

GW – 028

**Background
Groundwater
Investigation Report**

PART 8 OF 9

September 2015



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 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-01

Sample ID : MW-13-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/06/15 15:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	1800000	5200	100000	ug/l		9056MOD	04/13/15	100
Fluoride	570	9.9	100	ug/l		9056MOD	04/13/15	1
Sulfate	2400000	7700	500000	ug/l		9056MOD	04/13/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/14/15	1
Nitrate-Nitrite	690	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	6700000	2800	10000	ug/l		2540 C-	04/10/15	1
Arsenic	1.9	0.25	2.0	ug/l	J	6020	04/10/15	1
Barium	23.	0.36	5.0	ug/l		6020	04/10/15	1
Boron, Dissolved	450	75.	1000	ug/l	JV	6020	04/17/15	50
Calcium, Dissolved	710000	920	20000	ug/l	V	6020	04/15/15	20
Chromium	U	0.54	2.0	ug/l		6020	04/10/15	1
Iron	130	15.	100	ug/l		6020	04/10/15	1
Lead	0.48	0.24	2.0	ug/l	J	6020	04/10/15	1
Manganese	68.	0.25	5.0	ug/l		6020	04/10/15	1
Nickel	U	0.35	2.0	ug/l		6020	04/10/15	1
Selenium	2.7	0.38	2.0	ug/l		6020	04/10/15	1
Sodium, Dissolved	1200000	2200	20000	ug/l	V	6020	04/15/15	20
Vanadium	4.6	0.18	5.0	ug/l	J	6020	04/10/15	1
Aluminum, Dissolved	14.	2.0	100	ug/l	J	6020	04/10/15	1
Arsenic, Dissolved	1.6	0.25	2.0	ug/l	J	6020	04/10/15	1
Barium, Dissolved	24.	0.36	5.0	ug/l		6020	04/10/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/10/15	1
Chromium, Dissolved	U	0.54	2.0	ug/l		6020	04/10/15	1
Copper, Dissolved	1.0	0.52	5.0	ug/l	J	6020	04/10/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	04/10/15	1
Iron, Dissolved	28.	15.	100	ug/l	J	6020	04/10/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	04/10/15	1
Manganese, Dissolved	60.	0.25	5.0	ug/l		6020	04/10/15	1
Molybdenum, Dissolved	3.2	0.14	5.0	ug/l	J	6020	04/10/15	1
Nickel, Dissolved	0.67	0.35	2.0	ug/l	J	6020	04/10/15	1
Potassium, Dissolved	5300	37.	1000	ug/l		6020	04/10/15	1
Selenium, Dissolved	2.8	0.38	2.0	ug/l		6020	04/10/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/10/15	1
Uranium, Dissolved	5.9	0.33	10.	ug/l	J	6020	04/10/15	1
Vanadium, Dissolved	3.1	0.18	5.0	ug/l	J	6020	04/10/15	1
Zinc, Dissolved	13.	2.6	25.	ug/l	JJ6	6020	04/10/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/09/15	1

U = ND (Not Detected)

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

MDL = Minimum Detection Limit = LOD = TRRP SDL

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-01

Sample ID : MW-13-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/06/15 15:15

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/09/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.1			% Rec.		8015D/G	04/09/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/10/15	1
Surrogate Recovery								
Toluene-d8	98.1			% Rec.		8260B	04/10/15	1
Dibromofluoromethane	88.5			% Rec.		8260B	04/10/15	1
4-Bromofluorobenzene	101.			% Rec.		8260B	04/10/15	1
TPH (GC/FID) High Fraction	48.	25.	100	ug/l	J	3511/80	04/09/15	1
Surrogate recovery(%) o-Terphenyl	113.			% Rec.		3511/80	04/09/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/09/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/09/15	1
Surrogate Recovery								
2-Fluorophenol	45.0			% Rec.		8270C	04/09/15	1
Phenol-d5	31.9			% Rec.		8270C	04/09/15	1
Nitrobenzene-d5	73.7			% Rec.		8270C	04/09/15	1

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August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-0415-BG
Collected By : Ron Wood
Collection Date : 04/06/15 15:15

ESC Sample # : L757942-01

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	78.0			% Rec.		8270C	04/09/15	1
2,4,6-Tribromophenol	89.0			% Rec.		8270C	04/09/15	1
p-Terphenyl-d14	86.2			% Rec.		8270C	04/09/15	1

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-02

Sample ID : MW-12-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/06/15 16:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	1900000	5200	100000	ug/l		9056MOD	04/13/15	100
Fluoride	830	9.9	100	ug/l		9056MOD	04/13/15	1
Sulfate	2800000	7700	500000	ug/l		9056MOD	04/13/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/14/15	1
Nitrate-Nitrite	2100	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	7600000	2800	10000	ug/l		2540 C-	04/10/15	1
Arsenic	2.1	0.25	2.0	ug/l		6020	04/10/15	1
Barium	20.	0.36	5.0	ug/l		6020	04/10/15	1
Boron, Dissolved	430	75.	1000	ug/l	J	6020	04/17/15	50
Calcium, Dissolved	750000	460	10000	ug/l		6020	04/15/15	10
Chromium	U	0.54	2.0	ug/l		6020	04/10/15	1
Iron	78.	15.	100	ug/l	J	6020	04/10/15	1
Lead	U	0.24	2.0	ug/l		6020	04/10/15	1
Manganese	690	2.5	50.	ug/l		6020	04/10/15	10
Nickel	0.71	0.35	2.0	ug/l	J	6020	04/10/15	1
Selenium	5.2	0.38	2.0	ug/l		6020	04/10/15	1
Sodium, Dissolved	1400000	2200	20000	ug/l		6020	04/15/15	20
Vanadium	3.3	0.18	5.0	ug/l	J	6020	04/10/15	1
Aluminum, Dissolved	30.	2.0	100	ug/l	J	6020	04/10/15	1
Arsenic, Dissolved	2.5	0.25	2.0	ug/l		6020	04/10/15	1
Barium, Dissolved	19.	0.36	5.0	ug/l		6020	04/10/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/10/15	1
Chromium, Dissolved	U	0.54	2.0	ug/l		6020	04/10/15	1
Copper, Dissolved	1.4	0.52	5.0	ug/l	J	6020	04/10/15	1
Cobalt, Dissolved	1.0	0.26	2.0	ug/l	J	6020	04/10/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	04/10/15	1
Lead, Dissolved	0.24	0.24	2.0	ug/l	J	6020	04/10/15	1
Manganese, Dissolved	680	0.25	5.0	ug/l		6020	04/10/15	1
Molybdenum, Dissolved	4.6	0.14	5.0	ug/l	J	6020	04/10/15	1
Nickel, Dissolved	1.9	0.35	2.0	ug/l	J	6020	04/10/15	1
Potassium, Dissolved	5200	37.	1000	ug/l		6020	04/10/15	1
Selenium, Dissolved	4.1	0.38	2.0	ug/l		6020	04/10/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/10/15	1
Uranium, Dissolved	3.7	0.33	10.	ug/l	J	6020	04/10/15	1
Vanadium, Dissolved	1.5	0.18	5.0	ug/l	J	6020	04/10/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	04/10/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/09/15	1

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August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-02

Sample ID : MW-12-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/06/15 16:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	32.	31.	100	ug/l	J	8015D/G	04/09/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.3			% Rec.		8015D/G	04/09/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/10/15	1
Surrogate Recovery								
Toluene-d8	98.3			% Rec.		8260B	04/10/15	1
Dibromofluoromethane	87.1			% Rec.		8260B	04/10/15	1
4-Bromofluorobenzene	100.			% Rec.		8260B	04/10/15	1
TPH (GC/FID) High Fraction	73.	25.	100	ug/l	J	3511/80	04/09/15	1
Surrogate recovery(%) o-Terphenyl	113.			% Rec.		3511/80	04/09/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/09/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/09/15	1
Surrogate Recovery								
2-Fluorophenol	25.1			% Rec.		8270C	04/09/15	1
Phenol-d5	13.9			% Rec.		8270C	04/09/15	1
Nitrobenzene-d5	64.9			% Rec.		8270C	04/09/15	1

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Collected By : Ron Wood
Collection Date : 04/06/15 16:30

ESC Sample # : L757942-02

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	68.4			% Rec.		8270C	04/09/15	1
2,4,6-Tribromophenol	67.7			% Rec.		8270C	04/09/15	1
p-Terphenyl-d14	74.4			% Rec.		8270C	04/09/15	1

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August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-03

Sample ID : EB-25-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/06/15 18:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	0.13	0.052	1.0	mg/l	J	9056MOD	04/13/15	1
Fluoride	U	0.0099	0.10	mg/l		9056MOD	04/13/15	1
Sulfate	0.47	0.077	5.0	mg/l	J	9056MOD	04/13/15	1
Cyanide	U	0.0018	0.0050	mg/l		9012B	04/14/15	1
Nitrate-Nitrite	0.17	0.020	0.10	mg/l		353.2	04/16/15	1
Dissolved Solids	U	2.8	10.	mg/l	T4	2540 C-	04/10/15	1
Arsenic	U	0.00025	0.0020	mg/l		6020	04/10/15	1
Barium	U	0.00036	0.0050	mg/l		6020	04/10/15	1
Boron, Dissolved	U	0.075	1.0	mg/l		6020	04/17/15	50
Chromium	0.00056	0.00054	0.0020	mg/l	J	6020	04/10/15	1
Iron	U	0.015	0.10	mg/l		6020	04/10/15	1
Lead	U	0.00024	0.0020	mg/l		6020	04/10/15	1
Manganese	U	0.00025	0.0050	mg/l		6020	04/10/15	1
Nickel	U	0.00035	0.0020	mg/l		6020	04/10/15	1
Selenium	U	0.00038	0.0020	mg/l		6020	04/10/15	1
Vanadium	0.0014	0.00018	0.0050	mg/l	J	6020	04/10/15	1
Aluminum, Dissolved	0.018	0.0020	0.10	mg/l	J	6020	04/10/15	1
Arsenic, Dissolved	U	0.00025	0.0020	mg/l		6020	04/10/15	1
Barium, Dissolved	U	0.00036	0.0050	mg/l		6020	04/10/15	1
Cadmium, Dissolved	U	0.00016	0.0010	mg/l		6020	04/10/15	1
Calcium, Dissolved	0.094	0.046	1.0	mg/l	J	6020	04/10/15	1
Chromium, Dissolved	U	0.00054	0.0020	mg/l		6020	04/10/15	1
Copper, Dissolved	0.0020	0.00052	0.0050	mg/l	J	6020	04/10/15	1
Cobalt, Dissolved	U	0.00026	0.0020	mg/l		6020	04/10/15	1
Iron, Dissolved	U	0.015	0.10	mg/l		6020	04/10/15	1
Lead, Dissolved	U	0.00024	0.0020	mg/l		6020	04/10/15	1
Manganese, Dissolved	0.00042	0.00025	0.0050	mg/l	J	6020	04/10/15	1
Molybdenum, Dissolved	U	0.00014	0.0050	mg/l		6020	04/10/15	1
Nickel, Dissolved	U	0.00035	0.0020	mg/l		6020	04/10/15	1
Potassium, Dissolved	U	0.037	1.0	mg/l		6020	04/10/15	1
Selenium, Dissolved	U	0.00038	0.0020	mg/l		6020	04/10/15	1
Silver, Dissolved	U	0.00031	0.0020	mg/l		6020	04/10/15	1
Sodium, Dissolved	0.68	0.11	1.0	mg/l	J	6020	04/10/15	1
Uranium, Dissolved	U	0.00033	0.010	mg/l		6020	04/10/15	1
Vanadium, Dissolved	U	0.00018	0.0050	mg/l		6020	04/10/15	1
Zinc, Dissolved	U	0.0026	0.025	mg/l		6020	04/10/15	1
Mercury	U	0.000049	0.00020	mg/l		7470A	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-03

Sample ID : EB-25-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/06/15 18:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	0.031	0.10	mg/l		8015D/G	04/09/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.3			% Rec.		8015D/G	04/09/15	1
Volatile Organics								
Benzene	U	0.00033	0.0010	mg/l		8260B	04/10/15	1
Carbon tetrachloride	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
Chloroform	U	0.00032	0.0050	mg/l		8260B	04/10/15	1
1,2-Dibromoethane	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
1,1-Dichloroethane	U	0.00026	0.0010	mg/l		8260B	04/10/15	1
1,2-Dichloroethane	U	0.00036	0.0010	mg/l		8260B	04/10/15	1
1,1-Dichloroethene	U	0.00040	0.0010	mg/l		8260B	04/10/15	1
Ethylbenzene	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
Methylene Chloride	U	0.0010	0.0050	mg/l		8260B	04/10/15	1
1,1,1,2-Tetrachloroethane	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
1,1,2,2-Tetrachloroethane	U	0.00013	0.0010	mg/l		8260B	04/10/15	1
Toluene	U	0.00078	0.0050	mg/l		8260B	04/10/15	1
1,1,1-Trichloroethane	U	0.00032	0.0010	mg/l		8260B	04/10/15	1
Tetrachloroethene	U	0.00037	0.0010	mg/l		8260B	04/10/15	1
1,1,2-Trichloroethane	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
Vinyl chloride	U	0.00026	0.0010	mg/l		8260B	04/10/15	1
o-Xylene	U	0.00034	0.0010	mg/l		8260B	04/10/15	1
m&p-Xylene	U	0.00072	0.0020	mg/l		8260B	04/10/15	1
Xylenes, Total	U	0.0011	0.0030	mg/l		8260B	04/10/15	1
Surrogate Recovery								
Toluene-d8	98.6			% Rec.		8260B	04/10/15	1
Dibromofluoromethane	85.8			% Rec.		8260B	04/10/15	1
4-Bromofluorobenzene	100.			% Rec.		8260B	04/10/15	1
TPH (GC/FID) High Fraction	U	0.025	0.10	mg/l		3511/80	04/09/15	1
Surrogate recovery(%) o-Terphenyl	115.			% Rec.		3511/80	04/09/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.00034	0.0010	mg/l		8270C	04/09/15	1
1-Methylnaphthalene	U	0.00022	0.0010	mg/l		8270C	04/09/15	1
2-Methylnaphthalene	U	0.00031	0.0010	mg/l		8270C	04/09/15	1
Naphthalene	U	0.00037	0.0010	mg/l		8270C	04/09/15	1
Surrogate Recovery								
2-Fluorophenol	45.4			% Rec.		8270C	04/09/15	1
Phenol-d5	31.4			% Rec.		8270C	04/09/15	1
Nitrobenzene-d5	68.1			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-25-0415-BG
Collected By : Ron Wood
Collection Date : 04/06/15 18:00

ESC Sample # : L757942-03

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	70.0			% Rec.		8270C	04/09/15	1
2,4,6-Tribromophenol	75.7			% Rec.		8270C	04/09/15	1
p-Terphenyl-d14	78.3			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-04

Sample ID : MW-136-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 08:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	240000	5200	100000	ug/l		9056MOD	04/13/15	100
Fluoride	1600	9.9	100	ug/l		9056MOD	04/13/15	1
Sulfate	2400000	7700	500000	ug/l		9056MOD	04/13/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/14/15	1
Nitrate-Nitrite	1500	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	4700000	2800	10000	ug/l		2540 C-	04/14/15	1
Arsenic	3.1	0.25	2.0	ug/l		6020	04/10/15	1
Barium	17.	0.36	5.0	ug/l		6020	04/10/15	1
Boron, Dissolved	540	75.	1000	ug/l	J	6020	04/17/15	50
Calcium, Dissolved	740000	460	10000	ug/l		6020	04/15/15	10
Chromium	0.92	0.54	2.0	ug/l	J	6020	04/10/15	1
Iron	260	15.	100	ug/l		6020	04/10/15	1
Lead	0.47	0.24	2.0	ug/l	J	6020	04/10/15	1
Manganese	18.	0.25	5.0	ug/l		6020	04/10/15	1
Nickel	0.64	0.35	2.0	ug/l	J	6020	04/10/15	1
Selenium	3.8	0.38	2.0	ug/l		6020	04/10/15	1
Sodium, Dissolved	120000	1100	10000	ug/l		6020	04/15/15	10
Vanadium	18.	0.18	5.0	ug/l		6020	04/10/15	1
Aluminum, Dissolved	74.	2.0	100	ug/l	J	6020	04/10/15	1
Arsenic, Dissolved	2.8	0.25	2.0	ug/l		6020	04/10/15	1
Barium, Dissolved	11.	0.36	5.0	ug/l		6020	04/10/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/10/15	1
Chromium, Dissolved	U	0.54	2.0	ug/l		6020	04/10/15	1
Copper, Dissolved	1.6	0.52	5.0	ug/l	J	6020	04/10/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	04/10/15	1
Iron, Dissolved	24.	15.	100	ug/l	J	6020	04/10/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	04/10/15	1
Manganese, Dissolved	5.7	0.25	5.0	ug/l		6020	04/10/15	1
Molybdenum, Dissolved	6.0	0.14	5.0	ug/l		6020	04/10/15	1
Nickel, Dissolved	1.1	0.35	2.0	ug/l	J	6020	04/10/15	1
Potassium, Dissolved	2700	37.	1000	ug/l		6020	04/10/15	1
Selenium, Dissolved	3.6	0.38	2.0	ug/l		6020	04/10/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/10/15	1
Uranium, Dissolved	74.	0.33	10.	ug/l		6020	04/10/15	1
Vanadium, Dissolved	16.	0.18	5.0	ug/l		6020	04/10/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	04/10/15	1
Mercury	0.052	0.049	0.20	ug/l	J	7470A	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-04

Sample ID : MW-136-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 08:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/09/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	04/09/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/10/15	1
Surrogate Recovery								
Toluene-d8	98.5			% Rec.		8260B	04/10/15	1
Dibromofluoromethane	87.9			% Rec.		8260B	04/10/15	1
4-Bromofluorobenzene	98.4			% Rec.		8260B	04/10/15	1
TPH (GC/FID) High Fraction	32.	25.	100	ug/l	J	3511/80	04/09/15	1
Surrogate recovery(%) o-Terphenyl	115.			% Rec.		3511/80	04/09/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/09/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/09/15	1
Surrogate Recovery								
2-Fluorophenol	47.2			% Rec.		8270C	04/09/15	1
Phenol-d5	32.2			% Rec.		8270C	04/09/15	1
Nitrobenzene-d5	74.2			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-136-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 08:50

ESC Sample # : L757942-04

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	79.3			% Rec.		8270C	04/09/15	1
2,4,6-Tribromophenol	82.0			% Rec.		8270C	04/09/15	1
p-Terphenyl-d14	81.0			% Rec.		8270C	04/09/15	1

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-05

Sample ID : MW-25-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 10:30

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	6300000	5200	100000	ug/l		9056MOD	04/13/15	100
Fluoride	610	9.9	100	ug/l		9056MOD	04/13/15	1
Sulfate	4500000	7700	500000	ug/l		9056MOD	04/13/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/14/15	1
Nitrate-Nitrite	200	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	16000000	2800	10000	ug/l		2540 C-	04/14/15	1
Arsenic	11.	1.2	10.	ug/l		6020	04/10/15	5
Barium	22.	1.8	25.	ug/l	J	6020	04/10/15	5
Boron, Dissolved	380	75.	1000	ug/l	J	6020	04/17/15	50
Calcium, Dissolved	1000000	460	10000	ug/l		6020	04/15/15	10
Chromium	U	2.7	10.	ug/l		6020	04/10/15	5
Iron	U	75.	500	ug/l		6020	04/10/15	5
Lead	U	1.2	10.	ug/l		6020	04/10/15	5
Manganese	390	1.2	25.	ug/l		6020	04/10/15	5
Nickel	U	1.8	10.	ug/l		6020	04/10/15	5
Selenium	17.	1.9	10.	ug/l		6020	04/10/15	5
Sodium, Dissolved	4700000	11000	100000	ug/l		6020	04/15/15	100
Vanadium	20.	0.90	25.	ug/l	J	6020	04/10/15	5
Aluminum, Dissolved	16.	2.0	100	ug/l	J	6020	04/10/15	1
Arsenic, Dissolved	11.	0.25	2.0	ug/l		6020	04/10/15	1
Barium, Dissolved	18.	0.36	5.0	ug/l		6020	04/10/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/10/15	1
Chromium, Dissolved	U	0.54	2.0	ug/l		6020	04/10/15	1
Copper, Dissolved	1.8	0.52	5.0	ug/l	J	6020	04/10/15	1
Cobalt, Dissolved	0.93	0.26	2.0	ug/l	J	6020	04/10/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	04/10/15	1
Lead, Dissolved	0.28	0.24	2.0	ug/l	J	6020	04/10/15	1
Manganese, Dissolved	190	0.25	5.0	ug/l		6020	04/10/15	1
Molybdenum, Dissolved	29.	0.14	5.0	ug/l		6020	04/10/15	1
Nickel, Dissolved	5.1	0.35	2.0	ug/l		6020	04/10/15	1
Potassium, Dissolved	7900	37.	1000	ug/l		6020	04/10/15	1
Selenium, Dissolved	16.	0.38	2.0	ug/l		6020	04/10/15	1
Silver, Dissolved	0.35	0.31	2.0	ug/l	J	6020	04/10/15	1
Uranium, Dissolved	29.	0.33	10.	ug/l		6020	04/10/15	1
Vanadium, Dissolved	12.	0.18	5.0	ug/l		6020	04/10/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	04/10/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/09/15	1

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 10:30

ESC Sample # : L757942-05

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	56.	31.	100	ug/l	J	8015D/G	04/09/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.4			% Rec.		8015D/G	04/09/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/10/15	1
Surrogate Recovery								
Toluene-d8	97.8			% Rec.		8260B	04/10/15	1
Dibromofluoromethane	86.9			% Rec.		8260B	04/10/15	1
4-Bromofluorobenzene	103.			% Rec.		8260B	04/10/15	1
TPH (GC/FID) High Fraction	600	25.	100	ug/l		3511/80	04/09/15	1
Surrogate recovery(%) o-Terphenyl	111.			% Rec.		3511/80	04/09/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/09/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/09/15	1
Surrogate Recovery								
2-Fluorophenol	47.5			% Rec.		8270C	04/09/15	1
Phenol-d5	32.2			% Rec.		8270C	04/09/15	1
Nitrobenzene-d5	73.7			% Rec.		8270C	04/09/15	1

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 10:30

ESC Sample # : L757942-05

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	74.0			% Rec.		8270C	04/09/15	1
2,4,6-Tribromophenol	83.4			% Rec.		8270C	04/09/15	1
p-Terphenyl-d14	80.8			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-06

Sample ID : MW-17-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	140000	5200	100000	ug/l		9056MOD	04/14/15	100
Fluoride	1100	9.9	100	ug/l		9056MOD	04/13/15	1
Sulfate	1200000	7700	500000	ug/l		9056MOD	04/14/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/14/15	1
Nitrate-Nitrite	2100	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	04/14/15	1
Arsenic	1.4	0.25	2.0	ug/l	J	6020	04/10/15	1
Barium	14.	0.36	5.0	ug/l		6020	04/10/15	1
Boron, Dissolved	140	75.	1000	ug/l	J	6020	04/17/15	50
Calcium, Dissolved	380000	460	10000	ug/l		6020	04/15/15	10
Chromium	1.4	0.54	2.0	ug/l	J	6020	04/10/15	1
Iron	U	15.	100	ug/l		6020	04/10/15	1
Lead	U	0.24	2.0	ug/l		6020	04/10/15	1
Manganese	1.1	0.25	5.0	ug/l	J	6020	04/10/15	1
Nickel	U	0.35	2.0	ug/l		6020	04/10/15	1
Selenium	7.0	0.38	2.0	ug/l		6020	04/10/15	1
Vanadium	7.9	0.18	5.0	ug/l		6020	04/10/15	1
Aluminum, Dissolved	20.	2.0	100	ug/l	J	6020	04/10/15	1
Arsenic, Dissolved	1.1	0.25	2.0	ug/l	J	6020	04/10/15	1
Barium, Dissolved	12.	0.36	5.0	ug/l		6020	04/10/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/10/15	1
Chromium, Dissolved	1.0	0.54	2.0	ug/l	J	6020	04/10/15	1
Copper, Dissolved	0.86	0.52	5.0	ug/l	J	6020	04/10/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	04/10/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	04/10/15	1
Lead, Dissolved	0.40	0.24	2.0	ug/l	J	6020	04/10/15	1
Manganese, Dissolved	1.2	0.25	5.0	ug/l	J	6020	04/10/15	1
Molybdenum, Dissolved	10.	0.14	5.0	ug/l		6020	04/10/15	1
Nickel, Dissolved	0.40	0.35	2.0	ug/l	J	6020	04/10/15	1
Potassium, Dissolved	1900	37.	1000	ug/l		6020	04/10/15	1
Selenium, Dissolved	7.7	0.38	2.0	ug/l		6020	04/10/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/10/15	1
Sodium, Dissolved	73000	110	1000	ug/l		6020	04/10/15	1
Uranium, Dissolved	2.6	0.33	10.	ug/l	J	6020	04/10/15	1
Vanadium, Dissolved	5.8	0.18	5.0	ug/l		6020	04/10/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	04/10/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-06

Sample ID : MW-17-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 12:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.8			% Rec.		8015D/G	04/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/10/15	1
Surrogate Recovery								
Toluene-d8	99.4			% Rec.		8260B	04/10/15	1
Dibromofluoromethane	87.5			% Rec.		8260B	04/10/15	1
4-Bromofluorobenzene	101.			% Rec.		8260B	04/10/15	1
TPH (GC/FID) High Fraction	47.	25.	100	ug/l	J	3511/80	04/09/15	1
Surrogate recovery(%) o-Terphenyl	118.			% Rec.		3511/80	04/09/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/09/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/09/15	1
Surrogate Recovery								
2-Fluorophenol	39.8			% Rec.		8270C	04/09/15	1
Phenol-d5	27.7			% Rec.		8270C	04/09/15	1
Nitrobenzene-d5	61.4			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 12:00

ESC Sample # : L757942-06

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	63.8			% Rec.		8270C	04/09/15	1
2,4,6-Tribromophenol	71.9			% Rec.		8270C	04/09/15	1
p-Terphenyl-d14	78.0			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-07

Sample ID : MW-55-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 13:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	250000	5200	100000	ug/l		9056MOD	04/14/15	100
Fluoride	1900	9.9	100	ug/l		9056MOD	04/13/15	1
Sulfate	2800000	7700	500000	ug/l		9056MOD	04/14/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/14/15	1
Nitrate-Nitrite	14000	39.	200	ug/l		353.2	04/16/15	2
Dissolved Solids	4600000	2800	10000	ug/l		2540 C-	04/14/15	1
Arsenic	4.8	0.25	2.0	ug/l		6020	04/10/15	1
Barium	11.	0.36	5.0	ug/l		6020	04/10/15	1
Boron, Dissolved	1100	75.	1000	ug/l		6020	04/17/15	50
Calcium, Dissolved	640000	460	10000	ug/l		6020	04/15/15	10
Chromium	1.0	0.54	2.0	ug/l	J	6020	04/10/15	1
Iron	U	15.	100	ug/l		6020	04/10/15	1
Lead	0.75	0.24	2.0	ug/l	J	6020	04/10/15	1
Manganese	42.	0.25	5.0	ug/l		6020	04/10/15	1
Nickel	1.2	0.35	2.0	ug/l	J	6020	04/10/15	1
Selenium	19.	0.38	2.0	ug/l		6020	04/10/15	1
Sodium, Dissolved	200000	1100	10000	ug/l		6020	04/15/15	10
Vanadium	18.	0.18	5.0	ug/l		6020	04/10/15	1
Aluminum, Dissolved	18.	2.0	100	ug/l	J	6020	04/10/15	1
Arsenic, Dissolved	5.3	0.25	2.0	ug/l		6020	04/10/15	1
Barium, Dissolved	9.2	0.36	5.0	ug/l		6020	04/10/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/10/15	1
Chromium, Dissolved	U	0.54	2.0	ug/l		6020	04/10/15	1
Copper, Dissolved	1.1	0.52	5.0	ug/l	J	6020	04/10/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	04/10/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	04/10/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	04/10/15	1
Manganese, Dissolved	5.6	0.25	5.0	ug/l		6020	04/10/15	1
Molybdenum, Dissolved	22.	0.14	5.0	ug/l		6020	04/10/15	1
Nickel, Dissolved	2.3	0.35	2.0	ug/l		6020	04/10/15	1
Potassium, Dissolved	820	37.	1000	ug/l	J	6020	04/10/15	1
Selenium, Dissolved	21.	0.38	2.0	ug/l		6020	04/10/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/10/15	1
Uranium, Dissolved	44.	0.33	10.	ug/l		6020	04/10/15	1
Vanadium, Dissolved	16.	0.18	5.0	ug/l		6020	04/10/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	04/10/15	1
Mercury	0.050	0.049	0.20	ug/l	J	7470A	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-07

Sample ID : MW-55-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 13:55

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.4			% Rec.		8015D/G	04/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/10/15	1
Surrogate Recovery								
Toluene-d8	97.9			% Rec.		8260B	04/10/15	1
Dibromofluoromethane	86.7			% Rec.		8260B	04/10/15	1
4-Bromofluorobenzene	100.			% Rec.		8260B	04/10/15	1
TPH (GC/FID) High Fraction	210	25.	100	ug/l		3511/80	04/09/15	1
Surrogate recovery(%) o-Terphenyl	115.			% Rec.		3511/80	04/09/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/09/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/09/15	1
Surrogate Recovery								
2-Fluorophenol	35.1			% Rec.		8270C	04/09/15	1
Phenol-d5	24.3			% Rec.		8270C	04/09/15	1
Nitrobenzene-d5	54.0			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 13:55

ESC Sample # : L757942-07

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	58.2			% Rec.		8270C	04/09/15	1
2,4,6-Tribromophenol	59.7			% Rec.		8270C	04/09/15	1
p-Terphenyl-d14	64.6			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L757942-08

Sample ID : DUP-10-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/06/15 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	1900000	5200	100000	ug/l		9056MOD	04/14/15	100
Fluoride	790	9.9	100	ug/l		9056MOD	04/13/15	1
Sulfate	2700000	7700	500000	ug/l		9056MOD	04/14/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/14/15	1
Nitrate-Nitrite	2100	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	7300000	2800	10000	ug/l		2540 C-	04/10/15	1
Arsenic	3.4	2.5	20.	ug/l	J	6020	04/10/15	10
Barium	20.	3.6	50.	ug/l	J	6020	04/10/15	10
Boron, Dissolved	470	75.	1000	ug/l	J	6020	04/17/15	50
Calcium, Dissolved	750000	460	10000	ug/l		6020	04/15/15	10
Chromium	U	5.4	20.	ug/l		6020	04/10/15	10
Iron	U	150	1000	ug/l		6020	04/10/15	10
Lead	U	2.4	20.	ug/l		6020	04/10/15	10
Manganese	590	2.5	50.	ug/l		6020	04/10/15	10
Nickel	U	3.5	20.	ug/l		6020	04/10/15	10
Selenium	4.2	3.8	20.	ug/l	J	6020	04/10/15	10
Sodium, Dissolved	1400000	2200	20000	ug/l		6020	04/15/15	20
Vanadium	10.	1.8	50.	ug/l	J	6020	04/10/15	10
Aluminum, Dissolved	32.	2.0	100	ug/l	J	6020	04/10/15	1
Arsenic, Dissolved	2.4	0.25	2.0	ug/l		6020	04/10/15	1
Barium, Dissolved	18.	0.36	5.0	ug/l		6020	04/10/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/10/15	1
Chromium, Dissolved	U	0.54	2.0	ug/l		6020	04/10/15	1
Copper, Dissolved	1.2	0.52	5.0	ug/l	J	6020	04/10/15	1
Cobalt, Dissolved	0.98	0.26	2.0	ug/l	J	6020	04/10/15	1
Iron, Dissolved	U	15.	100	ug/l		6020	04/10/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	04/10/15	1
Manganese, Dissolved	590	0.25	5.0	ug/l		6020	04/10/15	1
Molybdenum, Dissolved	4.8	0.14	5.0	ug/l	J	6020	04/10/15	1
Nickel, Dissolved	1.9	0.35	2.0	ug/l	J	6020	04/10/15	1
Potassium, Dissolved	5000	37.	1000	ug/l		6020	04/10/15	1
Selenium, Dissolved	5.9	0.38	2.0	ug/l		6020	04/10/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/10/15	1
Uranium, Dissolved	4.4	0.33	10.	ug/l	J	6020	04/10/15	1
Vanadium, Dissolved	1.5	0.18	5.0	ug/l	J	6020	04/10/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	04/10/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : DUP-10-0415-BG
Collected By : Ron Wood
Collection Date : 04/06/15 00:00

ESC Sample # : L757942-08

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Iron	92.	14.	100	ug/l	J	6010B	04/10/15	1
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/10/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	98.7			% Rec.		8015D/G	04/10/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/10/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/10/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/10/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/10/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/10/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/10/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/10/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/10/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/10/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/10/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/10/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/10/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/10/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/10/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/10/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/10/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/10/15	1
Surrogate Recovery								
Toluene-d8	98.3			% Rec.		8260B	04/10/15	1
Dibromofluoromethane	87.7			% Rec.		8260B	04/10/15	1
4-Bromofluorobenzene	101.			% Rec.		8260B	04/10/15	1
TPH (GC/FID) High Fraction	45.	25.	100	ug/l	J	3511/80	04/09/15	1
Surrogate recovery(%) o-Terphenyl	110.			% Rec.		3511/80	04/09/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/09/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/09/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/09/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/09/15	1
Surrogate Recovery 2-Fluorophenol	26.7			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : DUP-10-0415-BG
Collected By : Ron Wood
Collection Date : 04/06/15 00:00

ESC Sample # : L757942-08

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phenol-d5	15.6			% Rec.		8270C	04/09/15	1
Nitrobenzene-d5	71.1			% Rec.		8270C	04/09/15	1
2-Fluorobiphenyl	74.9			% Rec.		8270C	04/09/15	1
2,4,6-Tribromophenol	72.8			% Rec.		8270C	04/09/15	1
p-Terphenyl-d14	85.9			% Rec.		8270C	04/09/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : TRIP BLANK
Collected By : Ron Wood
Collection Date : 04/06/15 00:00

ESC Sample # : L757942-09
Site ID : NAVAJO
Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.00033	0.0010	mg/l		8260B	04/10/15	1
Carbon tetrachloride	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
Chloroform	U	0.00032	0.0050	mg/l		8260B	04/10/15	1
1,2-Dibromoethane	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
1,1-Dichloroethane	U	0.00026	0.0010	mg/l		8260B	04/10/15	1
1,2-Dichloroethane	U	0.00036	0.0010	mg/l		8260B	04/10/15	1
1,1-Dichloroethene	U	0.00040	0.0010	mg/l		8260B	04/10/15	1
Ethylbenzene	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
Methylene Chloride	U	0.0010	0.0050	mg/l		8260B	04/10/15	1
1,1,1,2-Tetrachloroethane	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
1,1,2,2-Tetrachloroethane	U	0.00013	0.0010	mg/l		8260B	04/10/15	1
Toluene	U	0.00078	0.0050	mg/l		8260B	04/10/15	1
1,1,1-Trichloroethane	U	0.00032	0.0010	mg/l		8260B	04/10/15	1
Tetrachloroethene	U	0.00037	0.0010	mg/l		8260B	04/10/15	1
1,1,2-Trichloroethane	U	0.00038	0.0010	mg/l		8260B	04/10/15	1
Vinyl chloride	U	0.00026	0.0010	mg/l		8260B	04/10/15	1
o-Xylene	U	0.00034	0.0010	mg/l		8260B	04/10/15	1
m&p-Xylene	U	0.00072	0.0020	mg/l		8260B	04/10/15	1
Xylenes, Total	U	0.0011	0.0030	mg/l		8260B	04/10/15	1
Surrogate Recovery								
Toluene-d8	97.9			% Rec.		8260B	04/10/15	1
Dibromofluoromethane	87.6			% Rec.		8260B	04/10/15	1
4-Bromofluorobenzene	101.			% Rec.		8260B	04/10/15	1

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L757942-01	WG781349	SAMP	Arsenic	R3030119	J
	WG781176	SAMP	Boron, Dissolved	R3031334	JV
	WG781176	SAMP	Calcium, Dissolved	R3030844	V
	WG781349	SAMP	Lead	R3030119	J
	WG781176	SAMP	Sodium, Dissolved	R3030844	V
	WG781349	SAMP	Vanadium	R3030119	J
	WG780745	SAMP	TPH (GC/FID) High Fraction	R3029791	J
	WG781176	SAMP	Aluminum, Dissolved	R3030675	J
	WG781176	SAMP	Arsenic, Dissolved	R3030675	J
	WG781176	SAMP	Copper, Dissolved	R3030675	J
	WG781176	SAMP	Iron, Dissolved	R3030675	J
	WG781176	SAMP	Molybdenum, Dissolved	R3030675	J
	WG781176	SAMP	Nickel, Dissolved	R3030675	J
	WG781176	SAMP	Uranium, Dissolved	R3030675	J
	WG781176	SAMP	Vanadium, Dissolved	R3030675	J
	WG781176	SAMP	Zinc, Dissolved	R3030675	JJ6
L757942-02	WG781035	SAMP	TPH (GC/FID) Low Fraction	R3030024	J
	WG781176	SAMP	Boron, Dissolved	R3031334	J
	WG781349	SAMP	Iron	R3030119	J
	WG781349	SAMP	Nickel	R3030119	J
	WG781349	SAMP	Vanadium	R3030119	J
	WG780745	SAMP	TPH (GC/FID) High Fraction	R3029791	J
	WG781176	SAMP	Aluminum, Dissolved	R3030675	J
	WG781176	SAMP	Copper, Dissolved	R3030675	J
	WG781176	SAMP	Cobalt, Dissolved	R3030675	J
	WG781176	SAMP	Lead, Dissolved	R3030675	J
	WG781176	SAMP	Molybdenum, Dissolved	R3030675	J
	WG781176	SAMP	Nickel, Dissolved	R3030675	J
	WG781176	SAMP	Uranium, Dissolved	R3030675	J
	WG781176	SAMP	Vanadium, Dissolved	R3030675	J
L757942-03	WG781500	SAMP	Chloride	R3030595	J
	WG781500	SAMP	Sulfate	R3030595	J
	WG780988	SAMP	Dissolved Solids	R3030071	T4
	WG781349	SAMP	Chromium	R3030119	J
	WG781349	SAMP	Vanadium	R3030119	J
	WG781176	SAMP	Aluminum, Dissolved	R3030675	J
	WG781176	SAMP	Calcium, Dissolved	R3030675	J
	WG781176	SAMP	Copper, Dissolved	R3030675	J
	WG781176	SAMP	Manganese, Dissolved	R3030675	J
	WG781176	SAMP	Sodium, Dissolved	R3030675	J
L757942-04	WG781176	SAMP	Boron, Dissolved	R3031334	J
	WG781349	SAMP	Chromium	R3030119	J
	WG781349	SAMP	Lead	R3030119	J
	WG781349	SAMP	Nickel	R3030119	J
	WG781104	SAMP	Mercury	R3029872	J
	WG780745	SAMP	TPH (GC/FID) High Fraction	R3029791	J
	WG781176	SAMP	Aluminum, Dissolved	R3030675	J
	WG781176	SAMP	Copper, Dissolved	R3030675	J
	WG781176	SAMP	Iron, Dissolved	R3030675	J
	WG781176	SAMP	Nickel, Dissolved	R3030675	J
L757942-05	WG781035	SAMP	TPH (GC/FID) Low Fraction	R3030024	J
	WG781349	SAMP	Barium	R3030119	J
	WG781176	SAMP	Boron, Dissolved	R3031334	J
	WG781349	SAMP	Vanadium	R3030119	J
	WG781176	SAMP	Aluminum, Dissolved	R3030675	J
	WG781176	SAMP	Copper, Dissolved	R3030675	J
	WG781176	SAMP	Cobalt, Dissolved	R3030675	J
	WG781176	SAMP	Lead, Dissolved	R3030675	J
	WG781176	SAMP	Silver, Dissolved	R3030675	J
L757942-06	WG781349	SAMP	Arsenic	R3030119	J
	WG781176	SAMP	Boron, Dissolved	R3031334	J
	WG781349	SAMP	Chromium	R3030119	J
	WG781349	SAMP	Manganese	R3030119	J
	WG780745	SAMP	TPH (GC/FID) High Fraction	R3029791	J
	WG781176	SAMP	Aluminum, Dissolved	R3030675	J
	WG781176	SAMP	Arsenic, Dissolved	R3030675	J
	WG781176	SAMP	Chromium, Dissolved	R3030675	J
	WG781176	SAMP	Copper, Dissolved	R3030675	J
	WG781176	SAMP	Lead, Dissolved	R3030675	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L757942-07	WG781176	SAMP	Manganese,Dissolved	R3030675	J
	WG781176	SAMP	Nickel,Dissolved	R3030675	J
	WG781176	SAMP	Uranium,Dissolved	R3030675	J
	WG781349	SAMP	Chromium	R3030119	J
	WG781349	SAMP	Lead	R3030119	J
	WG781349	SAMP	Nickel	R3030119	J
	WG781104	SAMP	Mercury	R3029872	J
L757942-08	WG781176	SAMP	Aluminum,Dissolved	R3030675	J
	WG781176	SAMP	Copper,Dissolved	R3030675	J
	WG781176	SAMP	Potassium,Dissolved	R3030675	J
	WG781212	SAMP	Iron	R3030082	J
	WG781349	SAMP	Arsenic	R3030119	J
	WG781349	SAMP	Barium	R3030119	J
	WG781176	SAMP	Boron,Dissolved	R3031334	J
	WG781349	SAMP	Selenium	R3030119	J
	WG781349	SAMP	Vanadium	R3030119	J
	WG780745	SAMP	TPH (GC/FID) High Fraction	R3029791	J
	WG781176	SAMP	Aluminum,Dissolved	R3030675	J
	WG781176	SAMP	Copper,Dissolved	R3030675	J
	WG781176	SAMP	Cobalt,Dissolved	R3030675	J
	WG781176	SAMP	Molybdenum,Dissolved	R3030675	J
	WG781176	SAMP	Nickel,Dissolved	R3030675	J
	WG781176	SAMP	Uranium,Dissolved	R3030675	J
	WG781176	SAMP	Vanadium,Dissolved	R3030675	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
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.



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Tax I.D. 62-0814289

Est. 1970

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

Report Summary

Monday May 18, 2015

Report Number: L757943

Samples Received: 04/08/15

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

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

Entire Report Reviewed By:

Pam Langford , ESC Representative

Laboratory Certification Numbers

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

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REPORT OF ANALYSIS

May 18, 2015

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

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-0415-BG
Collected By : Ron Wood
Collection Date : 04/06/15 15:15

ESC Sample # : L757943-01

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/12 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/12 0000	ARF	1

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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L757943-01 (RA226) - subcontracted to Environmental Health Labs

L757943-01 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

May 18, 2015

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

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-12-0415-BG
Collected By : Ron Wood
Collection Date : 04/06/15 16:30

ESC Sample # : L757943-02

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/12 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/12 0000	ARF	1

BDL - Below Detection Limit

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L757943-02 (RA226) - subcontracted to Environmental Health Labs

L757943-02 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

May 18, 2015

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

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-25-0415-BG
Collected By : Ron Wood
Collection Date : 04/06/15 18:00

ESC Sample # : L757943-03

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/12 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/12 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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L757943-03 (RA228) - subcontracted to Environmental Health Labs

L757943-03 (RA226) - subcontracted to Environmental Health Labs



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May 18, 2015

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

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-136-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 08:50

ESC Sample # : L757943-04

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/12 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/12 0000	ARF	1

BDL - Below Detection Limit

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L757943-04 (RA228) - subcontracted to Environmental Health Labs

L757943-04 (RA226) - subcontracted to Environmental Health Labs



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May 18, 2015

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ARCADIS US - TX
2929 Briarpark Dr., Suite 300
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Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 10:30

ESC Sample # : L757943-05

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/12 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/12 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

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L757943-05 (RA228) - subcontracted to Environmental Health Labs



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2929 Briarpark Dr., Suite 300
Houston, TX 77042

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 12:00

ESC Sample # : L757943-06

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/12 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/12 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

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May 18, 2015

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

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 13:55

ESC Sample # : L757943-07

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/12 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/12 0000	ARF	1

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L757943-07 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

May 18, 2015

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

Date Received : April 08, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : DUP-10-0415-BG
Collected By : Ron Wood
Collection Date : 04/06/15 00:00

ESC Sample # : L757943-08

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/12 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/12 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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L757943-08 (RA226) - subcontracted to Environmental Health Labs

L757943-08 (RA228) - subcontracted to Environmental Health Labs



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

Report Summary

Friday May 15, 2015

Report Number: L758265

Samples Received: 04/09/15

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

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Entire Report Reviewed By:

Pam Langford , ESC Representative

Laboratory Certification Numbers

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NC - ENV375/DW21704/B10041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

May 15, 2015

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

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 16:20

ESC Sample # : L758265-01

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/15 0000	ARF	1

BDL - Below Detection Limit

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L758265-01 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

May 15, 2015

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

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-26-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 17:10

ESC Sample # : L758265-02

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/15 0000	ARF	1

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L758265-02 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

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

May 15, 2015

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 09:00

ESC Sample # : L758265-03

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/15 0000	ARF	1

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L758265-03 (RA226) - subcontracted to Environmental Health Labs

L758265-03 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

May 15, 2015

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

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 10:45

ESC Sample # : L758265-04

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/15 0000	ARF	1

BDL - Below Detection Limit

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L758265-04 (RA226) - subcontracted to Environmental Health Labs

L758265-04 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

May 15, 2015

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

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 11:50

ESC Sample # : L758265-05

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/15 0000	ARF	1

BDL - Below Detection Limit

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L758265-05 (RA226) - subcontracted to Environmental Health Labs

L758265-05 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

May 15, 2015

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

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 13:10

ESC Sample # : L758265-06

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/15 0000	ARF	1

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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L758265-06 (RA226) - subcontracted to Environmental Health Labs

L758265-06 (RA228) - subcontracted to Environmental Health Labs



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REPORT OF ANALYSIS

May 15, 2015

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

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-27-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 14:10

ESC Sample # : L758265-07

Site ID : NAVAJO

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	05/04/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	05/04/15 0000	ARF	1

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: 05/15/15 18:41 Printed: 05/15/15 18:41

L758265-07 (RA228) - subcontracted to Environmental Health Labs

L758265-07 (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: L758267

Samples Received: 04/09/15

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

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Entire Report Reviewed By:

Pam Langford , ESC Representative

Laboratory Certification Numbers

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NC - ENV375/DW21704/B10041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

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

August 11, 2015

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

ESC Sample # : L758267-01

Sample ID : UG-4-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 16:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	49000	52.	1000	ug/l		9056MOD	04/14/15	1
Fluoride	520	9.9	100	ug/l		9056MOD	04/14/15	1
Sulfate	2900000	7700	500000	ug/l		9056MOD	04/14/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/17/15	1
Nitrate-Nitrite	390	20.	100	ug/l	J5	353.2	04/16/15	1
Dissolved Solids	4400000	2800	10000	ug/l		2540 C-	04/14/15	1
Arsenic	1.2	0.25	2.0	ug/l	J	6020	04/13/15	1
Barium	26.	0.36	5.0	ug/l		6020	04/13/15	1
Boron, Dissolved	1100	75.	1000	ug/l	V	6020	04/17/15	50
Chromium	1.0	0.54	2.0	ug/l	J	6020	04/13/15	1
Iron	280	15.	100	ug/l		6020	04/13/15	1
Lead	0.32	0.24	2.0	ug/l	J	6020	04/13/15	1
Manganese	28.	0.25	5.0	ug/l		6020	04/13/15	1
Nickel	2.0	0.35	2.0	ug/l		6020	04/13/15	1
Selenium	6.1	0.38	2.0	ug/l		6020	04/13/15	1
Vanadium	5.8	0.18	5.0	ug/l		6020	04/13/15	1
Aluminum, Dissolved	56.	2.0	100	ug/l	J	6020	04/15/15	1
Arsenic, Dissolved	1.1	0.25	2.0	ug/l	J	6020	04/15/15	1
Barium, Dissolved	22.	0.36	5.0	ug/l		6020	04/15/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/15/15	1
Calcium, Dissolved	560000	46.	1000	ug/l	V	6020	04/15/15	1
Chromium, Dissolved	0.87	0.54	2.0	ug/l	J	6020	04/15/15	1
Copper, Dissolved	1.4	0.52	5.0	ug/l	J	6020	04/15/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	04/15/15	1
Iron, Dissolved	42.	15.	100	ug/l	J	6020	04/15/15	1
Lead, Dissolved	0.30	0.24	2.0	ug/l	J	6020	04/15/15	1
Manganese, Dissolved	22.	0.25	5.0	ug/l		6020	04/15/15	1
Molybdenum, Dissolved	4.4	0.14	5.0	ug/l	J	6020	04/15/15	1
Nickel, Dissolved	2.0	0.35	2.0	ug/l		6020	04/15/15	1
Potassium, Dissolved	2400	37.	1000	ug/l		6020	04/15/15	1
Selenium, Dissolved	5.9	0.38	2.0	ug/l		6020	04/15/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/15/15	1
Sodium, Dissolved	250000	110	1000	ug/l	01V	6020	04/15/15	1
Uranium, Dissolved	36.	0.33	10.	ug/l		6020	04/15/15	1
Vanadium, Dissolved	5.9	0.18	5.0	ug/l		6020	04/15/15	1
Zinc, Dissolved	8.4	2.6	25.	ug/l	J	6020	04/15/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/13/15	1

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

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

August 11, 2015

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

ESC Sample # : L758267-01

Sample ID : UG-4-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 16:20

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/14/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.8			% Rec.		8015D/G	04/14/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/13/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/13/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/13/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/13/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/13/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/13/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/13/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/13/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/13/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/13/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/13/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/13/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/13/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/13/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/13/15	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	04/13/15	1
Dibromofluoromethane	109.			% Rec.		8260B	04/13/15	1
4-Bromofluorobenzene	98.5			% Rec.		8260B	04/13/15	1
TPH (GC/FID) High Fraction	55.	25.	100	ug/l	J	3511/80	04/13/15	1
Surrogate recovery(%) o-Terphenyl	100.			% Rec.		3511/80	04/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/11/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/11/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/11/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/11/15	1
Surrogate Recovery								
2-Fluorophenol	43.0			% Rec.		8270C	04/11/15	1
Phenol-d5	30.7			% Rec.		8270C	04/11/15	1
Nitrobenzene-d5	51.6			% Rec.		8270C	04/11/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 16:20

ESC Sample # : L758267-01

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	65.1			% Rec.		8270C	04/11/15	1
2,4,6-Tribromophenol	61.2			% Rec.		8270C	04/11/15	1
p-Terphenyl-d14	54.7			% Rec.		8270C	04/11/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L758267-02

Sample ID : EB-26-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 17:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	240	52.	1000	ug/l	J	9056MOD	04/14/15	1
Fluoride	32.	9.9	100	ug/l	J	9056MOD	04/14/15	1
Sulfate	2900	77.	5000	ug/l	J	9056MOD	04/14/15	1
Cyanide	U	1.8	5.0	ug/l		9012B	04/17/15	1
Nitrate-Nitrite	190	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	U	2800	10000	ug/l		2540 C-	04/14/15	1
Arsenic	U	0.25	2.0	ug/l		6020	04/13/15	1
Barium	U	0.36	5.0	ug/l		6020	04/13/15	1
Boron, Dissolved	83.	75.	1000	ug/l	J	6020	04/17/15	50
Chromium	0.60	0.54	2.0	ug/l	J	6020	04/13/15	1
Iron	U	15.	100	ug/l		6020	04/13/15	1
Lead	U	0.24	2.0	ug/l		6020	04/13/15	1
Manganese	0.93	0.25	5.0	ug/l	J	6020	04/13/15	1
Nickel	0.54	0.35	2.0	ug/l	J	6020	04/13/15	1
Selenium	U	0.38	2.0	ug/l		6020	04/13/15	1
Vanadium	0.18	0.18	5.0	ug/l	J	6020	04/13/15	1
Aluminum, Dissolved	20.	2.0	100	ug/l	J	6020	04/15/15	1
Arsenic, Dissolved	U	0.25	2.0	ug/l		6020	04/15/15	1
Barium, Dissolved	U	0.36	5.0	ug/l		6020	04/15/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/15/15	1
Calcium, Dissolved	120	46.	1000	ug/l	J	6020	04/15/15	1
Chromium, Dissolved	1.1	0.54	2.0	ug/l	J	6020	04/15/15	1
Copper, Dissolved	2.1	0.52	5.0	ug/l	J	6020	04/15/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	04/15/15	1
Iron, Dissolved	42.	15.	100	ug/l	J	6020	04/15/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	04/15/15	1
Manganese, Dissolved	0.39	0.25	5.0	ug/l	J	6020	04/15/15	1
Molybdenum, Dissolved	U	0.14	5.0	ug/l		6020	04/15/15	1
Nickel, Dissolved	0.35	0.35	2.0	ug/l	J	6020	04/15/15	1
Potassium, Dissolved	U	37.	1000	ug/l		6020	04/15/15	1
Selenium, Dissolved	U	0.38	2.0	ug/l		6020	04/15/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/15/15	1
Sodium, Dissolved	140	110	1000	ug/l	J	6020	04/15/15	1
Uranium, Dissolved	U	0.33	10.	ug/l		6020	04/15/15	1
Vanadium, Dissolved	0.59	0.18	5.0	ug/l	J	6020	04/15/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	04/15/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/13/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

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

ESC Sample # : L758267-02

Sample ID : EB-26-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/07/15 17:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/14/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.8			% Rec.		8015D/G	04/14/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/13/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/13/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/13/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/13/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/13/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/13/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/13/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/13/15	1
Toluene	0.80	0.78	5.0	ug/l	J	8260B	04/13/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/13/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/13/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/13/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/13/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/13/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/13/15	1
Surrogate Recovery								
Toluene-d8	108.			% Rec.		8260B	04/13/15	1
Dibromofluoromethane	111.			% Rec.		8260B	04/13/15	1
4-Bromofluorobenzene	98.8			% Rec.		8260B	04/13/15	1
TPH (GC/FID) High Fraction	U	25.	100	ug/l		3511/80	04/13/15	1
Surrogate recovery(%) o-Terphenyl	101.			% Rec.		3511/80	04/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/11/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/11/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/11/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/11/15	1
Surrogate Recovery								
2-Fluorophenol	39.8			% Rec.		8270C	04/11/15	1
Phenol-d5	34.0			% Rec.		8270C	04/11/15	1
Nitrobenzene-d5	65.6			% Rec.		8270C	04/11/15	1

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-26-0415-BG
Collected By : Ron Wood
Collection Date : 04/07/15 17:10

ESC Sample # : L758267-02

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	66.8			% Rec.		8270C	04/11/15	1
2,4,6-Tribromophenol	66.5			% Rec.		8270C	04/11/15	1
p-Terphenyl-d14	60.6			% Rec.		8270C	04/11/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L758267-03

Sample ID : NP-5-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/08/15 09:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	360000	5200	100000	ug/l		9056MOD	04/14/15	100
Fluoride	2000	9.9	100	ug/l		9056MOD	04/14/15	1
Sulfate	3300000	7700	500000	ug/l		9056MOD	04/14/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/17/15	1
Nitrate-Nitrite	1700	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	6300000	2800	10000	ug/l		2540 C-	04/15/15	1
Arsenic	3.2	0.25	2.0	ug/l		6020	04/13/15	1
Barium	8.7	0.36	5.0	ug/l		6020	04/13/15	1
Boron, Dissolved	1900	75.	1000	ug/l		6020	04/17/15	50
Chromium	0.57	0.54	2.0	ug/l	J	6020	04/13/15	1
Iron	28.	15.	100	ug/l	J	6020	04/13/15	1
Lead	U	0.24	2.0	ug/l		6020	04/13/15	1
Manganese	0.63	0.25	5.0	ug/l	J	6020	04/13/15	1
Nickel	1.3	0.35	2.0	ug/l	J	6020	04/13/15	1
Selenium	16.	0.38	2.0	ug/l		6020	04/13/15	1
Vanadium	18.	0.18	5.0	ug/l		6020	04/13/15	1
Aluminum, Dissolved	16.	2.0	100	ug/l	J	6020	04/15/15	1
Arsenic, Dissolved	3.4	0.25	2.0	ug/l		6020	04/15/15	1
Barium, Dissolved	7.6	0.36	5.0	ug/l		6020	04/15/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/15/15	1
Calcium, Dissolved	520000	46.	1000	ug/l		6020	04/15/15	1
Chromium, Dissolved	0.86	0.54	2.0	ug/l	J	6020	04/15/15	1
Copper, Dissolved	1.7	0.52	5.0	ug/l	J	6020	04/15/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	04/15/15	1
Iron, Dissolved	34.	15.	100	ug/l	J	6020	04/15/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	04/15/15	1
Manganese, Dissolved	0.59	0.25	5.0	ug/l	J	6020	04/15/15	1
Molybdenum, Dissolved	36.	0.14	5.0	ug/l		6020	04/15/15	1
Nickel, Dissolved	1.6	0.35	2.0	ug/l	J	6020	04/15/15	1
Potassium, Dissolved	590	37.	1000	ug/l	J	6020	04/15/15	1
Selenium, Dissolved	18.	0.38	2.0	ug/l		6020	04/15/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/15/15	1
Sodium, Dissolved	260000	110	1000	ug/l		6020	04/15/15	1
Uranium, Dissolved	210	0.33	10.	ug/l		6020	04/15/15	1
Vanadium, Dissolved	19.	0.18	5.0	ug/l		6020	04/15/15	1
Zinc, Dissolved	U	2.6	25.	ug/l		6020	04/15/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/10/15	1

U = ND (Not Detected)

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

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

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

August 11, 2015

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

ESC Sample # : L758267-03

Sample ID : NP-5-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/08/15 09:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/14/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.0			% Rec.		8015D/G	04/14/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/13/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/13/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/13/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/13/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/13/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/13/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/13/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/13/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/13/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/13/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/13/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/13/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/13/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/13/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/13/15	1
Surrogate Recovery								
Toluene-d8	105.			% Rec.		8260B	04/13/15	1
Dibromofluoromethane	115.			% Rec.		8260B	04/13/15	1
4-Bromofluorobenzene	97.2			% Rec.		8260B	04/13/15	1
TPH (GC/FID) High Fraction	38.	25.	100	ug/l	J	3511/80	04/13/15	1
Surrogate recovery(%) o-Terphenyl	98.5			% Rec.		3511/80	04/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/11/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/11/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/11/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/11/15	1
Surrogate Recovery								
2-Fluorophenol	48.0			% Rec.		8270C	04/11/15	1
Phenol-d5	37.4			% Rec.		8270C	04/11/15	1
Nitrobenzene-d5	59.6			% Rec.		8270C	04/11/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 09:00

ESC Sample # : L758267-03

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	73.6			% Rec.		8270C	04/11/15	1
2,4,6-Tribromophenol	61.4			% Rec.		8270C	04/11/15	1
p-Terphenyl-d14	60.3			% Rec.		8270C	04/11/15	1

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

August 11, 2015

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

ESC Sample # : L758267-04

Sample ID : UG-1-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/08/15 10:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	93000	5200	100000	ug/l	J	9056MOD	04/14/15	100
Fluoride	650	9.9	100	ug/l		9056MOD	04/14/15	1
Sulfate	1500000	7700	500000	ug/l		9056MOD	04/14/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/17/15	1
Nitrate-Nitrite	13000	39.	200	ug/l		353.2	04/16/15	2
Dissolved Solids	3300000	2800	10000	ug/l		2540 C-	04/15/15	1
Arsenic	1.3	0.25	2.0	ug/l	J	6020	04/13/15	1
Barium	14.	0.36	5.0	ug/l		6020	04/13/15	1
Boron, Dissolved	580	75.	1000	ug/l	J	6020	04/17/15	50
Chromium	0.91	0.54	2.0	ug/l	J	6020	04/13/15	1
Iron	40.	15.	100	ug/l	J	6020	04/13/15	1
Lead	U	0.24	2.0	ug/l		6020	04/13/15	1
Manganese	0.50	0.25	5.0	ug/l	J	6020	04/13/15	1
Nickel	0.94	0.35	2.0	ug/l	J	6020	04/13/15	1
Selenium	10.	0.38	2.0	ug/l		6020	04/13/15	1
Vanadium	9.9	0.18	5.0	ug/l		6020	04/13/15	1
Aluminum, Dissolved	24.	2.0	100	ug/l	J	6020	04/15/15	1
Arsenic, Dissolved	1.3	0.25	2.0	ug/l	J	6020	04/15/15	1
Barium, Dissolved	12.	0.36	5.0	ug/l		6020	04/15/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/15/15	1
Calcium, Dissolved	460000	46.	1000	ug/l		6020	04/15/15	1
Chromium, Dissolved	1.6	0.54	2.0	ug/l	J	6020	04/15/15	1
Copper, Dissolved	1.5	0.52	5.0	ug/l	J	6020	04/15/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	04/15/15	1
Iron, Dissolved	52.	15.	100	ug/l	J	6020	04/15/15	1
Lead, Dissolved	U	0.24	2.0	ug/l		6020	04/15/15	1
Manganese, Dissolved	1.1	0.25	5.0	ug/l	J	6020	04/15/15	1
Molybdenum, Dissolved	5.6	0.14	5.0	ug/l		6020	04/15/15	1
Nickel, Dissolved	1.5	0.35	2.0	ug/l	J	6020	04/15/15	1
Potassium, Dissolved	1100	37.	1000	ug/l		6020	04/15/15	1
Selenium, Dissolved	11.	0.38	2.0	ug/l		6020	04/15/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/15/15	1
Sodium, Dissolved	93000	110	1000	ug/l		6020	04/15/15	1
Uranium, Dissolved	23.	0.33	10.	ug/l		6020	04/15/15	1
Vanadium, Dissolved	10.	0.18	5.0	ug/l		6020	04/15/15	1
Zinc, Dissolved	4.6	2.6	25.	ug/l	J	6020	04/15/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/10/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L758267-04

Sample ID : UG-1-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/08/15 10:45

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/14/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	99.4			% Rec.		8015D/G	04/14/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/13/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/13/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/13/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/13/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/13/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/13/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/13/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/13/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/13/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/13/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/13/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/13/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/13/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/13/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/13/15	1
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	04/13/15	1
Dibromofluoromethane	116.			% Rec.		8260B	04/13/15	1
4-Bromofluorobenzene	91.7			% Rec.		8260B	04/13/15	1
TPH (GC/FID) High Fraction	26.	25.	100	ug/l	J	3511/80	04/13/15	1
Surrogate recovery(%) o-Terphenyl	99.7			% Rec.		3511/80	04/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/11/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/11/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/11/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/11/15	1
Surrogate Recovery								
2-Fluorophenol	46.8			% Rec.		8270C	04/11/15	1
Phenol-d5	34.7			% Rec.		8270C	04/11/15	1
Nitrobenzene-d5	53.8			% Rec.		8270C	04/11/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 10:45

ESC Sample # : L758267-04

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	58.8			% Rec.		8270C	04/11/15	1
2,4,6-Tribromophenol	68.8			% Rec.		8270C	04/11/15	1
p-Terphenyl-d14	61.6			% Rec.		8270C	04/11/15	1

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

August 11, 2015

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

ESC Sample # : L758267-05

Sample ID : UG-2-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/08/15 11:50

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	73000	52.	1000	ug/l		9056MOD	04/14/15	1
Fluoride	1300	9.9	100	ug/l		9056MOD	04/14/15	1
Sulfate	970000	7700	500000	ug/l		9056MOD	04/14/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/17/15	1
Nitrate-Nitrite	4700	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	04/15/15	1
Arsenic	2.4	0.25	2.0	ug/l		6020	04/13/15	1
Barium	16.	0.36	5.0	ug/l		6020	04/13/15	1
Boron, Dissolved	320	75.	1000	ug/l	J	6020	04/17/15	50
Chromium	0.58	0.54	2.0	ug/l	J	6020	04/13/15	1
Iron	U	15.	100	ug/l		6020	04/13/15	1
Lead	U	0.24	2.0	ug/l		6020	04/13/15	1
Manganese	40.	0.25	5.0	ug/l		6020	04/13/15	1
Nickel	4.4	0.35	2.0	ug/l		6020	04/13/15	1
Selenium	3.6	0.38	2.0	ug/l		6020	04/13/15	1
Vanadium	12.	0.18	5.0	ug/l		6020	04/13/15	1
Aluminum, Dissolved	24.	2.0	100	ug/l	J	6020	04/15/15	1
Arsenic, Dissolved	2.6	0.25	2.0	ug/l		6020	04/15/15	1
Barium, Dissolved	14.	0.36	5.0	ug/l		6020	04/15/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/15/15	1
Calcium, Dissolved	330000	46.	1000	ug/l		6020	04/15/15	1
Chromium, Dissolved	1.1	0.54	2.0	ug/l	J	6020	04/15/15	1
Copper, Dissolved	1.4	0.52	5.0	ug/l	J	6020	04/15/15	1
Cobalt, Dissolved	0.34	0.26	2.0	ug/l	J	6020	04/15/15	1
Iron, Dissolved	15.	15.	100	ug/l	J	6020	04/15/15	1
Lead, Dissolved	0.46	0.24	2.0	ug/l	J	6020	04/15/15	1
Manganese, Dissolved	42.	0.25	5.0	ug/l		6020	04/15/15	1
Molybdenum, Dissolved	7.6	0.14	5.0	ug/l		6020	04/15/15	1
Nickel, Dissolved	5.0	0.35	2.0	ug/l		6020	04/15/15	1
Potassium, Dissolved	1600	37.	1000	ug/l		6020	04/15/15	1
Selenium, Dissolved	3.8	0.38	2.0	ug/l		6020	04/15/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/15/15	1
Sodium, Dissolved	88000	110	1000	ug/l		6020	04/15/15	1
Uranium, Dissolved	13.	0.33	10.	ug/l		6020	04/15/15	1
Vanadium, Dissolved	13.	0.18	5.0	ug/l		6020	04/15/15	1
Zinc, Dissolved	3.9	2.6	25.	ug/l	J	6020	04/15/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/10/15	1

U = ND (Not Detected)

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REPORT OF ANALYSIS

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

August 11, 2015

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 11:50

ESC Sample # : L758267-05

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/11/15	1
Surrogate Recovery-% a, a, a-Trifluorotoluene(FID)	94.7			% Rec.		8015D/G	04/11/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/13/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/13/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/13/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/13/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/13/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/13/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/13/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/13/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/13/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/13/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/13/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/13/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/13/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/13/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/13/15	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	04/13/15	1
Dibromofluoromethane	116.			% Rec.		8260B	04/13/15	1
4-Bromofluorobenzene	99.1			% Rec.		8260B	04/13/15	1
TPH (GC/FID) High Fraction	U	25.	100	ug/l		3511/80	04/13/15	1
Surrogate recovery(%) o-Terphenyl	99.0			% Rec.		3511/80	04/13/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/11/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/11/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/11/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/11/15	1
Surrogate Recovery								
2-Fluorophenol	38.9			% Rec.		8270C	04/11/15	1
Phenol-d5	32.7			% Rec.		8270C	04/11/15	1
Nitrobenzene-d5	44.0			% Rec.		8270C	04/11/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 11:50

ESC Sample # : L758267-05

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	60.1			% Rec.		8270C	04/11/15	1
2,4,6-Tribromophenol	55.5			% Rec.		8270C	04/11/15	1
p-Terphenyl-d14	62.5			% Rec.		8270C	04/11/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L758267-06

Sample ID : UG-3R-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/08/15 13:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	25000	52.	1000	ug/l		9056MOD	04/14/15	1
Fluoride	540	9.9	100	ug/l		9056MOD	04/14/15	1
Sulfate	1200000	7700	500000	ug/l		9056MOD	04/15/15	100
Cyanide	U	1.8	5.0	ug/l		9012B	04/17/15	1
Nitrate-Nitrite	1200	20.	100	ug/l		353.2	04/16/15	1
Dissolved Solids	2100000	2800	10000	ug/l		2540 C-	04/15/15	1
Arsenic	1.8	0.25	2.0	ug/l	J	6020	04/13/15	1
Barium	17.	0.36	5.0	ug/l		6020	04/13/15	1
Boron, Dissolved	230	75.	1000	ug/l	J	6020	04/17/15	50
Chromium	0.80	0.54	2.0	ug/l	J	6020	04/13/15	1
Iron	U	15.	100	ug/l		6020	04/13/15	1
Lead	U	0.24	2.0	ug/l		6020	04/13/15	1
Manganese	1.2	0.25	5.0	ug/l	J	6020	04/13/15	1
Nickel	0.70	0.35	2.0	ug/l	J	6020	04/13/15	1
Selenium	3.4	0.38	2.0	ug/l		6020	04/13/15	1
Vanadium	8.8	0.18	5.0	ug/l		6020	04/13/15	1
Aluminum, Dissolved	32.	2.0	100	ug/l	J	6020	04/15/15	1
Arsenic, Dissolved	1.8	0.25	2.0	ug/l	J	6020	04/15/15	1
Barium, Dissolved	18.	0.36	5.0	ug/l		6020	04/15/15	1
Cadmium, Dissolved	U	0.16	1.0	ug/l		6020	04/15/15	1
Calcium, Dissolved	370000	46.	1000	ug/l		6020	04/15/15	1
Chromium, Dissolved	1.1	0.54	2.0	ug/l	J	6020	04/15/15	1
Copper, Dissolved	1.5	0.52	5.0	ug/l	J	6020	04/15/15	1
Cobalt, Dissolved	U	0.26	2.0	ug/l		6020	04/15/15	1
Iron, Dissolved	22.	15.	100	ug/l	J	6020	04/15/15	1
Lead, Dissolved	0.31	0.24	2.0	ug/l	J	6020	04/15/15	1
Manganese, Dissolved	0.97	0.25	5.0	ug/l	J	6020	04/15/15	1
Molybdenum, Dissolved	3.6	0.14	5.0	ug/l	J	6020	04/15/15	1
Nickel, Dissolved	1.1	0.35	2.0	ug/l	J	6020	04/15/15	1
Potassium, Dissolved	1600	37.	1000	ug/l		6020	04/15/15	1
Selenium, Dissolved	3.5	0.38	2.0	ug/l		6020	04/15/15	1
Silver, Dissolved	U	0.31	2.0	ug/l		6020	04/15/15	1
Sodium, Dissolved	58000	110	1000	ug/l		6020	04/15/15	1
Uranium, Dissolved	11.	0.33	10.	ug/l		6020	04/15/15	1
Vanadium, Dissolved	9.2	0.18	5.0	ug/l		6020	04/15/15	1
Zinc, Dissolved	3.1	2.6	25.	ug/l	J	6020	04/15/15	1
Mercury	U	0.049	0.20	ug/l		7470A	04/10/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L758267-06

Sample ID : UG-3R-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/08/15 13:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	31.	100	ug/l		8015D/G	04/11/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	94.6			% Rec.		8015D/G	04/11/15	1
Volatile Organics								
Benzene	U	0.33	1.0	ug/l		8260B	04/13/15	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	04/13/15	1
Chloroform	U	0.32	5.0	ug/l		8260B	04/13/15	1
1,2-Dibromoethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethane	U	0.26	1.0	ug/l		8260B	04/13/15	1
1,2-Dichloroethane	U	0.36	1.0	ug/l		8260B	04/13/15	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	04/13/15	1
Ethylbenzene	U	0.38	1.0	ug/l		8260B	04/13/15	1
Methylene Chloride	U	1.0	5.0	ug/l		8260B	04/13/15	1
1,1,1,2-Tetrachloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
1,1,2,2-Tetrachloroethane	U	0.13	1.0	ug/l		8260B	04/13/15	1
Toluene	U	0.78	5.0	ug/l		8260B	04/13/15	1
1,1,1-Trichloroethane	U	0.32	1.0	ug/l		8260B	04/13/15	1
Tetrachloroethene	U	0.37	1.0	ug/l		8260B	04/13/15	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	04/13/15	1
Vinyl chloride	U	0.26	1.0	ug/l		8260B	04/13/15	1
o-Xylene	U	0.34	1.0	ug/l		8260B	04/13/15	1
m&p-Xylene	U	0.72	2.0	ug/l		8260B	04/13/15	1
Xylenes, Total	U	1.1	3.0	ug/l		8260B	04/13/15	1
Surrogate Recovery								
Toluene-d8	107.			% Rec.		8260B	04/13/15	1
Dibromofluoromethane	111.			% Rec.		8260B	04/13/15	1
4-Bromofluorobenzene	96.1			% Rec.		8260B	04/13/15	1
TPH (GC/FID) High Fraction	U	25.	100	ug/l		3511/80	04/14/15	1
Surrogate recovery(%) o-Terphenyl	101.			% Rec.		3511/80	04/14/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.34	1.0	ug/l		8270C	04/11/15	1
1-Methylnaphthalene	U	0.22	1.0	ug/l		8270C	04/11/15	1
2-Methylnaphthalene	U	0.31	1.0	ug/l		8270C	04/11/15	1
Naphthalene	U	0.37	1.0	ug/l		8270C	04/11/15	1
Surrogate Recovery								
2-Fluorophenol	38.2			% Rec.		8270C	04/11/15	1
Phenol-d5	30.6			% Rec.		8270C	04/11/15	1
Nitrobenzene-d5	47.1			% Rec.		8270C	04/11/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 13:10

ESC Sample # : L758267-06

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	57.1			% Rec.		8270C	04/11/15	1
2,4,6-Tribromophenol	60.6			% Rec.		8270C	04/11/15	1
p-Terphenyl-d14	62.6			% Rec.		8270C	04/11/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM

ESC Sample # : L758267-07

Sample ID : EB-27-0415-BG

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/08/15 14:10

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Chloride	0.28	0.052	1.0	mg/l	JP1	9056MOD	04/14/15	1
Fluoride	0.035	0.0099	0.10	mg/l	J	9056MOD	04/14/15	1
Sulfate	1.5	0.077	5.0	mg/l	JP1	9056MOD	04/14/15	1
Cyanide	U	0.0018	0.0050	mg/l		9012B	04/17/15	1
Nitrate-Nitrite	0.19	0.020	0.10	mg/l		353.2	04/16/15	1
Dissolved Solids	U	2.8	10.	mg/l		2540 C-	04/15/15	1
Arsenic	U	0.00025	0.0020	mg/l		6020	04/13/15	1
Barium	0.0012	0.00036	0.0050	mg/l	J	6020	04/13/15	1
Boron, Dissolved	U	0.075	1.0	mg/l		6020	04/17/15	50
Chromium	0.00067	0.00054	0.0020	mg/l	J	6020	04/13/15	1
Iron	U	0.015	0.10	mg/l		6020	04/13/15	1
Lead	U	0.00024	0.0020	mg/l		6020	04/13/15	1
Manganese	U	0.00025	0.0050	mg/l		6020	04/13/15	1
Nickel	U	0.00035	0.0020	mg/l		6020	04/13/15	1
Selenium	U	0.00038	0.0020	mg/l		6020	04/13/15	1
Vanadium	U	0.00018	0.0050	mg/l		6020	04/13/15	1
Aluminum, Dissolved	0.028	0.0020	0.10	mg/l	J	6020	04/15/15	1
Arsenic, Dissolved	U	0.00025	0.0020	mg/l		6020	04/15/15	1
Barium, Dissolved	0.00063	0.00036	0.0050	mg/l	J	6020	04/15/15	1
Cadmium, Dissolved	U	0.00016	0.0010	mg/l		6020	04/15/15	1
Calcium, Dissolved	0.20	0.046	1.0	mg/l	J	6020	04/15/15	1
Chromium, Dissolved	0.0011	0.00054	0.0020	mg/l	J	6020	04/15/15	1
Copper, Dissolved	0.0026	0.00052	0.0050	mg/l	J	6020	04/15/15	1
Cobalt, Dissolved	U	0.00026	0.0020	mg/l		6020	04/15/15	1
Iron, Dissolved	0.027	0.015	0.10	mg/l	J	6020	04/15/15	1
Lead, Dissolved	0.00055	0.00024	0.0020	mg/l	J	6020	04/15/15	1
Manganese, Dissolved	0.00058	0.00025	0.0050	mg/l	J	6020	04/15/15	1
Molybdenum, Dissolved	U	0.00014	0.0050	mg/l		6020	04/15/15	1
Nickel, Dissolved	0.00060	0.00035	0.0020	mg/l	J	6020	04/15/15	1
Potassium, Dissolved	U	0.037	1.0	mg/l		6020	04/15/15	1
Selenium, Dissolved	U	0.00038	0.0020	mg/l		6020	04/15/15	1
Silver, Dissolved	U	0.00031	0.0020	mg/l		6020	04/15/15	1
Sodium, Dissolved	0.22	0.11	1.0	mg/l	J	6020	04/15/15	1
Uranium, Dissolved	U	0.00033	0.010	mg/l		6020	04/15/15	1
Vanadium, Dissolved	0.00035	0.00018	0.0050	mg/l	J	6020	04/15/15	1
Zinc, Dissolved	0.0036	0.0026	0.025	mg/l	J	6020	04/15/15	1
Mercury	U	0.000049	0.00020	mg/l		7470A	04/10/15	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 : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-27-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 14:10

ESC Sample # : L758267-07

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
TPH (GC/FID) Low Fraction	U	0.031	0.10	mg/l		8015D/G	04/11/15	1
Surrogate Recovery-% a,a,a-Trifluorotoluene(FID)	94.7			% Rec.		8015D/G	04/11/15	1
Volatile Organics								
Benzene	U	0.00033	0.0010	mg/l		8260B	04/13/15	1
Carbon tetrachloride	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
Chloroform	U	0.00032	0.0050	mg/l		8260B	04/13/15	1
1,2-Dibromoethane	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
1,1-Dichloroethane	U	0.00026	0.0010	mg/l		8260B	04/13/15	1
1,2-Dichloroethane	U	0.00036	0.0010	mg/l		8260B	04/13/15	1
1,1-Dichloroethene	U	0.00040	0.0010	mg/l		8260B	04/13/15	1
Ethylbenzene	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
Methylene Chloride	U	0.0010	0.0050	mg/l		8260B	04/13/15	1
1,1,1,2-Tetrachloroethane	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
1,1,2,2-Tetrachloroethane	U	0.00013	0.0010	mg/l		8260B	04/13/15	1
Toluene	U	0.00078	0.0050	mg/l		8260B	04/13/15	1
1,1,1-Trichloroethane	U	0.00032	0.0010	mg/l		8260B	04/13/15	1
Tetrachloroethene	U	0.00037	0.0010	mg/l		8260B	04/13/15	1
1,1,2-Trichloroethane	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
Vinyl chloride	U	0.00026	0.0010	mg/l		8260B	04/13/15	1
o-Xylene	U	0.00034	0.0010	mg/l		8260B	04/13/15	1
m&p-Xylene	U	0.00072	0.0020	mg/l		8260B	04/13/15	1
Xylenes, Total	U	0.0011	0.0030	mg/l		8260B	04/13/15	1
Surrogate Recovery								
Toluene-d8	106.			% Rec.		8260B	04/13/15	1
Dibromofluoromethane	111.			% Rec.		8260B	04/13/15	1
4-Bromofluorobenzene	97.4			% Rec.		8260B	04/13/15	1
TPH (GC/FID) High Fraction	U	0.025	0.10	mg/l		3511/80	04/14/15	1
Surrogate recovery(%) o-Terphenyl	101.			% Rec.		3511/80	04/14/15	1
Base/Neutral Extractables								
Benzo(a)pyrene	U	0.00034	0.0010	mg/l		8270C	04/11/15	1
1-Methylnaphthalene	U	0.00022	0.0010	mg/l		8270C	04/11/15	1
2-Methylnaphthalene	U	0.00031	0.0010	mg/l		8270C	04/11/15	1
Naphthalene	U	0.00037	0.0010	mg/l		8270C	04/11/15	1
Surrogate Recovery								
2-Fluorophenol	41.8			% Rec.		8270C	04/11/15	1
Phenol-d5	32.6			% Rec.		8270C	04/11/15	1
Nitrobenzene-d5	53.4			% Rec.		8270C	04/11/15	1

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Houston, TX 77042

August 11, 2015

Date Received : April 09, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-27-0415-BG
Collected By : Ron Wood
Collection Date : 04/08/15 14:10

ESC Sample # : L758267-07

Site ID : NAVAJO

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
2-Fluorobiphenyl	70.1			% Rec.		8270C	04/11/15	1
2,4,6-Tribromophenol	71.1			% Rec.		8270C	04/11/15	1
p-Terphenyl-d14	59.3			% Rec.		8270C	04/11/15	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

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

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 08/11/15 10:39 Printed: 08/11/15 10:40



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 11, 2015

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

ESC Sample # : L758267-08

Sample ID : TRIP BLANK

Site ID : NAVAJO

Collected By : Ron Wood
Collection Date : 04/08/15 00:00

Project # : TX000836.0008.00004

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Volatile Organics								
Benzene	U	0.00033	0.0010	mg/l		8260B	04/13/15	1
Carbon tetrachloride	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
Chloroform	U	0.00032	0.0050	mg/l		8260B	04/13/15	1
1,2-Dibromoethane	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
1,1-Dichloroethane	U	0.00026	0.0010	mg/l		8260B	04/13/15	1
1,2-Dichloroethane	U	0.00036	0.0010	mg/l		8260B	04/13/15	1
1,1-Dichloroethene	U	0.00040	0.0010	mg/l		8260B	04/13/15	1
Ethylbenzene	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
Methylene Chloride	U	0.0010	0.0050	mg/l		8260B	04/13/15	1
1,1,1,2-Tetrachloroethane	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
1,1,2,2-Tetrachloroethane	U	0.00013	0.0010	mg/l		8260B	04/13/15	1
Toluene	U	0.00078	0.0050	mg/l		8260B	04/13/15	1
1,1,1-Trichloroethane	U	0.00032	0.0010	mg/l		8260B	04/13/15	1
Tetrachloroethene	U	0.00037	0.0010	mg/l		8260B	04/13/15	1
1,1,2-Trichloroethane	U	0.00038	0.0010	mg/l		8260B	04/13/15	1
Vinyl chloride	U	0.00026	0.0010	mg/l		8260B	04/13/15	1
o-Xylene	U	0.00034	0.0010	mg/l		8260B	04/13/15	1
m&p-Xylene	U	0.00072	0.0020	mg/l		8260B	04/13/15	1
Xylenes, Total	U	0.0011	0.0030	mg/l		8260B	04/13/15	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	04/13/15	1
Dibromofluoromethane	107.			% Rec.		8260B	04/13/15	1
4-Bromofluorobenzene	98.4			% Rec.		8260B	04/13/15	1

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD = TRRP SDL

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

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 08/11/15 10:39 Printed: 08/11/15 10:40

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L758267-01	WG781350	SAMP	Arsenic	R3030304	J
	WG781454	SAMP	Boron, Dissolved	R3031519	V
	WG781350	SAMP	Chromium	R3030304	J
	WG781350	SAMP	Lead	R3030304	J
	WG781978	SAMP	Nitrate-Nitrite	R3031266	J5
	WG781289	SAMP	TPH (GC/FID) High Fraction	R3030537	J
	WG781454	SAMP	Aluminum, Dissolved	R3030889	J
	WG781454	SAMP	Arsenic, Dissolved	R3030889	J
	WG781454	SAMP	Calcium, Dissolved	R3030889	V
	WG781454	SAMP	Chromium, Dissolved	R3030889	J
	WG781454	SAMP	Copper, Dissolved	R3030889	J
	WG781454	SAMP	Iron, Dissolved	R3030889	J
	WG781454	SAMP	Lead, Dissolved	R3030889	J
	WG781454	SAMP	Molybdenum, Dissolved	R3030889	J
	WG781454	SAMP	Sodium, Dissolved	R3030889	01V
	WG781454	SAMP	Zinc, Dissolved	R3030889	J
L758267-02	WG781906	SAMP	Chloride	R3031099	J
	WG781906	SAMP	Fluoride	R3031099	J
	WG781906	SAMP	Sulfate	R3031099	J
	WG781454	SAMP	Boron, Dissolved	R3031519	J
	WG781350	SAMP	Chromium	R3030304	J
	WG781350	SAMP	Manganese	R3030304	J
	WG781350	SAMP	Nickel	R3030304	J
	WG781350	SAMP	Vanadium	R3030304	J
	WG781454	SAMP	Aluminum, Dissolved	R3030889	J
	WG781454	SAMP	Calcium, Dissolved	R3030889	J
	WG781454	SAMP	Chromium, Dissolved	R3030889	J
	WG781454	SAMP	Copper, Dissolved	R3030889	J
	WG781454	SAMP	Iron, Dissolved	R3030889	J
	WG781454	SAMP	Manganese, Dissolved	R3030889	J
	WG781454	SAMP	Nickel, Dissolved	R3030889	J
	WG781454	SAMP	Sodium, Dissolved	R3030889	J
	WG781454	SAMP	Vanadium, Dissolved	R3030889	J
	WG781304	SAMP	Toluene	R3030499	J
L758267-03	WG781350	SAMP	Chromium	R3030304	J
	WG781350	SAMP	Iron	R3030304	J
	WG781350	SAMP	Manganese	R3030304	J
	WG781350	SAMP	Nickel	R3030304	J
	WG781289	SAMP	TPH (GC/FID) High Fraction	R3030537	J
	WG781454	SAMP	Aluminum, Dissolved	R3030889	J
	WG781454	SAMP	Chromium, Dissolved	R3030889	J
	WG781454	SAMP	Copper, Dissolved	R3030889	J
	WG781454	SAMP	Iron, Dissolved	R3030889	J
	WG781454	SAMP	Manganese, Dissolved	R3030889	J
	WG781454	SAMP	Nickel, Dissolved	R3030889	J
	WG781454	SAMP	Potassium, Dissolved	R3030889	J
L758267-04	WG781906	SAMP	Chloride	R3031099	J
	WG781350	SAMP	Arsenic	R3030304	J
	WG781454	SAMP	Boron, Dissolved	R3031519	J
	WG781350	SAMP	Chromium	R3030304	J
	WG781350	SAMP	Iron	R3030304	J
	WG781350	SAMP	Manganese	R3030304	J
	WG781350	SAMP	Nickel	R3030304	J
	WG781289	SAMP	TPH (GC/FID) High Fraction	R3030537	J
	WG781454	SAMP	Aluminum, Dissolved	R3030889	J
	WG781454	SAMP	Arsenic, Dissolved	R3030889	J
	WG781454	SAMP	Chromium, Dissolved	R3030889	J
	WG781454	SAMP	Copper, Dissolved	R3030889	J
	WG781454	SAMP	Iron, Dissolved	R3030889	J
	WG781454	SAMP	Manganese, Dissolved	R3030889	J
L758267-05	WG781454	SAMP	Nickel, Dissolved	R3030889	J
	WG781454	SAMP	Zinc, Dissolved	R3030889	J
	WG781454	SAMP	Boron, Dissolved	R3031519	J
	WG781350	SAMP	Chromium	R3030304	J
	WG781454	SAMP	Aluminum, Dissolved	R3030889	J
	WG781454	SAMP	Chromium, Dissolved	R3030889	J
	WG781454	SAMP	Copper, Dissolved	R3030889	J
	WG781454	SAMP	Cobalt, Dissolved	R3030889	J
	WG781454	SAMP	Iron, Dissolved	R3030889	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L758267-06	WG781454	SAMP	Lead, Dissolved	R3030889	J
	WG781454	SAMP	Zinc, Dissolved	R3030889	J
	WG781350	SAMP	Arsenic	R3030304	J
	WG781454	SAMP	Boron, Dissolved	R3031519	J
	WG781350	SAMP	Chromium	R3030304	J
	WG781350	SAMP	Manganese	R3030304	J
	WG781350	SAMP	Nickel	R3030304	J
	WG781454	SAMP	Aluminum, Dissolved	R3030889	J
	WG781454	SAMP	Arsenic, Dissolved	R3030889	J
	WG781454	SAMP	Chromium, Dissolved	R3030889	J
	WG781454	SAMP	Copper, Dissolved	R3030889	J
	WG781454	SAMP	Iron, Dissolved	R3030889	J
	WG781454	SAMP	Lead, Dissolved	R3030889	J
	WG781454	SAMP	Manganese, Dissolved	R3030889	J
	WG781454	SAMP	Molybdenum, Dissolved	R3030889	J
L758267-07	WG781454	SAMP	Nickel, Dissolved	R3030889	J
	WG781454	SAMP	Zinc, Dissolved	R3030889	J
	WG781906	SAMP	Chloride	R3031099	JP1
	WG781906	SAMP	Fluoride	R3031099	J
	WG781906	SAMP	Sulfate	R3031099	JP1
	WG781350	SAMP	Barium	R3030304	J
	WG781350	SAMP	Chromium	R3030304	J
	WG781454	SAMP	Aluminum, Dissolved	R3030889	J
	WG781454	SAMP	Barium, Dissolved	R3030889	J
	WG781454	SAMP	Calcium, Dissolved	R3030889	J
	WG781454	SAMP	Chromium, Dissolved	R3030889	J
	WG781454	SAMP	Copper, Dissolved	R3030889	J
	WG781454	SAMP	Iron, Dissolved	R3030889	J
	WG781454	SAMP	Lead, Dissolved	R3030889	J
	WG781454	SAMP	Manganese, Dissolved	R3030889	J
	WG781454	SAMP	Nickel, Dissolved	R3030889	J
	WG781454	SAMP	Sodium, Dissolved	R3030889	J
	WG781454	SAMP	Vanadium, Dissolved	R3030889	J
	WG781454	SAMP	Zinc, Dissolved	R3030889	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high
01	(ESC) The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
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

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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STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

*NELAP/TNI Recognized Accreditation Bodies

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:

339733

Attn: Janice Cozby
 12065 Lebanon Road
 Mount Juliet, TN 37122

Priority:

Standard Written

Status:

Final

PWS ID:

Not Supplied

Copies
 to: Autumn Fetty

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3237918	L763534-01	7500-Ra B	05/04/15 15:10	Client	05/08/15 09:00
3237918	L763534-01	7500-Ra D	05/04/15 15:10	Client	05/08/15 09:00
3237919	L763534-02	7500-Ra B	05/04/15 16:20	Client	05/08/15 09:00
3237919	L763534-02	7500-Ra D	05/04/15 16:20	Client	05/08/15 09:00
3237920	L763534-03	7500-Ra B	05/04/15 17:20	Client	05/08/15 09:00
3237920	L763534-03	7500-Ra D	05/04/15 17:20	Client	05/08/15 09:00
3237921	L763534-04	7500-Ra B	05/05/15 10:40	Client	05/08/15 09:00
3237921	L763534-04	7500-Ra D	05/05/15 10:40	Client	05/08/15 09:00
3237922	L763534-05	7500-Ra B	05/05/15 11:40	Client	05/08/15 09:00
3237922	L763534-05	7500-Ra D	05/05/15 11:40	Client	05/08/15 09:00
3237923	L763534-06	7500-Ra B	05/05/15 13:00	Client	05/08/15 09:00
3237923	L763534-06	7500-Ra D	05/05/15 13:00	Client	05/08/15 09:00
3237924	L763534-07	7500-Ra B	05/05/15 13:55	Client	05/08/15 09:00
3237924	L763534-07	7500-Ra D	05/05/15 13:55	Client	05/08/15 09:00
3237925	L763534-08	7500-Ra B	05/05/15 16:05	Client	05/08/15 09:00
3237925	L763534-08	7500-Ra D	05/05/15 16:05	Client	05/08/15 09:00
3237926	L763534-09	7500-Ra B	05/05/15 16:50	Client	05/08/15 09:00
3237926	L763534-09	7500-Ra D	05/05/15 16:50	Client	05/08/15 09:00
3237927	L763534-10	7500-Ra B	05/06/15 10:00	Client	05/08/15 09:00
3237927	L763534-10	7500-Ra D	05/06/15 10:00	Client	05/08/15 09:00
3237928	L763534-11	7500-Ra B	05/06/15 11:40	Client	05/08/15 09:00
3237928	L763534-11	7500-Ra D	05/06/15 11:40	Client	05/08/15 09:00
3237929	L763534-12	7500-Ra B	05/06/15 13:30	Client	05/08/15 09:00
3237929	L763534-12	7500-Ra D	05/06/15 13:30	Client	05/08/15 09:00
3237930	L763534-13	7500-Ra B	05/06/15 14:50	Client	05/08/15 09:00
3237930	L763534-13	7500-Ra D	05/06/15 14:50	Client	05/08/15 09:00
3237931	L763534-14	7500-Ra B	05/06/15 10:00	Client	05/08/15 09:00
3237931	L763534-14	7500-Ra D	05/06/15 10:00	Client	05/08/15 09:00
3237932	L763534-15	7500-Ra B	05/06/15 10:00	Client	05/08/15 09:00
3237932	L763534-15	7500-Ra D	05/06/15 10:00	Client	05/08/15 09:00

Report Summary

Note: Sample containers were provided by the client.

Note: The radium-226 result for site L763534-12 is potentially low biased due to a high biased barium carrier 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.



Authorized Signature

Title

06/08/2015

Date

Client Name: Environmental Science

Report #: 339733

Sampling Point: L763534-01

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	---	0.26	1.0	0.57 ± 0.33	pCi/L	05/18/15 08:36	05/21/15 10:26	3237918
15262-20-1	Radium-228	7500-Ra D	---	0.32	1.0	0.91 ± 0.36	pCi/L	05/18/15 12:29	05/27/15 18:49	3237918
---	Combined Radium	calc.	5 *	0.32	1.0	1.48 ± 0.49	pCi/L	05/18/15 08:36	05/27/15 18:49	3237918

** 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: L763534-02

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	---	0.29	1.0	0.63 ± 0.36	pCi/L	05/18/15 08:36	05/21/15 11:31	3237919
15262-20-1	Radium-228	7500-Ra D	---	0.32	1.0	0.99 ± 0.36	pCi/L	05/18/15 12:30	06/01/15 16:37	3237919
---	Combined Radium	calc.	5 *	0.32	1.0	1.62 ± 0.51	pCi/L	05/18/15 08:36	06/01/15 16:37	3237919

** 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: L763534-03

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	---	0.35	1.0	0.36 ± 0.35	pCi/L	05/18/15 08:36	05/21/15 11:31	3237920
15262-20-1	Radium-228	7500-Ra D	---	0.30	1.0	0.84 ± 0.34	pCi/L	05/18/15 12:30	06/01/15 16:37	3237920
---	Combined Radium	calc.	5 *	0.35	1.0	1.20 ± 0.49	pCi/L	05/18/15 08:36	06/01/15 16:37	3237920

** 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: L763534-04

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	---	0.26	1.0	0.47 ± 0.32	pCi/L	05/18/15 08:36	05/21/15 11:31	3237921
15262-20-1	Radium-228	7500-Ra D	---	0.52	1.0	0.93 ± 0.54	pCi/L	05/18/15 12:30	06/01/15 16:37	3237921
---	Combined Radium	calc.	5 *	0.52	1.0	1.40 ± 0.63	pCi/L	05/18/15 08:36	06/01/15 16:37	3237921

** 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: L763534-05

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	---	0.22	1.0	0.32 ± 0.25	pCi/L	05/18/15 08:36	05/21/15 11:31	3237922
15262-20-1	Radium-228	7500-Ra D	---	0.54	1.0	0.40 ± 0.54	pCi/L	05/18/15 12:30	06/01/15 16:37	3237922
---	Combined Radium	calc.	5 *	0.54	1.0	0.72 ± 0.60	pCi/L	05/18/15 08:36	06/01/15 16:37	3237922

** 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: L763534-06

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	---	0.21	1.0	0.77 ± 0.35	pCi/L	05/18/15 08:36	05/21/15 11:31	3237923
15262-20-1	Radium-228	7500-Ra D	---	0.5	1.0	1.0 ± 0.5	pCi/L	05/18/15 12:30	06/01/15 16:37	3237923
---	Combined Radium	calc.	5 *	0.5	1.0	1.77 ± 0.64	pCi/L	05/18/15 08:36	06/01/15 16:37	3237923

** 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: L763534-07

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	---	0.26	1.0	0.33 ± 0.52	pCi/L	05/18/15 08:36	05/26/15 11:00	3237924
15262-20-1	Radium-228	7500-Ra D	---	0.43	1.0	0.81 ± 0.45	pCi/L	05/18/15 12:30	06/01/15 16:37	3237924
---	Combined Radium	calc.	5 *	0.43	1.0	1.14 ± 0.69	pCi/L	05/18/15 08:36	06/01/15 16:37	3237924

** 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: L763534-08

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	---	0.25	1.0	0.52 ± 0.49	pCi/L	05/18/15 08:36	05/26/15 11:00	3237925
15262-20-1	Radium-228	7500-Ra D	---	0.47	1.0	0.30 ± 0.46	pCi/L	05/18/15 12:30	06/01/15 16:37	3237925
---	Combined Radium	calc.	5 *	0.47	1.0	0.82 ± 0.67	pCi/L	05/18/15 08:36	06/01/15 16:37	3237925

** 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: L763534-09

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	---	0.28	1.0	0.52 ± 0.34	pCi/L	05/15/15 14:25	05/20/15 10:22	3237926
15262-20-1	Radium-228	7500-Ra D	---	0.44	1.0	0.35 ± 0.43	pCi/L	05/18/15 12:30	06/01/15 16:37	3237926
---	Combined Radium	calc.	5 *	0.44	1.0	0.87 ± 0.55	pCi/L	05/15/15 14:25	06/01/15 16:37	3237926

** 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: L763534-10

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	---	0.24	1.0	0.58 ± 0.32	pCi/L	05/15/15 14:25	05/20/15 10:22	3237927
15262-20-1	Radium-228	7500-Ra D	---	0.35	1.0	0.57 ± 0.36	pCi/L	05/18/15 12:30	06/01/15 16:37	3237927
---	Combined Radium	calc.	5 *	0.35	1.0	1.15 ± 0.48	pCi/L	05/15/15 14:25	06/01/15 16:37	3237927

** 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: L763534-11

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	---	0.2	1.0	1.9 ± 0.7	pCi/L	05/15/15 14:25	05/26/15 09:55	3237928
15262-20-1	Radium-228	7500-Ra D	---	0.46	1.0	0.42 ± 0.46	pCi/L	05/20/15 11:31	06/03/15 11:17	3237928
---	Combined Radium	calc.	5 *	0.46	1.0	2.32 ± 0.83	pCi/L	05/15/15 14:25	06/03/15 11:17	3237928

** 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: L763534-12

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	---	0.30	1.0	0.29 ± 0.30	pCi/L	05/15/15 14:25	05/20/15 13:30	3237929
15262-20-1	Radium-228	7500-Ra D	---	0.33	1.0	0.53 ± 0.34	pCi/L	05/18/15 12:29	05/22/15 20:31	3237929
---	Combined Radium	calc.	5 *	0.33	1.0	0.82 ± 0.45	pCi/L	05/15/15 14:25	05/22/15 20:31	3237929

** 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: L763534-13

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	---	0.24	1.0	0.90 ± 0.40	pCi/L	05/15/15 14:25	05/20/15 13:30	3237930
15262-20-1	Radium-228	7500-Ra D	---	0.4	1.0	1.9 ± 0.5	pCi/L	05/18/15 12:29	05/22/15 20:31	3237930
---	Combined Radium	calc.	5 *	0.4	1.0	2.80 ± 0.65	pCi/L	05/15/15 14:25	05/22/15 20:31	3237930

** 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: L763534-14

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	---	0.41	1.0	0.20 ± 0.37	pCi/L	05/15/15 14:25	05/20/15 13:30	3237931
15262-20-1	Radium-228	7500-Ra D	---	0.5	1.0	1.1 ± 0.5	pCi/L	05/18/15 12:29	05/22/15 20:31	3237931
---	Combined Radium	calc.	5 *	0.5	1.0	1.30 ± 0.65	pCi/L	05/15/15 14:25	05/22/15 20:31	3237931

** 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: L763534-15

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	---	0.38	1.0	0.25 ± 0.35	pCi/L	05/18/15 10:47	05/21/15 09:21	3237932
15262-20-1	Radium-228	7500-Ra D	---	0.70	1.00	-0.03 ± 0.67	pCi/L	05/18/15 12:29	05/22/15 20:31	3237932
---	Combined Radium	calc.	5 *	0.70	1.0	0.22 ± 0.76	pCi/L	05/18/15 10:47	05/22/15 20:31	3237932

** 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

276743

Sub-Contract Lab : ENVHEALT
City / State : South Bend, IN
Results Needed by : 06/07/2015
ESC Purchase Order # : S21902

Client Provided Sample Container

339733

WORKGROUP **WG787331**
Date Created : 05/07/2015

Send Reports To : Janice Cozby jcozby@esclabsciences.com

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L763534-01	DW	05/04/2015 1510	Radium 226	RA226	7500Ra B-2001	NM Client
S18448040 S18448039						
L763534-01	DW	05/04/2015 1510	Radium 228	RA228	7500Ra D-2001	NM Client
S18448040 S18448039						
L763534-02	DW	05/04/2015 1620	Radium 226	RA226	7500Ra B-2001	NM Client
S18448043 S18448044						
L763534-02	DW	05/04/2015 1620	Radium 228	RA228	7500Ra D-2001	NM Client
S18448044 S18448043						
L763534-03	DW	05/04/2015 1720	Radium 226	RA226	7500Ra B-2001	NM Client
S18448048 S18448047						
L763534-03	DW	05/04/2015 1720	Radium 228	RA228	7500Ra D-2001	NM Client
S18448048 S18448047						
L763534-04	DW	05/05/2015 1040	Radium 226	RA226	7500Ra B-2001	NM Client
S18448052 S18448051						
L763534-04	DW	05/05/2015 1040	Radium 228	RA228	7500Ra D-2001	NM Client
S18448051 S18448052						
L763534-05	DW	05/05/2015 1140	Radium 226	RA226	7500Ra B-2001	NM Client
S18448056 S18448055						

• pH < 2 on all bottles
• 2 Liters per sites rec'd. dm 0.2 to 0.4%
wet ice

Relinquished by agb Date: 050715
Received by: amastis Date: 5-8-15 0900
Relinquished by _____ Date: _____
Received by: _____ Date: _____

Page : 1

Sub-Contract Lab : ENVHEALT
City / State : South Bend, IN
Results Needed by : 06/07/2015
ESC Purchase Order # : S21902

Client Provided Sample Container

WORKGROUP **WG787331**
Date Created : 05/07/2015

Send Reports To : Janice Cozby jcozby@esclabsciences.com

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L763534-05	DW	05/05/2015 1140	Radium 228	RA228	7500Ra D-2001	NM Client
S18448056 S18448055	3237922					
L763534-06	DW	05/05/2015 1300	Radium 226	RA226	7500Ra B-2001	NM Client
S18448059 S18448060	3237923					
L763534-06	DW	05/05/2015 1300	Radium 228	RA228	7500Ra D-2001	NM Client
S18448060 S18448059						
L763534-07	DW	05/05/2015 1355	Radium 226	RA226	7500Ra B-2001	NM Client
S18448063 S18448064	3237924					
L763534-07	DW	05/05/2015 1355	Radium 228	RA228	7500Ra D-2001	NM Client
S18448064 S18448063						
L763534-08	DW	05/05/2015 1605	Radium 226	RA226	7500Ra B-2001	NM Client
S18448067 S18448068	3237925					
L763534-08	DW	05/05/2015 1605	Radium 228	RA228	7500Ra D-2001	NM Client
S18448068 S18448067						
L763534-09	DW	05/05/2015 1650	Radium 226	RA226	7500Ra B-2001	NM Client
S18448071 S18448072	3237926					
L763534-09	DW	05/05/2015 1650	Radium 228	RA228	7500Ra D-2001	NM Client
S18448072 S18448071						
L763534-10	DW	05/06/2015 1000	Radium 226	RA226	7500Ra B-2001	NM Client
S18448076 S18448075	3237927					

Relinquished by _____ Date: _____
Received by : _____ Date: _____
Relinquished by _____ Date: _____
Received by : _____ Date: _____

Page : 2

Sub-Contract Lab : ENVHEALT
 City / State : South Bend, IN
 Results Needed by : 06/07/2015
 ESC Purchase Order # : S21902

Client Provided Sample Container

WORKGROUP **WG787331**
 Date Created : 05/07/2015

Send Reports To : Janice Cozby jcozby@esclabsciences.com

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L763534-10	DW	05/06/2015 1000	Radium 228	RA228	7500Ra D-2001	NM Client
S18448075 S18448076						
L763534-11	DW	05/06/2015 1140	Radium 226	RA226	7500Ra B-2001	NM Client
S18448080 S18448079						
L763534-11	DW	05/06/2015 1140	Radium 228	RA228	7500Ra D-2001	NM Client
S18448079 S18448080						
L763534-12	DW	05/06/2015 1330	Radium 226	RA226	7500Ra B-2001	NM Client
S18448083 S18448084						
L763534-12	DW	05/06/2015 1330	Radium 228	RA228	7500Ra D-2001	NM Client
S18448084 S18448083						
L763534-13	DW	05/06/2015 1450	Radium 226	RA226	7500Ra B-2001	NM Client
S18448087 S18448088						
L763534-13	DW	05/06/2015 1450	Radium 228	RA228	7500Ra D-2001	NM Client
S18448087 S18448088						
L763534-14	DW	05/06/2015 1000	Radium 226	RA226	7500Ra B-2001	NM Client
S18448092 S18448091						
L763534-14	DW	05/06/2015 1000	Radium 228	RA228	7500Ra D-2001	NM Client
S18448091 S18448092						
L763534-15	DW	05/06/2015 1500	Radium 226	RA226	7500Ra B-2001	NM Client
S18448095 S18448096						

Relinquished by _____ Date: _____
 Received by : _____ Date: _____
 Relinquished by _____ Date: _____
 Received by : _____ Date: _____

Page : 3

Sub-Contract Lab : __ENVHEALT__

City / State : _____ South Bend, IN _____

Results Needed by : __06/07/2015__

ESC Purchase Order # : __S21902__

Send Reports To : __Janice Cozby jcozby@esclabsciences.com__

Client Provided Sample Container

WORKGROUP WG787331

Date Created : 05/07/2015

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L763534-15	DW	05/06/2015 1500	Radium 228	RA228	7500Ra D-2001	NM Client

S18448096

S18448095

Relinquished by _____ Date: _____

Received by : _____ Date: _____

Relinquished by _____ Date: _____

Received by : _____ Date: _____

Page : 4



ARCADIS US - TX

2929 Briarpark Dr., Suite 300
Houston, TX 77042

Attn: Accounts Payable

630 Plaza Drive, Suite 600
Highlands Ranch, CO 80129

Report to:

Pam Krueger

Email To:

pam.krueger@arcadis-us.com; maisha.turner@arcadis-us.com

Project

Description: Navajo Refining Company - Artesia, NM

Client Project #

TX000836.0008.00004

Phone: 713-953-4800

Fax:

Collected by (print)

Pam Krueger

Collected by (signature)

Pam Krueger

Immediately

Packed on Ice N ☒ Y ☐

Sample ID

Matrix *

Comp/Grab

Depth

Date

Time

Chrs

MW-13-0515-B6

DW

6

—

5/4/15

1510

42

MW-12-0515-B6

DW

6

—

5/4/15

1620

42

EB-28-0515-B6

DW

6

—

5/4/15

1720

42

UG-2-0515-B6

DW

6

—

5/5/15

1040

42

UG-1-0515-B6

DW

6

—

5/5/15

1410

42

UG-4-0515-B6

DW

6

—

5/5/15

1300

42

UG-3A-0515-B6

DW

6

—

5/5/15

1355

42

NP-5-0515-B6

DW

6

—

5/5/15

1605

42

EB-29-0515-B6

DW

6

—

5/5/15

1650

42

MW-55-0515-B6

DW

6

—

5/6/15

1000

42

Rush? (Lab MUST Be Notified)

Same Day

Next Day

Two Day

Three Day

200%

100%

50%

25%

Site/Facility ID #

P.O. #

Lab Project #

ARCADHTX-NAVAJO

City/State

Collected:

Rem: (Contaminant)

Sample # (Lab only)

Actnum: ARCADHTX

Template: T99912

Prelogin: P508134

TSR: 633 - Pam Langford

PB: 429-15 MB

Shipped Via: FedEx Ground

Chain of Custody

Page 1 of 2

Analysis / Container / Preservative

Sub-Out 1L-HOPE-Add HNO3

Temp

Flow

Other

Hold #

Condition:

(lab use only)

COC Seal Intact:

Y

N

NA

pH Checked:

NCF:

Received by (Signature)

Time: 5/6/15

Date: 5/6/15

Received by (Signature)

Time: 1600

Date: 5/6/15

Received for lab by (Signature)

Time: 0900

Date: 5/6/15

Remarks:

6761 0190 9870

6761 0190 9866

6761 0190 9855

6761 0190 9844

6761 0190 9877

6761 0190 9844

Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

refer to 1763536



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

Tuesday June 09, 2015

Report Number: L763534

Samples Received: 05/07/15

Client Project: TX000836.0008.00004

Description: Navajo Refining Company - Artesia, NM

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

Entire Report Reviewed By:

Pam Langford , ESC Representative

Laboratory Certification Numbers

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

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

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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-13-0515-BG
Collected By : Ron Wood
Collection Date : 05/04/15 15:10

ESC Sample # : L763534-01

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

The reported analytical results relate only to the sample submitted.

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

Reported: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-01 (RA226) - subcontracted to Environmental Health Services

L763534-01 (RA228) - subcontracted to Environmental Health Services



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

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-12-0515-BG
Collected By : Ron Wood
Collection Date : 05/04/15 16:20

ESC Sample # : L763534-02

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-02 (RA228) - subcontracted to Environmental Health Services

L763534-02 (RA226) - subcontracted to Environmental Health Services



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-28-0515-BG
Collected By : Ron Wood
Collection Date : 05/04/15 17:20

ESC Sample # : L763534-03

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

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: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-03 (RA228) - subcontracted to Environmental Health Services

L763534-03 (RA226) - subcontracted to Environmental Health Services



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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-2-0515-BG
Collected By : Ron Wood
Collection Date : 05/05/15 10:40

ESC Sample # : L763534-04

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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Reported: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-04 (RA228) - subcontracted to Environmental Health Services

L763534-04 (RA226) - subcontracted to Environmental Health Services



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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-1-0515-BG
Collected By : Ron Wood
Collection Date : 05/05/15 11:40

ESC Sample # : L763534-05

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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Reported: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-05 (RA228) - subcontracted to Environmental Health Services

L763534-05 (RA226) - subcontracted to Environmental Health Services



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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-4-0515-BG
Collected By : Ron Wood
Collection Date : 05/05/15 13:00

ESC Sample # : L763534-06

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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Reported: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-06 (RA226) - subcontracted to Environmental Health Services

L763534-06 (RA228) - subcontracted to Environmental Health Services



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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : UG-3R-0515-BG
Collected By : Ron Wood
Collection Date : 05/05/15 13:55

ESC Sample # : L763534-07

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

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: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-07 (RA228) - subcontracted to Environmental Health Services

L763534-07 (RA226) - subcontracted to Environmental Health Services



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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : NP-5-0515-BG
Collected By : Ron Wood
Collection Date : 05/05/15 16:05

ESC Sample # : L763534-08

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

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: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-08 (RA226) - subcontracted to Environmental Health Services

L763534-08 (RA228) - subcontracted to Environmental Health Services



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REPORT OF ANALYSIS

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

June 09, 2015

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : EB-29-0515-BG
Collected By : Ron Wood
Collection Date : 05/05/15 16:50

ESC Sample # : L763534-09

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

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: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-09 (RA228) - subcontracted to Environmental Health Services

L763534-09 (RA226) - subcontracted to Environmental Health Services



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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-55-0515-BG
Collected By : Ron Wood
Collection Date : 05/06/15 10:00

ESC Sample # : L763534-10

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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Reported: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-10 (RA226) - subcontracted to Environmental Health Services

L763534-10 (RA228) - subcontracted to Environmental Health Services



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REPORT OF ANALYSIS

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

June 09, 2015

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-25-0515-BG
Collected By : Ron Wood
Collection Date : 05/06/15 10:00

ESC Sample # : L763534-11

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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Reported: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-11 (RA226) - subcontracted to Environmental Health Services

L763534-11 (RA228) - subcontracted to Environmental Health Services



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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM

Sample ID : MW-136-0515-BG

Collected By : Ron Wood
Collection Date : 05/06/15 10:00

ESC Sample # : L763534-12

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

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: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-12 (RA226) - subcontracted to Environmental Health Services

L763534-12 (RA228) - subcontracted to Environmental Health Services



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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

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM
Sample ID : MW-17-0515-BG
Collected By : Ron Wood
Collection Date : 05/06/15 10:00

ESC Sample # : L763534-13

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

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: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-13 (RA226) - subcontracted to Environmental Health Services

L763534-13 (RA228) - subcontracted to Environmental Health Services



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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM

Sample ID : DUP-11-0515-BG

Collected By : Ron Wood
Collection Date : 05/06/15 10:00

ESC Sample # : L763534-14

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

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: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-14 (RA228) - subcontracted to Environmental Health Services

L763534-14 (RA226) - subcontracted to Environmental Health Services



12065 Lebanon Rd.
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REPORT OF ANALYSIS

June 09, 2015

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

Date Received : May 07, 2015
Description : Navajo Refining Company - Artesia, NM

Sample ID : EB-30-0515-BG

Collected By : Ron Wood
Collection Date : 05/06/15 10:00

ESC Sample # : L763534-15

Site ID :

Project : TX000836.0008.00004

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
Radium 226	ATTACH TO CO		pCi/l	3.0	7500Ra	06/03/15 0000	ARF	1
Radium 228	ATTACH TO CO		pCi/l	2.5	7500Ra	06/03/15 0000	ARF	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit(EQL)

Limit - Maximum Contaminant Level as established by the US EPA

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Reported: 06/08/15 15:20 Revised: 06/09/15 15:40

L763534-15 (RA228) - subcontracted to Environmental Health Services

L763534-15 (RA226) - subcontracted to Environmental Health Services

ARCADIS US - TX

2929 Briarpark Dr., Suite 300
Houston, TX 77042

Billing Information:

Attn: Accounts Payable
630 Plaza Drive, Suite 600
Highlands Ranch, CO 80129Report to:
Pam KruegerEmail To: pam.krueger@arcadis-
us.com;maisha.turner@arcadis-Project
Description: Navajo Refining Company - Artesia, NMCity/State
Collected:Phone: 713-953-4800
Fax:Client Project #
TX000836.0008.00004Lab 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 ______ Same Day200%
___ Next Day100%
___ Two Day50%
___ Three Day25%Email? ___ No ___ Yes
FAX? ___ No ___ YesNo.
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Sub-Out 1L-HDPE-Add HNO3	Analysis / Container / Preservative	Chain of Custody
MW-13-0515-B6	G	DW	—	5/4/15	1510	42	X		
MW-12-0515-B6	G	DW	—	5/4/15	1620	42	X		
EB-28-0515-B6	G	DW	—	5/4/15	1720	42	X		
UG-2-0515-B6	G	DW	—	5/5/15	1040	42	X		
UG-1-0515-B6	G	DW	—	5/5/15	1140	42	X		
UG-4-0515-B6	G	DW	—	5/5/15	1300	42	X		
UG-3R-0515-B6	G	DW	—	5/5/15	1355	42	X		
NP-5-0515-B6	G	DW	—	5/5/15	1605	42	X		
EB-29-0515-B6	G	DW	—	5/5/15	1650	42	X		
MW-55-0515-B6	G	DW	—	5/6/15	1000	42	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: 6361 0190 9870

6361 0190 9866

6361 0190 9855

pH 6361 0190 9844

Flow Other

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Samples returned via: ☐ UPS

Hold #

(lab use only)

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: °C Bottles Received:

COC Seal Intact: ___ Y ___ N ___ NA

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: Time:

pH Checked: NCF:

refer to 2763536



YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 0763534

K095

Acctnum: ARCADHTX

Template: T99912

Prelogin: P508134

TSR: 633 - Pam Langford

PB: 429-15 ms

Shipped Via: FedEx Ground

Rem./Contaminant Sample # (lab only)

LABORATORY REPORT

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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STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Montana	CERT0026
Alaska	IN00035	Nebraska	E87775
Arizona	AZ0432	Nevada	IN000352015-1
Arkansas	IN035	New Hampshire*	2124
California	2920	New Mexico	IN00035
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New York*	11398
Connecticut	PH-0132	North Carolina	18700
Delaware	IN035	North Dakota	R-035
Florida (Primary AB)*	E87775	Ohio	87775
Georgia	929	Oklahoma	D9508
Hawaii	IN035	Oregon*	IN200001
Idaho	IN00035/E87775	Pennsylvania*	68-00466
Illinois*	200001	Puerto Rico	IN00035
Illinois Microbiology	200001	Rhode Island	LAO00241
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-14-7
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA150003	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	00127
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
Missouri	880		

[*NELAP/TNI Recognized Accreditation Bodies](#)

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:

339733

Attn: Janice Cozby
 12065 Lebanon Road
 Mount Juliet, TN 37122

Priority:

Standard Written

Status:

Final

PWS ID:

Not Supplied

Copies
 to: Autumn Fetty

Sample Information					
EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3237918	L763534-01	7500-Ra B	05/04/15 15:10	Client	05/08/15 09:00
3237918	L763534-01	7500-Ra D	05/04/15 15:10	Client	05/08/15 09:00
3237919	L763534-02	7500-Ra B	05/04/15 16:20	Client	05/08/15 09:00
3237919	L763534-02	7500-Ra D	05/04/15 16:20	Client	05/08/15 09:00
3237920	L763534-03	7500-Ra B	05/04/15 17:20	Client	05/08/15 09:00
3237920	L763534-03	7500-Ra D	05/04/15 17:20	Client	05/08/15 09:00
3237921	L763534-04	7500-Ra B	05/05/15 10:40	Client	05/08/15 09:00
3237921	L763534-04	7500-Ra D	05/05/15 10:40	Client	05/08/15 09:00
3237922	L763534-05	7500-Ra B	05/05/15 11:40	Client	05/08/15 09:00
3237922	L763534-05	7500-Ra D	05/05/15 11:40	Client	05/08/15 09:00
3237923	L763534-06	7500-Ra B	05/05/15 13:00	Client	05/08/15 09:00
3237923	L763534-06	7500-Ra D	05/05/15 13:00	Client	05/08/15 09:00
3237924	L763534-07	7500-Ra B	05/05/15 13:55	Client	05/08/15 09:00
3237924	L763534-07	7500-Ra D	05/05/15 13:55	Client	05/08/15 09:00
3237925	L763534-08	7500-Ra B	05/05/15 16:05	Client	05/08/15 09:00
3237925	L763534-08	7500-Ra D	05/05/15 16:05	Client	05/08/15 09:00
3237926	L763534-09	7500-Ra B	05/05/15 16:50	Client	05/08/15 09:00
3237926	L763534-09	7500-Ra D	05/05/15 16:50	Client	05/08/15 09:00
3237927	L763534-10	7500-Ra B	05/06/15 10:00	Client	05/08/15 09:00
3237927	L763534-10	7500-Ra D	05/06/15 10:00	Client	05/08/15 09:00
3237928	L763534-11	7500-Ra B	05/06/15 11:40	Client	05/08/15 09:00
3237928	L763534-11	7500-Ra D	05/06/15 11:40	Client	05/08/15 09:00
3237929	L763534-12	7500-Ra B	05/06/15 13:30	Client	05/08/15 09:00
3237929	L763534-12	7500-Ra D	05/06/15 13:30	Client	05/08/15 09:00
3237930	L763534-13	7500-Ra B	05/06/15 14:50	Client	05/08/15 09:00
3237930	L763534-13	7500-Ra D	05/06/15 14:50	Client	05/08/15 09:00
3237931	L763534-14	7500-Ra B	05/06/15 10:00	Client	05/08/15 09:00
3237931	L763534-14	7500-Ra D	05/06/15 10:00	Client	05/08/15 09:00
3237932	L763534-15	7500-Ra B	05/06/15 10:00	Client	05/08/15 09:00
3237932	L763534-15	7500-Ra D	05/06/15 10:00	Client	05/08/15 09:00

Report Summary

Note: Sample containers were provided by the client.

Note: The radium-226 result for site L763534-12 is potentially low biased due to a high biased barium carrier 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.



Authorized Signature

Title

06/08/2015

Date

Client Name: Environmental Science

Report #: 339733

Sampling Point: L763534-01

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	---	0.26	1.0	0.57 ± 0.33	pCi/L	05/18/15 08:36	05/21/15 10:26	3237918
15262-20-1	Radium-228	7500-Ra D	---	0.32	1.0	0.91 ± 0.36	pCi/L	05/18/15 12:29	05/27/15 18:49	3237918
---	Combined Radium	calc.	5 *	0.32	1.0	1.48 ± 0.49	pCi/L	05/18/15 08:36	05/27/15 18:49	3237918

** 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: L763534-02

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	---	0.29	1.0	0.63 ± 0.36	pCi/L	05/18/15 08:36	05/21/15 11:31	3237919
15262-20-1	Radium-228	7500-Ra D	---	0.32	1.0	0.99 ± 0.36	pCi/L	05/18/15 12:30	06/01/15 16:37	3237919
---	Combined Radium	calc.	5 *	0.32	1.0	1.62 ± 0.51	pCi/L	05/18/15 08:36	06/01/15 16:37	3237919

** 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: L763534-03

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	---	0.35	1.0	0.36 ± 0.35	pCi/L	05/18/15 08:36	05/21/15 11:31	3237920
15262-20-1	Radium-228	7500-Ra D	---	0.30	1.0	0.84 ± 0.34	pCi/L	05/18/15 12:30	06/01/15 16:37	3237920
---	Combined Radium	calc.	5 *	0.35	1.0	1.20 ± 0.49	pCi/L	05/18/15 08:36	06/01/15 16:37	3237920

** 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: L763534-04

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	---	0.26	1.0	0.47 ± 0.32	pCi/L	05/18/15 08:36	05/21/15 11:31	3237921
15262-20-1	Radium-228	7500-Ra D	---	0.52	1.0	0.93 ± 0.54	pCi/L	05/18/15 12:30	06/01/15 16:37	3237921
---	Combined Radium	calc.	5 *	0.52	1.0	1.40 ± 0.63	pCi/L	05/18/15 08:36	06/01/15 16:37	3237921

** 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: L763534-05

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	---	0.22	1.0	0.32 ± 0.25	pCi/L	05/18/15 08:36	05/21/15 11:31	3237922
15262-20-1	Radium-228	7500-Ra D	---	0.54	1.0	0.40 ± 0.54	pCi/L	05/18/15 12:30	06/01/15 16:37	3237922
---	Combined Radium	calc.	5 *	0.54	1.0	0.72 ± 0.60	pCi/L	05/18/15 08:36	06/01/15 16:37	3237922

** 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: L763534-06

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	---	0.21	1.0	0.77 ± 0.35	pCi/L	05/18/15 08:36	05/21/15 11:31	3237923
15262-20-1	Radium-228	7500-Ra D	---	0.5	1.0	1.0 ± 0.5	pCi/L	05/18/15 12:30	06/01/15 16:37	3237923
---	Combined Radium	calc.	5 *	0.5	1.0	1.77 ± 0.64	pCi/L	05/18/15 08:36	06/01/15 16:37	3237923

** 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: L763534-07

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	---	0.26	1.0	0.33 ± 0.52	pCi/L	05/18/15 08:36	05/26/15 11:00	3237924
15262-20-1	Radium-228	7500-Ra D	---	0.43	1.0	0.81 ± 0.45	pCi/L	05/18/15 12:30	06/01/15 16:37	3237924
---	Combined Radium	calc.	5 *	0.43	1.0	1.14 ± 0.69	pCi/L	05/18/15 08:36	06/01/15 16:37	3237924

** 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: L763534-08

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	---	0.25	1.0	0.52 ± 0.49	pCi/L	05/18/15 08:36	05/26/15 11:00	3237925
15262-20-1	Radium-228	7500-Ra D	---	0.47	1.0	0.30 ± 0.46	pCi/L	05/18/15 12:30	06/01/15 16:37	3237925
---	Combined Radium	calc.	5 *	0.47	1.0	0.82 ± 0.67	pCi/L	05/18/15 08:36	06/01/15 16:37	3237925

** 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: L763534-09

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	---	0.28	1.0	0.52 ± 0.34	pCi/L	05/15/15 14:25	05/20/15 10:22	3237926
15262-20-1	Radium-228	7500-Ra D	---	0.44	1.0	0.35 ± 0.43	pCi/L	05/18/15 12:30	06/01/15 16:37	3237926
---	Combined Radium	calc.	5 *	0.44	1.0	0.87 ± 0.55	pCi/L	05/15/15 14:25	06/01/15 16:37	3237926

** 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: L763534-10

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	---	0.24	1.0	0.58 ± 0.32	pCi/L	05/15/15 14:25	05/20/15 10:22	3237927
15262-20-1	Radium-228	7500-Ra D	---	0.35	1.0	0.57 ± 0.36	pCi/L	05/18/15 12:30	06/01/15 16:37	3237927
---	Combined Radium	calc.	5 *	0.35	1.0	1.15 ± 0.48	pCi/L	05/15/15 14:25	06/01/15 16:37	3237927

** 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: L763534-11

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	---	0.2	1.0	1.9 ± 0.7	pCi/L	05/15/15 14:25	05/26/15 09:55	3237928
15262-20-1	Radium-228	7500-Ra D	---	0.46	1.0	0.42 ± 0.46	pCi/L	05/20/15 11:31	06/03/15 11:17	3237928
---	Combined Radium	calc.	5 *	0.46	1.0	2.32 ± 0.83	pCi/L	05/15/15 14:25	06/03/15 11:17	3237928

** 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: L763534-12

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	---	0.30	1.0	0.29 ± 0.30	pCi/L	05/15/15 14:25	05/20/15 13:30	3237929
15262-20-1	Radium-228	7500-Ra D	---	0.33	1.0	0.53 ± 0.34	pCi/L	05/18/15 12:29	05/22/15 20:31	3237929
---	Combined Radium	calc.	5 *	0.33	1.0	0.82 ± 0.45	pCi/L	05/15/15 14:25	05/22/15 20:31	3237929

** 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: L763534-13

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	---	0.24	1.0	0.90 ± 0.40	pCi/L	05/15/15 14:25	05/20/15 13:30	3237930
15262-20-1	Radium-228	7500-Ra D	---	0.4	1.0	1.9 ± 0.5	pCi/L	05/18/15 12:29	05/22/15 20:31	3237930
---	Combined Radium	calc.	5 *	0.4	1.0	2.80 ± 0.65	pCi/L	05/15/15 14:25	05/22/15 20:31	3237930

** 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: L763534-14

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	---	0.41	1.0	0.20 ± 0.37	pCi/L	05/15/15 14:25	05/20/15 13:30	3237931
15262-20-1	Radium-228	7500-Ra D	---	0.5	1.0	1.1 ± 0.5	pCi/L	05/18/15 12:29	05/22/15 20:31	3237931
---	Combined Radium	calc.	5 *	0.5	1.0	1.30 ± 0.65	pCi/L	05/15/15 14:25	05/22/15 20:31	3237931

** 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: L763534-15

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	---	0.38	1.0	0.25 ± 0.35	pCi/L	05/18/15 10:47	05/21/15 09:21	3237932
15262-20-1	Radium-228	7500-Ra D	---	0.70	1.00	-0.03 ± 0.67	pCi/L	05/18/15 12:29	05/22/15 20:31	3237932
---	Combined Radium	calc.	5 *	0.70	1.0	0.22 ± 0.76	pCi/L	05/18/15 10:47	05/22/15 20:31	3237932

** 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

276743

339733

Sub-Contract Lab : ENVHEALT
City / State : South Bend, IN
Results Needed by : 06/07/2015
ESC Purchase Order # : S21902

Client Provided Sample Container

WORKGROUP **WG787331**
Date Created : 05/07/2015

Send Reports To : Janice Cozby jcozby@esclabsciences.com

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L763534-01	DW	05/04/2015 1510	Radium 226	RA226	7500Ra B-2001	NM Client
S18448040 S18448039						
L763534-01	DW	05/04/2015 1510	Radium 228	RA228	7500Ra D-2001	NM Client
S18448040 S18448039						
L763534-02	DW	05/04/2015 1620	Radium 226	RA226	7500Ra B-2001	NM Client
S18448043 S18448044						
L763534-02	DW	05/04/2015 1620	Radium 228	RA228	7500Ra D-2001	NM Client
S18448044 S18448043						
L763534-03	DW	05/04/2015 1720	Radium 226	RA226	7500Ra B-2001	NM Client
S18448048 S18448047						
L763534-03	DW	05/04/2015 1720	Radium 228	RA228	7500Ra D-2001	NM Client
S18448048 S18448047						
L763534-04	DW	05/05/2015 1040	Radium 226	RA226	7500Ra B-2001	NM Client
S18448052 S18448051						
L763534-04	DW	05/05/2015 1040	Radium 228	RA228	7500Ra D-2001	NM Client
S18448051 S18448052						
L763534-05	DW	05/05/2015 1140	Radium 226	RA226	7500Ra B-2001	NM Client
S18448056 S18448055						

• pH < 2 on all bottles
• 2 Liters per sites rec'd. dm 0.2 to 0.4%
wet ice

Relinquished by agb Date: 050715
Received by: amastis Date: 5-8-15 0900
Relinquished by _____ Date: _____
Received by: _____ Date: _____

Page: 1

Sub-Contract Lab : ENVHEALT
 City / State : South Bend, IN
 Results Needed by : 06/07/2015
 ESC Purchase Order # : S21902

Client Provided Sample Container

WORKGROUP **WG787331**
 Date Created : 05/07/2015

Send Reports To : Janice Cozby jcozby@esclabsciences.com

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L763534-05	DW	05/05/2015 1140	Radium 228	RA228	7500Ra D-2001	NM Client
S18448056 S18448055	3237922					
L763534-06	DW	05/05/2015 1300	Radium 226	RA226	7500Ra B-2001	NM Client
S18448059 S18448060	3237923					
L763534-06	DW	05/05/2015 1300	Radium 228	RA228	7500Ra D-2001	NM Client
S18448060 S18448059						
L763534-07	DW	05/05/2015 1355	Radium 226	RA226	7500Ra B-2001	NM Client
S18448063 S18448064	3237924					
L763534-07	DW	05/05/2015 1355	Radium 228	RA228	7500Ra D-2001	NM Client
S18448064 S18448063						
L763534-08	DW	05/05/2015 1605	Radium 226	RA226	7500Ra B-2001	NM Client
S18448067 S18448068	3237925					
L763534-08	DW	05/05/2015 1605	Radium 228	RA228	7500Ra D-2001	NM Client
S18448068 S18448067						
L763534-09	DW	05/05/2015 1650	Radium 226	RA226	7500Ra B-2001	NM Client
S18448071 S18448072	3237926					
L763534-09	DW	05/05/2015 1650	Radium 228	RA228	7500Ra D-2001	NM Client
S18448072 S18448071						
L763534-10	DW	05/06/2015 1000	Radium 226	RA226	7500Ra B-2001	NM Client
S18448076 S18448075	3237927					

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 Received by : _____ Date: _____

Sub-Contract Lab : ENVHEALT
City / State : South Bend, IN
Results Needed by : 06/07/2015
ESC Purchase Order # : S21902

Client Provided Sample Container

WORKGROUP **WG787331**
Date Created : 05/07/2015

Send Reports To : Janice Cozby jcozby@esclabsciences.com

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L763534-10	DW	05/06/2015 1000	Radium 228	RA228	7500Ra D-2001	NM Client
S18448075 S18448076						
L763534-11	DW	05/06/2015 1140	Radium 226	RA226	7500Ra B-2001	NM Client
S18448080 S18448079						
L763534-11	DW	05/06/2015 1140	Radium 228	RA228	7500Ra D-2001	NM Client
S18448079 S18448080						
L763534-12	DW	05/06/2015 1330	Radium 226	RA226	7500Ra B-2001	NM Client
S18448083 S18448084						
L763534-12	DW	05/06/2015 1330	Radium 228	RA228	7500Ra D-2001	NM Client
S18448084 S18448083						
L763534-13	DW	05/06/2015 1450	Radium 226	RA226	7500Ra B-2001	NM Client
S18448087 S18448088						
L763534-13	DW	05/06/2015 1450	Radium 228	RA228	7500Ra D-2001	NM Client
S18448087 S18448088						
L763534-14	DW	05/06/2015 1000	Radium 226	RA226	7500Ra B-2001	NM Client
S18448092 S18448091						
L763534-14	DW	05/06/2015 1000	Radium 228	RA228	7500Ra D-2001	NM Client
S18448091 S18448092						
L763534-15	DW	05/06/2015 1500	Radium 226	RA226	7500Ra B-2001	NM Client
S18448095 S18448096						

Relinquished by _____ Date: _____
Received by : _____ Date: _____
Relinquished by _____ Date: _____
Received by : _____ Date: _____

Page : 3

Sub-Contract Lab : __ENVHEALT__

City / State : _____ South Bend, IN _____

Results Needed by : __06/07/2015__

ESC Purchase Order # : __S21902__

Send Reports To : __Janice Cozby jcozby@esclabsciences.com__

Client Provided Sample Container

WORKGROUP WG787331

Date Created : 05/07/2015

SAMPLENO Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L763534-15	DW	05/06/2015 1500	Radium 228	RA228	7500Ra D-2001	NM Client

S18448096

S18448095

Relinquished by _____ Date: _____

Received by : _____ Date: _____

Relinquished by _____ Date: _____

Received by : _____ Date: _____

Page : 4



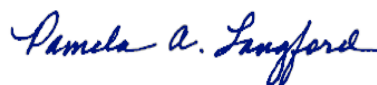
ARCADIS US - TX 2929 Briarpark Dr., Suite 300 Houston, TX 77042		Billing Information: Attn: Accounts Payable 630 Plaza Drive, Suite 600 Highlands Ranch, CO 80129	
Report to: Pam Krueger		Email To: pam.krueger@arcadis-us.com Email To: maisha.turner@arcadis-us.com	
Project: Description: Navajo Refining Company - Artesia, NM		City/State: Collected:	
Client Project # TX000836.0008.00004		Lab Project # ARCADHTX-NAVAJO	
Site/Facility ID #		P.O. #	
Rush? (Lab MUST Be Notified) Same Day 200% Next Day 100% Two Day 50% Three Day 25%		Date Results Needed	
Collected by (print): <i>Pam Krueger</i>		Date:	
Collected by (signature): <i>[Signature]</i>		Time:	
Immediately Packed on Ice N ☒ Y ☐		Email? No ☒ Yes ☐ FAX? No ☐ Yes ☐	
Sample ID	Comp/Grab	Matrix *	Depth
MW-13-0515-B6	6	DW	1510
MW-12-0515-B6	6	DW	1620
EB-28-0515-B6	6	DW	1720
UG-2-0515-B6	6	DW	1040
UG-1-0515-B6	6	DW	1410
UG-4-0515-B6	6	DW	1300
UG-3A-0515-B6	6	DW	1355
NP-5-0515-B6	6	DW	1605
EB-29-0515-B6	6	DW	1650
MW-55-0515-B6	6	DW	1000
Matrix: SS - Soil GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other			
Remarks: <i>6361 0190 9870</i>			
Relinquished by: (Signature) <i>[Signature]</i>			
Relinquished by: (Signature) <i>[Signature]</i>			
Relinquished by: (Signature) <i>[Signature]</i>			

ARCADIS US - TX

Sample Delivery Group: L763536
Samples Received: 05/07/2015
Project Number: TX000836.0008.00004
Description: Navajo Refining Company - Artesia, NM

Report To: Pam Krueger
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Entire Report Reviewed By:



Pam Langford

Pam Langford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW-13-0515-BG L763536-01 GW

Collected by
Ron Wood

Collected date/time
05/04/15 15:10

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG787808	1	05/09/15 13:22	05/11/15 16:28	MF
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 09:35	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 10:19	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 21:37	JD
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 11:21	AB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 15:10	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 13:46	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/09/15 20:27	05/09/15 20:27	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 03:59	05/16/15 03:59	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:33	05/15/15 10:33	ASK
Wet Chemistry by Method 9012B	WG787854	1	05/11/15 11:01	05/13/15 09:29	ASK
Wet Chemistry by Method 9056MOD	WG787846	1	05/11/15 19:30	05/11/15 19:30	NJM
Wet Chemistry by Method 9056MOD	WG787846	100	05/11/15 19:44	05/11/15 19:44	NJM

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

MW-12-0515-BG L763536-02 GW

Collected by
Ron Wood

Collected date/time
05/04/15 16:20

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG787808	1	05/09/15 13:22	05/11/15 16:27	MF
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 09:41	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 10:45	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:00	JD
Metals (ICPMS) by Method 6020	WG788354	20	05/13/15 09:57	05/14/15 02:28	AB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 15:33	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 14:03	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/09/15 20:48	05/09/15 20:48	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 04:19	05/16/15 04:19	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:34	05/15/15 10:34	ASK
Wet Chemistry by Method 9012B	WG787854	1	05/11/15 11:01	05/13/15 09:31	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/11/15 23:57	05/11/15 23:57	NJM
Wet Chemistry by Method 9056MOD	WG787847	25	05/12/15 13:12	05/12/15 13:12	NJM
Wet Chemistry by Method 9056MOD	WG787847	50	05/13/15 10:45	05/13/15 10:45	NJM

EB-28-0515-BG L763536-03 GW

Collected by
Ron Wood

Collected date/time
05/04/15 17:20

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG787808	1	05/09/15 13:22	05/11/15 16:30	MF
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 09:44	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 10:48	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:02	JD
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 15:57	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 14:20	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/09/15 21:09	05/09/15 21:09	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 04:38	05/16/15 04:38	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:36	05/15/15 10:36	ASK
Wet Chemistry by Method 9012B	WG787854	1	05/11/15 11:01	05/13/15 09:32	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/13/15 10:59	05/13/15 10:59	NJM

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



UG-2-0515-BG L763536-04 GW

Collected by
Ron Wood

Collected date/time
05/05/15 10:40

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG787851	1	05/11/15 12:36	05/12/15 15:30	MF
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 09:46	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 10:50	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:04	JD
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 16:20	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 14:37	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/09/15 21:30	05/09/15 21:30	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 04:58	05/16/15 04:58	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:37	05/15/15 10:37	ASK
Wet Chemistry by Method 9012B	WG787854	1	05/11/15 11:01	05/13/15 09:33	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/12/15 00:41	05/12/15 00:41	NJM
Wet Chemistry by Method 9056MOD	WG787847	25	05/12/15 13:41	05/12/15 13:41	NJM

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

UG-1-0515-BG L763536-05 GW

Collected by
Ron Wood

Collected date/time
05/05/15 11:40

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG787851	1	05/11/15 12:36	05/12/15 15:31	MF
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 09:48	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 10:53	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:07	JD
Metals (ICPMS) by Method 6020	WG788354	20	05/13/15 09:57	05/14/15 02:30	AB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 16:44	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 14:54	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/09/15 21:51	05/09/15 21:51	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 05:17	05/16/15 05:17	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:38	05/15/15 10:38	ASK
Wet Chemistry by Method 9012B	WG787854	1	05/11/15 11:01	05/13/15 09:34	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/12/15 00:55	05/12/15 00:55	NJM
Wet Chemistry by Method 9056MOD	WG787847	20	05/12/15 13:55	05/12/15 13:55	NJM

UG-4-0515-BG L763536-06 GW

Collected by
Ron Wood

Collected date/time
05/05/15 13:00

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG787851	1	05/11/15 12:36	05/12/15 15:31	MF
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:25	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 10:55	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:09	JD
Metals (ICPMS) by Method 6020	WG788354	20	05/13/15 09:57	05/14/15 02:32	AB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 17:07	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 15:12	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/09/15 23:44	05/09/15 23:44	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 05:36	05/16/15 05:36	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:39	05/15/15 10:39	ASK
Wet Chemistry by Method 9012B	WG787854	1	05/11/15 11:01	05/13/15 09:35	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/12/15 01:09	05/12/15 01:09	NJM
Wet Chemistry by Method 9056MOD	WG787847	50	05/12/15 14:10	05/12/15 14:10	NJM

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



UG-3R-0515-BG L763536-07 GW

Collected by
Ron Wood

Collected date/time
05/05/15 13:55

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG787851	1	05/11/15 12:36	05/12/15 15:31	MF
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:28	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 10:58	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:11	JD
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 17:30	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 15:29	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/10/15 00:05	05/10/15 00:05	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 05:56	05/16/15 05:56	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:40	05/15/15 10:40	ASK
Wet Chemistry by Method 9012B	WG787854	1	05/11/15 11:01	05/13/15 09:38	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/12/15 01:24	05/12/15 01:24	NJM
Wet Chemistry by Method 9056MOD	WG787847	25	05/12/15 14:24	05/12/15 14:24	NJM

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

NP-5-0515-BG L763536-08 GW

Collected by
Ron Wood

Collected date/time
05/05/15 16:05

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG787852	1	05/11/15 10:57	05/12/15 15:34	MF
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:30	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 11:01	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:13	JD
Metals (ICPMS) by Method 6020	WG788354	20	05/13/15 09:57	05/14/15 02:34	AB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 17:54	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 15:46	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG789077	1	05/15/15 02:33	05/15/15 02:33	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 06:15	05/16/15 06:15	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:42	05/15/15 10:42	ASK
Wet Chemistry by Method 9012B	WG788140	1	05/12/15 11:10	05/12/15 13:37	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/12/15 01:38	05/12/15 01:38	NJM
Wet Chemistry by Method 9056MOD	WG787847	50	05/12/15 14:39	05/12/15 14:39	NJM

EB-29-0515-BG L763536-09 GW

Collected by
Ron Wood

Collected date/time
05/05/15 16:50

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG787852	1	05/11/15 10:57	05/12/15 15:35	MF
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:32	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 11:03	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:16	JD
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 18:17	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 16:03	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/10/15 00:46	05/10/15 00:46	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 06:35	05/16/15 06:35	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:52	05/15/15 10:52	ASK
Wet Chemistry by Method 9012B	WG788140	1	05/12/15 11:10	05/12/15 13:39	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/13/15 11:14	05/13/15 11:14	NJM

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW-55-0515-BG L763536-10 GW

Collected by
Ron Wood

Collected date/time
05/06/15 10:00

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG789400	1	05/16/15 08:25	05/18/15 10:57	JG
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:34	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 11:06	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:18	JD
Metals (ICPMS) by Method 6020	WG788354	20	05/13/15 09:57	05/14/15 02:37	AB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 18:41	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 16:20	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/10/15 01:07	05/10/15 01:07	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 06:54	05/16/15 06:54	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:54	05/15/15 10:54	ASK
Wet Chemistry by Method 9012B	WG788140	1	05/12/15 11:10	05/12/15 13:43	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/12/15 02:07	05/12/15 02:07	NJM
Wet Chemistry by Method 9056MOD	WG787847	50	05/12/15 14:53	05/12/15 14:53	NJM

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

MW-25-0515-BG L763536-11 GW

Collected by
Ron Wood

Collected date/time
05/06/15 11:40

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG789400	1	05/16/15 08:25	05/18/15 10:58	JG
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:36	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 11:08	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/13/15 22:20	JD
Metals (ICPMS) by Method 6020	WG788354	100	05/13/15 09:57	05/14/15 02:39	AB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 19:04	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 18:21	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/10/15 01:28	05/10/15 01:28	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 07:14	05/16/15 07:14	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:55	05/15/15 10:55	ASK
Wet Chemistry by Method 9012B	WG788140	1	05/12/15 11:10	05/12/15 13:44	ASK
Wet Chemistry by Method 9056MOD	WG787847	1	05/12/15 02:50	05/12/15 02:50	NJM
Wet Chemistry by Method 9056MOD	WG787847	100	05/13/15 11:28	05/13/15 11:28	NJM

MW-136-0515-BG L763536-12 GW

Collected by
Ron Wood

Collected date/time
05/06/15 13:30

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG789400	1	05/16/15 08:25	05/18/15 10:58	JG
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:38	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 11:37	VSS
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 02:14	JD
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 11:23	AB
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 13:40	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 19:28	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 18:39	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/10/15 01:49	05/10/15 01:49	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 07:33	05/16/15 07:33	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:56	05/15/15 10:56	ASK
Wet Chemistry by Method 9012B	WG788140	1	05/12/15 11:10	05/12/15 13:45	ASK
Wet Chemistry by Method 9056MOD	WG788393	1	05/13/15 20:42	05/13/15 20:42	DJD
Wet Chemistry by Method 9056MOD	WG788393	100	05/14/15 02:29	05/14/15 02:29	DJD



MW-17-0515-BG L763536-13 GW

Collected by
Ron WoodCollected date/time
05/06/15 14:50Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG789400	1	05/16/15 08:25	05/18/15 10:58	JG
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:41	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 11:40	VSS
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 02:16	JD
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 11:30	AB
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 13:43	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 19:51	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 18:56	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/10/15 02:10	05/10/15 02:10	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 07:53	05/16/15 07:53	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:57	05/15/15 10:57	ASK
Wet Chemistry by Method 9012B	WG788140	1	05/12/15 11:10	05/12/15 13:46	ASK
Wet Chemistry by Method 9056MOD	WG788393	1	05/13/15 20:57	05/13/15 20:57	DJD
Wet Chemistry by Method 9056MOD	WG788393	100	05/14/15 02:43	05/14/15 02:43	DJD

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

DUP-11-0515-BG L763536-14 GW

Collected by
Ron WoodCollected date/time
05/06/15 00:00Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG789400	1	05/16/15 08:25	05/18/15 10:58	JG
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:43	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 11:42	VSS
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 02:19	JD
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 11:32	AB
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 13:45	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 20:15	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 19:13	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/10/15 02:30	05/10/15 02:30	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 08:12	05/16/15 08:12	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 10:58	05/15/15 10:58	ASK
Wet Chemistry by Method 9012B	WG788140	1	05/12/15 11:10	05/12/15 13:47	ASK
Wet Chemistry by Method 9056MOD	WG788393	1	05/13/15 21:11	05/13/15 21:11	DJD
Wet Chemistry by Method 9056MOD	WG788393	100	05/14/15 02:57	05/14/15 02:57	DJD

EB-30-0515-BG L763536-15 GW

Collected by
Ron WoodCollected date/time
05/06/15 15:00Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG789400	1	05/16/15 08:25	05/18/15 11:02	JG
Mercury by Method 7470A	WG787362	1	05/08/15 00:10	05/08/15 10:45	MPT
Metals (ICPMS) by Method 6020	WG788317	1	05/15/15 16:49	05/18/15 11:45	VSS
Metals (ICPMS) by Method 6020	WG788354	1	05/13/15 09:57	05/14/15 11:35	JD
Metals (ICPMS) by Method 6020	WG788354	5	05/13/15 09:57	05/14/15 13:48	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG787500	1	05/09/15 21:03	05/11/15 20:38	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG787196	1	05/08/15 22:59	05/09/15 19:31	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG787360	1	05/10/15 02:51	05/10/15 02:51	KLO
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 08:32	05/16/15 08:32	MCB
Wet Chemistry by Method 353.2	WG789223	10	05/15/15 11:00	05/15/15 11:00	ASK
Wet Chemistry by Method 9012B	WG788140	1	05/12/15 11:10	05/12/15 13:48	ASK
Wet Chemistry by Method 9056MOD	WG788393	1	05/14/15 02:14	05/14/15 02:14	DJD

TRIP BLANK L763536-16 GW

Collected by
Ron Wood

Collected date/time
05/06/15 00:00

Received date/time
05/07/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG787560	1	05/16/15 03:40	05/16/15 03:40	MCB

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



All MDL (LOD) and RL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Pam Langford

Pam Langford
Technical Service Representative

Sample Handling and Receiving

Sample quantity was not sufficient to complete analysis per recommended method guidelines for the following samples.

ESC Sample ID	Project Sample ID	Method
L763536-03	EB-28-0515-BG	2540 C-2011
L763536-09	EB-29-0515-BG	2540 C-2011

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L763536-10	MW-55-0515-BG	2540 C-2011
L763536-11	MW-25-0515-BG	2540 C-2011
L763536-12	MW-136-0515-BG	2540 C-2011
L763536-13	MW-17-0515-BG	2540 C-2011
L763536-14	DUP-11-0515-BG	2540 C-2011
L763536-15	EB-30-0515-BG	2540 C-2011

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	4110		2.80	10.0	1	05/11/2015 16:28	WG787808

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	0.340	J	0.200	1.00	10	05/15/2015 10:33	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/13/2015 09:29	WG787854

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	979		5.20	100	100	05/11/2015 19:44	WG787846
Fluoride	0.622		0.00990	0.100	1	05/11/2015 19:30	WG787846
Sulfate	1520		7.70	500	100	05/11/2015 19:44	WG787846

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 09:35	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0186	J	0.00200	0.100	1	05/13/2015 21:37	WG788354
Arsenic	0.00134	J	0.000250	0.00200	1	05/18/2015 10:19	WG788317
Arsenic,Dissolved	0.00128	J	0.000250	0.00200	1	05/13/2015 21:37	WG788354
Barium	0.0195		0.000360	0.00500	1	05/18/2015 10:19	WG788317
Barium,Dissolved	0.0213		0.000360	0.00500	1	05/13/2015 21:37	WG788354
Boron,Dissolved	0.376	4 O1	0.00150	0.0200	1	05/13/2015 21:37	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 21:37	WG788354
Calcium,Dissolved	423	4	0.0460	1.00	1	05/13/2015 21:37	WG788354
Chromium	U		0.000540	0.00200	1	05/18/2015 10:19	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/13/2015 21:37	WG788354
Copper,Dissolved	0.00115	J	0.000520	0.00500	1	05/13/2015 21:37	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/13/2015 21:37	WG788354
Iron	0.0608	J	0.0150	0.100	1	05/18/2015 10:19	WG788317
Iron,Dissolved	0.0226	J	0.0150	0.100	1	05/13/2015 21:37	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 10:19	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 21:37	WG788354
Manganese	0.138		0.000250	0.00500	1	05/18/2015 10:19	WG788317
Manganese,Dissolved	0.114		0.000250	0.00500	1	05/13/2015 21:37	WG788354
Molybdenum,Dissolved	0.00337	J	0.000140	0.00500	1	05/13/2015 21:37	WG788354
Nickel	0.00105	J	0.000350	0.00200	1	05/18/2015 10:19	WG788317
Nickel,Dissolved	0.000898	J	0.000350	0.00200	1	05/13/2015 21:37	WG788354
Potassium,Dissolved	4.48		0.0370	1.00	1	05/13/2015 21:37	WG788354
Selenium	0.000528	J	0.000380	0.00200	1	05/18/2015 10:19	WG788317
Selenium,Dissolved	0.000693	J	0.000380	0.00200	1	05/13/2015 21:37	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 21:37	WG788354
Sodium,Dissolved	891		0.550	5.00	5	05/14/2015 11:21	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00202	<u>J</u> O1	0.000330	0.0100	1	05/13/2015 21:37	WG788354
Vanadium	0.00277	<u>J</u>	0.000180	0.00500	1	05/18/2015 10:19	WG788317
Vanadium,Dissolved	0.00257	<u>J</u>	0.000180	0.00500	1	05/13/2015 21:37	WG788354
Zinc,Dissolved	0.00348	<u>J</u>	0.00260	0.0250	1	05/13/2015 21:37	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/09/2015 20:27	WG787360
(S) a,a,a-Trifluorotoluene(FID)	98.8			62.0-128		05/09/2015 20:27	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 03:59	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 03:59	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 03:59	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 03:59	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 03:59	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 03:59	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 03:59	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 03:59	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 03:59	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 03:59	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 03:59	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 03:59	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 03:59	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 03:59	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 03:59	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 03:59	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 03:59	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 03:59	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 03:59	WG787560
(S) Toluene-d8	105			90.0-115		05/16/2015 03:59	WG787560
(S) Dibromofluoromethane	105			79.0-121		05/16/2015 03:59	WG787560
(S) 4-Bromofluorobenzene	104			80.1-120		05/16/2015 03:59	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0450	<u>J</u>	0.0220	0.100	1	05/09/2015 13:46	WG787196
C28-C40 Oil Range	0.0260	<u>J</u>	0.0120	0.100	1	05/09/2015 13:46	WG787196
(S) o-Terphenyl	124			50.0-150		05/09/2015 13:46	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 15:10	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 15:10	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 15:10	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 15:10	WG787500
(S) 2-Fluorophenol	51.8			10.0-77.9		05/11/2015 15:10	WG787500
(S) Phenol-d5	32.3			5.00-70.1		05/11/2015 15:10	WG787500
(S) Nitrobenzene-d5	74.6			21.8-123		05/11/2015 15:10	WG787500



Collected date/time: 05/04/15 15:10

L763536

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	76.4			29.5-131		05/11/2015 15:10	WG787500
(S) 2,4,6-Tribromophenol	88.3			11.2-130		05/11/2015 15:10	WG787500
(S) p-Terphenyl-d14	70.4			29.3-137		05/11/2015 15:10	WG787500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	6420		2.80	10.0	1	05/11/2015 16:27	WG787808

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	0.678	J	0.200	1.00	10	05/15/2015 10:34	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/13/2015 09:31	WG787854

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	2350		1.30	25.0	25	05/12/2015 13:12	WG787847
Fluoride	0.665		0.00990	0.100	1	05/11/2015 23:57	WG787847
Sulfate	2720		3.90	250	50	05/13/2015 10:45	WG787847

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 09:41	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0116	J	0.00200	0.100	1	05/13/2015 22:00	WG788354
Arsenic	0.00210		0.000250	0.00200	1	05/18/2015 10:45	WG788317
Arsenic,Dissolved	0.00148	J	0.000250	0.00200	1	05/13/2015 22:00	WG788354
Barium	0.0225		0.000360	0.00500	1	05/18/2015 10:45	WG788317
Barium,Dissolved	0.0235		0.000360	0.00500	1	05/13/2015 22:00	WG788354
Boron,Dissolved	0.414		0.00150	0.0200	1	05/13/2015 22:00	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:00	WG788354
Calcium,Dissolved	810		0.920	20.0	20	05/14/2015 02:28	WG788354
Chromium	0.000808	J	0.000540	0.00200	1	05/18/2015 10:45	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/13/2015 22:00	WG788354
Copper,Dissolved	0.00118	J	0.000520	0.00500	1	05/13/2015 22:00	WG788354
Cobalt,Dissolved	0.00153	J	0.000260	0.00200	1	05/13/2015 22:00	WG788354
Iron	0.683		0.0150	0.100	1	05/18/2015 10:45	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/13/2015 22:00	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 10:45	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:00	WG788354
Manganese	1.43		0.000250	0.00500	1	05/18/2015 10:45	WG788317
Manganese,Dissolved	1.33		0.000250	0.00500	1	05/13/2015 22:00	WG788354
Molybdenum,Dissolved	0.00414	J	0.000140	0.00500	1	05/13/2015 22:00	WG788354
Nickel	0.00209		0.000350	0.00200	1	05/18/2015 10:45	WG788317
Nickel,Dissolved	0.00236		0.000350	0.00200	1	05/13/2015 22:00	WG788354
Potassium,Dissolved	6.05		0.0370	1.00	1	05/13/2015 22:00	WG788354
Selenium	0.00118	J	0.000380	0.00200	1	05/18/2015 10:45	WG788317
Selenium,Dissolved	0.00118	J	0.000380	0.00200	1	05/13/2015 22:00	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:00	WG788354
Sodium,Dissolved	1380		2.20	20.0	20	05/14/2015 02:28	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00202	U	0.000330	0.0100	1	05/13/2015 22:00	WG788354
Vanadium	0.00207	U	0.000180	0.00500	1	05/18/2015 10:45	WG788317
Vanadium,Dissolved	0.00165	U	0.000180	0.00500	1	05/13/2015 22:00	WG788354
Zinc,Dissolved	U		0.00260	0.0250	1	05/13/2015 22:00	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/09/2015 20:48	WG787360
(S) a,a,a-Trifluorotoluene(FID)	98.7			62.0-128		05/09/2015 20:48	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 04:19	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 04:19	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 04:19	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 04:19	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 04:19	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 04:19	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 04:19	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 04:19	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 04:19	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 04:19	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 04:19	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 04:19	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 04:19	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 04:19	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 04:19	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 04:19	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 04:19	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 04:19	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 04:19	WG787560
(S) Toluene-d8	105			90.0-115		05/16/2015 04:19	WG787560
(S) Dibromofluoromethane	106			79.0-121		05/16/2015 04:19	WG787560
(S) 4-Bromofluorobenzene	103			80.1-120		05/16/2015 04:19	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0560	U	0.0220	0.100	1	05/09/2015 14:03	WG787196
C28-C40 Oil Range	0.0260	U	0.0120	0.100	1	05/09/2015 14:03	WG787196
(S) o-Terphenyl	121			50.0-150		05/09/2015 14:03	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 15:33	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 15:33	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 15:33	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 15:33	WG787500
(S) 2-Fluorophenol	53.1			10.0-77.9		05/11/2015 15:33	WG787500
(S) Phenol-d5	34.9			5.00-70.1		05/11/2015 15:33	WG787500
(S) Nitrobenzene-d5	72.1			21.8-123		05/11/2015 15:33	WG787500



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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	76.6			29.5-131		05/11/2015 15:33	WG787500
(S) 2,4,6-Tribromophenol	88.8			11.2-130		05/11/2015 15:33	WG787500
(S) p-Terphenyl-d14	71.0			29.3-137		05/11/2015 15:33	WG787500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	U	T4	2.80	10.0	1	05/11/2015 16:30	WG787808

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.200	1.00	10	05/15/2015 10:36	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/13/2015 09:32	WG787854

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	0.178	J	0.0520	1.00	1	05/13/2015 10:59	WG787847
Fluoride	U		0.00990	0.100	1	05/13/2015 10:59	WG787847
Sulfate	0.122	J	0.0770	5.00	1	05/13/2015 10:59	WG787847

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 09:44	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.00982	J	0.00200	0.100	1	05/13/2015 22:02	WG788354
Arsenic	U		0.000250	0.00200	1	05/18/2015 10:48	WG788317
Arsenic,Dissolved	U		0.000250	0.00200	1	05/13/2015 22:02	WG788354
Barium	U		0.000360	0.00500	1	05/18/2015 10:48	WG788317
Barium,Dissolved	U		0.000360	0.00500	1	05/13/2015 22:02	WG788354
Boron,Dissolved	0.0366		0.00150	0.0200	1	05/13/2015 22:02	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:02	WG788354
Calcium,Dissolved	U		0.0460	1.00	1	05/13/2015 22:02	WG788354
Chromium	U		0.000540	0.00200	1	05/18/2015 10:48	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/13/2015 22:02	WG788354
Copper,Dissolved	U		0.000520	0.00500	1	05/13/2015 22:02	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/13/2015 22:02	WG788354
Iron	U		0.0150	0.100	1	05/18/2015 10:48	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/13/2015 22:02	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 10:48	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:02	WG788354
Manganese	U		0.000250	0.00500	1	05/18/2015 10:48	WG788317
Manganese,Dissolved	U		0.000250	0.00500	1	05/13/2015 22:02	WG788354
Molybdenum,Dissolved	U		0.000140	0.00500	1	05/13/2015 22:02	WG788354
Nickel	U		0.000350	0.00200	1	05/18/2015 10:48	WG788317
Nickel,Dissolved	0.000375	J	0.000350	0.00200	1	05/13/2015 22:02	WG788354
Potassium,Dissolved	U		0.0370	1.00	1	05/13/2015 22:02	WG788354
Selenium	U		0.000380	0.00200	1	05/18/2015 10:48	WG788317
Selenium,Dissolved	U		0.000380	0.00200	1	05/13/2015 22:02	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:02	WG788354
Sodium,Dissolved	0.524	J	0.110	1.00	1	05/13/2015 22:02	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	U		0.000330	0.0100	1	05/13/2015 22:02	WG788354
Vanadium	0.000192	J	0.000180	0.00500	1	05/18/2015 10:48	WG788317
Vanadium,Dissolved	U		0.000180	0.00500	1	05/13/2015 22:02	WG788354
Zinc,Dissolved	U		0.00260	0.0250	1	05/13/2015 22:02	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/09/2015 21:09	WG787360
(S) a,a,a-Trifluorotoluene(FID)	99.4			62.0-128		05/09/2015 21:09	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 04:38	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 04:38	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 04:38	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 04:38	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 04:38	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 04:38	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 04:38	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 04:38	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 04:38	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 04:38	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 04:38	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 04:38	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 04:38	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 04:38	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 04:38	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 04:38	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 04:38	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 04:38	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 04:38	WG787560
(S) Toluene-d8	100			90.0-115		05/16/2015 04:38	WG787560
(S) Dibromofluoromethane	106			79.0-121		05/16/2015 04:38	WG787560
(S) 4-Bromofluorobenzene	102			80.1-120		05/16/2015 04:38	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		0.0220	0.100	1	05/09/2015 14:20	WG787196
C28-C40 Oil Range	U		0.0120	0.100	1	05/09/2015 14:20	WG787196
(S) o-Terphenyl	120			50.0-150		05/09/2015 14:20	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 15:57	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 15:57	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 15:57	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 15:57	WG787500
(S) 2-Fluorophenol	53.1			10.0-77.9		05/11/2015 15:57	WG787500
(S) Phenol-d5	34.6			5.00-70.1		05/11/2015 15:57	WG787500
(S) Nitrobenzene-d5	74.2			21.8-123		05/11/2015 15:57	WG787500



Collected date/time: 05/04/15 17:20

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	74.0			29.5-131		05/11/2015 15:57	WG787500
(S) 2,4,6-Tribromophenol	95.0			11.2-130		05/11/2015 15:57	WG787500
(S) p-Terphenyl-d14	74.9			29.3-137		05/11/2015 15:57	WG787500

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	1980		2.80	10.0	1	05/12/2015 15:30	WG787851

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	4.60		0.200	1.00	10	05/15/2015 10:37	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/13/2015 09:33	WG787854

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	69.9		0.0520	1.00	1	05/12/2015 00:41	WG787847
Fluoride	1.60		0.00990	0.100	1	05/12/2015 00:41	WG787847
Sulfate	1130		1.90	125	25	05/12/2015 13:41	WG787847

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 09:46	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0105	J	0.00200	0.100	1	05/13/2015 22:04	WG788354
Arsenic	0.00211		0.000250	0.00200	1	05/18/2015 10:50	WG788317
Arsenic,Dissolved	0.00211		0.000250	0.00200	1	05/13/2015 22:04	WG788354
Barium	0.0146		0.000360	0.00500	1	05/18/2015 10:50	WG788317
Barium,Dissolved	0.0151		0.000360	0.00500	1	05/13/2015 22:04	WG788354
Boron,Dissolved	0.275		0.00150	0.0200	1	05/13/2015 22:04	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:04	WG788354
Calcium,Dissolved	341		0.0460	1.00	1	05/13/2015 22:04	WG788354
Chromium	0.000911	J	0.000540	0.00200	1	05/18/2015 10:50	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/13/2015 22:04	WG788354
Copper,Dissolved	0.00143	J	0.000520	0.00500	1	05/13/2015 22:04	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/13/2015 22:04	WG788354
Iron	U		0.0150	0.100	1	05/18/2015 10:50	WG788317
Iron,Dissolved	0.0239	J	0.0150	0.100	1	05/13/2015 22:04	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 10:50	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:04	WG788354
Manganese	0.0169		0.000250	0.00500	1	05/18/2015 10:50	WG788317
Manganese,Dissolved	0.0111		0.000250	0.00500	1	05/13/2015 22:04	WG788354
Molybdenum,Dissolved	0.0102		0.000140	0.00500	1	05/13/2015 22:04	WG788354
Nickel	0.00524		0.000350	0.00200	1	05/18/2015 10:50	WG788317
Nickel,Dissolved	0.00516		0.000350	0.00200	1	05/13/2015 22:04	WG788354
Potassium,Dissolved	1.75		0.0370	1.00	1	05/13/2015 22:04	WG788354
Selenium	0.00296		0.000380	0.00200	1	05/18/2015 10:50	WG788317
Selenium,Dissolved	0.00304		0.000380	0.00200	1	05/13/2015 22:04	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:04	WG788354
Sodium,Dissolved	83.9		0.110	1.00	1	05/13/2015 22:04	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.0139		0.000330	0.0100	1	05/13/2015 22:04	WG788354
Vanadium	0.0121		0.000180	0.00500	1	05/18/2015 10:50	WG788317
Vanadium,Dissolved	0.0111		0.000180	0.00500	1	05/13/2015 22:04	WG788354
Zinc,Dissolved	0.00290	J	0.00260	0.0250	1	05/13/2015 22:04	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/09/2015 21:30	WG787360
(S) a,a,a-Trifluorotoluene(FID)	99.3			62.0-128		05/09/2015 21:30	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 04:58	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 04:58	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 04:58	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 04:58	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 04:58	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 04:58	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 04:58	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 04:58	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 04:58	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 04:58	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 04:58	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 04:58	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 04:58	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 04:58	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 04:58	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 04:58	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 04:58	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 04:58	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 04:58	WG787560
(S) Toluene-d8	99.3			90.0-115		05/16/2015 04:58	WG787560
(S) Dibromofluoromethane	104			79.0-121		05/16/2015 04:58	WG787560
(S) 4-Bromofluorobenzene	107			80.1-120		05/16/2015 04:58	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0440	J	0.0220	0.100	1	05/09/2015 14:37	WG787196
C28-C40 Oil Range	0.0200	J	0.0120	0.100	1	05/09/2015 14:37	WG787196
(S) o-Terphenyl	123			50.0-150		05/09/2015 14:37	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 16:20	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 16:20	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 16:20	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 16:20	WG787500
(S) 2-Fluorophenol	56.0			10.0-77.9		05/11/2015 16:20	WG787500
(S) Phenol-d5	34.6			5.00-70.1		05/11/2015 16:20	WG787500
(S) Nitrobenzene-d5	78.6			21.8-123		05/11/2015 16:20	WG787500

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	80.3			29.5-131		05/11/2015 16:20	WG787500
(S) 2,4,6-Tribromophenol	99.4			11.2-130		05/11/2015 16:20	WG787500
(S) p-Terphenyl-d14	74.4			29.3-137		05/11/2015 16:20	WG787500

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	3210		2.80	10.0	1	05/12/2015 15:31	WG787851

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	20.6		0.200	1.00	10	05/15/2015 10:38	WG789223

Wet Chemistry by Method 9012B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	U		0.00180	0.00500	1	05/13/2015 09:34	WG787854

Wet Chemistry by Method 9056MOD

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	104		1.00	20.0	20	05/12/2015 13:55	WG787847
Fluoride	0.805		0.00990	0.100	1	05/12/2015 00:55	WG787847
Sulfate	1900		1.50	100	20	05/12/2015 13:55	WG787847

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.0000490	0.000200	1	05/08/2015 09:48	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	0.0145	J	0.00200	0.100	1	05/13/2015 22:07	WG788354
Arsenic	0.00139	J	0.000250	0.00200	1	05/18/2015 10:53	WG788317
Arsenic,Dissolved	0.00125	J	0.000250	0.00200	1	05/13/2015 22:07	WG788354
Barium	0.0130		0.000360	0.00500	1	05/18/2015 10:53	WG788317
Barium,Dissolved	0.0133		0.000360	0.00500	1	05/13/2015 22:07	WG788354
Boron,Dissolved	0.456		0.00150	0.0200	1	05/13/2015 22:07	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:07	WG788354
Calcium,Dissolved	514		0.920	20.0	20	05/14/2015 02:30	WG788354
Chromium	0.00154	J	0.000540	0.00200	1	05/18/2015 10:53	WG788317
Chromium,Dissolved	0.000889	J	0.000540	0.00200	1	05/13/2015 22:07	WG788354
Copper,Dissolved	0.00144	J	0.000520	0.00500	1	05/13/2015 22:07	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/13/2015 22:07	WG788354
Iron	0.0355	J	0.0150	0.100	1	05/18/2015 10:53	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/13/2015 22:07	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 10:53	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:07	WG788354
Manganese	0.000637	J	0.000250	0.00500	1	05/18/2015 10:53	WG788317
Manganese,Dissolved	0.000491	J	0.000250	0.00500	1	05/13/2015 22:07	WG788354
Molybdenum,Dissolved	0.00535		0.000140	0.00500	1	05/13/2015 22:07	WG788354
Nickel	0.00112	J	0.000350	0.00200	1	05/18/2015 10:53	WG788317
Nickel,Dissolved	0.00113	J	0.000350	0.00200	1	05/13/2015 22:07	WG788354
Potassium,Dissolved	1.19		0.0370	1.00	1	05/13/2015 22:07	WG788354
Selenium	0.0113		0.000380	0.00200	1	05/18/2015 10:53	WG788317
Selenium,Dissolved	0.0116		0.000380	0.00200	1	05/13/2015 22:07	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:07	WG788354
Sodium,Dissolved	91.5		0.110	1.00	1	05/13/2015 22:07	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.0240		0.000330	0.0100	1	05/13/2015 22:07	WG788354
Vanadium	0.0115		0.000180	0.00500	1	05/18/2015 10:53	WG788317
Vanadium,Dissolved	0.0110		0.000180	0.00500	1	05/13/2015 22:07	WG788354
Zinc,Dissolved	0.00311	J	0.00260	0.0250	1	05/13/2015 22:07	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/09/2015 21:51	WG787360
(S) a,a,a-Trifluorotoluene(FID)	99.5			62.0-128		05/09/2015 21:51	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 05:17	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 05:17	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 05:17	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 05:17	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 05:17	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 05:17	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 05:17	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 05:17	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 05:17	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 05:17	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 05:17	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 05:17	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 05:17	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 05:17	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 05:17	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 05:17	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 05:17	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 05:17	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 05:17	WG787560
(S) Toluene-d8	106			90.0-115		05/16/2015 05:17	WG787560
(S) Dibromofluoromethane	105			79.0-121		05/16/2015 05:17	WG787560
(S) 4-Bromofluorobenzene	103			80.1-120		05/16/2015 05:17	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0420	J	0.0220	0.100	1	05/09/2015 14:54	WG787196
C28-C40 Oil Range	0.0250	J	0.0120	0.100	1	05/09/2015 14:54	WG787196
(S) o-Terphenyl	119			50.0-150		05/09/2015 14:54	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 16:44	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 16:44	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 16:44	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 16:44	WG787500
(S) 2-Fluorophenol	45.5			10.0-77.9		05/11/2015 16:44	WG787500
(S) Phenol-d5	29.6			5.00-70.1		05/11/2015 16:44	WG787500
(S) Nitrobenzene-d5	64.5			21.8-123		05/11/2015 16:44	WG787500

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	67.6			29.5-131		05/11/2015 16:44	WG787500
(S) 2,4,6-Tribromophenol	79.6			11.2-130		05/11/2015 16:44	WG787500
(S) p-Terphenyl-d14	68.9			29.3-137		05/11/2015 16:44	WG787500

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	4050		2.80	10.0	1	05/12/2015 15:31	WG787851

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	0.795	J	0.200	1.00	10	05/15/2015 10:39	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/13/2015 09:35	WG787854

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	47.4		0.0520	1.00	1	05/12/2015 01:09	WG787847
Fluoride	0.674		0.00990	0.100	1	05/12/2015 01:09	WG787847
Sulfate	2860		3.90	250	50	05/12/2015 14:10	WG787847

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:25	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0151	J	0.00200	0.100	1	05/13/2015 22:09	WG788354
Arsenic	0.00104	J	0.000250	0.00200	1	05/18/2015 10:55	WG788317
Arsenic,Dissolved	0.00100	J	0.000250	0.00200	1	05/13/2015 22:09	WG788354
Barium	0.0223		0.000360	0.00500	1	05/18/2015 10:55	WG788317
Barium,Dissolved	0.0230		0.000360	0.00500	1	05/13/2015 22:09	WG788354
Boron,Dissolved	1.04		0.00150	0.0200	1	05/13/2015 22:09	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:09	WG788354
Calcium,Dissolved	601		0.920	20.0	20	05/14/2015 02:32	WG788354
Chromium	0.00168	J	0.000540	0.00200	1	05/18/2015 10:55	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/13/2015 22:09	WG788354
Copper,Dissolved	0.00123	J	0.000520	0.00500	1	05/13/2015 22:09	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/13/2015 22:09	WG788354
Iron	0.149		0.0150	0.100	1	05/18/2015 10:55	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/13/2015 22:09	WG788354
Lead	0.000272	J	0.000240	0.00200	1	05/18/2015 10:55	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:09	WG788354
Manganese	0.0190		0.000250	0.00500	1	05/18/2015 10:55	WG788317
Manganese,Dissolved	0.0119		0.000250	0.00500	1	05/13/2015 22:09	WG788354
Molybdenum,Dissolved	0.00404	J	0.000140	0.00500	1	05/13/2015 22:09	WG788354
Nickel	0.00233		0.000350	0.00200	1	05/18/2015 10:55	WG788317
Nickel,Dissolved	0.00216		0.000350	0.00200	1	05/13/2015 22:09	WG788354
Potassium,Dissolved	2.46		0.0370	1.00	1	05/13/2015 22:09	WG788354
Selenium	0.00560		0.000380	0.00200	1	05/18/2015 10:55	WG788317
Selenium,Dissolved	0.00578		0.000380	0.00200	1	05/13/2015 22:09	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:09	WG788354
Sodium,Dissolved	240		0.110	1.00	1	05/13/2015 22:09	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.0364		0.000330	0.0100	1	05/13/2015 22:09	WG788354
Vanadium	0.00627		0.000180	0.00500	1	05/18/2015 10:55	WG788317
Vanadium,Dissolved	0.00537		0.000180	0.00500	1	05/13/2015 22:09	WG788354
Zinc,Dissolved	0.00467	J	0.00260	0.0250	1	05/13/2015 22:09	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/09/2015 23:44	WG787360
(S) a,a,a-Trifluorotoluene(FID)	98.9			62.0-128		05/09/2015 23:44	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 05:36	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 05:36	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 05:36	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 05:36	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 05:36	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 05:36	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 05:36	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 05:36	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 05:36	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 05:36	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 05:36	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 05:36	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 05:36	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 05:36	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 05:36	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 05:36	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 05:36	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 05:36	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 05:36	WG787560
(S) Toluene-d8	105			90.0-115		05/16/2015 05:36	WG787560
(S) Dibromofluoromethane	107			79.0-121		05/16/2015 05:36	WG787560
(S) 4-Bromofluorobenzene	103			80.1-120		05/16/2015 05:36	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0290	J	0.0220	0.100	1	05/09/2015 15:12	WG787196
C28-C40 Oil Range	0.0230	J	0.0120	0.100	1	05/09/2015 15:12	WG787196
(S) o-Terphenyl	124			50.0-150		05/09/2015 15:12	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 17:07	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 17:07	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 17:07	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 17:07	WG787500
(S) 2-Fluorophenol	49.7			10.0-77.9		05/11/2015 17:07	WG787500
(S) Phenol-d5	33.2			5.00-70.1		05/11/2015 17:07	WG787500
(S) Nitrobenzene-d5	67.9			21.8-123		05/11/2015 17:07	WG787500

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	71.8			29.5-131		05/11/2015 17:07	WG787500
(S) 2,4,6-Tribromophenol	85.7			11.2-130		05/11/2015 17:07	WG787500
(S) p-Terphenyl-d14	67.1			29.3-137		05/11/2015 17:07	WG787500

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	2130		2.80	10.0	1	05/12/2015 15:31	WG787851

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	1.11		0.200	1.00	10	05/15/2015 10:40	WG789223

Wet Chemistry by Method 9012B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	U		0.00180	0.00500	1	05/13/2015 09:38	WG787854

Wet Chemistry by Method 9056MOD

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	28.1		0.0520	1.00	1	05/12/2015 01:24	WG787847
Fluoride	0.688		0.00990	0.100	1	05/12/2015 01:24	WG787847
Sulfate	1500		1.90	125	25	05/12/2015 14:24	WG787847

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:28	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	0.0102	J	0.00200	0.100	1	05/13/2015 22:11	WG788354
Arsenic	0.00158	J	0.000250	0.00200	1	05/18/2015 10:58	WG788317
Arsenic,Dissolved	0.00163	J	0.000250	0.00200	1	05/13/2015 22:11	WG788354
Barium	0.0175		0.000360	0.00500	1	05/18/2015 10:58	WG788317
Barium,Dissolved	0.0182		0.000360	0.00500	1	05/13/2015 22:11	WG788354
Boron,Dissolved	0.243		0.00150	0.0200	1	05/13/2015 22:11	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:11	WG788354
Calcium,Dissolved	403		0.0460	1.00	1	05/13/2015 22:11	WG788354
Chromium	0.00160	J	0.000540	0.00200	1	05/18/2015 10:58	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/13/2015 22:11	WG788354
Copper,Dissolved	0.00169	J	0.000520	0.00500	1	05/13/2015 22:11	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/13/2015 22:11	WG788354
Iron	0.0226	J	0.0150	0.100	1	05/18/2015 10:58	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/13/2015 22:11	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 10:58	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:11	WG788354
Manganese	0.00123	J	0.000250	0.00500	1	05/18/2015 10:58	WG788317
Manganese,Dissolved	0.000627	J	0.000250	0.00500	1	05/13/2015 22:11	WG788354
Molybdenum,Dissolved	0.00357	J	0.000140	0.00500	1	05/13/2015 22:11	WG788354
Nickel	0.000898	J	0.000350	0.00200	1	05/18/2015 10:58	WG788317
Nickel,Dissolved	0.000826	J	0.000350	0.00200	1	05/13/2015 22:11	WG788354
Potassium,Dissolved	1.68		0.0370	1.00	1	05/13/2015 22:11	WG788354
Selenium	0.00353		0.000380	0.00200	1	05/18/2015 10:58	WG788317
Selenium,Dissolved	0.00366		0.000380	0.00200	1	05/13/2015 22:11	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:11	WG788354
Sodium,Dissolved	59.9		0.110	1.00	1	05/13/2015 22:11	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.0112		0.000330	0.0100	1	05/13/2015 22:11	WG788354
Vanadium	0.00920		0.000180	0.00500	1	05/18/2015 10:58	WG788317
Vanadium,Dissolved	0.00895		0.000180	0.00500	1	05/13/2015 22:11	WG788354
Zinc,Dissolved	0.00318	J	0.00260	0.0250	1	05/13/2015 22:11	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/10/2015 00:05	WG787360
(S) a,a,a-Trifluorotoluene(FID)	99.3			62.0-128		05/10/2015 00:05	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 05:56	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 05:56	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 05:56	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 05:56	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 05:56	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 05:56	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 05:56	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 05:56	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 05:56	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 05:56	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 05:56	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 05:56	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 05:56	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 05:56	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 05:56	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 05:56	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 05:56	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 05:56	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 05:56	WG787560
(S) Toluene-d8	105			90.0-115		05/16/2015 05:56	WG787560
(S) Dibromofluoromethane	106			79.0-121		05/16/2015 05:56	WG787560
(S) 4-Bromofluorobenzene	103			80.1-120		05/16/2015 05:56	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	1.40		0.0220	0.100	1	05/09/2015 15:29	WG787196
C28-C40 Oil Range	1.40		0.0120	0.100	1	05/09/2015 15:29	WG787196
(S) o-Terphenyl	118			50.0-150		05/09/2015 15:29	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 17:30	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 17:30	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 17:30	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 17:30	WG787500
(S) 2-Fluorophenol	50.4			10.0-77.9		05/11/2015 17:30	WG787500
(S) Phenol-d5	32.8			5.00-70.1		05/11/2015 17:30	WG787500
(S) Nitrobenzene-d5	67.7			21.8-123		05/11/2015 17:30	WG787500



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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	72.1			29.5-131		05/11/2015 17:30	WG787500
(S) 2,4,6-Tribromophenol	82.0			11.2-130		05/11/2015 17:30	WG787500
(S) p-Terphenyl-d14	71.3			29.3-137		05/11/2015 17:30	WG787500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	5510		2.80	10.0	1	05/12/2015 15:34	WG787852

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	1.40		0.200	1.00	10	05/15/2015 10:42	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/12/2015 13:37	WG788140

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	404		2.60	50.0	50	05/12/2015 14:39	WG787847
Fluoride	2.37		0.00990	0.100	1	05/12/2015 01:38	WG787847
Sulfate	3420		3.90	250	50	05/12/2015 14:39	WG787847

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:30	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0113	J	0.00200	0.100	1	05/13/2015 22:13	WG788354
Arsenic	0.00348		0.000250	0.00200	1	05/18/2015 11:01	WG788317
Arsenic,Dissolved	0.00324		0.000250	0.00200	1	05/13/2015 22:13	WG788354
Barium	0.00791		0.000360	0.00500	1	05/18/2015 11:01	WG788317
Barium,Dissolved	0.00821		0.000360	0.00500	1	05/13/2015 22:13	WG788354
Boron,Dissolved	1.68		0.00150	0.0200	1	05/13/2015 22:13	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:13	WG788354
Calcium,Dissolved	537		0.920	20.0	20	05/14/2015 02:34	WG788354
Chromium	0.00131	J	0.000540	0.00200	1	05/18/2015 11:01	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/13/2015 22:13	WG788354
Copper,Dissolved	0.00135	J	0.000520	0.00500	1	05/13/2015 22:13	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/13/2015 22:13	WG788354
Iron	0.0331	J	0.0150	0.100	1	05/18/2015 11:01	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/13/2015 22:13	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 11:01	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:13	WG788354
Manganese	U		0.000250	0.00500	1	05/18/2015 11:01	WG788317
Manganese,Dissolved	0.000555	J	0.000250	0.00500	1	05/13/2015 22:13	WG788354
Molybdenum,Dissolved	0.0322		0.000140	0.00500	1	05/13/2015 22:13	WG788354
Nickel	0.00115	J	0.000350	0.00200	1	05/18/2015 11:01	WG788317
Nickel,Dissolved	0.00183	J	0.000350	0.00200	1	05/13/2015 22:13	WG788354
Potassium,Dissolved	0.386	J	0.0370	1.00	1	05/13/2015 22:13	WG788354
Selenium	0.0107		0.000380	0.00200	1	05/18/2015 11:01	WG788317
Selenium,Dissolved	0.0104		0.000380	0.00200	1	05/13/2015 22:13	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:13	WG788354
Sodium,Dissolved	228		0.110	1.00	1	05/13/2015 22:13	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.219		0.000330	0.0100	1	05/13/2015 22:13	WG788354
Vanadium	0.0194		0.000180	0.00500	1	05/18/2015 11:01	WG788317
Vanadium,Dissolved	0.0184		0.000180	0.00500	1	05/13/2015 22:13	WG788354
Zinc,Dissolved	U		0.00260	0.0250	1	05/13/2015 22:13	WG788354

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/15/2015 02:33	WG789077
(S) a,a,a-Trifluorotoluene(FID)	99.3			62.0-128		05/15/2015 02:33	WG789077

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 06:15	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 06:15	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 06:15	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 06:15	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 06:15	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 06:15	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 06:15	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 06:15	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 06:15	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 06:15	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 06:15	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 06:15	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 06:15	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 06:15	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 06:15	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 06:15	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 06:15	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 06:15	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 06:15	WG787560
(S) Toluene-d8	105			90.0-115		05/16/2015 06:15	WG787560
(S) Dibromofluoromethane	106			79.0-121		05/16/2015 06:15	WG787560
(S) 4-Bromofluorobenzene	104			80.1-120		05/16/2015 06:15	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0370	J	0.0220	0.100	1	05/09/2015 15:46	WG787196
C28-C40 Oil Range	0.0920	J	0.0120	0.100	1	05/09/2015 15:46	WG787196
(S) o-Terphenyl	124			50.0-150		05/09/2015 15:46	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 17:54	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 17:54	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 17:54	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 17:54	WG787500
(S) 2-Fluorophenol	49.7			10.0-77.9		05/11/2015 17:54	WG787500
(S) Phenol-d5	34.1			5.00-70.1		05/11/2015 17:54	WG787500
(S) Nitrobenzene-d5	68.6			21.8-123		05/11/2015 17:54	WG787500

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	75.3			29.5-131		05/11/2015 17:54	WG787500
(S) 2,4,6-Tribromophenol	88.7			11.2-130		05/11/2015 17:54	WG787500
(S) p-Terphenyl-d14	71.9			29.3-137		05/11/2015 17:54	WG787500

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	11.0	T4	2.80	10.0	1	05/12/2015 15:35	WG787852

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.200	1.00	10	05/15/2015 10:52	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/12/2015 13:39	WG788140

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	0.316	J	0.0520	1.00	1	05/13/2015 11:14	WG787847
Fluoride	U		0.00990	0.100	1	05/13/2015 11:14	WG787847
Sulfate	4.17	J	0.0770	5.00	1	05/13/2015 11:14	WG787847

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:32	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0139	J	0.00200	0.100	1	05/13/2015 22:16	WG788354
Arsenic	U		0.000250	0.00200	1	05/18/2015 11:03	WG788317
Arsenic,Dissolved	U		0.000250	0.00200	1	05/13/2015 22:16	WG788354
Barium	U		0.000360	0.00500	1	05/18/2015 11:03	WG788317
Barium,Dissolved	U		0.000360	0.00500	1	05/13/2015 22:16	WG788354
Boron,Dissolved	0.0930		0.00150	0.0200	1	05/13/2015 22:16	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:16	WG788354
Calcium,Dissolved	0.0502	J	0.0460	1.00	1	05/13/2015 22:16	WG788354
Chromium	0.000764	J	0.000540	0.00200	1	05/18/2015 11:03	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/13/2015 22:16	WG788354
Copper,Dissolved	U		0.000520	0.00500	1	05/13/2015 22:16	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/13/2015 22:16	WG788354
Iron	U		0.0150	0.100	1	05/18/2015 11:03	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/13/2015 22:16	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 11:03	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:16	WG788354
Manganese	U		0.000250	0.00500	1	05/18/2015 11:03	WG788317
Manganese,Dissolved	U		0.000250	0.00500	1	05/13/2015 22:16	WG788354
Molybdenum,Dissolved	U		0.000140	0.00500	1	05/13/2015 22:16	WG788354
Nickel	U		0.000350	0.00200	1	05/18/2015 11:03	WG788317
Nickel,Dissolved	U		0.000350	0.00200	1	05/13/2015 22:16	WG788354
Potassium,Dissolved	U		0.0370	1.00	1	05/13/2015 22:16	WG788354
Selenium	U		0.000380	0.00200	1	05/18/2015 11:03	WG788317
Selenium,Dissolved	U		0.000380	0.00200	1	05/13/2015 22:16	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:16	WG788354
Sodium,Dissolved	0.312	J	0.110	1.00	1	05/13/2015 22:16	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	U		0.000330	0.0100	1	05/13/2015 22:16	WG788354
Vanadium	0.000236	⌵	0.000180	0.00500	1	05/18/2015 11:03	WG788317
Vanadium,Dissolved	0.000187	⌵	0.000180	0.00500	1	05/13/2015 22:16	WG788354
Zinc,Dissolved	U		0.00260	0.0250	1	05/13/2015 22:16	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/10/2015 00:46	WG787360
(S) a,a,a-Trifluorotoluene(FID)	98.9			62.0-128		05/10/2015 00:46	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 06:35	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 06:35	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 06:35	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 06:35	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 06:35	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 06:35	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 06:35	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 06:35	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 06:35	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 06:35	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 06:35	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 06:35	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 06:35	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 06:35	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 06:35	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 06:35	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 06:35	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 06:35	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 06:35	WG787560
(S) Toluene-d8	107			90.0-115		05/16/2015 06:35	WG787560
(S) Dibromofluoromethane	106			79.0-121		05/16/2015 06:35	WG787560
(S) 4-Bromofluorobenzene	102			80.1-120		05/16/2015 06:35	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0740	⌵	0.0220	0.100	1	05/09/2015 16:03	WG787196
C28-C40 Oil Range	0.0330	⌵	0.0120	0.100	1	05/09/2015 16:03	WG787196
(S) o-Terphenyl	128			50.0-150		05/09/2015 16:03	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 18:17	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 18:17	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 18:17	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 18:17	WG787500
(S) 2-Fluorophenol	55.6			10.0-77.9		05/11/2015 18:17	WG787500
(S) Phenol-d5	35.0			5.00-70.1		05/11/2015 18:17	WG787500
(S) Nitrobenzene-d5	75.4			21.8-123		05/11/2015 18:17	WG787500

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	80.1			29.5-131		05/11/2015 18:17	WG787500
(S) 2,4,6-Tribromophenol	100			11.2-130		05/11/2015 18:17	WG787500
(S) p-Terphenyl-d14	85.6			29.3-137		05/11/2015 18:17	WG787500

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	5060	H	2.80	10.0	1	05/18/2015 10:57	WG789400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	12.7		0.200	1.00	10	05/15/2015 10:54	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/12/2015 13:43	WG788140

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	272		2.60	50.0	50	05/12/2015 14:53	WG787847
Fluoride	1.83	F	0.00990	0.100	1	05/12/2015 02:07	WG787847
Sulfate	2930		3.90	250	50	05/12/2015 14:53	WG787847

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:34	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.00957	J	0.00200	0.100	1	05/13/2015 22:18	WG788354
Arsenic	0.00532		0.000250	0.00200	1	05/18/2015 11:06	WG788317
Arsenic,Dissolved	0.00506		0.000250	0.00200	1	05/13/2015 22:18	WG788354
Barium	0.00889		0.000360	0.00500	1	05/18/2015 11:06	WG788317
Barium,Dissolved	0.0100		0.000360	0.00500	1	05/13/2015 22:18	WG788354
Boron,Dissolved	1.17		0.00150	0.0200	1	05/13/2015 22:18	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:18	WG788354
Calcium,Dissolved	611		0.920	20.0	20	05/14/2015 02:37	WG788354
Chromium	0.00167	J	0.000540	0.00200	1	05/18/2015 11:06	WG788317
Chromium,Dissolved	0.000642	J	0.000540	0.00200	1	05/13/2015 22:18	WG788354
Copper,Dissolved	0.00112	J	0.000520	0.00500	1	05/13/2015 22:18	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/13/2015 22:18	WG788354
Iron	0.0180	J	0.0150	0.100	1	05/18/2015 11:06	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/13/2015 22:18	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 11:06	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:18	WG788354
Manganese	0.0524		0.000250	0.00500	1	05/18/2015 11:06	WG788317
Manganese,Dissolved	0.00522		0.000250	0.00500	1	05/13/2015 22:18	WG788354
Molybdenum,Dissolved	0.0224		0.000140	0.00500	1	05/13/2015 22:18	WG788354
Nickel	0.00328		0.000350	0.00200	1	05/18/2015 11:06	WG788317
Nickel,Dissolved	0.00237		0.000350	0.00200	1	05/13/2015 22:18	WG788354
Potassium,Dissolved	0.845	J	0.0370	1.00	1	05/13/2015 22:18	WG788354
Selenium	0.0189		0.000380	0.00200	1	05/18/2015 11:06	WG788317
Selenium,Dissolved	0.0196		0.000380	0.00200	1	05/13/2015 22:18	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:18	WG788354
Sodium,Dissolved	194		0.110	1.00	1	05/13/2015 22:18	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.0465		0.000330	0.0100	1	05/13/2015 22:18	WG788354
Vanadium	0.0166		0.000180	0.00500	1	05/18/2015 11:06	WG788317
Vanadium,Dissolved	0.0153		0.000180	0.00500	1	05/13/2015 22:18	WG788354
Zinc,Dissolved	U		0.00260	0.0250	1	05/13/2015 22:18	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/10/2015 01:07	WG787360
(S) a,a,a-Trifluorotoluene(FID)	98.5			62.0-128		05/10/2015 01:07	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 06:54	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 06:54	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 06:54	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 06:54	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 06:54	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 06:54	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 06:54	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 06:54	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 06:54	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 06:54	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 06:54	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 06:54	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 06:54	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 06:54	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 06:54	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 06:54	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 06:54	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 06:54	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 06:54	WG787560
(S) Toluene-d8	104			90.0-115		05/16/2015 06:54	WG787560
(S) Dibromofluoromethane	104			79.0-121		05/16/2015 06:54	WG787560
(S) 4-Bromofluorobenzene	104			80.1-120		05/16/2015 06:54	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.270		0.0220	0.100	1	05/09/2015 16:20	WG787196
C28-C40 Oil Range	0.140		0.0120	0.100	1	05/09/2015 16:20	WG787196
(S) o-Terphenyl	123			50.0-150		05/09/2015 16:20	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 18:41	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 18:41	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 18:41	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 18:41	WG787500
(S) 2-Fluorophenol	46.1			10.0-77.9		05/11/2015 18:41	WG787500
(S) Phenol-d5	32.5			5.00-70.1		05/11/2015 18:41	WG787500
(S) Nitrobenzene-d5	70.8			21.8-123		05/11/2015 18:41	WG787500

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	79.2			29.5-131		05/11/2015 18:41	WG787500
(S) 2,4,6-Tribromophenol	85.4			11.2-130		05/11/2015 18:41	WG787500
(S) p-Terphenyl-d14	74.0			29.3-137		05/11/2015 18:41	WG787500

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

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Al

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Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	17600	H	2.80	10.0	1	05/18/2015 10:58	WG789400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	0.401	J	0.200	1.00	10	05/15/2015 10:55	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/12/2015 13:44	WG788140

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	U		0.0520	1.00	1	05/12/2015 02:50	WG787847
Fluoride	0.968		0.00990	0.100	1	05/12/2015 02:50	WG787847
Sulfate	5810		7.70	500	100	05/13/2015 11:28	WG787847

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:36	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0129	J	0.00200	0.100	1	05/13/2015 22:20	WG788354
Arsenic	0.00989		0.000250	0.00200	1	05/18/2015 11:08	WG788317
Arsenic,Dissolved	0.00986		0.000250	0.00200	1	05/13/2015 22:20	WG788354
Barium	0.0162		0.000360	0.00500	1	05/18/2015 11:08	WG788317
Barium,Dissolved	0.0172		0.000360	0.00500	1	05/13/2015 22:20	WG788354
Boron,Dissolved	0.486		0.00150	0.0200	1	05/13/2015 22:20	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/13/2015 22:20	WG788354
Calcium,Dissolved	1000		4.60	100	100	05/14/2015 02:39	WG788354
Chromium	0.00102	J	0.000540	0.00200	1	05/18/2015 11:08	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/13/2015 22:20	WG788354
Copper,Dissolved	0.00172	J	0.000520	0.00500	1	05/13/2015 22:20	WG788354
Cobalt,Dissolved	0.00122	J	0.000260	0.00200	1	05/13/2015 22:20	WG788354
Iron	U		0.0150	0.100	1	05/18/2015 11:08	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/13/2015 22:20	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 11:08	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/13/2015 22:20	WG788354
Manganese	0.414		0.000250	0.00500	1	05/18/2015 11:08	WG788317
Manganese,Dissolved	0.282		0.000250	0.00500	1	05/13/2015 22:20	WG788354
Molybdenum,Dissolved	0.0342		0.000140	0.00500	1	05/13/2015 22:20	WG788354
Nickel	0.00650		0.000350	0.00200	1	05/18/2015 11:08	WG788317
Nickel,Dissolved	0.00603		0.000350	0.00200	1	05/13/2015 22:20	WG788354
Potassium,Dissolved	8.14		0.0370	1.00	1	05/13/2015 22:20	WG788354
Selenium	0.0122		0.000380	0.00200	1	05/18/2015 11:08	WG788317
Selenium,Dissolved	0.0106		0.000380	0.00200	1	05/13/2015 22:20	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/13/2015 22:20	WG788354
Sodium,Dissolved	4320		11.0	100	100	05/14/2015 02:39	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.0326		0.000330	0.0100	1	05/13/2015 22:20	WG788354
Vanadium	0.0142		0.000180	0.00500	1	05/18/2015 11:08	WG788317
Vanadium,Dissolved	0.0131		0.000180	0.00500	1	05/13/2015 22:20	WG788354
Zinc,Dissolved	U		0.00260	0.0250	1	05/13/2015 22:20	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/10/2015 01:28	WG787360
(S) a,a,a-Trifluorotoluene(FID)	98.2			62.0-128		05/10/2015 01:28	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 07:14	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 07:14	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 07:14	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 07:14	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 07:14	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 07:14	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 07:14	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 07:14	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 07:14	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 07:14	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 07:14	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 07:14	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 07:14	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 07:14	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 07:14	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 07:14	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 07:14	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 07:14	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 07:14	WG787560
(S) Toluene-d8	106			90.0-115		05/16/2015 07:14	WG787560
(S) Dibromofluoromethane	109			79.0-121		05/16/2015 07:14	WG787560
(S) 4-Bromofluorobenzene	103			80.1-120		05/16/2015 07:14	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.700		0.0220	0.100	1	05/09/2015 18:21	WG787196
C28-C40 Oil Range	0.160		0.0120	0.100	1	05/09/2015 18:21	WG787196
(S) o-Terphenyl	127			50.0-150		05/09/2015 18:21	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 19:04	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 19:04	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 19:04	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 19:04	WG787500
(S) 2-Fluorophenol	49.7			10.0-77.9		05/11/2015 19:04	WG787500
(S) Phenol-d5	32.8			5.00-70.1		05/11/2015 19:04	WG787500
(S) Nitrobenzene-d5	61.4			21.8-123		05/11/2015 19:04	WG787500



Collected date/time: 05/06/15 11:40

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	66.6			29.5-131		05/11/2015 19:04	WG787500
(S) 2,4,6-Tribromophenol	75.8			11.2-130		05/11/2015 19:04	WG787500
(S) p-Terphenyl-d14	66.5			29.3-137		05/11/2015 19:04	WG787500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	4490	H	2.80	10.0	1	05/18/2015 10:58	WG789400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	3.81		0.200	1.00	10	05/15/2015 10:56	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/12/2015 13:45	WG788140

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	274		5.20	100	100	05/14/2015 02:29	WG788393
Fluoride	1.63		0.00990	0.100	1	05/13/2015 20:42	WG788393
Sulfate	U		0.0770	5.00	1	05/13/2015 20:42	WG788393

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:38	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0371	J	0.0100	0.500	5	05/14/2015 02:14	WG788354
Arsenic	0.00300		0.000250	0.00200	1	05/18/2015 11:37	WG788317
Arsenic,Dissolved	0.00261	J	0.00120	0.0100	5	05/14/2015 02:14	WG788354
Barium	0.0158		0.000360	0.00500	1	05/18/2015 11:37	WG788317
Barium,Dissolved	0.0131	J	0.00180	0.0250	5	05/14/2015 02:14	WG788354
Boron,Dissolved	0.619		0.00750	0.100	5	05/14/2015 13:40	WG788354
Cadmium,Dissolved	U		0.000800	0.00500	5	05/14/2015 02:14	WG788354
Calcium,Dissolved	745		0.230	5.00	5	05/14/2015 02:14	WG788354
Chromium	0.00222		0.000540	0.00200	1	05/18/2015 11:37	WG788317
Chromium,Dissolved	U		0.00270	0.0100	5	05/14/2015 02:14	WG788354
Copper,Dissolved	U		0.00260	0.0250	5	05/14/2015 02:14	WG788354
Cobalt,Dissolved	U		0.00130	0.0100	5	05/14/2015 02:14	WG788354
Iron	0.443		0.0150	0.100	1	05/18/2015 11:37	WG788317
Iron,Dissolved	0.0759	J	0.0750	0.500	5	05/14/2015 02:14	WG788354
Lead	0.000961	J	0.000240	0.00200	1	05/18/2015 11:37	WG788317
Lead,Dissolved	U		0.00120	0.0100	5	05/14/2015 02:14	WG788354
Manganese	0.0366		0.000250	0.00500	1	05/18/2015 11:37	WG788317
Manganese,Dissolved	0.00818	J	0.00120	0.0250	5	05/14/2015 02:14	WG788354
Molybdenum,Dissolved	0.00627	J	0.000700	0.0250	5	05/14/2015 02:14	WG788354
Nickel	0.00240		0.000350	0.00200	1	05/18/2015 11:37	WG788317
Nickel,Dissolved	0.00649	J	0.00180	0.0100	5	05/14/2015 02:14	WG788354
Potassium,Dissolved	3.20	J	0.180	5.00	5	05/14/2015 02:14	WG788354
Selenium	0.00462		0.000380	0.00200	1	05/18/2015 11:37	WG788317
Selenium,Dissolved	0.00465	J	0.00190	0.0100	5	05/14/2015 02:14	WG788354
Silver,Dissolved	U		0.00160	0.0100	5	05/14/2015 02:14	WG788354
Sodium,Dissolved	134		0.550	5.00	5	05/14/2015 11:23	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.0807		0.00160	0.0500	5	05/14/2015 02:14	WG788354
Vanadium	0.0184		0.000180	0.00500	1	05/18/2015 11:37	WG788317
Vanadium,Dissolved	0.0168	J	0.000900	0.0250	5	05/14/2015 02:14	WG788354
Zinc,Dissolved	U		0.0130	0.125	5	05/14/2015 02:14	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/10/2015 01:49	WG787360
(S) a,a,a-Trifluorotoluene(FID)	98.8			62.0-128		05/10/2015 01:49	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 07:33	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 07:33	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 07:33	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 07:33	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 07:33	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 07:33	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 07:33	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 07:33	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 07:33	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 07:33	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 07:33	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 07:33	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 07:33	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 07:33	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 07:33	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 07:33	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 07:33	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 07:33	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 07:33	WG787560
(S) Toluene-d8	105			90.0-115		05/16/2015 07:33	WG787560
(S) Dibromofluoromethane	104			79.0-121		05/16/2015 07:33	WG787560
(S) 4-Bromofluorobenzene	103			80.1-120		05/16/2015 07:33	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0490	J	0.0220	0.100	1	05/09/2015 18:39	WG787196
C28-C40 Oil Range	0.0370	J	0.0120	0.100	1	05/09/2015 18:39	WG787196
(S) o-Terphenyl	119			50.0-150		05/09/2015 18:39	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 19:28	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 19:28	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 19:28	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 19:28	WG787500
(S) 2-Fluorophenol	43.4			10.0-77.9		05/11/2015 19:28	WG787500
(S) Phenol-d5	31.4			5.00-70.1		05/11/2015 19:28	WG787500
(S) Nitrobenzene-d5	62.8			21.8-123		05/11/2015 19:28	WG787500

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	62.2			29.5-131		05/11/2015 19:28	WG787500
(S) 2,4,6-Tribromophenol	86.6			11.2-130		05/11/2015 19:28	WG787500
(S) p-Terphenyl-d14	71.6			29.3-137		05/11/2015 19:28	WG787500

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	2050	H	2.80	10.0	1	05/18/2015 10:58	WG789400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2.06		0.200	1.00	10	05/15/2015 10:57	WG789223

Wet Chemistry by Method 9012B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Cyanide	U		0.00180	0.00500	1	05/12/2015 13:46	WG788140

Wet Chemistry by Method 9056MOD

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	145		5.20	100	100	05/14/2015 02:43	WG788393
Fluoride	1.11		0.00990	0.100	1	05/13/2015 20:57	WG788393
Sulfate	U		0.0770	5.00	1	05/13/2015 20:57	WG788393

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:41	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	0.0231	J	0.0100	0.500	5	05/14/2015 02:16	WG788354
Arsenic	0.000962	J	0.000250	0.00200	1	05/18/2015 11:40	WG788317
Arsenic,Dissolved	U		0.00120	0.0100	5	05/14/2015 02:16	WG788354
Barium	0.0134		0.000360	0.00500	1	05/18/2015 11:40	WG788317
Barium,Dissolved	0.0144	J	0.00180	0.0250	5	05/14/2015 02:16	WG788354
Boron,Dissolved	0.131		0.00750	0.100	5	05/14/2015 13:43	WG788354
Cadmium,Dissolved	U		0.000800	0.00500	5	05/14/2015 02:16	WG788354
Calcium,Dissolved	386		0.230	5.00	5	05/14/2015 02:16	WG788354
Chromium	0.00237		0.000540	0.00200	1	05/18/2015 11:40	WG788317
Chromium,Dissolved	U		0.00270	0.0100	5	05/14/2015 02:16	WG788354
Copper,Dissolved	0.00851	J	0.00260	0.0250	5	05/14/2015 02:16	WG788354
Cobalt,Dissolved	U		0.00130	0.0100	5	05/14/2015 02:16	WG788354
Iron	U		0.0150	0.100	1	05/18/2015 11:40	WG788317
Iron,Dissolved	U		0.0750	0.500	5	05/14/2015 02:16	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 11:40	WG788317
Lead,Dissolved	U		0.00120	0.0100	5	05/14/2015 02:16	WG788354
Manganese	0.000789	J	0.000250	0.00500	1	05/18/2015 11:40	WG788317
Manganese,Dissolved	U		0.00120	0.0250	5	05/14/2015 02:16	WG788354
Molybdenum,Dissolved	0.00980	J	0.000700	0.0250	5	05/14/2015 02:16	WG788354
Nickel	U		0.000350	0.00200	1	05/18/2015 11:40	WG788317
Nickel,Dissolved	0.00259	J	0.00180	0.0100	5	05/14/2015 02:16	WG788354
Potassium,Dissolved	2.13	J	0.180	5.00	5	05/14/2015 02:16	WG788354
Selenium	0.00775		0.000380	0.00200	1	05/18/2015 11:40	WG788317
Selenium,Dissolved	0.00754	J	0.00190	0.0100	5	05/14/2015 02:16	WG788354
Silver,Dissolved	U		0.00160	0.0100	5	05/14/2015 02:16	WG788354
Sodium,Dissolved	81.6		0.550	5.00	5	05/14/2015 11:30	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00305	J	0.00160	0.0500	5	05/14/2015 02:16	WG788354
Vanadium	0.00595		0.000180	0.00500	1	05/18/2015 11:40	WG788317
Vanadium,Dissolved	0.00628	J	0.000900	0.0250	5	05/14/2015 02:16	WG788354
Zinc,Dissolved	U		0.0130	0.125	5	05/14/2015 02:16	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/10/2015 02:10	WG787360
(S) a,a,a-Trifluorotoluene(FID)	99.4			62.0-128		05/10/2015 02:10	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 07:53	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 07:53	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 07:53	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 07:53	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 07:53	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 07:53	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 07:53	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 07:53	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 07:53	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 07:53	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 07:53	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 07:53	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 07:53	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 07:53	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 07:53	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 07:53	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 07:53	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 07:53	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 07:53	WG787560
(S) Toluene-d8	106			90.0-115		05/16/2015 07:53	WG787560
(S) Dibromofluoromethane	104			79.0-121		05/16/2015 07:53	WG787560
(S) 4-Bromofluorobenzene	97.6			80.1-120		05/16/2015 07:53	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0260	J	0.0220	0.100	1	05/09/2015 18:56	WG787196
C28-C40 Oil Range	0.0170	J	0.0120	0.100	1	05/09/2015 18:56	WG787196
(S) o-Terphenyl	125			50.0-150		05/09/2015 18:56	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 19:51	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 19:51	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 19:51	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 19:51	WG787500
(S) 2-Fluorophenol	47.2			10.0-77.9		05/11/2015 19:51	WG787500
(S) Phenol-d5	30.2			5.00-70.1		05/11/2015 19:51	WG787500
(S) Nitrobenzene-d5	67.5			21.8-123		05/11/2015 19:51	WG787500



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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	74.6			29.5-131		05/11/2015 19:51	WG787500
(S) 2,4,6-Tribromophenol	89.2			11.2-130		05/11/2015 19:51	WG787500
(S) p-Terphenyl-d14	77.0			29.3-137		05/11/2015 19:51	WG787500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	4190	H	2.80	10.0	1	05/18/2015 10:58	WG789400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.200	1.00	10	05/15/2015 10:58	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/12/2015 13:47	WG788140

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	1100		5.20	100	100	05/14/2015 02:57	WG788393
Fluoride	0.752		0.00990	0.100	1	05/13/2015 21:11	WG788393
Sulfate	U		0.0770	5.00	1	05/13/2015 21:11	WG788393

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:43	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0345	J	0.0100	0.500	5	05/14/2015 02:19	WG788354
Arsenic	0.00138	J	0.000250	0.00200	1	05/18/2015 11:42	WG788317
Arsenic,Dissolved	0.00151	J	0.00120	0.0100	5	05/14/2015 02:19	WG788354
Barium	0.0196		0.000360	0.00500	1	05/18/2015 11:42	WG788317
Barium,Dissolved	0.0222	J	0.00180	0.0250	5	05/14/2015 02:19	WG788354
Boron,Dissolved	0.433		0.00750	0.100	5	05/14/2015 13:45	WG788354
Cadmium,Dissolved	U		0.000800	0.00500	5	05/14/2015 02:19	WG788354
Calcium,Dissolved	433		0.230	5.00	5	05/14/2015 02:19	WG788354
Chromium	0.00115	J	0.000540	0.00200	1	05/18/2015 11:42	WG788317
Chromium,Dissolved	U		0.00270	0.0100	5	05/14/2015 02:19	WG788354
Copper,Dissolved	U		0.00260	0.0250	5	05/14/2015 02:19	WG788354
Cobalt,Dissolved	U		0.00130	0.0100	5	05/14/2015 02:19	WG788354
Iron	0.0612	J	0.0150	0.100	1	05/18/2015 11:42	WG788317
Iron,Dissolved	U		0.0750	0.500	5	05/14/2015 02:19	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 11:42	WG788317
Lead,Dissolved	U		0.00120	0.0100	5	05/14/2015 02:19	WG788354
Manganese	0.127		0.000250	0.00500	1	05/18/2015 11:42	WG788317
Manganese,Dissolved	0.123		0.00120	0.0250	5	05/14/2015 02:19	WG788354
Molybdenum,Dissolved	0.00350	J	0.000700	0.0250	5	05/14/2015 02:19	WG788354
Nickel	0.000741	J	0.000350	0.00200	1	05/18/2015 11:42	WG788317
Nickel,Dissolved	U		0.00180	0.0100	5	05/14/2015 02:19	WG788354
Potassium,Dissolved	4.67	J	0.180	5.00	5	05/14/2015 02:19	WG788354
Selenium	0.000563	J	0.000380	0.00200	1	05/18/2015 11:42	WG788317
Selenium,Dissolved	U		0.00190	0.0100	5	05/14/2015 02:19	WG788354
Silver,Dissolved	U		0.00160	0.0100	5	05/14/2015 02:19	WG788354
Sodium,Dissolved	906		0.550	5.00	5	05/14/2015 11:32	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00220	U	0.00160	0.0500	5	05/14/2015 02:19	WG788354
Vanadium	0.00287	U	0.000180	0.00500	1	05/18/2015 11:42	WG788317
Vanadium,Dissolved	0.00286	U	0.000900	0.0250	5	05/14/2015 02:19	WG788354
Zinc,Dissolved	U		0.0130	0.125	5	05/14/2015 02:19	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/10/2015 02:30	WG787360
(S) a,a,a-Trifluorotoluene(FID)	99.0			62.0-128		05/10/2015 02:30	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 08:12	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 08:12	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 08:12	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 08:12	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 08:12	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 08:12	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 08:12	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 08:12	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 08:12	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 08:12	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 08:12	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 08:12	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 08:12	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 08:12	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 08:12	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 08:12	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 08:12	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 08:12	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 08:12	WG787560
(S) Toluene-d8	104			90.0-115		05/16/2015 08:12	WG787560
(S) Dibromofluoromethane	107			79.0-121		05/16/2015 08:12	WG787560
(S) 4-Bromofluorobenzene	99.3			80.1-120		05/16/2015 08:12	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0590	U	0.0220	0.100	1	05/09/2015 19:13	WG787196
C28-C40 Oil Range	0.0330	U	0.0120	0.100	1	05/09/2015 19:13	WG787196
(S) o-Terphenyl	128			50.0-150		05/09/2015 19:13	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 20:15	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 20:15	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 20:15	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 20:15	WG787500
(S) 2-Fluorophenol	49.9			10.0-77.9		05/11/2015 20:15	WG787500
(S) Phenol-d5	31.9			5.00-70.1		05/11/2015 20:15	WG787500
(S) Nitrobenzene-d5	71.0			21.8-123		05/11/2015 20:15	WG787500

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	74.8			29.5-131		05/11/2015 20:15	WG787500
(S) 2,4,6-Tribromophenol	93.0			11.2-130		05/11/2015 20:15	WG787500
(S) p-Terphenyl-d14	69.8			29.3-137		05/11/2015 20:15	WG787500

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	28.0	H	2.80	10.0	1	05/18/2015 11:02	WG789400

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	0.297	J	0.200	1.00	10	05/15/2015 11:00	WG789223

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	05/12/2015 13:48	WG788140

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	0.0873	J	0.0520	1.00	1	05/14/2015 02:14	WG788393
Fluoride	0.0116	J	0.00990	0.100	1	05/14/2015 02:14	WG788393
Sulfate	U		0.0770	5.00	1	05/14/2015 02:14	WG788393

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	05/08/2015 10:45	WG787362

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0101	J	0.00200	0.100	1	05/14/2015 11:35	WG788354
Arsenic	U		0.000250	0.00200	1	05/18/2015 11:45	WG788317
Arsenic,Dissolved	U		0.000250	0.00200	1	05/14/2015 11:35	WG788354
Barium	U		0.000360	0.00500	1	05/18/2015 11:45	WG788317
Barium,Dissolved	U		0.000360	0.00500	1	05/14/2015 11:35	WG788354
Boron,Dissolved	0.0382	J	0.00750	0.100	5	05/14/2015 13:48	WG788354
Cadmium,Dissolved	U		0.000160	0.00100	1	05/14/2015 11:35	WG788354
Calcium,Dissolved	U		0.0460	1.00	1	05/14/2015 11:35	WG788354
Chromium	0.000821	J	0.000540	0.00200	1	05/18/2015 11:45	WG788317
Chromium,Dissolved	U		0.000540	0.00200	1	05/14/2015 11:35	WG788354
Copper,Dissolved	U		0.000520	0.00500	1	05/14/2015 11:35	WG788354
Cobalt,Dissolved	U		0.000260	0.00200	1	05/14/2015 11:35	WG788354
Iron	U		0.0150	0.100	1	05/18/2015 11:45	WG788317
Iron,Dissolved	U		0.0150	0.100	1	05/14/2015 11:35	WG788354
Lead	U		0.000240	0.00200	1	05/18/2015 11:45	WG788317
Lead,Dissolved	U		0.000240	0.00200	1	05/14/2015 11:35	WG788354
Manganese	U		0.000250	0.00500	1	05/18/2015 11:45	WG788317
Manganese,Dissolved	U		0.000250	0.00500	1	05/14/2015 11:35	WG788354
Molybdenum,Dissolved	U		0.000140	0.00500	1	05/14/2015 11:35	WG788354
Nickel	U		0.000350	0.00200	1	05/18/2015 11:45	WG788317
Nickel,Dissolved	U		0.000350	0.00200	1	05/14/2015 11:35	WG788354
Potassium,Dissolved	U		0.0370	1.00	1	05/14/2015 11:35	WG788354
Selenium	U		0.000380	0.00200	1	05/18/2015 11:45	WG788317
Selenium,Dissolved	U		0.000380	0.00200	1	05/14/2015 11:35	WG788354
Silver,Dissolved	U		0.000310	0.00200	1	05/14/2015 11:35	WG788354
Sodium,Dissolved	0.195	J	0.110	1.00	1	05/14/2015 11:35	WG788354



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	U		0.000330	0.0100	1	05/14/2015 11:35	WG788354
Vanadium	0.000228	J	0.000180	0.00500	1	05/18/2015 11:45	WG788317
Vanadium,Dissolved	U		0.000180	0.00500	1	05/14/2015 11:35	WG788354
Zinc,Dissolved	U		0.00260	0.0250	1	05/14/2015 11:35	WG788354

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	05/10/2015 02:51	WG787360
(S) a,a,a-Trifluorotoluene(FID)	99.3			62.0-128		05/10/2015 02:51	WG787360

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 08:32	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 08:32	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 08:32	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 08:32	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 08:32	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 08:32	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 08:32	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 08:32	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 08:32	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 08:32	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 08:32	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 08:32	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 08:32	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 08:32	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 08:32	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 08:32	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 08:32	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 08:32	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 08:32	WG787560
(S) Toluene-d8	104			90.0-115		05/16/2015 08:32	WG787560
(S) Dibromofluoromethane	101			79.0-121		05/16/2015 08:32	WG787560
(S) 4-Bromofluorobenzene	101			80.1-120		05/16/2015 08:32	WG787560

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0230	J	0.0220	0.100	1	05/09/2015 19:31	WG787196
C28-C40 Oil Range	U		0.0120	0.100	1	05/09/2015 19:31	WG787196
(S) o-Terphenyl	122			50.0-150		05/09/2015 19:31	WG787196

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	05/11/2015 20:38	WG787500
1-Methylnaphthalene	U		0.000330	0.00100	1	05/11/2015 20:38	WG787500
2-Methylnaphthalene	U		0.000310	0.00100	1	05/11/2015 20:38	WG787500
Naphthalene	U		0.000370	0.00100	1	05/11/2015 20:38	WG787500
(S) 2-Fluorophenol	55.5			10.0-77.9		05/11/2015 20:38	WG787500
(S) Phenol-d5	36.4			5.00-70.1		05/11/2015 20:38	WG787500
(S) Nitrobenzene-d5	76.9			21.8-123		05/11/2015 20:38	WG787500



Collected date/time: 05/06/15 15:00

L763536

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	77.7			29.5-131		05/11/2015 20:38	WG787500
(S) 2,4,6-Tribromophenol	91.0			11.2-130		05/11/2015 20:38	WG787500
(S) p-Terphenyl-d14	72.0			29.3-137		05/11/2015 20:38	WG787500

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



Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	05/16/2015 03:40	WG787560
Carbon tetrachloride	U		0.000380	0.00100	1	05/16/2015 03:40	WG787560
Chloroform	U		0.000320	0.00500	1	05/16/2015 03:40	WG787560
1,2-Dibromoethane	U		0.000380	0.00100	1	05/16/2015 03:40	WG787560
1,1-Dichloroethane	U		0.000260	0.00100	1	05/16/2015 03:40	WG787560
1,2-Dichloroethane	U		0.000360	0.00100	1	05/16/2015 03:40	WG787560
1,1-Dichloroethene	U		0.000400	0.00100	1	05/16/2015 03:40	WG787560
Ethylbenzene	U		0.000380	0.00100	1	05/16/2015 03:40	WG787560
Methylene Chloride	U		0.00100	0.00500	1	05/16/2015 03:40	WG787560
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	05/16/2015 03:40	WG787560
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	05/16/2015 03:40	WG787560
Toluene	U		0.000780	0.00500	1	05/16/2015 03:40	WG787560
1,1,1-Trichloroethane	U		0.000319	0.00100	1	05/16/2015 03:40	WG787560
Tetrachloroethene	U		0.000372	0.00100	1	05/16/2015 03:40	WG787560
1,1,2-Trichloroethane	U		0.000380	0.00100	1	05/16/2015 03:40	WG787560
Vinyl chloride	U		0.000260	0.00100	1	05/16/2015 03:40	WG787560
o-Xylene	U		0.000340	0.00100	1	05/16/2015 03:40	WG787560
m&p-Xylene	U		0.000720	0.00200	1	05/16/2015 03:40	WG787560
Xylenes, Total	U		0.00110	0.00300	1	05/16/2015 03:40	WG787560
(S) Toluene-d8	106			90.0-115		05/16/2015 03:40	WG787560
(S) Dibromofluoromethane	104			79.0-121		05/16/2015 03:40	WG787560
(S) 4-Bromofluorobenzene	108			80.1-120		05/16/2015 03:40	WG787560

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 05/11/15 16:32

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		2.82	10.0

L762890-01 Original Sample (OS) • Duplicate (DUP)

(OS) 05/11/15 16:29 • (DUP) 05/11/15 16:29

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	142	144	1	1.40		5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/11/15 16:29 • (LCSD) 05/11/15 16:29

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Dissolved Solids	8800	8620	8500	98.0	96.6	85.0-115			1.40	5

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



Method Blank (MB)

(MB) 05/12/15 15:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	3.00		2.82	10.0

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

L763174-01 Original Sample (OS) • Duplicate (DUP)

(OS) 05/12/15 15:29 • (DUP) 05/12/15 15:29

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	232	232	1	0.000		5

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/12/15 15:28 • (LCSD) 05/12/15 15:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dissolved Solids	8800	8660	8580	98.4	97.5	85.0-115			0.928	5

Method Blank (MB)

(MB) 05/12/15 15:33

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	4.00		2.82	10.0

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L763536-08 Original Sample (OS) • Duplicate (DUP)

(OS) 05/12/15 15:34 • (DUP) 05/12/15 15:35

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	5510	5440	1	1.28		5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/12/15 15:34 • (LCSD) 05/12/15 15:34

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Dissolved Solids	8800	8720	8540	99.1	97.0	85.0-115			2.09	5

[L763536-10,11,12,13,14,15](#)

Method Blank (MB)

(MB) 05/18/15 11:05

Analyte	MB Result mg/l	<u>MB Qualifier</u>	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L763505-01 Original Sample (OS) • Duplicate (DUP)

(OS) 05/18/15 10:57 • (DUP) 05/18/15 10:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	<u>DUP Qualifier</u>	DUP RPD Limits %
Dissolved Solids	447	452	1	1.11		5

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/18/15 10:55 • (LCSD) 05/18/15 10:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dissolved Solids	8800	8420	8410	95.7	95.6	85.0-115			0.119	5

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) 05/15/15 10:26

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Nitrate-Nitrite	U		0.0197	0.100

L763628-01 Original Sample (OS) • Duplicate (DUP)

(OS) 05/15/15 10:43 • (DUP) 05/15/15 10:44

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Nitrate-Nitrite	0.12	0.11	1	8.7		20

L763700-01 Original Sample (OS) • Duplicate (DUP)

(OS) 05/15/15 12:10 • (DUP) 05/15/15 12:11

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Nitrate-Nitrite	11	10	2	9.5		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/15/15 10:30 • (LCSD) 05/15/15 10:31

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Nitrate-Nitrite	5.00	5.34	5.48	107	110	90.0-110			2.59	20

L763628-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/15/15 10:45 • (MS) 05/15/15 10:46 • (MSD) 05/15/15 10:48

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate-Nitrite	5.00	0.0295	5.12	5.12	102	102	1	90.0-110			0.000	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) 05/13/15 09:08

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L763524-02 Original Sample (OS) • Duplicate (DUP)

(OS) 05/13/15 09:25 • (DUP) 05/13/15 09:26

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	ND	1	0.00		20

L763536-01 Original Sample (OS) • Duplicate (DUP)

(OS) 05/13/15 09:29 • (DUP) 05/13/15 09:30

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	ND	1	0.00		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/13/15 09:10 • (LCSD) 05/13/15 09:11

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.106	0.102	106	102	90.0-110			3.85	20

L763536-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/13/15 09:35 • (MS) 05/13/15 09:36 • (MSD) 05/13/15 09:37

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.200	ND	0.201	0.202	101	101	1	90.0-110			0.496	20



Method Blank (MB)

(MB) 05/12/15 13:30

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

L763748-02 Original Sample (OS) • Duplicate (DUP)

(OS) 05/12/15 14:00 • (DUP) 05/12/15 14:01

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	ND	1	0.00		20

L763536-08 Original Sample (OS) • Duplicate (DUP)

(OS) 05/12/15 13:37 • (DUP) 05/12/15 13:38

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	ND	1	0.00		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/12/15 13:32 • (LCSD) 05/12/15 13:33

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Cyanide	0.100	0.101	0.0963	101	96.3	90.0-110			4.76	20

L763536-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/12/15 13:39 • (MS) 05/12/15 13:41 • (MSD) 05/12/15 13:42

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.200	ND	0.195	0.198	97.5	99.0	1	90.0-110			1.53	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) 05/11/15 11:38

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.0099	0.100
Sulfate	U		0.0774	5.00

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

L762258-02 Original Sample (OS) • Duplicate (DUP)

(OS) 05/11/15 13:05 • (DUP) 05/11/15 14:28

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	237	240	10	1		20
Fluoride	6.24	6.32	10	1		20
Sulfate	94.9	95.3	10	0		20

L763520-03 Original Sample (OS) • Duplicate (DUP)

(OS) 05/11/15 18:07 • (DUP) 05/11/15 18:21

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	0.176	0.188	1	7	J	20
Fluoride	0.0181	0.0179	1	1	J	20
Sulfate	ND	0.000	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/11/15 11:52 • (LCSD) 05/11/15 12:06

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	%	%	%			%	%
Chloride	40.0	39.4	39.3	99	98	90-110			0	20
Fluoride	8.00	7.98	7.99	100	100	90-110			0	20
Sulfate	40.0	39.9	39.6	100	99	90-110			1	20

L763467-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/11/15 16:47 • (MS) 05/11/15 17:01 • (MSD) 05/11/15 17:26

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
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[L763536-01](#)

Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%	%
Chloride	5.00	134	634	641	100	101	10	80-120	120
Fluoride	0.500	2.61	48.5	54.3	92	103	10	80-120	20
Sulfate	5.00	187	682	686	99	100	10	80-120	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) 05/11/15 22:44

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.0099	0.100
Sulfate	U		0.0774	5.00

L763536-02 Original Sample (OS) • Duplicate (DUP)

(OS) 05/11/15 23:57 • (DUP) 05/12/15 00:12

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Fluoride	0.665	0.682	1	3		20

L762104-06 Original Sample (OS) • Duplicate (DUP)

(OS) 05/12/15 10:04 • (DUP) 05/12/15 10:19

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	8.61	8.49	1	1		20
Sulfate	13.1	13.0	1	1		20

L763536-02 Original Sample (OS) • Duplicate (DUP)

(OS) 05/12/15 13:12 • (DUP) 05/12/15 13:26

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	2350	2310	25	1		20

L762104-06 Original Sample (OS) • Duplicate (DUP)

(OS) 05/12/15 16:39 • (DUP) 05/12/15 16:53

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Fluoride	0.126	0.145	1	14		20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/11/15 22:59 • (LCSD) 05/11/15 23:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Chloride	40.0	40.1	40.1	100	100	90-110			0	20
Fluoride	8.00	8.09	8.08	101	101	90-110			0	20
Sulfate	40.0	40.5	40.4	101	101	90-110			0	20

L763536-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/12/15 02:07 • (MS) 05/12/15 02:21 • (MSD) 05/12/15 02:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Fluoride	5.00	1.83	5.29	6.00	69	83	1	80-120	F		13	20

L763536-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/12/15 14:53 • (MS) 05/12/15 15:08 • (MSD) 05/12/15 15:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Chloride	1.00	272	2800	2790	101	101	50	80-120			0	20
Sulfate	1.00	2930	5300	5320	95	96	50	80-120			0	20

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) 05/13/15 18:18

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.0099	0.100
Sulfate	U		0.0774	5.00

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L763177-01 Original Sample (OS) • Duplicate (DUP)

(OS) 05/13/15 19:30 • (DUP) 05/13/15 19:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	13.2	13.1	1	0		20
Fluoride	0.477	0.530	1	10		20
Sulfate	16.7	16.6	1	0		20

L763865-27 Original Sample (OS) • Duplicate (DUP)

(OS) 05/14/15 01:02 • (DUP) 05/14/15 01:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1.04	0.891	1	15		20
Fluoride	0.0825	0.0921	1	0		20
Sulfate	0.428	0.405	1	0		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/13/15 18:33 • (LCSD) 05/13/15 18:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	40.0	39.6	39.7	99	99	90-110			0	20
Fluoride	8.00	7.94	7.94	99	99	90-110			0	20
Sulfate	40.0	41.6	41.3	104	103	90-110			1	20

L763293-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/13/15 19:59 • (MS) 05/13/15 20:14 • (MSD) 05/13/15 20:28

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
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[L763536-12,13,14,15](#)

Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%	%
Chloride	50.0	8.47	58.9	58.9	101	101	1	80-120	0 20
Fluoride	5.00	0.813	5.75	5.76	99	99	1	80-120	0 20
Sulfate	50.0	3.70	55.4	55.4	103	103	1	80-120	0 20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) 05/08/15 09:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000049	0.000200

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/08/15 09:30 • (LCSD) 05/08/15 09:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00500	0.00534	0.00521	107	104	80-120			2.37	20

L763536-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/08/15 09:35 • (MS) 05/08/15 09:37 • (MSD) 05/08/15 09:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00500	ND	0.00574	0.00552	117	113	1	75-125			3.82	20



Method Blank (MB)

(MB) 05/18/15 10:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.00025	0.00200
Barium	U		0.00036	0.00500
Chromium	U		0.00054	0.00200
Iron	U		0.015	0.100
Lead	U		0.00024	0.00200
Manganese	U		0.00025	0.00500
Nickel	U		0.00035	0.00200
Selenium	U		0.00038	0.00200
Vanadium	U		0.00018	0.00500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/18/15 10:14 • (LCSD) 05/18/15 10:16

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	0.0500	0.0501	0.0510	100	102	80-120			2	20
Barium	0.0500	0.0488	0.0495	98	99	80-120			1	20
Chromium	0.0500	0.0506	0.0516	101	103	80-120			2	20
Iron	5.00	4.88	5.09	98	102	80-120			4	20
Lead	0.0500	0.0510	0.0510	102	102	80-120			0	20
Manganese	0.0500	0.0495	0.0507	99	101	80-120			2	20
Nickel	0.0500	0.0519	0.0522	104	104	80-120			1	20
Selenium	0.0500	0.0494	0.0508	99	102	80-120			3	20
Vanadium	0.0500	0.0497	0.0510	99	102	80-120			3	20

L763536-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/18/15 10:19 • (MS) 05/18/15 10:24 • (MSD) 05/18/15 10:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	0.0500	0.00134	0.0583	0.0571	114	111	1	75-125			2	20
Barium	0.0500	0.0195	0.0694	0.0695	100	100	1	75-125			0	20
Chromium	0.0500	0.000354	0.0510	0.0511	101	101	1	75-125			0	20
Iron	5.00	0.0608	4.95	4.98	98	98	1	75-125			1	20
Lead	0.0500	0.0000735	0.0521	0.0515	104	103	1	75-125			1	20



L763536-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/18/15 10:19 • (MS) 05/18/15 10:24 • (MSD) 05/18/15 10:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese	0.0500	0.138	0.186	0.184	96	93	1	75-125			1	20
Nickel	0.0500	0.00105	0.0522	0.0514	102	101	1	75-125			1	20
Selenium	0.0500	0.000528	0.0546	0.0548	108	109	1	75-125			0	20
Vanadium	0.0500	0.00277	0.0551	0.0544	105	103	1	75-125			1	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) 05/13/15 21:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	0.00512		0.002	0.100
Arsenic,Dissolved	U		0.00025	0.00200
Barium,Dissolved	U		0.00036	0.00500
Boron,Dissolved	U		0.0015	0.0200
Boron,Dissolved	U		0.0015	0.0200
Cadmium,Dissolved	U		0.00016	0.00100
Calcium,Dissolved	U		0.046	1.00
Calcium,Dissolved	U		0.046	1.00
Chromium,Dissolved	U		0.00054	0.00200
Copper,Dissolved	U		0.00052	0.00500
Cobalt,Dissolved	U		0.00026	0.00200
Iron,Dissolved	U		0.015	0.100
Lead,Dissolved	U		0.00024	0.00200
Manganese,Dissolved	U		0.00025	0.00500
Molybdenum,Dissolved	U		0.00014	0.00500
Nickel,Dissolved	U		0.00035	0.00200
Potassium,Dissolved	U		0.037	1.00
Selenium,Dissolved	U		0.00038	0.00200
Silver,Dissolved	U		0.00031	0.00200
Sodium,Dissolved	U		0.11	1.00
Sodium,Dissolved	U		0.11	1.00
Uranium,Dissolved	U		0.00033	0.0100
Vanadium,Dissolved	U		0.00018	0.00500
Zinc,Dissolved	U		0.00256	0.0250

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/13/15 21:32 • (LCSD) 05/13/15 21:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	4.93	4.88	99	98	80-120			1	20
Arsenic,Dissolved	0.0500	0.0510	0.0507	102	101	80-120			1	20
Barium,Dissolved	0.0500	0.0516	0.0495	103	99	80-120			4	20
Boron,Dissolved	0.0500	0.0458	0.0473	92	95	80-120			3	20
Cadmium,Dissolved	0.0500	0.0525	0.0531	105	106	80-120			1	20
Calcium,Dissolved	5.00	5.16	5.05	103	101	80-120			2	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/13/15 21:32 • (LCSD) 05/13/15 21:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chromium,Dissolved	0.0500	0.0503	0.0495	101	99	80-120			2	20
Copper,Dissolved	0.0500	0.0532	0.0525	106	105	80-120			1	20
Cobalt,Dissolved	0.0500	0.0518	0.0508	104	102	80-120			2	20
Iron,Dissolved	5.00	4.89	4.75	98	95	80-120			3	20
Lead,Dissolved	0.0500	0.0505	0.0512	101	102	80-120			1	20
Manganese,Dissolved	0.0500	0.0500	0.0503	100	101	80-120			1	20
Molybdenum,Dissolved	0.0500	0.0504	0.0498	101	100	80-120			1	20
Nickel,Dissolved	0.0500	0.0516	0.0508	103	102	80-120			2	20
Potassium,Dissolved	5.00	5.04	5.00	101	100	80-120			1	20
Selenium,Dissolved	0.0500	0.0495	0.0510	99	102	80-120			3	20
Silver,Dissolved	0.0500	0.0511	0.0509	102	102	80-120			0	20
Sodium,Dissolved	5.00	5.29	5.22	106	104	80-120			1	20
Uranium,Dissolved	0.0500	0.0514	0.0516	103	103	80-120			0	20
Vanadium,Dissolved	0.0500	0.0505	0.0497	101	99	80-120			2	20
Zinc,Dissolved	0.0500	0.0496	0.0505	99	101	80-120			2	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L763536-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/13/15 21:37 • (MS) 05/13/15 21:41 • (MSD) 05/13/15 21:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	0.0186	4.90	4.84	98	96	1	75-125			1	20
Arsenic,Dissolved	0.0500	0.00128	0.0555	0.0539	108	105	1	75-125			3	20
Barium,Dissolved	0.0500	0.0213	0.0733	0.0725	104	102	1	75-125			1	20
Boron,Dissolved	0.0500	0.376	0.440	0.450	128	147	1	75-125	4	4	2	20
Cadmium,Dissolved	0.0500	0.0000309	0.0539	0.0519	108	104	1	75-125			4	20
Calcium,Dissolved	5.00	423	421	427	0	70	1	75-125	4	4	1	20
Chromium,Dissolved	0.0500	0.000358	0.0485	0.0477	96	95	1	75-125			2	20
Copper,Dissolved	0.0500	0.00115	0.0495	0.0495	97	97	1	75-125			0	20
Cobalt,Dissolved	0.0500	0.000120	0.0477	0.0480	95	96	1	75-125			1	20
Potassium,Dissolved	5.00	4.48	9.34	9.34	97	97	1	75-125			0	20
Iron,Dissolved	5.00	0.0226	4.59	4.53	91	90	1	75-125			1	20
Lead,Dissolved	0.0500	0.000225	0.0520	0.0516	103	103	1	75-125			1	20
Manganese,Dissolved	0.0500	0.114	0.162	0.162	94	95	1	75-125			0	20
Molybdenum,Dissolved	0.0500	0.00337	0.0562	0.0554	106	104	1	75-125			1	20
Nickel,Dissolved	0.0500	0.000898	0.0486	0.0468	95	92	1	75-125			4	20



L763536-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/13/15 21:37 • (MS) 05/13/15 21:41 • (MSD) 05/13/15 21:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Selenium,Dissolved	0.0500	0.000693	0.0533	0.0538	105	106	1	75-125			1	20
Silver,Dissolved	0.0500	0.0000987	0.0505	0.0500	101	100	1	75-125			1	20
Sodium,Dissolved	5.00	811	797	790	0	0	1	75-125	4	4	1	20
Uranium,Dissolved	0.0500	0.00202	0.0567	0.0563	109	109	1	75-125			1	20
Vanadium,Dissolved	0.0500	0.00257	0.0523	0.0519	99	99	1	75-125			1	20
Zinc,Dissolved	0.0500	0.00348	0.0458	0.0464	85	86	1	75-125			1	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) 05/09/15 17:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.2			62.0-128

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/09/15 16:05 • (LCSD) 05/09/15 16:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.91	5.69	107	104	67.0-132			3.67	20
(S) a,a,a-Trifluorotoluene(FID)				97.6	97.6	62.0-128				

L763473-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/09/15 18:43 • (MS) 05/09/15 17:40 • (MSD) 05/09/15 18:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	ND	5.78	6.18	105	112	1	50.0-143			6.68	20
(S) a,a,a-Trifluorotoluene(FID)					97.7	97.4		62.0-128				



Method Blank (MB)

(MB) 05/15/15 00:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	100			62.0-128

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/14/15 23:28 • (LCSD) 05/14/15 23:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.12	5.58	111	101	67.0-132			9.24	20
(S) a,a,a-Trifluorotoluene(FID)				100	98.9	62.0-128				

L764673-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/15/15 02:10 • (MS) 05/15/15 01:01 • (MSD) 05/15/15 01:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	0.180	6.62	6.13	117	108	1	50.0-143			7.59	20
(S) a,a,a-Trifluorotoluene(FID)					92.2	91.6		62.0-128				



Method Blank (MB)

(MB) 05/16/15 01:40

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000331	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chloroform	U		0.000324	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
Ethylbenzene	U		0.000384	0.00100
Methylene Chloride	U		0.00100	0.00500
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000780	0.00500
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
o-Xylene	U		0.000341	0.00100
m&p-Xylenes	U		0.000719	0.00200
(S) Toluene-d8	105			88.5-111
(S) Dibromofluoromethane	105			78.3-121
(S) 4-Bromofluorobenzene	104			71.0-126

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/16/15 00:22 • (LCSD) 05/16/15 00:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0262	0.0255	105	102	74.8-121			2.94	20
Carbon tetrachloride	0.0250	0.0288	0.0284	115	113	70.2-123			1.65	20
Chloroform	0.0250	0.0259	0.0254	103	102	76.0-121			1.92	20
1,2-Dibromoethane	0.0250	0.0267	0.0250	107	99.8	76.6-121			6.93	20
1,1-Dichloroethane	0.0250	0.0272	0.0262	109	105	70.7-126			3.46	20
1,2-Dichloroethane	0.0250	0.0262	0.0253	105	101	68.8-124			3.48	20
1,1-Dichloroethene	0.0250	0.0272	0.0265	109	106	67.8-129			2.26	20
Ethylbenzene	0.0250	0.0266	0.0255	107	102	78.8-122			4.23	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/16/15 00:22 • (LCSD) 05/16/15 00:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methylene Chloride	0.0250	0.0263	0.0246	105	98.5	70.3-120			6.49	20
1,1,1,2-Tetrachloroethane	0.0250	0.0271	0.0263	109	105	74.2-124			3.23	20
1,1,2,2-Tetrachloroethane	0.0250	0.0255	0.0244	102	97.8	70.7-122			4.28	20
Tetrachloroethene	0.0250	0.0260	0.0258	104	103	72.6-126			0.710	20
Toluene	0.0250	0.0251	0.0249	101	99.5	79.7-116			1.13	20
1,1,1-Trichloroethane	0.0250	0.0279	0.0264	111	106	73.2-123			5.40	20
1,1,2-Trichloroethane	0.0250	0.0257	0.0243	103	97.2	77.7-118			5.71	20
Vinyl chloride	0.0250	0.0261	0.0248	104	99.2	65.9-128			4.92	20
Xylenes, Total	0.0750	0.0810	0.0782	108	104	78.7-121			3.56	20
o-Xylene	0.0250	0.0268	0.0261	107	104	77.6-122			2.66	20
m&p-Xylenes	0.0500	0.0543	0.0521	109	104	78.8-121			4.01	20
(S) Toluene-d8				104	105	88.5-111				
(S) Dibromofluoromethane				106	102	78.3-121				
(S) 4-Bromofluorobenzene				108	101	71.0-126				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L763536-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/16/15 03:59 • (MS) 05/16/15 01:59 • (MSD) 05/16/15 02:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0235	0.0237	93.9	94.6	1	58.6-133			0.790	20
Carbon tetrachloride	0.0250	ND	0.0267	0.0266	107	107	1	60.6-139			0.260	20
Chloroform	0.0250	ND	0.0232	0.0232	92.7	92.9	1	66.1-133			0.130	20
1,2-Dibromoethane	0.0250	ND	0.0235	0.0236	94.1	94.2	1	73.8-131			0.150	20
1,1-Dichloroethane	0.0250	ND	0.0243	0.0239	97.0	95.7	1	64.0-134			1.42	20
1,2-Dichloroethane	0.0250	ND	0.0245	0.0244	97.8	97.6	1	60.7-132			0.180	20
1,1-Dichloroethene	0.0250	ND	0.0224	0.0223	89.8	89.0	1	48.8-144			0.860	20
Ethylbenzene	0.0250	ND	0.0236	0.0225	94.2	90.2	1	62.7-136			4.36	20
Methylene Chloride	0.0250	ND	0.0233	0.0231	93.1	92.2	1	61.5-125			0.910	20
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0243	0.0236	97.3	94.4	1	70.5-132			3.07	20
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0245	0.0233	97.8	93.1	1	64.9-145			4.98	20
Tetrachloroethene	0.0250	ND	0.0219	0.0222	87.4	88.7	1	57.4-141			1.44	20
Toluene	0.0250	ND	0.0223	0.0229	89.0	91.6	1	67.8-124			2.84	20
1,1,1-Trichloroethane	0.0250	ND	0.0243	0.0243	97.3	97.3	1	58.7-134			0.0900	20
1,1,2-Trichloroethane	0.0250	ND	0.0234	0.0225	93.7	90.1	1	74.1-130			3.98	20
Vinyl chloride	0.0250	ND	0.0222	0.0225	88.8	90.2	1	44.3-143			1.54	20



L763536-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 05/16/15 03:59 • (MS) 05/16/15 01:59 • (MSD) 05/16/15 02:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Xylenes, Total	0.0750	ND	0.0712	0.0693	94.9	92.4	1	65.6-133			2.68	20
o-Xylene	0.0250	ND	0.0240	0.0233	95.9	93.3	1	67.1-133			2.69	20
m&p-Xylenes	0.0500	ND	0.0472	0.0460	94.4	91.9	1	64.1-133			2.67	20
(S) Toluene-d8					104	106		90.0-115				
(S) Dibromofluoromethane					107	106		79.0-121				
(S) 4-Bromofluorobenzene					107	96.5		80.1-120				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) 05/09/15 12:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
C10-C28 Diesel Range	U		0.0222	0.100
C28-C40 Oil Range	U		0.0118	0.100
(S) o-Terphenyl	123			50.0-150

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/09/15 13:12 • (LCSD) 05/09/15 13:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	1.50	1.50	1.46	100	97.0	70.0-130			3.12	20
(S) o-Terphenyl				124	123	50.0-150				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) 05/11/15 14:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzo(a)pyrene	U		0.000340	0.00100
1-Methylnaphthalene	U		0.000332	0.00100
2-Methylnaphthalene	U		0.000311	0.00100
Naphthalene	U		0.000372	0.00100
(S) Nitrobenzene-d5	71.0			21.8-123
(S) 2-Fluorobiphenyl	73.5			29.5-131
(S) p-Terphenyl-d14	76.2			29.3-137
(S) Phenol-d5	32.7			5.00-70.1
(S) 2-Fluorophenol	52.0			10.0-77.9
(S) 2,4,6-Tribromophenol	81.3			11.2-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 05/11/15 13:59 • (LCSD) 05/11/15 14:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzo(a)pyrene	0.0500	0.0429	0.0446	85.9	89.2	45.6-106			3.87	20
1-Methylnaphthalene	0.0500	0.0424	0.0437	84.7	87.4	34.7-102			3.07	24.9
2-Methylnaphthalene	0.0500	0.0377	0.0379	75.5	75.8	33.8-98.6			0.360	24.2
Naphthalene	0.0500	0.0369	0.0382	73.8	76.3	32.2-101			3.39	23.8
(S) Nitrobenzene-d5				78.6	78.2	21.8-123				
(S) 2-Fluorobiphenyl				78.1	78.7	29.5-131				
(S) p-Terphenyl-d14				72.2	73.7	29.3-137				
(S) Phenol-d5				37.5	38.2	5.00-70.1				
(S) 2-Fluorophenol				55.2	57.1	10.0-77.9				
(S) 2,4,6-Tribromophenol				98.1	98.1	11.2-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
4	The sample concentration was greater than 4 times the spike value.
F	The MS/MSD recovery outside the control limit.
J	Estimated value.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE**.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina ¹	DW21704
Florida	E87487	North Carolina ²	41
Georgia	NELAP	North Dakota	R-140
Georgia ¹	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky ¹	90010	South Dakota	n/a
Kentucky ²	16	Tennessee ¹⁴	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

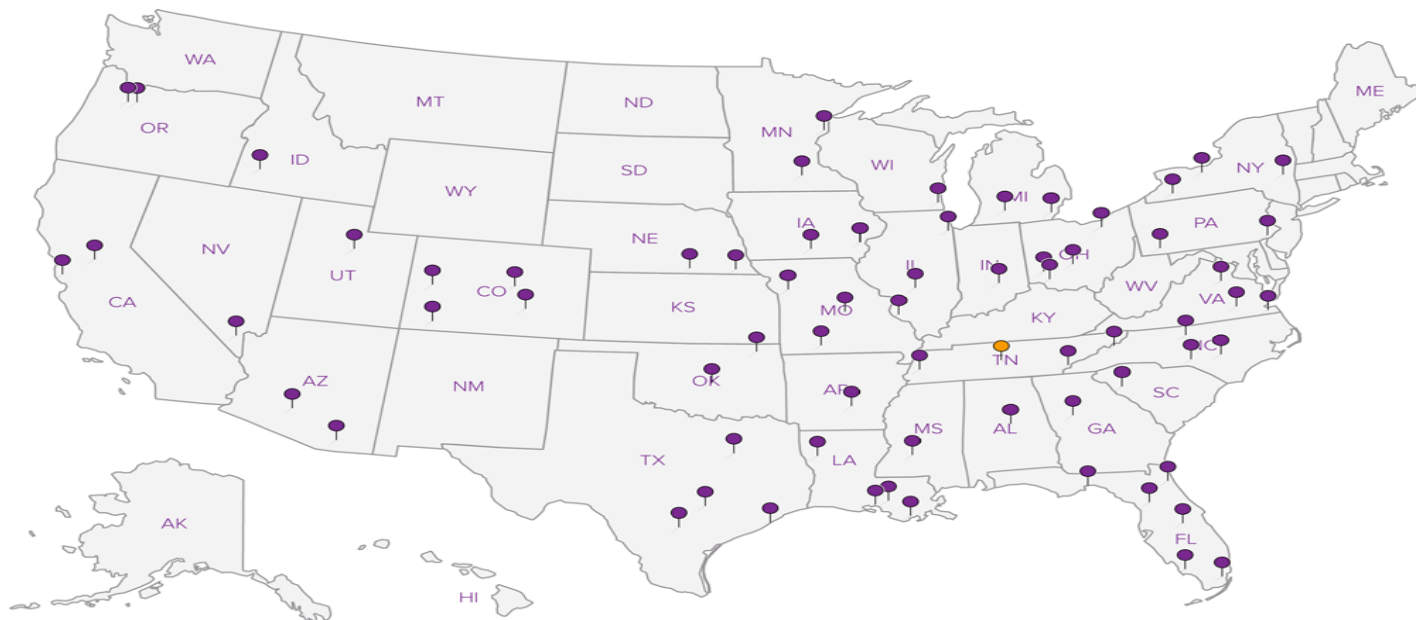
¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ^{n/a} Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



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				Analysis / Container / Preservative												Chain of Custody Page <u>1</u> of <u>2</u>	
				Report to: Pam Krueger				Email To: pam.krueger@arcadis-us.com;maisha.turner@arcadis-us.com				 L.A.B S.C.I.E.N.C.E.S YOUR LAB OF CHOICE 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859 L# L763536 K094 Acctnum: ARCADHTX Template: T99908 Prelogin: P508133 TSR: 633 - Pam Langford PB: 4-29-18 Shipped Via: FedEX Ground									
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): <i>Pam Krueger</i>		Site/Facility ID #		P.O. #		8270 100ml Amb NoPres CL, FL, SO4 125mlHDPE-NoPres CN 250mlHDPEAmb-NaOH ^{1/2} DROOROLVI 40mlAmb-HCl-BT GRO 40mlAmb HCl NAV DISSOLVED METALS 500mlHDPE-NoPres NO2NO3 250mlHDPE-H2SO4 ^{1/2} TDS 250mlHDPE-NoPres TOTAL METALS 500mlHDPE-HNO3 ^{1/2} V8260 40mlAmb-HCl															
Collected by (signature): <i>[Signature]</i>		Rush? (Lab MUST Be Notified) ___ Same Day200% ___ Next Day100% ___ Two Day50% ___ Three Day25%		Date Results Needed Email? ___ No ☒ Yes FAX? ___ No ___ Yes																No. of Cntrs	
Immediately Packed on Ice N ___ Y ☒																					
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time																
MW-13-0515-BG	G	GW	—	5/4/15	1510	15	X	X	X	X	X	X	X	X	X	X	X	X			
MW-12-0515-BG	G	GW	—	5/4/15	1620	15	X	X	X	X	X	X	X	X	X	X	X	X			
EB-28-0515-BG	G	GW	—	5/4/15	1720	15	X	X	X	X	X	X	X	X	X	X	X	X			
UG-2-0515-BG	G	GW	—	5/5/15	1040	15	X	X	X	X	X	X	X	X	X	X	X	X			
UG-1-0515-BG	G	GW	—	5/5/15	1140	15	X	X	X	X	X	X	X	X	X	X	X	X			
UG-4-0515-BG	G	GW	—	5/5/15	1300	15	X	X	X	X	X	X	X	X	X	X	X	X			
UG-3R-0515-BG	G	GW	—	5/5/15	1355	15	X	X	X	X	X	X	X	X	X	X	X	X			
NP-5-0515-BG	G	GW	—	5/5/15	1605	15	X	X	X	X	X	X	X	X	X	X	X	X			
EB-29-0515-BG	G	GW	—	5/5/15	1650	15	X	X	X	X	X	X	X	X	X	X	X	X			
MW-55-0515-BG	G	GW	—	5/6/15	1000	15	X	X	X	X	X	X	X	X	X	X	X	X			

* Matrix: SS - Soil GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other

Remarks: *6361 0191 0870* *6361 0190 9855* *6361 0190 9844* *6361 0190 9877* *6361 0190 9866* *6361 0190 9877*

pH _____ Temp _____ Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>		Date: <i>5/6/15</i>	Time: <i>1600</i>	Received by: (Signature) <i>[Signature]</i>	Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____	Condition: (lab use only) COC Seal Intact: ___ Y ___ N ___ NA pH Checked: <i>2.7/12</i> NCF:
Relinquished by: (Signature) <i>[Signature]</i>		Date:	Time:	Received by: (Signature)	Temp: <i>3.1</i> °C Bottles Received: <i>226</i>	
Relinquished by: (Signature) <i>[Signature]</i>		Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <i>5/7/15</i> Time: <i>0900</i>	

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:
Pam Krueger

Email To: pam.krueger@arcadis-us.com;maisha.turner@arcadis-

Project
Description: Navajo Refining Company - Artesia, NM

City/State
Collected:

Phone: 713-953-4800

Client Project #
TX000836.0008.00004

Lab Project #
ARCADHTX-NAVAJO

Fax:

Collected by (print):
Ron Vool

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)

Date Results Needed

Immediately
Packed on ice N ☐ Y ☒

Same Day200%
Next Day100%
Two Day50%
Three Day25%

Email? ☐ No ☒ Yes

FAX? ☐ No ☐ Yes

No.
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270 100ml Amb NoPres	CL, FL, SO4 125mlHDPE-NoPres	CN 250mlHDPEAmb-NaOH	DROOROLVI 40mlAmb-HCl-BT	GRO 40mlAmb HCl	NAV DISSOLVED METALS 500mlHDPE-NoPres	NO2NO3 250mlHDPE-H2SO4	TDS 250mlHDPE-NoPres	TOTAL METALS 500mlHDPE-HNO3	V8260 40mlAmb-HCl	Rem./Contaminant	Sample # (lab only)
MW-25-0515-BG	G	GW	—	5/6/15	1140	15	X	X	X	X	X	X	X	X	X	X		-11
MW-136-0515-BG	G	GW	—	5/6/15	1330	15	X	X	X	X	X	X	X	X	X	X		-12
MW-17-0515-BG	G	GW	—	5/6/15	1450	15	X	X	X	X	X	X	X	X	X	X		-13
DUP-11-0515-BG	G	GW	—	—	—	15	X	X	X	X	X	X	X	X	X	X		-14
EB-30-0515-BG	G	GW	—	5/6/15	1500	15	X	X	X	X	X	X	X	X	X	X		-15
Trap Blank	—	GW	—	—	—	15	X	X	X	X	X	X	X	X	X	X		
																X		-16

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: 6361 0191 0870

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

6361 0190 9877 6361 0190 9844
pH Temp

Flow Other

Samples returned via: ☐ UPS

☒ FedEx ☐ Courier ☐

Temp: 3.1 °C Bottles Received: 225

Date: 5/7/15 Time: 0900

Hold #

Condition: (lab use only)

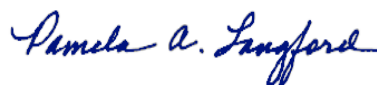
COC Seal Intact: ☐ Y ☐ N ☐ NA

pH Checked: NCF:

ARCADIS US - TX

Sample Delivery Group: L768982
Samples Received: 06/04/2015
Project Number: TX000836.0008.00004
Description: Navajo Refining Company - Artesia, NM
Site: BACKGROUND
Report To: Pam Krueger
2929 Briarpark Dr., Suite 300
Houston, TX 77042

Entire Report Reviewed By:



Pam Langford

Pam Langford

Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW-13-0615-BG L768982-01 GW

Collected by
Ron Wood

Collected date/time
06/01/15 15:20

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:03	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 20:30	MPT
Metals (ICPMS) by Method 6020	WG793580	1	06/05/15 06:41	06/07/15 17:43	VSS
Metals (ICPMS) by Method 6020	WG793580	5	06/05/15 06:41	06/08/15 16:40	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 10:05	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 16:20	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 17:18	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 15:42	06/11/15 15:42	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/09/15 21:41	06/09/15 21:41	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:07	06/11/15 04:07	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:16	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 20:37	06/10/15 20:37	NJM

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

MW-12-0615-BG L768982-02 GW

Collected by
Ron Wood

Collected date/time
06/01/15 16:30

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:03	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 20:33	MPT
Metals (ICPMS) by Method 6020	WG793580	5	06/05/15 06:41	06/08/15 16:42	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 10:15	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 16:44	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 17:36	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 16:05	06/11/15 16:05	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/09/15 22:05	06/09/15 22:05	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:08	06/11/15 04:08	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:17	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 20:52	06/10/15 20:52	NJM

EB-31-0615-BG L768982-03 GW

Collected by
Ron Wood

Collected date/time
06/01/15 17:40

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:03	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 20:42	MPT
Metals (ICPMS) by Method 6020	WG793580	1	06/05/15 06:41	06/08/15 16:45	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 10:18	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 17:07	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 17:54	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 16:27	06/11/15 16:27	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/09/15 22:28	06/09/15 22:28	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:10	06/11/15 04:10	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:18	JAL
Wet Chemistry by Method 9056MOD	WG794586	1	06/10/15 14:42	06/10/15 14:42	NJM

MW-25-0615-BG L768982-04 GW

Collected by
Ron Wood

Collected date/time
06/02/15 09:00

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:04	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 20:45	MPT
Metals (ICPMS) by Method 6020	WG793580	10	06/05/15 06:41	06/08/15 16:48	VSS

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW-25-0615-BG L768982-04 GW

Collected by
Ron Wood

Collected date/time
06/02/15 09:00

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 10:21	JD
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 17:30	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 18:12	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 16:49	06/11/15 16:49	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/09/15 22:51	06/09/15 22:51	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:11	06/11/15 04:11	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:21	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 21:08	06/10/15 21:08	NJM

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

MW-17-0615-BG L768982-05 GW

Collected by
Ron Wood

Collected date/time
06/02/15 10:30

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:04	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 20:48	MPT
Metals (ICPMS) by Method 6020	WG793580	1	06/05/15 06:41	06/08/15 16:50	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 11:24	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 17:53	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 18:29	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 17:11	06/11/15 17:11	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/09/15 23:13	06/09/15 23:13	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:12	06/11/15 04:12	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:22	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 21:23	06/10/15 21:23	NJM

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

NP-5-0615-BG L768982-06 GW

Collected by
Ron Wood

Collected date/time
06/02/15 11:50

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:05	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 20:51	MPT
Metals (ICPMS) by Method 6020	WG793580	5	06/05/15 06:41	06/08/15 16:53	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 11:27	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 18:17	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 18:47	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 17:34	06/11/15 17:34	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/09/15 23:36	06/09/15 23:36	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:13	06/11/15 04:13	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:25	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 21:39	06/10/15 21:39	NJM

MW-136-0615-BG L768982-07 GW

Collected by
Ron Wood

Collected date/time
06/02/15 13:30

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:05	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 20:54	MPT
Metals (ICPMS) by Method 6020	WG793580	5	06/05/15 06:41	06/08/15 17:04	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 11:29	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 18:40	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 19:05	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 17:56	06/11/15 17:56	MCB

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



MW-136-0615-BG L768982-07 GW

Collected by
Ron Wood

Collected date/time
06/02/15 13:30

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/09/15 23:59	06/09/15 23:59	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:14	06/11/15 04:14	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:26	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 21:54	06/10/15 21:54	NJM

¹ Cp

² Tc

³ Ss

⁴ Cn

MW-55-0615-BG L768982-08 GW

Collected by
Ron Wood

Collected date/time
06/02/15 14:50

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:05	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 20:57	MPT
Metals (ICPMS) by Method 6020	WG793580	5	06/05/15 06:41	06/08/15 17:06	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 11:32	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 19:03	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 19:23	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 18:18	06/11/15 18:18	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/10/15 00:22	06/10/15 00:22	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:24	06/11/15 04:24	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:27	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 22:10	06/10/15 22:10	NJM

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

UG-4-0615-BG L768982-09 GW

Collected by
Ron Wood

Collected date/time
06/02/15 16:30

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:05	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 21:00	MPT
Metals (ICPMS) by Method 6020	WG793580	5	06/05/15 06:41	06/08/15 17:09	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 11:35	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 19:26	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 19:41	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 18:40	06/11/15 18:40	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/10/15 00:45	06/10/15 00:45	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:25	06/11/15 04:25	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:28	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 22:25	06/10/15 22:25	NJM

DUP-12-0615-BG L768982-10 GW

Collected by
Ron Wood

Collected date/time
06/02/15 00:00

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793713	1	06/05/15 12:54	06/06/15 14:06	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 21:03	MPT
Metals (ICPMS) by Method 6020	WG793580	5	06/05/15 06:41	06/08/15 17:11	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 11:37	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 19:50	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 19:59	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 19:02	06/11/15 19:02	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/10/15 01:08	06/10/15 01:08	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:26	06/11/15 04:26	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:29	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 22:40	06/10/15 22:40	NJM

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



EB-32-0615-BG L768982-11 GW

Collected by
Ron Wood

Collected date/time
06/02/15 17:40

Received date/time
06/04/15 09:00

¹ Cp

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793849	1	06/06/15 13:13	06/09/15 16:57	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 21:06	MPT
Metals (ICPMS) by Method 6020	WG793580	1	06/05/15 06:41	06/08/15 17:14	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 11:40	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 20:13	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 21:28	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 22:10	06/11/15 22:10	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/10/15 01:31	06/10/15 01:31	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:28	06/11/15 04:28	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:30	JAL
Wet Chemistry by Method 9056MOD	WG794586	1	06/10/15 17:47	06/10/15 17:47	NJM

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

UG-3R-0615-BG L768982-12 GW

Collected by
Ron Wood

Collected date/time
06/03/15 08:30

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793849	1	06/06/15 13:13	06/09/15 16:58	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 21:09	MPT
Metals (ICPMS) by Method 6020	WG793580	1	06/05/15 06:41	06/08/15 16:30	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 11:42	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/08/15 20:36	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 21:46	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 22:32	06/11/15 22:32	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/10/15 01:54	06/10/15 01:54	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:29	06/11/15 04:29	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:32	JAL
Wet Chemistry by Method 9056MOD	WG794586	100	06/10/15 22:56	06/10/15 22:56	NJM

UG-1-0615-BG L768982-13 GW

Collected by
Ron Wood

Collected date/time
06/03/15 09:30

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793849	1	06/06/15 13:13	06/09/15 16:58	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 21:17	MPT
Metals (ICPMS) by Method 6020	WG793580	1	06/05/15 06:41	06/08/15 16:32	VSS
Metals (ICPMS) by Method 6020	WG793580	5	06/05/15 06:41	06/08/15 17:17	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 11:45	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/09/15 15:35	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 22:04	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 22:54	06/11/15 22:54	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/10/15 02:17	06/10/15 02:17	KLO
Wet Chemistry by Method 353.2	WG794537	2	06/11/15 04:43	06/11/15 04:43	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:33	JAL
Wet Chemistry by Method 9056MOD	WG794587	100	06/10/15 20:38	06/10/15 20:38	NJM

UG-2-0615-BG L768982-14 GW

Collected by
Ron Wood

Collected date/time
06/03/15 10:25

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793849	1	06/06/15 13:13	06/09/15 16:58	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 21:20	MPT
Metals (ICPMS) by Method 6020	WG793580	1	06/05/15 06:41	06/08/15 16:35	VSS

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



UG-2-0615-BG L768982-14 GW

Collected by
Ron Wood

Collected date/time
06/03/15 10:25

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 12:23	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/09/15 15:59	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 22:22	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 23:16	06/11/15 23:16	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/10/15 02:40	06/10/15 02:40	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:31	06/11/15 04:31	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:34	JAL
Wet Chemistry by Method 9056MOD	WG794587	100	06/10/15 20:52	06/10/15 20:52	NJM

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

EB-33-0615-BG L768982-15 GW

Collected by
Ron Wood

Collected date/time
06/03/15 10:45

Received date/time
06/04/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Gravimetric Analysis by Method 2540 C-2011	WG793849	1	06/06/15 13:13	06/09/15 16:59	JER
Mercury by Method 7470A	WG793530	1	06/05/15 01:58	06/05/15 21:23	MPT
Metals (ICPMS) by Method 6020	WG793580	1	06/05/15 06:41	06/08/15 16:37	VSS
Metals (ICPMS) by Method 6020	WG793649	1	06/05/15 07:54	06/05/15 12:26	LAT
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG794004	1	06/07/15 11:09	06/09/15 16:22	ADF
Semi-Volatile Organic Compounds (GC) by Method 8015	WG793561	1	06/06/15 02:06	06/06/15 22:40	JNS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG793965	1	06/11/15 23:38	06/11/15 23:38	MCB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG793664	1	06/10/15 03:03	06/10/15 03:03	KLO
Wet Chemistry by Method 353.2	WG794537	1	06/11/15 04:32	06/11/15 04:32	ASK
Wet Chemistry by Method 9012B	WG793865	1	06/06/15 09:27	06/10/15 15:35	JAL
Wet Chemistry by Method 9056MOD	WG794587	1	06/10/15 17:23	06/10/15 17:23	NJM

⁷ Gl

⁸ Al

⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the

Pam Langford

Pam Langford
Technical Service Representative

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	5130		2.80	10.0	1	06/06/2015 14:03	WG793713

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	0.884		0.0200	0.100	1	06/11/2015 04:07	WG794537

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	06/10/2015 15:16	WG793865

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	1580		5.20	100	100	06/10/2015 20:37	WG794586
Fluoride	17.0		0.990	10.0	100	06/10/2015 20:37	WG794586
Sulfate	1500		7.70	500	100	06/10/2015 20:37	WG794586

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	06/05/2015 20:30	WG793530

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0117	J	0.00200	0.100	1	06/07/2015 17:43	WG793580
Arsenic	0.00162	J	0.000250	0.00200	1	06/05/2015 10:05	WG793649
Arsenic,Dissolved	0.00171	J	0.000250	0.00200	1	06/07/2015 17:43	WG793580
Barium	0.0265		0.000360	0.00500	1	06/05/2015 10:05	WG793649
Barium,Dissolved	0.0277		0.000360	0.00500	1	06/07/2015 17:43	WG793580
Boron,Dissolved	0.462		0.00150	0.0200	1	06/07/2015 17:43	WG793580
Cadmium,Dissolved	U		0.000160	0.00100	1	06/07/2015 17:43	WG793580
Calcium,Dissolved	446	4	0.0460	1.00	1	06/07/2015 17:43	WG793580
Chromium	0.000959	J	0.000540	0.00200	1	06/05/2015 10:05	WG793649
Chromium,Dissolved	U		0.000540	0.00200	1	06/07/2015 17:43	WG793580
Copper,Dissolved	0.00142	J	0.000520	0.00500	1	06/07/2015 17:43	WG793580
Cobalt,Dissolved	U		0.000260	0.00200	1	06/07/2015 17:43	WG793580
Iron	0.0931	J	0.0150	0.100	1	06/05/2015 10:05	WG793649
Iron,Dissolved	U		0.0150	0.100	1	06/07/2015 17:43	WG793580
Lead	U		0.000240	0.00200	1	06/05/2015 10:05	WG793649
Lead,Dissolved	U		0.000240	0.00200	1	06/07/2015 17:43	WG793580
Manganese	0.211		0.000250	0.00500	1	06/05/2015 10:05	WG793649
Manganese,Dissolved	0.180		0.000250	0.00500	1	06/07/2015 17:43	WG793580
Molybdenum,Dissolved	0.00431	J	0.000140	0.00500	1	06/07/2015 17:43	WG793580
Nickel	0.0117		0.000350	0.00200	1	06/05/2015 10:05	WG793649
Nickel,Dissolved	0.00123	J	0.000350	0.00200	1	06/07/2015 17:43	WG793580
Potassium,Dissolved	4.32		0.0370	1.00	1	06/07/2015 17:43	WG793580
Selenium	0.00311		0.000380	0.00200	1	06/05/2015 10:05	WG793649
Selenium,Dissolved	0.00343		0.000380	0.00200	1	06/07/2015 17:43	WG793580
Silver,Dissolved	U		0.000310	0.00200	1	06/07/2015 17:43	WG793580
Sodium,Dissolved	988		0.550	5.00	5	06/08/2015 16:40	WG793580



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00664	U	0.000330	0.0100	1	06/07/2015 17:43	WG793580
Vanadium	0.00368	U	0.000180	0.00500	1	06/05/2015 10:05	WG793649
Vanadium,Dissolved	0.00340	U	0.000180	0.00500	1	06/07/2015 17:43	WG793580
Zinc,Dissolved	U		0.00260	0.0250	1	06/07/2015 17:43	WG793580

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	06/11/2015 15:42	WG793965
(S) a,a,a-Trifluorotoluene(FID)	90.4			62.0-128		06/11/2015 15:42	WG793965

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	06/09/2015 21:41	WG793664
Carbon tetrachloride	U		0.000380	0.00100	1	06/09/2015 21:41	WG793664
Chloroform	U		0.000320	0.00500	1	06/09/2015 21:41	WG793664
1,2-Dibromoethane	U		0.000380	0.00100	1	06/09/2015 21:41	WG793664
1,1-Dichloroethane	U		0.000260	0.00100	1	06/09/2015 21:41	WG793664
1,2-Dichloroethane	U		0.000360	0.00100	1	06/09/2015 21:41	WG793664
1,1-Dichloroethene	U		0.000400	0.00100	1	06/09/2015 21:41	WG793664
Ethylbenzene	U		0.000380	0.00100	1	06/09/2015 21:41	WG793664
Methylene Chloride	U		0.00100	0.00500	1	06/09/2015 21:41	WG793664
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	06/09/2015 21:41	WG793664
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	06/09/2015 21:41	WG793664
Toluene	U		0.000780	0.00500	1	06/09/2015 21:41	WG793664
1,1,1-Trichloroethane	U		0.000319	0.00100	1	06/09/2015 21:41	WG793664
Tetrachloroethene	U		0.000372	0.00100	1	06/09/2015 21:41	WG793664
1,1,2-Trichloroethane	U		0.000380	0.00100	1	06/09/2015 21:41	WG793664
Vinyl chloride	U		0.000260	0.00100	1	06/09/2015 21:41	WG793664
o-Xylene	U		0.000340	0.00100	1	06/09/2015 21:41	WG793664
m&p-Xylene	U		0.000720	0.00200	1	06/09/2015 21:41	WG793664
Xylenes, Total	U		0.00110	0.00300	1	06/09/2015 21:41	WG793664
(S) Toluene-d8	110			90.0-115		06/09/2015 21:41	WG793664
(S) Dibromofluoromethane	111			79.0-121		06/09/2015 21:41	WG793664
(S) 4-Bromofluorobenzene	95.7			80.1-120		06/09/2015 21:41	WG793664

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0440	U	0.0220	0.100	1	06/06/2015 17:18	WG793561
C28-C40 Oil Range	U		0.0120	0.100	1	06/06/2015 17:18	WG793561
(S) o-Terphenyl	107			50.0-150		06/06/2015 17:18	WG793561

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	06/08/2015 16:20	WG794004
1-Methylnaphthalene	U		0.000330	0.00100	1	06/08/2015 16:20	WG794004
2-Methylnaphthalene	U		0.000310	0.00100	1	06/08/2015 16:20	WG794004
Naphthalene	U		0.000370	0.00100	1	06/08/2015 16:20	WG794004
(S) 2-Fluorophenol	44.0			10.0-77.9		06/08/2015 16:20	WG794004
(S) Phenol-d5	30.5			5.00-70.1		06/08/2015 16:20	WG794004
(S) Nitrobenzene-d5	70.2			21.8-123		06/08/2015 16:20	WG794004



Collected date/time: 06/01/15 15:20

L768982

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	67.3			29.5-131		06/08/2015 16:20	WG794004
(S) 2,4,6-Tribromophenol	76.2			11.2-130		06/08/2015 16:20	WG794004
(S) p-Terphenyl-d14	63.5			29.3-137		06/08/2015 16:20	WG794004

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	8000		2.80	10.0	1	06/06/2015 14:03	WG793713

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	0.982		0.0200	0.100	1	06/11/2015 04:08	WG794537

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	06/10/2015 15:17	WG793865

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	2590		5.20	100	100	06/10/2015 20:52	WG794586
Fluoride	19.0		0.990	10.0	100	06/10/2015 20:52	WG794586
Sulfate	2200		7.70	500	100	06/10/2015 20:52	WG794586

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	06/05/2015 20:33	WG793530

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0100	0.500	5	06/08/2015 16:42	WG793580
Arsenic	0.00239		0.000250	0.00200	1	06/05/2015 10:15	WG793649
Arsenic,Dissolved	U		0.00120	0.0100	5	06/08/2015 16:42	WG793580
Barium	0.0235		0.000360	0.00500	1	06/05/2015 10:15	WG793649
Barium,Dissolved	0.0206	J	0.00180	0.0250	5	06/08/2015 16:42	WG793580
Boron,Dissolved	0.467		0.00750	0.100	5	06/08/2015 16:42	WG793580
Cadmium,Dissolved	U		0.000800	0.00500	5	06/08/2015 16:42	WG793580
Calcium,Dissolved	808		0.230	5.00	5	06/08/2015 16:42	WG793580
Chromium	0.000834	J	0.000540	0.00200	1	06/05/2015 10:15	WG793649
Chromium,Dissolved	U		0.00270	0.0100	5	06/08/2015 16:42	WG793580
Copper,Dissolved	U		0.00260	0.0250	5	06/08/2015 16:42	WG793580
Cobalt,Dissolved	U		0.00130	0.0100	5	06/08/2015 16:42	WG793580
Iron	0.887		0.0150	0.100	1	06/05/2015 10:15	WG793649
Iron,Dissolved	U		0.0750	0.500	5	06/08/2015 16:42	WG793580
Lead	U		0.000240	0.00200	1	06/05/2015 10:15	WG793649
Lead,Dissolved	U		0.00120	0.0100	5	06/08/2015 16:42	WG793580
Manganese	1.25		0.000250	0.00500	1	06/05/2015 10:15	WG793649
Manganese,Dissolved	1.13		0.00120	0.0250	5	06/08/2015 16:42	WG793580
Molybdenum,Dissolved	U		0.000700	0.0250	5	06/08/2015 16:42	WG793580
Nickel	0.00257		0.000350	0.00200	1	06/05/2015 10:15	WG793649
Nickel,Dissolved	0.00928	J	0.00180	0.0100	5	06/08/2015 16:42	WG793580
Potassium,Dissolved	5.53		0.180	5.00	5	06/08/2015 16:42	WG793580
Selenium	0.00128	J	0.000380	0.00200	1	06/05/2015 10:15	WG793649
Selenium,Dissolved	U		0.00190	0.0100	5	06/08/2015 16:42	WG793580
Silver,Dissolved	U		0.00160	0.0100	5	06/08/2015 16:42	WG793580
Sodium,Dissolved	1460		0.550	5.00	5	06/08/2015 16:42	WG793580



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00167	U	0.00160	0.0500	5	06/08/2015 16:42	WG793580
Vanadium	0.00248	U	0.000180	0.00500	1	06/05/2015 10:15	WG793649
Vanadium,Dissolved	0.00141	U	0.000900	0.0250	5	06/08/2015 16:42	WG793580
Zinc,Dissolved	0.0296	U	0.0130	0.125	5	06/08/2015 16:42	WG793580

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	06/11/2015 16:05	WG793965
(S) a,a,a-Trifluorotoluene(FID)	90.5			62.0-128		06/11/2015 16:05	WG793965

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	06/09/2015 22:05	WG793664
Carbon tetrachloride	U		0.000380	0.00100	1	06/09/2015 22:05	WG793664
Chloroform	U		0.000320	0.00500	1	06/09/2015 22:05	WG793664
1,2-Dibromoethane	U		0.000380	0.00100	1	06/09/2015 22:05	WG793664
1,1-Dichloroethane	U		0.000260	0.00100	1	06/09/2015 22:05	WG793664
1,2-Dichloroethane	U		0.000360	0.00100	1	06/09/2015 22:05	WG793664
1,1-Dichloroethene	U		0.000400	0.00100	1	06/09/2015 22:05	WG793664
Ethylbenzene	U		0.000380	0.00100	1	06/09/2015 22:05	WG793664
Methylene Chloride	U		0.00100	0.00500	1	06/09/2015 22:05	WG793664
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	06/09/2015 22:05	WG793664
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	06/09/2015 22:05	WG793664
Toluene	U		0.000780	0.00500	1	06/09/2015 22:05	WG793664
1,1,1-Trichloroethane	U		0.000319	0.00100	1	06/09/2015 22:05	WG793664
Tetrachloroethene	U		0.000372	0.00100	1	06/09/2015 22:05	WG793664
1,1,2-Trichloroethane	U		0.000380	0.00100	1	06/09/2015 22:05	WG793664
Vinyl chloride	U		0.000260	0.00100	1	06/09/2015 22:05	WG793664
o-Xylene	U		0.000340	0.00100	1	06/09/2015 22:05	WG793664
m&p-Xylene	U		0.000720	0.00200	1	06/09/2015 22:05	WG793664
Xylenes, Total	U		0.00110	0.00300	1	06/09/2015 22:05	WG793664
(S) Toluene-d8	108			90.0-115		06/09/2015 22:05	WG793664
(S) Dibromofluoromethane	112			79.0-121		06/09/2015 22:05	WG793664
(S) 4-Bromofluorobenzene	97.5			80.1-120		06/09/2015 22:05	WG793664

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.0500	U	0.0220	0.100	1	06/06/2015 17:36	WG793561
C28-C40 Oil Range	U		0.0120	0.100	1	06/06/2015 17:36	WG793561
(S) o-Terphenyl	105			50.0-150		06/06/2015 17:36	WG793561

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	06/08/2015 16:44	WG794004
1-Methylnaphthalene	U		0.000330	0.00100	1	06/08/2015 16:44	WG794004
2-Methylnaphthalene	U		0.000310	0.00100	1	06/08/2015 16:44	WG794004
Naphthalene	U		0.000370	0.00100	1	06/08/2015 16:44	WG794004
(S) 2-Fluorophenol	33.4			10.0-77.9		06/08/2015 16:44	WG794004
(S) Phenol-d5	19.4			5.00-70.1		06/08/2015 16:44	WG794004
(S) Nitrobenzene-d5	72.6			21.8-123		06/08/2015 16:44	WG794004



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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	74.4			29.5-131		06/08/2015 16:44	WG794004
(S) 2,4,6-Tribromophenol	81.1			11.2-130		06/08/2015 16:44	WG794004
(S) p-Terphenyl-d14	83.3			29.3-137		06/08/2015 16:44	WG794004

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



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	5.00	J	2.80	10.0	1	06/06/2015 14:03	WG793713

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0200	0.100	1	06/11/2015 04:10	WG794537

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	0.00240	F J	0.00180	0.00500	1	06/10/2015 15:18	WG793865

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	6.15		0.0520	1.00	1	06/10/2015 14:42	WG794586
Fluoride	0.0811	J	0.00990	0.100	1	06/10/2015 14:42	WG794586
Sulfate	0.0938	J	0.0770	5.00	1	06/10/2015 14:42	WG794586

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	06/05/2015 20:42	WG793530

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00200	0.100	1	06/08/2015 16:45	WG793580
Arsenic	U		0.000250	0.00200	1	06/05/2015 10:18	WG793649
Arsenic,Dissolved	U		0.000250	0.00200	1	06/08/2015 16:45	WG793580
Barium	0.00159	J	0.000360	0.00500	1	06/05/2015 10:18	WG793649
Barium,Dissolved	0.000906	J	0.000360	0.00500	1	06/08/2015 16:45	WG793580
Boron,Dissolved	0.0286		0.00150	0.0200	1	06/08/2015 16:45	WG793580
Cadmium,Dissolved	U		0.000160	0.00100	1	06/08/2015 16:45	WG793580
Calcium,Dissolved	U		0.0460	1.00	1	06/08/2015 16:45	WG793580
Chromium	U		0.000540	0.00200	1	06/05/2015 10:18	WG793649
Chromium,Dissolved	U		0.000540	0.00200	1	06/08/2015 16:45	WG793580
Copper,Dissolved	U		0.000520	0.00500	1	06/08/2015 16:45	WG793580
Cobalt,Dissolved	U		0.000260	0.00200	1	06/08/2015 16:45	WG793580
Iron	U		0.0150	0.100	1	06/05/2015 10:18	WG793649
Iron,Dissolved	U		0.0150	0.100	1	06/08/2015 16:45	WG793580
Lead	U		0.000240	0.00200	1	06/05/2015 10:18	WG793649
Lead,Dissolved	U		0.000240	0.00200	1	06/08/2015 16:45	WG793580
Manganese	0.000487	J	0.000250	0.00500	1	06/05/2015 10:18	WG793649
Manganese,Dissolved	U		0.000250	0.00500	1	06/08/2015 16:45	WG793580
Molybdenum,Dissolved	U		0.000140	0.00500	1	06/08/2015 16:45	WG793580
Nickel	0.00194	J	0.000350	0.00200	1	06/05/2015 10:18	WG793649
Nickel,Dissolved	U		0.000350	0.00200	1	06/08/2015 16:45	WG793580
Potassium,Dissolved	U		0.0370	1.00	1	06/08/2015 16:45	WG793580
Selenium	U		0.000380	0.00200	1	06/05/2015 10:18	WG793649
Selenium,Dissolved	U		0.000380	0.00200	1	06/08/2015 16:45	WG793580
Silver,Dissolved	U		0.000310	0.00200	1	06/08/2015 16:45	WG793580
Sodium,Dissolved	0.182	J	0.110	1.00	1	06/08/2015 16:45	WG793580



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	U		0.000330	0.0100	1	06/08/2015 16:45	WG793580
Vanadium	0.000380	✓	0.000180	0.00500	1	06/05/2015 10:18	WG793649
Vanadium,Dissolved	0.000355	✓	0.000180	0.00500	1	06/08/2015 16:45	WG793580
Zinc,Dissolved	U		0.00260	0.0250	1	06/08/2015 16:45	WG793580

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	06/11/2015 16:27	WG793965
(S) a,a,a-Trifluorotoluene(FID)	90.7			62.0-128		06/11/2015 16:27	WG793965

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	06/09/2015 22:28	WG793664
Carbon tetrachloride	U		0.000380	0.00100	1	06/09/2015 22:28	WG793664
Chloroform	U		0.000320	0.00500	1	06/09/2015 22:28	WG793664
1,2-Dibromoethane	U		0.000380	0.00100	1	06/09/2015 22:28	WG793664
1,1-Dichloroethane	U		0.000260	0.00100	1	06/09/2015 22:28	WG793664
1,2-Dichloroethane	U		0.000360	0.00100	1	06/09/2015 22:28	WG793664
1,1-Dichloroethene	U		0.000400	0.00100	1	06/09/2015 22:28	WG793664
Ethylbenzene	U		0.000380	0.00100	1	06/09/2015 22:28	WG793664
Methylene Chloride	U		0.00100	0.00500	1	06/09/2015 22:28	WG793664
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	06/09/2015 22:28	WG793664
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	06/09/2015 22:28	WG793664
Toluene	U		0.000780	0.00500	1	06/09/2015 22:28	WG793664
1,1,1-Trichloroethane	U		0.000319	0.00100	1	06/09/2015 22:28	WG793664
Tetrachloroethene	U		0.000372	0.00100	1	06/09/2015 22:28	WG793664
1,1,2-Trichloroethane	U		0.000380	0.00100	1	06/09/2015 22:28	WG793664
Vinyl chloride	U		0.000260	0.00100	1	06/09/2015 22:28	WG793664
o-Xylene	U		0.000340	0.00100	1	06/09/2015 22:28	WG793664
m&p-Xylene	U		0.000720	0.00200	1	06/09/2015 22:28	WG793664
Xylenes, Total	U		0.00110	0.00300	1	06/09/2015 22:28	WG793664
(S) Toluene-d8	109			90.0-115		06/09/2015 22:28	WG793664
(S) Dibromofluoromethane	112			79.0-121		06/09/2015 22:28	WG793664
(S) 4-Bromofluorobenzene	97.0			80.1-120		06/09/2015 22:28	WG793664

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		0.0220	0.100	1	06/06/2015 17:54	WG793561
C28-C40 Oil Range	U		0.0120	0.100	1	06/06/2015 17:54	WG793561
(S) o-Terphenyl	106			50.0-150		06/06/2015 17:54	WG793561

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	06/08/2015 17:07	WG794004
1-Methylnaphthalene	U		0.000330	0.00100	1	06/08/2015 17:07	WG794004
2-Methylnaphthalene	U		0.000310	0.00100	1	06/08/2015 17:07	WG794004
Naphthalene	U		0.000370	0.00100	1	06/08/2015 17:07	WG794004
(S) 2-Fluorophenol	47.2			10.0-77.9		06/08/2015 17:07	WG794004
(S) Phenol-d5	30.7			5.00-70.1		06/08/2015 17:07	WG794004
(S) Nitrobenzene-d5	63.9			21.8-123		06/08/2015 17:07	WG794004

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	68.7			29.5-131		06/08/2015 17:07	WG794004
(S) 2,4,6-Tribromophenol	79.3			11.2-130		06/08/2015 17:07	WG794004
(S) p-Terphenyl-d14	67.4			29.3-137		06/08/2015 17:07	WG794004

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	19400		2.80	10.0	1	06/06/2015 14:04	WG793713

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	0.119		0.0200	0.100	1	06/11/2015 04:11	WG794537

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	06/10/2015 15:21	WG793865

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	7190		5.20	100	100	06/10/2015 21:08	WG794586
Fluoride	20.2		0.990	10.0	100	06/10/2015 21:08	WG794586
Sulfate	5520		7.70	500	100	06/10/2015 21:08	WG794586

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	06/05/2015 20:45	WG793530

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0200	1.00	10	06/08/2015 16:48	WG793580
Arsenic	0.0122		0.000250	0.00200	1	06/05/2015 10:21	WG793649
Arsenic,Dissolved	0.0100	J	0.00250	0.0200	10	06/08/2015 16:48	WG793580
Barium	0.0153		0.000360	0.00500	1	06/05/2015 10:21	WG793649
Barium,Dissolved	0.0125	J	0.00360	0.0500	10	06/08/2015 16:48	WG793580
Boron,Dissolved	0.586		0.0150	0.200	10	06/08/2015 16:48	WG793580
Cadmium,Dissolved	U		0.00160	0.0100	10	06/08/2015 16:48	WG793580
Calcium,Dissolved	1010		0.460	10.0	10	06/08/2015 16:48	WG793580
Chromium	0.000820	J	0.000540	0.00200	1	06/05/2015 10:21	WG793649
Chromium,Dissolved	U		0.00540	0.0200	10	06/08/2015 16:48	WG793580
Copper,Dissolved	U		0.00520	0.0500	10	06/08/2015 16:48	WG793580
Cobalt,Dissolved	U		0.00260	0.0200	10	06/08/2015 16:48	WG793580
Iron	U		0.0150	0.100	1	06/05/2015 10:21	WG793649
Iron,Dissolved	U		0.150	1.00	10	06/08/2015 16:48	WG793580
Lead	U		0.000240	0.00200	1	06/05/2015 10:21	WG793649
Lead,Dissolved	U		0.00240	0.0200	10	06/08/2015 16:48	WG793580
Manganese	0.504		0.000250	0.00500	1	06/05/2015 10:21	WG793649
Manganese,Dissolved	0.304		0.00250	0.0500	10	06/08/2015 16:48	WG793580
Molybdenum,Dissolved	0.0182	J	0.00140	0.0500	10	06/08/2015 16:48	WG793580
Nickel	0.00808		0.000350	0.00200	1	06/05/2015 10:21	WG793649
Nickel,Dissolved	0.0239		0.00350	0.0200	10	06/08/2015 16:48	WG793580
Potassium,Dissolved	7.96	J	0.370	10.0	10	06/08/2015 16:48	WG793580
Selenium	0.0190		0.000380	0.00200	1	06/05/2015 10:21	WG793649
Selenium,Dissolved	0.0138	J	0.00380	0.0200	10	06/08/2015 16:48	WG793580
Silver,Dissolved	U		0.00310	0.0200	10	06/08/2015 16:48	WG793580
Sodium,Dissolved	4590		1.10	10.0	10	06/08/2015 16:48	WG793580



Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.0356	└	0.00330	0.100	10	06/08/2015 16:48	WG793580
Vanadium	0.0144		0.000180	0.00500	1	06/05/2015 10:21	WG793649
Vanadium,Dissolved	0.0146	└	0.00180	0.0500	10	06/08/2015 16:48	WG793580
Zinc,Dissolved	U		0.0260	0.250	10	06/08/2015 16:48	WG793580

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0310	0.100	1	06/11/2015 16:49	WG793965
(S) a,a,a-Trifluorotoluene(FID)	90.7			62.0-128		06/11/2015 16:49	WG793965

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.000330	0.00100	1	06/09/2015 22:51	WG793664
Carbon tetrachloride	U		0.000380	0.00100	1	06/09/2015 22:51	WG793664
Chloroform	U		0.000320	0.00500	1	06/09/2015 22:51	WG793664
1,2-Dibromoethane	U		0.000380	0.00100	1	06/09/2015 22:51	WG793664
1,1-Dichloroethane	U		0.000260	0.00100	1	06/09/2015 22:51	WG793664
1,2-Dichloroethane	U		0.000360	0.00100	1	06/09/2015 22:51	WG793664
1,1-Dichloroethene	U		0.000400	0.00100	1	06/09/2015 22:51	WG793664
Ethylbenzene	U		0.000380	0.00100	1	06/09/2015 22:51	WG793664
Methylene Chloride	U		0.00100	0.00500	1	06/09/2015 22:51	WG793664
1,1,1,2-Tetrachloroethane	U		0.000380	0.00100	1	06/09/2015 22:51	WG793664
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	1	06/09/2015 22:51	WG793664
Toluene	U		0.000780	0.00500	1	06/09/2015 22:51	WG793664
1,1,1-Trichloroethane	U		0.000319	0.00100	1	06/09/2015 22:51	WG793664
Tetrachloroethene	U		0.000372	0.00100	1	06/09/2015 22:51	WG793664
1,1,2-Trichloroethane	U		0.000380	0.00100	1	06/09/2015 22:51	WG793664
Vinyl chloride	U		0.000260	0.00100	1	06/09/2015 22:51	WG793664
o-Xylene	U		0.000340	0.00100	1	06/09/2015 22:51	WG793664
m&p-Xylene	U		0.000720	0.00200	1	06/09/2015 22:51	WG793664
Xylenes, Total	U		0.00110	0.00300	1	06/09/2015 22:51	WG793664
(S) Toluene-d8	111			90.0-115		06/09/2015 22:51	WG793664
(S) Dibromofluoromethane	112			79.0-121		06/09/2015 22:51	WG793664
(S) 4-Bromofluorobenzene	98.9			80.1-120		06/09/2015 22:51	WG793664

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	0.590		0.0220	0.100	1	06/06/2015 18:12	WG793561
C28-C40 Oil Range	0.120		0.0120	0.100	1	06/06/2015 18:12	WG793561
(S) o-Terphenyl	104			50.0-150		06/06/2015 18:12	WG793561

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzo(a)pyrene	U		0.000340	0.00100	1	06/08/2015 17:30	WG794004
1-Methylnaphthalene	U		0.000330	0.00100	1	06/08/2015 17:30	WG794004
2-Methylnaphthalene	U		0.000310	0.00100	1	06/08/2015 17:30	WG794004
Naphthalene	U		0.000370	0.00100	1	06/08/2015 17:30	WG794004
(S) 2-Fluorophenol	57.5			10.0-77.9		06/08/2015 17:30	WG794004
(S) Phenol-d5	38.1			5.00-70.1		06/08/2015 17:30	WG794004
(S) Nitrobenzene-d5	76.3			21.8-123		06/08/2015 17:30	WG794004

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	80.4			29.5-131		06/08/2015 17:30	WG794004
(S) 2,4,6-Tribromophenol	94.2			11.2-130		06/08/2015 17:30	WG794004
(S) p-Terphenyl-d14	77.0			29.3-137		06/08/2015 17:30	WG794004

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	2270		2.80	10.0	1	06/06/2015 14:04	WG793713

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Nitrate-Nitrite	2.09		0.0200	0.100	1	06/11/2015 04:12	WG794537

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Cyanide	U		0.00180	0.00500	1	06/10/2015 15:22	WG793865

Wet Chemistry by Method 9056MOD

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	751		5.20	100	100	06/10/2015 21:23	WG794586
Fluoride	17.6		0.990	10.0	100	06/10/2015 21:23	WG794586
Sulfate	915		7.70	500	100	06/10/2015 21:23	WG794586

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	1	06/05/2015 20:48	WG793530

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00200	0.100	1	06/08/2015 16:50	WG793580
Arsenic	0.00102	J	0.000250	0.00200	1	06/05/2015 11:24	WG793649
Arsenic,Dissolved	0.000754	J	0.000250	0.00200	1	06/08/2015 16:50	WG793580
Barium	0.0152		0.000360	0.00500	1	06/05/2015 11:24	WG793649
Barium,Dissolved	0.0137		0.000360	0.00500	1	06/08/2015 16:50	WG793580
Boron,Dissolved	0.122		0.00150	0.0200	1	06/08/2015 16:50	WG793580
Cadmium,Dissolved	U		0.000160	0.00100	1	06/08/2015 16:50	WG793580
Calcium,Dissolved	372		0.0460	1.00	1	06/08/2015 16:50	WG793580
Chromium	0.00174	J	0.000540	0.00200	1	06/05/2015 11:24	WG793649
Chromium,Dissolved	0.000718	J	0.000540	0.00200	1	06/08/2015 16:50	WG793580
Copper,Dissolved	U		0.000520	0.00500	1	06/08/2015 16:50	WG793580
Cobalt,Dissolved	U		0.000260	0.00200	1	06/08/2015 16:50	WG793580
Iron	U		0.0150	0.100	1	06/05/2015 11:24	WG793649
Iron,Dissolved	U		0.0150	0.100	1	06/08/2015 16:50	WG793580
Lead	U		0.000240	0.00200	1	06/05/2015 11:24	WG793649
Lead,Dissolved	U		0.000240	0.00200	1	06/08/2015 16:50	WG793580
Manganese	0.00105	J	0.000250	0.00500	1	06/05/2015 11:24	WG793649
Manganese,Dissolved	U		0.000250	0.00500	1	06/08/2015 16:50	WG793580
Molybdenum,Dissolved	0.00838		0.000140	0.00500	1	06/08/2015 16:50	WG793580
Nickel	0.00207		0.000350	0.00200	1	06/05/2015 11:24	WG793649
Nickel,Dissolved	U		0.000350	0.00200	1	06/08/2015 16:50	WG793580
Potassium,Dissolved	1.87		0.0370	1.00	1	06/08/2015 16:50	WG793580
Selenium	0.00799		0.000380	0.00200	1	06/05/2015 11:24	WG793649
Selenium,Dissolved	0.00797		0.000380	0.00200	1	06/08/2015 16:50	WG793580
Silver,Dissolved	U		0.000310	0.00200	1	06/08/2015 16:50	WG793580
Sodium,Dissolved	78.1		0.110	1.00	1	06/08/2015 16:50	WG793580