.0	ug/l		6020	11/25/14	1
Iron	U	50.	100	ug/l		6020	11/25/14	1
Lead	1.8	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	370	0.25	5.0	ug/l		6020	11/25/14	1
Nickel	5.9	0.35	2.0	ug/l		6020	11/25/14	1
Potassium	610	37.	1000	ug/l	J	6020	11/25/14	1
Selenium	22.	0.38	2.0	ug/l	01J6	6020	11/25/14	1
Sodium	590000	1100	10000	ug/l	V	6020	12/02/14	10
Vanadium	0.62	0.18	5.0	ug/l	J	6020	11/25/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	4800	310	1000	ug/l		8015D/G	11/20/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	116.			% Rec.		8015D/G	11/20/14	10
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/22/14	10
Benzene	1100	3.3	10.	ug/l		8260B	11/22/14	10
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/22/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/22/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/22/14	10
n-Butylbenzene	U	3.6	10.	ug/l		8260B	11/22/14	10
sec-Butylbenzene	7.8	3.6	10.	ug/l	J	8260B	11/22/14	10
Carbon disulfide	3.7	2.8	10.	ug/l	J	8260B	11/22/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/22/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/22/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/22/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/22/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/22/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/22/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/22/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/22/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/22/14	10

U = ND (Not Detected)

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-100

Sample ID : MW-43

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/22/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/22/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/22/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/22/14	10
Ethylbenzene	21.	3.8	10.	ug/l		8260B	11/22/14	10
Isopropylbenzene	50.	3.3	10.	ug/l		8260B	11/22/14	10
p-Isopropyltoluene	U	3.5	10.	ug/l		8260B	11/22/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/22/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/22/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/22/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/22/14	10
Methyl tert-butyl ether	11.	3.7	10.	ug/l		8260B	11/22/14	10
Naphthalene	U	10.	50.	ug/l		8260B	11/22/14	10
n-Propylbenzene	46.	3.5	10.	ug/l		8260B	11/22/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/22/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/22/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/22/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/22/14	10
Toluene	30.	7.8	50.	ug/l	J	8260B	11/22/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/22/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/22/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
1,2,4-Trimethylbenzene	27.	3.7	10.	ug/l		8260B	11/22/14	10
1,3,5-Trimethylbenzene	U	3.9	10.	ug/l		8260B	11/22/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/22/14	10
o-Xylene	12.	3.4	10.	ug/l		8260B	11/22/14	10
m&p-Xylene	160	7.2	20.	ug/l		8260B	11/22/14	10
Xylenes, Total	170	11.	30.	ug/l		8260B	11/22/14	10
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.9			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	7400	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	920	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/19/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-101

Sample ID : MW-50

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 17:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2800000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	4.2	0.25	2.0	ug/l		6020	11/25/14	1
Barium	24.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	450000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.60	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	3700	50.	100	ug/l		6020	11/25/14	1
Lead	1.0	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	1500	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	2300	37.	1000	ug/l		6020	11/25/14	1
Selenium	0.40	0.38	2.0	ug/l	J	6020	11/25/14	1
Sodium	160000	1100	10000	ug/l		6020	12/02/14	10
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	1.1	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	0.31	0.28	1.0	ug/l	J	8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	0.86	0.35	1.0	ug/l	J	8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
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Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-101

Sample ID : MW-50

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 17:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	94.5			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	360	110	500	ug/l	J	8015	11/20/14	5
C28-C40 Oil Range	U	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	110.			% Rec.		8015	11/20/14	5

U = ND (Not Detected)

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

MDL = Minimum Detection Limit = LOD = TRRP SDL

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Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-102

Sample ID : MW-52

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	1900	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	3.3	0.25	2.0	ug/l		6020	11/25/14	1
Barium	9.7	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	190000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.57	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	U	50.	100	ug/l		6020	11/25/14	1
Lead	0.76	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	60.	0.25	5.0	ug/l		6020	11/25/14	1
Nickel	6.7	0.35	2.0	ug/l		6020	11/25/14	1
Potassium	300	37.	1000	ug/l	J	6020	11/25/14	1
Selenium	2.0	0.38	2.0	ug/l		6020	11/25/14	1
Sodium	320000	1100	10000	ug/l		6020	12/02/14	10
Vanadium	25.	0.18	5.0	ug/l		6020	11/25/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	32.	31.	100	ug/l	J	8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	114.			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	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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1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-102

Sample ID : MW-52

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.5			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	280	110	500	ug/l	J	8015	11/20/14	5
C28-C40 Oil Range	U	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/20/14	5

U = ND (Not Detected)

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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-103

Sample ID : MW-57

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	2700	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	4100000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	5.5	0.25	2.0	ug/l		6020	11/25/14	1
Barium	52.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	570000	460	10000	ug/l		6020	12/02/14	10
Chromium	1.5	0.54	1.0	ug/l		6020	11/25/14	1
Iron	1000	50.	100	ug/l		6020	11/25/14	1
Lead	1.9	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	1300	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	1200	37.	1000	ug/l		6020	11/25/14	1
Selenium	8.8	0.38	2.0	ug/l		6020	11/25/14	1
Sodium	440000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	47.	31.	100	ug/l	J	8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	114.			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	6.0	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-103

Sample ID : MW-57

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	99.8			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.4			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	105.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	260	110	500	ug/l	J	8015	11/20/14	5
C28-C40 Oil Range	U	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	116.			% Rec.		8015	11/20/14	5

U = ND (Not Detected)

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MDL = Minimum Detection Limit = LOD = TRRP SDL

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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-104

Sample ID : MW-60

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 08:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3400000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	2.6	0.25	2.0	ug/l		6020	11/25/14	1
Barium	17.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	530000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.65	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	65.	50.	100	ug/l	J	6020	11/25/14	1
Lead	0.46	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	380	0.25	5.0	ug/l		6020	11/25/14	1
Nickel	1.6	0.35	2.0	ug/l	J	6020	11/25/14	1
Potassium	630	37.	1000	ug/l	J	6020	11/25/14	1
Selenium	14.	0.38	2.0	ug/l		6020	11/25/14	1
Sodium	240000	1100	10000	ug/l		6020	12/02/14	10
Vanadium	0.29	0.18	5.0	ug/l	J	6020	11/25/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	540	160	500	ug/l		8015D/G	11/20/14	5
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	116.			% Rec.		8015D/G	11/20/14	5
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	3.2	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	2.3	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	0.41	0.28	1.0	ug/l	J	8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	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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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-104

Sample ID : MW-60

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 08:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	13.	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	0.92	0.35	1.0	ug/l	J	8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.1			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	101.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	630	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	21.	12.	100	ug/l	J	8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/18/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-105

Sample ID : MW-61

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2700000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	2.0	0.25	2.0	ug/l		6020	11/25/14	1
Barium	53.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	470000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.81	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	U	50.	100	ug/l		6020	11/25/14	1
Lead	1.2	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	4.4	0.25	5.0	ug/l	J	6020	11/25/14	1
Potassium	1100	37.	1000	ug/l		6020	11/25/14	1
Selenium	8.7	0.38	2.0	ug/l		6020	11/25/14	1
Sodium	290000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	11000	3100	10000	ug/l		8015D/G	11/20/14	100
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	115.			% Rec.		8015D/G	11/20/14	100
Volatile Organics								
Acetone	U	500	2500	ug/l		8260B	11/22/14	50
Benzene	1300	16.	50.	ug/l		8260B	11/22/14	50
Bromodichloromethane	U	19.	50.	ug/l		8260B	11/22/14	50
Bromoform	U	23.	50.	ug/l		8260B	11/22/14	50
Bromomethane	U	43.	250	ug/l		8260B	11/22/14	50
n-Butylbenzene	U	18.	50.	ug/l		8260B	11/22/14	50
sec-Butylbenzene	U	18.	50.	ug/l		8260B	11/22/14	50
Carbon disulfide	U	14.	50.	ug/l		8260B	11/22/14	50
Carbon tetrachloride	U	19.	50.	ug/l		8260B	11/22/14	50
Chlorobenzene	U	17.	50.	ug/l		8260B	11/22/14	50
Chlorodibromomethane	U	16.	50.	ug/l		8260B	11/22/14	50
Chloroethane	U	23.	250	ug/l		8260B	11/22/14	50
Chloroform	U	16.	250	ug/l		8260B	11/22/14	50
Chloromethane	U	14.	130	ug/l		8260B	11/22/14	50
1,2-Dibromoethane	U	19.	50.	ug/l		8260B	11/22/14	50
1,1-Dichloroethane	U	13.	50.	ug/l		8260B	11/22/14	50
1,2-Dichloroethane	U	18.	50.	ug/l		8260B	11/22/14	50
1,1-Dichloroethene	U	20.	50.	ug/l		8260B	11/22/14	50
cis-1,2-Dichloroethene	U	13.	50.	ug/l		8260B	11/22/14	50
trans-1,2-Dichloroethene	U	20.	50.	ug/l		8260B	11/22/14	50
1,2-Dichloropropane	U	15.	50.	ug/l		8260B	11/22/14	50
cis-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/22/14	50
trans-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/22/14	50

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-105

Sample ID : MW-61

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	160	19.	50.	ug/l		8260B	11/22/14	50
Isopropylbenzene	110	16.	50.	ug/l		8260B	11/22/14	50
p-Isopropyltoluene	U	18.	50.	ug/l		8260B	11/22/14	50
2-Butanone (MEK)	U	200	500	ug/l		8260B	11/22/14	50
2-Hexanone	U	190	500	ug/l		8260B	11/22/14	50
Methylene Chloride	U	50.	250	ug/l		8260B	11/22/14	50
4-Methyl-2-pentanone (MIBK)	U	110	500	ug/l		8260B	11/22/14	50
Methyl tert-butyl ether	U	18.	50.	ug/l		8260B	11/22/14	50
Naphthalene	140	50.	250	ug/l	J	8260B	11/22/14	50
n-Propylbenzene	160	17.	50.	ug/l		8260B	11/22/14	50
Styrene	U	15.	50.	ug/l		8260B	11/22/14	50
1,1,1,2-Tetrachloroethane	U	19.	50.	ug/l		8260B	11/22/14	50
1,1,2,2-Tetrachloroethane	U	6.5	50.	ug/l		8260B	11/22/14	50
Tetrachloroethene	U	19.	50.	ug/l		8260B	11/22/14	50
Toluene	U	39.	250	ug/l		8260B	11/22/14	50
1,1,1-Trichloroethane	U	16.	50.	ug/l		8260B	11/22/14	50
1,1,2-Trichloroethane	U	19.	50.	ug/l		8260B	11/22/14	50
Trichloroethene	U	20.	50.	ug/l		8260B	11/22/14	50
1,2,4-Trimethylbenzene	430	19.	50.	ug/l		8260B	11/22/14	50
1,3,5-Trimethylbenzene	100	19.	50.	ug/l		8260B	11/22/14	50
Vinyl chloride	U	13.	50.	ug/l		8260B	11/22/14	50
o-Xylene	U	17.	50.	ug/l		8260B	11/22/14	50
m&p-Xylene	1200	36.	100	ug/l		8260B	11/22/14	50
Xylenes, Total	1200	53.	150	ug/l		8260B	11/22/14	50
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.1			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	101.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	6400	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	840	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	144.			% Rec.		8015	11/20/14	5

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-106

Sample ID : MW-62

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	10.	0.25	2.0	ug/l		6020	11/25/14	1
Barium	9300	3.6	50.	ug/l		6020	12/02/14	10
Calcium	160000	460	10000	ug/l		6020	12/02/14	10
Chromium	2.1	0.54	1.0	ug/l		6020	11/25/14	1
Iron	260	50.	100	ug/l		6020	11/25/14	1
Lead	9.8	0.24	2.0	ug/l		6020	11/25/14	1
Manganese	100	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	1800	37.	1000	ug/l		6020	11/25/14	1
Selenium	1.9	0.38	2.0	ug/l	J	6020	11/25/14	1
Sodium	480000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	42000	780	2500	ug/l		8015D/G	11/20/14	25
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	112.			% Rec.		8015D/G	11/20/14	25
Volatile Organics								
Acetone	U	500	2500	ug/l		8260B	11/19/14	50
Benzene	17000	160	500	ug/l		8260B	11/21/14	500
Bromodichloromethane	U	19.	50.	ug/l		8260B	11/19/14	50
Bromoform	U	23.	50.	ug/l		8260B	11/19/14	50
Bromomethane	U	43.	250	ug/l		8260B	11/19/14	50
n-Butylbenzene	U	18.	50.	ug/l		8260B	11/19/14	50
sec-Butylbenzene	U	18.	50.	ug/l		8260B	11/19/14	50
Carbon disulfide	U	14.	50.	ug/l		8260B	11/19/14	50
Carbon tetrachloride	U	19.	50.	ug/l		8260B	11/19/14	50
Chlorobenzene	U	17.	50.	ug/l		8260B	11/19/14	50
Chlorodibromomethane	U	16.	50.	ug/l		8260B	11/19/14	50
Chloroethane	U	23.	250	ug/l	J4	8260B	11/19/14	50
Chloroform	U	16.	250	ug/l		8260B	11/19/14	50
Chloromethane	U	14.	130	ug/l		8260B	11/19/14	50
1,2-Dibromoethane	U	19.	50.	ug/l		8260B	11/19/14	50
1,1-Dichloroethane	U	13.	50.	ug/l		8260B	11/19/14	50
1,2-Dichloroethane	U	18.	50.	ug/l		8260B	11/19/14	50
1,1-Dichloroethene	U	20.	50.	ug/l		8260B	11/19/14	50
cis-1,2-Dichloroethene	U	13.	50.	ug/l		8260B	11/19/14	50
trans-1,2-Dichloroethene	U	20.	50.	ug/l		8260B	11/19/14	50
1,2-Dichloropropane	U	15.	50.	ug/l		8260B	11/19/14	50
cis-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/19/14	50
trans-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/19/14	50

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-106

Sample ID : MW-62

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	910	19.	50.	ug/l		8260B	11/19/14	50
Isopropylbenzene	140	16.	50.	ug/l		8260B	11/19/14	50
p-Isopropyltoluene	U	18.	50.	ug/l		8260B	11/19/14	50
2-Butanone (MEK)	U	200	500	ug/l		8260B	11/19/14	50
2-Hexanone	U	190	500	ug/l		8260B	11/19/14	50
Methylene Chloride	U	50.	250	ug/l		8260B	11/19/14	50
4-Methyl-2-pentanone (MIBK)	U	110	500	ug/l		8260B	11/19/14	50
Methyl tert-butyl ether	25.	18.	50.	ug/l	J	8260B	11/19/14	50
Naphthalene	420	50.	250	ug/l	J4	8260B	11/19/14	50
n-Propylbenzene	210	17.	50.	ug/l		8260B	11/19/14	50
Styrene	U	15.	50.	ug/l		8260B	11/19/14	50
1,1,1,2-Tetrachloroethane	U	19.	50.	ug/l		8260B	11/19/14	50
1,1,2,2-Tetrachloroethane	U	6.5	50.	ug/l		8260B	11/19/14	50
Tetrachloroethene	U	19.	50.	ug/l		8260B	11/19/14	50
Toluene	U	39.	250	ug/l		8260B	11/19/14	50
1,1,1-Trichloroethane	U	16.	50.	ug/l		8260B	11/19/14	50
1,1,2-Trichloroethane	U	19.	50.	ug/l		8260B	11/19/14	50
Trichloroethene	U	20.	50.	ug/l		8260B	11/19/14	50
1,2,4-Trimethylbenzene	U	19.	50.	ug/l		8260B	11/19/14	50
1,3,5-Trimethylbenzene	U	19.	50.	ug/l		8260B	11/19/14	50
Vinyl chloride	U	13.	50.	ug/l		8260B	11/19/14	50
o-Xylene	U	17.	50.	ug/l		8260B	11/19/14	50
m&p-Xylene	80.	36.	100	ug/l	J	8260B	11/19/14	50
Xylenes, Total	80.	53.	150	ug/l	J	8260B	11/19/14	50
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	50
Dibromofluoromethane	98.1			% Rec.		8260B	11/19/14	50
4-Bromofluorobenzene	113.			% Rec.		8260B	11/19/14	50
Diesel and Oil Ranges								
C10-C28 Diesel Range	29000	220	1000	ug/l		8015	11/20/14	10
C28-C40 Oil Range	4400	120	1000	ug/l		8015	11/20/14	10
Surrogate Recovery								
o-Terphenyl	75.6			% Rec.		8015	11/20/14	10

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-107

Sample ID : MW-66

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	990000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	2.9	0.25	2.0	ug/l		6020	11/25/14	1
Barium	2200	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	140000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.76	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	1400	50.	100	ug/l		6020	11/25/14	1
Lead	2.6	0.24	2.0	ug/l		6020	11/25/14	1
Manganese	280	0.25	5.0	ug/l		6020	11/25/14	1
Nickel	6.8	0.35	2.0	ug/l		6020	11/25/14	1
Potassium	1000	37.	1000	ug/l		6020	11/25/14	1
Selenium	1.5	0.38	2.0	ug/l	J	6020	11/25/14	1
Sodium	160000	1100	10000	ug/l		6020	12/02/14	10
Vanadium	0.84	0.18	5.0	ug/l	J	6020	11/25/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	23000	310	1000	ug/l		8015D/G	11/20/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	117.			% Rec.		8015D/G	11/20/14	10
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/19/14	10
Benzene	6500	66.	200	ug/l		8260B	11/21/14	200
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/19/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/19/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/19/14	10
n-Butylbenzene	10.	3.6	10.	ug/l	J	8260B	11/19/14	10
sec-Butylbenzene	12.	3.6	10.	ug/l		8260B	11/19/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/19/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/19/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/19/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/19/14	10
Chloroethane	U	4.5	50.	ug/l	J4	8260B	11/19/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/19/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/19/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/19/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/19/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/19/14	10

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-107

Sample ID : MW-66

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/19/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/19/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/19/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/19/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/19/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/19/14	10
Ethylbenzene	190	3.8	10.	ug/l		8260B	11/19/14	10
Isopropylbenzene	79.	3.3	10.	ug/l		8260B	11/19/14	10
p-Isopropyltoluene	U	3.5	10.	ug/l		8260B	11/19/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/19/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/19/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/19/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/19/14	10
Methyl tert-butyl ether	1900	73.	200	ug/l		8260B	11/21/14	200
Naphthalene	220	10.	50.	ug/l	J4	8260B	11/19/14	10
n-Propylbenzene	120	3.5	10.	ug/l		8260B	11/19/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/19/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/19/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/19/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/19/14	10
Toluene	52.	7.8	50.	ug/l		8260B	11/19/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/19/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/19/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/19/14	10
1,2,4-Trimethylbenzene	12.	3.7	10.	ug/l		8260B	11/19/14	10
1,3,5-Trimethylbenzene	U	3.9	10.	ug/l		8260B	11/19/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/19/14	10
o-Xylene	15.	3.4	10.	ug/l		8260B	11/19/14	10
m&p-Xylene	100	7.2	20.	ug/l		8260B	11/19/14	10
Xylenes, Total	120	11.	30.	ug/l		8260B	11/19/14	10
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	10
Dibromofluoromethane	93.7			% Rec.		8260B	11/19/14	10
4-Bromofluorobenzene	112.			% Rec.		8260B	11/19/14	10
Diesel and Oil Ranges								
C10-C28 Diesel Range	3300	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	440	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/18/14	1

U = ND (Not Detected)

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-108

Sample ID : MW-90

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	4800	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	8800000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	11.	0.25	2.0	ug/l		6020	11/25/14	1
Barium	14.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	520000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.67	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	410	50.	100	ug/l		6020	11/25/14	1
Lead	U	0.24	2.0	ug/l		6020	11/25/14	1
Manganese	52.	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	3500	37.	1000	ug/l		6020	11/25/14	1
Selenium	21.	0.38	2.0	ug/l		6020	12/02/14	1
Sodium	500000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	210	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	114.			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	15.	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	2.7	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	0.37	0.28	1.0	ug/l	J	8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-108

Sample ID : MW-90

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	0.39	0.38	1.0	ug/l	J	8260B	11/19/14	1
Isopropylbenzene	12.	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	4.9	1.0	5.0	ug/l	JJ4	8260B	11/19/14	1
n-Propylbenzene	3.8	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	0.37	0.34	1.0	ug/l	J	8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	98.4			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	111.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2300	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	1200	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	119.			% Rec.		8015	11/20/14	5

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-93
Collected By : SU/HMI Team
Collection Date : 11/13/14 13:55

ESC Sample # : L733743-109

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3100000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	3.0	0.25	2.0	ug/l		6020	11/25/14	1
Barium	52.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	640000	460	10000	ug/l		6020	12/02/14	10
Chromium	6.5	0.54	1.0	ug/l		6020	11/25/14	1
Iron	3200	50.	100	ug/l		6020	11/25/14	1
Lead	5.4	0.24	2.0	ug/l		6020	11/25/14	1
Manganese	1300	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	4700	37.	1000	ug/l		6020	11/25/14	1
Selenium	13.	0.38	2.0	ug/l		6020	11/25/14	1
Sodium	130000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	6500	310	1000	ug/l		8015D/G	11/20/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	116.			% Rec.		8015D/G	11/20/14	10
Volatile Organics								
Acetone	U	500	2500	ug/l		8260B	11/19/14	50
Benzene	1300	16.	50.	ug/l		8260B	11/19/14	50
Bromodichloromethane	U	19.	50.	ug/l		8260B	11/19/14	50
Bromoform	U	23.	50.	ug/l		8260B	11/19/14	50
Bromomethane	U	43.	250	ug/l		8260B	11/19/14	50
n-Butylbenzene	U	18.	50.	ug/l		8260B	11/19/14	50
sec-Butylbenzene	U	18.	50.	ug/l		8260B	11/19/14	50
Carbon disulfide	14.	14.	50.	ug/l	J	8260B	11/19/14	50
Carbon tetrachloride	U	19.	50.	ug/l		8260B	11/19/14	50
Chlorobenzene	U	17.	50.	ug/l		8260B	11/19/14	50
Chlorodibromomethane	U	16.	50.	ug/l		8260B	11/19/14	50
Chloroethane	U	23.	250	ug/l	J4	8260B	11/19/14	50
Chloroform	U	16.	250	ug/l		8260B	11/19/14	50
Chloromethane	U	14.	130	ug/l		8260B	11/19/14	50
1,2-Dibromoethane	U	19.	50.	ug/l		8260B	11/19/14	50
1,1-Dichloroethane	U	13.	50.	ug/l		8260B	11/19/14	50
1,2-Dichloroethane	U	18.	50.	ug/l		8260B	11/19/14	50
1,1-Dichloroethene	U	20.	50.	ug/l		8260B	11/19/14	50
cis-1,2-Dichloroethene	U	13.	50.	ug/l		8260B	11/19/14	50
trans-1,2-Dichloroethene	U	20.	50.	ug/l		8260B	11/19/14	50
1,2-Dichloropropane	U	15.	50.	ug/l		8260B	11/19/14	50
cis-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/19/14	50
trans-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/19/14	50

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-109

Sample ID : MW-93

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	39.	19.	50.	ug/l	J	8260B	11/19/14	50
Isopropylbenzene	50.	16.	50.	ug/l	J	8260B	11/19/14	50
p-Isopropyltoluene	U	18.	50.	ug/l		8260B	11/19/14	50
2-Butanone (MEK)	U	200	500	ug/l		8260B	11/19/14	50
2-Hexanone	U	190	500	ug/l		8260B	11/19/14	50
Methylene Chloride	U	50.	250	ug/l		8260B	11/19/14	50
4-Methyl-2-pentanone (MIBK)	U	110	500	ug/l		8260B	11/19/14	50
Methyl tert-butyl ether	U	18.	50.	ug/l		8260B	11/19/14	50
Naphthalene	170	50.	250	ug/l	JJ4	8260B	11/19/14	50
n-Propylbenzene	74.	17.	50.	ug/l		8260B	11/19/14	50
Styrene	U	15.	50.	ug/l		8260B	11/19/14	50
1,1,1,2-Tetrachloroethane	U	19.	50.	ug/l		8260B	11/19/14	50
1,1,2,2-Tetrachloroethane	U	6.5	50.	ug/l		8260B	11/19/14	50
Tetrachloroethene	U	19.	50.	ug/l		8260B	11/19/14	50
Toluene	U	39.	250	ug/l		8260B	11/19/14	50
1,1,1-Trichloroethane	U	16.	50.	ug/l		8260B	11/19/14	50
1,1,2-Trichloroethane	U	19.	50.	ug/l		8260B	11/19/14	50
Trichloroethene	U	20.	50.	ug/l		8260B	11/19/14	50
1,2,4-Trimethylbenzene	240	19.	50.	ug/l		8260B	11/19/14	50
1,3,5-Trimethylbenzene	46.	19.	50.	ug/l	J	8260B	11/19/14	50
Vinyl chloride	U	13.	50.	ug/l		8260B	11/19/14	50
o-Xylene	U	17.	50.	ug/l		8260B	11/19/14	50
m&p-Xylene	450	36.	100	ug/l		8260B	11/19/14	50
Xylenes, Total	450	53.	150	ug/l		8260B	11/19/14	50
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	50
Dibromofluoromethane	95.9			% Rec.		8260B	11/19/14	50
4-Bromofluorobenzene	110.			% Rec.		8260B	11/19/14	50
Diesel and Oil Ranges								
C10-C28 Diesel Range	11000	110	500	ug/l		8015	11/19/14	5
C28-C40 Oil Range	2200	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	83.9			% Rec.		8015	11/18/14	1

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(615) 758-5858
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-110

Sample ID : MW-96

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3000000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	4.9	0.25	2.0	ug/l		6020	11/25/14	1
Barium	73.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	390000	460	10000	ug/l		6020	12/02/14	10
Chromium	2.1	0.54	1.0	ug/l		6020	11/25/14	1
Iron	370	50.	100	ug/l		6020	11/25/14	1
Lead	0.89	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	110	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	1900	37.	1000	ug/l		6020	11/25/14	1
Selenium	1.9	0.38	2.0	ug/l	J	6020	11/25/14	1
Sodium	310000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	26000	1600	5000	ug/l		8015D/G	11/20/14	50
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	115.			% Rec.		8015D/G	11/20/14	50
Volatile Organics								
Acetone	U	250	1300	ug/l		8260B	11/21/14	25
Benzene	U	8.3	25.	ug/l		8260B	11/21/14	25
Bromodichloromethane	U	9.5	25.	ug/l		8260B	11/21/14	25
Bromoform	U	12.	25.	ug/l		8260B	11/21/14	25
Bromomethane	U	22.	130	ug/l	J3	8260B	11/21/14	25
n-Butylbenzene	U	9.0	25.	ug/l		8260B	11/21/14	25
sec-Butylbenzene	U	9.1	25.	ug/l		8260B	11/21/14	25
Carbon disulfide	U	6.9	25.	ug/l		8260B	11/21/14	25
Carbon tetrachloride	U	9.5	25.	ug/l		8260B	11/21/14	25
Chlorobenzene	U	8.7	25.	ug/l		8260B	11/21/14	25
Chlorodibromomethane	U	8.2	25.	ug/l		8260B	11/21/14	25
Chloroethane	U	11.	130	ug/l		8260B	11/21/14	25
Chloroform	U	8.1	130	ug/l		8260B	11/21/14	25
Chloromethane	U	6.9	63.	ug/l		8260B	11/21/14	25
1,2-Dibromoethane	U	9.5	25.	ug/l		8260B	11/21/14	25
1,1-Dichloroethane	U	6.5	25.	ug/l		8260B	11/21/14	25
1,2-Dichloroethane	U	9.0	25.	ug/l		8260B	11/21/14	25
1,1-Dichloroethene	U	10.	25.	ug/l		8260B	11/21/14	25
cis-1,2-Dichloroethene	U	6.5	25.	ug/l		8260B	11/21/14	25
trans-1,2-Dichloroethene	U	9.9	25.	ug/l		8260B	11/21/14	25
1,2-Dichloropropane	U	7.6	25.	ug/l		8260B	11/21/14	25
cis-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/21/14	25
trans-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/21/14	25

U = ND (Not Detected)

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-110

Sample ID : MW-96

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	9.6	25.	ug/l		8260B	11/21/14	25
Isopropylbenzene	55.	8.2	25.	ug/l		8260B	11/21/14	25
p-Isopropyltoluene	U	8.8	25.	ug/l		8260B	11/21/14	25
2-Butanone (MEK)	U	98.	250	ug/l		8260B	11/21/14	25
2-Hexanone	U	96.	250	ug/l		8260B	11/21/14	25
Methylene Chloride	U	25.	130	ug/l		8260B	11/21/14	25
4-Methyl-2-pentanone (MIBK)	U	54.	250	ug/l		8260B	11/21/14	25
Methyl tert-butyl ether	28000	9.2	25.	ug/l	E	8260B	11/21/14	25
Naphthalene	U	25.	130	ug/l		8260B	11/21/14	25
n-Propylbenzene	44.	8.7	25.	ug/l		8260B	11/21/14	25
Styrene	U	7.7	25.	ug/l		8260B	11/21/14	25
1,1,1,2-Tetrachloroethane	U	9.6	25.	ug/l		8260B	11/21/14	25
1,1,2,2-Tetrachloroethane	U	3.2	25.	ug/l		8260B	11/21/14	25
Tetrachloroethene	U	9.3	25.	ug/l		8260B	11/21/14	25
Toluene	U	20.	130	ug/l		8260B	11/21/14	25
1,1,1-Trichloroethane	U	8.0	25.	ug/l		8260B	11/21/14	25
1,1,2-Trichloroethane	U	9.6	25.	ug/l		8260B	11/21/14	25
Trichloroethene	U	10.	25.	ug/l		8260B	11/21/14	25
1,2,4-Trimethylbenzene	U	9.3	25.	ug/l		8260B	11/21/14	25
1,3,5-Trimethylbenzene	U	9.7	25.	ug/l		8260B	11/21/14	25
Vinyl chloride	U	6.5	25.	ug/l		8260B	11/21/14	25
o-Xylene	U	8.5	25.	ug/l		8260B	11/21/14	25
m&p-Xylene	U	18.	50.	ug/l		8260B	11/21/14	25
Xylenes, Total	U	26.	75.	ug/l		8260B	11/21/14	25
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	96.1			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	10000	110	500	ug/l		8015	11/19/14	5
C28-C40 Oil Range	1600	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	11/18/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-111

Sample ID : MW-98

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 15:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2800000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	0.68	0.25	2.0	ug/l	J	6020	11/25/14	1
Barium	17.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	460000	460	10000	ug/l		6020	12/02/14	10
Chromium	1.1	0.54	1.0	ug/l		6020	11/25/14	1
Iron	64.	50.	100	ug/l	J	6020	11/25/14	1
Lead	7.9	0.24	2.0	ug/l		6020	11/25/14	1
Manganese	27.	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	200	37.	1000	ug/l	J	6020	11/25/14	1
Selenium	20.	0.38	2.0	ug/l		6020	12/02/14	1
Sodium	81000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	26000	3100	10000	ug/l		8015D/G	11/20/14	100
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	115.			% Rec.		8015D/G	11/20/14	100
Volatile Organics								
Acetone	U	2500	13000	ug/l		8260B	11/19/14	250
Benzene	4800	83.	250	ug/l		8260B	11/19/14	250
Bromodichloromethane	U	95.	250	ug/l		8260B	11/19/14	250
Bromoform	U	120	250	ug/l		8260B	11/19/14	250
Bromomethane	U	220	1300	ug/l		8260B	11/19/14	250
n-Butylbenzene	U	90.	250	ug/l		8260B	11/19/14	250
sec-Butylbenzene	U	91.	250	ug/l		8260B	11/19/14	250
Carbon disulfide	U	69.	250	ug/l		8260B	11/19/14	250
Carbon tetrachloride	U	95.	250	ug/l		8260B	11/19/14	250
Chlorobenzene	U	87.	250	ug/l		8260B	11/19/14	250
Chlorodibromomethane	U	82.	250	ug/l		8260B	11/19/14	250
Chloroethane	U	110	1300	ug/l	J4	8260B	11/19/14	250
Chloroform	U	81.	1300	ug/l		8260B	11/19/14	250
Chloromethane	U	69.	630	ug/l		8260B	11/19/14	250
1,2-Dibromoethane	U	95.	250	ug/l		8260B	11/19/14	250
1,1-Dichloroethane	U	65.	250	ug/l		8260B	11/19/14	250
1,2-Dichloroethane	U	90.	250	ug/l		8260B	11/19/14	250
1,1-Dichloroethene	U	100	250	ug/l		8260B	11/19/14	250
cis-1,2-Dichloroethene	U	65.	250	ug/l		8260B	11/19/14	250
trans-1,2-Dichloroethene	U	99.	250	ug/l		8260B	11/19/14	250
1,2-Dichloropropane	U	76.	250	ug/l		8260B	11/19/14	250
cis-1,3-Dichloropropene	U	100	250	ug/l		8260B	11/19/14	250
trans-1,3-Dichloropropene	U	100	250	ug/l		8260B	11/19/14	250

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(615) 758-5858
1-800-767-5859
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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-111

Sample ID : MW-98

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 15:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	630	96.	250	ug/l		8260B	11/19/14	250
Isopropylbenzene	U	82.	250	ug/l		8260B	11/19/14	250
p-Isopropyltoluene	U	88.	250	ug/l		8260B	11/19/14	250
2-Butanone (MEK)	U	980	2500	ug/l		8260B	11/19/14	250
2-Hexanone	U	960	2500	ug/l		8260B	11/19/14	250
Methylene Chloride	U	250	1300	ug/l		8260B	11/19/14	250
4-Methyl-2-pentanone (MIBK)	U	540	2500	ug/l		8260B	11/19/14	250
Methyl tert-butyl ether	U	92.	250	ug/l		8260B	11/19/14	250
Naphthalene	450	250	1300	ug/l	JJ4	8260B	11/19/14	250
n-Propylbenzene	97.	87.	250	ug/l	J	8260B	11/19/14	250
Styrene	U	77.	250	ug/l		8260B	11/19/14	250
1,1,1,2-Tetrachloroethane	U	96.	250	ug/l		8260B	11/19/14	250
1,1,2,2-Tetrachloroethane	U	32.	250	ug/l		8260B	11/19/14	250
Tetrachloroethene	U	93.	250	ug/l		8260B	11/19/14	250
Toluene	280	200	1300	ug/l	J	8260B	11/19/14	250
1,1,1-Trichloroethane	U	80.	250	ug/l		8260B	11/19/14	250
1,1,2-Trichloroethane	U	96.	250	ug/l		8260B	11/19/14	250
Trichloroethene	U	100	250	ug/l		8260B	11/19/14	250
1,2,4-Trimethylbenzene	340	93.	250	ug/l		8260B	11/19/14	250
1,3,5-Trimethylbenzene	U	97.	250	ug/l		8260B	11/19/14	250
Vinyl chloride	U	65.	250	ug/l		8260B	11/19/14	250
o-Xylene	U	85.	250	ug/l		8260B	11/19/14	250
m&p-Xylene	1600	180	500	ug/l		8260B	11/19/14	250
Xylenes, Total	1600	260	750	ug/l		8260B	11/19/14	250
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	250
Dibromofluoromethane	97.8			% Rec.		8260B	11/19/14	250
4-Bromofluorobenzene	111.			% Rec.		8260B	11/19/14	250
Diesel and Oil Ranges								
C10-C28 Diesel Range	5400	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	550	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	108.			% Rec.		8015	11/18/14	1

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-101

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:05

ESC Sample # : L733743-112

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1600000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	49.	0.25	2.0	ug/l		6020	11/25/14	1
Barium	89.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	280000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.61	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	1800	50.	100	ug/l		6020	11/25/14	1
Lead	0.65	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	980	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	810	37.	1000	ug/l	J	6020	11/25/14	1
Selenium	1.2	0.38	2.0	ug/l	J	6020	11/25/14	1
Sodium	150000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	1400	310	1000	ug/l		8015D/G	11/20/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	117.			% Rec.		8015D/G	11/20/14	10
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/19/14	10
Benzene	220	3.3	10.	ug/l		8260B	11/19/14	10
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/19/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/19/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/19/14	10
n-Butylbenzene	U	3.6	10.	ug/l		8260B	11/19/14	10
sec-Butylbenzene	U	3.6	10.	ug/l		8260B	11/19/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/19/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/19/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/19/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/19/14	10
Chloroethane	U	4.5	50.	ug/l	J4	8260B	11/19/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/19/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/19/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/19/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/19/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/19/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/19/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/19/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/19/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/19/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/19/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/19/14	10

U = ND (Not Detected)

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August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-112

Sample ID : MW-101

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	5.0	3.8	10.	ug/l	J	8260B	11/19/14	10
Isopropylbenzene	7.8	3.3	10.	ug/l	J	8260B	11/19/14	10
p-Isopropyltoluene	U	3.5	10.	ug/l		8260B	11/19/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/19/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/19/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/19/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/19/14	10
Methyl tert-butyl ether	120	3.7	10.	ug/l		8260B	11/19/14	10
Naphthalene	10.	10.	50.	ug/l	JJ4	8260B	11/19/14	10
n-Propylbenzene	5.0	3.5	10.	ug/l	J	8260B	11/19/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/19/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/19/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/19/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/19/14	10
Toluene	U	7.8	50.	ug/l		8260B	11/19/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/19/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/19/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/19/14	10
1,2,4-Trimethylbenzene	U	3.7	10.	ug/l		8260B	11/19/14	10
1,3,5-Trimethylbenzene	U	3.9	10.	ug/l		8260B	11/19/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/19/14	10
o-Xylene	U	3.4	10.	ug/l		8260B	11/19/14	10
m&p-Xylene	U	7.2	20.	ug/l		8260B	11/19/14	10
Xylenes, Total	U	11.	30.	ug/l		8260B	11/19/14	10
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/19/14	10
Dibromofluoromethane	97.7			% Rec.		8260B	11/19/14	10
4-Bromofluorobenzene	112.			% Rec.		8260B	11/19/14	10
Diesel and Oil Ranges								
C10-C28 Diesel Range	5300	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	820	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	118.			% Rec.		8015	11/18/14	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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Mt. Juliet, TN 37122
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Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-104
Collected By : SU/HMI Team
Collection Date : 11/13/14 14:05

ESC Sample # : L733743-113

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1300000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	1.8	0.25	2.0	ug/l	J	6020	11/25/14	1
Barium	30.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	230000	460	10000	ug/l		6020	12/02/14	10
Chromium	U	0.54	1.0	ug/l		6020	11/25/14	1
Iron	U	50.	100	ug/l		6020	11/25/14	1
Lead	U	0.24	2.0	ug/l		6020	11/25/14	1
Manganese	31.	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	6000	37.	1000	ug/l		6020	11/25/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/25/14	1
Sodium	69000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	1300	780	2500	ug/l	J	8015D/G	11/20/14	25
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.3			% Rec.		8015D/G	11/20/14	25
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	94.	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	0.50	0.36	1.0	ug/l	J	8260B	11/19/14	1
sec-Butylbenzene	33.	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	14.	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-113

Sample ID : MW-104

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	2.1	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	37.	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	0.49	0.37	1.0	ug/l	J	8260B	11/19/14	1
Naphthalene	1.8	1.0	5.0	ug/l	JJ4	8260B	11/19/14	1
n-Propylbenzene	7.4	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	98.7			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	111.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	700	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	180	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	116.			% Rec.		8015	11/18/14	1

U = ND (Not Detected)

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

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(615) 758-5858
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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-114

Sample ID : MW-107

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1200000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	15.	0.25	2.0	ug/l		6020	11/25/14	1
Barium	520	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	230000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.97	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	3800	50.	100	ug/l		6020	11/25/14	1
Lead	0.49	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	390	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	730	37.	1000	ug/l	J	6020	11/25/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/25/14	1
Sodium	83000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	17000	780	2500	ug/l		8015D/G	11/20/14	25
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	11/20/14	25
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/19/14	10
Benzene	8200	33.	100	ug/l		8260B	11/20/14	100
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/19/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/19/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/19/14	10
n-Butylbenzene	U	3.6	10.	ug/l		8260B	11/19/14	10
sec-Butylbenzene	5.7	3.6	10.	ug/l	J	8260B	11/19/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/19/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/19/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/19/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/19/14	10
Chloroethane	U	4.5	50.	ug/l	J4	8260B	11/19/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/19/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/19/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/19/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/19/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/19/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/19/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/19/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/19/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/19/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/19/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/19/14	10

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-114

Sample ID : MW-107

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	300	3.8	10.	ug/l		8260B	11/19/14	10
Isopropylbenzene	42.	3.3	10.	ug/l		8260B	11/19/14	10
p-Isopropyltoluene	U	3.5	10.	ug/l		8260B	11/19/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/19/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/19/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/19/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/19/14	10
Methyl tert-butyl ether	2300	3.7	10.	ug/l	E	8260B	11/19/14	10
Naphthalene	150	10.	50.	ug/l	J4	8260B	11/19/14	10
n-Propylbenzene	57.	3.5	10.	ug/l		8260B	11/19/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/19/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/19/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/19/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/19/14	10
Toluene	20.	7.8	50.	ug/l	J	8260B	11/19/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/19/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/19/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/19/14	10
1,2,4-Trimethylbenzene	31.	3.7	10.	ug/l		8260B	11/19/14	10
1,3,5-Trimethylbenzene	5.2	3.9	10.	ug/l	J	8260B	11/19/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/19/14	10
o-Xylene	3.5	3.4	10.	ug/l	J	8260B	11/19/14	10
m&p-Xylene	120	7.2	20.	ug/l		8260B	11/19/14	10
Xylenes, Total	120	11.	30.	ug/l		8260B	11/19/14	10
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	11/19/14	10
Dibromofluoromethane	93.3			% Rec.		8260B	11/19/14	10
4-Bromofluorobenzene	111.			% Rec.		8260B	11/19/14	10
Diesel and Oil Ranges								
C10-C28 Diesel Range	4900	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	620	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	116.			% Rec.		8015	11/18/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-109

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:20

ESC Sample # : L733743-115

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2500000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	7.7	0.25	2.0	ug/l		6020	11/25/14	1
Barium	94.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	280000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.76	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	460	50.	100	ug/l		6020	11/25/14	1
Lead	U	0.24	2.0	ug/l		6020	11/25/14	1
Manganese	180	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	1300	37.	1000	ug/l		6020	11/25/14	1
Selenium	U	0.38	2.0	ug/l		6020	11/25/14	1
Sodium	490000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	1000	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	79.3			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	280	3.3	10.	ug/l		8260B	11/21/14	10
Bromodichloromethane	U	0.38	1.0	ug/l	J5J3	8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l	J5J3	8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l	J3	8260B	11/19/14	1
n-Butylbenzene	1.3	0.36	1.0	ug/l	J5J3	8260B	11/19/14	1
sec-Butylbenzene	3.3	0.36	1.0	ug/l	J3	8260B	11/19/14	1
Carbon disulfide	0.54	0.28	1.0	ug/l	J	8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l	J3	8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l	J5J3	8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l	J5J3	8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4J6	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l	J5J3	8260B	11/19/14	1
Chloromethane	1.0	0.28	2.5	ug/l	J	8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l	J5J3	8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l	J3	8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l	J3	8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l	J3	8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l	J5J3	8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l	J5J3	8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l	J5J3	8260B	11/19/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-115

Sample ID : MW-109

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	20.	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	28.	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l	J3	8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J5	8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l	J5J3	8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l	J5J3	8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l	J3	8260B	11/19/14	1
Naphthalene	2.6	1.0	5.0	ug/l	JJ4J5J3	8260B	11/19/14	1
n-Propylbenzene	21.	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l	J5J3	8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l	J5J3	8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l	J5J3	8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l	J3	8260B	11/19/14	1
Toluene	5.7	0.78	5.0	ug/l	J3	8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l	J5J3	8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l	J3	8260B	11/19/14	1
1,2,4-Trimethylbenzene	0.63	0.37	1.0	ug/l	JJ3	8260B	11/19/14	1
1,3,5-Trimethylbenzene	0.40	0.39	1.0	ug/l	JJ5J3	8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	0.36	0.34	1.0	ug/l	JJ5J3	8260B	11/19/14	1
m&p-Xylene	2.7	0.72	2.0	ug/l	J3	8260B	11/19/14	1
Xylenes, Total	3.1	1.1	3.0	ug/l	J3J5	8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	96.6			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	3700	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	430	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	122.			% Rec.		8015	11/18/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-110
Collected By : SU/HMI Team
Collection Date : 11/13/14 11:35

ESC Sample # : L733743-116

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1200000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	51.	0.25	2.0	ug/l		6020	11/25/14	1
Barium	48.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	100000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.74	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	1200	50.	100	ug/l		6020	11/25/14	1
Lead	U	0.24	2.0	ug/l		6020	11/25/14	1
Manganese	1800	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	140	37.	1000	ug/l	J	6020	11/25/14	1
Selenium	0.38	0.38	2.0	ug/l	J	6020	11/25/14	1
Sodium	270000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	470	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.4			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	1.5	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	1.5	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-116

Sample ID : MW-110

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 11:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	1.6	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	2.2	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	1.7	1.0	5.0	ug/l	JJ4	8260B	11/19/14	1
n-Propylbenzene	1.5	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	1.0	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	97.6			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	820	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	140	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/18/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-117

Sample ID : MW-111

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1700000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	14.	0.25	2.0	ug/l		6020	11/25/14	1
Barium	220	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	260000	460	10000	ug/l		6020	12/02/14	10
Chromium	2.4	0.54	1.0	ug/l		6020	11/25/14	1
Iron	8000	50.	100	ug/l		6020	11/25/14	1
Lead	1.3	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	1600	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	490	37.	1000	ug/l	J	6020	11/25/14	1
Selenium	0.46	0.38	2.0	ug/l	J	6020	11/25/14	1
Sodium	220000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	1700	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.0			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	180	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	0.52	0.36	1.0	ug/l	J	8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-117

Sample ID : MW-111

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	26.	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	2.4	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	1600	0.37	1.0	ug/l	E	8260B	11/19/14	1
Naphthalene	6.4	1.0	5.0	ug/l	J4	8260B	11/19/14	1
n-Propylbenzene	2.2	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	1.6	0.78	5.0	ug/l	J	8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	7.4	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	1.7	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	5.2	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	22.	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	27.	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	98.8			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	111.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2000	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	430	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	115.			% Rec.		8015	11/18/14	1

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Mt. Juliet, TN 37122
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REPORT OF ANALYSIS

August 26, 2015

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

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-113

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:25

ESC Sample # : L733743-118

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1900000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	8.8	0.25	2.0	ug/l		6020	11/25/14	1
Barium	47.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	300000	460	10000	ug/l		6020	12/02/14	10
Chromium	0.59	0.54	1.0	ug/l	J	6020	11/25/14	1
Iron	680	50.	100	ug/l		6020	11/25/14	1
Lead	0.25	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	1900	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	400	37.	1000	ug/l	J	6020	11/25/14	1
Selenium	0.44	0.38	2.0	ug/l	J	6020	11/25/14	1
Sodium	160000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	2400	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	91.4			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	1500	8.3	25.	ug/l		8260B	11/20/14	25
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	0.81	0.36	1.0	ug/l	J	8260B	11/19/14	1
sec-Butylbenzene	1.1	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	0.52	0.36	1.0	ug/l	J	8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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

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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-118

Sample ID : MW-113

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	7.0	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	9.7	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	0.94	0.35	1.0	ug/l	J	8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	20.	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	48.	1.0	5.0	ug/l	J4	8260B	11/19/14	1
n-Propylbenzene	3.3	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	4.6	0.78	5.0	ug/l	J	8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	41.	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	7.1	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	16.	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	86.	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	100	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	90.3			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	112.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	640	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	23.	12.	100	ug/l	J	8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	128.			% Rec.		8015	11/20/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
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1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-114
Collected By : SU/HMI Team
Collection Date : 11/12/14 13:35

ESC Sample # : L733743-119

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	360	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3400000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	3.1	0.25	2.0	ug/l		6020	11/25/14	1
Barium	26.	0.36	5.0	ug/l		6020	11/25/14	1
Calcium	620000	460	10000	ug/l		6020	12/02/14	10
Chromium	2.3	0.54	1.0	ug/l		6020	11/25/14	1
Iron	810	50.	100	ug/l		6020	11/25/14	1
Lead	0.55	0.24	2.0	ug/l	J	6020	11/25/14	1
Manganese	1200	0.25	5.0	ug/l		6020	11/25/14	1
Potassium	2700	37.	1000	ug/l		6020	11/25/14	1
Selenium	1.8	0.38	2.0	ug/l	J	6020	11/25/14	1
Sodium	130000	1100	10000	ug/l		6020	12/02/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.3			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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

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(615) 758-5858
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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-119

Sample ID : MW-114

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 13:35

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	1.2	1.0	5.0	ug/l	JJ4	8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	98.1			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	32.	22.	100	ug/l	J	8015	11/18/14	1
C28-C40 Oil Range	100	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	110.			% Rec.		8015	11/18/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-115

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:50

ESC Sample # : L733743-120

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	5700000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	3.4	0.25	2.0	ug/l		6020	12/01/14	1
Barium	15.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	690000	460	10000	ug/l	V	6020	12/01/14	10
Chromium	0.86	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	130	50.	100	ug/l		6020	12/01/14	1
Lead	0.24	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	30.	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	720	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	2.8	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	340000	1100	10000	ug/l	V	6020	12/01/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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MDL = Minimum Detection Limit = LOD = TRRP SDL

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-120

Sample ID : MW-115

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l	J4	8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	99.7			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	110.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	110	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	190	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/18/14	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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Mt. Juliet, TN 37122
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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-121

Sample ID : MW-116

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	740	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3700000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	3.8	0.25	2.0	ug/l		6020	12/01/14	1
Barium	9.8	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	580000	460	10000	ug/l		6020	12/01/14	10
Chromium	1.0	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	110	50.	100	ug/l		6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	4.2	0.25	5.0	ug/l	J	6020	12/01/14	1
Potassium	1600	37.	1000	ug/l		6020	12/01/14	1
Selenium	5.5	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	230000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-116
Collected By : SU/HMI Team
Collection Date : 11/12/14 12:00

ESC Sample # : L733743-121

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l	J4	8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	98.0			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	106.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	26.	22.	100	ug/l	J	8015	11/18/14	1
C28-C40 Oil Range	74.	12.	100	ug/l	J	8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/18/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-117
Collected By : SU/HMI Team
Collection Date : 11/13/14 14:00

ESC Sample # : L733743-122

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	650	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3000000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	2.5	0.25	2.0	ug/l		6020	12/01/14	1
Barium	20.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	610000	460	10000	ug/l		6020	12/01/14	10
Chromium	3.1	0.54	1.0	ug/l		6020	12/01/14	1
Iron	950	50.	100	ug/l		6020	12/01/14	1
Lead	0.72	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	14.	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	5200	37.	1000	ug/l		6020	12/01/14	1
Selenium	7.7	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	110000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.2			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-122

Sample ID : MW-117

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l	J4	8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	98.8			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	29.	22.	100	ug/l	J	8015	11/20/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	116.			% Rec.		8015	11/20/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-123

Sample ID : MW-118

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	980	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3700000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	12.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	33.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	670000	460	10000	ug/l		6020	12/01/14	10
Chromium	3.2	0.54	1.0	ug/l		6020	12/01/14	1
Iron	1100	50.	100	ug/l		6020	12/01/14	1
Lead	1.0	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	20.	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	6200	37.	1000	ug/l		6020	12/01/14	1
Selenium	6.5	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	140000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	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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Mt. Juliet, TN 37122
(615) 758-5858
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Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-123

Sample ID : MW-118

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l	J4	8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	98.6			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	109.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	32.	22.	100	ug/l	J	8015	11/20/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	11/20/14	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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-124

Sample ID : MW-119

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3200000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	6.2	0.25	2.0	ug/l		6020	12/01/14	1
Barium	60.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	670000	460	10000	ug/l		6020	12/01/14	10
Chromium	4.2	0.54	1.0	ug/l		6020	12/01/14	1
Iron	2300	50.	100	ug/l		6020	12/01/14	1
Lead	1.6	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	62.	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	1800	37.	1000	ug/l		6020	12/01/14	1
Selenium	1.3	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	77000	110	1000	ug/l		6020	12/01/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.1			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1

U = ND (Not Detected)

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

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-124

Sample ID : MW-119

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l	J4	8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	98.7			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	112.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	53.	22.	100	ug/l	J	8015	11/20/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	119.			% Rec.		8015	11/20/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-125
Collected By : SU/HMI Team
Collection Date : 11/12/14 11:15

ESC Sample # : L733743-125

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	200	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	4100000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	3.6	0.25	2.0	ug/l		6020	12/01/14	1
Barium	9.2	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	610000	460	10000	ug/l		6020	12/01/14	10
Chromium	0.56	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	420	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	1300	37.	1000	ug/l		6020	12/01/14	1
Selenium	3.3	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	260000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.1			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/19/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/19/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/19/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/19/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/19/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/19/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/19/14	1
Chloroethane	U	0.45	5.0	ug/l	J4	8260B	11/19/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/19/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/19/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/19/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/19/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/19/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/19/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-125

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:15

ESC Sample # : L733743-125

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/19/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/19/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/19/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/19/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/19/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/19/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/19/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/19/14	1
Naphthalene	U	1.0	5.0	ug/l	J4	8260B	11/19/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/19/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/19/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/19/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/19/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/19/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/19/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/19/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/19/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/19/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/19/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/19/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/19/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/19/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/19/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/19/14	1
Dibromofluoromethane	97.9			% Rec.		8260B	11/19/14	1
4-Bromofluorobenzene	115.			% Rec.		8260B	11/19/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	47.	22.	100	ug/l	J	8015	11/18/14	1
C28-C40 Oil Range	74.	12.	100	ug/l	J	8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	109.			% Rec.		8015	11/18/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-126

Sample ID : MW-126A

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2400000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	2.1	0.25	2.0	ug/l		6020	12/01/14	1
Barium	28.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	360000	460	10000	ug/l		6020	12/01/14	10
Chromium	1.7	0.54	1.0	ug/l		6020	12/01/14	1
Iron	1700	50.	100	ug/l		6020	12/01/14	1
Lead	1.0	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	790	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	660	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	0.53	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	180000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	410	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.8			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/20/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/20/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	3.0	0.36	1.0	ug/l		8260B	11/20/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-126

Sample ID : MW-126A

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/20/14	1
Isopropylbenzene	16.	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/20/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/20/14	1
n-Propylbenzene	3.2	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/20/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	99.6			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	880	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	170	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/18/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-127

Sample ID : MW-126B

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	390	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3500000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	3.9	0.25	2.0	ug/l		6020	12/01/14	1
Barium	17.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	600000	460	10000	ug/l		6020	12/01/14	10
Chromium	1.3	0.54	1.0	ug/l		6020	12/01/14	1
Iron	390	50.	100	ug/l		6020	12/01/14	1
Lead	0.64	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	98.	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	2400	37.	1000	ug/l		6020	12/01/14	1
Selenium	2.6	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	210000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.4			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l	J3	8260B	11/20/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/20/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-127

Sample ID : MW-126B

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/20/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/20/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/20/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/20/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	103.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	93.1			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	280	22.	100	ug/l		8015	11/18/14	1
C28-C40 Oil Range	140	12.	100	ug/l		8015	11/18/14	1
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	11/18/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-127
Collected By : SU/HMI Team
Collection Date : 11/12/14 11:15

ESC Sample # : L733743-128

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1800000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	6.4	0.25	2.0	ug/l		6020	12/01/14	1
Barium	1200	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	290000	460	10000	ug/l		6020	12/01/14	10
Chromium	3.5	0.54	1.0	ug/l		6020	12/01/14	1
Iron	3900	50.	100	ug/l		6020	12/01/14	1
Lead	2.0	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	140	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	990	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	1.2	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	160000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	6100	310	1000	ug/l		8015D/G	11/20/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.2			% Rec.		8015D/G	11/20/14	10
Volatile Organics								
Acetone	U	10.	50.	ug/l	J3	8260B	11/20/14	1
Benzene	1800	8.3	25.	ug/l		8260B	11/21/14	25
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/20/14	1
n-Butylbenzene	1.3	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	2.0	0.36	1.0	ug/l		8260B	11/20/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-128

Sample ID : MW-127

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	240	9.6	25.	ug/l		8260B	11/21/14	25
Isopropylbenzene	12.	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	1.8	0.35	1.0	ug/l		8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	760	9.2	25.	ug/l		8260B	11/21/14	25
Naphthalene	40.	1.0	5.0	ug/l		8260B	11/20/14	1
n-Propylbenzene	20.	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	150	0.78	5.0	ug/l		8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	78.	0.37	1.0	ug/l		8260B	11/20/14	1
1,3,5-Trimethylbenzene	6.1	0.39	1.0	ug/l		8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	68.	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	82.	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	150	1.1	3.0	ug/l		8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	106.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	94.9			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	1300	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	160	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-129

Sample ID : MW-128

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1400000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	62.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	94.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	250000	460	10000	ug/l		6020	12/01/14	10
Chromium	5.1	0.54	1.0	ug/l		6020	12/01/14	1
Iron	5000	50.	100	ug/l		6020	12/01/14	1
Lead	13.	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	2600	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	1200	37.	1000	ug/l		6020	12/01/14	1
Selenium	1.2	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	110000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	1200	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.3			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	16.	10.	50.	ug/l	JJ3	8260B	11/20/14	1
Benzene	120	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/20/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	0.59	0.36	1.0	ug/l	J	8260B	11/20/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-129

Sample ID : MW-128

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	12.	0.38	1.0	ug/l		8260B	11/20/14	1
Isopropylbenzene	2.3	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	950	0.37	1.0	ug/l	E	8260B	11/20/14	1
Naphthalene	6.1	1.0	5.0	ug/l		8260B	11/20/14	1
n-Propylbenzene	3.2	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	0.92	0.78	5.0	ug/l	J	8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	2.8	0.37	1.0	ug/l		8260B	11/20/14	1
1,3,5-Trimethylbenzene	0.48	0.39	1.0	ug/l	J	8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	5.5	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	5.5	1.1	3.0	ug/l		8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	94.4			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	98.2			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2400	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	490	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-130
Collected By : SU/HMI Team
Collection Date : 11/13/14 10:10

ESC Sample # : L733743-130

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	350	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	4.6	0.25	2.0	ug/l		6020	12/01/14	1
Barium	26.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	310000	460	10000	ug/l		6020	12/01/14	10
Chromium	2.5	0.54	1.0	ug/l		6020	12/01/14	1
Iron	1200	50.	100	ug/l		6020	12/01/14	1
Lead	1.2	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	120	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	1000	37.	1000	ug/l		6020	12/01/14	1
Selenium	3.7	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	310000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.5			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l	J3	8260B	11/20/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/20/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-130

Sample ID : MW-130

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 10:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/20/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	1.2	0.37	1.0	ug/l		8260B	11/20/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/20/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/20/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	94.2			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	700	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	140	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	124.			% Rec.		8015	11/20/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-131

Sample ID : MW-131

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1200000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	23.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	2600	3.6	50.	ug/l		6020	12/01/14	10
Calcium	200000	460	10000	ug/l		6020	12/01/14	10
Chromium	2.8	0.54	1.0	ug/l		6020	12/01/14	1
Iron	3800	50.	100	ug/l		6020	12/01/14	1
Lead	1.4	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	360	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	640	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	0.50	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	160000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	9100	780	2500	ug/l		8015D/G	11/20/14	25
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.4			% Rec.		8015D/G	11/20/14	25
Volatile Organics								
Acetone	U	100	500	ug/l	J3	8260B	11/20/14	10
Benzene	1800	3.3	10.	ug/l		8260B	11/20/14	10
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/20/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/20/14	10
n-Butylbenzene	5.6	3.6	10.	ug/l	J	8260B	11/20/14	10
sec-Butylbenzene	4.7	3.6	10.	ug/l	J	8260B	11/20/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/20/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/20/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/20/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/20/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/20/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/20/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/20/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/20/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/20/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/20/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10

U = ND (Not Detected)

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

MDL = Minimum Detection Limit = LOD = TRRP SDL

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-131

Sample ID : MW-131

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	67.	3.8	10.	ug/l		8260B	11/20/14	10
Isopropylbenzene	16.	3.3	10.	ug/l		8260B	11/20/14	10
p-Isopropyltoluene	3.6	3.5	10.	ug/l	J	8260B	11/20/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/20/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/20/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/20/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/20/14	10
Methyl tert-butyl ether	5600	3.7	10.	ug/l	E	8260B	11/20/14	10
Naphthalene	43.	10.	50.	ug/l	J	8260B	11/20/14	10
n-Propylbenzene	30.	3.5	10.	ug/l		8260B	11/20/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/20/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/20/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/20/14	10
Toluene	310	7.8	50.	ug/l		8260B	11/20/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/20/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2,4-Trimethylbenzene	58.	3.7	10.	ug/l		8260B	11/20/14	10
1,3,5-Trimethylbenzene	16.	3.9	10.	ug/l		8260B	11/20/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/20/14	10
o-Xylene	65.	3.4	10.	ug/l		8260B	11/20/14	10
m&p-Xylene	120	7.2	20.	ug/l		8260B	11/20/14	10
Xylenes, Total	180	11.	30.	ug/l		8260B	11/20/14	10
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	91.3			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	96.9			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	3700	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	290	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	112.			% Rec.		8015	11/19/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-132

Sample ID : MW-134

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	7400	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	4600000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	5.9	0.25	2.0	ug/l		6020	12/01/14	1
Barium	15.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	660000	460	10000	ug/l		6020	12/01/14	10
Chromium	2.4	0.54	1.0	ug/l		6020	12/01/14	1
Iron	360	50.	100	ug/l		6020	12/01/14	1
Lead	0.24	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	31.	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	1800	37.	1000	ug/l		6020	12/01/14	1
Selenium	12.	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	310000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/20/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.0			% Rec.		8015D/G	11/20/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l	J3	8260B	11/20/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/20/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-132

Sample ID : MW-134

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/20/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/20/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/20/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/20/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	98.9			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	94.7			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	64.	22.	100	ug/l	J	8015	11/19/14	1
C28-C40 Oil Range	37.	12.	100	ug/l	J	8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	115.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-133

Sample ID : MW-135

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	69000	200	1000	ug/l		353.2	11/20/14	10
Dissolved Solids	5600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	8.8	0.25	2.0	ug/l		6020	12/01/14	1
Barium	410	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	840000	460	10000	ug/l		6020	12/01/14	10
Chromium	18.	0.54	1.0	ug/l		6020	12/01/14	1
Iron	9600	50.	100	ug/l		6020	12/01/14	1
Lead	10.	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	420	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	2800	37.	1000	ug/l		6020	12/01/14	1
Selenium	38.	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	570000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/22/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	100.			% Rec.		8015D/G	11/22/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l	J3	8260B	11/20/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/20/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-133

Sample ID : MW-135

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/20/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/20/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/20/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/20/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	99.3			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	97.1			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	310	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	140	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	135.			% Rec.		8015	11/20/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-134

Sample ID : RA-4798

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 16:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	1500	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2200000	2800	10000	ug/l		2540 C-	11/20/14	1
Calcium	400000	460	10000	ug/l		6020	12/01/14	10
Potassium	2200	37.	1000	ug/l		6020	12/01/14	1
Sodium	110000	1100	10000	ug/l		6020	12/01/14	10
Volatile Organics								
Acetone	U	10.	50.	ug/l	J3	8260B	11/20/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/20/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/20/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/20/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/20/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/20/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/20/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/20/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/20/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/20/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloroethane	1.5	0.36	1.0	ug/l		8260B	11/20/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/20/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/20/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/20/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/20/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/20/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/20/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l		8260B	11/20/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/20/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/20/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/20/14	1
Methyl tert-butyl ether	8.6	0.37	1.0	ug/l		8260B	11/20/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/20/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/20/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/20/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : RA-4798

Collected By : SU/HMI Team
Collection Date : 11/13/14 16:00

ESC Sample # : L733743-134

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/20/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/20/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/20/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/20/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/20/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/20/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/20/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/20/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/20/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/20/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/20/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/20/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	103.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	95.3			% Rec.		8260B	11/20/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-135

Sample ID : MW-102

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2200000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	12.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	250	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	290000	460	10000	ug/l		6020	12/01/14	10
Chromium	1.6	0.54	1.0	ug/l		6020	12/01/14	1
Iron	100	50.	100	ug/l	J	6020	12/01/14	1
Lead	2.6	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	49.	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	800	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	1.3	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	430000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	36000	3100	10000	ug/l		8015D/G	11/21/14	100
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.2			% Rec.		8015D/G	11/21/14	100
Volatile Organics								
Acetone	U	500	2500	ug/l	J3	8260B	11/20/14	50
Benzene	11000	160	500	ug/l		8260B	11/21/14	500
Bromodichloromethane	U	19.	50.	ug/l		8260B	11/20/14	50
Bromoform	U	23.	50.	ug/l		8260B	11/20/14	50
Bromomethane	U	43.	250	ug/l		8260B	11/20/14	50
n-Butylbenzene	U	18.	50.	ug/l		8260B	11/20/14	50
sec-Butylbenzene	U	18.	50.	ug/l		8260B	11/20/14	50
Carbon disulfide	U	14.	50.	ug/l		8260B	11/20/14	50
Carbon tetrachloride	U	19.	50.	ug/l		8260B	11/20/14	50
Chlorobenzene	U	17.	50.	ug/l		8260B	11/20/14	50
Chlorodibromomethane	U	16.	50.	ug/l		8260B	11/20/14	50
Chloroethane	U	23.	250	ug/l		8260B	11/20/14	50
Chloroform	U	16.	250	ug/l		8260B	11/20/14	50
Chloromethane	U	14.	130	ug/l		8260B	11/20/14	50
1,2-Dibromoethane	U	19.	50.	ug/l		8260B	11/20/14	50
1,1-Dichloroethane	U	13.	50.	ug/l		8260B	11/20/14	50
1,2-Dichloroethane	U	18.	50.	ug/l		8260B	11/20/14	50
1,1-Dichloroethene	U	20.	50.	ug/l		8260B	11/20/14	50
cis-1,2-Dichloroethene	U	13.	50.	ug/l		8260B	11/20/14	50
trans-1,2-Dichloroethene	U	20.	50.	ug/l		8260B	11/20/14	50
1,2-Dichloropropane	U	15.	50.	ug/l		8260B	11/20/14	50
cis-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/20/14	50
trans-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/20/14	50

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-135

Sample ID : MW-102

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	990	19.	50.	ug/l		8260B	11/20/14	50
Isopropylbenzene	40.	16.	50.	ug/l	J	8260B	11/20/14	50
p-Isopropyltoluene	U	18.	50.	ug/l		8260B	11/20/14	50
2-Butanone (MEK)	U	200	500	ug/l		8260B	11/20/14	50
2-Hexanone	U	190	500	ug/l		8260B	11/20/14	50
Methylene Chloride	U	50.	250	ug/l		8260B	11/20/14	50
4-Methyl-2-pentanone (MIBK)	U	110	500	ug/l		8260B	11/20/14	50
Methyl tert-butyl ether	2000	18.	50.	ug/l		8260B	11/20/14	50
Naphthalene	180	50.	250	ug/l	J	8260B	11/20/14	50
n-Propylbenzene	57.	17.	50.	ug/l		8260B	11/20/14	50
Styrene	U	15.	50.	ug/l		8260B	11/20/14	50
1,1,1,2-Tetrachloroethane	U	19.	50.	ug/l		8260B	11/20/14	50
1,1,2,2-Tetrachloroethane	U	6.5	50.	ug/l		8260B	11/20/14	50
Tetrachloroethene	U	19.	50.	ug/l		8260B	11/20/14	50
Toluene	2000	39.	250	ug/l		8260B	11/20/14	50
1,1,1-Trichloroethane	U	16.	50.	ug/l		8260B	11/20/14	50
1,1,2-Trichloroethane	U	19.	50.	ug/l		8260B	11/20/14	50
Trichloroethene	U	20.	50.	ug/l		8260B	11/20/14	50
1,2,4-Trimethylbenzene	260	19.	50.	ug/l		8260B	11/20/14	50
1,3,5-Trimethylbenzene	59.	19.	50.	ug/l		8260B	11/20/14	50
Vinyl chloride	U	13.	50.	ug/l		8260B	11/20/14	50
o-Xylene	540	17.	50.	ug/l		8260B	11/20/14	50
m&p-Xylene	1300	36.	100	ug/l		8260B	11/20/14	50
Xylenes, Total	1800	53.	150	ug/l		8260B	11/20/14	50
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	92.6			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	96.1			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	9500	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	830	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	116.			% Rec.		8015	11/20/14	1

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-136

Sample ID : MW-48

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1800000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	33.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	350	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	190000	460	10000	ug/l		6020	12/01/14	10
Chromium	3.1	0.54	1.0	ug/l		6020	12/01/14	1
Iron	1400	50.	100	ug/l		6020	12/01/14	1
Lead	12.	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	2000	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	2400	37.	1000	ug/l		6020	12/01/14	1
Selenium	1.4	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	380000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	4500	1600	5000	ug/l	J	8015D/G	11/21/14	50
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.1			% Rec.		8015D/G	11/21/14	50
Volatile Organics								
Acetone	U	250	1300	ug/l	J3	8260B	11/20/14	25
Benzene	140	8.3	25.	ug/l		8260B	11/20/14	25
Bromodichloromethane	U	9.5	25.	ug/l		8260B	11/20/14	25
Bromoform	U	12.	25.	ug/l		8260B	11/20/14	25
Bromomethane	U	22.	130	ug/l		8260B	11/20/14	25
n-Butylbenzene	U	9.0	25.	ug/l		8260B	11/20/14	25
sec-Butylbenzene	9.4	9.1	25.	ug/l	J	8260B	11/20/14	25
Carbon disulfide	U	6.9	25.	ug/l		8260B	11/20/14	25
Carbon tetrachloride	U	9.5	25.	ug/l		8260B	11/20/14	25
Chlorobenzene	U	8.7	25.	ug/l		8260B	11/20/14	25
Chlorodibromomethane	U	8.2	25.	ug/l		8260B	11/20/14	25
Chloroethane	U	11.	130	ug/l		8260B	11/20/14	25
Chloroform	U	8.1	130	ug/l		8260B	11/20/14	25
Chloromethane	U	6.9	63.	ug/l		8260B	11/20/14	25
1,2-Dibromoethane	U	9.5	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethane	U	6.5	25.	ug/l		8260B	11/20/14	25
1,2-Dichloroethane	U	9.0	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
cis-1,2-Dichloroethene	U	6.5	25.	ug/l		8260B	11/20/14	25
trans-1,2-Dichloroethene	U	9.9	25.	ug/l		8260B	11/20/14	25
1,2-Dichloropropane	U	7.6	25.	ug/l		8260B	11/20/14	25
cis-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25
trans-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-136

Sample ID : MW-48

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	75.	9.6	25.	ug/l		8260B	11/20/14	25
Isopropylbenzene	41.	8.2	25.	ug/l		8260B	11/20/14	25
p-Isopropyltoluene	U	8.8	25.	ug/l		8260B	11/20/14	25
2-Butanone (MEK)	U	98.	250	ug/l		8260B	11/20/14	25
2-Hexanone	U	96.	250	ug/l		8260B	11/20/14	25
Methylene Chloride	U	25.	130	ug/l		8260B	11/20/14	25
4-Methyl-2-pentanone (MIBK)	U	54.	250	ug/l		8260B	11/20/14	25
Methyl tert-butyl ether	1100	9.2	25.	ug/l		8260B	11/20/14	25
Naphthalene	28.	25.	130	ug/l	J	8260B	11/20/14	25
n-Propylbenzene	68.	8.7	25.	ug/l		8260B	11/20/14	25
Styrene	U	7.7	25.	ug/l		8260B	11/20/14	25
1,1,1,2-Tetrachloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
1,1,2,2-Tetrachloroethane	U	3.2	25.	ug/l		8260B	11/20/14	25
Tetrachloroethene	U	9.3	25.	ug/l		8260B	11/20/14	25
Toluene	30.	20.	130	ug/l	J	8260B	11/20/14	25
1,1,1-Trichloroethane	U	8.0	25.	ug/l		8260B	11/20/14	25
1,1,2-Trichloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
Trichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
1,2,4-Trimethylbenzene	200	9.3	25.	ug/l		8260B	11/20/14	25
1,3,5-Trimethylbenzene	U	9.7	25.	ug/l		8260B	11/20/14	25
Vinyl chloride	U	6.5	25.	ug/l		8260B	11/20/14	25
o-Xylene	10.	8.5	25.	ug/l	J	8260B	11/20/14	25
m&p-Xylene	120	18.	50.	ug/l		8260B	11/20/14	25
Xylenes, Total	130	26.	75.	ug/l		8260B	11/20/14	25
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	99.1			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	94.4			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	4000	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	880	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	108.			% Rec.		8015	11/20/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-137

Sample ID : MW-65

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1900000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	58.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	370	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	260000	460	10000	ug/l		6020	12/01/14	10
Chromium	0.74	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	8600	50.	100	ug/l		6020	12/01/14	1
Lead	1.9	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	2200	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	890	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	0.42	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	290000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	27000	1600	5000	ug/l		8015D/G	11/21/14	50
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.0			% Rec.		8015D/G	11/21/14	50
Volatile Organics								
Acetone	U	500	2500	ug/l	J3	8260B	11/20/14	50
Benzene	8900	160	500	ug/l		8260B	11/21/14	500
Bromodichloromethane	U	19.	50.	ug/l		8260B	11/20/14	50
Bromoform	U	23.	50.	ug/l		8260B	11/20/14	50
Bromomethane	U	43.	250	ug/l		8260B	11/20/14	50
n-Butylbenzene	U	18.	50.	ug/l		8260B	11/20/14	50
sec-Butylbenzene	U	18.	50.	ug/l		8260B	11/20/14	50
Carbon disulfide	U	14.	50.	ug/l		8260B	11/20/14	50
Carbon tetrachloride	U	19.	50.	ug/l		8260B	11/20/14	50
Chlorobenzene	U	17.	50.	ug/l		8260B	11/20/14	50
Chlorodibromomethane	U	16.	50.	ug/l		8260B	11/20/14	50
Chloroethane	U	23.	250	ug/l		8260B	11/20/14	50
Chloroform	U	16.	250	ug/l		8260B	11/20/14	50
Chloromethane	U	14.	130	ug/l		8260B	11/20/14	50
1,2-Dibromoethane	U	19.	50.	ug/l		8260B	11/20/14	50
1,1-Dichloroethane	U	13.	50.	ug/l		8260B	11/20/14	50
1,2-Dichloroethane	U	18.	50.	ug/l		8260B	11/20/14	50
1,1-Dichloroethene	U	20.	50.	ug/l		8260B	11/20/14	50
cis-1,2-Dichloroethene	U	13.	50.	ug/l		8260B	11/20/14	50
trans-1,2-Dichloroethene	U	20.	50.	ug/l		8260B	11/20/14	50
1,2-Dichloropropane	U	15.	50.	ug/l		8260B	11/20/14	50
cis-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/20/14	50
trans-1,3-Dichloropropene	U	21.	50.	ug/l		8260B	11/20/14	50

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-65

Collected By : SU/HMI Team
Collection Date : 11/13/14 15:20

ESC Sample # : L733743-137

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	1200	19.	50.	ug/l		8260B	11/20/14	50
Isopropylbenzene	53.	16.	50.	ug/l		8260B	11/20/14	50
p-Isopropyltoluene	U	18.	50.	ug/l		8260B	11/20/14	50
2-Butanone (MEK)	U	200	500	ug/l		8260B	11/20/14	50
2-Hexanone	U	190	500	ug/l		8260B	11/20/14	50
Methylene Chloride	U	50.	250	ug/l		8260B	11/20/14	50
4-Methyl-2-pentanone (MIBK)	U	110	500	ug/l		8260B	11/20/14	50
Methyl tert-butyl ether	4700	18.	50.	ug/l		8260B	11/20/14	50
Methyl tert-butyl ether	3400	180	500	ug/l		8260B	11/20/14	50
Naphthalene	220	50.	250	ug/l	J	8260B	11/20/14	50
n-Propylbenzene	83.	17.	50.	ug/l		8260B	11/20/14	50
Styrene	U	15.	50.	ug/l		8260B	11/20/14	50
1,1,1,2-Tetrachloroethane	U	19.	50.	ug/l		8260B	11/20/14	50
1,1,2,2-Tetrachloroethane	U	6.5	50.	ug/l		8260B	11/20/14	50
Tetrachloroethene	U	19.	50.	ug/l		8260B	11/20/14	50
Toluene	U	39.	250	ug/l		8260B	11/20/14	50
1,1,1-Trichloroethane	U	16.	50.	ug/l		8260B	11/20/14	50
1,1,2-Trichloroethane	U	19.	50.	ug/l		8260B	11/20/14	50
Trichloroethene	U	20.	50.	ug/l		8260B	11/20/14	50
1,2,4-Trimethylbenzene	60.	19.	50.	ug/l		8260B	11/20/14	50
1,3,5-Trimethylbenzene	22.	19.	50.	ug/l	J	8260B	11/20/14	50
Vinyl chloride	U	13.	50.	ug/l		8260B	11/20/14	50
o-Xylene	25.	17.	50.	ug/l	J	8260B	11/20/14	50
m&p-Xylene	180	36.	100	ug/l		8260B	11/20/14	50
Xylenes, Total	210	53.	150	ug/l		8260B	11/20/14	50
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	92.7			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	98.9			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	15000	44.	200	ug/l		8015	11/20/14	2
C28-C40 Oil Range	1200	24.	200	ug/l		8015	11/20/14	2
Surrogate Recovery								
o-Terphenyl	118.			% Rec.		8015	11/20/14	2

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-138

Sample ID : MW-99

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 16:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1100000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	12.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	430	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	170000	460	10000	ug/l		6020	12/01/14	10
Chromium	1.9	0.54	1.0	ug/l		6020	12/01/14	1
Iron	1200	50.	100	ug/l		6020	12/01/14	1
Lead	3.8	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	290	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	3900	37.	1000	ug/l		6020	12/01/14	1
Selenium	U	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	170000	1100	10000	ug/l		6020	12/01/14	10
TPH (GC/FID) Low Fraction	14000	1600	5000	ug/l		8015D/G	11/21/14	50
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.6			% Rec.		8015D/G	11/21/14	50
Volatile Organics								
Acetone	U	100	500	ug/l	J3	8260B	11/20/14	10
Benzene	2600	33.	100	ug/l		8260B	11/21/14	100
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/20/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/20/14	10
n-Butylbenzene	6.5	3.6	10.	ug/l	J	8260B	11/20/14	10
sec-Butylbenzene	8.1	3.6	10.	ug/l	J	8260B	11/20/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/20/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/20/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/20/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/20/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/20/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/20/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/20/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/20/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/20/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/20/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-138

Sample ID : MW-99

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 16:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	590	3.8	10.	ug/l		8260B	11/20/14	10
Isopropylbenzene	37.	3.3	10.	ug/l		8260B	11/20/14	10
p-Isopropyltoluene	8.3	3.5	10.	ug/l	J	8260B	11/20/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/20/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/20/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/20/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/20/14	10
Methyl tert-butyl ether	3400	3.7	10.	ug/l	E	8260B	11/20/14	10
Naphthalene	44.	10.	50.	ug/l	J	8260B	11/20/14	10
n-Propylbenzene	52.	3.5	10.	ug/l		8260B	11/20/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/20/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/20/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/20/14	10
Toluene	580	7.8	50.	ug/l		8260B	11/20/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/20/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2,4-Trimethylbenzene	330	3.7	10.	ug/l		8260B	11/20/14	10
1,3,5-Trimethylbenzene	36.	3.9	10.	ug/l		8260B	11/20/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/20/14	10
o-Xylene	150	3.4	10.	ug/l		8260B	11/20/14	10
m&p-Xylene	690	7.2	20.	ug/l		8260B	11/20/14	10
Xylenes, Total	840	11.	30.	ug/l		8260B	11/20/14	10
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	94.5			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	98.5			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2500	22.	100	ug/l		8015	11/20/14	1
C28-C40 Oil Range	440	12.	100	ug/l		8015	11/20/14	1
Surrogate Recovery								
o-Terphenyl	107.			% Rec.		8015	11/20/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-139

Sample ID : KWB-10R

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1200000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	36.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	3400	3.6	50.	ug/l		6020	12/01/14	10
Calcium	170000	460	10000	ug/l		6020	12/01/14	10
Chromium	1.0	0.54	1.0	ug/l		6020	12/01/14	1
Iron	8200	50.	100	ug/l		6020	12/01/14	1
Lead	4.2	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	190	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	510	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	0.52	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	160000	1100	10000	ug/l		6020	12/01/14	10
Volatile Organics								
Acetone	U	250	1300	ug/l	J3	8260B	11/20/14	25
Benzene	5100	83.	250	ug/l		8260B	11/21/14	250
Bromodichloromethane	U	9.5	25.	ug/l		8260B	11/20/14	25
Bromoform	U	12.	25.	ug/l		8260B	11/20/14	25
Bromomethane	U	22.	130	ug/l		8260B	11/20/14	25
n-Butylbenzene	11.	9.0	25.	ug/l	J	8260B	11/20/14	25
sec-Butylbenzene	10.	9.1	25.	ug/l	J	8260B	11/20/14	25
Carbon disulfide	U	6.9	25.	ug/l		8260B	11/20/14	25
Carbon tetrachloride	U	9.5	25.	ug/l		8260B	11/20/14	25
Chlorobenzene	U	8.7	25.	ug/l		8260B	11/20/14	25
Chlorodibromomethane	U	8.2	25.	ug/l		8260B	11/20/14	25
Chloroethane	U	11.	130	ug/l		8260B	11/20/14	25
Chloroform	U	8.1	130	ug/l		8260B	11/20/14	25
Chloromethane	U	6.9	63.	ug/l		8260B	11/20/14	25
1,2-Dibromoethane	U	9.5	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethane	U	6.5	25.	ug/l		8260B	11/20/14	25
1,2-Dichloroethane	U	9.0	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
cis-1,2-Dichloroethene	U	6.5	25.	ug/l		8260B	11/20/14	25
trans-1,2-Dichloroethene	U	9.9	25.	ug/l		8260B	11/20/14	25
1,2-Dichloropropane	U	7.6	25.	ug/l		8260B	11/20/14	25
cis-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25
trans-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25
Ethylbenzene	400	9.6	25.	ug/l		8260B	11/20/14	25
Isopropylbenzene	40.	8.2	25.	ug/l		8260B	11/20/14	25
p-Isopropyltoluene	13.	8.8	25.	ug/l	J	8260B	11/20/14	25
2-Butanone (MEK)	400	98.	250	ug/l		8260B	11/20/14	25

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-139

Sample ID : KWB-10R

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	96.	250	ug/l		8260B	11/20/14	25
Methylene Chloride	U	25.	130	ug/l		8260B	11/20/14	25
4-Methyl-2-pentanone (MIBK)	U	54.	250	ug/l		8260B	11/20/14	25
Methyl tert-butyl ether	5900	9.2	25.	ug/l	E	8260B	11/20/14	25
Methyl tert-butyl ether	5200	92.	250	ug/l	E	8260B	11/20/14	25
Naphthalene	190	25.	130	ug/l		8260B	11/20/14	25
n-Propylbenzene	62.	8.7	25.	ug/l		8260B	11/20/14	25
Styrene	U	7.7	25.	ug/l		8260B	11/20/14	25
1,1,1,2-Tetrachloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
1,1,2,2-Tetrachloroethane	U	3.2	25.	ug/l		8260B	11/20/14	25
Tetrachloroethene	U	9.3	25.	ug/l		8260B	11/20/14	25
Toluene	180	20.	130	ug/l		8260B	11/20/14	25
1,1,1-Trichloroethane	U	8.0	25.	ug/l		8260B	11/20/14	25
1,1,2-Trichloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
Trichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
1,2,4-Trimethylbenzene	410	9.3	25.	ug/l		8260B	11/20/14	25
1,3,5-Trimethylbenzene	110	9.7	25.	ug/l		8260B	11/20/14	25
Vinyl chloride	U	6.5	25.	ug/l		8260B	11/20/14	25
o-Xylene	320	8.5	25.	ug/l		8260B	11/20/14	25
m&p-Xylene	900	18.	50.	ug/l		8260B	11/20/14	25
Xylenes, Total	1200	26.	75.	ug/l		8260B	11/20/14	25
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	93.4			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	98.5			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	12000	44.	200	ug/l		8015	11/19/14	2
C28-C40 Oil Range	500	24.	200	ug/l		8015	11/19/14	2
Surrogate Recovery								
o-Terphenyl	72.5			% Rec.		8015	11/19/14	2

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : KWB-2R

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:30

ESC Sample # : L733743-140

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	5.3	0.25	2.0	ug/l		6020	12/01/14	1
Barium	89.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	330000	230	5000	ug/l		6020	12/01/14	5
Chromium	0.60	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	570	50.	100	ug/l		6020	12/01/14	1
Lead	3.9	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	310	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	1200	37.	1000	ug/l		6020	12/01/14	1
Selenium	0.48	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	200000	550	5000	ug/l		6020	12/01/14	5
Volatile Organics								
Acetone	U	250	1300	ug/l	J3	8260B	11/20/14	25
Benzene	4400	8.3	25.	ug/l		8260B	11/20/14	25
Bromodichloromethane	U	9.5	25.	ug/l		8260B	11/20/14	25
Bromoform	U	12.	25.	ug/l		8260B	11/20/14	25
Bromomethane	U	22.	130	ug/l		8260B	11/20/14	25
n-Butylbenzene	10.	9.0	25.	ug/l	J	8260B	11/20/14	25
sec-Butylbenzene	12.	9.1	25.	ug/l	J	8260B	11/20/14	25
Carbon disulfide	U	6.9	25.	ug/l		8260B	11/20/14	25
Carbon tetrachloride	U	9.5	25.	ug/l		8260B	11/20/14	25
Chlorobenzene	U	8.7	25.	ug/l		8260B	11/20/14	25
Chlorodibromomethane	U	8.2	25.	ug/l		8260B	11/20/14	25
Chloroethane	U	11.	130	ug/l		8260B	11/20/14	25
Chloroform	U	8.1	130	ug/l		8260B	11/20/14	25
Chloromethane	U	6.9	63.	ug/l		8260B	11/20/14	25
1,2-Dibromoethane	U	9.5	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethane	U	6.5	25.	ug/l		8260B	11/20/14	25
1,2-Dichloroethane	U	9.0	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
cis-1,2-Dichloroethene	U	6.5	25.	ug/l		8260B	11/20/14	25
trans-1,2-Dichloroethene	U	9.9	25.	ug/l		8260B	11/20/14	25
1,2-Dichloropropane	U	7.6	25.	ug/l		8260B	11/20/14	25
cis-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25
trans-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25
Ethylbenzene	2900	9.6	25.	ug/l		8260B	11/20/14	25
Isopropylbenzene	82.	8.2	25.	ug/l		8260B	11/20/14	25
p-Isopropyltoluene	U	8.8	25.	ug/l		8260B	11/20/14	25
2-Butanone (MEK)	U	98.	250	ug/l		8260B	11/20/14	25

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-140

Sample ID : KWB-2R

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	96.	250	ug/l		8260B	11/20/14	25
Methylene Chloride	U	25.	130	ug/l		8260B	11/20/14	25
4-Methyl-2-pentanone (MIBK)	U	54.	250	ug/l		8260B	11/20/14	25
Methyl tert-butyl ether	34.	9.2	25.	ug/l		8260B	11/20/14	25
Naphthalene	510	25.	130	ug/l		8260B	11/20/14	25
n-Propylbenzene	160	8.7	25.	ug/l		8260B	11/20/14	25
Styrene	U	7.7	25.	ug/l		8260B	11/20/14	25
1,1,1,2-Tetrachloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
1,1,2,2-Tetrachloroethane	U	3.2	25.	ug/l		8260B	11/20/14	25
Tetrachloroethene	U	9.3	25.	ug/l		8260B	11/20/14	25
Toluene	35.	20.	130	ug/l	J	8260B	11/20/14	25
1,1,1-Trichloroethane	U	8.0	25.	ug/l		8260B	11/20/14	25
1,1,2-Trichloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
Trichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
1,2,4-Trimethylbenzene	790	9.3	25.	ug/l		8260B	11/20/14	25
1,3,5-Trimethylbenzene	39.	9.7	25.	ug/l		8260B	11/20/14	25
Vinyl chloride	U	6.5	25.	ug/l		8260B	11/20/14	25
o-Xylene	31.	8.5	25.	ug/l		8260B	11/20/14	25
m&p-Xylene	710	18.	50.	ug/l		8260B	11/20/14	25
Xylenes, Total	740	26.	75.	ug/l		8260B	11/20/14	25
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	93.8			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	95.8			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	5500	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	290	59.	500	ug/l	J	8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	148.			% Rec.		8015	11/20/14	5

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-141

Sample ID : KWB-5

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	200	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1500000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	24.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	3700	18.	250	ug/l		6020	12/01/14	50
Calcium	270000	230	5000	ug/l		6020	12/01/14	5
Chromium	0.59	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	5400	50.	100	ug/l		6020	12/01/14	1
Lead	0.42	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	2300	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	1000	37.	1000	ug/l		6020	12/01/14	1
Selenium	0.82	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	210000	550	5000	ug/l		6020	12/01/14	5
Volatile Organics								
Acetone	U	100	500	ug/l	J3	8260B	11/20/14	10
Benzene	410	3.3	10.	ug/l		8260B	11/20/14	10
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/20/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/20/14	10
n-Butylbenzene	U	3.6	10.	ug/l		8260B	11/20/14	10
sec-Butylbenzene	U	3.6	10.	ug/l		8260B	11/20/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/20/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/20/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/20/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/20/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/20/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/20/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/20/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/20/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/20/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/20/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10
Ethylbenzene	9.5	3.8	10.	ug/l	J	8260B	11/20/14	10
Isopropylbenzene	6.6	3.3	10.	ug/l	J	8260B	11/20/14	10
p-Isopropyltoluene	U	3.5	10.	ug/l		8260B	11/20/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/20/14	10

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-141

Sample ID : KWB-5

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 14:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	38.	100	ug/l		8260B	11/20/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/20/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/20/14	10
Methyl tert-butyl ether	9900	3.7	10.	ug/l	E	8260B	11/20/14	10
Naphthalene	23.	10.	50.	ug/l	J	8260B	11/20/14	10
n-Propylbenzene	11.	3.5	10.	ug/l		8260B	11/20/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/20/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/20/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/20/14	10
Toluene	U	7.8	50.	ug/l		8260B	11/20/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/20/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2,4-Trimethylbenzene	U	3.7	10.	ug/l		8260B	11/20/14	10
1,3,5-Trimethylbenzene	U	3.9	10.	ug/l		8260B	11/20/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/20/14	10
o-Xylene	U	3.4	10.	ug/l		8260B	11/20/14	10
m&p-Xylene	U	7.2	20.	ug/l		8260B	11/20/14	10
Xylenes, Total	U	11.	30.	ug/l		8260B	11/20/14	10
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	92.1			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	93.3			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	1800	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	290	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	112.			% Rec.		8015	11/19/14	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-142

Sample ID : KWB-6

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 15:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	370	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1600000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	9.5	0.25	2.0	ug/l		6020	12/01/14	1
Barium	160	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	260000	230	5000	ug/l		6020	12/01/14	5
Chromium	0.73	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	770	50.	100	ug/l		6020	12/01/14	1
Lead	1.0	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	2200	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	200	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	1.3	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	150000	550	5000	ug/l		6020	12/01/14	5
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/20/14	10
Benzene	5100	33.	100	ug/l		8260B	11/21/14	100
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/20/14	10
Bromomethane	U	8.7	50.	ug/l	J4	8260B	11/20/14	10
n-Butylbenzene	U	3.6	10.	ug/l		8260B	11/20/14	10
sec-Butylbenzene	5.6	3.6	10.	ug/l	J	8260B	11/20/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/20/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/20/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/20/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/20/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/20/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/20/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/20/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/20/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/20/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/20/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/20/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/20/14	10
Ethylbenzene	810	3.8	10.	ug/l		8260B	11/20/14	10
Isopropylbenzene	40.	3.3	10.	ug/l		8260B	11/20/14	10
p-Isopropyltoluene	4.2	3.5	10.	ug/l	J	8260B	11/20/14	10
2-Butanone (MEK)	U	39.	100	ug/l		8260B	11/20/14	10

U = ND (Not Detected)

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

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-142

Sample ID : KWB-6

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 15:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
2-Hexanone	U	38.	100	ug/l		8260B	11/20/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/20/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/20/14	10
Methyl tert-butyl ether	160	3.7	10.	ug/l		8260B	11/20/14	10
Naphthalene	98.	10.	50.	ug/l		8260B	11/20/14	10
n-Propylbenzene	58.	3.5	10.	ug/l		8260B	11/20/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/20/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/20/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/20/14	10
Toluene	530	7.8	50.	ug/l		8260B	11/20/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/20/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/20/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/20/14	10
1,2,4-Trimethylbenzene	260	3.7	10.	ug/l		8260B	11/20/14	10
1,3,5-Trimethylbenzene	47.	3.9	10.	ug/l		8260B	11/20/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/20/14	10
o-Xylene	200	3.4	10.	ug/l		8260B	11/20/14	10
m&p-Xylene	930	7.2	20.	ug/l		8260B	11/20/14	10
Xylenes, Total	1100	11.	30.	ug/l		8260B	11/20/14	10
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	113.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	96.4			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	1800	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	140	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	11/19/14	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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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-143

Sample ID : MW-112

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1200000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	5.0	0.25	2.0	ug/l		6020	12/01/14	1
Barium	7600	36.	500	ug/l		6020	12/01/14	100
Calcium	190000	230	5000	ug/l		6020	12/01/14	5
Chromium	2.1	0.54	1.0	ug/l		6020	12/01/14	1
Iron	5800	50.	100	ug/l		6020	12/01/14	1
Lead	1.3	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	310	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	310	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	1.8	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	190000	550	5000	ug/l		6020	12/01/14	5
TPH (GC/FID) Low Fraction	28000	1600	5000	ug/l		8015D/G	11/21/14	50
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.1			% Rec.		8015D/G	11/21/14	50
Volatile Organics								
Acetone	U	250	1300	ug/l		8260B	11/20/14	25
Benzene	8500	83.	250	ug/l		8260B	11/21/14	250
Bromodichloromethane	U	9.5	25.	ug/l		8260B	11/20/14	25
Bromoform	U	12.	25.	ug/l		8260B	11/20/14	25
Bromomethane	U	22.	130	ug/l	J4	8260B	11/20/14	25
n-Butylbenzene	U	9.0	25.	ug/l		8260B	11/20/14	25
sec-Butylbenzene	9.1	9.1	25.	ug/l	J	8260B	11/20/14	25
Carbon disulfide	U	6.9	25.	ug/l		8260B	11/20/14	25
Carbon tetrachloride	U	9.5	25.	ug/l		8260B	11/20/14	25
Chlorobenzene	U	8.7	25.	ug/l		8260B	11/20/14	25
Chlorodibromomethane	U	8.2	25.	ug/l		8260B	11/20/14	25
Chloroethane	U	11.	130	ug/l		8260B	11/20/14	25
Chloroform	U	8.1	130	ug/l		8260B	11/20/14	25
Chloromethane	U	6.9	63.	ug/l		8260B	11/20/14	25
1,2-Dibromoethane	U	9.5	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethane	U	6.5	25.	ug/l		8260B	11/20/14	25
1,2-Dichloroethane	U	9.0	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
cis-1,2-Dichloroethene	U	6.5	25.	ug/l		8260B	11/20/14	25
trans-1,2-Dichloroethene	U	9.9	25.	ug/l		8260B	11/20/14	25
1,2-Dichloropropane	U	7.6	25.	ug/l		8260B	11/20/14	25
cis-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25
trans-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-143

Sample ID : MW-112

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 12:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	970	9.6	25.	ug/l		8260B	11/20/14	25
Isopropylbenzene	57.	8.2	25.	ug/l		8260B	11/20/14	25
p-Isopropyltoluene	U	8.8	25.	ug/l		8260B	11/20/14	25
2-Butanone (MEK)	U	98.	250	ug/l		8260B	11/20/14	25
2-Hexanone	U	96.	250	ug/l		8260B	11/20/14	25
Methylene Chloride	U	25.	130	ug/l		8260B	11/20/14	25
4-Methyl-2-pentanone (MIBK)	U	54.	250	ug/l		8260B	11/20/14	25
Methyl tert-butyl ether	1000	9.2	25.	ug/l		8260B	11/20/14	25
Naphthalene	200	25.	130	ug/l		8260B	11/20/14	25
n-Propylbenzene	100	8.7	25.	ug/l		8260B	11/20/14	25
Styrene	U	7.7	25.	ug/l		8260B	11/20/14	25
1,1,1,2-Tetrachloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
1,1,2,2-Tetrachloroethane	U	3.2	25.	ug/l		8260B	11/20/14	25
Tetrachloroethene	U	9.3	25.	ug/l		8260B	11/20/14	25
Toluene	730	20.	130	ug/l		8260B	11/20/14	25
1,1,1-Trichloroethane	U	8.0	25.	ug/l		8260B	11/20/14	25
1,1,2-Trichloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
Trichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
1,2,4-Trimethylbenzene	350	9.3	25.	ug/l		8260B	11/20/14	25
1,3,5-Trimethylbenzene	90.	9.7	25.	ug/l		8260B	11/20/14	25
Vinyl chloride	U	6.5	25.	ug/l		8260B	11/20/14	25
o-Xylene	600	8.5	25.	ug/l		8260B	11/20/14	25
m&p-Xylene	1400	18.	50.	ug/l		8260B	11/20/14	25
Xylenes, Total	2000	26.	75.	ug/l		8260B	11/20/14	25
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	112.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	95.4			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2200	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	100	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	105.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-58
Collected By : SU/HMI Team
Collection Date : 11/13/14 09:15

ESC Sample # : L733743-144

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1300000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	7.8	0.25	2.0	ug/l		6020	12/01/14	1
Barium	670	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	340000	230	5000	ug/l		6020	12/01/14	5
Chromium	0.83	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	660	50.	100	ug/l		6020	12/01/14	1
Lead	5.8	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	94.	0.25	5.0	ug/l		6020	12/01/14	1
Nickel	1.5	0.35	2.0	ug/l	J	6020	12/01/14	1
Potassium	550	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	0.40	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	66000	110	1000	ug/l		6020	12/01/14	1
Vanadium	4.3	0.18	5.0	ug/l	J	6020	12/01/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
Volatile Organics								
Acetone	U	250	1300	ug/l		8260B	11/20/14	25
Benzene	7400	83.	250	ug/l		8260B	11/21/14	250
Bromodichloromethane	U	9.5	25.	ug/l		8260B	11/20/14	25
Bromoform	U	12.	25.	ug/l		8260B	11/20/14	25
Bromomethane	U	22.	130	ug/l	J4	8260B	11/20/14	25
n-Butylbenzene	U	9.0	25.	ug/l		8260B	11/20/14	25
sec-Butylbenzene	9.7	9.1	25.	ug/l	J	8260B	11/20/14	25
Carbon disulfide	U	6.9	25.	ug/l		8260B	11/20/14	25
Carbon tetrachloride	U	9.5	25.	ug/l		8260B	11/20/14	25
Chlorobenzene	U	8.7	25.	ug/l		8260B	11/20/14	25
Chlorodibromomethane	U	8.2	25.	ug/l		8260B	11/20/14	25
Chloroethane	U	11.	130	ug/l		8260B	11/20/14	25
Chloroform	U	8.1	130	ug/l		8260B	11/20/14	25
Chloromethane	U	6.9	63.	ug/l		8260B	11/20/14	25
1,2-Dibromoethane	U	9.5	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethane	U	6.5	25.	ug/l		8260B	11/20/14	25
1,2-Dichloroethane	U	9.0	25.	ug/l		8260B	11/20/14	25
1,1-Dichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
cis-1,2-Dichloroethene	U	6.5	25.	ug/l		8260B	11/20/14	25
trans-1,2-Dichloroethene	U	9.9	25.	ug/l		8260B	11/20/14	25
1,2-Dichloropropane	U	7.6	25.	ug/l		8260B	11/20/14	25

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-144

Sample ID : MW-58

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
cis-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25
trans-1,3-Dichloropropene	U	10.	25.	ug/l		8260B	11/20/14	25
Ethylbenzene	2400	9.6	25.	ug/l		8260B	11/20/14	25
Isopropylbenzene	66.	8.2	25.	ug/l		8260B	11/20/14	25
p-Isopropyltoluene	U	8.8	25.	ug/l		8260B	11/20/14	25
2-Butanone (MEK)	U	98.	250	ug/l		8260B	11/20/14	25
2-Hexanone	U	96.	250	ug/l		8260B	11/20/14	25
Methylene Chloride	U	25.	130	ug/l		8260B	11/20/14	25
4-Methyl-2-pentanone (MIBK)	U	54.	250	ug/l		8260B	11/20/14	25
Methyl tert-butyl ether	U	9.2	25.	ug/l		8260B	11/20/14	25
Naphthalene	480	25.	130	ug/l		8260B	11/20/14	25
n-Propylbenzene	100	8.7	25.	ug/l		8260B	11/20/14	25
Styrene	U	7.7	25.	ug/l		8260B	11/20/14	25
1,1,1,2-Tetrachloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
1,1,2,2-Tetrachloroethane	U	3.2	25.	ug/l		8260B	11/20/14	25
Tetrachloroethene	U	9.3	25.	ug/l		8260B	11/20/14	25
Toluene	U	20.	130	ug/l		8260B	11/20/14	25
1,1,1-Trichloroethane	U	8.0	25.	ug/l		8260B	11/20/14	25
1,1,2-Trichloroethane	U	9.6	25.	ug/l		8260B	11/20/14	25
Trichloroethene	U	10.	25.	ug/l		8260B	11/20/14	25
1,2,4-Trimethylbenzene	860	9.3	25.	ug/l		8260B	11/20/14	25
1,3,5-Trimethylbenzene	98.	9.7	25.	ug/l		8260B	11/20/14	25
Vinyl chloride	U	6.5	25.	ug/l		8260B	11/20/14	25
o-Xylene	76.	8.5	25.	ug/l		8260B	11/20/14	25
m&p-Xylene	1600	18.	50.	ug/l		8260B	11/20/14	25
Xylenes, Total	1600	26.	75.	ug/l		8260B	11/20/14	25
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	111.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	91.9			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	7800	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	1000	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	81.2			% Rec.		8015	11/20/14	5

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-145

Sample ID : MW-105

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2400000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	11.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	120	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	660000	460	10000	ug/l		6020	12/01/14	10
Chromium	2.7	0.54	1.0	ug/l		6020	12/01/14	1
Iron	870	50.	100	ug/l		6020	12/01/14	1
Lead	2.5	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	270	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	7000	37.	1000	ug/l		6020	12/01/14	1
Selenium	12.	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	29000	110	1000	ug/l		6020	12/01/14	1
TPH (GC/FID) Low Fraction	14000	3100	10000	ug/l		8015D/G	11/21/14	100
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.6			% Rec.		8015D/G	11/21/14	100
Volatile Organics								
Acetone	U	2500	13000	ug/l		8260B	11/20/14	250
Benzene	3400	83.	250	ug/l		8260B	11/20/14	250
Bromodichloromethane	U	95.	250	ug/l		8260B	11/20/14	250
Bromoform	U	120	250	ug/l		8260B	11/20/14	250
Bromomethane	U	220	1300	ug/l	J4	8260B	11/20/14	250
n-Butylbenzene	U	90.	250	ug/l		8260B	11/20/14	250
sec-Butylbenzene	U	91.	250	ug/l		8260B	11/20/14	250
Carbon disulfide	U	69.	250	ug/l		8260B	11/20/14	250
Carbon tetrachloride	U	95.	250	ug/l		8260B	11/20/14	250
Chlorobenzene	U	87.	250	ug/l		8260B	11/20/14	250
Chlorodibromomethane	U	82.	250	ug/l		8260B	11/20/14	250
Chloroethane	U	110	1300	ug/l		8260B	11/20/14	250
Chloroform	U	81.	1300	ug/l		8260B	11/20/14	250
Chloromethane	U	69.	630	ug/l		8260B	11/20/14	250
1,2-Dibromoethane	U	95.	250	ug/l		8260B	11/20/14	250
1,1-Dichloroethane	U	65.	250	ug/l		8260B	11/20/14	250
1,2-Dichloroethane	U	90.	250	ug/l		8260B	11/20/14	250
1,1-Dichloroethene	U	100	250	ug/l		8260B	11/20/14	250
cis-1,2-Dichloroethene	U	65.	250	ug/l		8260B	11/20/14	250
trans-1,2-Dichloroethene	U	99.	250	ug/l		8260B	11/20/14	250
1,2-Dichloropropane	U	76.	250	ug/l		8260B	11/20/14	250
cis-1,3-Dichloropropene	U	100	250	ug/l		8260B	11/20/14	250
trans-1,3-Dichloropropene	U	100	250	ug/l		8260B	11/20/14	250

U = ND (Not Detected)

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

MDL = Minimum Detection Limit = LOD = TRRP SDL

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1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-145

Sample ID : MW-105

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 09:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	580	96.	250	ug/l		8260B	11/20/14	250
Isopropylbenzene	U	82.	250	ug/l		8260B	11/20/14	250
p-Isopropyltoluene	U	88.	250	ug/l		8260B	11/20/14	250
2-Butanone (MEK)	U	980	2500	ug/l		8260B	11/20/14	250
2-Hexanone	U	960	2500	ug/l		8260B	11/20/14	250
Methylene Chloride	U	250	1300	ug/l		8260B	11/20/14	250
4-Methyl-2-pentanone (MIBK)	U	540	2500	ug/l		8260B	11/20/14	250
Methyl tert-butyl ether	U	92.	250	ug/l		8260B	11/20/14	250
Naphthalene	U	250	1300	ug/l		8260B	11/20/14	250
n-Propylbenzene	U	87.	250	ug/l		8260B	11/20/14	250
Styrene	U	77.	250	ug/l		8260B	11/20/14	250
1,1,1,2-Tetrachloroethane	U	96.	250	ug/l		8260B	11/20/14	250
1,1,2,2-Tetrachloroethane	U	32.	250	ug/l		8260B	11/20/14	250
Tetrachloroethene	U	93.	250	ug/l		8260B	11/20/14	250
Toluene	U	200	1300	ug/l		8260B	11/20/14	250
1,1,1-Trichloroethane	U	80.	250	ug/l		8260B	11/20/14	250
1,1,2-Trichloroethane	U	96.	250	ug/l		8260B	11/20/14	250
Trichloroethene	U	100	250	ug/l		8260B	11/20/14	250
1,2,4-Trimethylbenzene	110	93.	250	ug/l	J	8260B	11/20/14	250
1,3,5-Trimethylbenzene	U	97.	250	ug/l		8260B	11/20/14	250
Vinyl chloride	U	65.	250	ug/l		8260B	11/20/14	250
o-Xylene	U	85.	250	ug/l		8260B	11/20/14	250
m&p-Xylene	230	180	500	ug/l	J	8260B	11/20/14	250
Xylenes, Total	U	260	750	ug/l		8260B	11/20/14	250
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/20/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/20/14	1
4-Bromofluorobenzene	97.6			% Rec.		8260B	11/20/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	7800	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	750	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	104.			% Rec.		8015	11/20/14	5

U = ND (Not Detected)

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-146

Sample ID : MW-129

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1300000	2800	10000	ug/l		2540 C-	11/18/14	1
Arsenic	27.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	660	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	270000	230	5000	ug/l		6020	12/01/14	5
Chromium	4.5	0.54	1.0	ug/l		6020	12/01/14	1
Iron	7800	50.	100	ug/l		6020	12/01/14	1
Lead	4.4	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	1200	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	800	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	3.2	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	210000	550	5000	ug/l		6020	12/01/14	5
TPH (GC/FID) Low Fraction	4600	630	2000	ug/l		8015D/G	11/21/14	20
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.4			% Rec.		8015D/G	11/21/14	20
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/21/14	10
Benzene	84.	3.3	10.	ug/l		8260B	11/21/14	10
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/21/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/21/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/21/14	10
n-Butylbenzene	U	3.6	10.	ug/l		8260B	11/21/14	10
sec-Butylbenzene	U	3.6	10.	ug/l		8260B	11/21/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/21/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/21/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/21/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/21/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/21/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/21/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/21/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/21/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/21/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/21/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/21/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/21/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/21/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/21/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/21/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/21/14	10

U = ND (Not Detected)

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(615) 758-5858
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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-146

Sample ID : MW-129

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:25

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	25.	3.8	10.	ug/l		8260B	11/21/14	10
Isopropylbenzene	4.4	3.3	10.	ug/l	J	8260B	11/21/14	10
p-Isopropyltoluene	U	3.5	10.	ug/l		8260B	11/21/14	10
2-Butanone (MEK)	U	39.	100	ug/l	J4J3	8260B	11/21/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/21/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/21/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/21/14	10
Methyl tert-butyl ether	5400	3.7	10.	ug/l	E	8260B	11/21/14	10
Naphthalene	U	10.	50.	ug/l		8260B	11/21/14	10
n-Propylbenzene	4.8	3.5	10.	ug/l	J	8260B	11/21/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/21/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/21/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/21/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/21/14	10
Toluene	71.	7.8	50.	ug/l		8260B	11/21/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/21/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/21/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/21/14	10
1,2,4-Trimethylbenzene	14.	3.7	10.	ug/l		8260B	11/21/14	10
1,3,5-Trimethylbenzene	4.3	3.9	10.	ug/l	J	8260B	11/21/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/21/14	10
o-Xylene	16.	3.4	10.	ug/l		8260B	11/21/14	10
m&p-Xylene	43.	7.2	20.	ug/l		8260B	11/21/14	10
Xylenes, Total	59.	11.	30.	ug/l		8260B	11/21/14	10
Surrogate Recovery								
Toluene-d8	98.9			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	96.5			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	101.			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2700	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	320	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	118.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-147

Sample ID : MW-133

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1300000	2800	10000	ug/l		2540 C-	11/19/14	1
Arsenic	19.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	130	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	200000	230	5000	ug/l	V	6020	12/01/14	5
Chromium	0.60	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	3500	50.	100	ug/l		6020	12/01/14	1
Lead	0.80	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	380	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	460	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	U	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	140000	550	5000	ug/l	V	6020	12/01/14	5
TPH (GC/FID) Low Fraction	9400	1600	5000	ug/l		8015D/G	11/21/14	50
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.0			% Rec.		8015D/G	11/21/14	50
Volatile Organics								
Acetone	U	1000	5000	ug/l		8260B	11/21/14	100
Benzene	620	33.	100	ug/l		8260B	11/21/14	100
Bromodichloromethane	U	38.	100	ug/l		8260B	11/21/14	100
Bromoform	U	47.	100	ug/l		8260B	11/21/14	100
Bromomethane	U	87.	500	ug/l		8260B	11/21/14	100
n-Butylbenzene	U	36.	100	ug/l		8260B	11/21/14	100
sec-Butylbenzene	U	36.	100	ug/l		8260B	11/21/14	100
Carbon disulfide	U	28.	100	ug/l		8260B	11/21/14	100
Carbon tetrachloride	U	38.	100	ug/l		8260B	11/21/14	100
Chlorobenzene	U	35.	100	ug/l		8260B	11/21/14	100
Chlorodibromomethane	U	33.	100	ug/l		8260B	11/21/14	100
Chloroethane	U	45.	500	ug/l		8260B	11/21/14	100
Chloroform	U	32.	500	ug/l		8260B	11/21/14	100
Chloromethane	U	28.	250	ug/l		8260B	11/21/14	100
1,2-Dibromoethane	U	38.	100	ug/l		8260B	11/21/14	100
1,1-Dichloroethane	U	26.	100	ug/l		8260B	11/21/14	100
1,2-Dichloroethane	U	36.	100	ug/l		8260B	11/21/14	100
1,1-Dichloroethene	U	40.	100	ug/l		8260B	11/21/14	100
cis-1,2-Dichloroethene	U	26.	100	ug/l		8260B	11/21/14	100
trans-1,2-Dichloroethene	U	40.	100	ug/l		8260B	11/21/14	100
1,2-Dichloropropane	U	31.	100	ug/l		8260B	11/21/14	100
cis-1,3-Dichloropropene	U	42.	100	ug/l		8260B	11/21/14	100
trans-1,3-Dichloropropene	U	42.	100	ug/l		8260B	11/21/14	100

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-147

Sample ID : MW-133

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/12/14 10:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	300	38.	100	ug/l		8260B	11/21/14	100
Isopropylbenzene	57.	33.	100	ug/l	J	8260B	11/21/14	100
p-Isopropyltoluene	U	35.	100	ug/l		8260B	11/21/14	100
2-Butanone (MEK)	U	390	1000	ug/l	J4J3	8260B	11/21/14	100
2-Hexanone	U	380	1000	ug/l		8260B	11/21/14	100
Methylene Chloride	U	100	500	ug/l		8260B	11/21/14	100
4-Methyl-2-pentanone (MIBK)	U	210	1000	ug/l		8260B	11/21/14	100
Methyl tert-butyl ether	5600	37.	100	ug/l		8260B	11/21/14	100
Naphthalene	U	100	500	ug/l		8260B	11/21/14	100
n-Propylbenzene	84.	35.	100	ug/l	J	8260B	11/21/14	100
Styrene	U	31.	100	ug/l		8260B	11/21/14	100
1,1,1,2-Tetrachloroethane	U	38.	100	ug/l		8260B	11/21/14	100
1,1,2,2-Tetrachloroethane	U	13.	100	ug/l		8260B	11/21/14	100
Tetrachloroethene	U	37.	100	ug/l		8260B	11/21/14	100
Toluene	100	78.	500	ug/l	J	8260B	11/21/14	100
1,1,1-Trichloroethane	U	32.	100	ug/l		8260B	11/21/14	100
1,1,2-Trichloroethane	U	38.	100	ug/l		8260B	11/21/14	100
Trichloroethene	U	40.	100	ug/l		8260B	11/21/14	100
1,2,4-Trimethylbenzene	280	37.	100	ug/l		8260B	11/21/14	100
1,3,5-Trimethylbenzene	53.	39.	100	ug/l	J	8260B	11/21/14	100
Vinyl chloride	U	26.	100	ug/l		8260B	11/21/14	100
o-Xylene	38.	34.	100	ug/l	J	8260B	11/21/14	100
m&p-Xylene	180	72.	200	ug/l	J	8260B	11/21/14	100
Xylenes, Total	220	110	300	ug/l	J	8260B	11/21/14	100
Surrogate Recovery								
Toluene-d8	99.8			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	98.8			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	99.4			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	2800	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	250	12.	100	ug/l		8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	118.			% Rec.		8015	11/19/14	1

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1-800-767-5859
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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-148

Sample ID : MW-67

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 16:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	1.8	0.25	2.0	ug/l	J	6020	12/01/14	1
Barium	120	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	240000	230	5000	ug/l		6020	12/01/14	5
Chromium	0.74	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	0.94	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	130	0.25	5.0	ug/l		6020	12/01/14	1
Nickel	3.3	0.35	2.0	ug/l		6020	12/01/14	1
Potassium	590	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	14.	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	160000	550	5000	ug/l		6020	12/01/14	5
Vanadium	0.36	0.18	5.0	ug/l	J	6020	12/01/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	810	31.	100	ug/l		8015D/G	11/22/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	92.1			% Rec.		8015D/G	11/22/14	1
Volatile Organics								
Acetone	U	50.	250	ug/l	J4	8260B	11/23/14	5
Benzene	140	1.6	5.0	ug/l		8260B	11/23/14	5
Bromodichloromethane	U	1.9	5.0	ug/l		8260B	11/23/14	5
Bromoform	U	2.3	5.0	ug/l		8260B	11/23/14	5
Bromomethane	U	4.3	25.	ug/l		8260B	11/23/14	5
n-Butylbenzene	2.9	1.8	5.0	ug/l	J	8260B	11/23/14	5
sec-Butylbenzene	7.8	1.8	5.0	ug/l		8260B	11/23/14	5
Carbon disulfide	2.4	1.4	5.0	ug/l	J	8260B	11/23/14	5
Carbon tetrachloride	U	1.9	5.0	ug/l		8260B	11/23/14	5
Chlorobenzene	U	1.7	5.0	ug/l		8260B	11/23/14	5
Chlorodibromomethane	U	1.6	5.0	ug/l		8260B	11/23/14	5
Chloroethane	U	2.3	25.	ug/l		8260B	11/23/14	5
Chloroform	U	1.6	25.	ug/l		8260B	11/23/14	5
Chloromethane	U	1.4	13.	ug/l		8260B	11/23/14	5
1,2-Dibromoethane	U	1.9	5.0	ug/l		8260B	11/23/14	5
1,1-Dichloroethane	U	1.3	5.0	ug/l		8260B	11/23/14	5
1,2-Dichloroethane	U	1.8	5.0	ug/l		8260B	11/23/14	5

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-67

Collected By : SU/HMI Team
Collection Date : 11/13/14 16:30

ESC Sample # : L733743-148

Site ID : REST

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/23/14	5
cis-1,2-Dichloroethene	2.2	1.3	5.0	ug/l	J	8260B	11/23/14	5
trans-1,2-Dichloroethene	U	2.0	5.0	ug/l		8260B	11/23/14	5
1,2-Dichloropropane	U	1.5	5.0	ug/l		8260B	11/23/14	5
cis-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/23/14	5
trans-1,3-Dichloropropene	U	2.1	5.0	ug/l		8260B	11/23/14	5
Ethylbenzene	5.0	1.9	5.0	ug/l		8260B	11/23/14	5
Isopropylbenzene	27.	1.6	5.0	ug/l		8260B	11/23/14	5
p-Isopropyltoluene	U	1.8	5.0	ug/l		8260B	11/23/14	5
2-Butanone (MEK)	U	20.	50.	ug/l	J4	8260B	11/23/14	5
2-Hexanone	U	19.	50.	ug/l		8260B	11/23/14	5
Methylene Chloride	U	5.0	25.	ug/l		8260B	11/23/14	5
4-Methyl-2-pentanone (MIBK)	U	11.	50.	ug/l		8260B	11/23/14	5
Methyl tert-butyl ether	460	1.8	5.0	ug/l		8260B	11/23/14	5
Naphthalene	5.3	5.0	25.	ug/l	J	8260B	11/23/14	5
n-Propylbenzene	19.	1.7	5.0	ug/l		8260B	11/23/14	5
Styrene	U	1.5	5.0	ug/l		8260B	11/23/14	5
1,1,1,2-Tetrachloroethane	U	1.9	5.0	ug/l		8260B	11/23/14	5
1,1,2,2-Tetrachloroethane	U	0.65	5.0	ug/l		8260B	11/23/14	5
Tetrachloroethene	U	1.9	5.0	ug/l		8260B	11/23/14	5
Toluene	U	3.9	25.	ug/l		8260B	11/23/14	5
1,1,1-Trichloroethane	U	1.6	5.0	ug/l		8260B	11/23/14	5
1,1,2-Trichloroethane	U	1.9	5.0	ug/l		8260B	11/23/14	5
Trichloroethene	U	2.0	5.0	ug/l		8260B	11/23/14	5
1,2,4-Trimethylbenzene	5.0	1.9	5.0	ug/l	J	8260B	11/23/14	5
1,3,5-Trimethylbenzene	U	1.9	5.0	ug/l		8260B	11/23/14	5
Vinyl chloride	U	1.3	5.0	ug/l		8260B	11/23/14	5
o-Xylene	U	1.7	5.0	ug/l		8260B	11/23/14	5
m&p-Xylene	8.4	3.6	10.	ug/l	J	8260B	11/23/14	5
Xylenes, Total	8.4	5.3	15.	ug/l	J	8260B	11/23/14	5
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/23/14	1
Dibromofluoromethane	103.			% Rec.		8260B	11/23/14	1
4-Bromofluorobenzene	95.3			% Rec.		8260B	11/23/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	4200	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	820	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	104.			% Rec.		8015	11/20/14	5

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-149

Sample ID : MW-91

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2000000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	4.7	0.25	2.0	ug/l		6020	12/01/14	1
Barium	94.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	460000	230	5000	ug/l		6020	12/01/14	5
Chromium	0.99	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	1.3	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	26.	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	1000	37.	1000	ug/l		6020	12/01/14	1
Selenium	9.8	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	37000	110	1000	ug/l		6020	12/01/14	1
TPH (GC/FID) Low Fraction	7900	310	1000	ug/l		8015D/G	11/22/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	91.1			% Rec.		8015D/G	11/22/14	1
Volatile Organics								
Acetone	U	2500	13000	ug/l		8260B	11/21/14	250
Benzene	2500	83.	250	ug/l		8260B	11/21/14	250
Bromodichloromethane	U	95.	250	ug/l		8260B	11/21/14	250
Bromoform	U	120	250	ug/l		8260B	11/21/14	250
Bromomethane	U	220	1300	ug/l		8260B	11/21/14	250
n-Butylbenzene	U	90.	250	ug/l		8260B	11/21/14	250
sec-Butylbenzene	U	91.	250	ug/l		8260B	11/21/14	250
Carbon disulfide	U	69.	250	ug/l		8260B	11/21/14	250
Carbon tetrachloride	U	95.	250	ug/l		8260B	11/21/14	250
Chlorobenzene	U	87.	250	ug/l		8260B	11/21/14	250
Chlorodibromomethane	U	82.	250	ug/l		8260B	11/21/14	250
Chloroethane	U	110	1300	ug/l		8260B	11/21/14	250
Chloroform	U	81.	1300	ug/l		8260B	11/21/14	250
Chloromethane	U	69.	630	ug/l		8260B	11/21/14	250
1,2-Dibromoethane	U	95.	250	ug/l		8260B	11/21/14	250
1,1-Dichloroethane	U	65.	250	ug/l		8260B	11/21/14	250
1,2-Dichloroethane	U	90.	250	ug/l		8260B	11/21/14	250
1,1-Dichloroethene	U	100	250	ug/l		8260B	11/21/14	250
cis-1,2-Dichloroethene	U	65.	250	ug/l		8260B	11/21/14	250
trans-1,2-Dichloroethene	U	99.	250	ug/l		8260B	11/21/14	250
1,2-Dichloropropane	U	76.	250	ug/l		8260B	11/21/14	250
cis-1,3-Dichloropropene	U	100	250	ug/l		8260B	11/21/14	250
trans-1,3-Dichloropropene	U	100	250	ug/l		8260B	11/21/14	250

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-149

Sample ID : MW-91

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	170	96.	250	ug/l	J	8260B	11/21/14	250
Isopropylbenzene	100	82.	250	ug/l	J	8260B	11/21/14	250
p-Isopropyltoluene	U	88.	250	ug/l		8260B	11/21/14	250
2-Butanone (MEK)	U	980	2500	ug/l	J4J3	8260B	11/21/14	250
2-Hexanone	U	960	2500	ug/l		8260B	11/21/14	250
Methylene Chloride	U	250	1300	ug/l		8260B	11/21/14	250
4-Methyl-2-pentanone (MIBK)	U	540	2500	ug/l		8260B	11/21/14	250
Methyl tert-butyl ether	U	92.	250	ug/l		8260B	11/21/14	250
Naphthalene	U	250	1300	ug/l		8260B	11/21/14	250
n-Propylbenzene	110	87.	250	ug/l	J	8260B	11/21/14	250
Styrene	U	77.	250	ug/l		8260B	11/21/14	250
1,1,1,2-Tetrachloroethane	U	96.	250	ug/l		8260B	11/21/14	250
1,1,2,2-Tetrachloroethane	U	32.	250	ug/l		8260B	11/21/14	250
Tetrachloroethene	U	93.	250	ug/l		8260B	11/21/14	250
Toluene	920	200	1300	ug/l	J	8260B	11/21/14	250
1,1,1-Trichloroethane	U	80.	250	ug/l		8260B	11/21/14	250
1,1,2-Trichloroethane	U	96.	250	ug/l		8260B	11/21/14	250
Trichloroethene	U	100	250	ug/l		8260B	11/21/14	250
1,2,4-Trimethylbenzene	180	93.	250	ug/l	J	8260B	11/21/14	250
1,3,5-Trimethylbenzene	U	97.	250	ug/l		8260B	11/21/14	250
Vinyl chloride	U	65.	250	ug/l		8260B	11/21/14	250
o-Xylene	U	85.	250	ug/l		8260B	11/21/14	250
m&p-Xylene	540	180	500	ug/l		8260B	11/21/14	250
Xylenes, Total	540	260	750	ug/l	J	8260B	11/21/14	250
Surrogate Recovery								
Toluene-d8	99.0			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	97.8			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	11000	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	1800	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	96.7			% Rec.		8015	11/20/14	5

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-150

Sample ID : MW-94

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 16:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2600000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	17.	0.25	2.0	ug/l		6020	12/01/14	1
Barium	780	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	190000	230	5000	ug/l		6020	12/01/14	5
Chromium	1.4	0.54	1.0	ug/l		6020	12/01/14	1
Iron	81.	50.	100	ug/l	J	6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	6.5	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	580	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	1.2	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	370000	550	5000	ug/l		6020	12/01/14	5
TPH (GC/FID) Low Fraction	5500	310	1000	ug/l		8015D/G	11/22/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	100.			% Rec.		8015D/G	11/22/14	1
Volatile Organics								
Acetone	U	200	1000	ug/l	J4	8260B	11/23/14	20
Benzene	370	6.6	20.	ug/l		8260B	11/23/14	20
Bromodichloromethane	U	7.6	20.	ug/l		8260B	11/23/14	20
Bromoform	U	9.4	20.	ug/l		8260B	11/23/14	20
Bromomethane	U	17.	100	ug/l		8260B	11/23/14	20
n-Butylbenzene	40.	7.2	20.	ug/l		8260B	11/23/14	20
sec-Butylbenzene	40.	7.3	20.	ug/l		8260B	11/23/14	20
Carbon disulfide	20.	5.5	20.	ug/l		8260B	11/23/14	20
Carbon tetrachloride	U	7.6	20.	ug/l		8260B	11/23/14	20
Chlorobenzene	U	7.0	20.	ug/l		8260B	11/23/14	20
Chlorodibromomethane	U	6.5	20.	ug/l		8260B	11/23/14	20
Chloroethane	U	9.1	100	ug/l		8260B	11/23/14	20
Chloroform	U	6.5	100	ug/l		8260B	11/23/14	20
Chloromethane	U	5.5	50.	ug/l		8260B	11/23/14	20
1,2-Dibromoethane	U	7.6	20.	ug/l		8260B	11/23/14	20
1,1-Dichloroethane	U	5.2	20.	ug/l		8260B	11/23/14	20
1,2-Dichloroethane	U	7.2	20.	ug/l		8260B	11/23/14	20
1,1-Dichloroethene	U	8.0	20.	ug/l		8260B	11/23/14	20
cis-1,2-Dichloroethene	U	5.2	20.	ug/l		8260B	11/23/14	20
trans-1,2-Dichloroethene	U	7.9	20.	ug/l		8260B	11/23/14	20
1,2-Dichloropropane	U	6.1	20.	ug/l		8260B	11/23/14	20
cis-1,3-Dichloropropene	U	8.4	20.	ug/l		8260B	11/23/14	20
trans-1,3-Dichloropropene	U	8.4	20.	ug/l		8260B	11/23/14	20

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-150

Sample ID : MW-94

Site ID : REST

Collected By : SU/HMI Team
Collection Date : 11/13/14 16:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	580	7.7	20.	ug/l		8260B	11/23/14	20
Isopropylbenzene	84.	6.5	20.	ug/l		8260B	11/23/14	20
p-Isopropyltoluene	20.	7.0	20.	ug/l		8260B	11/23/14	20
2-Butanone (MEK)	U	79.	200	ug/l	J4	8260B	11/23/14	20
2-Hexanone	U	76.	200	ug/l		8260B	11/23/14	20
Methylene Chloride	U	20.	100	ug/l		8260B	11/23/14	20
4-Methyl-2-pentanone (MIBK)	U	43.	200	ug/l		8260B	11/23/14	20
Methyl tert-butyl ether	1300	7.3	20.	ug/l		8260B	11/23/14	20
Naphthalene	220	20.	100	ug/l		8260B	11/23/14	20
n-Propylbenzene	130	7.0	20.	ug/l		8260B	11/23/14	20
Styrene	U	6.1	20.	ug/l		8260B	11/23/14	20
1,1,1,2-Tetrachloroethane	U	7.7	20.	ug/l		8260B	11/23/14	20
1,1,2,2-Tetrachloroethane	U	2.6	20.	ug/l		8260B	11/23/14	20
Tetrachloroethene	U	7.4	20.	ug/l		8260B	11/23/14	20
Toluene	700	16.	100	ug/l		8260B	11/23/14	20
1,1,1-Trichloroethane	U	6.4	20.	ug/l		8260B	11/23/14	20
1,1,2-Trichloroethane	U	7.7	20.	ug/l		8260B	11/23/14	20
Trichloroethene	U	8.0	20.	ug/l		8260B	11/23/14	20
1,2,4-Trimethylbenzene	540	7.5	20.	ug/l		8260B	11/23/14	20
1,3,5-Trimethylbenzene	120	7.7	20.	ug/l		8260B	11/23/14	20
Vinyl chloride	U	5.2	20.	ug/l		8260B	11/23/14	20
o-Xylene	400	6.8	20.	ug/l		8260B	11/23/14	20
m&p-Xylene	310	14.	40.	ug/l		8260B	11/23/14	20
Xylenes, Total	710	21.	60.	ug/l		8260B	11/23/14	20
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/23/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/23/14	1
4-Bromofluorobenzene	97.2			% Rec.		8260B	11/23/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	9400	44.	200	ug/l		8015	11/20/14	2
C28-C40 Oil Range	1200	24.	200	ug/l		8015	11/20/14	2
Surrogate Recovery								
o-Terphenyl	69.9			% Rec.		8015	11/20/14	2

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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Mt. Juliet, TN 37122
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1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-151

Sample ID : DUP-REST-01

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	2000000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	9.3	0.25	2.0	ug/l		6020	12/01/14	1
Barium	48.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	320000	230	5000	ug/l		6020	12/01/14	5
Chromium	U	0.54	1.0	ug/l		6020	12/01/14	1
Iron	700	50.	100	ug/l		6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	1900	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	400	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	0.70	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	170000	550	5000	ug/l		6020	12/01/14	5
TPH (GC/FID) Low Fraction	2700	310	1000	ug/l		8015D/G	11/21/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	96.7			% Rec.		8015D/G	11/21/14	10
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/22/14	10
Benzene	1200	3.3	10.	ug/l		8260B	11/22/14	10
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/22/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/22/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/22/14	10
n-Butylbenzene	U	3.6	10.	ug/l		8260B	11/22/14	10
sec-Butylbenzene	U	3.6	10.	ug/l		8260B	11/22/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/22/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/22/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/22/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/22/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/22/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/22/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/22/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/22/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/22/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/22/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/22/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/22/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/22/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/22/14	10

U = ND (Not Detected)

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

MDL = Minimum Detection Limit = LOD = TRRP SDL

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-151

Sample ID : DUP-REST-01

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	7.9	3.8	10.	ug/l	J	8260B	11/22/14	10
Isopropylbenzene	9.7	3.3	10.	ug/l	J	8260B	11/22/14	10
p-Isopropyltoluene	U	3.5	10.	ug/l		8260B	11/22/14	10
2-Butanone (MEK)	U	39.	100	ug/l	J4J3	8260B	11/22/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/22/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/22/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/22/14	10
Methyl tert-butyl ether	19.	3.7	10.	ug/l		8260B	11/22/14	10
Naphthalene	32.	10.	50.	ug/l	J	8260B	11/22/14	10
n-Propylbenzene	U	3.5	10.	ug/l		8260B	11/22/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/22/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/22/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/22/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/22/14	10
Toluene	U	7.8	50.	ug/l		8260B	11/22/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/22/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/22/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
1,2,4-Trimethylbenzene	39.	3.7	10.	ug/l		8260B	11/22/14	10
1,3,5-Trimethylbenzene	6.9	3.9	10.	ug/l	J	8260B	11/22/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/22/14	10
o-Xylene	15.	3.4	10.	ug/l		8260B	11/22/14	10
m&p-Xylene	85.	7.2	20.	ug/l		8260B	11/22/14	10
Xylenes, Total	100	11.	30.	ug/l		8260B	11/22/14	10
Surrogate Recovery								
Toluene-d8	99.5			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	97.6			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	820	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	580	59.	500	ug/l		8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	114.			% Rec.		8015	11/20/14	5

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-152

Sample ID : DUP-REST-02

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	1300000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	1.7	0.25	2.0	ug/l	J	6020	12/01/14	1
Barium	29.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	230000	230	5000	ug/l		6020	12/01/14	5
Chromium	0.75	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	32.	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	6300	37.	1000	ug/l		6020	12/01/14	1
Selenium	0.95	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	67000	110	1000	ug/l		6020	12/01/14	1
TPH (GC/FID) Low Fraction	1400	310	1000	ug/l		8015D/G	11/21/14	10
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.2			% Rec.		8015D/G	11/21/14	10
Volatile Organics								
Acetone	U	100	500	ug/l		8260B	11/22/14	10
Benzene	110	3.3	10.	ug/l		8260B	11/22/14	10
Bromodichloromethane	U	3.8	10.	ug/l		8260B	11/22/14	10
Bromoform	U	4.7	10.	ug/l		8260B	11/22/14	10
Bromomethane	U	8.7	50.	ug/l		8260B	11/22/14	10
n-Butylbenzene	U	3.6	10.	ug/l		8260B	11/22/14	10
sec-Butylbenzene	42.	3.6	10.	ug/l		8260B	11/22/14	10
Carbon disulfide	U	2.8	10.	ug/l		8260B	11/22/14	10
Carbon tetrachloride	U	3.8	10.	ug/l		8260B	11/22/14	10
Chlorobenzene	U	3.5	10.	ug/l		8260B	11/22/14	10
Chlorodibromomethane	U	3.3	10.	ug/l		8260B	11/22/14	10
Chloroethane	U	4.5	50.	ug/l		8260B	11/22/14	10
Chloroform	U	3.2	50.	ug/l		8260B	11/22/14	10
Chloromethane	U	2.8	25.	ug/l		8260B	11/22/14	10
1,2-Dibromoethane	U	3.8	10.	ug/l		8260B	11/22/14	10
1,1-Dichloroethane	U	2.6	10.	ug/l		8260B	11/22/14	10
1,2-Dichloroethane	U	3.6	10.	ug/l		8260B	11/22/14	10
1,1-Dichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
cis-1,2-Dichloroethene	U	2.6	10.	ug/l		8260B	11/22/14	10
trans-1,2-Dichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
1,2-Dichloropropane	U	3.1	10.	ug/l		8260B	11/22/14	10
cis-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/22/14	10
trans-1,3-Dichloropropene	U	4.2	10.	ug/l		8260B	11/22/14	10

U = ND (Not Detected)

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

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-152

Sample ID : DUP-REST-02

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 13:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	3.8	10.	ug/l		8260B	11/22/14	10
Isopropylbenzene	46.	3.3	10.	ug/l		8260B	11/22/14	10
p-Isopropyltoluene	U	3.5	10.	ug/l		8260B	11/22/14	10
2-Butanone (MEK)	U	39.	100	ug/l	J4J3	8260B	11/22/14	10
2-Hexanone	U	38.	100	ug/l		8260B	11/22/14	10
Methylene Chloride	U	10.	50.	ug/l		8260B	11/22/14	10
4-Methyl-2-pentanone (MIBK)	U	21.	100	ug/l		8260B	11/22/14	10
Methyl tert-butyl ether	U	3.7	10.	ug/l		8260B	11/22/14	10
Naphthalene	U	10.	50.	ug/l		8260B	11/22/14	10
n-Propylbenzene	9.7	3.5	10.	ug/l	J	8260B	11/22/14	10
Styrene	U	3.1	10.	ug/l		8260B	11/22/14	10
1,1,1,2-Tetrachloroethane	U	3.8	10.	ug/l		8260B	11/22/14	10
1,1,2,2-Tetrachloroethane	U	1.3	10.	ug/l		8260B	11/22/14	10
Tetrachloroethene	U	3.7	10.	ug/l		8260B	11/22/14	10
Toluene	U	7.8	50.	ug/l		8260B	11/22/14	10
1,1,1-Trichloroethane	U	3.2	10.	ug/l		8260B	11/22/14	10
1,1,2-Trichloroethane	U	3.8	10.	ug/l		8260B	11/22/14	10
Trichloroethene	U	4.0	10.	ug/l		8260B	11/22/14	10
1,2,4-Trimethylbenzene	U	3.7	10.	ug/l		8260B	11/22/14	10
1,3,5-Trimethylbenzene	U	3.9	10.	ug/l		8260B	11/22/14	10
Vinyl chloride	U	2.6	10.	ug/l		8260B	11/22/14	10
o-Xylene	U	3.4	10.	ug/l		8260B	11/22/14	10
m&p-Xylene	U	7.2	20.	ug/l		8260B	11/22/14	10
Xylenes, Total	U	11.	30.	ug/l		8260B	11/22/14	10
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	95.2			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	105.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	620	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	330	59.	500	ug/l	J	8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	105.			% Rec.		8015	11/20/14	5

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-153

Sample ID : DUP-REST-03

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	640	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3300000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	2.4	0.25	2.0	ug/l		6020	12/01/14	1
Barium	16.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	640000	460	10000	ug/l		6020	12/01/14	10
Chromium	2.4	0.54	1.0	ug/l		6020	12/01/14	1
Iron	710	50.	100	ug/l		6020	12/01/14	1
Lead	0.86	0.24	2.0	ug/l	J	6020	12/01/14	1
Manganese	14.	0.25	5.0	ug/l		6020	12/01/14	1
Nickel	2.2	0.35	2.0	ug/l		6020	12/01/14	1
Potassium	5000	37.	1000	ug/l		6020	12/01/14	1
Selenium	7.9	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	98000	110	1000	ug/l		6020	12/01/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-153

Sample ID : DUP-REST-03

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4J3	8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	99.7			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	100.			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	99.9			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	120	110	500	ug/l	J	8015	11/20/14	5
C28-C40 Oil Range	200	59.	500	ug/l	J	8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	116.			% Rec.		8015	11/20/14	5

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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-154

Sample ID : DUP-REST-04

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	46000	99.	500	ug/l		353.2	11/20/14	5
Dissolved Solids	4500000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	2.0	0.25	2.0	ug/l		6020	12/01/14	1
Barium	28.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	740000	460	10000	ug/l		6020	12/01/14	10
Chromium	U	0.54	1.0	ug/l		6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	5.5	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	160	0.25	5.0	ug/l		6020	12/01/14	1
Nickel	4.2	0.35	2.0	ug/l		6020	12/01/14	1
Potassium	810	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	8.2	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	430000	1100	10000	ug/l		6020	12/01/14	10
Vanadium	12.	0.18	5.0	ug/l		6020	12/01/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	290	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	97.8			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	7.2	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	0.92	0.36	1.0	ug/l	J	8260B	11/22/14	1
sec-Butylbenzene	2.4	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	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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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-154

Sample ID : DUP-REST-04

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 08:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	2.4	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	0.56	0.35	1.0	ug/l	J	8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4J3	8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	1.5	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	19.	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	47.	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	1.1	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	0.68	0.34	1.0	ug/l	J	8260B	11/22/14	1
m&p-Xylene	1.5	0.72	2.0	ug/l	J	8260B	11/22/14	1
Xylenes, Total	2.2	1.1	3.0	ug/l	J	8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	99.8			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	103.			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	100.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	860	110	500	ug/l		8015	11/20/14	5
C28-C40 Oil Range	320	59.	500	ug/l	J	8015	11/20/14	5
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	11/20/14	5

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : DUP-REST-05
Collected By : SU/HMI Team
Collection Date : 11/13/14 12:05

ESC Sample # : L733743-155

Site ID : REST (QA/QC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	4300	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	3700000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	1.6	0.25	2.0	ug/l	J	6020	12/01/14	1
Barium	10.	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	610000	460	10000	ug/l		6020	12/01/14	10
Chromium	0.60	0.54	1.0	ug/l	J	6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	1.6	0.25	5.0	ug/l	J	6020	12/01/14	1
Nickel	0.65	0.35	2.0	ug/l	J	6020	12/01/14	1
Potassium	670	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	4.6	0.38	2.0	ug/l		6020	12/01/14	1
Sodium	150000	1100	10000	ug/l		6020	12/01/14	10
Vanadium	12.	0.18	5.0	ug/l		6020	12/01/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.1			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-155

Sample ID : DUP-REST-05

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:05

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4J3	8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	99.0			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	104.			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	74.	22.	100	ug/l	J	8015	11/21/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	125.			% Rec.		8015	11/21/14	1

U = ND (Not Detected)

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MDL = Minimum Detection Limit = LOD = TRRP SDL

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-REST-01
Collected By : SU/HMI Team
Collection Date : 11/13/14 12:40

ESC Sample # : L733743-156

Site ID : REST (QA/QC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	U	2800	10000	ug/l	T4	2540 C-	11/20/14	1
Arsenic	U	0.25	2.0	ug/l		6020	12/01/14	1
Barium	U	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	150	46.	1000	ug/l	J	6020	12/01/14	1
Chromium	U	0.54	1.0	ug/l		6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	U	0.25	5.0	ug/l		6020	12/01/14	1
Potassium	U	37.	1000	ug/l		6020	12/01/14	1
Selenium	0.66	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	140	110	1000	ug/l	J	6020	12/01/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.6			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-156

Sample ID : EB-REST-01

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4J5	8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	99.8			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	101.			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	100.			% Rec.		8260B	11/21/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	42.	22.	100	ug/l	J	8015	11/21/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	125.			% Rec.		8015	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
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Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-157

Sample ID : EB-REST-02

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	34000	2800	10000	ug/l		2540 C-	11/20/14	1
Arsenic	0.53	0.25	2.0	ug/l	J	6020	12/01/14	1
Barium	5.6	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	2300	46.	1000	ug/l		6020	12/01/14	1
Chromium	U	0.54	1.0	ug/l		6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	1.7	0.25	5.0	ug/l	J	6020	12/01/14	1
Potassium	190	37.	1000	ug/l	J	6020	12/01/14	1
Selenium	0.75	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	3100	110	1000	ug/l		6020	12/01/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.4			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/22/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/22/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/22/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/22/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/22/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/22/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/22/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/22/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/22/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/22/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/22/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/22/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/22/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/22/14	1

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-157

Sample ID : EB-REST-02

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 14:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/22/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/22/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/22/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4J3	8260B	11/22/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/22/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/22/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/22/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/22/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/22/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/22/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/22/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/22/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/22/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/22/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/22/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/22/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/22/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/22/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/22/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/22/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/22/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/22/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/22/14	1
Surrogate Recovery								
Toluene-d8	99.1			% Rec.		8260B	11/22/14	1
Dibromofluoromethane	96.7			% Rec.		8260B	11/22/14	1
4-Bromofluorobenzene	101.			% Rec.		8260B	11/22/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	240	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	15.	12.	100	ug/l	J	8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	130.			% Rec.		8015	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-158

Sample ID : EB-REST-03

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	U	2800	10000	ug/l	T4	2540 C-	11/19/14	1
Arsenic	U	0.25	2.0	ug/l		6020	12/01/14	1
Barium	U	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	100	46.	1000	ug/l	J	6020	12/01/14	1
Chromium	U	0.54	1.0	ug/l		6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	0.29	0.25	5.0	ug/l	J	6020	12/01/14	1
Potassium	U	37.	1000	ug/l		6020	12/01/14	1
Selenium	0.96	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	320	110	1000	ug/l	J	6020	12/01/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/21/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.5			% Rec.		8015D/G	11/21/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l	J4	8260B	11/23/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/23/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/23/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/23/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/23/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/23/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/23/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/23/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/23/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/23/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/23/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/23/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/23/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/23/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/23/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/23/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/23/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/23/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/23/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/23/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/23/14	1

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(615) 758-5858
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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-158

Sample ID : EB-REST-03

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/23/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/23/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/23/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4	8260B	11/23/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/23/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/23/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/23/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/23/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/23/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/23/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/23/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/23/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/23/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/23/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/23/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/23/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/23/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/23/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/23/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/23/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/23/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/23/14	1
Surrogate Recovery								
Toluene-d8	99.6			% Rec.		8260B	11/23/14	1
Dibromofluoromethane	105.			% Rec.		8260B	11/23/14	1
4-Bromofluorobenzene	92.7			% Rec.		8260B	11/23/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	27.	22.	100	ug/l	J	8015	11/19/14	1
C28-C40 Oil Range	64.	12.	100	ug/l	J	8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	118.			% Rec.		8015	11/19/14	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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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-REST-04
Collected By : SU/HMI Team
Collection Date : 11/12/14 09:00

ESC Sample # : L733743-159

Site ID : REST (QA/QC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	11/20/14	1
Dissolved Solids	12000	2800	10000	ug/l	T4	2540 C-	11/19/14	1
Arsenic	U	0.25	2.0	ug/l		6020	12/01/14	1
Barium	U	0.36	5.0	ug/l		6020	12/01/14	1
Calcium	120	46.	1000	ug/l	J	6020	12/01/14	1
Chromium	U	0.54	1.0	ug/l		6020	12/01/14	1
Iron	U	50.	100	ug/l		6020	12/01/14	1
Lead	U	0.24	2.0	ug/l		6020	12/01/14	1
Manganese	0.37	0.25	5.0	ug/l	J	6020	12/01/14	1
Nickel	U	0.35	2.0	ug/l		6020	12/01/14	1
Potassium	U	37.	1000	ug/l		6020	12/01/14	1
Selenium	1.0	0.38	2.0	ug/l	J	6020	12/01/14	1
Sodium	320	110	1000	ug/l	J	6020	12/01/14	1
Vanadium	U	0.18	5.0	ug/l		6020	12/01/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/19/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	11/19/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l	J4	8260B	11/23/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/23/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/23/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/23/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/23/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/23/14	1
Carbon disulfide	0.33	0.28	1.0	ug/l	J	8260B	11/23/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/23/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/23/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/23/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/23/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/23/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/23/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/23/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/23/14	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
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Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-159

Sample ID : EB-REST-04

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 09:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/23/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/23/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/23/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/23/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/23/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/23/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/23/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/23/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/23/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4	8260B	11/23/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/23/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/23/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/23/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/23/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/23/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/23/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/23/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/23/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/23/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/23/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/23/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/23/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/23/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/23/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/23/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/23/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/23/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/23/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	11/23/14	1
Dibromofluoromethane	102.			% Rec.		8260B	11/23/14	1
4-Bromofluorobenzene	96.3			% Rec.		8260B	11/23/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	200	22.	100	ug/l		8015	11/19/14	1
C28-C40 Oil Range	24.	12.	100	ug/l	J	8015	11/19/14	1
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	11/19/14	1

U = ND (Not Detected)

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-REST-05
Collected By : SU/HMI Team
Collection Date : 11/13/14 12:00

ESC Sample # : L733743-160

Site ID : REST (QA/QC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Cyanide	U	1.8	5.0	ug/l		9012B	11/21/14	1
Nitrate-Nitrite	U	20.	100	ug/l	J6	353.2	11/20/14	1
Dissolved Solids	16000	2800	10000	ug/l	T4	2540 C-	11/20/14	1
Arsenic	U	0.25	2.0	ug/l		6020	11/20/14	1
Barium	2.9	0.36	5.0	ug/l	J	6020	11/20/14	1
Calcium	340	46.	1000	ug/l	J	6020	11/20/14	1
Chromium	U	0.54	1.0	ug/l		6020	11/20/14	1
Iron	U	50.	100	ug/l		6020	11/20/14	1
Lead	U	0.24	2.0	ug/l		6020	11/20/14	1
Manganese	6.0	0.25	5.0	ug/l		6020	11/20/14	1
Nickel	0.74	0.35	2.0	ug/l	J	6020	11/20/14	1
Potassium	U	37.	1000	ug/l		6020	11/20/14	1
Selenium	0.63	0.38	2.0	ug/l	J	6020	11/20/14	1
Sodium	240	110	1000	ug/l	J	6020	11/20/14	1
Vanadium	U	0.18	5.0	ug/l		6020	11/20/14	1
Mercury	U	0.049	0.20	ug/l		7470A	11/18/14	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	11/19/14	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	11/19/14	1
Volatile Organics								
Acetone	U	10.	50.	ug/l	J4	8260B	11/23/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/23/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/23/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/23/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/23/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/23/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/23/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/23/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/23/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/23/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/23/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/23/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/23/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/23/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/23/14	1

U = ND (Not Detected)

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

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-160

Sample ID : EB-REST-05

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/23/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/23/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/23/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/23/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/23/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/23/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/23/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/23/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/23/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4	8260B	11/23/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/23/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/23/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/23/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/23/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/23/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/23/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/23/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/23/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/23/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/23/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/23/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/23/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/23/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/23/14	1
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/23/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/23/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/23/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/23/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/23/14	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	11/23/14	1
Dibromofluoromethane	102.			% Rec.		8260B	11/23/14	1
4-Bromofluorobenzene	96.4			% Rec.		8260B	11/23/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	3000	22.	100	ug/l		8015	11/21/14	1
C28-C40 Oil Range	35.	12.	100	ug/l	J	8015	11/21/14	1
Surrogate Recovery								
o-Terphenyl	131.			% Rec.		8015	11/21/14	1

U = ND (Not Detected)

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-161

Sample ID : TRIP BLANK-REST-01

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/12/14 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4J3	8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : TRIP BLANK-REST-01
Collected By : SU/HMI Team
Collection Date : 11/12/14 00:00

ESC Sample # : L733743-161

Site ID : REST (QA/QC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	116.			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	102.			% Rec.		8260B	11/21/14	1

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(615) 758-5858
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Fax (615) 758-5859

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Est. 1970

REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L733743-162

Sample ID : TRIP BLANK-REST-02

Site ID : REST (QA/QC)

Collected By : SU/HMI Team
Collection Date : 11/13/14 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Volatile Organics								
Acetone	U	10.	50.	ug/l		8260B	11/21/14	1
Benzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
Bromodichloromethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Bromoform	U	0.47	1.0	ug/l		8260B	11/21/14	1
Bromomethane	U	0.87	5.0	ug/l		8260B	11/21/14	1
n-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
sec-Butylbenzene	U	0.36	1.0	ug/l		8260B	11/21/14	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	11/21/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	11/21/14	1
Chlorobenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Chlorodibromomethane	U	0.33	1.0	ug/l		8260B	11/21/14	1
Chloroethane	U	0.45	5.0	ug/l		8260B	11/21/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	11/21/14	1
Chloromethane	U	0.28	2.5	ug/l		8260B	11/21/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	11/21/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
cis-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	11/21/14	1
trans-1,2-Dichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2-Dichloropropane	U	0.31	1.0	ug/l		8260B	11/21/14	1
cis-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
trans-1,3-Dichloropropene	U	0.42	1.0	ug/l		8260B	11/21/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	11/21/14	1
Isopropylbenzene	U	0.33	1.0	ug/l		8260B	11/21/14	1
p-Isopropyltoluene	U	0.35	1.0	ug/l		8260B	11/21/14	1
2-Butanone (MEK)	U	3.9	10.	ug/l	J4J3	8260B	11/21/14	1
2-Hexanone	U	3.8	10.	ug/l		8260B	11/21/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	11/21/14	1
4-Methyl-2-pentanone (MIBK)	U	2.1	10.	ug/l		8260B	11/21/14	1
Methyl tert-butyl ether	U	0.37	1.0	ug/l		8260B	11/21/14	1
Naphthalene	U	1.0	5.0	ug/l		8260B	11/21/14	1
n-Propylbenzene	U	0.35	1.0	ug/l		8260B	11/21/14	1
Styrene	U	0.31	1.0	ug/l		8260B	11/21/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	11/21/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	11/21/14	1
Toluene	U	0.78	5.0	ug/l		8260B	11/21/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	11/21/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	11/21/14	1
Trichloroethene	U	0.40	1.0	ug/l		8260B	11/21/14	1
1,2,4-Trimethylbenzene	U	0.37	1.0	ug/l		8260B	11/21/14	1

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REPORT OF ANALYSIS

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

August 26, 2015

Date Received : November 15, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : TRIP BLANK-REST-02
Collected By : SU/HMI Team
Collection Date : 11/13/14 00:00

ESC Sample # : L733743-162

Site ID : REST (QA/QC)

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
1,3,5-Trimethylbenzene	U	0.39	1.0	ug/l		8260B	11/21/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	11/21/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	11/21/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	11/21/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	11/21/14	1
Surrogate Recovery								
Toluene-d8	100.			% Rec.		8260B	11/21/14	1
Dibromofluoromethane	114.			% Rec.		8260B	11/21/14	1
4-Bromofluorobenzene	100.			% Rec.		8260B	11/21/14	1

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-91	WG755118	SAMP	C10-C28 Diesel Range	R3005752	J
	WG755209	SAMP	Chromium	R3005672	JB
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Potassium	R3005672	J
	WG755209	SAMP	Selenium	R3005553	J
L733743-92	WG755118	SAMP	C28-C40 Oil Range	R3005752	J
	WG755209	SAMP	Chromium	R3005672	JB
	WG755209	SAMP	Lead	R3005553	JB
	WG755209	SAMP	Potassium	R3005672	J
	WG755209	SAMP	Selenium	R3005553	J
	WG755209	SAMP	Vanadium	R3005672	J
	WG754916	SAMP	n-Butylbenzene	R3006052	J
	WG754916	SAMP	sec-Butylbenzene	R3006052	J
	WG754916	SAMP	p-Isopropyltoluene	R3006052	J
	WG754916	SAMP	Naphthalene	R3006052	J
	WG754916	SAMP	1,3,5-Trimethylbenzene	R3006052	J
	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
	WG755209	SAMP	Chromium	R3005672	JB
L733743-93	WG755209	SAMP	Lead	R3005553	B
	WG755209	SAMP	Potassium	R3005672	J
	WG754916	SAMP	n-Butylbenzene	R3006052	J
	WG754916	SAMP	p-Isopropyltoluene	R3006052	J
	WG754916	SAMP	o-Xylene	R3006052	J
	WG754916	SAMP	m&p-Xylene	R3006052	J
	WG754916	SAMP	Xylenes, Total	R3006052	J
	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
	WG755209	SAMP	Arsenic	R3005553	J
	WG755209	SAMP	Lead	R3005553	JB
L733743-94	WG755209	SAMP	Manganese	R3005553	J
	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
	WG755211	SAMP	Arsenic	R3005746	J
	WG755211	SAMP	Chromium	R3005746	JB
	WG755211	SAMP	Manganese	R3005746	J
L733743-95	WG755211	SAMP	Nickel	R3005746	J
	WG755211	SAMP	Potassium	R3005746	J
	WG755211	SAMP	Arsenic	R3005746	J
	WG755211	SAMP	Chromium	R3005746	JB
	WG755211	SAMP	Manganese	R3005746	J
L733743-96	WG755211	SAMP	Nickel	R3005746	J
	WG755211	SAMP	Potassium	R3005746	J
	WG755211	SAMP	Chromium	R3005746	J
	WG755211	SAMP	Manganese	R3005746	J
	WG755211	SAMP	Nickel	R3005746	J
L733743-97	WG755211	SAMP	Potassium	R3005746	J
	WG755211	SAMP	Chromium	R3005746	B
	WG755211	SAMP	Iron	R3005746	J
	WG755211	SAMP	Lead	R3005746	J
	WG755211	SAMP	Selenium	R3005746	J
L733743-98	WG754916	SAMP	Isopropylbenzene	R3006052	J
	WG754916	SAMP	Methyl tert-butyl ether	R3006052	J
	WG754916	SAMP	Naphthalene	R3006052	J
	WG755211	SAMP	Chromium	R3005746	B
	WG755211	SAMP	Iron	R3005746	J
	WG755211	SAMP	Potassium	R3005746	J
	WG755211	SAMP	Selenium	R3005746	J
	WG754916	SAMP	Acetone	R3006052	J
	WG754916	SAMP	sec-Butylbenzene	R3006052	J
	WG754916	SAMP	Naphthalene	R3006052	J
L733743-99	WG754916	SAMP	Toluene	R3006052	J
	WG754916	SAMP	1,3,5-Trimethylbenzene	R3006052	J
	WG755211	SAMP	Arsenic	R3005746	J
	WG755211	SAMP	Chromium	R3005746	JB
	WG755211	SAMP	Lead	R3005746	J
	WG755211	SAMP	Selenium	R3005746	J
	WG755261	SAMP	Nitrate-Nitrite	R3005420	J6
	WG754916	SAMP	Bromomethane	R3006052	J3
	WG754916	SAMP	sec-Butylbenzene	R3006052	J
	WG754916	SAMP	Carbon disulfide	R3006052	J
L733743-100	WG755292	SAMP	Cyanide	R3005748	J
	WG755204	SAMP	Calcium	R3007660	V
	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
	WG755204	SAMP	Selenium	R3006455	01J6

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-101	WG755204	SAMP	Sodium	R3007660	V
	WG755204	SAMP	Vanadium	R3006455	J
	WG754916	SAMP	sec-Butylbenzene	R3006052	J
	WG754916	SAMP	Carbon disulfide	R3006052	J
	WG754916	SAMP	Toluene	R3006052	J
	WG755118	SAMP	C10-C28 Diesel Range	R3005752	J
	WG755204	SAMP	Chromium	R3006455	J
	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Selenium	R3006455	J
	WG754916	SAMP	Carbon disulfide	R3006052	J
L733743-102	WG754916	SAMP	p-Isopropyltoluene	R3006052	J
	WG755118	SAMP	C10-C28 Diesel Range	R3005752	J
	WG754945	SAMP	TPH (GC/FID) Low Fraction	R3005634	J
	WG755204	SAMP	Chromium	R3006455	J
	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
L733743-103	WG755118	SAMP	C10-C28 Diesel Range	R3005752	J
	WG754945	SAMP	TPH (GC/FID) Low Fraction	R3005634	J
	WG755204	SAMP	Lead	R3006455	J
L733743-104	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
	WG755204	SAMP	Chromium	R3006455	J
	WG755204	SAMP	Iron	R3006455	J
	WG755204	SAMP	Lead	R3006455	J
L733743-105	WG755204	SAMP	Nickel	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
	WG755204	SAMP	Vanadium	R3006455	J
	WG754916	SAMP	Carbon disulfide	R3006052	J
	WG754916	SAMP	n-Propylbenzene	R3006052	J
	WG755204	SAMP	Chromium	R3006455	J
	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Manganese	R3006455	J
	WG754916	SAMP	Naphthalene	R3006052	J
	WG755204	SAMP	Selenium	R3006455	J
L733743-106	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Methyl tert-butyl ether	R3005430	J
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG754917	SAMP	m&p-Xylene	R3005430	J
	WG754917	SAMP	Xylenes, Total	R3005430	J
	WG755204	SAMP	Chromium	R3006455	J
	WG755204	SAMP	Selenium	R3006455	J
L733743-107	WG755204	SAMP	Vanadium	R3006455	J
	WG754917	SAMP	n-Butylbenzene	R3005430	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG755204	SAMP	Chromium	R3006455	J
	WG754917	SAMP	Carbon disulfide	R3005430	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Ethylbenzene	R3005430	J
	WG754917	SAMP	Naphthalene	R3005430	JJ4
	WG754917	SAMP	o-Xylene	R3005430	J
L733743-108	WG754917	SAMP	Carbon disulfide	R3005430	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Ethylbenzene	R3005430	J
	WG754917	SAMP	Isopropylbenzene	R3005430	J
	WG754917	SAMP	Naphthalene	R3005430	JJ4
	WG754917	SAMP	1,3,5-Trimethylbenzene	R3005430	J
	WG755204	SAMP	Lead	R3006455	J
L733743-109	WG755204	SAMP	Selenium	R3006455	J
	WG755673	SAMP	Bromomethane	R3005866	J3
	WG755673	SAMP	Methyl tert-butyl ether	R3005866	E
	WG755204	SAMP	Arsenic	R3006455	J
	WG755204	SAMP	Iron	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	JJ4
	WG754917	SAMP	n-Propylbenzene	R3005430	J
	WG754917	SAMP	Toluene	R3005430	J
L733743-110	WG755204	SAMP	Chromium	R3006455	J
	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
L733743-111	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	JJ4
	WG754917	SAMP	n-Propylbenzene	R3005430	J
	WG754917	SAMP	Toluene	R3005430	J
	WG755204	SAMP	Chromium	R3006455	J
L733743-112	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-113	WG755204	SAMP	Selenium	R3006455	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Ethylbenzene	R3005430	J
	WG754917	SAMP	Isopropylbenzene	R3005430	J
	WG754917	SAMP	Naphthalene	R3005430	JJ4
	WG754917	SAMP	n-Propylbenzene	R3005430	J
	WG754946	SAMP	TPH (GC/FID) Low Fraction	R3005622	J
	WG755204	SAMP	Arsenic	R3006455	J
	WG754917	SAMP	n-Butylbenzene	R3005430	J
	WG754917	SAMP	Chloroethane	R3005430	J4
L733743-114	WG754917	SAMP	Methyl tert-butyl ether	R3005430	J
	WG754917	SAMP	Naphthalene	R3005430	JJ4
	WG755204	SAMP	Chromium	R3006455	J
	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
	WG754917	SAMP	sec-Butylbenzene	R3005430	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Methyl tert-butyl ether	R3005430	E
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG754917	SAMP	Toluene	R3005430	J
L733743-115	WG754917	SAMP	1,3,5-Trimethylbenzene	R3005430	J
	WG754917	SAMP	o-Xylene	R3005430	J
	WG755204	SAMP	Chromium	R3006455	J
	WG754917	SAMP	Bromodichloromethane	R3005430	J5J3
	WG754917	SAMP	Bromoform	R3005430	J5J3
	WG754917	SAMP	Bromomethane	R3005430	J3
	WG754917	SAMP	n-Butylbenzene	R3005430	J5J3
	WG754917	SAMP	sec-Butylbenzene	R3005430	J3
	WG754917	SAMP	Carbon disulfide	R3005430	J
	WG754917	SAMP	Carbon tetrachloride	R3005430	J3
L733743-116	WG754917	SAMP	Chlorobenzene	R3005430	J5J3
	WG754917	SAMP	Chlorodibromomethane	R3005430	J5J3
	WG754917	SAMP	Chloroethane	R3005430	J4J6
	WG754917	SAMP	Chloroform	R3005430	J5J3
	WG754917	SAMP	Chloromethane	R3005430	J
	WG754917	SAMP	1,2-Dibromoethane	R3005430	J5J3
	WG754917	SAMP	1,1-Dichloroethane	R3005430	J3
	WG754917	SAMP	1,2-Dichloroethane	R3005430	J3
	WG754917	SAMP	cis-1,2-Dichloroethene	R3005430	J3
	WG754917	SAMP	1,2-Dichloropropane	R3005430	J5J3
L733743-117	WG754917	SAMP	cis-1,3-Dichloropropene	R3005430	J5J3
	WG754917	SAMP	trans-1,3-Dichloropropene	R3005430	J5J3
	WG754917	SAMP	p-Isopropyltoluene	R3005430	J3
	WG754917	SAMP	2-Butanone (MEK)	R3005430	J5
	WG754917	SAMP	2-Hexanone	R3005430	J5J3
	WG754917	SAMP	4-Methyl-2-pentanone (MIBK)	R3005430	J5J3
	WG754917	SAMP	Methyl tert-butyl ether	R3005430	J3
	WG754917	SAMP	Naphthalene	R3005430	JJ4J5J3
	WG754917	SAMP	Styrene	R3005430	J5J3
	WG754917	SAMP	1,1,1,2-Tetrachloroethane	R3005430	J5J3
L733743-116	WG754917	SAMP	1,1,2,2-Tetrachloroethane	R3005430	J5J3
	WG754917	SAMP	Tetrachloroethene	R3005430	J3
	WG754917	SAMP	Toluene	R3005430	J3
	WG754917	SAMP	1,1,2-Trichloroethane	R3005430	J5J3
	WG754917	SAMP	Trichloroethene	R3005430	J3
	WG754917	SAMP	1,2,4-Trimethylbenzene	R3005430	JJ3
	WG754917	SAMP	1,3,5-Trimethylbenzene	R3005430	JJ5J3
	WG754917	SAMP	o-Xylene	R3005430	JJ5J3
	WG754917	SAMP	m&p-Xylene	R3005430	J3
	WG754917	SAMP	Xylenes, Total	R3005430	J3J5
L733743-117	WG755204	SAMP	Chromium	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
	WG755204	SAMP	Selenium	R3006455	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	JJ4
	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
	WG755204	SAMP	Selenium	R3006455	J
	WG754917	SAMP	sec-Butylbenzene	R3005430	J
	WG754917	SAMP	Chloroethane	R3005430	J4

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-118	WG754917	SAMP	Methyl tert-butyl ether	R3005430	E
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG754917	SAMP	Toluene	R3005430	J
	WG755478	SAMP	C28-C40 Oil Range	R3005753	J
	WG755204	SAMP	Chromium	R3006455	J
	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Potassium	R3006455	J
	WG755204	SAMP	Selenium	R3006455	J
	WG754917	SAMP	n-Butylbenzene	R3005430	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	1,2-Dichloroethane	R3005430	J
	WG754917	SAMP	p-Isopropyltoluene	R3005430	J
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG754917	SAMP	Toluene	R3005430	J
L733743-119	WG755121	SAMP	C10-C28 Diesel Range	R3005267	J
	WG755204	SAMP	Lead	R3006455	J
	WG755204	SAMP	Selenium	R3006455	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	JJ4
L733743-120	WG755205	SAMP	Calcium	R3007460	V
	WG755205	SAMP	Chromium	R3007460	J
	WG755205	SAMP	Lead	R3007460	J
	WG755205	SAMP	Potassium	R3007460	J
	WG755205	SAMP	Sodium	R3007460	V
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG755121	SAMP	C10-C28 Diesel Range	R3005267	J
L733743-121	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
	WG755205	SAMP	Chromium	R3007460	J
	WG755205	SAMP	Manganese	R3007460	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG755478	SAMP	C10-C28 Diesel Range	R3005753	J
	WG755205	SAMP	Lead	R3007460	J
L733743-122	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG755478	SAMP	C10-C28 Diesel Range	R3005753	J
	WG755205	SAMP	Lead	R3007460	J
L733743-123	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG755478	SAMP	C10-C28 Diesel Range	R3005753	J
L733743-124	WG755205	SAMP	Lead	R3007460	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG755478	SAMP	C10-C28 Diesel Range	R3005753	J
	WG755205	SAMP	Lead	R3007460	J
	WG755205	SAMP	Selenium	R3007460	J
L733743-125	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	J4
	WG755121	SAMP	C10-C28 Diesel Range	R3005267	J
	WG755121	SAMP	C28-C40 Oil Range	R3005267	J
	WG755205	SAMP	Chromium	R3007460	J
	WG754917	SAMP	Chloroethane	R3005430	J4
	WG754917	SAMP	Naphthalene	R3005430	J4
L733743-126	WG755205	SAMP	Lead	R3007460	J
	WG755205	SAMP	Potassium	R3007460	J
	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
L733743-127	WG755205	SAMP	Potassium	R3007460	J
	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
L733743-128	WG755205	SAMP	Potassium	R3007460	J
	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	JJ3
L733743-129	WG754918	SAMP	sec-Butylbenzene	R3005615	J
	WG754918	SAMP	Methyl tert-butyl ether	R3005615	E
	WG754918	SAMP	Toluene	R3005615	J
	WG754918	SAMP	1,3,5-Trimethylbenzene	R3005615	J
	WG755205	SAMP	Lead	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG755205	SAMP	Lead	R3007460	J
	WG755205	SAMP	Potassium	R3007460	J
L733743-130	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG755205	SAMP	Lead	R3007460	J
L733743-131	WG755205	SAMP	Potassium	R3007460	J
	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-132	WG754918	SAMP	n-Butylbenzene	R3005615	J
	WG754918	SAMP	sec-Butylbenzene	R3005615	J
	WG754918	SAMP	p-Isopropyltoluene	R3005615	J
	WG754918	SAMP	Methyl tert-butyl ether	R3005615	E
	WG754918	SAMP	Naphthalene	R3005615	J
	WG755122	SAMP	C10-C28 Diesel Range	R3005268	J
	WG755122	SAMP	C28-C40 Oil Range	R3005268	J
	WG755205	SAMP	Lead	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
L733743-133	WG754918	SAMP	Acetone	R3005615	J3
L733743-134	WG754918	SAMP	Acetone	R3005615	J3
L733743-135	WG755205	SAMP	Iron	R3007460	J
	WG755205	SAMP	Potassium	R3007460	J
	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG754918	SAMP	Isopropylbenzene	R3005615	J
	WG754918	SAMP	Naphthalene	R3005615	J
L733743-136	WG754947	SAMP	TPH (GC/FID) Low Fraction	R3005962	J
	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG754918	SAMP	sec-Butylbenzene	R3005615	J
	WG754918	SAMP	Naphthalene	R3005615	J
	WG754918	SAMP	Toluene	R3005615	J
L733743-137	WG754918	SAMP	o-Xylene	R3005615	J
	WG755205	SAMP	Chromium	R3007460	J
	WG755205	SAMP	Lead	R3007460	J
	WG755205	SAMP	Potassium	R3007460	J
	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG754918	SAMP	Naphthalene	R3005615	J
	WG754918	SAMP	1,3,5-Trimethylbenzene	R3005615	J
L733743-138	WG754918	SAMP	o-Xylene	R3005615	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG754918	SAMP	n-Butylbenzene	R3005615	J
	WG754918	SAMP	sec-Butylbenzene	R3005615	J
	WG754918	SAMP	p-Isopropyltoluene	R3005615	J
	WG754918	SAMP	Methyl tert-butyl ether	R3005615	E
L733743-139	WG754918	SAMP	Naphthalene	R3005615	J
	WG755205	SAMP	Potassium	R3007460	J
	WG755205	SAMP	Selenium	R3007460	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG754918	SAMP	n-Butylbenzene	R3005615	J
	WG754918	SAMP	sec-Butylbenzene	R3005615	J
	WG754918	SAMP	p-Isopropyltoluene	R3005615	J
	WG754918	SAMP	Methyl tert-butyl ether	R3005615	E
L733743-140	WG755478	SAMP	C28-C40 Oil Range	R3005753	J
	WG755207	SAMP	Chromium	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG754918	SAMP	n-Butylbenzene	R3005615	J
	WG754918	SAMP	sec-Butylbenzene	R3005615	J
L733743-141	WG754918	SAMP	Toluene	R3005615	J
	WG755207	SAMP	Chromium	R3007479	J
	WG755207	SAMP	Lead	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
	WG754918	SAMP	Acetone	R3005615	J3
	WG754918	SAMP	Ethylbenzene	R3005615	J
	WG754918	SAMP	Isopropylbenzene	R3005615	J
	WG754918	SAMP	Methyl tert-butyl ether	R3005615	E
	WG754918	SAMP	Naphthalene	R3005615	J
L733743-142	WG755207	SAMP	Chromium	R3007479	J
	WG755207	SAMP	Lead	R3007479	J
	WG755207	SAMP	Potassium	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	sec-Butylbenzene	R3005627	J
	WG755736	SAMP	p-Isopropyltoluene	R3005627	J
L733743-143	WG755207	SAMP	Lead	R3007479	J
	WG755207	SAMP	Potassium	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-144	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	sec-Butylbenzene	R3005627	J
	WG755207	SAMP	Chromium	R3007479	J
	WG755207	SAMP	Nickel	R3007479	J
	WG755207	SAMP	Potassium	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
	WG755207	SAMP	Vanadium	R3007479	J
L733743-145	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	sec-Butylbenzene	R3005627	J
	WG755736	SAMP	Bromomethane	R3005627	J4
	WG755736	SAMP	1,2,4-Trimethylbenzene	R3005627	J
L733743-146	WG755736	SAMP	m&p-Xylene	R3005627	J
	WG755207	SAMP	Potassium	R3007479	J
	WG754919	SAMP	Isopropylbenzene	R3006039	J
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
L733743-147	WG754919	SAMP	Methyl tert-butyl ether	R3006039	E
	WG754919	SAMP	n-Propylbenzene	R3006039	J
	WG754919	SAMP	1,3,5-Trimethylbenzene	R3006039	J
	WG755207	SAMP	Calcium	R3007479	V
	WG755207	SAMP	Chromium	R3007479	J
	WG755207	SAMP	Lead	R3007479	J
	WG755207	SAMP	Potassium	R3007479	J
	WG755207	SAMP	Sodium	R3007479	V
	WG754919	SAMP	Isopropylbenzene	R3006039	J
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
L733743-148	WG754919	SAMP	n-Propylbenzene	R3006039	J
	WG754919	SAMP	Toluene	R3006039	J
	WG754919	SAMP	1,3,5-Trimethylbenzene	R3006039	J
	WG754919	SAMP	o-Xylene	R3006039	J
	WG754919	SAMP	m&p-Xylene	R3006039	J
	WG754919	SAMP	Xylenes, Total	R3006039	J
	WG755207	SAMP	Arsenic	R3007479	J
	WG755207	SAMP	Chromium	R3007479	J
	WG755207	SAMP	Lead	R3007479	J
	WG755207	SAMP	Potassium	R3007479	J
	WG755207	SAMP	Vanadium	R3007479	J
	WG756413	SAMP	Acetone	R3006164	J4
	WG756413	SAMP	n-Butylbenzene	R3006164	J
	WG756413	SAMP	Carbon disulfide	R3006164	J
	WG756413	SAMP	cis-1,2-Dichloroethene	R3006164	J
	WG756413	SAMP	2-Butanone (MEK)	R3006164	J4
	WG756413	SAMP	Naphthalene	R3006164	J
L733743-149	WG756413	SAMP	1,2,4-Trimethylbenzene	R3006164	J
	WG756413	SAMP	m&p-Xylene	R3006164	J
	WG756413	SAMP	Xylenes, Total	R3006164	J
	WG755207	SAMP	Chromium	R3007479	J
	WG755207	SAMP	Lead	R3007479	J
	WG754919	SAMP	Ethylbenzene	R3006039	J
	WG754919	SAMP	Isopropylbenzene	R3006039	J
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
	WG754919	SAMP	n-Propylbenzene	R3006039	J
	WG754919	SAMP	Toluene	R3006039	J
L733743-150	WG754919	SAMP	1,2,4-Trimethylbenzene	R3006039	J
	WG754919	SAMP	Xylenes, Total	R3006039	J
	WG755207	SAMP	Iron	R3007479	J
	WG755207	SAMP	Potassium	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
L733743-151	WG756413	SAMP	Acetone	R3006164	J4
	WG756413	SAMP	2-Butanone (MEK)	R3006164	J4
	WG755207	SAMP	Potassium	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
	WG754919	SAMP	Ethylbenzene	R3006039	J
L733743-152	WG754919	SAMP	Isopropylbenzene	R3006039	J
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
	WG754919	SAMP	Naphthalene	R3006039	J
	WG754919	SAMP	1,3,5-Trimethylbenzene	R3006039	J
	WG755478	SAMP	C28-C40 Oil Range	R3005753	J
	WG755207	SAMP	Arsenic	R3007479	J
	WG755207	SAMP	Chromium	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L733743-153	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
	WG754919	SAMP	n-Propylbenzene	R3006039	J
	WG755478	SAMP	C10-C28 Diesel Range	R3005753	J
	WG755478	SAMP	C28-C40 Oil Range	R3005753	J
L733743-154	WG755207	SAMP	Lead	R3007479	J
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
	WG755478	SAMP	C28-C40 Oil Range	R3005753	J
	WG755207	SAMP	Potassium	R3007479	J
	WG754919	SAMP	n-Butylbenzene	R3006039	J
	WG754919	SAMP	p-Isopropyltoluene	R3006039	J
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
	WG754919	SAMP	o-Xylene	R3006039	J
	WG754919	SAMP	m&p-Xylene	R3006039	J
L733743-155	WG754919	SAMP	Xylenes, Total	R3006039	J
	WG755492	SAMP	C10-C28 Diesel Range	R3005971	J
	WG755207	SAMP	Arsenic	R3007479	J
	WG755207	SAMP	Chromium	R3007479	J
	WG755207	SAMP	Manganese	R3007479	J
	WG755207	SAMP	Nickel	R3007479	J
	WG755207	SAMP	Potassium	R3007479	J
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
	WG755492	SAMP	C10-C28 Diesel Range	R3005971	J
	WG755343	SAMP	Dissolved Solids	R3005641	T4
L733743-156	WG755207	SAMP	Calcium	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
	WG755207	SAMP	Sodium	R3007479	J
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J5
	WG755492	SAMP	C28-C40 Oil Range	R3005971	J
	WG755207	SAMP	Arsenic	R3007479	J
	WG755207	SAMP	Manganese	R3007479	J
	WG755207	SAMP	Potassium	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
L733743-157	WG755122	SAMP	C10-C28 Diesel Range	R3005268	J
	WG755122	SAMP	C28-C40 Oil Range	R3005268	J
	WG755137	SAMP	Dissolved Solids	R3005387	T4
	WG755207	SAMP	Calcium	R3007479	J
	WG755207	SAMP	Manganese	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
	WG755207	SAMP	Sodium	R3007479	J
	WG756413	SAMP	Acetone	R3006164	J4
	WG756413	SAMP	2-Butanone (MEK)	R3006164	J4
	WG755122	SAMP	C28-C40 Oil Range	R3005268	J
L733743-158	WG755137	SAMP	Dissolved Solids	R3005387	T4
	WG755207	SAMP	Calcium	R3007479	J
	WG755207	SAMP	Manganese	R3007479	J
	WG755207	SAMP	Selenium	R3007479	J
	WG755207	SAMP	Sodium	R3007479	J
	WG756413	SAMP	Acetone	R3006164	J4
	WG756413	SAMP	Carbon disulfide	R3006164	J
	WG756413	SAMP	2-Butanone (MEK)	R3006164	J4
	WG755492	SAMP	C28-C40 Oil Range	R3005971	J
	WG755343	SAMP	Dissolved Solids	R3005641	T4
L733743-159	WG755211	SAMP	Barium	R3005746	J
	WG755211	SAMP	Calcium	R3005746	J
	WG755211	SAMP	Nickel	R3005746	J
	WG755211	SAMP	Selenium	R3005746	J
	WG755211	SAMP	Sodium	R3005746	J
	WG755581	SAMP	Nitrate-Nitrite	R3005666	J6
	WG756413	SAMP	Acetone	R3006164	J4
	WG756413	SAMP	2-Butanone (MEK)	R3006164	J4
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3
	WG754919	SAMP	2-Butanone (MEK)	R3006039	J4J3

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.
E	GTL (EPA) - Greater than upper calibration limit: Actual value is known to be greater than the upper calibration range.
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
01	(ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
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.

LABORATORY REPORT

This report contains 25 pages.
(including the cover page)

If you have any questions concerning this report, please do not hesitate to call us at
(800) 332-4345 or (574) 233-4777.

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Eaton Analytical, Inc.*

110 South Hill Street
 South Bend, IN 46617
 Tel: (574) 233-4777
 Fax: (574) 233-8207
 1 800 332 4345

Laboratory Report

Client: Environmental Science

Report:

329341

Attn: Janice Cozby
 12065 Lebanon Road
 Mount Juliet, TN 37122

Priority:

Standard Written

Status:

Final

PWS ID:

Not Supplied

Copies
 to: None

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3140766	L733752-01	7500-Ra B	11/11/14 12:00	Client	11/18/14 09:45
3140766	L733752-01	7500-Ra D	11/11/14 12:00	Client	11/18/14 09:45
3140767	L733752-02	7500-Ra B	11/11/14 13:40	Client	11/18/14 09:45
3140767	L733752-02	7500-Ra D	11/11/14 13:40	Client	11/18/14 09:45
3140768	L733752-03	7500-Ra B	11/11/14 15:00	Client	11/18/14 09:45
3140768	L733752-03	7500-Ra D	11/11/14 15:00	Client	11/18/14 09:45
3140769	L733752-04	7500-Ra B	11/11/14 16:10	Client	11/18/14 09:45
3140769	L733752-04	7500-Ra D	11/11/14 16:10	Client	11/18/14 09:45
3140770	L733752-05	7500-Ra B	11/11/14 17:00	Client	11/18/14 09:45
3140770	L733752-05	7500-Ra D	11/11/14 17:00	Client	11/18/14 09:45
3140771	L733752-06	7500-Ra B	11/12/14 09:45	Client	11/18/14 09:45
3140771	L733752-06	7500-Ra D	11/12/14 09:45	Client	11/18/14 09:45
3140772	L733752-07	7500-Ra B	11/12/14 10:40	Client	11/18/14 09:45
3140772	L733752-07	7500-Ra D	11/12/14 10:40	Client	11/18/14 09:45
3140773	L733752-08	7500-Ra B	11/12/14 12:45	Client	11/18/14 09:45
3140773	L733752-08	7500-Ra D	11/12/14 12:45	Client	11/18/14 09:45
3140774	L733752-09	7500-Ra B	11/12/14 14:35	Client	11/18/14 09:45
3140774	L733752-09	7500-Ra D	11/12/14 14:35	Client	11/18/14 09:45
3140775	L733752-10	7500-Ra B	11/12/14 15:50	Client	11/18/14 09:45
3140775	L733752-10	7500-Ra D	11/12/14 15:50	Client	11/18/14 09:45
3140776	L733752-11	7500-Ra B	11/12/14 16:55	Client	11/18/14 09:45
3140776	L733752-11	7500-Ra D	11/12/14 16:55	Client	11/18/14 09:45
3140777	L733752-12	7500-Ra B	11/13/14 09:50	Client	11/18/14 09:45
3140777	L733752-12	7500-Ra D	11/13/14 09:50	Client	11/18/14 09:45
3140778	L733752-13	7500-Ra B	11/13/14 11:30	Client	11/18/14 09:45
3140778	L733752-13	7500-Ra D	11/13/14 11:30	Client	11/18/14 09:45
3140779	L733752-14	7500-Ra B	11/13/14 12:30	Client	11/18/14 09:45
3140779	L733752-14	7500-Ra D	11/13/14 12:30	Client	11/18/14 09:45

Client Name: Environmental Science

Report #: 329341

3140780	L733752-15	7500-Ra B	11/13/14 12:30	Client	11/18/14 09:45
3140780	L733752-15	7500-Ra D	11/13/14 12:30	Client	11/18/14 09:45

Report Summary

Note: Sample containers were provided by the client.

Note: In the Method 7500-Ra B analysis the sample results for EEA samples 3140766, 3140769, 3140771, 3140777 and 3140778 may be low biased due to high biased barium mass recovery.

Note: In the Method 7500-Ra D analysis the sample results for EEA samples 3140766 and 3140771 may be high biased due to low biased barium mass recovery.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Kelly Trott at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

 Analytical Services Manager

Authorized Signature

Title

02/07/2015

Date

Client Name: Environmental Science

Report #: 329341

Sampling Point: L733752-01

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	-0.12	1.0	-0.77 ± -0.25	pCi/L	11/21/14 11:40	11/25/14 10:59	3140766
15262-20-1	Radium-228	7500-Ra D	---	0.94	1.0	0.99 ± 0.94	pCi/L	11/21/14 11:38	12/16/14 11:50	3140766
---	Combined Radium	calc.	5 *	0.94	---	0.22 ± 0.97	pCi/L	11/21/14 11:40	12/16/14 11:50	3140766

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-02

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.3	1.0	2.0 ± 0.6	pCi/L	11/21/14 11:40	11/25/14 10:59	3140767
15262-20-1	Radium-228	7500-Ra D	---	0.37	1.0	0.68 ± 0.39	pCi/L	11/21/14 11:38	12/16/14 11:50	3140767
---	Combined Radium	calc.	5 *	0.37	---	2.68 ± 0.73	pCi/L	11/21/14 11:40	12/16/14 11:50	3140767

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-03

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.2	1.0	2.3 ± 0.6	pCi/L	11/21/14 11:40	11/25/14 10:59	3140768
15262-20-1	Radium-228	7500-Ra D	---	0.37	1.0	0.67 ± 0.39	pCi/L	11/21/14 11:38	12/16/14 11:50	3140768
---	Combined Radium	calc.	5 *	0.37	---	2.97 ± 0.76	pCi/L	11/21/14 11:40	12/16/14 11:50	3140768

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-04

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.3	1.0	1.7 ± 0.5	pCi/L	11/21/14 11:40	11/25/14 10:59	3140769
15262-20-1	Radium-228	7500-Ra D	---	0.42	1.0	0.67 ± 0.44	pCi/L	11/21/14 11:38	12/16/14 11:50	3140769
---	Combined Radium	calc.	5 *	0.42	---	2.37 ± 0.70	pCi/L	11/21/14 11:40	12/16/14 11:50	3140769

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Client Name: Environmental Science

Report #: 329341

Sampling Point: L733752-05

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.4	1.0	1.8 ± 0.6	pCi/L	11/21/14 11:42	11/25/14 09:49	3140770
15262-20-1	Radium-228	7500-Ra D	---	0.43	1.00	0.07 ± 0.40	pCi/L	11/21/14 11:38	12/16/14 11:50	3140770
---	Combined Radium	calc.	5 *	0.43	---	1.87 ± 0.75	pCi/L	11/21/14 11:42	12/16/14 11:50	3140770

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-06

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.2	1.0	1.8 ± 0.5	pCi/L	11/21/14 11:42	11/25/14 09:49	3140771
15262-20-1	Radium-228	7500-Ra D	---	0.9	1.0	1.8 ± 0.9	pCi/L	11/21/14 11:38	12/16/14 11:50	3140771
---	Combined Radium	calc.	5 *	0.9	---	3.6 ± 1.1	pCi/L	11/21/14 11:42	12/16/14 11:50	3140771

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-07

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.4	1.0	2.1 ± 0.7	pCi/L	11/21/14 11:42	11/25/14 09:49	3140772
15262-20-1	Radium-228	7500-Ra D	---	0.32	1.0	0.78 ± 0.36	pCi/L	11/21/14 11:38	12/16/14 11:50	3140772
---	Combined Radium	calc.	5 *	0.4	---	2.88 ± 0.77	pCi/L	11/21/14 11:42	12/16/14 11:50	3140772

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-08

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.3	1.0	2.1 ± 0.6	pCi/L	11/21/14 11:42	11/25/14 09:49	3140773
15262-20-1	Radium-228	7500-Ra D	---	0.29	1.0	0.41 ± 0.30	pCi/L	11/21/14 11:39	12/16/14 11:51	3140773
---	Combined Radium	calc.	5 *	0.3	---	2.51 ± 0.71	pCi/L	11/21/14 11:42	12/16/14 11:51	3140773

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-09

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.3	1.0	1.5 ± 0.6	pCi/L	11/21/14 11:42	11/25/14 09:49	3140774
15262-20-1	Radium-228	7500-Ra D	---	0.33	1.0	0.57 ± 0.34	pCi/L	11/21/14 11:39	12/16/14 11:51	3140774
---	Combined Radium	calc.	5 *	0.33	---	2.07 ± 0.66	pCi/L	11/21/14 11:42	12/16/14 11:51	3140774

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-10

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.3	1.0	1.1 ± 0.5	pCi/L	11/21/14 11:42	11/25/14 09:49	3140775
15262-20-1	Radium-228	7500-Ra D	---	0.29	1.0	0.32 ± 0.29	pCi/L	11/21/14 11:39	12/16/14 11:51	3140775
---	Combined Radium	calc.	5 *	0.3	---	1.42 ± 0.56	pCi/L	11/21/14 11:42	12/16/14 11:51	3140775

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-11

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.3	1.0	1.8 ± 0.6	pCi/L	11/21/14 11:42	11/25/14 09:49	3140776
15262-20-1	Radium-228	7500-Ra D	---	0.34	1.0	0.22 ± 0.34	pCi/L	11/21/14 11:39	12/16/14 11:51	3140776
---	Combined Radium	calc.	5 *	0.34	---	2.02 ± 0.72	pCi/L	11/21/14 11:42	12/16/14 11:51	3140776

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-12

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.2	1.0	2.3 ± 0.6	pCi/L	11/21/14 11:42	11/25/14 09:49	3140777
15262-20-1	Radium-228	7500-Ra D	---	0.36	1.0	0.65 ± 0.37	pCi/L	11/21/14 11:39	12/16/14 11:51	3140777
---	Combined Radium	calc.	5 *	0.36	---	2.95 ± 0.69	pCi/L	11/21/14 11:42	12/16/14 11:51	3140777

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-13

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.3	1.0	3.0 ± 0.7	pCi/L	11/21/14 11:42	11/25/14 09:49	3140778
15262-20-1	Radium-228	7500-Ra D	---	0.28	1.0	0.70 ± 0.30	pCi/L	11/21/14 11:39	12/16/14 11:51	3140778
---	Combined Radium	calc.	5 *	0.3	---	3.70 ± 0.79	pCi/L	11/21/14 11:42	12/16/14 11:51	3140778

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-14

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.52	1.0	0.53 ± 0.53	pCi/L	11/28/14 11:20	12/02/14 08:50	3140779
15262-20-1	Radium-228	7500-Ra D	---	0.38	1.0	0.30 ± 0.37	pCi/L	11/21/14 11:39	12/16/14 11:51	3140779
---	Combined Radium	calc.	5 *	0.52	---	0.83 ± 0.65	pCi/L	11/28/14 11:20	12/16/14 11:51	3140779

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

Sampling Point: L733752-15

PWS ID: Not Supplied

Radionuclides										
Analyte ID #	Analyte	Method	Reg Limit	MDA 95**	MRL	Result	Units	Preparation Date	Analyzed	EEA ID #
13982-63-3	Radium-226	7500-Ra B	---	0.6	1.0	1.2 ± 0.7	pCi/L	11/28/14 11:20	12/02/14 08:50	3140780
15262-20-1	Radium-228	7500-Ra D	---	0.3	1.0	1.0 ± 0.3	pCi/L	11/21/14 11:39	12/16/14 11:51	3140780
---	Combined Radium	calc.	5 *	0.6	---	2.2 ± 0.8	pCi/L	11/28/14 11:20	12/16/14 11:51	3140780

** Minimum Detectable Activity (MDA95) shall be that concentration which can be counted with a precision of plus or minus 100% at the 95 % confidence level.

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

Sub-Contract Chain of Custody

 **Environmental Science Corp**
12065 Lebanon Road
Mt. Juliet, TN 37122
(615) 773-9756 (615) 758-5859 fax

Sub-Contract Lab : ENVHEALT

City / State : South Bend, IN

Results Needed by : 12/10/14

ESC Purchase Order # : S21007

Send Reports To : Janice Cozby jcozby@esclabsciences.com

WORKGROUP

WG755057

Date Created :

11/17/2014

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L733752-01 17669922 17669921	DW	11/11/2014 12:00	Radium 226 3140766	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
L733752-01 17669921 17669922	DW	11/11/2014 12:00	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
L733752-02 17669939 17669940	DW	11/11/2014 13:40	Radium 226 3140767	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
L733752-02 17669939 17669940	DW	11/11/2014 13:40	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
L733752-03 17669942 17669941	DW	11/11/2014 15:00	Radium 226 3140768	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
L733752-03 17669942 17669941	DW	11/11/2014 15:00	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
L733752-04 17669943 17669944	DW	11/11/2014 16:10	Radium 226 3140769	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
L733752-04 17669944 17669943	DW	11/11/2014 16:10	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
L733752-05 17669945 17669946	DW	11/11/2014 17:00	Radium 226 3140770	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD

Client Provided Sample Container
(2) pH 2.2 per site

Relinquished by J Cozby

Date: 11/17/14

Received by: K. DeWitt

Date: 11-18-14 0945

Relinquished by _____

Date: _____

Received by: _____

Date: _____

Sub-Contract Lab : ENVHEALT

City / State : South Bend, IN

Results Needed by : 12/10/14

ESC Purchase Order # : S21007

Send Reports To : Janice Cozby jcozby@esclabsciences.com

WORKGROUP

WG755057

Date Created :

11/17/2014

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L733752-05	DW	11/11/2014 17:00	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669945 17669946						
L733752-06	DW	11/12/2014 9:45	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669947 17669948			3140771			
L733752-06	DW	11/12/2014 9:45	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669947 17669948						
L733752-07	DW	11/12/2014 10:40	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669950 17669949			3140772			
L733752-07	DW	11/12/2014 10:40	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669949 17669950						
L733752-08	DW	11/12/2014 12:40	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669952 17669951			3140773			
L733752-08	DW	11/12/2014 12:40	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669951 17669952						
L733752-09	DW	11/12/2014 14:30	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669953 17669954			3140774			
L733752-09	DW	11/12/2014 14:30	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669953 17669954						
L733752-10	DW	11/12/2014 15:50	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669956 17669955			3140775			

Client Provided Sample Container

Relinquished by _____

Date: _____

Received by : K. Depina

Date: 11-18-14 0945

Relinquished by _____

Date: _____

Received by : _____

Date: _____



Sub-Contract Lab : ENVHEALT

City / State : South Bend, IN

Results Needed by : 12/10/14

ESC Purchase Order # : S21007

Send Reports To : Janice Cozby jcozby@esclabsciences.com

WORKGROUP

WG755057

Date Created :

11/17/2014

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L733752-10	DW	11/12/2014 15:50	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669955 17669956						
L733752-11	DW	11/12/2014 16:50	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669957 17669958						
L733752-11	DW	11/12/2014 16:50	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669958 17669957						
L733752-12	DW	11/13/2014 9:50	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669959 17669960						
L733752-12	DW	11/13/2014 9:50	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669960 17669959						
L733752-13	DW	11/13/2014 11:30	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669961 17669962						
L733752-13	DW	11/13/2014 11:30	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669962 17669961						
L733752-14	DW	11/13/2014 12:30	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669964 17669963						
L733752-14	DW	11/13/2014 12:30	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD
17669963 17669964						
L733752-15	DW	11/13/2014 12:30	Radium 226	RA226	7500Ra B-2001	NM CLIENT - NEEDS EQUIS EDD
17669965 17669966						

Client Provided Sample Container

Relinquished by _____

Date: _____

Received by : K. Depina

Date: 11-18-14 0945

Relinquished by _____

Date: _____

Received by : _____

Date: _____



Sub-Contract Lab : ENVHEALT
City / State : South Bend, IN
Results Needed by : 12/10/14
ESC Purchase Order # : S21007

WORKGROUP **WG755057**
Date Created : 11/17/2014

Send Reports To : Janice Cozby jcozby@esclabsciences.com

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L733752-15	DW	11/13/2014 12:30	Radium 228	RA228	7500Ra D-2001	NM CLIENT - NEEDS EQUIS EDD

17669966
17669965

Client Provided Sample Container

Relinquished by _____ Date: _____

Received by : K. Dunning Date: 11-18-14 09:45

Relinquished by _____ Date: _____

Received by : _____ Date: _____



ARCADIS US - TX

2929 Briarpark Dr., Suite 300
Houston, TX 77042

Billing Information:

Attn: Accounts Payable
630 Plaza Drive, Suite 600
Highlands Ranch, CO 80129

Report to:
Project Manager

Email To: pam.krueger@arcadis-us.com; maisha.turner@arcadis-us.com

Project
Description: Navajo Refining Company - Artesia, NM

City/State
Collected:

Phone: 713-953-4800
Fax:

Client Project #
TX000836.0008.00004

Lab Project #
ARCADHTX-NAVAJO

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Date Results Needed

Immediately
Packed on Ice N Y X

Same Day 200%
Next Day 100%
Two Day 50%
Three Day 25%

Email? No X Yes
FAX? No Yes

No.
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Chain of Custody
MW-25-1114-BG	G	GW	-	11/11/14	1200	2	X	ESC
MW-17-1114-BG	G	GW	-	11/11/14	1340	2	X	ESC
NP-5-1114-BG	G	GW	-	11/11/14	1500	2	X	ESC
MW-136-1114-BG	G	GW	-	11/11/14	1610	2	X	ESC
EB-12-1114-BG	G	GW	-	11/11/14	1700	2	X	ESC
MW-13-1114-BG	G	GW	-	11/12/14	0945	2	X	ESC
MW-12-1114-BG	G	GW	-	11/12/14	1040	2	X	ESC
MW-55-1114-BG	G	GW	-	11/12/14	1245	2	X	ESC
UG-2-1114-BG	G	GW	-	11/12/14	1435	2	X	ESC
UG-1-1114-BG	G	GW	-	11/12/14	1550	2	X	ESC

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Samples returned via: ☐ UPS

Condition: (lab use only)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 28°C Bottles Received: 30ER

COC Seal Intact: Y N NA

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 11/14/14 Time: 0900

pH Checked: 2.2

NCF:

ARCADIS US - TX

2929 Briarpark Dr., Suite 300
Houston, TX 77042

Billing Information:

Attn: Accounts Payable
630 Plaza Drive, Suite 600
Highlands Ranch, CO 80129

Report to:
Project Manager

Email To: pam.krueger@arcadis-
us.com;maisha.turner@arcadis-

Project
Description: Navajo Refining Company - Artesia, NM

City/State
Collected:

Phone: 713-953-4800
Fax:

Client Project #
TX000836.0008.00004

Lab Project #
ARCADHTX-NAVAJO

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
☐ Same Day 200%
☐ Next Day 100%
☐ Two Day 50%
☐ Three Day 25%

Date Results Needed

Email? ☐ No ☒ Yes

FAX? ☐ No ☐ Yes

No.
of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts
EB-13-1114-BG	G	GW	-	11/12/14	1655	2
UG-4-1114-BG	G	GW	-	11/13/14	0950	2
UG-3R-1114-BG	G	GW	-	11/13/14	1130	2
EB-14-1114-BG	G	GW	-	11/13/14	1230	2
DUP-S-1114		GW				2
		GW				2
		GW				2
		GW				2
		GW				2
		GW				2

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Hold #

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Samples returned via: ☐ UPS

Condition: (lab use only)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 28°C Bottles Received: 30ER

COC Seal Intact: ☒ Y ☐ N ☐ NA

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 11/14/14 Time: 0900

pH Checked: 7.2

NCF:

Analysis / Container / Preservative

CL,FL,SO4 125mlHDPE-NoPres

CN 250mlHDPEAmb-NaOH

DIS METALS 500mlHDPE-HNO3

DRO 100ml Amb-HCl

GRO 40mlAmb HCl

METALS 500mlHDPE-HNO3

NO2NO3 250mlHDPE-H2SO4

TDS 250mlHDPE-NoPres

V8260 40mlAmb-HCl

Chain of Custody Page 1 of 2



YOUR LAB OF CHOICE

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



L# L733752

Table #

Acctnum: ARCADHTX

Template: T98202

Prelogin: P488967

TSR: 633 - Pam Langford

PB: 11-5-14

Shipped Via: FedEx Ground

Rem /Contaminant Sample # (lab only)

-11

12

13

14

15

Eurofins Eaton Analytical Run Log

Run ID: **197199** Method: **7500-Ra B**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3140770	L733752-05	GW	CI	11/25/2014 09:49	
FS	3140771	L733752-06	GW	CI	11/25/2014 09:49	
FS	3140772	L733752-07	GW	CI	11/25/2014 09:49	
FS	3140773	L733752-08	GW	CI	11/25/2014 09:49	
FS	3140774	L733752-09	GW	CI	11/25/2014 09:49	
FS	3140775	L733752-10	GW	CI	11/25/2014 09:49	
FS	3140776	L733752-11	GW	CI	11/25/2014 09:49	
FS	3140777	L733752-12	GW	CI	11/25/2014 09:49	
FS	3140778	L733752-13	GW	CI	11/25/2014 09:49	
LRB	3144942		RW	CI	11/25/2014 09:49	
LFB	3144943		RW	CI	11/25/2014 09:49	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-226	7500-Ra B	0.4	L733752-05		1.8		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3140770
FS	Radium-226	7500-Ra B	0.2	L733752-06		1.8		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3140771
FS	Radium-226	7500-Ra B	0.4	L733752-07		2.1		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3140772
FS	Radium-226	7500-Ra B	0.3	L733752-08		2.1		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3140773
FS	Radium-226	7500-Ra B	0.3	L733752-09		1.5		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3140774
FS	Radium-226	7500-Ra B	0.3	L733752-10		1.1		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3140775
FS	Radium-226	7500-Ra B	0.3	L733752-11		1.8		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3140776
FS	Radium-226	7500-Ra B	0.2	L733752-12		2.3		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3140777
FS	Radium-226	7500-Ra B	0.3	L733752-13		3.0		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3140778
LRB	Radium-226	7500-Ra B	0.18	---		0.16		pCi/L	---	---	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3144942
LFB	Radium-226	7500-Ra B	0.2	---		16.2200	18.0	% Recovery	90	30 - 160	---	---	1.0	11/21/2014 11:42	11/25/2014 09:49	3144943

Eurofins Eaton Analytical Run Log

Run ID: **197202** Method: **7500-Ra B**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3140766	L733752-01	GW	CI	11/25/2014 10:59	
FS	3140767	L733752-02	GW	CI	11/25/2014 10:59	
FS	3140768	L733752-03	GW	CI	11/25/2014 10:59	
FS	3140769	L733752-04	GW	CI	11/25/2014 10:59	
LRB	3145087		RW	CI	11/25/2014 10:59	
LFB	3145088		RW	CI	11/25/2014 10:59	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-226	7500-Ra B	-0.12	L733752-01		-0.77		pCi/L	---	---	---	---	1.0	11/21/2014 11:40	11/25/2014 10:59	3140766
FS	Radium-226	7500-Ra B	0.3	L733752-02		2.0		pCi/L	---	---	---	---	1.0	11/21/2014 11:40	11/25/2014 10:59	3140767
FS	Radium-226	7500-Ra B	0.2	L733752-03		2.3		pCi/L	---	---	---	---	1.0	11/21/2014 11:40	11/25/2014 10:59	3140768
FS	Radium-226	7500-Ra B	0.3	L733752-04		1.7		pCi/L	---	---	---	---	1.0	11/21/2014 11:40	11/25/2014 10:59	3140769
LRB	Radium-226	7500-Ra B	0.18	---		0.19		pCi/L	---	---	---	---	1.0	11/21/2014 11:40	11/25/2014 10:59	3145087
LFB	Radium-226	7500-Ra B	0.2	---		19.4400	18.0	% Recovery	108	30 - 160	---	---	1.0	11/21/2014 11:40	11/25/2014 10:59	3145088

Eurofins Eaton Analytical
Run Log

Run ID: **197409** Method: **7500-Ra B**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3140779	L733752-14	GW	DU	12/02/2014 08:50	
FS	3140780	L733752-15	GW	DU	12/02/2014 08:50	
LRB	3148304		RW	DU	12/02/2014 08:50	
LFB	3148305		RW	DU	12/02/2014 08:50	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-226	7500-Ra B	0.52	L733752-14		0.53		pCi/L	---	---	---	---	1.0	11/28/2014 11:20	12/02/2014 08:50	3140779
FS	Radium-226	7500-Ra B	0.6	L733752-15		1.2		pCi/L	---	---	---	---	1.0	11/28/2014 11:20	12/02/2014 08:50	3140780
LRB	Radium-226	7500-Ra B	0.26	---		0.42		pCi/L	---	---	---	---	1.0	11/28/2014 11:20	12/02/2014 08:50	3148304
LFB	Radium-226	7500-Ra B	0.2	---		20.5300	18.0	% Recovery	114	30 - 160	---	---	1.0	11/28/2014 11:20	12/02/2014 08:50	3148305

Eurofins Eaton Analytical Run Log

Run ID: **197835** Method: **7500-Ra D**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3140766	L733752-01	GW	DU	12/16/2014 11:50	
FS	3140767	L733752-02	GW	DU	12/16/2014 11:50	
FS	3140768	L733752-03	GW	DU	12/16/2014 11:50	
FS	3140769	L733752-04	GW	DU	12/16/2014 11:50	
FS	3140770	L733752-05	GW	DU	12/16/2014 11:50	
FS	3140771	L733752-06	GW	DU	12/16/2014 11:50	
FS	3140772	L733752-07	GW	DU	12/16/2014 11:50	
LRB	3156430		RW	DU	12/16/2014 11:50	
LFB	3156431		RW	DU	12/16/2014 11:50	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-228	7500-Ra D	0.94	L733752-01		0.99		pCi/L	---	---	---	---	1.0	11/21/2014 11:38	12/16/2014 11:50	3140766
FS	Radium-228	7500-Ra D	0.37	L733752-02		0.68		pCi/L	---	---	---	---	1.0	11/21/2014 11:38	12/16/2014 11:50	3140767
FS	Radium-228	7500-Ra D	0.37	L733752-03		0.67		pCi/L	---	---	---	---	1.0	11/21/2014 11:38	12/16/2014 11:50	3140768
FS	Radium-228	7500-Ra D	0.42	L733752-04		0.67		pCi/L	---	---	---	---	1.0	11/21/2014 11:38	12/16/2014 11:50	3140769
FS	Radium-228	7500-Ra D	0.43	L733752-05		0.07		pCi/L	---	---	---	---	1.0	11/21/2014 11:38	12/16/2014 11:50	3140770
FS	Radium-228	7500-Ra D	0.9	L733752-06		1.8		pCi/L	---	---	---	---	1.0	11/21/2014 11:38	12/16/2014 11:50	3140771
FS	Radium-228	7500-Ra D	0.32	L733752-07		0.78		pCi/L	---	---	---	---	1.0	11/21/2014 11:38	12/16/2014 11:50	3140772
LRB	Radium-228	7500-Ra D	0.50	---		0.44		pCi/L	---	---	---	---	1.0	11/21/2014 11:38	12/16/2014 11:50	3156430
LFB	Radium-228	7500-Ra D	0.31	---		8.7400	8.3	% Recovery	105	48 - 139	---	---	1.0	11/21/2014 11:38	12/16/2014 11:50	3156431

Eurofins Eaton Analytical
Run Log

Run ID: **197838** Method: **7500-Ra D**

<u>Type</u>	<u>Sample Id</u>	<u>Sample Site</u>	<u>Matrix</u>	<u>Instrument ID</u>	<u>Analysis Date</u>	<u>Calibration File</u>
FS	3140773	L733752-08	GW	CI	12/16/2014 11:51	
FS	3140774	L733752-09	GW	CI	12/16/2014 11:51	
FS	3140775	L733752-10	GW	CI	12/16/2014 11:51	
FS	3140776	L733752-11	GW	CI	12/16/2014 11:51	
FS	3140777	L733752-12	GW	CI	12/16/2014 11:51	
FS	3140778	L733752-13	GW	CI	12/16/2014 11:51	
FS	3140779	L733752-14	GW	CI	12/16/2014 11:51	
FS	3140780	L733752-15	GW	CI	12/16/2014 11:51	
LRB	3156472		RW	CI	12/16/2014 11:51	
LFB	3156473		RW	CI	12/16/2014 11:51	

QC Summary Report

Sample Type	Analyte	Method	MRL	Client ID	Result Flag	Amount	Target	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Dil Factor	Extracted	Analyzed	EEA ID #
FS	Radium-228	7500-Ra D	0.29	L733752-08		0.41		pCi/L	---	---	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3140773
FS	Radium-228	7500-Ra D	0.33	L733752-09		0.57		pCi/L	---	---	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3140774
FS	Radium-228	7500-Ra D	0.29	L733752-10		0.32		pCi/L	---	---	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3140775
FS	Radium-228	7500-Ra D	0.34	L733752-11		0.22		pCi/L	---	---	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3140776
FS	Radium-228	7500-Ra D	0.36	L733752-12		0.65		pCi/L	---	---	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3140777
FS	Radium-228	7500-Ra D	0.28	L733752-13		0.70		pCi/L	---	---	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3140778
FS	Radium-228	7500-Ra D	0.38	L733752-14		0.30		pCi/L	---	---	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3140779
FS	Radium-228	7500-Ra D	0.3	L733752-15		1.0		pCi/L	---	---	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3140780
LRB	Radium-228	7500-Ra D	0.27	---		0.31		pCi/L	---	---	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3156472
LFB	Radium-228	7500-Ra D	0.27	---		6.5000	8.3	% Recovery	78	48 - 139	---	---	1.0	11/21/2014 11:39	12/16/2014 11:51	3156473

Sample Type Key

<u>Type (Abbr.)</u>	<u>Sample Type</u>
FS	Field Sample
LFB	Laboratory Fortified Blank
LRB	Laboratory Reagent Blank

Quality Control Summary

SDG: L739910

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 12, 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 L739910-01, -02, -03, -04, -05, -06, -07, and -08 were analyzed in analytical batch WG761032. 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 L739910-09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG761034. 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 L739910-01, -02, -03, and -04 were analyzed in analytical batch WG762430. 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 L739910-05, -06, -07, and -08 were analyzed in analytical batch WG763941. 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 WG761032 sample duplicate analysis was performed on sample L739910-08. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG761032 sample duplicate analysis was performed on sample L739904-01. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG761034 sample duplicate analysis was performed on sample L739910-14. The relative percent difference exceeded the method limits for Chloride.

For analytical batch WG761034 sample duplicate analysis was performed on sample L739444-02. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG762430 sample duplicate analysis was performed on sample L739910-04. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG763941 sample duplicate analysis was performed on sample L742571-09. The relative percent difference exceeded the method limits for Fluoride.

For analytical batch WG763941 sample duplicate analysis was performed on sample L739910-05. The relative percent differences were within the method limits for target analytes reported from this batch.

Quality Control Summary

SDG: L739910

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 12, 2015

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG761032 matrix spike/matrix spike duplicate analysis was performed on sample L739910-05. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG761034 matrix spike/matrix spike duplicate analysis was performed on sample L738835-04. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG762430 matrix spike/matrix spike duplicate analysis was performed on sample L739974-02. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

For analytical batch WG763941 matrix spike/matrix spike duplicate analysis was performed on sample L739910-08. The matrix spike recoveries were below laboratory control limits for Fluoride. The relative percent difference exceeded laboratory limits for Fluoride.

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 L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG761215. 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 WG761215 sample duplicate analysis was performed on sample L739950-01. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG761215 sample duplicate analysis was performed on sample L739849-02. The relative percent differences were within the method limits for target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG761215 matrix spike/matrix spike duplicate analysis was performed on sample L739910-01. The matrix spike recoveries were below laboratory control limits for Cyanide. 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.

Quality Control Summary

SDG: L739910

For: ARCADIS US - TX

**Project: Navajo Refining Company - Artesia,
August 12, 2015**

Total Dissolved Solids by Method 2540 C-2011

Laboratory Control Sample

Samples L739910-01, -02, -03, -04, and -05 were analyzed in analytical batch WG761244. 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 L739910-06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG761560. 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 WG761244 sample duplicate analysis was performed on sample L739548-03. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG761244 sample duplicate analysis was performed on sample L739949-10. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG761560 sample duplicate analysis was performed on sample L739830-01. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG761560 sample duplicate analysis was performed on sample L739910-14. The relative percent differences were within the method limits for target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

Precision for batch WG761244 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Precision for batch WG761560 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.

Nitrate-Nitrite by Method 353.2

Laboratory Control Sample

Samples L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG762511. 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 WG762511 sample duplicate analysis was performed on sample L739910-14. The relative percent differences were within the method limits for target analytes reported from this batch.

For analytical batch WG762511 sample duplicate analysis was performed on sample L739910-10. The relative percent differences were within the method limits for target analytes reported from this batch.

Quality Control Summary

SDG: L739910

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 12, 2015

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG762511 matrix spike/matrix spike duplicate analysis was performed on sample L740066-03. 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.

Trace Metals by Method 6020

Laboratory Control Sample

Samples L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG761143. 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 L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG761385. 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 WG761143 matrix spike/matrix spike duplicate analysis was performed on sample L739910-01. The matrix spike recoveries were above laboratory control limits for Boron and Sodium. The matrix spike recoveries were below laboratory control limits for Calcium and Silver. The relative percent difference was within laboratory limits for all target analytes reported from this batch. Boron did not meet the method limit criteria for the serial dilution.

For analytical batch WG761385 matrix spike/matrix spike duplicate analysis was performed on sample L739910-01. The matrix spike recoveries were below laboratory control limits for Boron,Dissolved and Silver,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.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit except Nickel had a detection above the MDL in WG761143.

Volatile TPH by Method 8015D/GRO

Laboratory Control Sample

Samples L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG761466. 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.

Quality Control Summary

SDG: L739910

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 12, 2015

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG761466 matrix spike/matrix spike duplicate analysis was performed on sample L739910-01. 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.

Volatile Organic Compounds by Method 8260B

Laboratory Control Sample

Samples L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG761321. The laboratory control sample associated with these samples had all target analytes within method limits except for 1,1,1-Trichloroethane. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG761321 matrix spike/matrix spike duplicate analysis was performed on sample L739910-01. 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 L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG761458. 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 WG761458 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.

Diesel Range Organics by Method 8015

Laboratory Control Sample

Samples L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, and -14 were analyzed in analytical batch WG761511. 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.



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Mt. Juliet, TN 37122
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Quality Control Summary

SDG: L739910

For: ARCADIS US - TX

Project: Navajo Refining Company - Artesia,

August 12, 2015

Matrix Spike/Matrix Spike Duplicate

Precision for batch WG761511 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.

Nancy F. McLain
ESC Representative
ESC Lab Sciences



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

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

Report Summary

Wednesday August 12, 2015

Report Number: L739910

Samples Received: 12/19/14

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,
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1-800-767-5859
Fax (615) 758-5859

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 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-01

Sample ID : MW-136-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/16/14 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	250000	5200	100000	ug/l		9056MOD	12/26/14	100
Fluoride	1900	9.9	100	ug/l		9056MOD	12/30/14	1
Sulfate	2900000	7700	500000	ug/l		9056MOD	12/26/14	100
Cyanide	U	1.8	5.0	ug/l	J6	9012B	12/22/14	1
Nitrate-Nitrite	630	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	4100000	2800	10000	ug/l		2540 C-	12/23/14	1
Aluminum	980	2.0	100	ug/l		6020	01/08/15	1
Aluminum, Dissolved	40.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	2.8	0.25	2.0	ug/l		6020	01/08/15	1
Arsenic, Dissolved	2.7	0.25	2.0	ug/l		6020	01/08/15	1
Barium	27.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	12.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	650	1.5	20.	ug/l	01V	6020	01/08/15	1
Boron, Dissolved	680	1.5	20.	ug/l	V	6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	730000	460	10000	ug/l		6020	01/08/15	10
Calcium, Dissolved	660000	460	10000	ug/l		6020	01/08/15	10
Chromium	1.7	0.54	1.0	ug/l		6020	01/08/15	1
Chromium, Dissolved	0.95	0.54	1.0	ug/l	J	6020	01/08/15	1
Copper	1.5	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	1.3	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	0.98	0.26	2.0	ug/l	J	6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	560	15.	100	ug/l		6020	01/08/15	1
Iron, Dissolved	26.	15.	100	ug/l	J	6020	01/08/15	1
Lead	1.0	0.24	2.0	ug/l	J	6020	01/08/15	1
Lead, Dissolved	0.25	0.24	2.0	ug/l	J	6020	01/08/15	1
Manganese	41.	0.25	5.0	ug/l		6020	01/08/15	1
Manganese, Dissolved	5.0	0.25	5.0	ug/l		6020	01/08/15	1
Molybdenum	6.6	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	6.8	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	1.9	0.35	2.0	ug/l	JB	6020	01/08/15	1
Nickel, Dissolved	0.78	0.35	2.0	ug/l	J	6020	01/08/15	1
Potassium	3000	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	3100	37.	1000	ug/l		6020	01/08/15	1
Selenium	4.3	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	4.4	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l	J6	6020	01/08/15	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 10:48 Revised: 08/12/15 14:24



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Mt. Juliet, TN 37122
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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-01

Sample ID : MW-136-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/16/14 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l	J6	6020	01/08/15	1
Sodium	110000	1100	10000	ug/l		6020	01/08/15	10
Sodium, Dissolved	100000	1100	10000	ug/l		6020	01/08/15	10
Uranium	76.	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	78.	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	20.	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	19.	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	7.4	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	3.0	2.6	25.	ug/l	J	6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	100.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	108.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	99.2			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	12/24/14	1
Surrogate Recovery								

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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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-136-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 13:20

ESC Sample # : L739910-01

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	108.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	26.6			% Rec.		8270C	12/23/14	1
Phenol-d5	27.0			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	81.3			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	73.6			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	69.1			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	79.8			% Rec.		8270C	12/23/14	1

U = ND (Not Detected)

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

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-02

Sample ID : NP-5-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/16/14 14:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	400000	5200	100000	ug/l		9056MOD	12/26/14	100
Fluoride	3000	9.9	100	ug/l		9056MOD	12/30/14	1
Sulfate	3600000	7700	500000	ug/l		9056MOD	12/26/14	100
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	1500	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	5800000	2800	10000	ug/l		2540 C-	12/23/14	1
Aluminum	200	2.0	100	ug/l		6020	01/08/15	1
Aluminum, Dissolved	22.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	3.3	0.25	2.0	ug/l		6020	01/08/15	1
Arsenic, Dissolved	3.6	0.25	2.0	ug/l		6020	01/08/15	1
Barium	11.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	9.0	0.36	5.0	ug/l		6020	01/08/15	1
Boron	2100	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	2100	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	530000	460	10000	ug/l		6020	01/08/15	10
Calcium, Dissolved	520000	460	10000	ug/l		6020	01/08/15	10
Chromium	1.2	0.54	1.0	ug/l		6020	01/08/15	1
Chromium, Dissolved	1.1	0.54	1.0	ug/l		6020	01/08/15	1
Copper	2.9	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	1.7	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	130	15.	100	ug/l		6020	01/08/15	1
Iron, Dissolved	36.	15.	100	ug/l	J	6020	01/08/15	1
Lead	0.38	0.24	2.0	ug/l	J	6020	01/08/15	1
Lead, Dissolved	0.30	0.24	2.0	ug/l	J	6020	01/08/15	1
Manganese	1.9	0.25	5.0	ug/l	J	6020	01/08/15	1
Manganese, Dissolved	0.58	0.25	5.0	ug/l	J	6020	01/08/15	1
Molybdenum	38.	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	38.	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	1.9	0.35	2.0	ug/l	JB	6020	01/08/15	1
Nickel, Dissolved	4.0	0.35	2.0	ug/l		6020	01/08/15	1
Potassium	660	37.	1000	ug/l	J	6020	01/08/15	1
Potassium, Dissolved	700	37.	1000	ug/l	J	6020	01/08/15	1
Selenium	14.	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	14.	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	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 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-02

Sample ID : NP-5-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/16/14 14:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	260000	1100	10000	ug/l		6020	01/08/15	10
Sodium, Dissolved	250000	1100	10000	ug/l		6020	01/08/15	10
Uranium	200	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	210	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	22.	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	22.	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	3.1	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	98.3			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	106.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	94.2			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	20.	12.	100	ug/l	J	8015	12/24/14	1
Surrogate Recovery								

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 14:30

ESC Sample # : L739910-02

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	108.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	56.7			% Rec.		8270C	12/23/14	1
Phenol-d5	40.4			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	75.0			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	75.7			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	78.1			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	78.0			% Rec.		8270C	12/23/14	1

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-03

Sample ID : MW-17-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/16/14 15:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	130000	2600	50000	ug/l		9056MOD	12/26/14	50
Fluoride	1200	9.9	100	ug/l		9056MOD	12/30/14	1
Sulfate	1100000	3900	250000	ug/l		9056MOD	12/26/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	2000	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	2000000	2800	10000	ug/l		2540 C-	12/23/14	1
Aluminum	24.	2.0	100	ug/l	J	6020	01/08/15	1
Aluminum, Dissolved	20.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	1.1	0.25	2.0	ug/l	J	6020	01/08/15	1
Arsenic, Dissolved	1.3	0.25	2.0	ug/l	J	6020	01/08/15	1
Barium	14.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	14.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	200	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	190	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	370000	230	5000	ug/l		6020	01/08/15	5
Calcium, Dissolved	400000	460	10000	ug/l		6020	01/08/15	10
Chromium	1.7	0.54	1.0	ug/l		6020	01/08/15	1
Chromium, Dissolved	2.0	0.54	1.0	ug/l		6020	01/08/15	1
Copper	0.55	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	1.2	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	U	15.	100	ug/l		6020	01/08/15	1
Iron, Dissolved	20.	15.	100	ug/l	J	6020	01/08/15	1
Lead	0.75	0.24	2.0	ug/l	J	6020	01/08/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/08/15	1
Manganese	0.97	0.25	5.0	ug/l	J	6020	01/08/15	1
Manganese, Dissolved	0.32	0.25	5.0	ug/l	J	6020	01/08/15	1
Molybdenum	11.	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	12.	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	0.92	0.35	2.0	ug/l	J	6020	01/08/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	01/08/15	1
Potassium	2100	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	2200	37.	1000	ug/l		6020	01/08/15	1
Selenium	7.9	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	8.6	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 15:50

ESC Sample # : L739910-03

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	75000	550	5000	ug/l		6020	01/08/15	5
Sodium, Dissolved	77000	110	1000	ug/l		6020	01/08/15	1
Uranium	2.9	0.33	10.	ug/l	J	6020	01/08/15	1
Uranium, Dissolved	2.9	0.33	10.	ug/l	J	6020	01/08/15	1
Vanadium	7.6	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	8.1	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	2.7	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	103.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	96.4			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	12/24/14	1
Surrogate Recovery								

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 15:50

ESC Sample # : L739910-03

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	112.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	52.2			% Rec.		8270C	12/23/14	1
Phenol-d5	36.9			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	86.4			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	69.1			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	62.4			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	76.0			% Rec.		8270C	12/23/14	1

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Houston, TX 77042

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-04

Sample ID : MW-55-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/16/14 17:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	210000	5200	100000	ug/l		9056MOD	12/26/14	100
Fluoride	2200	9.9	100	ug/l		9056MOD	12/30/14	1
Sulfate	2500000	7700	500000	ug/l		9056MOD	12/26/14	100
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	7200	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	4200000	2800	10000	ug/l		2540 C-	12/23/14	1
Aluminum	120	2.0	100	ug/l		6020	01/08/15	1
Aluminum, Dissolved	13.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	5.6	0.25	2.0	ug/l		6020	01/08/15	1
Arsenic, Dissolved	5.5	0.25	2.0	ug/l		6020	01/08/15	1
Barium	14.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	11.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	1200	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	1200	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	520000	460	10000	ug/l		6020	01/08/15	10
Calcium, Dissolved	580000	460	10000	ug/l		6020	01/08/15	10
Chromium	1.6	0.54	1.0	ug/l		6020	01/08/15	1
Chromium, Dissolved	2.1	0.54	1.0	ug/l		6020	01/08/15	1
Copper	1.2	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	1.0	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	1.7	0.26	2.0	ug/l	J	6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	78.	15.	100	ug/l	J	6020	01/08/15	1
Iron, Dissolved	17.	15.	100	ug/l	J	6020	01/08/15	1
Lead	0.62	0.24	2.0	ug/l	J	6020	01/08/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/08/15	1
Manganese	160	0.25	5.0	ug/l		6020	01/08/15	1
Manganese, Dissolved	8.6	0.25	5.0	ug/l		6020	01/08/15	1
Molybdenum	25.	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	25.	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	30.	0.35	2.0	ug/l	B	6020	01/08/15	1
Nickel, Dissolved	0.77	0.35	2.0	ug/l	J	6020	01/08/15	1
Potassium	890	37.	1000	ug/l	J	6020	01/08/15	1
Potassium, Dissolved	910	37.	1000	ug/l	J	6020	01/08/15	1
Selenium	19.	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	20.	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-04

Sample ID : MW-55-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/16/14 17:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	150000	1100	10000	ug/l		6020	01/08/15	10
Sodium, Dissolved	180000	1100	10000	ug/l		6020	01/08/15	10
Uranium	41.	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	41.	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	18.	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	18.	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	U	2.6	25.	ug/l		6020	01/08/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	100.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	106.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	96.8			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	150	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	65.	12.	100	ug/l	J	8015	12/24/14	1
Surrogate Recovery								

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 17:00

ESC Sample # : L739910-04

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	109.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	43.1			% Rec.		8270C	12/23/14	1
Phenol-d5	31.3			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	67.9			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	73.5			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	71.4			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	70.4			% Rec.		8270C	12/23/14	1

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-05

Sample ID : EB-15-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/16/14 17:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	200	52.	1000	ug/l	J	9056MOD	12/26/14	1
Fluoride	16.	9.9	100	ug/l	J	9056MOD	01/12/15	1
Sulfate	5100	77.	5000	ug/l		9056MOD	12/26/14	1
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	25000	2800	10000	ug/l		2540 C-	12/23/14	1
Aluminum	11.	2.0	100	ug/l	J	6020	01/08/15	1
Aluminum, Dissolved	9.1	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	U	0.25	2.0	ug/l		6020	01/08/15	1
Arsenic, Dissolved	U	0.25	2.0	ug/l		6020	01/08/15	1
Barium	U	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	0.70	0.36	5.0	ug/l	J	6020	01/08/15	1
Boron	80.	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	58.	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	250	46.	1000	ug/l	J	6020	01/08/15	1
Calcium, Dissolved	82.	46.	1000	ug/l	J	6020	01/08/15	1
Chromium	U	0.54	1.0	ug/l		6020	01/08/15	1
Chromium, Dissolved	U	0.54	1.0	ug/l		6020	01/08/15	1
Copper	0.63	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	U	0.52	5.0	ug/l		6020	01/08/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	210	15.	100	ug/l		6020	01/08/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/08/15	1
Lead	U	0.24	2.0	ug/l		6020	01/08/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/08/15	1
Manganese	0.86	0.25	5.0	ug/l	J	6020	01/08/15	1
Manganese, Dissolved	U	0.25	5.0	ug/l		6020	01/08/15	1
Molybdenum	U	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	8.9	0.35	2.0	ug/l	B	6020	01/08/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	01/08/15	1
Potassium	U	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	01/08/15	1
Selenium	U	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	U	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-05

Sample ID : EB-15-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/16/14 17:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	300	110	1000	ug/l	J	6020	01/08/15	1
Sodium, Dissolved	200	110	1000	ug/l	J	6020	01/08/15	1
Uranium	U	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	U	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	U	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	U	2.6	25.	ug/l		6020	01/08/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	105.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	92.7			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	12/24/14	1
Surrogate Recovery								

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August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-15-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 17:45

ESC Sample # : L739910-05

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	110.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	52.8			% Rec.		8270C	12/23/14	1
Phenol-d5	37.5			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	59.4			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	63.7			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	73.1			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	76.8			% Rec.		8270C	12/23/14	1

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-06

Sample ID : MW-25-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 08:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	5200000	5200	100000	ug/l		9056MOD	12/26/14	100
Fluoride	500	9.9	100	ug/l		9056MOD	01/12/15	1
Sulfate	4200000	7700	500000	ug/l		9056MOD	12/26/14	100
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	420	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	11000000	2800	10000	ug/l		2540 C-	12/24/14	1
Aluminum	14.	2.0	100	ug/l	J	6020	01/08/15	1
Aluminum, Dissolved	31.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	9.4	0.25	2.0	ug/l		6020	01/08/15	1
Arsenic, Dissolved	7.9	0.25	2.0	ug/l		6020	01/08/15	1
Barium	29.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	22.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	510	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	410	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	0.20	0.16	1.0	ug/l	J	6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	1300000	2300	50000	ug/l		6020	01/08/15	50
Calcium, Dissolved	1000000	2300	50000	ug/l		6020	01/08/15	50
Chromium	0.55	0.54	1.0	ug/l	J	6020	01/08/15	1
Chromium, Dissolved	0.77	0.54	1.0	ug/l	J	6020	01/08/15	1
Copper	1.4	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	1.7	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	3.5	0.26	2.0	ug/l		6020	01/08/15	1
Cobalt, Dissolved	1.5	0.26	2.0	ug/l	J	6020	01/08/15	1
Iron	26.	15.	100	ug/l	J	6020	01/08/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/08/15	1
Lead	U	0.24	2.0	ug/l		6020	01/08/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/08/15	1
Manganese	1200	0.25	5.0	ug/l		6020	01/08/15	1
Manganese, Dissolved	520	0.25	5.0	ug/l		6020	01/08/15	1
Molybdenum	27.	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	24.	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	15.	0.35	2.0	ug/l	B	6020	01/08/15	1
Nickel, Dissolved	4.4	0.35	2.0	ug/l		6020	01/08/15	1
Potassium	10000	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	8300	37.	1000	ug/l		6020	01/08/15	1
Selenium	37.	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	29.	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

U = ND (Not Detected)

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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-06

Sample ID : MW-25-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 08:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	4000000	5500	50000	ug/l		6020	01/08/15	50
Sodium, Dissolved	3200000	5500	50000	ug/l		6020	01/08/15	50
Uranium	27.	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	23.	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	18.	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	14.	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	3.2	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	100.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	110.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	96.8			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	260	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	65.	12.	100	ug/l	J	8015	12/24/14	1
Surrogate Recovery								

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 08:20

ESC Sample # : L739910-06

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	112.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	36.7			% Rec.		8270C	12/23/14	1
Phenol-d5	23.6			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	81.1			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	75.1			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	75.1			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	68.8			% Rec.		8270C	12/23/14	1

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-07

Sample ID : MW-13-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 10:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	2700000	5200	100000	ug/l		9056MOD	12/26/14	100
Fluoride	540	9.9	100	ug/l		9056MOD	01/12/15	1
Sulfate	3800000	7700	500000	ug/l		9056MOD	12/26/14	100
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	4400	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	8500000	2800	10000	ug/l		2540 C-	12/24/14	1
Aluminum	16.	2.0	100	ug/l	J	6020	01/08/15	1
Aluminum, Dissolved	12.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	2.6	0.25	2.0	ug/l		6020	01/08/15	1
Arsenic, Dissolved	1.9	0.25	2.0	ug/l	J	6020	01/08/15	1
Barium	29.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	24.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	1200	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	970	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	800000	2300	50000	ug/l		6020	01/08/15	50
Calcium, Dissolved	750000	920	20000	ug/l		6020	01/08/15	20
Chromium	0.82	0.54	1.0	ug/l	J	6020	01/08/15	1
Chromium, Dissolved	0.81	0.54	1.0	ug/l	J	6020	01/08/15	1
Copper	2.2	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	2.6	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	0.44	0.26	2.0	ug/l	J	6020	01/08/15	1
Cobalt, Dissolved	0.26	0.26	2.0	ug/l	J	6020	01/08/15	1
Iron	480	15.	100	ug/l		6020	01/08/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/08/15	1
Lead	U	0.24	2.0	ug/l		6020	01/08/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/08/15	1
Manganese	150	0.25	5.0	ug/l		6020	01/08/15	1
Manganese, Dissolved	52.	0.25	5.0	ug/l		6020	01/08/15	1
Molybdenum	5.8	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	5.3	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	1.2	0.35	2.0	ug/l	JB	6020	01/08/15	1
Nickel, Dissolved	0.58	0.35	2.0	ug/l	J	6020	01/08/15	1
Potassium	6100	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	5400	37.	1000	ug/l		6020	01/08/15	1
Selenium	21.	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	19.	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

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Fax (615) 758-5859

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 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-07

Sample ID : MW-13-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 10:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	1800000	5500	50000	ug/l		6020	01/08/15	50
Sodium, Dissolved	1800000	2200	20000	ug/l		6020	01/08/15	20
Uranium	24.	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	21.	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	7.6	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	5.3	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	3.1	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	100.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	107.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	99.9			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	25.	12.	100	ug/l	J	8015	12/24/14	1
Surrogate Recovery								

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 10:15

ESC Sample # : L739910-07

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	106.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	57.2			% Rec.		8270C	12/23/14	1
Phenol-d5	40.0			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	76.5			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	73.9			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	78.3			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	74.3			% Rec.		8270C	12/23/14	1

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-08

Sample ID : MW-12-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 11:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	1700000	5200	100000	ug/l		9056MOD	12/26/14	100
Fluoride	780	9.9	100	ug/l	J6J3	9056MOD	01/12/15	1
Sulfate	3100000	7700	500000	ug/l		9056MOD	12/26/14	100
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	6700	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	6800000	2800	10000	ug/l		2540 C-	12/24/14	1
Aluminum	15.	2.0	100	ug/l	J	6020	01/08/15	1
Aluminum, Dissolved	14.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	1.6	0.25	2.0	ug/l	J	6020	01/08/15	1
Arsenic, Dissolved	1.4	0.25	2.0	ug/l	J	6020	01/08/15	1
Barium	23.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	22.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	730	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	630	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	770000	920	20000	ug/l		6020	01/08/15	20
Calcium, Dissolved	680000	920	20000	ug/l		6020	01/08/15	20
Chromium	0.55	0.54	1.0	ug/l	J	6020	01/08/15	1
Chromium, Dissolved	0.84	0.54	1.0	ug/l	J	6020	01/08/15	1
Copper	2.3	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	2.4	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	240	15.	100	ug/l		6020	01/08/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/08/15	1
Lead	0.26	0.24	2.0	ug/l	J	6020	01/08/15	1
Lead, Dissolved	0.32	0.24	2.0	ug/l	J	6020	01/08/15	1
Manganese	210	0.25	5.0	ug/l		6020	01/08/15	1
Manganese, Dissolved	200	0.25	5.0	ug/l		6020	01/08/15	1
Molybdenum	5.2	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	4.9	0.14	5.0	ug/l	J	6020	01/08/15	1
Nickel	1.9	0.35	2.0	ug/l	JB	6020	01/08/15	1
Nickel, Dissolved	0.92	0.35	2.0	ug/l	J	6020	01/08/15	1
Potassium	5600	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	5200	37.	1000	ug/l		6020	01/08/15	1
Selenium	8.8	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	8.8	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

U = ND (Not Detected)

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

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Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-08

Sample ID : MW-12-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 11:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	1500000	2200	20000	ug/l		6020	01/08/15	20
Sodium, Dissolved	1300000	2200	20000	ug/l		6020	01/08/15	20
Uranium	5.9	0.33	10.	ug/l	J	6020	01/08/15	1
Uranium, Dissolved	5.3	0.33	10.	ug/l	J	6020	01/08/15	1
Vanadium	2.3	0.18	5.0	ug/l	J	6020	01/08/15	1
Vanadium, Dissolved	2.0	0.18	5.0	ug/l	J	6020	01/08/15	1
Zinc	3.5	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	100.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	108.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	95.3			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	24.	12.	100	ug/l	J	8015	12/24/14	1
Surrogate Recovery								

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Fax (615) 758-5859

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 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-12-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 11:10

ESC Sample # : L739910-08

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	109.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	45.3			% Rec.		8270C	12/23/14	1
Phenol-d5	31.6			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	84.9			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	82.9			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	77.2			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	78.1			% Rec.		8270C	12/23/14	1

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-09

Sample ID : UG-4-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 13:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	51000	52.	1000	ug/l		9056MOD	12/19/14	1
Fluoride	560	9.9	100	ug/l		9056MOD	12/19/14	1
Sulfate	U	77.	5000	ug/l		9056MOD	12/19/14	1
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	510	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	4200000	2800	10000	ug/l		2540 C-	12/24/14	1
Aluminum	29.	2.0	100	ug/l	J	6020	01/08/15	1
Aluminum, Dissolved	16.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	0.93	0.25	2.0	ug/l	J	6020	01/08/15	1
Arsenic, Dissolved	0.94	0.25	2.0	ug/l	J	6020	01/08/15	1
Barium	29.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	26.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	1200	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	1100	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	610000	460	10000	ug/l		6020	01/08/15	10
Calcium, Dissolved	590000	460	10000	ug/l		6020	01/08/15	10
Chromium	0.91	0.54	1.0	ug/l	J	6020	01/08/15	1
Chromium, Dissolved	1.2	0.54	1.0	ug/l		6020	01/08/15	1
Copper	1.6	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	5.8	0.52	5.0	ug/l		6020	01/08/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	17.	15.	100	ug/l	J	6020	01/08/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/08/15	1
Lead	U	0.24	2.0	ug/l		6020	01/08/15	1
Lead, Dissolved	1.2	0.24	2.0	ug/l	J	6020	01/08/15	1
Manganese	100	0.25	5.0	ug/l		6020	01/08/15	1
Manganese, Dissolved	91.	0.25	5.0	ug/l		6020	01/08/15	1
Molybdenum	6.2	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	5.5	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	2.9	0.35	2.0	ug/l	B	6020	01/08/15	1
Nickel, Dissolved	1.6	0.35	2.0	ug/l	J	6020	01/08/15	1
Potassium	3300	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	3000	37.	1000	ug/l		6020	01/08/15	1
Selenium	6.9	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	7.2	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-09

Sample ID : UG-4-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 13:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	250000	1100	10000	ug/l		6020	01/08/15	10
Sodium, Dissolved	240000	1100	10000	ug/l		6020	01/08/15	10
Uranium	39.	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	35.	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	5.6	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	5.1	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	10.	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	8.2	2.6	25.	ug/l	J	6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	105.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	91.7			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	51.	12.	100	ug/l	J	8015	12/24/14	1
Surrogate Recovery								

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 13:15

ESC Sample # : L739910-09

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	108.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	43.7			% Rec.		8270C	12/23/14	1
Phenol-d5	33.5			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	91.6			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	84.2			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	77.2			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	89.4			% Rec.		8270C	12/23/14	1

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-10

Sample ID : UG-1-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 14:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	95000	52.	1000	ug/l		9056MOD	12/19/14	1
Fluoride	710	9.9	100	ug/l		9056MOD	12/19/14	1
Sulfate	2100000	3900	250000	ug/l		9056MOD	12/19/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	13000	99.	500	ug/l		353.2	12/30/14	5
Dissolved Solids	3100000	2800	10000	ug/l		2540 C-	12/24/14	1
Aluminum	22.	2.0	100	ug/l	J	6020	01/08/15	1
Aluminum, Dissolved	12.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	1.5	0.25	2.0	ug/l	J	6020	01/08/15	1
Arsenic, Dissolved	1.5	0.25	2.0	ug/l	J	6020	01/08/15	1
Barium	16.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	15.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	640	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	560	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	560000	460	10000	ug/l		6020	01/08/15	10
Calcium, Dissolved	490000	460	10000	ug/l		6020	01/08/15	10
Chromium	1.7	0.54	1.0	ug/l		6020	01/08/15	1
Chromium, Dissolved	1.8	0.54	1.0	ug/l		6020	01/08/15	1
Copper	1.4	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	2.0	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	59.	15.	100	ug/l	J	6020	01/08/15	1
Iron, Dissolved	30.	15.	100	ug/l	J	6020	01/08/15	1
Lead	0.83	0.24	2.0	ug/l	J	6020	01/08/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/08/15	1
Manganese	0.50	0.25	5.0	ug/l	J	6020	01/08/15	1
Manganese, Dissolved	0.28	0.25	5.0	ug/l	J	6020	01/08/15	1
Molybdenum	6.3	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	5.8	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	1.2	0.35	2.0	ug/l	JB	6020	01/08/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	01/08/15	1
Potassium	1500	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	1400	37.	1000	ug/l		6020	01/08/15	1
Selenium	10.	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	9.7	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

U = ND (Not Detected)

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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-10

Sample ID : UG-1-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 14:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	100000	1100	10000	ug/l		6020	01/08/15	10
Sodium, Dissolved	93000	110	1000	ug/l		6020	01/08/15	1
Uranium	25.	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	22.	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	15.	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	14.	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	4.5	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	4.0	2.6	25.	ug/l	J	6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	107.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	99.4			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	37.	12.	100	ug/l	J	8015	12/24/14	1
Surrogate Recovery								

U = ND (Not Detected)

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 14:15

ESC Sample # : L739910-10

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	111.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	53.7			% Rec.		8270C	12/23/14	1
Phenol-d5	40.7			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	77.1			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	74.6			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	72.1			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	69.7			% Rec.		8270C	12/23/14	1

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-11

Sample ID : UG-2-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 15:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	100000	2600	50000	ug/l		9056MOD	12/19/14	50
Fluoride	1500	9.9	100	ug/l		9056MOD	12/19/14	1
Sulfate	1400000	3900	250000	ug/l		9056MOD	12/19/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	4200	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	2200000	2800	10000	ug/l		2540 C-	12/24/14	1
Aluminum	19.	2.0	100	ug/l	J	6020	01/08/15	1
Aluminum, Dissolved	14.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	2.6	0.25	2.0	ug/l		6020	01/08/15	1
Arsenic, Dissolved	2.6	0.25	2.0	ug/l		6020	01/08/15	1
Barium	18.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	16.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	360	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	330	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	450000	230	5000	ug/l		6020	01/08/15	5
Calcium, Dissolved	390000	230	5000	ug/l		6020	01/08/15	5
Chromium	0.56	0.54	1.0	ug/l	J	6020	01/08/15	1
Chromium, Dissolved	0.98	0.54	1.0	ug/l	J	6020	01/08/15	1
Copper	1.7	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	2.1	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	1.0	0.26	2.0	ug/l	J	6020	01/08/15	1
Cobalt, Dissolved	0.94	0.26	2.0	ug/l	J	6020	01/08/15	1
Iron	48.	15.	100	ug/l	J	6020	01/08/15	1
Iron, Dissolved	82.	15.	100	ug/l	J	6020	01/08/15	1
Lead	0.24	0.24	2.0	ug/l	J	6020	01/08/15	1
Lead, Dissolved	0.43	0.24	2.0	ug/l	J	6020	01/08/15	1
Manganese	180	0.25	5.0	ug/l		6020	01/08/15	1
Manganese, Dissolved	170	0.25	5.0	ug/l		6020	01/08/15	1
Molybdenum	9.9	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	9.3	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	12.	0.35	2.0	ug/l	B	6020	01/08/15	1
Nickel, Dissolved	11.	0.35	2.0	ug/l		6020	01/08/15	1
Potassium	2200	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	2100	37.	1000	ug/l		6020	01/08/15	1
Selenium	3.0	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	3.0	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

U = ND (Not Detected)

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1-800-767-5859
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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-11

Sample ID : UG-2-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 15:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	120000	550	5000	ug/l		6020	01/08/15	5
Sodium, Dissolved	100000	550	5000	ug/l		6020	01/08/15	5
Uranium	17.	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	15.	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	15.	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	14.	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	6.6	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	4.5	2.6	25.	ug/l	J	6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	105.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	94.9			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	12/24/14	1
Surrogate Recovery								

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 15:15

ESC Sample # : L739910-11

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	109.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	40.3			% Rec.		8270C	12/23/14	1
Phenol-d5	27.0			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	74.0			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	69.1			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	65.7			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	70.1			% Rec.		8270C	12/23/14	1

U = ND (Not Detected)

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Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-12

Sample ID : UG-3R-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 16:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	24000	52.	1000	ug/l		9056MOD	12/19/14	1
Fluoride	590	9.9	100	ug/l		9056MOD	12/19/14	1
Sulfate	1500000	3900	250000	ug/l		9056MOD	12/19/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	870	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	12/24/14	1
Aluminum	100	2.0	100	ug/l		6020	01/08/15	1
Aluminum, Dissolved	18.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	1.7	0.25	2.0	ug/l	J	6020	01/08/15	1
Arsenic, Dissolved	1.7	0.25	2.0	ug/l	J	6020	01/08/15	1
Barium	20.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	19.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	260	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	260	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	440000	230	5000	ug/l		6020	01/08/15	5
Calcium, Dissolved	400000	230	5000	ug/l		6020	01/08/15	5
Chromium	2.3	0.54	1.0	ug/l		6020	01/08/15	1
Chromium, Dissolved	1.4	0.54	1.0	ug/l		6020	01/08/15	1
Copper	1.1	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	20.	0.52	5.0	ug/l		6020	01/08/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	110	15.	100	ug/l		6020	01/08/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/08/15	1
Lead	0.28	0.24	2.0	ug/l	J	6020	01/08/15	1
Lead, Dissolved	3.5	0.24	2.0	ug/l		6020	01/08/15	1
Manganese	3.6	0.25	5.0	ug/l	J	6020	01/08/15	1
Manganese, Dissolved	0.77	0.25	5.0	ug/l	J	6020	01/08/15	1
Molybdenum	4.0	0.14	5.0	ug/l	J	6020	01/08/15	1
Molybdenum, Dissolved	3.8	0.14	5.0	ug/l	J	6020	01/08/15	1
Nickel	18.	0.35	2.0	ug/l	B	6020	01/08/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	01/08/15	1
Potassium	1900	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	1900	37.	1000	ug/l		6020	01/08/15	1
Selenium	3.6	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	3.5	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

U = ND (Not Detected)

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

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-12

Sample ID : UG-3R-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 16:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	64000	550	5000	ug/l		6020	01/08/15	5
Sodium, Dissolved	58000	110	1000	ug/l		6020	01/08/15	1
Uranium	13.	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	11.	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	10.	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	9.6	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	5.7	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	9.2	2.6	25.	ug/l	J	6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	106.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	98.0			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	12/24/14	1
Surrogate Recovery								

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 16:00

ESC Sample # : L739910-12

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	114.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	62.1			% Rec.		8270C	12/23/14	1
Phenol-d5	44.1			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	83.5			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	81.7			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	78.3			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	80.3			% Rec.		8270C	12/23/14	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 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-13

Sample ID : DUP-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	220000	2600	50000	ug/l		9056MOD	12/19/14	50
Fluoride	1400	9.9	100	ug/l		9056MOD	12/19/14	1
Sulfate	2700000	3900	250000	ug/l		9056MOD	12/19/14	50
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	620	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	3900000	2800	10000	ug/l		2540 C-	12/24/14	1
Aluminum	680	2.0	100	ug/l		6020	01/08/15	1
Aluminum, Dissolved	24.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	2.9	0.25	2.0	ug/l		6020	01/08/15	1
Arsenic, Dissolved	2.8	0.25	2.0	ug/l		6020	01/08/15	1
Barium	20.	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	12.	0.36	5.0	ug/l		6020	01/08/15	1
Boron	680	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	640	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	720000	460	10000	ug/l		6020	01/08/15	10
Calcium, Dissolved	670000	460	10000	ug/l		6020	01/08/15	10
Chromium	1.4	0.54	1.0	ug/l		6020	01/08/15	1
Chromium, Dissolved	1.3	0.54	1.0	ug/l		6020	01/08/15	1
Copper	1.3	0.52	5.0	ug/l	J	6020	01/08/15	1
Copper, Dissolved	2.2	0.52	5.0	ug/l	J	6020	01/08/15	1
Cobalt	0.84	0.26	2.0	ug/l	J	6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	370	15.	100	ug/l		6020	01/08/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/08/15	1
Lead	0.55	0.24	2.0	ug/l	J	6020	01/08/15	1
Lead, Dissolved	0.65	0.24	2.0	ug/l	J	6020	01/08/15	1
Manganese	33.	0.25	5.0	ug/l		6020	01/08/15	1
Manganese, Dissolved	4.8	0.25	5.0	ug/l	J	6020	01/08/15	1
Molybdenum	7.0	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	6.6	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	1.8	0.35	2.0	ug/l	JB	6020	01/08/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	01/08/15	1
Potassium	3200	37.	1000	ug/l		6020	01/08/15	1
Potassium, Dissolved	3000	37.	1000	ug/l		6020	01/08/15	1
Selenium	4.2	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	4.4	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	1

U = ND (Not Detected)

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

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1-800-767-5859
Fax (615) 758-5859

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-13

Sample ID : DUP-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	110000	1100	10000	ug/l		6020	01/08/15	10
Sodium, Dissolved	100000	1100	10000	ug/l		6020	01/08/15	10
Uranium	83.	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	77.	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	21.	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	19.	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	6.2	2.6	25.	ug/l	J	6020	01/08/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	100.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	110.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	94.9			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	16.	12.	100	ug/l	J	8015	12/24/14	1
Surrogate Recovery								

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REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : DUP-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 00:00

ESC Sample # : L739910-13

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	109.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	20.2			% Rec.		8270C	12/23/14	1
Phenol-d5	21.5			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	78.5			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	73.5			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	75.7			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	68.6			% Rec.		8270C	12/23/14	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 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-14

Sample ID : EB-16-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 18:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Chloride	120	52.	1000	ug/l	JP1	9056MOD	12/19/14	1
Fluoride	12.	9.9	100	ug/l	J	9056MOD	12/19/14	1
Sulfate	U	77.	5000	ug/l		9056MOD	12/19/14	1
Cyanide	U	1.8	5.0	ug/l		9012B	12/22/14	1
Nitrate-Nitrite	U	20.	100	ug/l		353.2	12/30/14	1
Dissolved Solids	U	2800	10000	ug/l	T4	2540 C-	12/24/14	1
Aluminum	17.	2.0	100	ug/l	J	6020	01/08/15	1
Aluminum, Dissolved	21.	2.0	100	ug/l	J	6020	01/08/15	1
Arsenic	U	0.25	2.0	ug/l		6020	01/08/15	1
Arsenic, Dissolved	U	0.25	2.0	ug/l		6020	01/08/15	1
Barium	U	0.36	5.0	ug/l		6020	01/08/15	1
Barium, Dissolved	U	0.36	5.0	ug/l		6020	01/08/15	1
Boron	45.	1.5	20.	ug/l		6020	01/08/15	1
Boron, Dissolved	49.	1.5	20.	ug/l		6020	01/08/15	1
Cadmium	U	0.16	1.0	ug/l		6020	01/08/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/08/15	1
Calcium	370	46.	1000	ug/l	J	6020	01/08/15	1
Calcium, Dissolved	120	46.	1000	ug/l	J	6020	01/08/15	1
Chromium	1.2	0.54	1.0	ug/l		6020	01/08/15	1
Chromium, Dissolved	0.73	0.54	1.0	ug/l	J	6020	01/08/15	1
Copper	U	0.52	5.0	ug/l		6020	01/08/15	1
Copper, Dissolved	U	0.52	5.0	ug/l		6020	01/08/15	1
Cobalt	U	0.26	2.0	ug/l		6020	01/08/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	01/08/15	1
Iron	31.	15.	100	ug/l	J	6020	01/08/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	01/08/15	1
Lead	U	0.24	2.0	ug/l		6020	01/08/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	01/08/15	1
Manganese	0.31	0.25	5.0	ug/l	J	6020	01/08/15	1
Manganese, Dissolved	U	0.25	5.0	ug/l		6020	01/08/15	1
Molybdenum	U	0.14	5.0	ug/l		6020	01/08/15	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	01/08/15	1
Nickel	0.97	0.35	2.0	ug/l	JB	6020	01/08/15	1
Nickel, Dissolved	U	0.35	2.0	ug/l		6020	01/08/15	1
Potassium	120	37.	1000	ug/l	J	6020	01/08/15	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	01/08/15	1
Selenium	U	0.38	2.0	ug/l		6020	01/08/15	1
Selenium, Dissolved	U	0.38	2.0	ug/l		6020	01/08/15	1
Silver	U	0.31	2.0	ug/l		6020	01/08/15	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 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L739910-14

Sample ID : EB-16-1214-BG

Site ID :

Collected By : Ron Wood
Collection Date : 12/17/14 18:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
Silver, Dissolved	U	0.31	2.0	ug/l		6020	01/08/15	1
Sodium	350	110	1000	ug/l	J	6020	01/08/15	1
Sodium, Dissolved	300	110	1000	ug/l	J	6020	01/08/15	1
Uranium	U	0.33	10.	ug/l		6020	01/08/15	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	01/08/15	1
Vanadium	U	0.18	5.0	ug/l		6020	01/08/15	1
Vanadium, Dissolved	U	0.18	5.0	ug/l		6020	01/08/15	1
Zinc	U	2.6	25.	ug/l		6020	01/08/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	01/08/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	12/24/14	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	101.			% Rec.		8015D/G	12/24/14	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	12/28/14	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/28/14	1
Chloroform	U	0.32	5.0	ug/l		8260B	12/28/14	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/28/14	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	12/28/14	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/28/14	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	12/28/14	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	12/28/14	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	12/28/14	1
Toluene	U	0.78	5.0	ug/l		8260B	12/28/14	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l	J4	8260B	12/28/14	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	12/28/14	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/28/14	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	12/28/14	1
o-Xylene	U	0.34	1.0	ug/l		8260B	12/28/14	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	12/28/14	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	12/28/14	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	12/28/14	1
Dibromofluoromethane	104.			% Rec.		8260B	12/28/14	1
4-Bromofluorobenzene	92.6			% Rec.		8260B	12/28/14	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	U	22.	100	ug/l		8015	12/24/14	1
C28-C40 Oil Range	U	12.	100	ug/l		8015	12/24/14	1
Surrogate Recovery								

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 10:48 Revised: 08/12/15 14:24



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 12, 2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-16-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 18:15

ESC Sample # : L739910-14

Site ID :

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qual	Method	Date	Dil.
o-Terphenyl	115.			% Rec.		8015	12/24/14	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	12/23/14	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	12/23/14	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	12/23/14	1
Naphthalene	U	0.37	1.0	ug/l		8270C	12/23/14	1
Surrogate Recovery								
2-Fluorophenol	52.3			% Rec.		8270C	12/23/14	1
Phenol-d5	37.5			% Rec.		8270C	12/23/14	1
Nitrobenzene-d5	79.9			% Rec.		8270C	12/23/14	1
2-Fluorobiphenyl	74.1			% Rec.		8270C	12/23/14	1
2,4,6-Tribromophenol	71.7			% Rec.		8270C	12/23/14	1
p-Terphenyl-d14	88.2			% Rec.		8270C	12/23/14	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 10:48 Revised: 08/12/15 14:24

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L739910-01	WG761215	SAMP	Cyanide	R3011448	J6
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Boron	R3013764	01V
	WG761385	SAMP	Boron, Dissolved	R3013803	V
	WG761385	SAMP	Chromium, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761143	SAMP	Cobalt	R3013764	J
	WG761385	SAMP	Iron, Dissolved	R3013803	J
	WG761143	SAMP	Lead	R3013764	J
	WG761385	SAMP	Lead, Dissolved	R3013803	J
	WG761143	SAMP	Nickel	R3013764	JB
	WG761385	SAMP	Nickel, Dissolved	R3013803	J
	WG761143	SAMP	Silver	R3013764	J6
	WG761385	SAMP	Silver, Dissolved	R3013803	J6
	WG761143	SAMP	Zinc	R3013764	J
	WG761385	SAMP	Zinc, Dissolved	R3013803	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761511	SAMP	C28-C40 Oil Range	R3011914	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
L739910-02	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761385	SAMP	Iron, Dissolved	R3013803	J
	WG761143	SAMP	Lead	R3013764	J
	WG761385	SAMP	Lead, Dissolved	R3013803	J
	WG761143	SAMP	Manganese	R3013764	J
	WG761385	SAMP	Manganese, Dissolved	R3013803	J
	WG761143	SAMP	Nickel	R3013764	JB
	WG761143	SAMP	Potassium	R3013764	J
	WG761385	SAMP	Potassium, Dissolved	R3013803	J
	WG761143	SAMP	Zinc	R3013764	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761143	SAMP	Aluminum	R3013764	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Arsenic	R3013764	J
	WG761385	SAMP	Arsenic, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761385	SAMP	Iron, Dissolved	R3013803	J
	WG761143	SAMP	Lead	R3013764	J
L739910-03	WG761143	SAMP	Manganese	R3013764	J
	WG761385	SAMP	Manganese, Dissolved	R3013803	J
	WG761143	SAMP	Nickel	R3013764	J
	WG761143	SAMP	Uranium	R3013764	J
	WG761385	SAMP	Uranium, Dissolved	R3013803	J
	WG761143	SAMP	Zinc	R3013764	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761511	SAMP	C28-C40 Oil Range	R3011914	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761143	SAMP	Cobalt	R3013764	J
	WG761143	SAMP	Iron	R3013764	J
	WG761385	SAMP	Iron, Dissolved	R3013803	J
	WG761143	SAMP	Lead	R3013764	J
	WG761143	SAMP	Nickel	R3013764	B
	WG761385	SAMP	Nickel, Dissolved	R3013803	J
	WG761143	SAMP	Potassium	R3013764	J
	WG761385	SAMP	Potassium, Dissolved	R3013803	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
L739910-04	WG761032	SAMP	Chloride	R3012365	J
	WG763941	SAMP	Fluoride	R3014301	J
	WG761143	SAMP	Aluminum	R3013764	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761385	SAMP	Barium, Dissolved	R3013803	J
	WG761143	SAMP	Calcium	R3013764	J
	WG761385	SAMP	Calcium, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761143	SAMP	Manganese	R3013764	J
L739910-05					

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L739910-06	WG761143	SAMP	Nickel	R3013764	B
	WG761143	SAMP	Sodium	R3013764	J
	WG761385	SAMP	Sodium, Dissolved	R3013803	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761511	SAMP	C28-C40 Oil Range	R3011914	J
	WG761143	SAMP	Aluminum	R3013764	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Cadmium	R3013764	J
	WG761143	SAMP	Chromium	R3013764	J
	WG761385	SAMP	Chromium, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761385	SAMP	Cobalt, Dissolved	R3013803	J
	WG761143	SAMP	Iron	R3013764	J
L739910-07	WG761143	SAMP	Nickel	R3013764	B
	WG761143	SAMP	Zinc	R3013764	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761511	SAMP	C28-C40 Oil Range	R3011914	J
	WG761143	SAMP	Aluminum	R3013764	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761385	SAMP	Arsenic, Dissolved	R3013803	J
	WG761143	SAMP	Chromium	R3013764	J
	WG761385	SAMP	Chromium, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761143	SAMP	Cobalt	R3013764	J
	WG761385	SAMP	Cobalt, Dissolved	R3013803	J
	WG761143	SAMP	Nickel	R3013764	JB
L739910-08	WG761385	SAMP	Nickel, Dissolved	R3013803	J
	WG761143	SAMP	Zinc	R3013764	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761511	SAMP	C28-C40 Oil Range	R3011914	J
	WG763941	SAMP	Fluoride	R3014301	J6J3
	WG761143	SAMP	Aluminum	R3013764	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Arsenic	R3013764	J
	WG761385	SAMP	Arsenic, Dissolved	R3013803	J
	WG761143	SAMP	Chromium	R3013764	J
	WG761385	SAMP	Chromium, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761143	SAMP	Lead	R3013764	J
L739910-09	WG761385	SAMP	Lead, Dissolved	R3013803	J
	WG761385	SAMP	Molybdenum, Dissolved	R3013803	J
	WG761143	SAMP	Nickel	R3013764	JB
	WG761385	SAMP	Nickel, Dissolved	R3013803	J
	WG761143	SAMP	Uranium	R3013764	J
	WG761385	SAMP	Uranium, Dissolved	R3013803	J
	WG761143	SAMP	Vanadium	R3013764	J
	WG761385	SAMP	Vanadium, Dissolved	R3013803	J
	WG761143	SAMP	Zinc	R3013764	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761511	SAMP	C28-C40 Oil Range	R3011914	J
	WG761143	SAMP	Aluminum	R3013764	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Arsenic	R3013764	J
	WG761385	SAMP	Arsenic, Dissolved	R3013803	J
L739910-10	WG761143	SAMP	Chromium	R3013764	J
	WG761143	SAMP	Copper	R3013764	J
	WG761143	SAMP	Iron	R3013764	J
	WG761385	SAMP	Lead, Dissolved	R3013803	J
	WG761143	SAMP	Nickel	R3013764	B
	WG761385	SAMP	Nickel, Dissolved	R3013803	J
	WG761143	SAMP	Zinc	R3013764	J
	WG761385	SAMP	Zinc, Dissolved	R3013803	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761511	SAMP	C28-C40 Oil Range	R3011914	J
	WG761143	SAMP	Aluminum	R3013764	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Arsenic	R3013764	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L739910-11	WG761385	SAMP	Arsenic, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761143	SAMP	Iron	R3013764	J
	WG761385	SAMP	Iron, Dissolved	R3013803	J
	WG761143	SAMP	Lead	R3013764	J
	WG761143	SAMP	Manganese	R3013764	J
	WG761385	SAMP	Manganese, Dissolved	R3013803	J
	WG761143	SAMP	Nickel	R3013764	JB
	WG761143	SAMP	Zinc	R3013764	J
	WG761385	SAMP	Zinc, Dissolved	R3013803	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761143	SAMP	Aluminum	R3013764	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Chromium	R3013764	J
	WG761385	SAMP	Chromium, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761143	SAMP	Cobalt	R3013764	J
	WG761385	SAMP	Cobalt, Dissolved	R3013803	J
	WG761143	SAMP	Iron	R3013764	J
	WG761385	SAMP	Iron, Dissolved	R3013803	J
	WG761143	SAMP	Lead	R3013764	J
	WG761385	SAMP	Lead, Dissolved	R3013803	J
L739910-12	WG761143	SAMP	Nickel	R3013764	B
	WG761143	SAMP	Zinc	R3013764	J
	WG761385	SAMP	Zinc, Dissolved	R3013803	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Arsenic	R3013764	J
	WG761385	SAMP	Arsenic, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761143	SAMP	Lead	R3013764	J
	WG761143	SAMP	Manganese	R3013764	J
	WG761385	SAMP	Manganese, Dissolved	R3013803	J
	WG761143	SAMP	Molybdenum	R3013764	J
	WG761385	SAMP	Molybdenum, Dissolved	R3013803	J
	WG761143	SAMP	Nickel	R3013764	B
	WG761143	SAMP	Zinc	R3013764	J
	WG761385	SAMP	Zinc, Dissolved	R3013803	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761511	SAMP	C28-C40 Oil Range	R3011914	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Copper	R3013764	J
	WG761385	SAMP	Copper, Dissolved	R3013803	J
	WG761143	SAMP	Cobalt	R3013764	J
	WG761143	SAMP	Lead	R3013764	J
L739910-13	WG761385	SAMP	Lead, Dissolved	R3013803	J
	WG761385	SAMP	Manganese, Dissolved	R3013803	J
	WG761143	SAMP	Nickel	R3013764	JB
	WG761143	SAMP	Zinc	R3013764	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
	WG761034	SAMP	Chloride	R3011068	JP1
	WG761034	SAMP	Fluoride	R3011068	J
	WG761560	SAMP	Dissolved Solids	R3011954	T4
	WG761143	SAMP	Aluminum	R3013764	J
	WG761385	SAMP	Aluminum, Dissolved	R3013803	J
	WG761143	SAMP	Calcium	R3013764	J
	WG761385	SAMP	Calcium, Dissolved	R3013803	J
	WG761385	SAMP	Chromium, Dissolved	R3013803	J
	WG761143	SAMP	Iron	R3013764	J
	WG761143	SAMP	Manganese	R3013764	J
	WG761143	SAMP	Nickel	R3013764	JB
	WG761143	SAMP	Potassium	R3013764	J
	WG761143	SAMP	Sodium	R3013764	J
	WG761385	SAMP	Sodium, Dissolved	R3013803	J
	WG761321	SAMP	1,1,1-Trichloroethane	R3012322	J4
L739910-14					

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.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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: L739910

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:	12/16/2014	Analytic Batch:	WG761032
Analysis Date:	12/26/2014 1:49:00 PM	Analyst:	236
Instrument ID:	IC-9		
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08		

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	39.258	98	90 - 110	
Fluoride	1	8	8.0389	100	90 - 110	
Sulfate	1	40	39.9	100	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.317	98	90 - 110	
Fluoride	1	8	8.0347	100	90 - 110	
Sulfate	1	40	39.888	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	39.258	98	39.317	98	90 - 110	0	20
Fluoride	1	8	8.0389	100	8.0347	100	90 - 110	0	20
Sulfate	1	40	39.9	100	39.888	100	90 - 110	0	20

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761034
Analysis Date:	12/19/2014 1:04:00 PM	Analyst:	236
Instrument ID:	IC-8		
Sample Numbers:	L739910-09, -10, -11, -12, -13, -14		

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	39.205	98	90 - 110	
Fluoride	1	8	8.2614	103	90 - 110	
Sulfate	1	40	40.225	101	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.156	98	90 - 110	
Fluoride	1	8	8.1771	102	90 - 110	
Sulfate	1	40	40.193	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	39.205	98	39.156	98	90 - 110	0	20
Fluoride	1	8	8.2614	103	8.1771	102	90 - 110	1	20
Sulfate	1	40	40.225	101	40.193	100	90 - 110	0	20

Quality Control Summary

SDG: L739910

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:	WG762430
Collection Date:	12/16/2014			Analyst:	577
Analysis Date:	12/30/2014 1:32:00 PM				
Instrument ID:	IC-5				
Sample Numbers:	L739910-01, -02, -03, -04				

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Chloride	16887-00-6	< 1.00	0.215	
Fluoride	16984-48-8	< 0.100	< 0.00990	
Sulfate	14808-79-8	< 5.00	0.398	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.341	98	90 - 110	
Fluoride	1	8	8.4398	105	90 - 110	
Sulfate	1	40	41.283	103	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.404	99	90 - 110	
Fluoride	1	8	8.4479	106	90 - 110	
Sulfate	1	40	41.285	103	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	39.341	98	39.404	99	90 - 110	0	20	
Fluoride	1	8	8.4398	105	8.4479	106	90 - 110	0	20	
Sulfate	1	40	41.283	103	41.285	103	90 - 110	0	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG763941
Analysis Date:	1/12/2015 2:03:00 PM	Analyst:	236
Instrument ID:	IC-8		
Sample Numbers:	L739910-05, -06, -07, -08		

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	39.468	99	90 - 110	
Fluoride	1	8	8.1025	101	90 - 110	
Sulfate	1	40	39.171	98	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.629	99	90 - 110	
Fluoride	1	8	8.1956	102	90 - 110	
Sulfate	1	40	39.514	99	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec	Control RPD
Chloride	1	40	39.468	99	39.629	99	90 - 110	0	20
Fluoride	1	8	8.1025	101	8.1956	102	90 - 110	1	20
Sulfate	1	40	39.171	98	39.514	99	90 - 110	1	20

Quality Control Summary

SDG: L739910

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:	WG761032
Collection Date:	12/16/2014			Analyst:	236
Analysis Date:	12/26/2014 1:49:00 PM				
Instrument ID:	IC-9				
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08				

Sample Duplicate

L739910-08

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	100	1711.6	1693.6	1	20	
Sulfate	100	3105.4	3075.4	1	20	

Sample Duplicate

L739904-01

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	20	851.99	856.25	0	20	
Sulfate	1	31.204	31.007	1	20	

Matrix Spike / Matrix Spike Duplicate

L739910-05

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Chloride	1	50	0.1976	48.905	97	50.732	101	80 - 120		4	20	
Fluoride	1	5	<0.0099	4.8849	98	5.2025	104	80 - 120		6	20	
Sulfate	1	50	5.0838	49.660	89	51.234	92	80 - 120		3	20	

Quality Control Summary

SDG: L739910

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:	WG761034
Collection Date:	12/16/2014			Analyst:	236
Analysis Date:	12/19/2014 1:04:00 PM				
Instrument ID:	IC-8				
Sample Numbers:	L739910-09, -10, -11, -12, -13, -14				

Sample Duplicate

L739910-14

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	1	0.1167	0.057	69	20	P1
Fluoride	1	0.0121	0.0122	1	20	
Sulfate	1	<0.0774	<0.0774		20	

Sample Duplicate

L739444-02

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	1	55.578	56.206	1	20	

Matrix Spike / Matrix Spike Duplicate

L738835-04

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Sulfate	1	50	17.462	62.987	91	63.668	92	80 - 120		1	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG762430
Analysis Date:	12/30/2014 1:32:00 PM	Analyst:	577
Instrument ID:	IC-5		
Sample Numbers:	L739910-01, -02, -03, -04		

Sample Duplicate

L739910-04

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Fluoride	1	2.2082	2.2324	1	20	

Matrix Spike / Matrix Spike Duplicate

L739974-02

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Sulfate	50	1	1478.8	3707.0	89	3688.0	88	80 - 120		1	20	

Quality Control Summary

SDG: L739910

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:	WG763941
Collection Date:	12/16/2014			Analyst:	236
Analysis Date:	1/12/2015 2:03:00 PM				
Instrument ID:	IC-8				
Sample Numbers:	L739910-05, -06, -07, -08				

Sample Duplicate

L742571-09

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	1	0.09	0.1802	67	20	P1
Fluoride	1	<0.0099	0.0181	200	20	P1
Sulfate	1	4.1669	0.4405	162	20	P1

Sample Duplicate

L739910-05

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Fluoride	1	0.0162	0.0163	1	20	

Matrix Spike / Matrix Spike Duplicate

L739910-08

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Fluoride	1	5	0.7754	3.9827	64	5.2779	90	80 - 120	J6	28	20	J3

Quality Control Summary

SDG: L739910

ARCADIS US - TX

Test: Cyanide by Method 9012B
 Project No: TX000836.0008.00004
 Project: Navajo Refining Company - Artesia, NM
 Collection Date: 12/16/2014
 Analysis Date: 12/22/2014 3:57:00 PM
 Instrument ID: LACHAT4
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Matrix: Water - mg/L
 EPA ID: TN00003
Analytic Batch: WG761215
 Analyst: 518

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	0.104	104	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Cyanide	1	0.1	0.105	105	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	0.104	104	0.105	105	90 - 110	0.96	20		

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761215
Analysis Date:	12/22/2014 3:57:00 PM	Analyst:	518
Instrument ID:	LACHAT4		
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Sample Duplicate

L739950-01

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

Sample Duplicate

L739849-02

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

Matrix Spike / Matrix Spike Duplicate

L739910-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Cyanide	1	0.2	<0.0018	0.179	89.5	0.161	80.5	90 - 110	J6	10.6	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG762511
Analysis Date:	12/30/2014 10:42:00 AM	Analyst:	578
Instrument ID:	LACHAT5		
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

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	5.13	103	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Nitrate-Nitrite	1	5	5.23	105	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD Limits	Qual
Nitrate-Nitrite	1	5	5.13	103	5.23	105	90 - 110	1.93	20	

Quality Control Summary

SDG: L739910

ARCADIS US - TX

Test: Nitrate-Nitrite by Method 353.2
 Project No: TX000836.0008.00004
 Project: Navajo Refining Company - Artesia, NM
 Collection Date: 12/16/2014
 Analysis Date: 12/30/2014 10:42:00 AM
 Instrument ID: LACHAT5
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Matrix: Water - mg/L
 EPA ID: TN00003
Analytic Batch: WG762511
 Analyst: 578

Sample Duplicate

L739910-14

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Nitrate-Nitrite	1	<0.0197	<0.0197		20	

Sample Duplicate

L739910-10

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Nitrate-Nitrite	5	13	13.85	7.41	20	

Matrix Spike / Matrix Spike Duplicate

L740066-03

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD Qual
Nitrate-Nitrite	1	5	<0.0197	4.83	96.6	4.71	94.2	90 - 110		2.52	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761244
Analysis Date:	12/23/2014 12:45:00 PM	Analyst:	36
Instrument ID:	WETBAL2		
Sample Numbers:	L739910-01, -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	8700	98.9	85 - 115	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Dissolved Solids	1	8800	8500	96.6	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	8700	98.9	8500	96.6	85 - 115	2.33	5		

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761560
Analysis Date:	12/24/2014 3:12:00 PM	Analyst:	632
Instrument ID:	WETBAL2		
Sample Numbers:	L739910-06, -07, -08, -09, -10, -11, -12, -13, -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	8550	97.2	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 Limits	Qual
Dissolved Solids	1	8800	8550	97.2	8370	95.1	85 - 115	2.13	5	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761244
Analysis Date:	12/23/2014 12:45:00 PM	Analyst:	36
Instrument ID:	WETBAL2		
Sample Numbers:	L739910-01, -02, -03, -04, -05		

Sample Duplicate

L739548-03

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	123	120	2.47	5	

Sample Duplicate

L739949-10

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	240	250	4.08	5	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761560
Analysis Date:	12/24/2014 3:12:00 PM	Analyst:	632
Instrument ID:	WETBAL2		
Sample Numbers:	L739910-06, -07, -08, -09, -10, -11, -12, -13, -14		

Sample Duplicate

L739830-01

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Dissolved Solids	1	190	188	1.06	5	

Sample Duplicate

L739910-14

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

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761143
Analysis Date:	1/8/2015 11:04:00 AM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	12/20/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Aluminum	7429-90-5	< 100	3.78	
Arsenic	7440-38-2	< 2.00	< 0.250	
Barium	7440-39-3	< 5.00	< 0.360	
Boron	7440-42-8	< 20.0	1.83	
Cadmium	7440-43-9	< 1.00	< 0.160	
Calcium	7440-70-2	< 1000	< 46.0	
Chromium	7440-47-3	< 1.00	< 0.540	
Cobalt	7440-48-4	< 2.00	< 0.260	
Copper	7440-50-8	< 5.00	< 0.520	
Iron	7439-89-6	< 100	< 15.0	
Lead	7439-92-1	< 2.00	0.559	
Manganese	7439-96-5	< 5.00	< 0.250	
Molybdenum	7439-98-7	< 5.00	< 0.140	
Nickel	7440-02-0	< 2.00	1.15	B
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: L739910

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:	12/16/2014	Analytic Batch:	WG761385
Analysis Date:	1/8/2015 6:58:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	12/22/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Aluminum,Dissolved	7429-90-5	< 100	3.05	
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	4.81	
Cadmium,Dissolved	7440-43-9	< 1.00	< 0.160	
Calcium,Dissolved	7440-70-2	< 1000	< 46.0	
Chromium,Dissolved	7440-47-3	< 1.00	< 0.540	
Cobalt,Dissolved	7440-48-4	< 2.00	< 0.260	
Copper,Dissolved	7440-50-8	< 5.00	0.769	
Iron,Dissolved	7439-89-6	< 100	< 15.0	
Lead,Dissolved	7439-92-1	< 2.00	0.356	
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	0.954	
Potassium,Dissolved	7440-09-7	< 1000	72.9	
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: L739910

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: 12/16/2014 **Analytic Batch: WG761143**

Analysis Date: 1/8/2015 11:04:00 AM Analyst: 428

Instrument ID: ICPMS8 Prep Date: 12/20/2014

Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum	1	1000	1017.2	102	70 - 130	
Arsenic	1	100	101.57	102	85 - 115	
Barium	1	100	101.26	101	85 - 115	
Boron	1	100	106.16	106	70 - 130	
Cadmium	1	100	103.27	103	85 - 115	
Calcium	1	10000	9905.6	99.1	70 - 130	
Chromium	1	100	103.73	104	85 - 115	
Cobalt	1	100	103.88	104	85 - 115	
Copper	1	100	103.23	103	85 - 115	
Iron	1	1000	1040.0	104	85 - 115	
Lead	1	100	99.358	99.4	85 - 115	
Manganese	1	100	101.44	101	85 - 115	
Molybdenum	1	100	101.30	101	85 - 115	
Nickel	1	100	100.10	100	85 - 115	
Potassium	1	10000	10300	103	70 - 130	
Selenium	1	100	102.86	103	85 - 115	
Silver	1	100	100.26	100	85 - 115	
Sodium	1	10000	10594	106	70 - 130	
Uranium	1	100	98.707	98.7	70 - 130	
Vanadium	1	100	101.76	102	85 - 115	
Zinc	1	100	99.956	100	85 - 115	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761143
Analysis Date:	1/8/2015 11:04:00 AM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	12/20/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum	1	1000	1041.3	104	70 - 130	
Arsenic	1	100	102.95	103	85 - 115	
Barium	1	100	103.29	103	85 - 115	
Boron	1	100	111.83	112	70 - 130	
Cadmium	1	100	104.67	105	85 - 115	
Calcium	1	10000	10285	103	70 - 130	
Chromium	1	100	104.72	105	85 - 115	
Cobalt	1	100	106.00	106	85 - 115	
Copper	1	100	104.45	104	85 - 115	
Iron	1	1000	1037.9	104	85 - 115	
Lead	1	100	102.44	102	85 - 115	
Manganese	1	100	102.78	103	85 - 115	
Molybdenum	1	100	102.12	102	85 - 115	
Nickel	1	100	103.15	103	85 - 115	
Potassium	1	10000	10425	104	70 - 130	
Selenium	1	100	102.63	103	85 - 115	
Silver	1	100	100.86	101	85 - 115	
Sodium	1	10000	10735	107	70 - 130	
Uranium	1	100	100.88	101	70 - 130	
Vanadium	1	100	103.27	103	85 - 115	
Zinc	1	100	102.06	102	85 - 115	

Quality Control Summary

SDG: L739910

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: 12/16/2014 **Analytic Batch: WG761143**
Analysis Date: 1/8/2015 11:04:00 AM Analyst: 428
Instrument ID: ICPMS8 Prep Date: 12/20/2014
Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control	% Rec	Control RPD	
							Limits	Qual	% RPD	Limits Qual
Aluminum	1	1000	1017.2	102	1041.3	104	70 - 130		2.34	20
Arsenic	1	100	101.57	102	102.95	103	85 - 115		1.35	20
Barium	1	100	101.26	101	103.29	103	85 - 115		1.99	20
Boron	1	100	106.16	106	111.83	112	70 - 130		5.2	20
Cadmium	1	100	103.27	103	104.67	105	85 - 115		1.34	20
Calcium	1	10000	9905.6	99.1	10285	103	70 - 130		3.76	20
Chromium	1	100	103.73	104	104.72	105	85 - 115		0.95	20
Cobalt	1	100	103.88	104	106.00	106	85 - 115		2.03	20
Copper	1	100	103.23	103	104.45	104	85 - 115		1.17	20
Iron	1	1000	1040.0	104	1037.9	104	85 - 115		0.21	20
Lead	1	100	99.358	99.4	102.44	102	85 - 115		3.06	20
Manganese	1	100	101.44	101	102.78	103	85 - 115		1.31	20
Molybdenum	1	100	101.30	101	102.12	102	85 - 115		0.8	20
Nickel	1	100	100.10	100	103.15	103	85 - 115		3	20
Potassium	1	10000	10300	103	10425	104	70 - 130		1.2	20
Selenium	1	100	102.86	103	102.63	103	85 - 115		0.22	20
Silver	1	100	100.26	100	100.86	101	85 - 115		0.59	20
Sodium	1	10000	10594	106	10735	107	70 - 130		1.32	20
Uranium	1	100	98.707	98.7	100.88	101	70 - 130		2.18	20
Vanadium	1	100	101.76	102	103.27	103	85 - 115		1.47	20
Zinc	1	100	99.956	100	102.06	102	85 - 115		2.09	20

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761385
Analysis Date:	1/8/2015 6:58:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	12/22/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum,Dissolved	1	500	529.85	106	70 - 130	
Arsenic,Dissolved	1	50	53.088	106	85 - 115	
Barium,Dissolved	1	50	52.963	106	85 - 115	
Boron,Dissolved	1	50	61.242	122	70 - 130	
Cadmium,Dissolved	1	50	52.875	106	85 - 115	
Calcium,Dissolved	1	5000	5440.9	109	70 - 130	
Chromium,Dissolved	1	50	53.375	107	85 - 115	
Cobalt,Dissolved	1	50	53.651	107	85 - 115	
Copper,Dissolved	1	50	53.985	108	85 - 115	
Iron,Dissolved	1	500	535.76	107	85 - 115	
Lead,Dissolved	1	50	51.820	104	85 - 115	
Manganese,Dissolved	1	50	52.541	105	85 - 115	
Molybdenum,Dissolved	1	50	51.860	104	85 - 115	
Nickel,Dissolved	1	50	54.055	108	85 - 115	
Potassium,Dissolved	1	5000	5287.6	106	70 - 130	
Selenium,Dissolved	1	50	53.904	108	85 - 115	
Silver,Dissolved	1	50	51.661	103	85 - 115	
Sodium,Dissolved	1	5000	5415.8	108	70 - 130	
Uranium,Dissolved	1	50	51.285	103	70 - 130	
Vanadium,Dissolved	1	50	53.205	106	85 - 115	
Zinc,Dissolved	1	50	49.659	99	85 - 115	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761385
Analysis Date:	1/8/2015 6:58:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	12/22/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Aluminum,Dissolved	1	500	543.22	109	70 - 130	
Arsenic,Dissolved	1	50	51.883	104	85 - 115	
Barium,Dissolved	1	50	53.102	106	85 - 115	
Boron,Dissolved	1	50	60.557	121	70 - 130	
Cadmium,Dissolved	1	50	52.144	104	85 - 115	
Calcium,Dissolved	1	5000	5423.4	108	70 - 130	
Chromium,Dissolved	1	50	53.115	106	85 - 115	
Cobalt,Dissolved	1	50	53.396	107	85 - 115	
Copper,Dissolved	1	50	53.791	108	85 - 115	
Iron,Dissolved	1	500	532.28	106	85 - 115	
Lead,Dissolved	1	50	51.098	102	85 - 115	
Manganese,Dissolved	1	50	52.651	105	85 - 115	
Molybdenum,Dissolved	1	50	51.909	104	85 - 115	
Nickel,Dissolved	1	50	52.386	105	85 - 115	
Potassium,Dissolved	1	5000	5278.9	106	70 - 130	
Selenium,Dissolved	1	50	54.347	109	85 - 115	
Silver,Dissolved	1	50	51.600	103	85 - 115	
Sodium,Dissolved	1	5000	5467.2	109	70 - 130	
Uranium,Dissolved	1	50	50.491	101	70 - 130	
Vanadium,Dissolved	1	50	52.803	106	85 - 115	
Zinc,Dissolved	1	50	49.273	99	85 - 115	

Quality Control Summary

SDG: L739910

ARCADIS US - TX

Test: Trace Metals by Method 6020
Project No: TX000836.0008.00004
Project: Navajo Refining Company - Artesia, NM
Collection Date: 12/16/2014
Analysis Date: 1/8/2015 6:58:00 PM
Instrument ID: ICPMS8
Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Matrix: Water - ug/L
EPA ID: TN00003
Analytic Batch: WG761385
Analyst: 338
Prep Date: 12/22/2014

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	529.85	106	543.22	109	70 - 130	2	20	
Arsenic,Dissolved	1	50	53.088	106	51.883	104	85 - 115	2	20	
Barium,Dissolved	1	50	52.963	106	53.102	106	85 - 115	0	20	
Boron,Dissolved	1	50	61.242	122	60.557	121	70 - 130	1	20	
Cadmium,Dissolved	1	50	52.875	106	52.144	104	85 - 115	1	20	
Calcium,Dissolved	1	5000	5440.9	109	5423.4	108	70 - 130	0	20	
Chromium,Dissolved	1	50	53.375	107	53.115	106	85 - 115	0	20	
Cobalt,Dissolved	1	50	53.651	107	53.396	107	85 - 115	0	20	
Copper,Dissolved	1	50	53.985	108	53.791	108	85 - 115	0	20	
Iron,Dissolved	1	500	535.76	107	532.28	106	85 - 115	1	20	
Lead,Dissolved	1	50	51.820	104	51.098	102	85 - 115	1	20	
Manganese,Dissolved	1	50	52.541	105	52.651	105	85 - 115	0	20	
Molybdenum,Dissolved	1	50	51.860	104	51.909	104	85 - 115	0	20	
Nickel,Dissolved	1	50	54.055	108	52.386	105	85 - 115	3	20	
Potassium,Dissolved	1	5000	5287.6	106	5278.9	106	70 - 130	0	20	
Selenium,Dissolved	1	50	53.904	108	54.347	109	85 - 115	1	20	
Silver,Dissolved	1	50	51.661	103	51.600	103	85 - 115	0	20	
Sodium,Dissolved	1	5000	5415.8	108	5467.2	109	70 - 130	1	20	
Uranium,Dissolved	1	50	51.285	103	50.491	101	70 - 130	2	20	
Vanadium,Dissolved	1	50	53.205	106	52.803	106	85 - 115	1	20	
Zinc,Dissolved	1	50	49.659	99	49.273	99	85 - 115	1	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761143
Analysis Date:	1/8/2015 11:04:00 AM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	12/20/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Serial Dilution

L739910-01

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Aluminum	5	981.74	1488.7	52	10	
Arsenic	5	2.7580	2.9806	8	10	
Barium	5	27.016	27.331	1	10	
Boron	5	653.88	741.93	13	10	O1
Cadmium	5	<0.16	<0.8		10	
Calcium	5	682322	728816	7	10	
Chromium	5	1.7220	<2.7	18	10	
Cobalt	5	0.9818	<1.3	16	10	
Copper	5	1.5396	<2.6	37	10	
Iron	5	556.04	824.85	48	10	
Lead	5	1.0387	1.4153	36	10	
Manganese	5	40.604	43.953	8	10	
Molybdenum	5	6.6343	6.5472	1	10	
Nickel	5	1.8939	27.533	1354	10	
Potassium	5	3042.7	3039.8	0	10	
Selenium	5	4.2715	4.4875	5	10	
Silver	5	<0.31	<1.55		10	
Sodium	5	103943	111791	8	10	
Uranium	5	76.426	78.147	2	10	
Vanadium	5	19.759	20.761	5	10	
Zinc	5	7.3965	<12.8	56	10	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761143
Analysis Date:	1/8/2015 11:04:00 AM	Analyst:	428
Instrument ID:	ICPMS8	Prep Date:	12/20/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Matrix Spike / Matrix Spike Duplicate

L739910-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Aluminum	1	1000	981.74	2239.0	126	2149.1	116	70 - 130		4.1	20	
Arsenic	1	100	2.7580	109.06	106	109.99	107	75 - 125		0.84	20	
Barium	1	100	27.016	139.09	112	139.25	112	75 - 125		0.12	20	
Boron	1	100	653.88	751.98	98.1	780.90	127	70 - 130	V	3.77	20	
Cadmium	1	100	<0.16	106.51	106	106.95	107	75 - 125		0.41	20	
Calcium	1	10000	682322	684765	24.4	689394	70.7	70 - 130	V	0.67	20	
Chromium	1	100	1.7220	105.72	104	105.20	104	75 - 125		0.49	20	
Cobalt	1	100	0.9818	103.29	102	103.53	103	75 - 125		0.24	20	
Copper	1	100	1.5396	102.42	101	103.28	101	75 - 125		0.84	20	
Iron	1	1000	556.04	1659.7	110	1651.3	109	75 - 125		0.5	20	
Lead	1	100	1.0387	101.68	101	100.01	99.0	75 - 125		1.65	20	
Manganese	1	100	40.604	142.36	102	141.97	101	75 - 125		0.27	20	
Molybdenum	1	100	6.6343	113.46	107	114.24	207	75 - 125		0.68	20	
Nickel	1	100	1.8939	100.43	98.5	101.30	99.5	75 - 125		0.86	20	
Potassium	1	10000	3042.7	13199	102	13140	101	70 - 130		0.45	20	
Selenium	1	100	4.2715	108.42	104	110.36	106	75 - 125		1.77	20	
Silver	1	100	<0.31	27.736	27.5	27.578	27.5	75 - 125	J6	0.57	20	
Sodium	1	10000	103943	113632	96.9	114593	106	70 - 130	V	0.84	20	
Uranium	1	100	76.426	180.95	105	181.49	105	70 - 130		0.3	20	
Vanadium	1	100	19.759	122.79	103	124.21	104	75 - 125		1.14	20	
Zinc	1	100	7.3965	105.50	98.1	104.96	97.5	75 - 125		0.51	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761385
Analysis Date:	1/8/2015 6:58:00 PM	Analyst:	338
Instrument ID:	ICPMS8	Prep Date:	12/22/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Serial Dilution

L739910-01

Analyte	Dil	Sample Result	SD Result	% RPD	Limit	Qualifier
Aluminum,Dissolved	5	39.883	49.850	25	10	
Arsenic,Dissolved	5	2.7107	2.7582	2	10	
Barium,Dissolved	5	12.241	11.219	8	10	
Boron,Dissolved	5	677.28	709.01	5	10	
Cadmium,Dissolved	5	<0.16	<0.8		10	
Chromium,Dissolved	5	0.9537	<2.7	7	10	
Cobalt,Dissolved	5	<0.26	<1.3		10	
Copper,Dissolved	5	1.3168	<2.6	15	10	
Iron,Dissolved	5	26.286	<75	111	10	
Lead,Dissolved	5	0.2513	<1.2	4	10	
Manganese,Dissolved	5	5.0102	5.2465	5	10	
Molybdenum,Dissolved	5	6.8341	6.7990	1	10	
Nickel,Dissolved	5	0.7825	<1.75	481	10	
Potassium,Dissolved	5	3120.6	3158.4	1	10	
Selenium,Dissolved	5	4.3782	4.7863	9	10	
Silver,Dissolved	5	<0.31	<1.55		10	
Uranium,Dissolved	5	77.87	77.615	0	10	
Vanadium,Dissolved	5	19.327	19.154	1	10	
Zinc,Dissolved	5	3.0151	<12.8	110	10	

Quality Control Summary

SDG: L739910

ARCADIS US - TX

Test: Trace Metals by Method 6020
Project No: TX000836.0008.00004
Project: Navajo Refining Company - Artesia, NM
Collection Date: 12/16/2014
Analysis Date: 1/8/2015 6:58:00 PM
Instrument ID: ICPMS8
Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Matrix: Water - ug/L
EPA ID: TN00003
Analytic Batch: WG761385
Analyst: 338
Prep Date: 12/22/2014

Matrix Spike / Matrix Spike Duplicate

L739910-01

Analyte	Dil	Spike Value	Sample	MS	% Rec	MSD	% Rec	Control Limits	% Rec Qual	RPD	Control Limits	RPD
Aluminum,Dissolved	1	500	39.883	550.13	102	550.47	102	70 - 130		0	20	
Arsenic,Dissolved	1	50	2.7107	63.213	121	62.288	119	75 - 125		1	20	
Barium,Dissolved	1	50	12.241	67.678	111	66.369	108	75 - 125		2	20	
Boron,Dissolved	1	50	677.28	729.16	104	708.51	62	70 - 130	V	3	20	
Cadmium,Dissolved	1	50	<0.16	58.251	116	57.551	115	75 - 125		1	20	
Chromium,Dissolved	1	50	0.9537	57.056	112	55.804	110	75 - 125		2	20	
Cobalt,Dissolved	1	50	<0.26	55.165	110	53.936	107	75 - 125		2	20	
Copper,Dissolved	1	50	1.3168	56.162	110	56.420	110	75 - 125		0	20	
Iron,Dissolved	1	500	26.286	561.42	107	557.32	106	75 - 125		1	20	
Lead,Dissolved	1	50	0.2513	53.933	107	53.167	106	75 - 125		1	20	
Manganese,Dissolved	1	50	5.0102	59.701	109	58.001	106	75 - 125		3	20	
Molybdenum,Dissolved	1	50	6.8341	63.927	114	63.067	112	75 - 125		1	20	
Nickel,Dissolved	1	50	0.7825	54.583	108	57.983	114	75 - 125		6	20	
Potassium,Dissolved	1	5000	3120.6	8703.8	112	8624.1	110	70 - 130		1	20	
Selenium,Dissolved	1	50	4.3782	63.841	119	62.280	116	75 - 125		2	20	
Silver,Dissolved	1	50	<0.31	31.889	63	36.669	73	75 - 125	J6	14	20	
Uranium,Dissolved	1	50	77.87	135.90	116	132.54	109	70 - 130		3	20	
Vanadium,Dissolved	1	50	19.327	76.836	115	74.926	111	75 - 125		3	20	
Zinc,Dissolved	1	50	3.0151	54.089	102	54.870	104	75 - 125		1	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761466
Analysis Date:	12/24/2014 11:52:00 AM	Analyst:	621
Instrument ID:	VOCGC12		
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

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	5.1579	93.8	67 - 132	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
TPH (GC/FID) Low Fraction	1	5.5	5.0899	92.5	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	5.1579	93.8	5.0899	92.5	67 - 132	1.33	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761466
Analysis Date:	12/24/2014 11:52:00 AM	Analyst:	621
Instrument ID:	VOCGC12		
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Matrix Spike / Matrix Spike Duplicate

L739910-01

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	5.1674	94	5.1099	92.9	50 - 143		1.12	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761466
Analysis Date:	12/24/2014 11:52:00 AM	Analyst:	621
Instrument ID:	VOCGC12		
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Surrogate Summary

Laboratory

Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec
L739910-01	VOCGC12	1224_10	0.201	100		
L739910-02	VOCGC12	1224_11	0.197	98.3		
L739910-03	VOCGC12	1224_12	0.201	101		
L739910-04	VOCGC12	1224_13	0.201	100		
L739910-05	VOCGC12	1224_14	0.201	101		
L739910-06	VOCGC12	1224_15	0.200	100		
L739910-07	VOCGC12	1224_16	0.201	100		
L739910-08	VOCGC12	1224_17	0.200	100		
L739910-09	VOCGC12	1224_18	0.201	101		
L739910-10	VOCGC12	1224_19	0.202	101		
L739910-11	VOCGC12	1224_24	0.201	101		
L739910-12	VOCGC12	1224_25	0.201	101		
L739910-13	VOCGC12	1224_26	0.200	100		
L739910-14	VOCGC12	1224_27	0.202	101		
LCS WG761466	VOCGC12	1224_04	0.198	99.2	0.205	102
LCSD WG761466	VOCGC12	1224_05	0.198	99.2	0.204	102
MS WG761466	VOCGC12	1224_06	0.194	97.1	0.202	101
MSD WG761466	VOCGC12	1224_07	0.194	96.8	0.200	100
BLANK WG761466	VOCGC12	1224_09	0.202	101	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: L739910

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:	12/16/2014	Analytic Batch:	WG761321
Analysis Date:	12/28/2014 1:40:00 PM	Analyst:	644
Instrument ID:	VOCMS6		
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

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: L739910

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: 12/16/2014 **Analytic Batch: WG761321**
 Analysis Date: 12/28/2014 1:40:00 PM Analyst: 644
 Instrument ID: VOCMS6
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0268	107	74.2 - 124	J4
1,1,1-Trichloroethane	1	0.025	0.0315	126	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0273	109	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0269	108	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0285	114	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0292	117	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0251	100	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0306	122	68.8 - 124	
Benzene	1	0.025	0.0275	110	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0289	116	70.2 - 123	
Chloroform	1	0.025	0.0299	120	76 - 121	
Ethylbenzene	1	0.025	0.0263	105	78.8 - 122	
m&p-Xylenes	1	0.05	0.0518	104	78.8 - 121	
Methylene Chloride	1	0.025	0.0264	106	70.3 - 120	
o-Xylene	1	0.025	0.0261	105	77.6 - 122	
Tetrachloroethene	1	0.025	0.0274	110	72.6 - 126	
Toluene	1	0.025	0.0264	105	79.7 - 116	
Vinyl chloride	1	0.025	0.0294	117	65.9 - 128	
Xylenes, Total	1	0.075	0.0779	104	78.7 - 121	

Quality Control Summary

SDG: L739910

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: 12/16/2014 **Analytic Batch: WG761321**
 Analysis Date: 12/28/2014 1:40:00 PM Analyst: 644
 Instrument ID: VOCMS6
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1,1,1,2-Tetrachloroethane	1	0.025	0.0253	101	74.2 - 124	
1,1,1-Trichloroethane	1	0.025	0.0284	113	73.2 - 123	
1,1,2,2-Tetrachloroethane	1	0.025	0.0262	105	70.7 - 122	
1,1,2-Trichloroethane	1	0.025	0.0264	106	77.7 - 118	
1,1-Dichloroethane	1	0.025	0.0266	106	70.7 - 126	
1,1-Dichloroethene	1	0.025	0.0272	109	67.8 - 129	
1,2-Dibromoethane	1	0.025	0.0247	99	76.6 - 121	
1,2-Dichloroethane	1	0.025	0.0288	115	68.8 - 124	
Benzene	1	0.025	0.0265	106	74.8 - 121	
Carbon tetrachloride	1	0.025	0.0268	107	70.2 - 123	
Chloroform	1	0.025	0.0272	109	76 - 121	
Ethylbenzene	1	0.025	0.0253	101	78.8 - 122	
m&p-Xylenes	1	0.05	0.0500	99.9	78.8 - 121	
Methylene Chloride	1	0.025	0.0245	97.9	70.3 - 120	
o-Xylene	1	0.025	0.0249	99.5	77.6 - 122	
Tetrachloroethene	1	0.025	0.0265	106	72.6 - 126	
Toluene	1	0.025	0.0256	102	79.7 - 116	
Vinyl chloride	1	0.025	0.0263	105	65.9 - 128	
Xylenes, Total	1	0.075	0.0748	99.8	78.7 - 121	

Quality Control Summary

SDG: L739910

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: 12/16/2014 Analytic Batch: WG761321
 Analysis Date: 12/28/2014 1:40:00 PM Analyst: 644
 Instrument ID: VOCMS6
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

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	0.0268	107	0.0253	101	74.2 - 124		5.56	20
1,1,1-Trichloroethane	1	0.025	0.0315	126	0.0284	113	73.2 - 123	J4	10.4	20
1,1,2,2-Tetrachloroethane	1	0.025	0.0273	109	0.0262	105	70.7 - 122		4.06	20
1,1,2-Trichloroethane	1	0.025	0.0269	108	0.0264	106	77.7 - 118		1.86	20
1,1-Dichloroethane	1	0.025	0.0285	114	0.0266	106	70.7 - 126		6.97	20
1,1-Dichloroethene	1	0.025	0.0292	117	0.0272	109	67.8 - 129		7	20
1,2-Dibromoethane	1	0.025	0.0251	100	0.0247	99	76.6 - 121		1.48	20
1,2-Dichloroethane	1	0.025	0.0306	122	0.0288	115	68.8 - 124		6.16	20
Benzene	1	0.025	0.0275	110	0.0265	106	74.8 - 121		3.44	20
Carbon tetrachloride	1	0.025	0.0289	116	0.0268	107	70.2 - 123		7.56	20
Chloroform	1	0.025	0.0299	120	0.0272	109	76 - 121		9.29	20
Ethylbenzene	1	0.025	0.0263	105	0.0253	101	78.8 - 122		3.91	20
m&p-Xylenes	1	0.05	0.0518	104	0.0500	99.9	78.8 - 121		3.58	20
Methylene Chloride	1	0.025	0.0264	106	0.0245	97.9	70.3 - 120		7.63	20
o-Xylene	1	0.025	0.0261	105	0.0249	99.5	77.6 - 122		4.96	20
Tetrachloroethene	1	0.025	0.0274	110	0.0265	106	72.6 - 126		3.62	20
Toluene	1	0.025	0.0264	105	0.0256	102	79.7 - 116		2.94	20
Vinyl chloride	1	0.025	0.0294	117	0.0263	105	65.9 - 128		11	20
Xylenes, Total	1	0.075	0.0779	104	0.0748	99.8	78.7 - 121		4.04	20

Quality Control Summary

SDG: L739910

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: 12/16/2014 Analytic Batch: WG761321
 Analysis Date: 12/28/2014 1:40:00 PM Analyst: 644
 Instrument ID: VOCMS6
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Matrix Spike / Matrix Spike Duplicate

L739910-01

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	0.0255	102	0.0253	101	70.5 - 132		0.66	20	
1,1,1-Trichloroethane	1	0.025	<0.0003	0.0266	106	0.0269	108	58.7 - 134		1.26	20	
1,1,2,2-Tetrachloroethane	1	0.025	<0.0001	0.0284	114	0.0282	113	64.9 - 145		0.89	20	
1,1,2-Trichloroethane	1	0.025	<0.0004	0.0268	107	0.0268	107	74.1 - 130		0.12	20	
1,1-Dichloroethane	1	0.025	<0.0003	0.0262	105	0.0266	106	64 - 134		1.61	20	
1,1-Dichloroethene	1	0.025	<0.0004	0.0258	103	0.0258	103	48.8 - 144		0.08	20	
1,2-Dibromoethane	1	0.025	<0.0004	0.0253	101	0.0265	106	73.8 - 131		4.85	20	
1,2-Dichloroethane	1	0.025	<0.0004	0.0294	118	0.0301	121	60.7 - 132		2.31	20	
Benzene	1	0.025	<0.0003	0.0258	103	0.0265	106	58.6 - 133		2.45	20	
Carbon tetrachloride	1	0.025	<0.0004	0.0254	102	0.0254	102	60.6 - 139		0.05	20	
Chloroform	1	0.025	<0.0003	0.0276	110	0.0284	114	66.1 - 133		2.78	20	
Ethylbenzene	1	0.025	<0.0004	0.0239	95.4	0.0235	93.8	62.7 - 136		1.67	20	
m&p-Xylenes	1	0.05	<0.0007	0.0471	93.5	0.0456	90.6	64.1 - 133		3.18	20	
Methylene Chloride	1	0.025	<0.001	0.0245	97.8	0.0256	102	61.5 - 125		4.6	20	
o-Xylene	1	0.025	<0.0003	0.0236	94.5	0.0233	93.4	67.1 - 133		1.18	20	
Tetrachloroethene	1	0.025	<0.0004	0.0245	97.9	0.0245	97.9	57.4 - 141		0.05	20	
Toluene	1	0.025	<0.0008	0.0253	101	0.0254	102	67.8 - 124		0.57	20	
Vinyl chloride	1	0.025	<0.0003	0.0241	96.5	0.0243	97.3	44.3 - 143		0.74	20	
Xylenes, Total	1	0.075	<0.0011	0.0707	94.3	0.0690	91.9	65.6 - 133		2.51	20	

Quality Control Summary

SDG: L739910

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: 12/16/2014 Analytic Batch: WG761321
 Analysis Date: 12/28/2014 1:40:00 PM Analyst: 644
 Instrument ID: VOCMS6
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Internal Standard Response and Retention Time Summary

File ID: 1228_05
 Analyzed: 12/28/14 101900

	IS1		IS2		IS3		DCB	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	191377	4.25	347210	4.58	54560	5.73	158357	8.10
Upper Limit	383000	4.75	694000	5.08	109000	6.23	317000	8.60
Lower Limit	95700	3.75	174000	4.08	27300	5.23	79200	7.60
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L739910-05	186846	4.25	337971	4.58	53920	5.73	150580	8.10
L739910-14	191964	4.25	342094	4.58	55197	5.73	153371	8.10
L739910-01	183431	4.25	334884	4.58	51624	5.73	151035	8.10
L739910-02	188789	4.25	336586	4.58	55234	5.73	150850	8.10
L739910-03	190248	4.25	339947	4.58	52741	5.73	150486	8.10
L739910-04	187111	4.25	341745	4.58	53768	5.73	148000	8.10
L739910-06	186320	4.25	343593	4.58	55701	5.73	158853	8.10
L739910-07	188168	4.25	343259	4.58	53112	5.73	155796	8.10
L739910-08	184900	4.25	337866	4.58	53600	5.73	150356	8.10
L739910-09	189843	4.25	341196	4.58	56252	5.73	153228	8.10
L739910-10	187684	4.25	346832	4.58	52886	5.73	155696	8.10
L739910-11	191698	4.25	340292	4.58	54485	5.73	154040	8.10
L739910-12	178300	4.25	319807	4.58	51646	5.73	146747	8.10
L739910-13	179072	4.25	326027	4.58	54195	5.73	148343	8.10
MSD WG761321	196343	4.25	352277	4.58	57481	5.73	161360	8.10
MS WG761321	194467	4.25	345132	4.58	56754	5.73	159331	8.10
LCSD WG761321	196860	4.25	353365	4.58	56157	5.73	157980	8.10
LCS WG761321	189145	4.25	342032	4.58	53068	5.73	152998	8.10
BLANK WG761321	188434	4.25	336797	4.58	52946	5.73	147937	8.10

Legend:

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

Quality Control Summary

SDG: L739910

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: 12/16/2014 Analytic Batch: WG761321
 Analysis Date: 12/28/2014 1:40:00 PM Analyst: 644
 Instrument ID: VOCMS6
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Surrogate Summary

		BFB			DFM		TD8		TFT	
Laboratory										
Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L739910-01	VOCMS6	1228_15	0.0397	99.2	0.0431	108	0.0414	103		
L739910-02	VOCMS6	1228_16	0.0377	94.2	0.0425	106	0.0421	105		
L739910-03	VOCMS6	1228_17	0.0386	96.4	0.0412	103	0.0412	103		
L739910-04	VOCMS6	1228_18	0.0387	96.8	0.0424	106	0.0419	105		
L739910-05	VOCMS6	1228_13	0.0371	92.7	0.0420	105	0.0420	105		
L739910-06	VOCMS6	1228_19	0.0387	96.8	0.0439	110	0.0418	105		
L739910-07	VOCMS6	1228_20	0.0399	99.9	0.0428	107	0.0418	104		
L739910-08	VOCMS6	1228_21	0.0381	95.3	0.0431	108	0.0418	104		
L739910-09	VOCMS6	1228_22	0.0367	91.7	0.0422	105	0.0423	106		
L739910-10	VOCMS6	1228_23	0.0398	99.4	0.0428	107	0.0414	103		
L739910-11	VOCMS6	1228_24	0.0380	94.9	0.0421	105	0.0417	104		
L739910-12	VOCMS6	1228_25	0.0392	98.0	0.0424	106	0.0427	107		
L739910-13	VOCMS6	1228_26	0.0380	94.9	0.0440	110	0.0430	107		
L739910-14	VOCMS6	1228_14	0.0370	92.6	0.0416	104	0.0415	104		
LCS WG761321	VOCMS6	1228_06	0.0381	95.2	0.0435	109	0.0412	103	0.0402	100
LCSD WG761321	VOCMS6	1228_07	0.0380	95.0	0.0410	102	0.0414	103	0.0404	101
MS WG761321	VOCMS6	1228_09	0.0378	94.4	0.0415	104	0.0416	104	0.0410	102
MSD WG761321	VOCMS6	1228_10	0.0376	93.9	0.0427	107	0.0412	103	0.0407	102
BLANK WG761321	VOCMS6	1228_12	0.0382	95.5	0.0430	107	0.0415	104	0.0407	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: L739910

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:	12/16/2014	Analytic Batch:	WG761511
Analysis Date:	12/24/2014 3:54:00 AM	Analyst:	546
Instrument ID:	SVGC31	Prep Date:	12/22/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

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	1.5992	107	70 - 130	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.5965	106	70 - 130	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec Qual	Control RPD	RPD Qual
Extractable Petroleum Hydrocarbon	1	1.5	1.5992	107	1.5965	106	70 - 130	0.17	20	

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761511
Analysis Date:	12/24/2014 3:54:00 AM	Analyst:	546
Instrument ID:	SVGC31	Prep Date:	12/22/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Surrogate Summary

o-Terphenyl

Laboratory

Sample ID	Instrument	File ID	ppm	% Rec
L739910-01	SVGC31	1223_39	0.0216	108
L739910-02	SVGC31	1223_40	0.0216	108
L739910-03	SVGC31	1223_41	0.0224	112
L739910-04	SVGC31	1223_42	0.0217	109
L739910-05	SVGC31	1223_43	0.0221	110
L739910-06	SVGC31	1223_44	0.0224	112
L739910-07	SVGC31	1223_45	0.0213	106
L739910-08	SVGC31	1223_46	0.0218	109
L739910-09	SVGC31	1223_47	0.0215	108
L739910-10	SVGC31	1223_48	0.0222	111
L739910-11	SVGC31	1223_53	0.0219	109
L739910-12	SVGC31	1223_54	0.0227	114
L739910-13	SVGC31	1223_55	0.0218	109
L739910-14	SVGC31	1223_56	0.0230	115
BLANK WG761511	SVGC31	1223_05	0.0208	104
LCS WG761511	SVGC31	1223_06	0.0222	111
LCSD WG761511	SVGC31	1223_07	0.0221	111

o-Terphenyl --O-TERPHENYL

True Value: 0.02 ppm Limits: 50 - 150

Quality Control Summary

SDG: L739910

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: 12/16/2014 **Analytic Batch: WG761458**

Analysis Date: 12/23/2014 4:41:00 PM Analyst: 280

Instrument ID: BNAMS4 Prep Date: 12/22/2014

Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

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: L739910

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: 12/16/2014 **Analytic Batch: WG761458**
 Analysis Date: 12/23/2014 4:41:00 PM Analyst: 280
 Instrument ID: BNAMS4 Prep Date: 12/22/2014
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1-Methylnaphthalene	1	25	22.401	89.6	34.7 - 102	
2-Methylnaphthalene	1	25	19.083	76.3	33.8 - 98.6	
Benzo(a)pyrene	1	25	20.292	81.2	45.6 - 106	
Naphthalene	1	25	18.976	75.9	32.2 - 101	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
1-Methylnaphthalene	1	25	20.415	81.7	34.7 - 102	
2-Methylnaphthalene	1	25	17.802	71.2	33.8 - 98.6	
Benzo(a)pyrene	1	25	19.514	78.1	45.6 - 106	
Naphthalene	1	25	17.951	71.8	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	22.401	89.6	20.415	81.7	34.7 - 102	9.28	24.9	
2-Methylnaphthalene	1	25	19.083	76.3	17.802	71.2	33.8 - 98.6	6.94	24.2	
Benzo(a)pyrene	1	25	20.292	81.2	19.514	78.1	45.6 - 106	3.9	20	
Naphthalene	1	25	18.976	75.9	17.951	71.8	32.2 - 101	5.56	23.8	

Quality Control Summary

SDG: L739910

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: 12/16/2014 Analytic Batch: WG761458
 Analysis Date: 12/23/2014 4:41:00 PM Analyst: 280
 Instrument ID: BNAMS4 Prep Date: 12/22/2014
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Internal Standard Response and Retention Time Summary

File ID: 1223A_04

Analyzed: 12/23/14 123900

	DCB		NAP		ACE		PHEN	
	Response	RT	Response	RT	Response	RT	Response	RT
12 Hr. Std	158797	5.18	569236	6.45	368914	8.31	721315	9.93
Upper Limit	318000	5.68	1140000	6.95	738000	8.81	1440000	10.43
Lower Limit	79400	4.68	285000	5.95	184000	7.81	361000	9.43
Sample ID	Response	RT	Response	RT	Response	RT	Response	RT
L739910-01	126901	5.19	472686	6.45	315327	8.31	594763	9.92
L739910-02	137623	5.18	493145	6.44	313677	8.31	609717	9.92
L739910-03	128089	5.18	485840	6.44	325506	8.31	585381	9.92
L739910-04	124469	5.18	464067	6.44	299443	8.31	568950	9.92
L739910-05	129722	5.19	486947	6.44	317186	8.31	592046	9.92
L739910-06	129609	5.18	510933	6.44	341425	8.31	637255	9.92
L739910-07	126711	5.18	461497	6.44	295779	8.31	569238	9.92
L739910-08	122657	5.18	448217	6.44	288983	8.31	536594	9.92
L739910-09	108322	5.18	409806	6.44	277154	8.31	521395	9.92
L739910-10	118441	5.18	431941	6.44	273421	8.31	548509	9.92
L739910-11	129758	5.18	455602	6.44	301732	8.31	563960	9.92
L739910-12	123195	5.18	457376	6.44	294562	8.31	558348	9.92
L739910-13	127368	5.18	464916	6.44	296862	8.31	565058	9.92
L739910-14	126758	5.18	469268	6.44	300931	8.31	602863	9.92
LCSD WG761458	128013	5.19	480364	6.45	298086	8.31	577740	9.92
LCS WG761458	129393	5.19	478920	6.45	303685	8.31	587618	9.92
BLANK WG761458	145961	5.19	526625	6.44	344979	8.31	651840	9.92

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: L739910

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: 12/16/2014 Analytic Batch: WG761458
 Analysis Date: 12/23/2014 4:41:00 PM Analyst: 280
 Instrument ID: BNAMS4 Prep Date: 12/22/2014
 Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Internal Standard Response and Retention Time Summary

File ID: 1223A_04

Analyzed: 12/23/14 123900

	DCB		CHR		PER	
	Response	RT	Response	RT	Response	RT
12 Hr. Std	158797	5.18	867955	12.80	1087364	14.25
Upper Limit	318000	5.68	1740000	13.30	2170000	14.75
Lower Limit	79400	4.68	434000	12.30	544000	13.75
Sample ID	Response	RT	Response	RT	Response	RT
L739910-01	126901	5.19	736152	12.80	853267	14.24
L739910-02	137623	5.18	791747	12.80	915649	14.24
L739910-03	128089	5.18	777510	12.80	888576	14.24
L739910-04	124469	5.18	772630	12.80	881540	14.24
L739910-05	129722	5.19	749282	12.80	882845	14.24
L739910-06	129609	5.18	775821	12.80	935521	14.24
L739910-07	126711	5.18	722033	12.80	821719	14.24
L739910-08	122657	5.18	700603	12.80	824057	14.24
L739910-09	108322	5.18	629006	12.79	774219	14.24
L739910-10	118441	5.18	719104	12.80	775400	14.24
L739910-11	129758	5.18	711754	12.80	845619	14.24
L739910-12	123195	5.18	713286	12.80	864406	14.24
L739910-13	127368	5.18	755791	12.80	818851	14.24
L739910-14	126758	5.18	674165	12.79	855834	14.24
LCSD WG761458	128013	5.19	768145	12.80	887931	14.24
LCS WG761458	129393	5.19	756510	12.80	881774	14.24
BLANK WG761458	145961	5.19	804372	12.80	1005322	14.24

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: L739910

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: 12/16/2014 Analytic Batch: WG761458
Analysis Date: 12/23/2014 4:41:00 PM Analyst: 280
Instrument ID: BNAMS4 Prep Date: 12/22/2014
Sample Numbers: L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14

Surrogate Summary

		TBP			FBP		2FP		NBZ	
Laboratory										
Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L739910-01	BNAMS4	1223A_15	0.0138	69.1	0.00736	73.6	0.00532	26.6	0.00813	81.3
L739910-02	BNAMS4	1223A_16	0.0156	78.1	0.00757	75.7	0.0113	56.7	0.00750	75.0
L739910-03	BNAMS4	1223A_17	0.0125	62.4	0.00691	69.1	0.0104	52.2	0.00864	86.4
L739910-04	BNAMS4	1223A_18	0.0143	71.4	0.00735	73.5	0.00862	43.1	0.00679	67.9
L739910-05	BNAMS4	1223A_19	0.0146	73.1	0.00637	63.7	0.0106	52.8	0.00594	59.4
L739910-06	BNAMS4	1223A_20	0.0150	75.1	0.00751	75.1	0.00733	36.7	0.00811	81.1
L739910-07	BNAMS4	1223A_21	0.0157	78.3	0.00739	73.9	0.0114	57.2	0.00765	76.5
L739910-08	BNAMS4	1223A_22	0.0154	77.2	0.00829	82.9	0.00906	45.3	0.00849	84.9
L739910-09	BNAMS4	1223A_23	0.0154	77.2	0.00842	84.2	0.00873	43.7	0.00916	91.6
L739910-10	BNAMS4	1223A_24	0.0144	72.1	0.00746	74.6	0.0107	53.7	0.00771	77.1
L739910-11	BNAMS4	1223A_25	0.0131	65.7	0.00691	69.1	0.00807	40.3	0.00740	74.0
L739910-12	BNAMS4	1223A_26	0.0157	78.3	0.00817	81.7	0.0124	62.1	0.00835	83.5
L739910-13	BNAMS4	1223A_27	0.0151	75.7	0.00735	73.5	0.00404	20.2	0.00785	78.5
L739910-14	BNAMS4	1223A_28	0.0143	71.7	0.00741	74.1	0.0105	52.3	0.00799	79.9
LCS WG761458	BNAMS4	1223A_06	0.0175	87.7	0.00838	83.8	0.0113	56.7	0.00982	98.2
LCSD WG761458	BNAMS4	1223A_07	0.0180	90.1	0.00849	84.9	0.0121	60.6	0.00793	79.3
BLANK WG761458	BNAMS4	1223A_08	0.0129	64.6	0.00708	70.8	0.0105	52.4	0.00693	69.3

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

Quality Control Summary

SDG: L739910

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:	12/16/2014	Analytic Batch:	WG761458
Analysis Date:	12/23/2014 4:41:00 PM	Analyst:	280
Instrument ID:	BNAMS4	Prep Date:	12/22/2014
Sample Numbers:	L739910-01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14		

Surrogate Summary

Laboratory Sample ID	Instrument	File ID	TPH		PHL	
			ppm	% Rec	ppm	% Rec
L739910-01	BNAMS4	1223A_15	0.00798	79.8	0.00541	27.0
L739910-02	BNAMS4	1223A_16	0.00780	78.0	0.00807	40.4
L739910-03	BNAMS4	1223A_17	0.00760	76.0	0.00738	36.9
L739910-04	BNAMS4	1223A_18	0.00704	70.4	0.00626	31.3
L739910-05	BNAMS4	1223A_19	0.00768	76.8	0.00750	37.5
L739910-06	BNAMS4	1223A_20	0.00688	68.8	0.00472	23.6
L739910-07	BNAMS4	1223A_21	0.00743	74.3	0.00801	40.0
L739910-08	BNAMS4	1223A_22	0.00781	78.1	0.00631	31.6
L739910-09	BNAMS4	1223A_23	0.00894	89.4	0.00670	33.5
L739910-10	BNAMS4	1223A_24	0.00697	69.7	0.00814	40.7
L739910-11	BNAMS4	1223A_25	0.00701	70.1	0.00540	27.0
L739910-12	BNAMS4	1223A_26	0.00803	80.3	0.00882	44.1
L739910-13	BNAMS4	1223A_27	0.00686	68.6	0.00430	21.5
L739910-14	BNAMS4	1223A_28	0.00882	88.2	0.00750	37.5
LCS WG761458	BNAMS4	1223A_06	0.00751	75.1	0.00827	41.4
LCSD WG761458	BNAMS4	1223A_07	0.00757	75.7	0.00866	43.3
BLANK WG761458	BNAMS4	1223A_08	0.00662	66.2	0.00701	35.1

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

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	<i>Ron Wood</i>

Sample ID	Collection		Type		Matrix	No. of Cntrs	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
	Date	Time	Comp	Grab												
MW-136-1214-BG	12/16/14	1320		G	GW	1715	X	X	X	X	X	X	X	X	X	X
NP-5-1214-BG	12/16/14	1430			GW											
MW-17-1214-BG	12/16/14	1550			GW											
MW-55-1214-BG	12/16/14	1700			GW											
EB-15-1214-BG	12/16/14	1745			GW											
MW-25-1214-BG	12/17/14	0820			GW											
MW-13-1214-BG	12/17/14	1015			GW											
MW-12-1214-BG	12/17/14	1110			GW											
UG-4-1214-BG	12/17/14	1315			GW											
UG-1-1214-BG	12/17/14	1415			GW											
UG-2-1214-BG	12/17/14	1515			GW											
UG-3R-1214-BG	12/17/14	1600			GW											
DUP-06-1214-BG					GW											
EB-16-1214-BG	12/17/14	1815			GW											

Special Instructions/Comments:

Laboratory Information and Receipt		Relinquished By	
Lab Name:	Cooler Custody Seal (✓)	Printed Name:	Received By
✓ Cooler packed with ice (✓)	Intact ☒ Not Intact ☐	<i>Ron Wood</i>	Printed Name:
Specify Turnaround Requirements	Sample Receipt: <i>AVY</i>	Signature:	Signature:
	Condition/Cooler Temp: <i>3.7°C</i>	Firm: <i>ARCADIS</i>	Firm:
		Date/Time: <i>12/17/14 1920</i>	Date/Time:

PARAMETER ANALYSIS & METHOD

Preservation Key:		Container Information Key:	
A. H2SO4	1. 40 mL Vial		
B. HCL	2. 1 L Amber		
C. HNO3	3. 250 mL Plastic		
D. NaOH	4. 500 mL Plastic		
E. None	5. Encore		
F.	6. 2 oz. Glass		
G.	7. 4 oz. Glass		
H.	8. 8 oz. Glass		
	9. 125 mL Plastic		
	10. 4 oz. Amber		
Matrix Key:			
SO- Soil	SE- Sediment	NL- NAPL/Oil	
W- Water	SL- Sludge	SW- Sample Wipe	
T- Tissue	A- Air		

REMARKS

1739-910
Run Trip Blank for VOCs - 01
02
03
04
05
06
07
08
09
10
11
12
13
14

☒ Special QA/QC Instructions (✓)

619449588031
6194495887995236+TB
619449588010
619449588009
619449588042
619449588793

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:
Date/Time:	Date/Time:	Date/Time:	Date/Time:

ESC Lab Sciences Non-Conformance Form

Login #:L739910	Client: ARCADHTX	Date:12/19/14	Evaluated by:Andy Vann

Non-Conformance (check applicable items)

Sample Integrity	Chain of Custody Clarification	
Parameter(s) past holding time	Login Clarification Needed	If Broken Container:
Improper temperature	Chain of custody is incomplete	Insufficient packing material around container
Improper container type	Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation	Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS)
Insufficient sample volume.	Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.	Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.	Trip Blank not received.	If no Chain of Custody:
Broken container	Client did not "X" analysis.	Received by:
x Broken container:	Chain of Custody is missing	Date/Time:
x Sufficient sample remains		Temp./Cont. Rec./pH:
		Carrier:
		Tracking#

Login Comments:What total/dissolved metals? Two HCL vials received broken for MW-136-1214-BG.

Client informed by:	Call	Email	Voice Mail	Date:	Time:
TSR Initials:	Client Contact:				

Login Instructions:

Please perform all metals listed in the "Navajo Metals" product per Ron Wood

Notice: This communication and any attached files may contain privileged or other confidential



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

Report Summary

Tuesday March 03, 2015

Report Number: L740016

Samples Received: 12/19/14

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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2929 Briarpark Dr., Suite 300
Houston, TX 77042

Case Narrative

Tuesday March 03, 2015

Report Number: L740016

Samples Received: 12/19/14

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

Other Comments

No results for Radium 226/228 are provided for sample DUP-06-1214-BG, L740016-13. The initial analysis of this sample failed to meet QC acceptance criteria, and insufficient volume remained for sample reanalysis.



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REPORT OF ANALYSIS

March 03,2015

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

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-136-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 13:20

ESC Sample # : L740016-01

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-01 (RA226) - subcontracted to Environmental Health Labs

L740016-01 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 03,2015

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

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 14:30

ESC Sample # : L740016-02

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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: 03/03/15 12:20 Printed: 03/03/15 13:20

L740016-02 (RA228) - subcontracted to Environmental Health Labs

L740016-02 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 03,2015

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Houston, TX 77042

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 15:50

ESC Sample # : L740016-03

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-03 (RA226) - subcontracted to Environmental Health Labs

L740016-03 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 03,2015

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

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 17:00

ESC Sample # : L740016-04

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-04 (RA228) - subcontracted to Environmental Health Labs

L740016-04 (RA226) - subcontracted to Environmental Health Labs



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March 03,2015

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-15-1214-BG
Collected By : Ron Wood
Collection Date : 12/16/14 17:45

ESC Sample # : L740016-05

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-05 (RA228) - subcontracted to Environmental Health Labs

L740016-05 (RA226) - subcontracted to Environmental Health Labs



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Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 08:20

ESC Sample # : L740016-06

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-06 (RA228) - subcontracted to Environmental Health Labs

L740016-06 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 03,2015

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Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 10:15

ESC Sample # : L740016-07

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-07 (RA228) - subcontracted to Environmental Health Labs

L740016-07 (RA226) - subcontracted to Environmental Health Labs



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March 03,2015

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Houston, TX 77042

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-12-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 11:10

ESC Sample # : L740016-08

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-08 (RA228) - subcontracted to Environmental Health Labs

L740016-08 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 03,2015

Pam Krueger
ARCADIS US - TX
2929 Briarpark Dr., Suite 300
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Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 13:15

ESC Sample # : L740016-09

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 0000	JLC	1

* Value could not be converted to specified units.

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

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L740016-09 (RA226) - subcontracted to Environmental Health Labs

L740016-09 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 03,2015

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Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 14:15

ESC Sample # : L740016-10

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 0000	JLC	1

* Value could not be converted to specified units.

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Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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L740016-10 (RA228) - subcontracted to Environmental Health Labs

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REPORT OF ANALYSIS

March 03,2015

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Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 15:15

ESC Sample # : L740016-11

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-11 (RA228) - subcontracted to Environmental Health Labs

L740016-11 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 03,2015

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ARCADIS US - TX
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Houston, TX 77042

Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 16:00

ESC Sample # : L740016-12

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-12 (RA228) - subcontracted to Environmental Health Labs

L740016-12 (RA226) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

March 03,2015

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ARCADIS US - TX
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Date Received : December 19, 2014
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-16-1214-BG
Collected By : Ron Wood
Collection Date : 12/17/14 18:15

ESC Sample # : L740016-14

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO			3.0	7500Ra	01/26/15 0000	JLC	1
Radium 228	ATTACH TO CO			2.5	7500Ra	01/26/15 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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L740016-14 (RA228) - subcontracted to Environmental Health Labs

L740016-14 (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: L742605

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 # : L742605-01

Sample ID : MW-13-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 09:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	2600000	5200	100000	ug/l		9056MOD	01/13/15	100
Fluoride	480	9.9	100	ug/l		9056MOD	01/13/15	1
Sulfate	3400000	3900	250000	ug/l		9056MOD	01/13/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	2400	20.	100	ug/l		353.2	01/15/15	1
Dissolved Solids	7900000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	37.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	20.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	4.0	0.25	2.0	ug/l		6020	01/12/15	1
Arsenic, Dissolved	1.6	0.25	2.0	ug/l	J	6020	01/12/15	1
Barium	33.	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	690	1.5	20.	ug/l	01V	6020	01/12/15	1
Boron, Dissolved	790	1.5	20.	ug/l	V01	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	750000	920	20000	ug/l		6020	01/14/15	20
Calcium, Dissolved	720000	920	20000	ug/l		6020	01/13/15	20
Chromium	1.1	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	1.1	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	2.5	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	3.2	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	2000	15.	100	ug/l		6020	01/12/15	1
Iron, Dissolved	21.	15.	100	ug/l	J	6020	01/12/15	1
Lead	1.5	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	630	0.25	5.0	ug/l	J3V	6020	01/12/15	1
Manganese, Dissolved	47.	0.25	5.0	ug/l		6020	01/12/15	1
Molybdenum	3.2	0.14	5.0	ug/l	J	6020	01/12/15	1
Molybdenum, Dissolved	4.5	0.14	5.0	ug/l	J	6020	01/12/15	1
Nickel	1.6	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	5100	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	5300	37.	1000	ug/l		6020	01/13/15	1
Selenium	9.6	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	9.8	0.38	2.0	ug/l		6020	01/12/15	1
Silver	0.56	0.31	2.0	ug/l	J	6020	01/12/15	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 : January 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L742605-01

Sample ID : MW-13-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 09:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	0.68	0.31	2.0	ug/l	J	6020	01/12/15	1
Sodium	1600000	2200	20000	ug/l		6020	01/14/15	20
Sodium, Dissolved	1600000	2200	20000	ug/l		6020	01/13/15	20
Uranium	15.	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	14.	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	10.	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	4.4	0.18	5.0	ug/l	J	6020	01/12/15	1
Zinc	4.5	2.6	25.	ug/l	J	6020	01/12/15	1
Zinc, Dissolved	25.	2.6	25.	ug/l	JJ6	6020	01/12/15	1
Mercury	1.0	0.049	0.20	ug/l		7470A	01/12/15	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	99.6			% Rec.		8260B	01/11/15	1
Dibromofluoromethane	98.0			% Rec.		8260B	01/11/15	1
4-Bromofluorobenzene	98.3			% 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 : MW-13-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 09:00

ESC Sample # : L742605-01

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	14.	12.	100	ug/l	J	8015	01/12/15	1
Surrogate Recovery								
o-Terphenyl	94.4			% Rec.		8015	01/12/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/14/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/14/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/14/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/14/15	1
Surrogate Recovery								
2-Fluorophenol	49.8			% Rec.		8270C	01/14/15	1
Phenol-d5	36.0			% Rec.		8270C	01/14/15	1
Nitrobenzene-d5	56.8			% Rec.		8270C	01/14/15	1
2-Fluorobiphenyl	66.0			% Rec.		8270C	01/14/15	1
2,4,6-Tribromophenol	71.3			% Rec.		8270C	01/14/15	1
p-Terphenyl-d14	65.3			% Rec.		8270C	01/14/15	1

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Fax (615) 758-5859

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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 # : L742605-02

Sample ID : MW-12-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 10:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	2100000	5200	100000	ug/l		9056MOD	01/13/15	100
Fluoride	650	9.9	100	ug/l		9056MOD	01/13/15	1
Sulfate	3300000	3900	250000	ug/l		9056MOD	01/13/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	4300	20.	100	ug/l		353.2	01/15/15	1
Dissolved Solids	7300000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	24.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	12.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	3.3	0.25	2.0	ug/l		6020	01/12/15	1
Arsenic, Dissolved	1.2	0.25	2.0	ug/l	J	6020	01/12/15	1
Barium	22.	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	22.	0.36	5.0	ug/l		6020	01/12/15	1
Boron	520	1.5	20.	ug/l		6020	01/12/15	1
Boron, Dissolved	570	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	730000	920	20000	ug/l		6020	01/14/15	20
Calcium, Dissolved	730000	920	20000	ug/l		6020	01/13/15	20
Chromium	1.2	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	0.87	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	2.1	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	0.83	0.26	2.0	ug/l	J	6020	01/12/15	1
Cobalt, Dissolved	0.65	0.26	2.0	ug/l	J	6020	01/12/15	1
Iron	2300	15.	100	ug/l		6020	01/12/15	1
Iron, Dissolved	37.	15.	100	ug/l	J	6020	01/12/15	1
Lead	0.34	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	420	0.25	5.0	ug/l		6020	01/12/15	1
Manganese, Dissolved	350	0.25	5.0	ug/l		6020	01/12/15	1
Molybdenum	4.1	0.14	5.0	ug/l	J	6020	01/12/15	1
Molybdenum, Dissolved	4.6	0.14	5.0	ug/l	J	6020	01/12/15	1
Nickel	2.0	0.35	2.0	ug/l		6020	01/12/15	1
Nickel, Dissolved	1.8	0.35	2.0	ug/l	J	6020	01/12/15	1
Potassium	5400	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	5600	37.	1000	ug/l		6020	01/13/15	1
Selenium	5.3	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	5.4	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 # : L742605-02

Sample ID : MW-12-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 10:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Silver, Dissolved	0.31	0.31	2.0	ug/l	J	6020	01/12/15	1
Sodium	1400000	2200	20000	ug/l		6020	01/14/15	20
Sodium, Dissolved	1400000	2200	20000	ug/l		6020	01/13/15	20
Uranium	4.3	0.33	10.	ug/l	J	6020	01/12/15	1
Uranium, Dissolved	4.2	0.33	10.	ug/l	J	6020	01/12/15	1
Vanadium	3.2	0.18	5.0	ug/l	J	6020	01/12/15	1
Vanadium, Dissolved	1.7	0.18	5.0	ug/l	J	6020	01/12/15	1
Zinc	4.0	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	01/12/15	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	99.1			% Rec.		8260B	01/11/15	1
Dibromofluoromethane	96.8			% Rec.		8260B	01/11/15	1
4-Bromofluorobenzene	101.			% 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 : MW-12-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 10:00

ESC Sample # : L742605-02

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	21.	12.	100	ug/l	J	8015	01/12/15	1
Surrogate Recovery								
o-Terphenyl	95.0			% Rec.		8015	01/12/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/14/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/14/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/14/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/14/15	1
Surrogate Recovery								
2-Fluorophenol	37.8			% Rec.		8270C	01/14/15	1
Phenol-d5	26.8			% Rec.		8270C	01/14/15	1
Nitrobenzene-d5	60.8			% Rec.		8270C	01/14/15	1
2-Fluorobiphenyl	73.4			% Rec.		8270C	01/14/15	1
2,4,6-Tribromophenol	69.1			% Rec.		8270C	01/14/15	1
p-Terphenyl-d14	68.4			% Rec.		8270C	01/14/15	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 # : L742605-03

Sample ID : MW-25-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 11:40

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	5700000	5200	100000	ug/l		9056MOD	01/13/15	100
Fluoride	430	9.9	100	ug/l		9056MOD	01/13/15	1
Sulfate	4000000	3900	250000	ug/l		9056MOD	01/13/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	470	20.	100	ug/l		353.2	01/15/15	1
Dissolved Solids	13000000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	15.	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	7.1	0.25	2.0	ug/l		6020	01/12/15	1
Arsenic, Dissolved	7.6	0.25	2.0	ug/l		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	400	1.5	20.	ug/l		6020	01/12/15	1
Boron, Dissolved	450	1.5	20.	ug/l		6020	01/13/15	1
Cadmium	0.21	0.16	1.0	ug/l	J	6020	01/12/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	01/12/15	1
Calcium	1100000	2300	50000	ug/l		6020	01/14/15	50
Calcium, Dissolved	1000000	2300	50000	ug/l		6020	01/13/15	50
Chromium	0.72	0.54	1.0	ug/l	JB	6020	01/12/15	1
Chromium, Dissolved	0.74	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	2.4	0.52	5.0	ug/l	J	6020	01/12/15	1
Cobalt	3.2	0.26	2.0	ug/l		6020	01/12/15	1
Cobalt, Dissolved	0.65	0.26	2.0	ug/l	J	6020	01/12/15	1
Iron	U	15.	100	ug/l		6020	01/12/15	1
Iron, Dissolved	29.	15.	100	ug/l	J	6020	01/12/15	1
Lead	0.32	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	1600	0.25	5.0	ug/l		6020	01/12/15	1
Manganese, Dissolved	500	0.25	5.0	ug/l		6020	01/12/15	1
Molybdenum	7.1	0.14	5.0	ug/l		6020	01/12/15	1
Molybdenum, Dissolved	19.	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	5.2	0.35	2.0	ug/l		6020	01/12/15	1
Nickel, Dissolved	4.4	0.35	2.0	ug/l		6020	01/12/15	1
Potassium	7600	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	7400	37.	1000	ug/l		6020	01/13/15	1
Selenium	48.	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	41.	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 # : L742605-03

Sample ID : MW-25-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 11:40

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	2900000	5500	50000	ug/l		6020	01/14/15	50
Sodium, Dissolved	3000000	5500	50000	ug/l		6020	01/13/15	50
Uranium	21.	0.33	10.	ug/l		6020	01/12/15	1
Uranium, Dissolved	22.	0.33	10.	ug/l		6020	01/12/15	1
Vanadium	14.	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	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	01/12/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	01/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.5			% 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	99.8			% Rec.		8260B	01/11/15	1
Dibromofluoromethane	94.0			% Rec.		8260B	01/11/15	1
4-Bromofluorobenzene	93.9			% Rec.		8260B	01/11/15	1
Diesel and Oil Ranges								
C10-C28 Diesel Range	320	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 : MW-25-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 11:40

ESC Sample # : L742605-03

Site ID : BACKGROUND

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
C28-C40 Oil Range	81.	12.	100	ug/l	J	8015	01/12/15	1
Surrogate Recovery								
o-Terphenyl	98.5			% Rec.		8015	01/12/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/14/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/14/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/14/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/14/15	1
Surrogate Recovery								
2-Fluorophenol	23.3			% Rec.		8270C	01/14/15	1
Phenol-d5	14.4			% Rec.		8270C	01/14/15	1
Nitrobenzene-d5	54.9			% Rec.		8270C	01/14/15	1
2-Fluorobiphenyl	65.9			% Rec.		8270C	01/14/15	1
2,4,6-Tribromophenol	64.7			% Rec.		8270C	01/14/15	1
p-Terphenyl-d14	61.2			% Rec.		8270C	01/14/15	1

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Fax (615) 758-5859

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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 # : L742605-04

Sample ID : MW-17-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 13:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	140000	5200	100000	ug/l		9056MOD	01/13/15	100
Fluoride	920	9.9	100	ug/l		9056MOD	01/13/15	1
Sulfate	1400000	3900	250000	ug/l		9056MOD	01/13/15	50
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	2200	20.	100	ug/l		353.2	01/15/15	1
Dissolved Solids	1900000	2800	10000	ug/l		2540 C-	01/14/15	1
Aluminum	20.	2.0	100	ug/l	J	6020	01/14/15	1
Aluminum, Dissolved	26.	2.0	100	ug/l	J	6020	01/13/15	1
Arsenic	1.0	0.25	2.0	ug/l	J	6020	01/12/15	1
Arsenic, Dissolved	1.0	0.25	2.0	ug/l	J	6020	01/12/15	1
Barium	13.	0.36	5.0	ug/l		6020	01/12/15	1
Barium, Dissolved	13.	0.36	5.0	ug/l		6020	01/12/15	1
Boron	140	1.5	20.	ug/l		6020	01/12/15	1
Boron, Dissolved	150	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	370000	230	5000	ug/l		6020	01/14/15	5
Calcium, Dissolved	380000	230	5000	ug/l		6020	01/13/15	5
Chromium	1.9	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	1.8	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	0.76	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	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	2.1	0.25	5.0	ug/l	J	6020	01/12/15	1
Manganese, Dissolved	1.7	0.25	5.0	ug/l	J	6020	01/12/15	1
Molybdenum	10.	0.14	5.0	ug/l		6020	01/12/15	1
Molybdenum, Dissolved	11.	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	0.43	0.35	2.0	ug/l	J	6020	01/12/15	1
Nickel, Dissolved	0.72	0.35	2.0	ug/l	J	6020	01/12/15	1
Potassium	2000	37.	1000	ug/l		6020	01/14/15	1
Potassium, Dissolved	2000	37.	1000	ug/l		6020	01/13/15	1
Selenium	7.5	0.38	2.0	ug/l		6020	01/12/15	1
Selenium, Dissolved	7.8	0.38	2.0	ug/l		6020	01/12/15	1
Silver	U	0.31	2.0	ug/l		6020	01/12/15	1

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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 # : L742605-04

Sample ID : MW-17-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 13:20

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	79000	110	1000	ug/l		6020	01/14/15	1
Sodium, Dissolved	78000	110	1000	ug/l		6020	01/13/15	1
Uranium	2.8	0.33	10.	ug/l	J	6020	01/12/15	1
Uranium, Dissolved	2.6	0.33	10.	ug/l	J	6020	01/12/15	1
Vanadium	6.6	0.18	5.0	ug/l		6020	01/12/15	1
Vanadium, Dissolved	6.6	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	30.	2.6	25.	ug/l		6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/12/15	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	01/11/15	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	98.7			% Rec.		8260B	01/11/15	1
Dibromofluoromethane	97.3			% Rec.		8260B	01/11/15	1
4-Bromofluorobenzene	97.4			% 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 : MW-17-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 13:20

ESC Sample # : L742605-04

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	01/12/15	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	01/14/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/14/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/14/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/14/15	1
Surrogate Recovery								
2-Fluorophenol	46.8			% Rec.		8270C	01/14/15	1
Phenol-d5	35.0			% Rec.		8270C	01/14/15	1
Nitrobenzene-d5	52.9			% Rec.		8270C	01/14/15	1
2-Fluorobiphenyl	61.1			% Rec.		8270C	01/14/15	1
2,4,6-Tribromophenol	63.7			% Rec.		8270C	01/14/15	1
p-Terphenyl-d14	62.6			% Rec.		8270C	01/14/15	1

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1-800-767-5859
Fax (615) 758-5859

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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

ESC Sample # : L742605-05

Sample ID : EB-19-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 14:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	U	52.	1000	ug/l		9056MOD	01/12/15	1
Fluoride	U	9.9	100	ug/l		9056MOD	01/13/15	1
Sulfate	U	77.	5000	ug/l		9056MOD	01/13/15	1
Cyanide	U	1.8	5.0	ug/l		9012B	01/13/15	1
Nitrate-Nitrite	170	20.	100	ug/l	J6	353.2	01/15/15	1
Dissolved Solids	6000	2800	10000	ug/l	J	2540 C-	01/14/15	1
Aluminum	13.	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	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	2.3	0.36	5.0	ug/l	J	6020	01/12/15	1
Boron	50.	1.5	20.	ug/l		6020	01/12/15	1
Boron, Dissolved	52.	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	120	46.	1000	ug/l	J	6020	01/14/15	1
Calcium, Dissolved	130	46.	1000	ug/l	J	6020	01/13/15	1
Chromium	1.2	0.54	1.0	ug/l	B	6020	01/12/15	1
Chromium, Dissolved	1.6	0.54	2.0	ug/l	JB	6020	01/12/15	1
Copper	2.2	0.52	5.0	ug/l	J	6020	01/12/15	1
Copper, Dissolved	2.4	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	31.	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	U	0.25	5.0	ug/l		6020	01/12/15	1
Manganese, Dissolved	0.34	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	6.3	0.14	5.0	ug/l		6020	01/12/15	1
Nickel	0.36	0.35	2.0	ug/l	J	6020	01/12/15	1
Nickel, Dissolved	0.43	0.35	2.0	ug/l	J	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)

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

MDL = Minimum Detection Limit = LOD = TRRP SDL

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(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

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 # : L742605-05

Sample ID : EB-19-0115-BG

Site ID : BACKGROUND

Collected By : Ron Wood
Collection Date : 01/07/15 14:30

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	1900	110	1000	ug/l		6020	01/14/15	1
Sodium, Dissolved	1700	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	23.	2.6	25.	ug/l	J	6020	01/12/15	1
Mercury	U	0.049	0.20	ug/l		7470A	01/12/15	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	01/11/15	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	98.6			% Rec.		8260B	01/11/15	1
Dibromofluoromethane	96.7			% Rec.		8260B	01/11/15	1
4-Bromofluorobenzene	101.			% 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-19-0115-BG
Collected By : Ron Wood
Collection Date : 01/07/15 14:30

ESC Sample # : L742605-05

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	96.8			% Rec.		8015	01/12/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	01/14/15	1
1-Methylnaphthalene	U	0.33	1.0	ug/l		8270C	01/14/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	01/14/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	01/14/15	1
Surrogate Recovery								
2-Fluorophenol	49.5			% Rec.		8270C	01/14/15	1
Phenol-d5	35.3			% Rec.		8270C	01/14/15	1
Nitrobenzene-d5	57.2			% Rec.		8270C	01/14/15	1
2-Fluorobiphenyl	66.2			% Rec.		8270C	01/14/15	1
2,4,6-Tribromophenol	62.8			% Rec.		8270C	01/14/15	1
p-Terphenyl-d14	58.8			% Rec.		8270C	01/14/15	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 : TRIPBLANK

Collected By : Ron Wood
Collection Date : 01/07/15 00:00

ESC Sample # : L742605-06

Site ID : BACKGROUND

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	98.7			% Rec.		8260B	01/10/15	1
Dibromofluoromethane	97.6			% Rec.		8260B	01/10/15	1
4-Bromofluorobenzene	98.5			% Rec.		8260B	01/10/15	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

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

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L742605-01	WG764078	SAMP	C28-C40 Oil Range	R3014280	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764055	SAMP	Arsenic, Dissolved	R3014351	J
	WG764202	SAMP	Boron	R3014405	O1V
	WG764055	SAMP	Boron, Dissolved	R3014415	V01
	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	Manganese	R3014405	J3V
	WG764202	SAMP	Molybdenum	R3014405	J
	WG764055	SAMP	Molybdenum, Dissolved	R3014351	J
	WG764202	SAMP	Nickel	R3014405	J
	WG764055	SAMP	Nickel, Dissolved	R3014351	J
	WG764202	SAMP	Silver	R3014405	J
	WG764055	SAMP	Silver, Dissolved	R3014351	J
	WG764055	SAMP	Vanadium, Dissolved	R3014351	J
	WG764202	SAMP	Zinc	R3014405	J
	WG764055	SAMP	Zinc, Dissolved	R3014351	JJ6
L742605-02	WG764078	SAMP	C28-C40 Oil Range	R3014280	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	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	Cobalt, Dissolved	R3014351	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	Nickel, Dissolved	R3014351	J
	WG764055	SAMP	Silver, Dissolved	R3014351	J
	WG764202	SAMP	Uranium	R3014405	J
	WG764055	SAMP	Uranium, Dissolved	R3014351	J
	WG764202	SAMP	Vanadium	R3014405	J
	WG764055	SAMP	Vanadium, Dissolved	R3014351	J
	WG764202	SAMP	Zinc	R3014405	J
	WG764055	SAMP	Zinc, Dissolved	R3014351	J
L742605-03	WG764078	SAMP	C28-C40 Oil Range	R3014280	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764202	SAMP	Cadmium	R3014405	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	Cobalt, Dissolved	R3014351	J
	WG764055	SAMP	Iron, Dissolved	R3014351	J
	WG764202	SAMP	Lead	R3014405	J
	WG764055	SAMP	Zinc, Dissolved	R3014351	J
L742605-04	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	Manganese	R3014405	J
	WG764055	SAMP	Manganese, Dissolved	R3014351	J
	WG764202	SAMP	Nickel	R3014405	J
	WG764055	SAMP	Nickel, Dissolved	R3014351	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L742605-05	WG764202	SAMP	Uranium	R3014405	J
	WG764055	SAMP	Uranium, Dissolved	R3014351	J
	WG764306	SAMP	Dissolved Solids	R3014606	J
	WG764202	SAMP	Aluminum	R3014524	J
	WG764055	SAMP	Aluminum, Dissolved	R3014415	J
	WG764055	SAMP	Barium, Dissolved	R3014351	J
	WG764202	SAMP	Calcium	R3014524	J
	WG764055	SAMP	Calcium, Dissolved	R3014415	J
	WG764202	SAMP	Chromium	R3014405	B
	WG764055	SAMP	Chromium, Dissolved	R3014351	JB
	WG764202	SAMP	Copper	R3014405	J
	WG764055	SAMP	Copper, Dissolved	R3014351	J
	WG764055	SAMP	Iron, Dissolved	R3014351	J
	WG764055	SAMP	Manganese, Dissolved	R3014351	J
	WG764202	SAMP	Nickel	R3014405	J
	WG764055	SAMP	Nickel, Dissolved	R3014351	J
	WG764055	SAMP	Zinc, Dissolved	R3014351	J
	WG764296	SAMP	Nitrate-Nitrite	R3014751	J6

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.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
01	(ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
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: L742605

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:	1/7/2015	Analytic Batch:	WG764060
Analysis Date:	1/13/2015 1:20:00 AM	Analyst:	236
Instrument ID:	IC-9		
Sample Numbers:	L742605-01, -02, -03, -04, -05		

Method Blank

Analyte	CAS	RDL	MDL	Qualifier
Chloride	16887-00-6	< 1.00	< 0.0519	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.111	98	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.142	98	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
Chloride	1	40	39.111	98	39.142	98	90 - 110	0	20		

Quality Control Summary

SDG: L742605

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:	1/7/2015	Analytic Batch:	WG764385
Analysis Date:	1/13/2015 9:04:00 PM	Analyst:	577
Instrument ID:	IC-8		
Sample Numbers:	L742605-01, -02, -03, -04, -05		

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	0.120	

Laboratory Control Sample (LCS)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.304	98	90 - 110	
Fluoride	1	8	7.9939	100	90 - 110	
Sulfate	1	40	39.024	98	90 - 110	

Laboratory Control Sample Duplicate (LCSD)

Analyte	Dil	True Value	Found	% Rec	Control Limits	Qual
Chloride	1	40	39.389	98	90 - 110	
Fluoride	1	8	8.0547	101	90 - 110	
Sulfate	1	40	38.985	97	90 - 110	

Laboratory Control Sample / Laboratory Control Sample Duplicate

Analyte	Dil	Spike	LCS	% Rec	LCSD	% Rec	Control Limits	% Rec	Control RPD	Qual
Chloride	1	40	39.304	98	39.389	98	90 - 110	0	20	
Fluoride	1	8	7.9939	100	8.0547	101	90 - 110	1	20	
Sulfate	1	40	39.024	98	38.985	97	90 - 110	0	20	

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:	WG764060
Collection Date:	1/7/2015			Analyst:	236
Analysis Date:	1/13/2015 1:20:00 AM				
Instrument ID:	IC-9				
Sample Numbers:	L742605-01, -02, -03, -04, -05				

Sample Duplicate

L742511-03

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	2	156.41	163.32	4	20	

Sample Duplicate

L742762-01

Analyte	Dil	Sample Result	DUP Result	% RPD	Limit	Qualifier
Chloride	1	54.434	55.734	2	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
Chloride	1	50	<0.0519	50.381	101	49.232	98	80 - 120		2	20	