ANALYTICAL REPORT

October 04, 2024

Pace Analytical Services, LLC
2025.04.23 21:52:11 -05'00'
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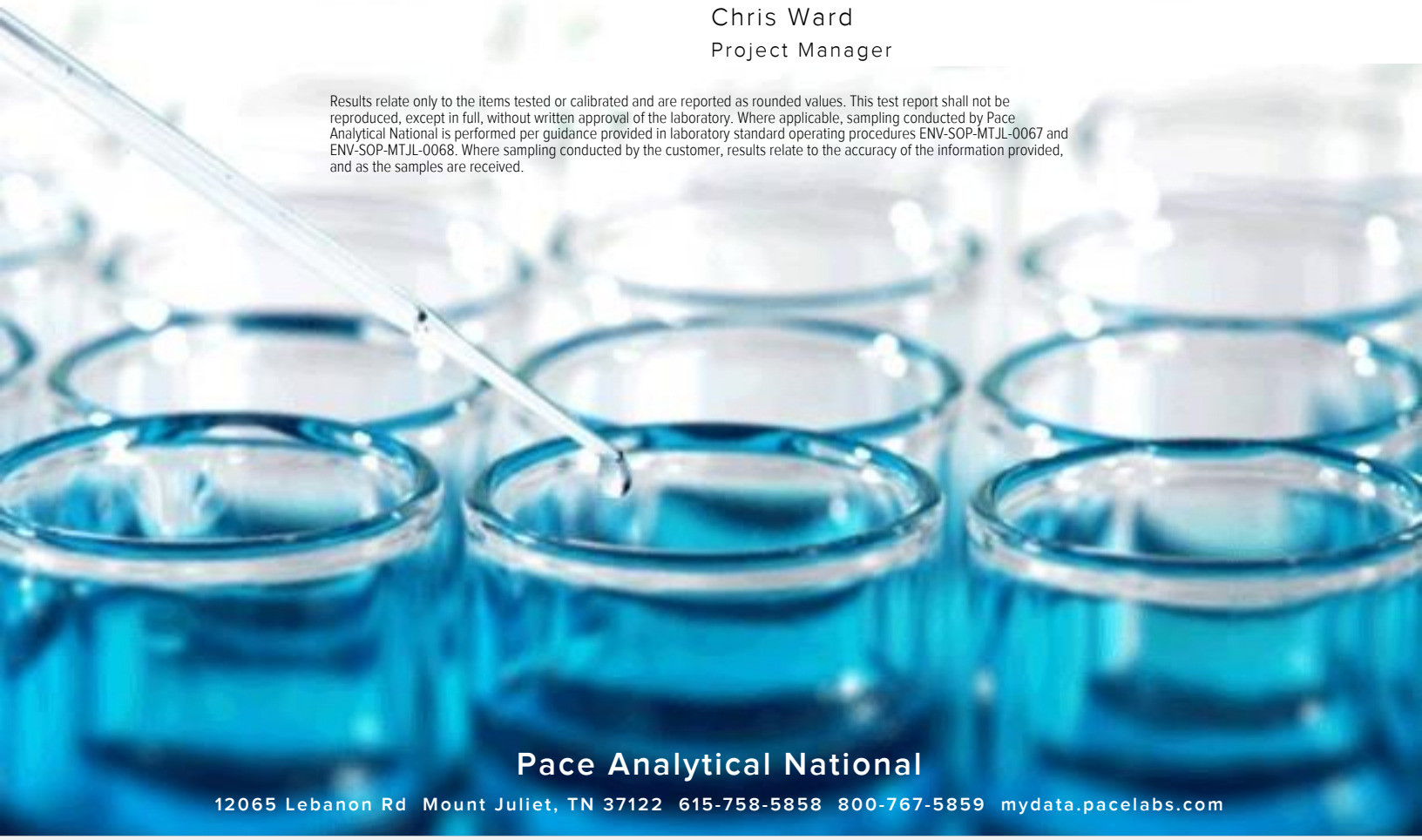
Caerus Oil and Gas

Sample Delivery Group:	L1780144
Samples Received:	09/20/2024
Project Number:	
Description:	Corral Creek 4508 Facility Decommissioning
Site:	CORRAL CREEK 4508
Report To:	Jake J. / Brett M. / Blair R. / Andy V. 143 Diamond Avenue Parachute, CO 81635

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

20240919-M29 199-(FL-T-BASE)@5 L1780144-01 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 09:42 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370236	1	09/27/24 20:20	09/27/24 20:20	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 16:40	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371241	1	09/27/24 11:25	09/27/24 12:33	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371249	1	09/27/24 11:29	09/28/24 14:07	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370265	1	09/26/24 19:30	09/27/24 01:12	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 12:44	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369031	1	09/24/24 13:25	09/25/24 06:15	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 06:22	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 16:51	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 00:26	MKM	Mt. Juliet, TN

20240919-M29 199-(FL-T-NW)@5 L1780144-02 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 09:43 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370234	1	09/28/24 18:15	09/28/24 18:15	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 16:46	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371933	1	09/28/24 21:34	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371938	1	09/28/24 21:32	09/28/24 22:20	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370263	1	09/27/24 22:59	09/28/24 02:37	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 13:00	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369031	1	09/24/24 13:25	09/25/24 06:40	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 06:41	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 21:52	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 00:44	MKM	Mt. Juliet, TN

20240919-M29 199-(FL-T-EW)@5 L1780144-03 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 09:45 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370234	1	09/28/24 18:17	09/28/24 18:17	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 16:52	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371933	1	09/28/24 21:34	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371938	1	09/28/24 21:32	09/28/24 22:20	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370263	1	09/27/24 22:59	09/28/24 02:39	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 13:03	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369031	1	09/24/24 13:25	09/25/24 07:04	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 06:59	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 19:28	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 19:53	JCH	Mt. Juliet, TN

20240919-M29 199-(FL-T-SW)@5 L1780144-04 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 09:47 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370236	1	09/27/24 20:18	09/27/24 20:18	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 16:58	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371241	1	09/27/24 11:25	09/27/24 12:33	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371249	1	09/27/24 11:29	09/28/24 14:07	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370265	1	09/26/24 19:30	09/27/24 01:14	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 13:07	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369031	1	09/24/24 13:25	09/25/24 07:28	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 07:18	JAH	Mt. Juliet, TN

20240919-M29 199-(FL-T-SW)@5 L1780144-04 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 09:47 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	10	09/27/24 08:20	09/27/24 19:54	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 20:10	JCH	Mt. Juliet, TN

20240919-M29 199-(FL-T-WW)@5 L1780144-05 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 09:49 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370234	1	09/28/24 18:19	09/28/24 18:19	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 17:04	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371933	1	09/28/24 21:34	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371938	1	09/28/24 21:32	09/28/24 22:20	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370263	1	09/27/24 22:59	09/28/24 02:40	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 13:17	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 13:25	09/25/24 15:44	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 07:37	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 18:36	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 01:01	MKM	Mt. Juliet, TN

20240919-M29 199-(FL-T-STOCK)@5 L1780144-06 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 09:51 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370231	1	09/27/24 23:20	09/27/24 23:20	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 17:11	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371706	1	09/28/24 08:41	09/28/24 16:30	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371709	1	09/28/24 08:46	09/28/24 16:15	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370249	1	09/26/24 19:25	09/27/24 00:35	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 13:20	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 13:25	09/25/24 16:07	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 07:55	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 19:15	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 19:35	JCH	Mt. Juliet, TN

20240919-M29 199-(WH-BASE)@9 L1780144-07 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 10:38 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370231	1	09/27/24 23:21	09/27/24 23:21	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 17:23	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371706	1	09/28/24 08:41	09/28/24 16:30	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371709	1	09/28/24 08:46	09/28/24 16:15	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370249	1	09/26/24 19:25	09/27/24 00:37	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	25	10/03/24 14:26	10/04/24 13:37	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 13:23	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2371284	25	09/24/24 13:25	09/28/24 23:34	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 08:14	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 19:02	KDB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	5	09/27/24 08:20	09/27/24 22:32	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 01:19	MKM	Mt. Juliet, TN

20240919-M29 199-(WH-NW)@9 L1780144-08 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 10:39 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370231	1	09/27/24 23:23	09/27/24 23:23	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 17:41	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371706	1	09/28/24 08:41	09/28/24 16:30	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371709	1	09/28/24 08:46	09/28/24 16:15	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370249	1	09/26/24 19:25	09/27/24 00:39	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 13:27	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 13:25	09/25/24 16:31	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 08:33	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 17:30	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 01:37	MKM	Mt. Juliet, TN

20240919-M29 199-(WH-EW)@9 L1780144-09 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 10:41 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370234	1	09/28/24 18:20	09/28/24 18:20	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 17:48	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371933	1	09/28/24 21:34	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371938	1	09/28/24 21:32	09/28/24 22:20	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370263	1	09/27/24 22:59	09/28/24 02:42	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 13:30	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 13:25	09/25/24 16:54	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 08:51	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 16:38	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 01:55	MKM	Mt. Juliet, TN

20240919-M29 199-(WH-WW)@9 L1780144-10 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 10:43 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370236	1	09/27/24 20:25	09/27/24 20:25	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 18:00	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371241	1	09/27/24 11:25	09/27/24 12:33	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371249	1	09/27/24 11:29	09/28/24 14:07	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370265	1	09/26/24 19:30	09/27/24 01:16	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	25	10/03/24 14:26	10/04/24 14:26	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2373995	5	10/03/24 14:26	10/04/24 13:33	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 13:25	09/25/24 17:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 09:10	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 17:43	KDB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	5	09/27/24 08:20	09/27/24 22:05	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 02:12	MKM	Mt. Juliet, TN

20240919-M29 199-(WH-SW)@9 L1780144-11 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 10:45 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370231	1	09/27/24 23:25	09/27/24 23:25	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 18:06	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371706	1	09/28/24 08:41	09/28/24 16:30	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371709	1	09/28/24 08:46	09/28/24 16:15	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370249	1	09/26/24 19:25	09/27/24 00:41	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370490	20	09/29/24 08:38	09/30/24 00:36	LD	Mt. Juliet, TN

20240919-M29 199-(WH-SW)@9 L1780144-11 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 10:45 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG2370490	5	09/29/24 08:38	09/29/24 23:54	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 13:25	09/25/24 17:42	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369024	1	09/24/24 13:25	09/25/24 09:29	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 18:10	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 02:30	MKM	Mt. Juliet, TN

20240919-M29 199-(WH-STOCK) L1780144-12 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 10:48 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370234	1	09/28/24 18:22	09/28/24 18:22	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 18:12	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371933	1	09/28/24 21:34	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371938	1	09/28/24 21:32	09/28/24 22:20	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370263	1	09/27/24 22:59	09/28/24 02:44	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	20	09/30/24 08:44	09/30/24 20:17	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:08	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 13:25	09/25/24 18:05	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369065	1	09/24/24 13:25	09/25/24 03:29	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 18:49	KDB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	5	09/27/24 08:20	09/27/24 22:19	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 03:24	MKM	Mt. Juliet, TN

20240919-M29 199-(SEP-BASE)@4 L1780144-13 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 11:38 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370236	1	09/27/24 20:27	09/27/24 20:27	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 18:19	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371241	1	09/27/24 11:25	09/27/24 12:33	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371249	1	09/27/24 11:29	09/28/24 14:07	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370265	1	09/26/24 19:30	09/27/24 01:18	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:11	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2371284	25	09/24/24 13:25	09/28/24 23:57	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369065	1	09/24/24 13:25	09/25/24 03:49	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 15:59	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 03:41	MKM	Mt. Juliet, TN

20240919-M29 199-(SEP-NW)@4 L1780144-14 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 11:39 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370234	1	09/28/24 18:24	09/28/24 18:24	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 18:25	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371933	1	09/28/24 21:34	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371938	1	09/28/24 21:32	09/28/24 22:20	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370263	1	09/27/24 22:59	09/28/24 02:46	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:15	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 13:25	09/25/24 18:29	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369065	1	09/24/24 13:25	09/25/24 04:09	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 16:25	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 18:06	JCH	Mt. Juliet, TN

20240919-M29 199-(SEP-EW)@4 L1780144-15 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 11:40 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370238	1	09/28/24 23:11	09/28/24 23:11	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 18:31	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371932	1	09/28/24 21:33	09/28/24 22:50	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371940	1	09/28/24 21:33	09/29/24 14:30	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370271	1	09/27/24 22:58	09/28/24 23:43	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:25	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 13:25	09/25/24 18:52	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369065	1	09/24/24 13:25	09/25/24 04:29	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370975	1	09/27/24 08:20	09/27/24 16:12	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2370955	1	09/27/24 07:10	09/28/24 18:24	JCH	Mt. Juliet, TN

20240919-M29 199-(SEP-SW)@4 L1780144-16 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 11:42 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370236	1	09/27/24 20:29	09/27/24 20:29	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 18:37	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371241	1	09/27/24 11:25	09/27/24 12:33	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371249	1	09/27/24 11:29	09/28/24 14:07	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370265	1	09/26/24 19:30	09/27/24 01:19	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:28	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 15:26	09/25/24 19:16	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369065	1	09/24/24 15:26	09/25/24 04:48	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370983	1	09/30/24 07:01	09/30/24 14:57	AUU	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/01/24 21:45	ALM	Mt. Juliet, TN

20240919-M29 199-(SEP-WW)@4 L1780144-17 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 11:43 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370238	1	09/28/24 23:09	09/28/24 23:09	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 18:56	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371932	1	09/28/24 21:33	09/28/24 22:50	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371940	1	09/28/24 21:33	09/29/24 14:30	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370271	1	09/27/24 22:58	09/28/24 23:45	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:31	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 15:26	09/25/24 19:39	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369709	1	09/24/24 15:26	09/26/24 02:46	WHS	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370983	1	09/30/24 07:01	09/30/24 21:25	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/01/24 22:02	ALM	Mt. Juliet, TN

20240919-M29 199-(SEP-STOCK) L1780144-18 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 11:44 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370238	1	09/28/24 23:22	09/28/24 23:22	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369233	1	09/25/24 01:47	09/25/24 19:02	VSS	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371932	1	09/28/24 21:33	09/28/24 22:50	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371940	1	09/28/24 21:33	09/29/24 14:30	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370271	1	09/27/24 22:58	09/28/24 23:47	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:34	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2369420	1	09/24/24 15:26	09/25/24 20:03	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369739	1	09/24/24 15:26	09/26/24 02:20	JAH	Mt. Juliet, TN

20240919-M29 199-(SEP-STOCK) L1780144-18 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 11:44 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370983	1	09/30/24 07:01	09/30/24 21:38	KKS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/01/24 22:20	ALM	Mt. Juliet, TN

20240919-M29 199-(MH-BASE)@4 L1780144-19 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 12:37 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370237	1	09/28/24 21:30	09/28/24 21:30	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 09:14	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371934	1	09/28/24 21:30	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371935	1	09/28/24 19:02	09/29/24 14:00	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370270	1	09/27/24 23:00	09/28/24 22:09	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:38	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370003	1	09/24/24 15:26	09/26/24 00:16	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2370677	1	09/24/24 15:26	09/26/24 23:01	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370983	1	09/30/24 07:01	09/30/24 17:03	AUU	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/01/24 22:38	ALM	Mt. Juliet, TN

20240919-M29 199-(MH-NW)@4 L1780144-20 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 12:38 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370238	1	09/28/24 23:02	09/28/24 23:02	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 09:27	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371932	1	09/28/24 21:33	09/28/24 22:50	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371940	1	09/28/24 21:33	09/29/24 14:30	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370271	1	09/27/24 22:58	09/28/24 23:48	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:41	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370003	1	09/24/24 15:26	09/26/24 00:40	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2370677	1	09/24/24 15:26	09/26/24 23:20	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370983	1	09/30/24 07:01	09/30/24 17:16	AUU	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/01/24 22:55	ALM	Mt. Juliet, TN

20240919-M29 199-(MH-EW)@4 L1780144-21 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 12:39 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370237	1	09/28/24 21:58	09/28/24 21:58	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 09:33	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371934	1	09/28/24 21:30	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371935	1	09/28/24 19:02	09/29/24 14:00	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370270	1	09/27/24 23:00	09/28/24 22:11	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:44	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370003	1	09/24/24 15:26	09/26/24 01:03	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2370677	1	09/24/24 15:26	09/26/24 23:39	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 18:23	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/01/24 23:13	ALM	Mt. Juliet, TN

20240919-M29 199-(MH-SW)@4 L1780144-22 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 12:40 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370236	1	09/27/24 20:31	09/27/24 20:31	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 09:39	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371241	1	09/27/24 11:25	09/27/24 12:33	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371249	1	09/27/24 11:29	09/28/24 14:07	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370265	1	09/26/24 19:30	09/27/24 01:21	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 18:52	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370003	1	09/24/24 15:26	09/26/24 01:27	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2370677	1	09/24/24 15:26	09/26/24 23:57	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 19:03	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/01/24 23:31	ALM	Mt. Juliet, TN

20240919-M29 199-(MH-WW)@4 L1780144-23 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 12:42 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370237	1	09/28/24 21:37	09/28/24 21:37	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 09:45	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371934	1	09/28/24 21:30	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371935	1	09/28/24 19:02	09/29/24 14:00	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370270	1	09/27/24 23:00	09/28/24 22:12	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:47	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370003	1	09/24/24 15:26	09/26/24 01:50	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2370677	1	09/24/24 15:26	09/27/24 00:16	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 19:17	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/01/24 23:48	ALM	Mt. Juliet, TN

20240919-M29 199-(MH-STOCK) L1780144-24 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 12:43 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370234	1	09/28/24 18:25	09/28/24 18:25	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 09:58	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371933	1	09/28/24 21:34	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371938	1	09/28/24 21:32	09/28/24 22:20	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370263	1	09/27/24 22:59	09/28/24 02:48	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:50	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370003	1	09/24/24 15:26	09/26/24 02:13	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2372670	1	09/24/24 15:26	09/30/24 20:46	AV	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 19:43	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/02/24 00:06	ALM	Mt. Juliet, TN

20240919-M29 199-(T03-BASE)@10 L1780144-25 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 13:45 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370237	1	09/28/24 21:57	09/28/24 21:57	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 10:16	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371934	1	09/28/24 21:30	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371935	1	09/28/24 19:02	09/29/24 14:00	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370270	1	09/27/24 23:00	09/28/24 22:14	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 19:54	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2371252	1	09/24/24 15:26	09/28/24 23:43	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2370677	1	09/24/24 15:26	09/27/24 00:34	ACG	Mt. Juliet, TN

20240919-M29 199-(T03-BASE)@10 L1780144-25 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 13:45 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 17:16	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/02/24 00:23	ALM	Mt. Juliet, TN

20240919-M29 199-(T03-NW)@10 L1780144-26 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 13:46 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370238	1	09/28/24 22:55	09/28/24 22:55	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 10:23	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371932	1	09/28/24 21:33	09/28/24 22:50	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371940	1	09/28/24 21:33	09/29/24 14:30	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370271	1	09/27/24 22:58	09/28/24 23:50	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 20:04	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370003	1	09/24/24 15:26	09/26/24 02:37	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369167	1	09/24/24 15:26	09/25/24 04:57	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 17:29	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/02/24 00:41	ALM	Mt. Juliet, TN

20240919-M29 199-(T03-EW)@10 L1780144-27 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 13:47 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370234	1	09/28/24 18:27	09/28/24 18:27	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 10:29	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371933	1	09/28/24 21:34	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371938	1	09/28/24 21:32	09/28/24 22:20	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370263	1	09/27/24 22:59	09/28/24 02:53	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 20:07	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370003	1	09/24/24 15:26	09/26/24 03:00	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2370936	1	09/24/24 15:26	09/29/24 12:25	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 18:23	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/02/24 00:59	ALM	Mt. Juliet, TN

20240919-M29 199-(T03-SW)@10 L1780144-28 Solid

Collected by: Trevor Lakin | Collected date/time: 09/19/24 13:48 | Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370238	1	09/28/24 22:57	09/28/24 22:57	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 11:00	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371932	1	09/28/24 21:33	09/28/24 22:50	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371940	1	09/28/24 21:33	09/29/24 14:30	BJM	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370271	1	09/27/24 22:58	09/28/24 23:52	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 20:10	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2371252	1	09/24/24 15:26	09/29/24 00:02	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369167	1	09/24/24 15:26	09/25/24 05:16	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 18:09	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/02/24 01:16	ALM	Mt. Juliet, TN

20240919-M29 199-(T03-WW)@10 L1780144-29 Solid

Collected by: Trevor Lakin
Collected date/time: 09/19/24 13:50
Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370236	1	09/27/24 20:33	09/27/24 20:33	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 11:06	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371241	1	09/27/24 11:25	09/27/24 12:33	KA	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371249	1	09/27/24 11:29	09/28/24 14:07	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370265	1	09/26/24 19:30	09/27/24 00:51	MAP	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370490	5	09/29/24 08:38	09/30/24 00:07	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370003	1	09/24/24 15:26	09/26/24 06:45	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2370936	1	09/24/24 15:26	09/29/24 12:44	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 17:42	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/02/24 01:34	ALM	Mt. Juliet, TN

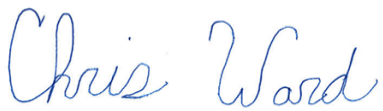
20240919-M29 199-(T03-STOCK) L1780144-30 Solid

Collected by: Trevor Lakin
Collected date/time: 09/19/24 13:53
Received date/time: 09/20/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2370234	1	09/28/24 18:29	09/28/24 18:29	MAP	Mt. Juliet, TN
Wet Chemistry by Method 7199	WG2369240	1	09/26/24 16:26	09/27/24 11:12	EKB	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG2371933	1	09/28/24 21:34	09/28/24 22:00	KRB	Mt. Juliet, TN
Wet Chemistry by Method 9050AMod	WG2371938	1	09/28/24 21:32	09/28/24 22:20	KRB	Mt. Juliet, TN
Metals (ICP) by Method 6010B-NE493 Ch 2	WG2370263	1	09/27/24 22:59	09/28/24 02:55	JTM	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2370487	5	09/30/24 08:44	09/30/24 20:14	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2370739	25	09/24/24 15:26	09/27/24 04:58	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2369167	1	09/24/24 15:26	09/25/24 05:35	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2370622	1	09/26/24 19:37	09/27/24 18:36	KDB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG2372962	1	10/01/24 15:20	10/02/24 01:52	ALM	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (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.



Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.29		1	09/27/2024 20:20	WG2370236

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/25/2024 16:40	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	9.28	T8	1	09/27/2024 12:33	WG2371241

Sample Narrative:

L1780144-01 WG2371241: 9.28 at 20.9C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	510	umhos/cm		10.0	1	09/28/2024 14:07	WG2371249

Sample Narrative:

L1780144-01 WG2371249: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.154	J	0.0167	0.200	1	09/27/2024 01:12	WG2370265

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.27		0.100	1.00	5	10/04/2024 12:44	WG2373995
Barium	173		0.152	2.50	5	10/04/2024 12:44	WG2373995
Cadmium	U		0.0855	1.00	5	10/04/2024 12:44	WG2373995
Copper	6.40		0.132	5.00	5	10/04/2024 12:44	WG2373995
Lead	9.97		0.0990	2.00	5	10/04/2024 12:44	WG2373995
Nickel	12.3		0.197	2.50	5	10/04/2024 12:44	WG2373995
Selenium	0.485	J	0.180	2.50	5	10/04/2024 12:44	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 12:44	WG2373995
Zinc	34.6		0.740	25.0	5	10/04/2024 12:44	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0315	B J	0.0217	0.100	1	09/25/2024 06:15	WG2369031
(S) a,a,a-Trifluorotoluene(FID)	*97.4*			*77.0-120*		*09/25/2024 06:15*	WG2369031

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 06:22	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 06:22	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 06:22	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 06:22	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 06:22	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 06:22	WG2369024
(S) Toluene-d8	*106*			*75.0-131*		*09/25/2024 06:22*	WG2369024
(S) 4-Bromofluorobenzene	*95.9*			*67.0-138*		*09/25/2024 06:22*	WG2369024
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*		*09/25/2024 06:22*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3.64	J	1.61	4.00	1	09/27/2024 16:51	WG2370975
C28-C36 Motor Oil Range	5.49		0.274	4.00	1	09/27/2024 16:51	WG2370975
(S) o-Terphenyl	*56.3*			*18.0-148*		*09/27/2024 16:51*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 00:26	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 00:26	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 00:26	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 00:26	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 00:26	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 00:26	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 00:26	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 00:26	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 00:26	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 00:26	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 00:26	WG2370955
1-Methylnaphthalene	U		0.00449	0.0200	1	09/28/2024 00:26	WG2370955
2-Methylnaphthalene	U		0.00427	0.0200	1	09/28/2024 00:26	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 00:26	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 00:26	WG2370955
(S) p-Terphenyl-d14	*71.3*			*23.0-120*		*09/28/2024 00:26*	WG2370955
(S) Nitrobenzene-d5	*78.4*			*14.0-149*		*09/28/2024 00:26*	WG2370955
(S) 2-Fluorobiphenyl	*75.3*			*34.0-125*		*09/28/2024 00:26*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.14		1	09/28/2024 18:15	WG2370234

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/25/2024 16:46	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	9.23	T8	1	09/28/2024 22:00	WG2371933

Sample Narrative:

L1780144-02 WG2371933: 9.23 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	376	umhos/cm		10.0	1	09/28/2024 22:20	WG2371938

Sample Narrative:

L1780144-02 WG2371938: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.204		0.0167	0.200	1	09/28/2024 02:37	WG2370263

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.14		0.100	1.00	5	10/04/2024 13:00	WG2373995
Barium	597		0.152	2.50	5	10/04/2024 13:00	WG2373995
Cadmium	0.111	J	0.0855	1.00	5	10/04/2024 13:00	WG2373995
Copper	7.03		0.132	5.00	5	10/04/2024 13:00	WG2373995
Lead	11.0		0.0990	2.00	5	10/04/2024 13:00	WG2373995
Nickel	15.3		0.197	2.50	5	10/04/2024 13:00	WG2373995
Selenium	0.500	J	0.180	2.50	5	10/04/2024 13:00	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 13:00	WG2373995
Zinc	36.8		0.740	25.0	5	10/04/2024 13:00	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0367	B J	0.0217	0.100	1	09/25/2024 06:40	WG2369031
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*77.0-120*		*09/25/2024 06:40*	WG2369031

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 06:41	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 06:41	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 06:41	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 06:41	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 06:41	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 06:41	WG2369024
(S) Toluene-d8	*105*			*75.0-131*		*09/25/2024 06:41*	WG2369024
(S) 4-Bromofluorobenzene	*96.3*			*67.0-138*		*09/25/2024 06:41*	WG2369024
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*09/25/2024 06:41*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	8.18		1.61	4.00	1	09/27/2024 21:52	WG2370975
C28-C36 Motor Oil Range	11.2		0.274	4.00	1	09/27/2024 21:52	WG2370975
(S) o-Terphenyl	*59.8*			*18.0-148*		*09/27/2024 21:52*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 00:44	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 00:44	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 00:44	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 00:44	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 00:44	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 00:44	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 00:44	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 00:44	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 00:44	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 00:44	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 00:44	WG2370955
1-Methylnaphthalene	0.00507	J	0.00449	0.0200	1	09/28/2024 00:44	WG2370955
2-Methylnaphthalene	0.0117	J	0.00427	0.0200	1	09/28/2024 00:44	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 00:44	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 00:44	WG2370955
(S) p-Terphenyl-d14	*68.1*			*23.0-120*		*09/28/2024 00:44*	WG2370955
(S) Nitrobenzene-d5	*80.7*			*14.0-149*		*09/28/2024 00:44*	WG2370955
(S) 2-Fluorobiphenyl	*75.2*			*34.0-125*		*09/28/2024 00:44*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.05		1	09/28/2024 18:17	WG2370234

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/25/2024 16:52	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	9.31	T8	1	09/28/2024 22:00	WG2371933

Sample Narrative:

L1780144-03 WG2371933: 9.31 at 22.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	360	umhos/cm		10.0	1	09/28/2024 22:20	WG2371938

Sample Narrative:

L1780144-03 WG2371938: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.364		0.0167	0.200	1	09/28/2024 02:39	WG2370263

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.21		0.100	1.00	5	10/04/2024 13:03	WG2373995
Barium	205		0.152	2.50	5	10/04/2024 13:03	WG2373995
Cadmium	0.0968	J	0.0855	1.00	5	10/04/2024 13:03	WG2373995
Copper	7.88		0.132	5.00	5	10/04/2024 13:03	WG2373995
Lead	8.43		0.0990	2.00	5	10/04/2024 13:03	WG2373995
Nickel	18.5		0.197	2.50	5	10/04/2024 13:03	WG2373995
Selenium	0.546	J	0.180	2.50	5	10/04/2024 13:03	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 13:03	WG2373995
Zinc	29.7		0.740	25.0	5	10/04/2024 13:03	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0557	B J	0.0217	0.100	1	09/25/2024 07:04	WG2369031
(S) a,a,a-Trifluorotoluene(FID)	*96.6*			*77.0-120*		*09/25/2024 07:04*	WG2369031

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 06:59	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 06:59	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 06:59	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 06:59	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 06:59	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 06:59	WG2369024
(S) Toluene-d8	*106*			*75.0-131*		*09/25/2024 06:59*	WG2369024
(S) 4-Bromofluorobenzene	*98.5*			*67.0-138*		*09/25/2024 06:59*	WG2369024
(S) 1,2-Dichloroethane-d4	*98.7*			*70.0-130*		*09/25/2024 06:59*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	29.5		1.61	4.00	1	09/27/2024 19:28	WG2370975
C28-C36 Motor Oil Range	45.8		0.274	4.00	1	09/27/2024 19:28	WG2370975
(S) o-Terphenyl	*52.9*			*18.0-148*		*09/27/2024 19:28*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	0.322		0.00209	0.00600	1	09/28/2024 19:53	WG2370955
Anthracene	0.368		0.00230	0.00600	1	09/28/2024 19:53	WG2370955
Benzo(a)anthracene	1.16		0.00173	0.00600	1	09/28/2024 19:53	WG2370955
Benzo(b)fluoranthene	1.64		0.00153	0.00600	1	09/28/2024 19:53	WG2370955
Benzo(k)fluoranthene	0.532		0.00215	0.00600	1	09/28/2024 19:53	WG2370955
Benzo(a)pyrene	1.11		0.00179	0.00600	1	09/28/2024 19:53	WG2370955
Chrysene	1.48		0.00232	0.00600	1	09/28/2024 19:53	WG2370955
Dibenz(a,h)anthracene	0.202		0.00172	0.00600	1	09/28/2024 19:53	WG2370955
Fluoranthene	2.93		0.00227	0.00600	1	09/28/2024 19:53	WG2370955
Fluorene	0.407		0.00205	0.00600	1	09/28/2024 19:53	WG2370955
Indeno(1,2,3-cd)pyrene	0.863		0.00181	0.00600	1	09/28/2024 19:53	WG2370955
1-Methylnaphthalene	0.0454		0.00449	0.0200	1	09/28/2024 19:53	WG2370955
2-Methylnaphthalene	0.0638		0.00427	0.0200	1	09/28/2024 19:53	WG2370955
Naphthalene	0.0726		0.00408	0.0200	1	09/28/2024 19:53	WG2370955
Pyrene	2.12		0.00200	0.00600	1	09/28/2024 19:53	WG2370955
(S) p-Terphenyl-d14	*73.8*			*23.0-120*		*09/28/2024 19:53*	WG2370955
(S) Nitrobenzene-d5	*77.7*			*14.0-149*		*09/28/2024 19:53*	WG2370955
(S) 2-Fluorobiphenyl	*76.6*			*34.0-125*		*09/28/2024 19:53*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.25		1	09/27/2024 20:18	WG2370236

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.443	J	0.255	1.00	1	09/25/2024 16:58	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.41	T8	1	09/27/2024 12:33	WG2371241

Sample Narrative:

L1780144-04 WG2371241: 8.41 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	343	umhos/cm		10.0	1	09/28/2024 14:07	WG2371249

Sample Narrative:

L1780144-04 WG2371249: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.282		0.0167	0.200	1	09/27/2024 01:14	WG2370265

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.23		0.100	1.00	5	10/04/2024 13:07	WG2373995
Barium	319		0.152	2.50	5	10/04/2024 13:07	WG2373995
Cadmium	0.138	J	0.0855	1.00	5	10/04/2024 13:07	WG2373995
Copper	8.55		0.132	5.00	5	10/04/2024 13:07	WG2373995
Lead	13.8		0.0990	2.00	5	10/04/2024 13:07	WG2373995
Nickel	13.8		0.197	2.50	5	10/04/2024 13:07	WG2373995
Selenium	0.354	J	0.180	2.50	5	10/04/2024 13:07	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 13:07	WG2373995
Zinc	48.0		0.740	25.0	5	10/04/2024 13:07	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0804	B J	0.0217	0.100	1	09/25/2024 07:28	WG2369031
(S) a,a,a-Trifluorotoluene(FID)	*96.5*			*77.0-120*		*09/25/2024 07:28*	WG2369031

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 07:18	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 07:18	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 07:18	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 07:18	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 07:18	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 07:18	WG2369024
(S) Toluene-d8	*105*			*75.0-131*		*09/25/2024 07:18*	WG2369024
(S) 4-Bromofluorobenzene	*97.2*			*67.0-138*		*09/25/2024 07:18*	WG2369024
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*09/25/2024 07:18*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	158		16.1	40.0	10	09/27/2024 19:54	WG2370975
C28-C36 Motor Oil Range	236		2.74	40.0	10	09/27/2024 19:54	WG2370975
(S) o-Terphenyl	*40.8*			*18.0-148*		*09/27/2024 19:54*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	0.00275	J	0.00209	0.00600	1	09/28/2024 20:10	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 20:10	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 20:10	WG2370955
Benzo(b)fluoranthene	0.00313	J	0.00153	0.00600	1	09/28/2024 20:10	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 20:10	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 20:10	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 20:10	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 20:10	WG2370955
Fluoranthene	0.00348	J	0.00227	0.00600	1	09/28/2024 20:10	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 20:10	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 20:10	WG2370955
1-Methylnaphthalene	0.0348		0.00449	0.0200	1	09/28/2024 20:10	WG2370955
2-Methylnaphthalene	0.0789		0.00427	0.0200	1	09/28/2024 20:10	WG2370955
Naphthalene	0.0207		0.00408	0.0200	1	09/28/2024 20:10	WG2370955
Pyrene	0.00336	J	0.00200	0.00600	1	09/28/2024 20:10	WG2370955
(S) p-Terphenyl-d14	*76.4*			*23.0-120*		*09/28/2024 20:10*	WG2370955
(S) Nitrobenzene-d5	*79.7*			*14.0-149*		*09/28/2024 20:10*	WG2370955
(S) 2-Fluorobiphenyl	*79.0*			*34.0-125*		*09/28/2024 20:10*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.71		1	09/28/2024 18:19	WG2370234

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.294	J	0.255	1.00	1	09/25/2024 17:04	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	9.16	T8	1	09/28/2024 22:00	WG2371933

Sample Narrative:

L1780144-05 WG2371933: 9.16 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	460	umhos/cm		10.0	1	09/28/2024 22:20	WG2371938

Sample Narrative:

L1780144-05 WG2371938: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.179	J	0.0167	0.200	1	09/28/2024 02:40	WG2370263

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.51		0.100	1.00	5	10/04/2024 13:17	WG2373995
Barium	390		0.152	2.50	5	10/04/2024 13:17	WG2373995
Cadmium	U		0.0855	1.00	5	10/04/2024 13:17	WG2373995
Copper	7.57		0.132	5.00	5	10/04/2024 13:17	WG2373995
Lead	9.44		0.0990	2.00	5	10/04/2024 13:17	WG2373995
Nickel	15.5		0.197	2.50	5	10/04/2024 13:17	WG2373995
Selenium	0.443	J	0.180	2.50	5	10/04/2024 13:17	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 13:17	WG2373995
Zinc	31.9		0.740	25.0	5	10/04/2024 13:17	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0352	B J	0.0217	0.100	1	09/25/2024 15:44	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*97.1*			*77.0-120*		*09/25/2024 15:44*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 07:37	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 07:37	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 07:37	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 07:37	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 07:37	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 07:37	WG2369024
(S) Toluene-d8	*108*			*75.0-131*		*09/25/2024 07:37*	WG2369024
(S) 4-Bromofluorobenzene	*100*			*67.0-138*		*09/25/2024 07:37*	WG2369024
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*09/25/2024 07:37*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.47	J	1.61	4.00	1	09/27/2024 18:36	WG2370975
C28-C36 Motor Oil Range	5.68		0.274	4.00	1	09/27/2024 18:36	WG2370975
(S) o-Terphenyl	*55.5*			*18.0-148*		*09/27/2024 18:36*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 01:01	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 01:01	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 01:01	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 01:01	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 01:01	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 01:01	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 01:01	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 01:01	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 01:01	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 01:01	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 01:01	WG2370955
1-Methylnaphthalene	U		0.00449	0.0200	1	09/28/2024 01:01	WG2370955
2-Methylnaphthalene	U		0.00427	0.0200	1	09/28/2024 01:01	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 01:01	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 01:01	WG2370955
(S) p-Terphenyl-d14	*74.6*			*23.0-120*		*09/28/2024 01:01*	WG2370955
(S) Nitrobenzene-d5	*85.1*			*14.0-149*		*09/28/2024 01:01*	WG2370955
(S) 2-Fluorobiphenyl	*82.0*			*34.0-125*		*09/28/2024 01:01*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.78		1	09/27/2024 23:20	WG2370231

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U	P1	0.255	1.00	1	09/25/2024 17:11	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.83	T8	1	09/28/2024 16:30	WG2371706

Sample Narrative:

L1780144-06 WG2371706: 8.83 at 19.5C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	395	umhos/cm		10.0	1	09/28/2024 16:15	WG2371709

Sample Narrative:

L1780144-06 WG2371709: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.257		0.0167	0.200	1	09/27/2024 00:35	WG2370249

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.82		0.100	1.00	5	10/04/2024 13:20	WG2373995
Barium	329		0.152	2.50	5	10/04/2024 13:20	WG2373995
Cadmium	0.131	J	0.0855	1.00	5	10/04/2024 13:20	WG2373995
Copper	7.56		0.132	5.00	5	10/04/2024 13:20	WG2373995
Lead	10.2		0.0990	2.00	5	10/04/2024 13:20	WG2373995
Nickel	18.6		0.197	2.50	5	10/04/2024 13:20	WG2373995
Selenium	0.591	J	0.180	2.50	5	10/04/2024 13:20	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 13:20	WG2373995
Zinc	38.1		0.740	25.0	5	10/04/2024 13:20	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0435	B J	0.0217	0.100	1	09/25/2024 16:07	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*97.0*			*77.0-120*		*09/25/2024 16:07*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 07:55	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 07:55	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 07:55	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 07:55	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 07:55	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 07:55	WG2369024
(S) Toluene-d8	*108*			*75.0-131*		*09/25/2024 07:55*	WG2369024
(S) 4-Bromofluorobenzene	*96.3*			*67.0-138*		*09/25/2024 07:55*	WG2369024
(S) 1,2-Dichloroethane-d4	*98.4*			*70.0-130*		*09/25/2024 07:55*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	32.6		1.61	4.00	1	09/27/2024 19:15	WG2370975
C28-C36 Motor Oil Range	56.7		0.274	4.00	1	09/27/2024 19:15	WG2370975
(S) o-Terphenyl	*49.5*			*18.0-148*		*09/27/2024 19:15*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 19:35	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 19:35	WG2370955
Benzo(a)anthracene	0.00498	J	0.00173	0.00600	1	09/28/2024 19:35	WG2370955
Benzo(b)fluoranthene	0.00797		0.00153	0.00600	1	09/28/2024 19:35	WG2370955
Benzo(k)fluoranthene	0.00272	J	0.00215	0.00600	1	09/28/2024 19:35	WG2370955
Benzo(a)pyrene	0.00513	J	0.00179	0.00600	1	09/28/2024 19:35	WG2370955
Chrysene	0.00582	J	0.00232	0.00600	1	09/28/2024 19:35	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 19:35	WG2370955
Fluoranthene	0.0139		0.00227	0.00600	1	09/28/2024 19:35	WG2370955
Fluorene	0.00254	J	0.00205	0.00600	1	09/28/2024 19:35	WG2370955
Indeno(1,2,3-cd)pyrene	0.00434	J	0.00181	0.00600	1	09/28/2024 19:35	WG2370955
1-Methylnaphthalene	0.0102	J	0.00449	0.0200	1	09/28/2024 19:35	WG2370955
2-Methylnaphthalene	0.0212		0.00427	0.0200	1	09/28/2024 19:35	WG2370955
Naphthalene	0.00858	J	0.00408	0.0200	1	09/28/2024 19:35	WG2370955
Pyrene	0.0103		0.00200	0.00600	1	09/28/2024 19:35	WG2370955
(S) p-Terphenyl-d14	*73.6*			*23.0-120*		*09/28/2024 19:35*	WG2370955
(S) Nitrobenzene-d5	*77.7*			*14.0-149*		*09/28/2024 19:35*	WG2370955
(S) 2-Fluorobiphenyl	*80.2*			*34.0-125*		*09/28/2024 19:35*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.63		1	09/27/2024 23:21	WG2370231

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	1.98		0.255	1.00	1	09/25/2024 17:23	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.40	T8	1	09/28/2024 16:30	WG2371706

Sample Narrative:

L1780144-07 WG2371706: 8.4 at 19.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	710	umhos/cm		10.0	1	09/28/2024 16:15	WG2371709

Sample Narrative:

L1780144-07 WG2371709: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.335		0.0167	0.200	1	09/27/2024 00:37	WG2370249

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.71		0.100	1.00	5	10/04/2024 13:23	WG2373995
Barium	2400		0.760	12.5	25	10/04/2024 13:37	WG2373995
Cadmium	0.418	J	0.0855	1.00	5	10/04/2024 13:23	WG2373995
Copper	12.7		0.132	5.00	5	10/04/2024 13:23	WG2373995
Lead	75.2		0.0990	2.00	5	10/04/2024 13:23	WG2373995
Nickel	12.2		0.197	2.50	5	10/04/2024 13:23	WG2373995
Selenium	0.405	J	0.180	2.50	5	10/04/2024 13:23	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 13:23	WG2373995
Zinc	135		0.740	25.0	5	10/04/2024 13:23	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.67	B J	0.543	2.50	25	09/28/2024 23:34	WG2371284
(S) a,a,a-Trifluorotoluene(FID)	*101*			*77.0-120*		*09/28/2024 23:34*	WG2371284

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 08:14	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 08:14	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 08:14	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 08:14	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 08:14	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 08:14	WG2369024
(S) Toluene-d8	*105*			*75.0-131*		*09/25/2024 08:14*	WG2369024
(S) 4-Bromofluorobenzene	*96.7*			*67.0-138*		*09/25/2024 08:14*	WG2369024
(S) 1,2-Dichloroethane-d4	*99.7*			*70.0-130*		*09/25/2024 08:14*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	220		1.61	4.00	1	09/27/2024 19:02	WG2370975
C28-C36 Motor Oil Range	226		1.37	20.0	5	09/27/2024 22:32	WG2370975
(S) o-Terphenyl	*30.8*			*18.0-148*		*09/27/2024 19:02*	WG2370975
(S) o-Terphenyl	*33.2*			*18.0-148*		*09/27/2024 22:32*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 01:19	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 01:19	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 01:19	WG2370955
Benzo(b)fluoranthene	0.00210	J	0.00153	0.00600	1	09/28/2024 01:19	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 01:19	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 01:19	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 01:19	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 01:19	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 01:19	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 01:19	WG2370955
Indeno(1,2,3-cd)pyrene	0.00203	J	0.00181	0.00600	1	09/28/2024 01:19	WG2370955
1-Methylnaphthalene	0.0112	J	0.00449	0.0200	1	09/28/2024 01:19	WG2370955
2-Methylnaphthalene	0.0176	J	0.00427	0.0200	1	09/28/2024 01:19	WG2370955
Naphthalene	0.00693	J	0.00408	0.0200	1	09/28/2024 01:19	WG2370955
Pyrene	0.0190		0.00200	0.00600	1	09/28/2024 01:19	WG2370955
(S) p-Terphenyl-d14	*74.0*			*23.0-120*		*09/28/2024 01:19*	WG2370955
(S) Nitrobenzene-d5	*90.5*			*14.0-149*		*09/28/2024 01:19*	WG2370955
(S) 2-Fluorobiphenyl	*76.4*			*34.0-125*		*09/28/2024 01:19*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	5.20		1	09/27/2024 23:23	WG2370231

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	1.42		0.255	1.00	1	09/25/2024 17:41	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.64	T8	1	09/28/2024 16:30	WG2371706

Sample Narrative:

L1780144-08 WG2371706: 8.64 at 19.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	495	umhos/cm		10.0	1	09/28/2024 16:15	WG2371709

Sample Narrative:

L1780144-08 WG2371709: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.196	J	0.0167	0.200	1	09/27/2024 00:39	WG2370249

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	1.50		0.100	1.00	5	10/04/2024 13:27	WG2373995
Barium	442		0.152	2.50	5	10/04/2024 13:27	WG2373995
Cadmium	0.112	J	0.0855	1.00	5	10/04/2024 13:27	WG2373995
Copper	3.98	J	0.132	5.00	5	10/04/2024 13:27	WG2373995
Lead	15.9		0.0990	2.00	5	10/04/2024 13:27	WG2373995
Nickel	5.26		0.197	2.50	5	10/04/2024 13:27	WG2373995
Selenium	0.428	J	0.180	2.50	5	10/04/2024 13:27	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 13:27	WG2373995
Zinc	29.9		0.740	25.0	5	10/04/2024 13:27	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0328	B J	0.0217	0.100	1	09/25/2024 16:31	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*77.0-120*		*09/25/2024 16:31*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 08:33	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 08:33	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 08:33	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 08:33	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 08:33	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 08:33	WG2369024
(S) Toluene-d8	*106*			*75.0-131*		*09/25/2024 08:33*	WG2369024
(S) 4-Bromofluorobenzene	*95.9*			*67.0-138*		*09/25/2024 08:33*	WG2369024
(S) 1,2-Dichloroethane-d4	*95.8*			*70.0-130*		*09/25/2024 08:33*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	67.3		1.61	4.00	1	09/27/2024 17:30	WG2370975
C28-C36 Motor Oil Range	105		0.274	4.00	1	09/27/2024 17:30	WG2370975
(S) o-Terphenyl	*38.9*			*18.0-148*		*09/27/2024 17:30*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 01:37	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 01:37	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 01:37	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 01:37	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 01:37	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 01:37	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 01:37	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 01:37	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 01:37	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 01:37	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 01:37	WG2370955
1-Methylnaphthalene	U		0.00449	0.0200	1	09/28/2024 01:37	WG2370955
2-Methylnaphthalene	0.00511	J	0.00427	0.0200	1	09/28/2024 01:37	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 01:37	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 01:37	WG2370955
(S) p-Terphenyl-d14	*76.3*			*23.0-120*		*09/28/2024 01:37*	WG2370955
(S) Nitrobenzene-d5	*88.4*			*14.0-149*		*09/28/2024 01:37*	WG2370955
(S) 2-Fluorobiphenyl	*80.2*			*34.0-125*		*09/28/2024 01:37*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	4.82		1	09/28/2024 18:20	WG2370234

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.451	J	0.255	1.00	1	09/25/2024 17:48	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.86	T8	1	09/28/2024 22:00	WG2371933

Sample Narrative:

L1780144-09 WG2371933: 8.86 at 22.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	468	umhos/cm		10.0	1	09/28/2024 22:20	WG2371938

Sample Narrative:

L1780144-09 WG2371938: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.253		0.0167	0.200	1	09/28/2024 02:42	WG2370263

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	2.12		0.100	1.00	5	10/04/2024 13:30	WG2373995
Barium	529		0.152	2.50	5	10/04/2024 13:30	WG2373995
Cadmium	0.0999	J	0.0855	1.00	5	10/04/2024 13:30	WG2373995
Copper	5.10		0.132	5.00	5	10/04/2024 13:30	WG2373995
Lead	13.8		0.0990	2.00	5	10/04/2024 13:30	WG2373995
Nickel	9.40		0.197	2.50	5	10/04/2024 13:30	WG2373995
Selenium	0.216	J	0.180	2.50	5	10/04/2024 13:30	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 13:30	WG2373995
Zinc	40.6		0.740	25.0	5	10/04/2024 13:30	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0286	B J	0.0217	0.100	1	09/25/2024 16:54	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*97.6*			*77.0-120*		*09/25/2024 16:54*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 08:51	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 08:51	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 08:51	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 08:51	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 08:51	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 08:51	WG2369024
(S) Toluene-d8	*107*			*75.0-131*		*09/25/2024 08:51*	WG2369024
(S) 4-Bromofluorobenzene	*98.0*			*67.0-138*		*09/25/2024 08:51*	WG2369024
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*09/25/2024 08:51*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	22.4		1.61	4.00	1	09/27/2024 16:38	WG2370975
C28-C36 Motor Oil Range	49.2		0.274	4.00	1	09/27/2024 16:38	WG2370975
(S) o-Terphenyl	*45.2*			*18.0-148*		*09/27/2024 16:38*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 01:55	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 01:55	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 01:55	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 01:55	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 01:55	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 01:55	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 01:55	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 01:55	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 01:55	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 01:55	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 01:55	WG2370955
1-Methylnaphthalene	U		0.00449	0.0200	1	09/28/2024 01:55	WG2370955
2-Methylnaphthalene	U		0.00427	0.0200	1	09/28/2024 01:55	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 01:55	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 01:55	WG2370955
(S) p-Terphenyl-d14	*76.5*			*23.0-120*		*09/28/2024 01:55*	WG2370955
(S) Nitrobenzene-d5	*87.0*			*14.0-149*		*09/28/2024 01:55*	WG2370955
(S) 2-Fluorobiphenyl	*80.3*			*34.0-125*		*09/28/2024 01:55*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.69		1	09/27/2024 20:25	WG2370236

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	1.39		0.255	1.00	1	09/25/2024 18:00	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.52	T8	1	09/27/2024 12:33	WG2371241

Sample Narrative:

L1780144-10 WG2371241: 8.52 at 20.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	620	umhos/cm		10.0	1	09/28/2024 14:07	WG2371249

Sample Narrative:

L1780144-10 WG2371249: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.333		0.0167	0.200	1	09/27/2024 01:16	WG2370265

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.25		0.100	1.00	5	10/04/2024 13:33	WG2373995
Barium	2080		0.760	12.5	25	10/04/2024 14:26	WG2373995
Cadmium	0.235	J	0.0855	1.00	5	10/04/2024 13:33	WG2373995
Copper	11.0		0.132	5.00	5	10/04/2024 13:33	WG2373995
Lead	54.6		0.0990	2.00	5	10/04/2024 13:33	WG2373995
Nickel	13.5		0.197	2.50	5	10/04/2024 13:33	WG2373995
Selenium	0.373	J	0.180	2.50	5	10/04/2024 13:33	WG2373995
Silver	U		0.0865	0.500	5	10/04/2024 13:33	WG2373995
Zinc	98.5		0.740	25.0	5	10/04/2024 13:33	WG2373995

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0463	B J	0.0217	0.100	1	09/25/2024 17:17	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*96.9*			*77.0-120*		*09/25/2024 17:17*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 09:10	WG2369024
Toluene	U		0.00130	0.00500	1	09/25/2024 09:10	WG2369024
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 09:10	WG2369024
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 09:10	WG2369024
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 09:10	WG2369024
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 09:10	WG2369024
(S) Toluene-d8	*105*			*75.0-131*		*09/25/2024 09:10*	WG2369024
(S) 4-Bromofluorobenzene	*98.2*			*67.0-138*		*09/25/2024 09:10*	WG2369024
(S) 1,2-Dichloroethane-d4	*99.4*			*70.0-130*		*09/25/2024 09:10*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	83.7		1.61	4.00	1	09/27/2024 17:43	WG2370975
C28-C36 Motor Oil Range	168		1.37	20.0	5	09/27/2024 22:05	WG2370975
(S) o-Terphenyl	*32.1*			*18.0-148*		*09/27/2024 17:43*	WG2370975
(S) o-Terphenyl	*42.1*			*18.0-148*		*09/27/2024 22:05*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 02:12	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 02:12	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 02:12	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 02:12	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 02:12	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 02:12	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 02:12	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 02:12	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 02:12	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 02:12	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 02:12	WG2370955
1-Methylnaphthalene	U		0.00449	0.0200	1	09/28/2024 02:12	WG2370955
2-Methylnaphthalene	0.00597	J	0.00427	0.0200	1	09/28/2024 02:12	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 02:12	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 02:12	WG2370955
(S) p-Terphenyl-d14	*69.9*			*23.0-120*		*09/28/2024 02:12*	WG2370955
(S) Nitrobenzene-d5	*85.9*			*14.0-149*		*09/28/2024 02:12*	WG2370955
(S) 2-Fluorobiphenyl	*75.8*			*34.0-125*		*09/28/2024 02:12*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	5.50		1	09/27/2024 23:25	WG2370231

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	1.47		0.255	1.00	1	09/25/2024 18:06	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.37	T8	1	09/28/2024 16:30	WG2371706

Sample Narrative:

L1780144-11 WG2371706: 8.37 at 19.8C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	618	umhos/cm		10.0	1	09/28/2024 16:15	WG2371709

Sample Narrative:

L1780144-11 WG2371709: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.329		0.0167	0.200	1	09/27/2024 00:41	WG2370249

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.87		0.100	1.00	5	09/29/2024 23:54	WG2370490
Barium	3280		0.608	10.0	20	09/30/2024 00:36	WG2370490
Cadmium	0.421	J	0.0855	1.00	5	09/29/2024 23:54	WG2370490
Copper	15.3		0.132	5.00	5	09/29/2024 23:54	WG2370490
Lead	85.2		0.0990	2.00	5	09/29/2024 23:54	WG2370490
Nickel	16.9		0.197	2.50	5	09/29/2024 23:54	WG2370490
Selenium	0.508	J	0.180	2.50	5	09/29/2024 23:54	WG2370490
Silver	0.0882	J	0.0865	0.500	5	09/29/2024 23:54	WG2370490
Zinc	254		0.740	25.0	5	09/29/2024 23:54	WG2370490

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0427	B J	0.0217	0.100	1	09/25/2024 17:42	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*97.0*			*77.0-120*		*09/25/2024 17:42*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U	J3	0.000467	0.00100	1	09/25/2024 09:29	WG2369024
Toluene	U	J3	0.00130	0.00500	1	09/25/2024 09:29	WG2369024
Ethylbenzene	U	J3	0.000737	0.00250	1	09/25/2024 09:29	WG2369024
Xylenes, Total	U	J3	0.000880	0.00650	1	09/25/2024 09:29	WG2369024
1,2,4-Trimethylbenzene	U	J3	0.00158	0.00500	1	09/25/2024 09:29	WG2369024
1,3,5-Trimethylbenzene	U	J3	0.00200	0.00500	1	09/25/2024 09:29	WG2369024
(S) Toluene-d8	*105*			*75.0-131*		*09/25/2024 09:29*	WG2369024
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*		*09/25/2024 09:29*	WG2369024
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*09/25/2024 09:29*	WG2369024

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	106		1.61	4.00	1	09/27/2024 18:10	WG2370975
C28-C36 Motor Oil Range	156		0.274	4.00	1	09/27/2024 18:10	WG2370975
(S) o-Terphenyl	*47.1*			*18.0-148*		*09/27/2024 18:10*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 02:30	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 02:30	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 02:30	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 02:30	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 02:30	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 02:30	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 02:30	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 02:30	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 02:30	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 02:30	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 02:30	WG2370955
1-Methylnaphthalene	0.00474	J	0.00449	0.0200	1	09/28/2024 02:30	WG2370955
2-Methylnaphthalene	0.00690	J	0.00427	0.0200	1	09/28/2024 02:30	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 02:30	WG2370955
Pyrene	0.00330	J	0.00200	0.00600	1	09/28/2024 02:30	WG2370955
(S) p-Terphenyl-d14	*71.1*			*23.0-120*		*09/28/2024 02:30*	WG2370955
(S) Nitrobenzene-d5	*84.4*			*14.0-149*		*09/28/2024 02:30*	WG2370955
(S) 2-Fluorobiphenyl	*73.3*			*34.0-125*		*09/28/2024 02:30*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.82		1	09/28/2024 18:22	WG2370234

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	1.28		0.255	1.00	1	09/25/2024 18:12	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.60	T8	1	09/28/2024 22:00	WG2371933

Sample Narrative:

L1780144-12 WG2371933: 8.6 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	495	umhos/cm		10.0	1	09/28/2024 22:20	WG2371938

Sample Narrative:

L1780144-12 WG2371938: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.256		0.0167	0.200	1	09/28/2024 02:44	WG2370263

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.76		0.100	1.00	5	09/30/2024 19:08	WG2370487
Barium	2980		0.608	10.0	20	09/30/2024 20:17	WG2370487
Cadmium	0.300	J	0.0855	1.00	5	09/30/2024 19:08	WG2370487
Copper	13.4		0.132	5.00	5	09/30/2024 19:08	WG2370487
Lead	48.2		0.0990	2.00	5	09/30/2024 19:08	WG2370487
Nickel	17.4		0.197	2.50	5	09/30/2024 19:08	WG2370487
Selenium	0.771	J	0.180	2.50	5	09/30/2024 19:08	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:08	WG2370487
Zinc	100		0.740	25.0	5	09/30/2024 19:08	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0449	B J	0.0217	0.100	1	09/25/2024 18:05	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*97.9*			*77.0-120*		*09/25/2024 18:05*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 03:29	WG2369065
Toluene	U		0.00130	0.00500	1	09/25/2024 03:29	WG2369065
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 03:29	WG2369065
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 03:29	WG2369065
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 03:29	WG2369065
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 03:29	WG2369065
(S) Toluene-d8	*99.6*			*75.0-131*		*09/25/2024 03:29*	WG2369065
(S) 4-Bromofluorobenzene	*81.4*			*67.0-138*		*09/25/2024 03:29*	WG2369065
(S) 1,2-Dichloroethane-d4	*92.7*			*70.0-130*		*09/25/2024 03:29*	WG2369065

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	78.6		1.61	4.00	1	09/27/2024 18:49	WG2370975
C28-C36 Motor Oil Range	169		1.37	20.0	5	09/27/2024 22:19	WG2370975
(S) o-Terphenyl	*48.3*			*18.0-148*		*09/27/2024 22:19*	WG2370975
(S) o-Terphenyl	*43.9*			*18.0-148*		*09/27/2024 18:49*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 03:24	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 03:24	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 03:24	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 03:24	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 03:24	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 03:24	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 03:24	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 03:24	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 03:24	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 03:24	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 03:24	WG2370955
1-Methylnaphthalene	U		0.00449	0.0200	1	09/28/2024 03:24	WG2370955
2-Methylnaphthalene	0.00537	J	0.00427	0.0200	1	09/28/2024 03:24	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 03:24	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 03:24	WG2370955
(S) p-Terphenyl-d14	*71.3*			*23.0-120*		*09/28/2024 03:24*	WG2370955
(S) Nitrobenzene-d5	*86.5*			*14.0-149*		*09/28/2024 03:24*	WG2370955
(S) 2-Fluorobiphenyl	*76.1*			*34.0-125*		*09/28/2024 03:24*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.29		1	09/27/2024 20:27	WG2370236

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/25/2024 18:19	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.75	T8	1	09/27/2024 12:33	WG2371241

Sample Narrative:

L1780144-13 WG2371241: 8.75 at 21.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	330	umhos/cm		10.0	1	09/28/2024 14:07	WG2371249

Sample Narrative:

L1780144-13 WG2371249: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.325		0.0167	0.200	1	09/27/2024 01:18	WG2370265

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.55		0.100	1.00	5	09/30/2024 19:11	WG2370487
Barium	178		0.152	2.50	5	09/30/2024 19:11	WG2370487
Cadmium	0.0888	J	0.0855	1.00	5	09/30/2024 19:11	WG2370487
Copper	9.83		0.132	5.00	5	09/30/2024 19:11	WG2370487
Lead	13.1		0.0990	2.00	5	09/30/2024 19:11	WG2370487
Nickel	18.3		0.197	2.50	5	09/30/2024 19:11	WG2370487
Selenium	0.582	J	0.180	2.50	5	09/30/2024 19:11	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:11	WG2370487
Zinc	50.7		0.740	25.0	5	09/30/2024 19:11	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	1.37	B J	0.543	2.50	25	09/28/2024 23:57	WG2371284
(S) a,a,a-Trifluorotoluene(FID)	*102*			*77.0-120*		*09/28/2024 23:57*	WG2371284

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 03:49	WG2369065
Toluene	U		0.00130	0.00500	1	09/25/2024 03:49	WG2369065
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 03:49	WG2369065
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 03:49	WG2369065
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 03:49	WG2369065
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 03:49	WG2369065
(S) Toluene-d8	*101*			*75.0-131*		*09/25/2024 03:49*	WG2369065
(S) 4-Bromofluorobenzene	*79.4*			*67.0-138*		*09/25/2024 03:49*	WG2369065
(S) 1,2-Dichloroethane-d4	*91.3*			*70.0-130*		*09/25/2024 03:49*	WG2369065

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	09/27/2024 15:59	WG2370975
C28-C36 Motor Oil Range	U		0.274	4.00	1	09/27/2024 15:59	WG2370975
(S) o-Terphenyl	*51.9*			*18.0-148*		*09/27/2024 15:59*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 03:41	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 03:41	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 03:41	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 03:41	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 03:41	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 03:41	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 03:41	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 03:41	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 03:41	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 03:41	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 03:41	WG2370955
1-Methylnaphthalene	U		0.00449	0.0200	1	09/28/2024 03:41	WG2370955
2-Methylnaphthalene	U		0.00427	0.0200	1	09/28/2024 03:41	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 03:41	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 03:41	WG2370955
(S) p-Terphenyl-d14	*70.2*			*23.0-120*		*09/28/2024 03:41*	WG2370955
(S) Nitrobenzene-d5	*79.4*			*14.0-149*		*09/28/2024 03:41*	WG2370955
(S) 2-Fluorobiphenyl	*74.7*			*34.0-125*		*09/28/2024 03:41*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.70		1	09/28/2024 18:24	WG2370234

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.380	J	0.255	1.00	1	09/25/2024 18:25	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.27	T8	1	09/28/2024 22:00	WG2371933

Sample Narrative:

L1780144-14 WG2371933: 8.27 at 22.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	242	umhos/cm		10.0	1	09/28/2024 22:20	WG2371938

Sample Narrative:

L1780144-14 WG2371938: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.311		0.0167	0.200	1	09/28/2024 02:46	WG2370263

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.43		0.100	1.00	5	09/30/2024 19:15	WG2370487
Barium	243		0.152	2.50	5	09/30/2024 19:15	WG2370487
Cadmium	0.199	J	0.0855	1.00	5	09/30/2024 19:15	WG2370487
Copper	11.6		0.132	5.00	5	09/30/2024 19:15	WG2370487
Lead	13.8		0.0990	2.00	5	09/30/2024 19:15	WG2370487
Nickel	22.3		0.197	2.50	5	09/30/2024 19:15	WG2370487
Selenium	0.685	J	0.180	2.50	5	09/30/2024 19:15	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:15	WG2370487
Zinc	54.5		0.740	25.0	5	09/30/2024 19:15	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0521	B J	0.0217	0.100	1	09/25/2024 18:29	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*96.5*			*77.0-120*		*09/25/2024 18:29*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 04:09	WG2369065
Toluene	U		0.00130	0.00500	1	09/25/2024 04:09	WG2369065
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 04:09	WG2369065
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 04:09	WG2369065
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 04:09	WG2369065
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 04:09	WG2369065
(S) Toluene-d8	*102*			*75.0-131*		*09/25/2024 04:09*	WG2369065
(S) 4-Bromofluorobenzene	*83.6*			*67.0-138*		*09/25/2024 04:09*	WG2369065
(S) 1,2-Dichloroethane-d4	*84.6*			*70.0-130*		*09/25/2024 04:09*	WG2369065

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.76	J	1.61	4.00	1	09/27/2024 16:25	WG2370975
C28-C36 Motor Oil Range	5.19		0.274	4.00	1	09/27/2024 16:25	WG2370975
(S) o-Terphenyl	*60.8*			*18.0-148*		*09/27/2024 16:25*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 18:06	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 18:06	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 18:06	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 18:06	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 18:06	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 18:06	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 18:06	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 18:06	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 18:06	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 18:06	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 18:06	WG2370955
1-Methylnaphthalene	U		0.00449	0.0200	1	09/28/2024 18:06	WG2370955
2-Methylnaphthalene	U		0.00427	0.0200	1	09/28/2024 18:06	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 18:06	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 18:06	WG2370955
(S) p-Terphenyl-d14	*83.5*			*23.0-120*		*09/28/2024 18:06*	WG2370955
(S) Nitrobenzene-d5	*85.3*			*14.0-149*		*09/28/2024 18:06*	WG2370955
(S) 2-Fluorobiphenyl	*88.4*			*34.0-125*		*09/28/2024 18:06*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.86		1	09/28/2024 23:11	WG2370238

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/25/2024 18:31	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.60	T8	1	09/28/2024 22:50	WG2371932

Sample Narrative:

L1780144-15 WG2371932: 8.6 at 19.8C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	405	umhos/cm		10.0	1	09/29/2024 14:30	WG2371940

Sample Narrative:

L1780144-15 WG2371940: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.288		0.0167	0.200	1	09/28/2024 23:43	WG2370271

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.19		0.100	1.00	5	09/30/2024 19:25	WG2370487
Barium	189		0.152	2.50	5	09/30/2024 19:25	WG2370487
Cadmium	0.104	J	0.0855	1.00	5	09/30/2024 19:25	WG2370487
Copper	11.3		0.132	5.00	5	09/30/2024 19:25	WG2370487
Lead	13.8		0.0990	2.00	5	09/30/2024 19:25	WG2370487
Nickel	21.0		0.197	2.50	5	09/30/2024 19:25	WG2370487
Selenium	0.670	J	0.180	2.50	5	09/30/2024 19:25	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:25	WG2370487
Zinc	59.5		0.740	25.0	5	09/30/2024 19:25	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0455	B J	0.0217	0.100	1	09/25/2024 18:52	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*96.8*			*77.0-120*		*09/25/2024 18:52*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 04:29	WG2369065
Toluene	U		0.00130	0.00500	1	09/25/2024 04:29	WG2369065
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 04:29	WG2369065
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 04:29	WG2369065
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 04:29	WG2369065
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 04:29	WG2369065
(S) Toluene-d8	*95.9*			*75.0-131*		*09/25/2024 04:29*	WG2369065
(S) 4-Bromofluorobenzene	*78.8*			*67.0-138*		*09/25/2024 04:29*	WG2369065
(S) 1,2-Dichloroethane-d4	*94.2*			*70.0-130*		*09/25/2024 04:29*	WG2369065

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	09/27/2024 16:12	WG2370975
C28-C36 Motor Oil Range	0.313	J	0.274	4.00	1	09/27/2024 16:12	WG2370975
(S) o-Terphenyl	*54.3*			*18.0-148*		*09/27/2024 16:12*	WG2370975

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	09/28/2024 18:24	WG2370955
Anthracene	U		0.00230	0.00600	1	09/28/2024 18:24	WG2370955
Benzo(a)anthracene	U		0.00173	0.00600	1	09/28/2024 18:24	WG2370955
Benzo(b)fluoranthene	U		0.00153	0.00600	1	09/28/2024 18:24	WG2370955
Benzo(k)fluoranthene	U		0.00215	0.00600	1	09/28/2024 18:24	WG2370955
Benzo(a)pyrene	U		0.00179	0.00600	1	09/28/2024 18:24	WG2370955
Chrysene	U		0.00232	0.00600	1	09/28/2024 18:24	WG2370955
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	09/28/2024 18:24	WG2370955
Fluoranthene	U		0.00227	0.00600	1	09/28/2024 18:24	WG2370955
Fluorene	U		0.00205	0.00600	1	09/28/2024 18:24	WG2370955
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	09/28/2024 18:24	WG2370955
1-Methylnaphthalene	U		0.00449	0.0200	1	09/28/2024 18:24	WG2370955
2-Methylnaphthalene	U		0.00427	0.0200	1	09/28/2024 18:24	WG2370955
Naphthalene	U		0.00408	0.0200	1	09/28/2024 18:24	WG2370955
Pyrene	U		0.00200	0.00600	1	09/28/2024 18:24	WG2370955
(S) p-Terphenyl-d14	*77.7*			*23.0-120*		*09/28/2024 18:24*	WG2370955
(S) Nitrobenzene-d5	*79.5*			*14.0-149*		*09/28/2024 18:24*	WG2370955
(S) 2-Fluorobiphenyl	*84.2*			*34.0-125*		*09/28/2024 18:24*	WG2370955

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	2.42		1	09/27/2024 20:29	WG2370236

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.275	J	0.255	1.00	1	09/25/2024 18:37	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.37	T8	1	09/27/2024 12:33	WG2371241

Sample Narrative:

L1780144-16 WG2371241: 8.37 at 20.8C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	281	umhos/cm		10.0	1	09/28/2024 14:07	WG2371249

Sample Narrative:

L1780144-16 WG2371249: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.201		0.0167	0.200	1	09/27/2024 01:19	WG2370265

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.28		0.100	1.00	5	09/30/2024 19:28	WG2370487
Barium	164		0.152	2.50	5	09/30/2024 19:28	WG2370487
Cadmium	0.370	J	0.0855	1.00	5	09/30/2024 19:28	WG2370487
Copper	12.8		0.132	5.00	5	09/30/2024 19:28	WG2370487
Lead	10.7		0.0990	2.00	5	09/30/2024 19:28	WG2370487
Nickel	27.1		0.197	2.50	5	09/30/2024 19:28	WG2370487
Selenium	0.762	J	0.180	2.50	5	09/30/2024 19:28	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:28	WG2370487
Zinc	49.9		0.740	25.0	5	09/30/2024 19:28	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0526	B J	0.0217	0.100	1	09/25/2024 19:16	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*96.7*			*77.0-120*		*09/25/2024 19:16*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 04:48	WG2369065
Toluene	U		0.00130	0.00500	1	09/25/2024 04:48	WG2369065
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 04:48	WG2369065
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 04:48	WG2369065
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 04:48	WG2369065
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 04:48	WG2369065
(S) Toluene-d8	*102*			*75.0-131*		*09/25/2024 04:48*	WG2369065
(S) 4-Bromofluorobenzene	*80.3*			*67.0-138*		*09/25/2024 04:48*	WG2369065
(S) 1,2-Dichloroethane-d4	*95.1*			*70.0-130*		*09/25/2024 04:48*	WG2369065

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	72.8		1.61	4.00	1	09/30/2024 14:57	WG2370983
C28-C36 Motor Oil Range	95.8		0.274	4.00	1	09/30/2024 14:57	WG2370983
(S) o-Terphenyl	*50.5*			*18.0-148*		*09/30/2024 14:57*	WG2370983

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/01/2024 21:45	WG2372962
Anthracene	U		0.00230	0.00600	1	10/01/2024 21:45	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/01/2024 21:45	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/01/2024 21:45	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/01/2024 21:45	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/01/2024 21:45	WG2372962
Chrysene	0.00363	J	0.00232	0.00600	1	10/01/2024 21:45	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/01/2024 21:45	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/01/2024 21:45	WG2372962
Fluorene	U		0.00205	0.00600	1	10/01/2024 21:45	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/01/2024 21:45	WG2372962
1-Methylnaphthalene	0.00469	J	0.00449	0.0200	1	10/01/2024 21:45	WG2372962
2-Methylnaphthalene	0.0120	J	0.00427	0.0200	1	10/01/2024 21:45	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/01/2024 21:45	WG2372962
Pyrene	U		0.00200	0.00600	1	10/01/2024 21:45	WG2372962
(S) p-Terphenyl-d14	*88.9*			*23.0-120*		*10/01/2024 21:45*	WG2372962
(S) Nitrobenzene-d5	*93.0*			*14.0-149*		*10/01/2024 21:45*	WG2372962
(S) 2-Fluorobiphenyl	*88.7*			*34.0-125*		*10/01/2024 21:45*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.04		1	09/28/2024 23:09	WG2370238

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/25/2024 18:56	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.61	T8	1	09/28/2024 22:50	WG2371932

Sample Narrative:

L1780144-17 WG2371932: 8.61 at 19.9C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	292	umhos/cm		10.0	1	09/29/2024 14:30	WG2371940

Sample Narrative:

L1780144-17 WG2371940: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.246		0.0167	0.200	1	09/28/2024 23:45	WG2370271

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.81		0.100	1.00	5	09/30/2024 19:31	WG2370487
Barium	139		0.152	2.50	5	09/30/2024 19:31	WG2370487
Cadmium	U		0.0855	1.00	5	09/30/2024 19:31	WG2370487
Copper	8.87		0.132	5.00	5	09/30/2024 19:31	WG2370487
Lead	9.24		0.0990	2.00	5	09/30/2024 19:31	WG2370487
Nickel	17.1		0.197	2.50	5	09/30/2024 19:31	WG2370487
Selenium	0.365	J	0.180	2.50	5	09/30/2024 19:31	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:31	WG2370487
Zinc	43.6		0.740	25.0	5	09/30/2024 19:31	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0401	B J	0.0217	0.100	1	09/25/2024 19:39	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*96.9*			*77.0-120*		*09/25/2024 19:39*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/26/2024 02:46	WG2369709
Toluene	U		0.00130	0.00500	1	09/26/2024 02:46	WG2369709
Ethylbenzene	U		0.000737	0.00250	1	09/26/2024 02:46	WG2369709
Xylenes, Total	U		0.000880	0.00650	1	09/26/2024 02:46	WG2369709
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/26/2024 02:46	WG2369709
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/26/2024 02:46	WG2369709
(S) Toluene-d8	*107*			*75.0-131*		*09/26/2024 02:46*	WG2369709
(S) 4-Bromofluorobenzene	*97.9*			*67.0-138*		*09/26/2024 02:46*	WG2369709
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*09/26/2024 02:46*	WG2369709

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	7.95		1.61	4.00	1	09/30/2024 21:25	WG2370983
C28-C36 Motor Oil Range	8.99		0.274	4.00	1	09/30/2024 21:25	WG2370983
(S) o-Terphenyl	*54.9*			*18.0-148*		*09/30/2024 21:25*	WG2370983

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/01/2024 22:02	WG2372962
Anthracene	U		0.00230	0.00600	1	10/01/2024 22:02	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/01/2024 22:02	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/01/2024 22:02	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/01/2024 22:02	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/01/2024 22:02	WG2372962
Chrysene	U		0.00232	0.00600	1	10/01/2024 22:02	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/01/2024 22:02	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/01/2024 22:02	WG2372962
Fluorene	U		0.00205	0.00600	1	10/01/2024 22:02	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/01/2024 22:02	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/01/2024 22:02	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/01/2024 22:02	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/01/2024 22:02	WG2372962
Pyrene	U		0.00200	0.00600	1	10/01/2024 22:02	WG2372962
(S) p-Terphenyl-d14	*60.8*			*23.0-120*		*10/01/2024 22:02*	WG2372962
(S) Nitrobenzene-d5	*75.9*			*14.0-149*		*10/01/2024 22:02*	WG2372962
(S) 2-Fluorobiphenyl	*70.9*			*34.0-125*		*10/01/2024 22:02*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
	SAR				
Sodium Adsorption Ratio	2.21		1	09/28/2024 23:22	WG2370238

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.406	J	0.255	1.00	1	09/25/2024 19:02	WG2369233

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.52	T8	1	09/28/2024 22:50	WG2371932

Sample Narrative:

L1780144-18 WG2371932: 8.52 at 20.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	220	umhos/cm		10.0	1	09/29/2024 14:30	WG2371940

Sample Narrative:

L1780144-18 WG2371940: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.231		0.0167	0.200	1	09/28/2024 23:47	WG2370271

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.65		0.100	1.00	5	09/30/2024 19:34	WG2370487
Barium	250		0.152	2.50	5	09/30/2024 19:34	WG2370487
Cadmium	0.236	J	0.0855	1.00	5	09/30/2024 19:34	WG2370487
Copper	13.4		0.132	5.00	5	09/30/2024 19:34	WG2370487
Lead	12.5		0.0990	2.00	5	09/30/2024 19:34	WG2370487
Nickel	27.6		0.197	2.50	5	09/30/2024 19:34	WG2370487
Selenium	0.747	J	0.180	2.50	5	09/30/2024 19:34	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:34	WG2370487
Zinc	61.6		0.740	25.0	5	09/30/2024 19:34	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0746	B J	0.0217	0.100	1	09/25/2024 20:03	WG2369420
(S) a,a,a-Trifluorotoluene(FID)	*96.9*			*77.0-120*		*09/25/2024 20:03*	WG2369420

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U	J4	0.000467	0.00100	1	09/26/2024 02:20	WG2369739
Toluene	U		0.00130	0.00500	1	09/26/2024 02:20	WG2369739
Ethylbenzene	U		0.000737	0.00250	1	09/26/2024 02:20	WG2369739
Xylenes, Total	U		0.000880	0.00650	1	09/26/2024 02:20	WG2369739
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/26/2024 02:20	WG2369739
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/26/2024 02:20	WG2369739
(S) Toluene-d8	*106*			*75.0-131*		*09/26/2024 02:20*	WG2369739
(S) 4-Bromofluorobenzene	*94.0*			*67.0-138*		*09/26/2024 02:20*	WG2369739
(S) 1,2-Dichloroethane-d4	*95.9*			*70.0-130*		*09/26/2024 02:20*	WG2369739

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	6.83		1.61	4.00	1	09/30/2024 21:38	WG2370983
C28-C36 Motor Oil Range	6.97		0.274	4.00	1	09/30/2024 21:38	WG2370983
(S) o-Terphenyl	*52.7*			*18.0-148*		*09/30/2024 21:38*	WG2370983

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/01/2024 22:20	WG2372962
Anthracene	U		0.00230	0.00600	1	10/01/2024 22:20	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/01/2024 22:20	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/01/2024 22:20	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/01/2024 22:20	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/01/2024 22:20	WG2372962
Chrysene	U		0.00232	0.00600	1	10/01/2024 22:20	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/01/2024 22:20	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/01/2024 22:20	WG2372962
Fluorene	U		0.00205	0.00600	1	10/01/2024 22:20	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/01/2024 22:20	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/01/2024 22:20	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/01/2024 22:20	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/01/2024 22:20	WG2372962
Pyrene	U		0.00200	0.00600	1	10/01/2024 22:20	WG2372962
(S) p-Terphenyl-d14	*84.6*			*23.0-120*		*10/01/2024 22:20*	WG2372962
(S) Nitrobenzene-d5	*86.8*			*14.0-149*		*10/01/2024 22:20*	WG2372962
(S) 2-Fluorobiphenyl	*81.5*			*34.0-125*		*10/01/2024 22:20*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.21		1	09/28/2024 21:30	WG2370237

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/27/2024 09:14	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.59	T8	1	09/28/2024 22:00	WG2371934

Sample Narrative:

L1780144-19 WG2371934: 8.59 at 20.7C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	192	umhos/cm		10.0	1	09/29/2024 14:00	WG2371935

Sample Narrative:

L1780144-19 WG2371935: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.0888	J	0.0167	0.200	1	09/28/2024 22:09	WG2370270

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.34		0.100	1.00	5	09/30/2024 19:38	WG2370487
Barium	260		0.152	2.50	5	09/30/2024 19:38	WG2370487
Cadmium	0.0897	J	0.0855	1.00	5	09/30/2024 19:38	WG2370487
Copper	8.73		0.132	5.00	5	09/30/2024 19:38	WG2370487
Lead	11.9		0.0990	2.00	5	09/30/2024 19:38	WG2370487
Nickel	16.9		0.197	2.50	5	09/30/2024 19:38	WG2370487
Selenium	0.408	J	0.180	2.50	5	09/30/2024 19:38	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:38	WG2370487
Zinc	50.0		0.740	25.0	5	09/30/2024 19:38	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0341	B J	0.0217	0.100	1	09/26/2024 00:16	WG2370003
(S) a,a,a-Trifluorotoluene(FID)	*97.5*			*77.0-120*		*09/26/2024 00:16*	WG2370003

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/26/2024 23:01	WG2370677
Toluene	U		0.00130	0.00500	1	09/26/2024 23:01	WG2370677
Ethylbenzene	U		0.000737	0.00250	1	09/26/2024 23:01	WG2370677
Xylenes, Total	U		0.000880	0.00650	1	09/26/2024 23:01	WG2370677
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/26/2024 23:01	WG2370677
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/26/2024 23:01	WG2370677
(S) Toluene-d8	*107*			*75.0-131*		*09/26/2024 23:01*	WG2370677
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*		*09/26/2024 23:01*	WG2370677
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*09/26/2024 23:01*	WG2370677

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.61	4.00	1	09/30/2024 17:03	WG2370983
C28-C36 Motor Oil Range	0.916	J	0.274	4.00	1	09/30/2024 17:03	WG2370983
(S) o-Terphenyl	*51.8*			*18.0-148*		*09/30/2024 17:03*	WG2370983

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/01/2024 22:38	WG2372962
Anthracene	U		0.00230	0.00600	1	10/01/2024 22:38	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/01/2024 22:38	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/01/2024 22:38	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/01/2024 22:38	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/01/2024 22:38	WG2372962
Chrysene	U		0.00232	0.00600	1	10/01/2024 22:38	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/01/2024 22:38	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/01/2024 22:38	WG2372962
Fluorene	U		0.00205	0.00600	1	10/01/2024 22:38	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/01/2024 22:38	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/01/2024 22:38	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/01/2024 22:38	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/01/2024 22:38	WG2372962
Pyrene	U		0.00200	0.00600	1	10/01/2024 22:38	WG2372962
(S) p-Terphenyl-d14	*82.3*			*23.0-120*		*10/01/2024 22:38*	WG2372962
(S) Nitrobenzene-d5	*82.8*			*14.0-149*		*10/01/2024 22:38*	WG2372962
(S) 2-Fluorobiphenyl	*80.9*			*34.0-125*		*10/01/2024 22:38*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.58		1	09/28/2024 23:02	WG2370238

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.597	J	0.255	1.00	1	09/27/2024 09:27	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.60	T8	1	09/28/2024 22:50	WG2371932

Sample Narrative:

L1780144-20 WG2371932: 8.6 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	185	umhos/cm		10.0	1	09/29/2024 14:30	WG2371940

Sample Narrative:

L1780144-20 WG2371940: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.0929	J	0.0167	0.200	1	09/28/2024 23:48	WG2370271

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.75		0.100	1.00	5	09/30/2024 19:41	WG2370487
Barium	523		0.152	2.50	5	09/30/2024 19:41	WG2370487
Cadmium	0.118	J	0.0855	1.00	5	09/30/2024 19:41	WG2370487
Copper	11.3		0.132	5.00	5	09/30/2024 19:41	WG2370487
Lead	16.8		0.0990	2.00	5	09/30/2024 19:41	WG2370487
Nickel	18.3		0.197	2.50	5	09/30/2024 19:41	WG2370487
Selenium	0.440	J	0.180	2.50	5	09/30/2024 19:41	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:41	WG2370487
Zinc	52.7		0.740	25.0	5	09/30/2024 19:41	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0315	B J	0.0217	0.100	1	09/26/2024 00:40	WG2370003
(S) a,a,a-Trifluorotoluene(FID)	*97.5*			*77.0-120*		*09/26/2024 00:40*	WG2370003

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/26/2024 23:20	WG2370677
Toluene	U		0.00130	0.00500	1	09/26/2024 23:20	WG2370677
Ethylbenzene	U		0.000737	0.00250	1	09/26/2024 23:20	WG2370677
Xylenes, Total	U		0.000880	0.00650	1	09/26/2024 23:20	WG2370677
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/26/2024 23:20	WG2370677
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/26/2024 23:20	WG2370677
(S) Toluene-d8	*109*			*75.0-131*		*09/26/2024 23:20*	WG2370677
(S) 4-Bromofluorobenzene	*96.9*			*67.0-138*		*09/26/2024 23:20*	WG2370677
(S) 1,2-Dichloroethane-d4	*96.9*			*70.0-130*		*09/26/2024 23:20*	WG2370677

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	6.52		1.61	4.00	1	09/30/2024 17:16	WG2370983
C28-C36 Motor Oil Range	11.8		0.274	4.00	1	09/30/2024 17:16	WG2370983
(S) o-Terphenyl	*59.1*			*18.0-148*		*09/30/2024 17:16*	WG2370983

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/01/2024 22:55	WG2372962
Anthracene	U		0.00230	0.00600	1	10/01/2024 22:55	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/01/2024 22:55	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/01/2024 22:55	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/01/2024 22:55	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/01/2024 22:55	WG2372962
Chrysene	0.00336	J	0.00232	0.00600	1	10/01/2024 22:55	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/01/2024 22:55	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/01/2024 22:55	WG2372962
Fluorene	U		0.00205	0.00600	1	10/01/2024 22:55	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/01/2024 22:55	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/01/2024 22:55	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/01/2024 22:55	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/01/2024 22:55	WG2372962
Pyrene	U		0.00200	0.00600	1	10/01/2024 22:55	WG2372962
(S) p-Terphenyl-d14	*75.9*			*23.0-120*		*10/01/2024 22:55*	WG2372962
(S) Nitrobenzene-d5	*78.0*			*14.0-149*		*10/01/2024 22:55*	WG2372962
(S) 2-Fluorobiphenyl	*73.6*			*34.0-125*		*10/01/2024 22:55*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.44		1	09/28/2024 21:58	WG2370237

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.372	J	0.255	1.00	1	09/27/2024 09:33	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.52	T8	1	09/28/2024 22:00	WG2371934

Sample Narrative:

L1780144-21 WG2371934: 8.52 at 20.6C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	213	umhos/cm		10.0	1	09/29/2024 14:00	WG2371935

Sample Narrative:

L1780144-21 WG2371935: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.0997	J	0.0167	0.200	1	09/28/2024 22:11	WG2370270

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.16		0.100	1.00	5	09/30/2024 19:44	WG2370487
Barium	327		0.152	2.50	5	09/30/2024 19:44	WG2370487
Cadmium	0.108	J	0.0855	1.00	5	09/30/2024 19:44	WG2370487
Copper	11.9		0.132	5.00	5	09/30/2024 19:44	WG2370487
Lead	13.8		0.0990	2.00	5	09/30/2024 19:44	WG2370487
Nickel	17.5		0.197	2.50	5	09/30/2024 19:44	WG2370487
Selenium	0.492	J	0.180	2.50	5	09/30/2024 19:44	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:44	WG2370487
Zinc	49.8		0.740	25.0	5	09/30/2024 19:44	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0364	B J	0.0217	0.100	1	09/26/2024 01:03	WG2370003
(S) a,a,a-Trifluorotoluene(FID)	*97.2*			*77.0-120*		*09/26/2024 01:03*	WG2370003

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/26/2024 23:39	WG2370677
Toluene	U		0.00130	0.00500	1	09/26/2024 23:39	WG2370677
Ethylbenzene	U		0.000737	0.00250	1	09/26/2024 23:39	WG2370677
Xylenes, Total	U		0.000880	0.00650	1	09/26/2024 23:39	WG2370677
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/26/2024 23:39	WG2370677
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/26/2024 23:39	WG2370677
(S) Toluene-d8	*107*			*75.0-131*		*09/26/2024 23:39*	WG2370677
(S) 4-Bromofluorobenzene	*98.6*			*67.0-138*		*09/26/2024 23:39*	WG2370677
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*09/26/2024 23:39*	WG2370677

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	4.41		1.61	4.00	1	09/27/2024 18:23	WG2370622
C28-C36 Motor Oil Range	6.95		0.274	4.00	1	09/27/2024 18:23	WG2370622
(S) o-Terphenyl	*66.8*			*18.0-148*		*09/27/2024 18:23*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/01/2024 23:13	WG2372962
Anthracene	U		0.00230	0.00600	1	10/01/2024 23:13	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/01/2024 23:13	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/01/2024 23:13	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/01/2024 23:13	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/01/2024 23:13	WG2372962
Chrysene	U		0.00232	0.00600	1	10/01/2024 23:13	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/01/2024 23:13	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/01/2024 23:13	WG2372962
Fluorene	U		0.00205	0.00600	1	10/01/2024 23:13	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/01/2024 23:13	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/01/2024 23:13	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/01/2024 23:13	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/01/2024 23:13	WG2372962
Pyrene	U		0.00200	0.00600	1	10/01/2024 23:13	WG2372962
(S) p-Terphenyl-d14	*81.9*			*23.0-120*		*10/01/2024 23:13*	WG2372962
(S) Nitrobenzene-d5	*82.9*			*14.0-149*		*10/01/2024 23:13*	WG2372962
(S) 2-Fluorobiphenyl	*79.7*			*34.0-125*		*10/01/2024 23:13*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.37		1	09/27/2024 20:31	WG2370236

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.489	J	0.255	1.00	1	09/27/2024 09:39	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.49	T8	1	09/27/2024 12:33	WG2371241

Sample Narrative:

L1780144-22 WG2371241: 8.49 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	171	umhos/cm		10.0	1	09/28/2024 14:07	WG2371249

Sample Narrative:

L1780144-22 WG2371249: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.0917	J	0.0167	0.200	1	09/27/2024 01:21	WG2370265

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.54		0.100	1.00	5	09/30/2024 18:52	WG2370487
Barium	218	J5	0.152	2.50	5	09/30/2024 18:52	WG2370487
Cadmium	0.106	J O1	0.0855	1.00	5	09/30/2024 18:52	WG2370487
Copper	11.7		0.132	5.00	5	09/30/2024 18:52	WG2370487
Lead	14.1		0.0990	2.00	5	09/30/2024 18:52	WG2370487
Nickel	17.0	O1	0.197	2.50	5	09/30/2024 18:52	WG2370487
Selenium	0.476	J	0.180	2.50	5	09/30/2024 18:52	WG2370487
Silver	U	O1	0.0865	0.500	5	09/30/2024 18:52	WG2370487
Zinc	52.6		0.740	25.0	5	09/30/2024 18:52	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0360	B J	0.0217	0.100	1	09/26/2024 01:27	WG2370003
(S) a,a,a-Trifluorotoluene(FID)	*97.4*			*77.0-120*		*09/26/2024 01:27*	WG2370003

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/26/2024 23:57	WG2370677
Toluene	U		0.00130	0.00500	1	09/26/2024 23:57	WG2370677
Ethylbenzene	U		0.000737	0.00250	1	09/26/2024 23:57	WG2370677
Xylenes, Total	U		0.000880	0.00650	1	09/26/2024 23:57	WG2370677
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/26/2024 23:57	WG2370677
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/26/2024 23:57	WG2370677
(S) Toluene-d8	*109*			*75.0-131*		*09/26/2024 23:57*	WG2370677
(S) 4-Bromofluorobenzene	*96.1*			*67.0-138*		*09/26/2024 23:57*	WG2370677
(S) 1,2-Dichloroethane-d4	*92.3*			*70.0-130*		*09/26/2024 23:57*	WG2370677

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	7.09		1.61	4.00	1	09/27/2024 19:03	WG2370622
C28-C36 Motor Oil Range	11.6		0.274	4.00	1	09/27/2024 19:03	WG2370622
(S) o-Terphenyl	*48.8*			*18.0-148*		*09/27/2024 19:03*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/01/2024 23:31	WG2372962
Anthracene	U		0.00230	0.00600	1	10/01/2024 23:31	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/01/2024 23:31	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/01/2024 23:31	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/01/2024 23:31	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/01/2024 23:31	WG2372962
Chrysene	U		0.00232	0.00600	1	10/01/2024 23:31	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/01/2024 23:31	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/01/2024 23:31	WG2372962
Fluorene	U		0.00205	0.00600	1	10/01/2024 23:31	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/01/2024 23:31	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/01/2024 23:31	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/01/2024 23:31	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/01/2024 23:31	WG2372962
Pyrene	U		0.00200	0.00600	1	10/01/2024 23:31	WG2372962
(S) p-Terphenyl-d14	*80.1*			*23.0-120*		*10/01/2024 23:31*	WG2372962
(S) Nitrobenzene-d5	*82.2*			*14.0-149*		*10/01/2024 23:31*	WG2372962
(S) 2-Fluorobiphenyl	*78.8*			*34.0-125*		*10/01/2024 23:31*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.24		1	09/28/2024 21:37	WG2370237

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.617	J P1	0.255	1.00	1	09/27/2024 09:45	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.43	T8	1	09/28/2024 22:00	WG2371934

Sample Narrative:

L1780144-23 WG2371934: 8.43 at 20.5C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	199	umhos/cm		10.0	1	09/29/2024 14:00	WG2371935

Sample Narrative:

L1780144-23 WG2371935: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.112	J	0.0167	0.200	1	09/28/2024 22:12	WG2370270

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.87		0.100	1.00	5	09/30/2024 19:47	WG2370487
Barium	282		0.152	2.50	5	09/30/2024 19:47	WG2370487
Cadmium	0.0889	J	0.0855	1.00	5	09/30/2024 19:47	WG2370487
Copper	10.6		0.132	5.00	5	09/30/2024 19:47	WG2370487
Lead	13.6		0.0990	2.00	5	09/30/2024 19:47	WG2370487
Nickel	16.6		0.197	2.50	5	09/30/2024 19:47	WG2370487
Selenium	0.600	J	0.180	2.50	5	09/30/2024 19:47	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:47	WG2370487
Zinc	49.1		0.740	25.0	5	09/30/2024 19:47	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0333	B J	0.0217	0.100	1	09/26/2024 01:50	WG2370003
(S) a,a,a-Trifluorotoluene(FID)	*97.5*			*77.0-120*		*09/26/2024 01:50*	WG2370003

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/27/2024 00:16	WG2370677
Toluene	U		0.00130	0.00500	1	09/27/2024 00:16	WG2370677
Ethylbenzene	U		0.000737	0.00250	1	09/27/2024 00:16	WG2370677
Xylenes, Total	U		0.000880	0.00650	1	09/27/2024 00:16	WG2370677
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/27/2024 00:16	WG2370677
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/27/2024 00:16	WG2370677
(S) Toluene-d8	*110*			*75.0-131*		*09/27/2024 00:16*	WG2370677
(S) 4-Bromofluorobenzene	*97.2*			*67.0-138*		*09/27/2024 00:16*	WG2370677
(S) 1,2-Dichloroethane-d4	*98.3*			*70.0-130*		*09/27/2024 00:16*	WG2370677

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	4.37		1.61	4.00	1	09/27/2024 19:17	WG2370622
C28-C36 Motor Oil Range	9.10		0.274	4.00	1	09/27/2024 19:17	WG2370622
(S) o-Terphenyl	*61.3*			*18.0-148*		*09/27/2024 19:17*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/01/2024 23:48	WG2372962
Anthracene	U		0.00230	0.00600	1	10/01/2024 23:48	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/01/2024 23:48	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/01/2024 23:48	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/01/2024 23:48	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/01/2024 23:48	WG2372962
Chrysene	U		0.00232	0.00600	1	10/01/2024 23:48	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/01/2024 23:48	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/01/2024 23:48	WG2372962
Fluorene	U		0.00205	0.00600	1	10/01/2024 23:48	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/01/2024 23:48	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/01/2024 23:48	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/01/2024 23:48	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/01/2024 23:48	WG2372962
Pyrene	U		0.00200	0.00600	1	10/01/2024 23:48	WG2372962
(S) p-Terphenyl-d14	*83.4*			*23.0-120*		*10/01/2024 23:48*	WG2372962
(S) Nitrobenzene-d5	*83.7*			*14.0-149*		*10/01/2024 23:48*	WG2372962
(S) 2-Fluorobiphenyl	*81.4*			*34.0-125*		*10/01/2024 23:48*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.35		1	09/28/2024 18:25	WG2370234

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.590	J	0.255	1.00	1	09/27/2024 09:58	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.40	T8	1	09/28/2024 22:00	WG2371933

Sample Narrative:

L1780144-24 WG2371933: 8.4 at 22.3C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	201	umhos/cm		10.0	1	09/28/2024 22:20	WG2371938

Sample Narrative:

L1780144-24 WG2371938: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.108	J	0.0167	0.200	1	09/28/2024 02:48	WG2370263

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.97		0.100	1.00	5	09/30/2024 19:50	WG2370487
Barium	374		0.152	2.50	5	09/30/2024 19:50	WG2370487
Cadmium	0.117	J	0.0855	1.00	5	09/30/2024 19:50	WG2370487
Copper	10.7		0.132	5.00	5	09/30/2024 19:50	WG2370487
Lead	15.7		0.0990	2.00	5	09/30/2024 19:50	WG2370487
Nickel	17.9		0.197	2.50	5	09/30/2024 19:50	WG2370487
Selenium	0.594	J	0.180	2.50	5	09/30/2024 19:50	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:50	WG2370487
Zinc	53.4		0.740	25.0	5	09/30/2024 19:50	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0298	B J	0.0217	0.100	1	09/26/2024 02:13	WG2370003
(S) a,a,a-Trifluorotoluene(FID)	*97.2*			*77.0-120*		*09/26/2024 02:13*	WG2370003

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/30/2024 20:46	WG2372670
Toluene	U		0.00130	0.00500	1	09/30/2024 20:46	WG2372670
Ethylbenzene	U		0.000737	0.00250	1	09/30/2024 20:46	WG2372670
Xylenes, Total	U		0.000880	0.00650	1	09/30/2024 20:46	WG2372670
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/30/2024 20:46	WG2372670
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/30/2024 20:46	WG2372670
(S) Toluene-d8	*102*			*75.0-131*		*09/30/2024 20:46*	WG2372670
(S) 4-Bromofluorobenzene	*96.6*			*67.0-138*		*09/30/2024 20:46*	WG2372670
(S) 1,2-Dichloroethane-d4	*119*			*70.0-130*		*09/30/2024 20:46*	WG2372670

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	6.12		1.61	4.00	1	09/27/2024 19:43	WG2370622
C28-C36 Motor Oil Range	11.6		0.274	4.00	1	09/27/2024 19:43	WG2370622
(S) o-Terphenyl	*56.2*			*18.0-148*		*09/27/2024 19:43*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/02/2024 00:06	WG2372962
Anthracene	U		0.00230	0.00600	1	10/02/2024 00:06	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/02/2024 00:06	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/02/2024 00:06	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/02/2024 00:06	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/02/2024 00:06	WG2372962
Chrysene	U		0.00232	0.00600	1	10/02/2024 00:06	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/02/2024 00:06	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/02/2024 00:06	WG2372962
Fluorene	U		0.00205	0.00600	1	10/02/2024 00:06	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/02/2024 00:06	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/02/2024 00:06	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/02/2024 00:06	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/02/2024 00:06	WG2372962
Pyrene	U		0.00200	0.00600	1	10/02/2024 00:06	WG2372962
(S) p-Terphenyl-d14	*81.9*			*23.0-120*		*10/02/2024 00:06*	WG2372962
(S) Nitrobenzene-d5	*82.0*			*14.0-149*		*10/02/2024 00:06*	WG2372962
(S) 2-Fluorobiphenyl	*80.5*			*34.0-125*		*10/02/2024 00:06*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.61		1	09/28/2024 21:57	WG2370237

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.504	J	0.255	1.00	1	09/27/2024 10:16	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.04	T8	1	09/28/2024 22:00	WG2371934

Sample Narrative:

L1780144-25 WG2371934: 8.04 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	729	umhos/cm		10.0	1	09/29/2024 14:00	WG2371935

Sample Narrative:

L1780144-25 WG2371935: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.329		0.0167	0.200	1	09/28/2024 22:14	WG2370270

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	15.7		0.100	1.00	5	09/30/2024 19:54	WG2370487
Barium	235		0.152	2.50	5	09/30/2024 19:54	WG2370487
Cadmium	0.162	J	0.0855	1.00	5	09/30/2024 19:54	WG2370487
Copper	16.6		0.132	5.00	5	09/30/2024 19:54	WG2370487
Lead	25.3		0.0990	2.00	5	09/30/2024 19:54	WG2370487
Nickel	19.4		0.197	2.50	5	09/30/2024 19:54	WG2370487
Selenium	0.597	J	0.180	2.50	5	09/30/2024 19:54	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 19:54	WG2370487
Zinc	56.2		0.740	25.0	5	09/30/2024 19:54	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0389	B J	0.0217	0.100	1	09/28/2024 23:43	WG2371252
(S) a,a,a-Trifluorotoluene(FID)	*93.2*			*77.0-120*		*09/28/2024 23:43*	WG2371252

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/27/2024 00:34	WG2370677
Toluene	U		0.00130	0.00500	1	09/27/2024 00:34	WG2370677
Ethylbenzene	U		0.000737	0.00250	1	09/27/2024 00:34	WG2370677
Xylenes, Total	U		0.000880	0.00650	1	09/27/2024 00:34	WG2370677
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/27/2024 00:34	WG2370677
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/27/2024 00:34	WG2370677
(S) Toluene-d8	*110*			*75.0-131*		*09/27/2024 00:34*	WG2370677
(S) 4-Bromofluorobenzene	*96.9*			*67.0-138*		*09/27/2024 00:34*	WG2370677
(S) 1,2-Dichloroethane-d4	*93.5*			*70.0-130*		*09/27/2024 00:34*	WG2370677

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	9.04		1.61	4.00	1	09/27/2024 17:16	WG2370622
C28-C36 Motor Oil Range	12.0		0.274	4.00	1	09/27/2024 17:16	WG2370622
(S) o-Terphenyl	*66.4*			*18.0-148*		*09/27/2024 17:16*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/02/2024 00:23	WG2372962
Anthracene	U		0.00230	0.00600	1	10/02/2024 00:23	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/02/2024 00:23	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/02/2024 00:23	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/02/2024 00:23	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/02/2024 00:23	WG2372962
Chrysene	U		0.00232	0.00600	1	10/02/2024 00:23	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/02/2024 00:23	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/02/2024 00:23	WG2372962
Fluorene	U		0.00205	0.00600	1	10/02/2024 00:23	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/02/2024 00:23	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/02/2024 00:23	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/02/2024 00:23	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/02/2024 00:23	WG2372962
Pyrene	U		0.00200	0.00600	1	10/02/2024 00:23	WG2372962
(S) p-Terphenyl-d14	*80.0*			*23.0-120*		*10/02/2024 00:23*	WG2372962
(S) Nitrobenzene-d5	*81.5*			*14.0-149*		*10/02/2024 00:23*	WG2372962
(S) 2-Fluorobiphenyl	*77.7*			*34.0-125*		*10/02/2024 00:23*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.96		1	09/28/2024 22:55	WG2370238

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.294	J	0.255	1.00	1	09/27/2024 10:23	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.05	T8	1	09/28/2024 22:50	WG2371932

Sample Narrative:

L1780144-26 WG2371932: 8.05 at 20.2C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	677	umhos/cm		10.0	1	09/29/2024 14:30	WG2371940

Sample Narrative:

L1780144-26 WG2371940: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.393		0.0167	0.200	1	09/28/2024 23:50	WG2370271

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.31		0.100	1.00	5	09/30/2024 20:04	WG2370487
Barium	206		0.152	2.50	5	09/30/2024 20:04	WG2370487
Cadmium	0.116	J	0.0855	1.00	5	09/30/2024 20:04	WG2370487
Copper	10.5		0.132	5.00	5	09/30/2024 20:04	WG2370487
Lead	14.4		0.0990	2.00	5	09/30/2024 20:04	WG2370487
Nickel	17.0		0.197	2.50	5	09/30/2024 20:04	WG2370487
Selenium	0.782	J	0.180	2.50	5	09/30/2024 20:04	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 20:04	WG2370487
Zinc	50.1		0.740	25.0	5	09/30/2024 20:04	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0311	B J	0.0217	0.100	1	09/26/2024 02:37	WG2370003
(S) a,a,a-Trifluorotoluene(FID)	*97.6*			*77.0-120*		*09/26/2024 02:37*	WG2370003

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 04:57	WG2369167
Toluene	U		0.00130	0.00500	1	09/25/2024 04:57	WG2369167
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 04:57	WG2369167
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 04:57	WG2369167
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 04:57	WG2369167
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 04:57	WG2369167
(S) Toluene-d8	*97.0*			*75.0-131*		*09/25/2024 04:57*	WG2369167
(S) 4-Bromofluorobenzene	*98.3*			*67.0-138*		*09/25/2024 04:57*	WG2369167
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*09/25/2024 04:57*	WG2369167

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	44.1		1.61	4.00	1	09/27/2024 17:29	WG2370622
C28-C36 Motor Oil Range	36.2		0.274	4.00	1	09/27/2024 17:29	WG2370622
(S) o-Terphenyl	*67.6*			*18.0-148*		*09/27/2024 17:29*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/02/2024 00:41	WG2372962
Anthracene	U		0.00230	0.00600	1	10/02/2024 00:41	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/02/2024 00:41	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/02/2024 00:41	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/02/2024 00:41	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/02/2024 00:41	WG2372962
Chrysene	U		0.00232	0.00600	1	10/02/2024 00:41	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/02/2024 00:41	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/02/2024 00:41	WG2372962
Fluorene	U		0.00205	0.00600	1	10/02/2024 00:41	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/02/2024 00:41	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/02/2024 00:41	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/02/2024 00:41	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/02/2024 00:41	WG2372962
Pyrene	U		0.00200	0.00600	1	10/02/2024 00:41	WG2372962
(S) p-Terphenyl-d14	*80.8*			*23.0-120*		*10/02/2024 00:41*	WG2372962
(S) Nitrobenzene-d5	*79.4*			*14.0-149*		*10/02/2024 00:41*	WG2372962
(S) 2-Fluorobiphenyl	*77.2*			*34.0-125*		*10/02/2024 00:41*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.37		1	09/28/2024 18:27	WG2370234

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.339	J	0.255	1.00	1	09/27/2024 10:29	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	8.22	T8	1	09/28/2024 22:00	WG2371933

Sample Narrative:

L1780144-27 WG2371933: 8.22 at 21.9C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	383	umhos/cm		10.0	1	09/28/2024 22:20	WG2371938

Sample Narrative:

L1780144-27 WG2371938: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.284		0.0167	0.200	1	09/28/2024 02:53	WG2370263

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.85		0.100	1.00	5	09/30/2024 20:07	WG2370487
Barium	230		0.152	2.50	5	09/30/2024 20:07	WG2370487
Cadmium	0.129	J	0.0855	1.00	5	09/30/2024 20:07	WG2370487
Copper	11.7		0.132	5.00	5	09/30/2024 20:07	WG2370487
Lead	14.6		0.0990	2.00	5	09/30/2024 20:07	WG2370487
Nickel	17.3		0.197	2.50	5	09/30/2024 20:07	WG2370487
Selenium	0.585	J	0.180	2.50	5	09/30/2024 20:07	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 20:07	WG2370487
Zinc	51.1		0.740	25.0	5	09/30/2024 20:07	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0397	B J	0.0217	0.100	1	09/26/2024 03:00	WG2370003
(S) a,a,a-Trifluorotoluene(FID)	*97.3*			*77.0-120*		*09/26/2024 03:00*	WG2370003

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/29/2024 12:25	WG2370936
Toluene	U		0.00130	0.00500	1	09/29/2024 12:25	WG2370936
Ethylbenzene	U		0.000737	0.00250	1	09/29/2024 12:25	WG2370936
Xylenes, Total	U		0.000880	0.00650	1	09/29/2024 12:25	WG2370936
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/29/2024 12:25	WG2370936
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/29/2024 12:25	WG2370936
(S) Toluene-d8	*107*			*75.0-131*		*09/29/2024 12:25*	WG2370936
(S) 4-Bromofluorobenzene	*97.6*			*67.0-138*		*09/29/2024 12:25*	WG2370936
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*09/29/2024 12:25*	WG2370936

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	8.99		1.61	4.00	1	09/27/2024 18:23	WG2370622
C28-C36 Motor Oil Range	11.3		0.274	4.00	1	09/27/2024 18:23	WG2370622
(S) o-Terphenyl	*66.5*			*18.0-148*		*09/27/2024 18:23*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/02/2024 00:59	WG2372962
Anthracene	U		0.00230	0.00600	1	10/02/2024 00:59	WG2372962
Benzo(a)anthracene	0.00235	J	0.00173	0.00600	1	10/02/2024 00:59	WG2372962
Benzo(b)fluoranthene	0.00211	J	0.00153	0.00600	1	10/02/2024 00:59	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/02/2024 00:59	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/02/2024 00:59	WG2372962
Chrysene	0.00268	J	0.00232	0.00600	1	10/02/2024 00:59	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/02/2024 00:59	WG2372962
Fluoranthene	0.00552	J	0.00227	0.00600	1	10/02/2024 00:59	WG2372962
Fluorene	U		0.00205	0.00600	1	10/02/2024 00:59	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/02/2024 00:59	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/02/2024 00:59	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/02/2024 00:59	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/02/2024 00:59	WG2372962
Pyrene	0.00441	J	0.00200	0.00600	1	10/02/2024 00:59	WG2372962
(S) p-Terphenyl-d14	*81.6*			*23.0-120*		*10/02/2024 00:59*	WG2372962
(S) Nitrobenzene-d5	*81.4*			*14.0-149*		*10/02/2024 00:59*	WG2372962
(S) 2-Fluorobiphenyl	*78.8*			*34.0-125*		*10/02/2024 00:59*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.23		1	09/28/2024 22:57	WG2370238

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.365	J	0.255	1.00	1	09/27/2024 11:00	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	9.05	T8	1	09/28/2024 22:50	WG2371932

Sample Narrative:

L1780144-28 WG2371932: 9.05 at 20.1C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1160	umhos/cm		10.0	1	09/29/2024 14:30	WG2371940

Sample Narrative:

L1780144-28 WG2371940: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.270		0.0167	0.200	1	09/28/2024 23:52	WG2370271

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.20		0.100	1.00	5	09/30/2024 20:10	WG2370487
Barium	329		0.152	2.50	5	09/30/2024 20:10	WG2370487
Cadmium	U		0.0855	1.00	5	09/30/2024 20:10	WG2370487
Copper	11.3		0.132	5.00	5	09/30/2024 20:10	WG2370487
Lead	14.1		0.0990	2.00	5	09/30/2024 20:10	WG2370487
Nickel	18.9		0.197	2.50	5	09/30/2024 20:10	WG2370487
Selenium	0.570	J	0.180	2.50	5	09/30/2024 20:10	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 20:10	WG2370487
Zinc	51.7		0.740	25.0	5	09/30/2024 20:10	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0634	B J	0.0217	0.100	1	09/29/2024 00:02	WG2371252
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*77.0-120*		*09/29/2024 00:02*	WG2371252

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 05:16	WG2369167
Toluene	U		0.00130	0.00500	1	09/25/2024 05:16	WG2369167
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 05:16	WG2369167
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 05:16	WG2369167
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 05:16	WG2369167
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/25/2024 05:16	WG2369167
(S) Toluene-d8	*97.8*			*75.0-131*		*09/25/2024 05:16*	WG2369167
(S) 4-Bromofluorobenzene	*97.9*			*67.0-138*		*09/25/2024 05:16*	WG2369167
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*09/25/2024 05:16*	WG2369167

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	21.3		1.61	4.00	1	09/27/2024 18:09	WG2370622
C28-C36 Motor Oil Range	30.6		0.274	4.00	1	09/27/2024 18:09	WG2370622
(S) o-Terphenyl	*63.3*			*18.0-148*		*09/27/2024 18:09*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/02/2024 01:16	WG2372962
Anthracene	U		0.00230	0.00600	1	10/02/2024 01:16	WG2372962
Benzo(a)anthracene	0.00398	J	0.00173	0.00600	1	10/02/2024 01:16	WG2372962
Benzo(b)fluoranthene	0.00346	J	0.00153	0.00600	1	10/02/2024 01:16	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/02/2024 01:16	WG2372962
Benzo(a)pyrene	0.00254	J	0.00179	0.00600	1	10/02/2024 01:16	WG2372962
Chrysene	0.00351	J	0.00232	0.00600	1	10/02/2024 01:16	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/02/2024 01:16	WG2372962
Fluoranthene	0.0113		0.00227	0.00600	1	10/02/2024 01:16	WG2372962
Fluorene	U		0.00205	0.00600	1	10/02/2024 01:16	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/02/2024 01:16	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/02/2024 01:16	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/02/2024 01:16	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/02/2024 01:16	WG2372962
Pyrene	0.00840		0.00200	0.00600	1	10/02/2024 01:16	WG2372962
(S) p-Terphenyl-d14	*83.4*			*23.0-120*		*10/02/2024 01:16*	WG2372962
(S) Nitrobenzene-d5	*83.4*			*14.0-149*		*10/02/2024 01:16*	WG2372962
(S) 2-Fluorobiphenyl	*81.9*			*34.0-125*		*10/02/2024 01:16*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.62		1	09/27/2024 20:33	WG2370236

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	U		0.255	1.00	1	09/27/2024 11:06	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.90	T8	1	09/27/2024 12:33	WG2371241

Sample Narrative:

L1780144-29 WG2371241: 7.9 at 20.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	1120	umhos/cm		10.0	1	09/28/2024 14:07	WG2371249

Sample Narrative:

L1780144-29 WG2371249: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.353		0.0167	0.200	1	09/27/2024 00:51	WG2370265

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.40		0.100	1.00	5	09/30/2024 00:07	WG2370490
Barium	203		0.152	2.50	5	09/30/2024 00:07	WG2370490
Cadmium	0.0960	J	0.0855	1.00	5	09/30/2024 00:07	WG2370490
Copper	9.41		0.132	5.00	5	09/30/2024 00:07	WG2370490
Lead	13.2		0.0990	2.00	5	09/30/2024 00:07	WG2370490
Nickel	17.0		0.197	2.50	5	09/30/2024 00:07	WG2370490
Selenium	0.489	J	0.180	2.50	5	09/30/2024 00:07	WG2370490
Silver	U		0.0865	0.500	5	09/30/2024 00:07	WG2370490
Zinc	46.3		0.740	25.0	5	09/30/2024 00:07	WG2370490

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0474	B J	0.0217	0.100	1	09/26/2024 06:45	WG2370003
(S) a,a,a-Trifluorotoluene(FID)	*97.7*			*77.0-120*		*09/26/2024 06:45*	WG2370003

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/29/2024 12:44	WG2370936
Toluene	U		0.00130	0.00500	1	09/29/2024 12:44	WG2370936
Ethylbenzene	U		0.000737	0.00250	1	09/29/2024 12:44	WG2370936
Xylenes, Total	U		0.000880	0.00650	1	09/29/2024 12:44	WG2370936
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/29/2024 12:44	WG2370936
1,3,5-Trimethylbenzene	U		0.00200	0.00500	1	09/29/2024 12:44	WG2370936
(S) Toluene-d8	*109*			*75.0-131*		*09/29/2024 12:44*	WG2370936
(S) 4-Bromofluorobenzene	*97.7*			*67.0-138*		*09/29/2024 12:44*	WG2370936
(S) 1,2-Dichloroethane-d4	*98.1*			*70.0-130*		*09/29/2024 12:44*	WG2370936

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	6.57		1.61	4.00	1	09/27/2024 17:42	WG2370622
C28-C36 Motor Oil Range	14.5		0.274	4.00	1	09/27/2024 17:42	WG2370622
(S) o-Terphenyl	*99.8*			*18.0-148*		*09/27/2024 17:42*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00209	0.00600	1	10/02/2024 01:34	WG2372962
Anthracene	U		0.00230	0.00600	1	10/02/2024 01:34	WG2372962
Benzo(a)anthracene	U		0.00173	0.00600	1	10/02/2024 01:34	WG2372962
Benzo(b)fluoranthene	U		0.00153	0.00600	1	10/02/2024 01:34	WG2372962
Benzo(k)fluoranthene	U		0.00215	0.00600	1	10/02/2024 01:34	WG2372962
Benzo(a)pyrene	U		0.00179	0.00600	1	10/02/2024 01:34	WG2372962
Chrysene	U		0.00232	0.00600	1	10/02/2024 01:34	WG2372962
Dibenz(a,h)anthracene	U		0.00172	0.00600	1	10/02/2024 01:34	WG2372962
Fluoranthene	U		0.00227	0.00600	1	10/02/2024 01:34	WG2372962
Fluorene	U		0.00205	0.00600	1	10/02/2024 01:34	WG2372962
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600	1	10/02/2024 01:34	WG2372962
1-Methylnaphthalene	U		0.00449	0.0200	1	10/02/2024 01:34	WG2372962
2-Methylnaphthalene	U		0.00427	0.0200	1	10/02/2024 01:34	WG2372962
Naphthalene	U		0.00408	0.0200	1	10/02/2024 01:34	WG2372962
Pyrene	U		0.00200	0.00600	1	10/02/2024 01:34	WG2372962
(S) p-Terphenyl-d14	*79.8*			*23.0-120*		*10/02/2024 01:34*	WG2372962
(S) Nitrobenzene-d5	*81.5*			*14.0-149*		*10/02/2024 01:34*	WG2372962
(S) 2-Fluorobiphenyl	*78.0*			*34.0-125*		*10/02/2024 01:34*	WG2372962

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	3.02		1	09/28/2024 18:29	WG2370234

Wet Chemistry by Method 7199

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Hexavalent Chromium	0.511	J	0.255	1.00	1	09/27/2024 11:12	WG2369240

Wet Chemistry by Method 9045D

Analyte	Result pH	Qualifier	Dilution	Analysis date / time	Batch
pH	7.98	T8	1	09/28/2024 22:00	WG2371933

Sample Narrative:

L1780144-30 WG2371933: 7.98 at 21.4C

Wet Chemistry by Method 9050AMod

Analyte	Result	Units	Qualifier	RDL	Dilution	Analysis date / time	Batch
Specific Conductance	595	umhos/cm		10.0	1	09/28/2024 22:20	WG2371938

Sample Narrative:

L1780144-30 WG2371938: at 25C

Metals (ICP) by Method 6010B-NE493 Ch 2

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Hot Water Sol. Boron	0.323		0.0167	0.200	1	09/28/2024 02:55	WG2370263

Metals (ICPMS) by Method 6020

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	4.78		0.100	1.00	5	09/30/2024 20:14	WG2370487
Barium	338		0.152	2.50	5	09/30/2024 20:14	WG2370487
Cadmium	0.136	J	0.0855	1.00	5	09/30/2024 20:14	WG2370487
Copper	11.0		0.132	5.00	5	09/30/2024 20:14	WG2370487
Lead	14.8		0.0990	2.00	5	09/30/2024 20:14	WG2370487
Nickel	16.7		0.197	2.50	5	09/30/2024 20:14	WG2370487
Selenium	0.656	J	0.180	2.50	5	09/30/2024 20:14	WG2370487
Silver	U		0.0865	0.500	5	09/30/2024 20:14	WG2370487
Zinc	53.5		0.740	25.0	5	09/30/2024 20:14	WG2370487

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	4.12	B	0.543	2.50	25	09/27/2024 04:58	WG2370739
(S) a,a,a-Trifluorotoluene(FID)	*94.0*			*77.0-120*		*09/27/2024 04:58*	WG2370739

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000467	0.00100	1	09/25/2024 05:35	WG2369167
Toluene	U		0.00130	0.00500	1	09/25/2024 05:35	WG2369167
Ethylbenzene	U		0.000737	0.00250	1	09/25/2024 05:35	WG2369167
Xylenes, Total	U		0.000880	0.00650	1	09/25/2024 05:35	WG2369167
1,2,4-Trimethylbenzene	U		0.00158	0.00500	1	09/25/2024 05:35	WG2369167
1,3,5-Trimethylbenzene	0.00338	J	0.00200	0.00500	1	09/25/2024 05:35	WG2369167
(S) Toluene-d8	*94.3*			*75.0-131*		*09/25/2024 05:35*	WG2369167
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*		*09/25/2024 05:35*	WG2369167
(S) 1,2-Dichloroethane-d4	*97.1*			*70.0-130*		*09/25/2024 05:35*	WG2369167

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	70.1		1.61	4.00	1	09/27/2024 18:36	WG2370622
C28-C36 Motor Oil Range	87.8		0.274	4.00	1	09/27/2024 18:36	WG2370622
(S) o-Terphenyl	*76.8*			*18.0-148*		*09/27/2024 18:36*	WG2370622

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

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3 J6	0.00209	0.00600	1	10/02/2024 01:52	WG2372962
Anthracene	U	J3 J6	0.00230	0.00600	1	10/02/2024 01:52	WG2372962
Benzo(a)anthracene	U	J3 J6	0.00173	0.00600	1	10/02/2024 01:52	WG2372962
Benzo(b)fluoranthene	U	J3 J6	0.00153	0.00600	1	10/02/2024 01:52	WG2372962
Benzo(k)fluoranthene	U	J3 J6	0.00215	0.00600	1	10/02/2024 01:52	WG2372962
Benzo(a)pyrene	U	J3 J6	0.00179	0.00600	1	10/02/2024 01:52	WG2372962
Chrysene	U	J3 J6	0.00232	0.00600	1	10/02/2024 01:52	WG2372962
Dibenz(a,h)anthracene	U	J3 J6	0.00172	0.00600	1	10/02/2024 01:52	WG2372962
Fluoranthene	U	J3 J6	0.00227	0.00600	1	10/02/2024 01:52	WG2372962
Fluorene	0.00225	J J3 J6	0.00205	0.00600	1	10/02/2024 01:52	WG2372962
Indeno(1,2,3-cd)pyrene	U	J3 J6	0.00181	0.00600	1	10/02/2024 01:52	WG2372962
1-Methylnaphthalene	0.00941	J J3 J6	0.00449	0.0200	1	10/02/2024 01:52	WG2372962
2-Methylnaphthalene	0.00538	J J3 J6	0.00427	0.0200	1	10/02/2024 01:52	WG2372962
Naphthalene	U	J3 J6	0.00408	0.0200	1	10/02/2024 01:52	WG2372962
Pyrene	U	J3 J6	0.00200	0.00600	1	10/02/2024 01:52	WG2372962
(S) p-Terphenyl-d14	*75.1*			*23.0-120*		*10/02/2024 01:52*	WG2372962
(S) Nitrobenzene-d5	*76.4*			*14.0-149*		*10/02/2024 01:52*	WG2372962
(S) 2-Fluorobiphenyl	*73.5*			*34.0-125*		*10/02/2024 01:52*	WG2372962

Method Blank (MB)

(MB) R4124474-1 09/25/24 16:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1780144-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-06 09/25/24 17:11 • (DUP) R4124474-3 09/25/24 17:17

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	0.317	1	200	J P1	20

L1780144-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-09 09/25/24 17:48 • (DUP) R4124474-4 09/25/24 17:54

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	0.451	0.488	1	7.73	J	20

Laboratory Control Sample (LCS)

(LCS) R4124474-2 09/25/24 16:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	11.1	111	80.0-120	

L1780935-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780935-13 09/25/24 19:14 • (MS) R4124474-5 09/25/24 19:20 • (MSD) R4124474-6 09/25/24 19:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	0.688	20.4	18.7	98.8	90.2	1	75.0-125			8.78	20

L1780935-13 Original Sample (OS) • Matrix Spike (MS)

(OS) L1780935-13 09/25/24 19:14 • (MS) R4124474-7 09/25/24 19:33

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	651	0.688	532	81.8	50	75.0-125	

Method Blank (MB)

(MB) R4125288-1 09/27/24 09:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Hexavalent Chromium	U		0.255	1.00

L1780144-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-19 09/27/24 09:14 • (DUP) R4125288-3 09/27/24 09:21

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	U	U	1	0.000		20

L1780144-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-23 09/27/24 09:45 • (DUP) R4125288-4 09/27/24 09:52

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	0.617	0.416	1	39.0	J P1	20

Laboratory Control Sample (LCS)

(LCS) R4125288-2 09/27/24 09:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	10.0	10.6	106	80.0-120	

L1780144-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780144-27 09/27/24 10:29 • (MS) R4125288-5 09/27/24 10:35 • (MSD) R4125288-6 09/27/24 10:41

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	20.0	0.339	21.7	21.5	107	106	1	75.0-125			0.899	20

L1780144-27 Original Sample (OS) • Matrix Spike (MS)

(OS) L1780144-27 09/27/24 10:29 • (MS) R4125288-7 09/27/24 10:47

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	633	0.339	701	111	50	75.0-125	

L1779584-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1779584-06 09/27/24 12:33 • (DUP) R4125387-2 09/27/24 12:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.64	8.62	1	0.232		1

Sample Narrative:

OS: 8.64 at 21.3C

DUP: 8.62 at 21.2C

L1780156-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1780156-03 09/27/24 12:33 • (DUP) R4125387-3 09/27/24 12:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.17	8.22	1	0.610		1

Sample Narrative:

OS: 8.17 at 20.2C

DUP: 8.22 at 20.2C

Laboratory Control Sample (LCS)

(LCS) R4125387-1 09/27/24 12:33

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 19.5C

L1775376-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1775376-01 09/28/24 16:30 • (DUP) R4125808-2 09/28/24 16:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.39	8.36	1	0.358		1

Sample Narrative:

OS: 8.39 at 19.4C

DUP: 8.36 at 19.3C

L1780151-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1780151-02 09/28/24 16:30 • (DUP) R4125808-3 09/28/24 16:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	7.98	7.96	1	0.251		1

Sample Narrative:

OS: 7.98 at 20C

DUP: 7.96 at 20C

Laboratory Control Sample (LCS)

(LCS) R4125808-1 09/28/24 16:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 19.6C

L1780144-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-17 09/28/24 22:50 • (DUP) R4125854-2 09/28/24 22:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.61	8.62	1	0.116		1

Sample Narrative:

OS: 8.61 at 19.9C

DUP: 8.62 at 19.8C

L1780160-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1780160-03 09/28/24 22:50 • (DUP) R4125854-3 09/28/24 22:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.02	8.03	1	0.125		1

Sample Narrative:

OS: 8.02 at 19.2C

DUP: 8.03 at 19.3C

Laboratory Control Sample (LCS)

(LCS) R4125854-1 09/28/24 22:50

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.98	99.8	99.0-101	

Sample Narrative:

LCS: 9.98 at 19.3C

L1780144-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-03 09/28/24 22:00 • (DUP) R4125852-2 09/28/24 22:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	9.31	9.32	1	0.107		1

Sample Narrative:

OS: 9.31 at 22.4C

DUP: 9.32 at 22.2C

L1780153-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1780153-15 09/28/24 22:00 • (DUP) R4125852-3 09/28/24 22:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.03	8.03	1	0.000		1

Sample Narrative:

OS: 8.03 at 21C

DUP: 8.03 at 21C

Laboratory Control Sample (LCS)

(LCS) R4125852-1 09/28/24 22:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 19.5C

L1780144-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-19 09/28/24 22:00 • (DUP) R4125853-2 09/28/24 22:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	pH	su		%		%
pH	8.59	8.56	1	0.350		1

Sample Narrative:

OS: 8.59 at 20.7C

DUP: 8.56 at 20.6C

L1780160-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1780160-10 09/28/24 22:00 • (DUP) R4125853-3 09/28/24 22:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.85	7.87	1	0.254		1

Sample Narrative:

OS: 7.85 at 19.8C

DUP: 7.87 at 19.7C

Laboratory Control Sample (LCS)

(LCS) R4125853-1 09/28/24 22:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.02 at 19.8C

Method Blank (MB)

(MB) R4125754-1 09/28/24 14:07

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:
BLANK: at 25C

L1780144-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-01 09/28/24 14:07 • (DUP) R4125754-3 09/28/24 14:07

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	510	502	1	1.58		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1780153-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1780153-03 09/28/24 14:07 • (DUP) R4125754-4 09/28/24 14:07

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	898	890	1	0.895		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4125754-2 09/28/24 14:07

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	749	102	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R4125806-1 09/28/24 16:15

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:
BLANK: at 25C

L1779465-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1779465-01 09/28/24 16:15 • (DUP) R4125806-3 09/28/24 16:15

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	209	208	1	0.288		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1780151-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1780151-01 09/28/24 16:15 • (DUP) R4125806-4 09/28/24 16:15

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	175	177	1	1.02		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4125806-2 09/28/24 16:15

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	721	98.4	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R4125916-1 09/29/24 14:00

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:
BLANK: at 25C

L1780144-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-19 09/29/24 14:00 • (DUP) R4125916-3 09/29/24 14:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	192	190	1	1.20		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1780160-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1780160-10 09/29/24 14:00 • (DUP) R4125916-4 09/29/24 14:00

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	3680	3660	1	0.545		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4125916-2 09/29/24 14:00

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	749	102	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R4125851-1 09/28/24 22:20

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:
BLANK: at 25C

L1780144-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-03 09/28/24 22:20 • (DUP) R4125851-3 09/28/24 22:20

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	360	358	1	0.557		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1780153-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1780153-15 09/28/24 22:20 • (DUP) R4125851-4 09/28/24 22:20

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	358	358	1	0.000		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4125851-2 09/28/24 22:20

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	704	96.0	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R4125912-1 09/29/24 14:30

Analyte	MB Result umhos/cm	MB Qualifier	MB MDL umhos/cm	MB RDL umhos/cm
Specific Conductance	U		10.0	10.0

Sample Narrative:
BLANK: at 25C

L1780144-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1780144-17 09/29/24 14:30 • (DUP) R4125912-3 09/29/24 14:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	292	288	1	1.38		20

Sample Narrative:
OS: at 25C
DUP: at 25C

L1780160-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1780160-03 09/29/24 14:30 • (DUP) R4125912-4 09/29/24 14:30

Analyte	Original Result umhos/cm	DUP Result umhos/cm	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Specific Conductance	434	433	1	0.231		20

Sample Narrative:
OS: at 25C
DUP: at 25C

Laboratory Control Sample (LCS)

(LCS) R4125912-2 09/29/24 14:30

Analyte	Spike Amount umhos/cm	LCS Result umhos/cm	LCS Rec. %	Rec. Limits %	LCS Qualifier
Specific Conductance	733	735	100	85.0-115	

Sample Narrative:
LCS: at 25C

Method Blank (MB)

(MB) R4125138-1 09/27/24 00:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R4125138-2 09/27/24 00:09 • (LCSD) R4125138-3 09/27/24 00:11

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 %
Hot Water Sol. Boron	1.00	0.999	1.03	99.9	103	80.0-120			3.02	20

Method Blank (MB)

(MB) R4125706-1 09/28/24 02:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R4125706-2 09/28/24 02:33 • (LCSD) R4125706-3 09/28/24 02:35

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 %
Hot Water Sol. Boron	1.00	0.971	0.986	97.1	98.6	80.0-120			1.57	20

Method Blank (MB)

(MB) R4125139-1 09/27/24 01:05

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R4125139-2 09/27/24 01:07 • (LCSD) R4125139-3 09/27/24 01:09

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 %
Hot Water Sol. Boron	1.00	1.01	1.02	101	102	80.0-120			1.39	20

Method Blank (MB)

(MB) R4125859-1 09/28/24 22:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R4125859-2 09/28/24 22:05 • (LCSD) R4125859-3 09/28/24 22:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Hot Water Sol. Boron	1.00	0.956	0.964	95.6	96.4	80.0-120			0.807	20

Method Blank (MB)

(MB) R4125861-1 09/28/24 23:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hot Water Sol. Boron	U		0.0167	0.200

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

(LCS) R4125861-2 09/28/24 23:40 • (LCSD) R4125861-3 09/28/24 23:41

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 %
Hot Water Sol. Boron	1.00	0.913	0.953	91.3	95.3	80.0-120			4.33	20

Method Blank (MB)

(MB) R4126413-1 09/30/24 18:46

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4126413-2 09/30/24 18:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	99.9	99.9	80.0-120	
Barium	100	103	103	80.0-120	
Cadmium	100	103	103	80.0-120	
Copper	100	103	103	80.0-120	
Lead	100	99.4	99.4	80.0-120	
Nickel	100	106	106	80.0-120	
Selenium	100	95.1	95.1	80.0-120	
Silver	20.0	21.1	105	80.0-120	
Zinc	100	103	103	80.0-120	

L1780144-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780144-22 09/30/24 18:52 • (MS) R4126413-5 09/30/24 19:02 • (MSD) R4126413-6 09/30/24 19:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	5.54	110	100	105	94.5	5	75.0-125			9.61	20
Barium	100	218	370	355	152	136	5	75.0-125	J5	J5	4.20	20
Cadmium	100	0.106	108	95.8	107	95.7	5	75.0-125			11.5	20
Copper	100	11.7	119	106	107	94.7	5	75.0-125			10.8	20
Lead	100	14.1	123	106	109	92.1	5	75.0-125			15.1	20
Nickel	100	17.0	124	113	107	95.6	5	75.0-125			9.86	20
Selenium	100	0.476	100	92.3	99.8	91.8	5	75.0-125			8.28	20
Silver	20.0	U	21.3	19.3	106	96.6	5	75.0-125			9.69	20
Zinc	100	52.6	153	143	100	90.7	5	75.0-125			6.36	20

Method Blank (MB)

(MB) R4126010-4 09/29/24 23:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4126010-3 09/29/24 23:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	101	101	80.0-120	
Barium	100	101	101	80.0-120	
Cadmium	100	102	102	80.0-120	
Copper	100	102	102	80.0-120	
Lead	100	100	100	80.0-120	
Nickel	100	104	104	80.0-120	
Selenium	100	96.9	96.9	80.0-120	
Silver	20.0	20.3	102	80.0-120	
Zinc	100	102	102	80.0-120	

L1780151-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780151-04 09/29/24 23:38 • (MS) R4126010-7 09/29/24 23:48 • (MSD) R4126010-8 09/29/24 23:51

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	7.61	100	100	92.7	92.8	5	75.0-125			0.0234	20
Barium	100	276	398	420	122	144	5	75.0-125		J5	5.26	20
Cadmium	100	0.340	92.7	94.5	92.3	94.2	5	75.0-125			1.95	20
Copper	100	16.4	110	112	93.5	95.9	5	75.0-125			2.17	20
Lead	100	17.3	105	108	87.7	90.7	5	75.0-125			2.76	20
Nickel	100	24.4	120	120	95.2	96.0	5	75.0-125			0.609	20
Selenium	100	0.700	89.8	92.6	89.1	91.9	5	75.0-125			3.05	20
Silver	20.0	U	18.4	18.7	91.8	93.6	5	75.0-125			1.95	20
Zinc	100	73.0	168	173	94.7	100	5	75.0-125			3.11	20

Method Blank (MB)

(MB) R4128423-1 10/04/24 12:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Nickel	U		0.197	2.50
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

Laboratory Control Sample (LCS)

(LCS) R4128423-2 10/04/24 12:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	99.0	99.0	80.0-120	
Barium	100	97.7	97.7	80.0-120	
Cadmium	100	99.6	99.6	80.0-120	
Copper	100	99.8	99.8	80.0-120	
Lead	100	98.3	98.3	80.0-120	
Nickel	100	101	101	80.0-120	
Selenium	100	96.1	96.1	80.0-120	
Silver	20.0	19.7	98.5	80.0-120	
Zinc	100	100	100	80.0-120	

L1780144-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780144-01 10/04/24 12:44 • (MS) R4128423-5 10/04/24 12:54 • (MSD) R4128423-6 10/04/24 12:57

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	4.27	100	104	95.8	99.8	5	75.0-125			4.00	20
Barium	100	173	318	255	146	82.3	5	75.0-125	J5	J3	22.1	20
Cadmium	100	U	96.2	103	96.2	103	5	75.0-125			7.03	20
Copper	100	6.40	105	111	98.9	104	5	75.0-125			5.12	20
Lead	100	9.97	107	109	97.0	99.5	5	75.0-125			2.27	20
Nickel	100	12.3	112	118	99.9	105	5	75.0-125			4.60	20
Selenium	100	0.485	91.7	92.2	91.2	91.7	5	75.0-125			0.617	20
Silver	20.0	U	19.1	20.4	95.3	102	5	75.0-125			6.97	20
Zinc	100	34.6	135	131	100	96.4	5	75.0-125			2.87	20

Method Blank (MB)

(MB) R4124043-2 09/24/24 22:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0295	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*98.9*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4124043-1 09/24/24 21:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.49	110	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	

Method Blank (MB)

(MB) R4125210-2 09/25/24 10:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0262	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*98.8*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4125210-1 09/25/24 09:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.13	103	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*108*	*77.0-120*	

Method Blank (MB)

(MB) R4124712-2 09/25/24 23:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0222	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*99.3*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4124712-1 09/25/24 22:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	4.95	99.0	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*110*	*77.0-120*	

Method Blank (MB)

(MB) R4125246-3 09/26/24 23:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.624	J	0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	*95.4*			*77.0-120*

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

(LCS) R4125246-1 09/26/24 22:05 • (LCSD) R4125246-2 09/26/24 22:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.00	5.50	5.66	110	113	72.0-127			2.87	20
(S) a,a,a-Trifluorotoluene(FID)				*102*	*102*	*77.0-120*				

Method Blank (MB)

(MB) R4126707-3 09/28/24 22:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0237	J	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*95.9*			*77.0-120*

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

(LCS) R4126707-1 09/28/24 21:16 • (LCSD) R4126707-2 09/28/24 21:36

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.00	5.75	5.39	115	108	72.0-127			6.46	20
(S) a,a,a-Trifluorotoluene(FID)				*108*	*106*	*77.0-120*				

Method Blank (MB)

(MB) R4126679-2 09/28/24 22:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	1.02	J	0.543	2.50
(S) a,a,a-Trifluorotoluene(FID)	*100*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4126679-1 09/28/24 21:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.00	5.40	108	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*107*	*77.0-120*	

Method Blank (MB)

(MB) R4124644-2 09/25/24 03:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4124644-1 09/25/24 02:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.103	82.4	70.0-123	
Toluene	0.125	0.109	87.2	75.0-121	
Ethylbenzene	0.125	0.108	86.4	74.0-126	
Xylenes, Total	0.375	0.323	86.1	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.128	102	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.125	100	73.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) 4-Bromofluorobenzene			*95.1*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*104*	*70.0-130*	

L1780144-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780144-11 09/25/24 09:29 • (MS) R4124644-4 09/25/24 09:47 • (MSD) R4124644-5 09/25/24 10:07

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	U	0.0532	0.118	42.6	94.4	1	10.0-149		J3	75.7	37
Toluene	0.125	U	0.0609	0.133	48.7	106	1	10.0-156		J3	74.4	38
Ethylbenzene	0.125	U	0.0611	0.136	48.9	109	1	10.0-160		J3	76.0	38
Xylenes, Total	0.375	U	0.199	0.422	53.1	113	1	10.0-160		J3	71.8	38
1,2,4-Trimethylbenzene	0.125	U	0.0808	0.161	64.6	129	1	10.0-160		J3	66.3	36
1,3,5-Trimethylbenzene	0.125	U	0.0750	0.153	60.0	122	1	10.0-160		J3	68.4	38
(S) Toluene-d8					*107*	*104*		*75.0-131*				
(S) 4-Bromofluorobenzene					*98.1*	*97.8*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*97.3*	*107*		*70.0-130*				

Method Blank (MB)

(MB) R4124917-3 09/24/24 21:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*97.2*			*75.0-131*
(S) 4-Bromofluorobenzene	*81.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*94.3*			*70.0-130*

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

(LCS) R4124917-1 09/24/24 19:39 • (LCSD) R4124917-2 09/24/24 19:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.124	0.110	99.2	88.0	70.0-123			12.0	20
Toluene	0.125	0.127	0.113	102	90.4	75.0-121			11.7	20
Ethylbenzene	0.125	0.114	0.109	91.2	87.2	74.0-126			4.48	20
Xylenes, Total	0.375	0.341	0.320	90.9	85.3	72.0-127			6.35	20
1,2,4-Trimethylbenzene	0.125	0.117	0.114	93.6	91.2	70.0-126			2.60	20
1,3,5-Trimethylbenzene	0.125	0.119	0.112	95.2	89.6	73.0-127			6.06	20
(S) Toluene-d8				*99.2*	*97.4*	*75.0-131*				
(S) 4-Bromofluorobenzene				*84.3*	*86.1*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*93.2*	*96.3*	*70.0-130*				

Method Blank (MB)

(MB) R4124837-2 09/25/24 00:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*97.9*			*75.0-131*
(S) 4-Bromofluorobenzene	*99.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*99.7*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4124837-1 09/24/24 23:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.138	110	70.0-123	
Toluene	0.125	0.127	102	75.0-121	
Ethylbenzene	0.125	0.122	97.6	74.0-126	
Xylenes, Total	0.375	0.342	91.2	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.107	85.6	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.116	92.8	73.0-127	
(S) Toluene-d8			*97.6*	*75.0-131*	
(S) 4-Bromofluorobenzene			*91.1*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*105*	*70.0-130*	

Method Blank (MB)

(MB) R4124679-3 09/26/24 00:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*104*			*75.0-131*
(S) 4-Bromofluorobenzene	*95.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

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

(LCS) R4124679-1 09/25/24 23:20 • (LCSD) R4124679-2 09/25/24 23:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.103	0.108	82.4	86.4	70.0-123			4.74	20
Toluene	0.125	0.111	0.112	88.8	89.6	75.0-121			0.897	20
Ethylbenzene	0.125	0.113	0.107	90.4	85.6	74.0-126			5.45	20
Xylenes, Total	0.375	0.337	0.332	89.9	88.5	72.0-127			1.49	20
1,2,4-Trimethylbenzene	0.125	0.126	0.126	101	101	70.0-126			0.000	20
1,3,5-Trimethylbenzene	0.125	0.127	0.128	102	102	73.0-127			0.784	20
(S) Toluene-d8				*107*	*102*	*75.0-131*				
(S) 4-Bromofluorobenzene				*96.6*	*93.8*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*106*	*114*	*70.0-130*				

Method Blank (MB)

(MB) R4124685-3 09/26/24 02:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*95.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*84.7*			*70.0-130*

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

(LCS) R4124685-1 09/26/24 00:41 • (LCSD) R4124685-2 09/26/24 01:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.157	0.156	126	125	70.0-123	J4	J4	0.639	20
Toluene	0.125	0.149	0.146	119	117	75.0-121			2.03	20
Ethylbenzene	0.125	0.148	0.151	118	121	74.0-126			2.01	20
Xylenes, Total	0.375	0.362	0.401	96.5	107	72.0-127			10.2	20
1,2,4-Trimethylbenzene	0.125	0.119	0.126	95.2	101	70.0-126			5.71	20
1,3,5-Trimethylbenzene	0.125	0.130	0.123	104	98.4	73.0-127			5.53	20
(S) Toluene-d8				*102*	*101*	*75.0-131*				
(S) 4-Bromofluorobenzene				*96.6*	*95.5*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*105*	*103*	*70.0-130*				

Method Blank (MB)

(MB) R4126195-2 09/26/24 22:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*107*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*96.8*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4126195-1 09/26/24 21:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.106	84.8	70.0-123	
Toluene	0.125	0.111	88.8	75.0-121	
Ethylbenzene	0.125	0.106	84.8	74.0-126	
Xylenes, Total	0.375	0.320	85.3	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.101	80.8	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.105	84.0	73.0-127	
(S) Toluene-d8			*106*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*110*	*70.0-130*	

Method Blank (MB)

(MB) R4126034-2 09/29/24 11:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*93.6*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4126034-1 09/29/24 10:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.113	90.4	70.0-123	
Toluene	0.125	0.117	93.6	75.0-121	
Ethylbenzene	0.125	0.111	88.8	74.0-126	
Xylenes, Total	0.375	0.341	90.9	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.109	87.2	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.111	88.8	73.0-127	
(S) Toluene-d8			*106*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*111*	*70.0-130*	

Method Blank (MB)

(MB) R4126662-3 09/30/24 20:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Xylenes, Total	U		0.000880	0.00650
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
(S) Toluene-d8	*102*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.5*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*121*			*70.0-130*

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

(LCS) R4126662-1 09/30/24 18:25 • (LCSD) R4126662-2 09/30/24 18:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.113	0.107	90.4	85.6	70.0-123			5.45	20
Toluene	0.125	0.111	0.109	88.8	87.2	75.0-121			1.82	20
Ethylbenzene	0.125	0.105	0.102	84.0	81.6	74.0-126			2.90	20
Xylenes, Total	0.375	0.311	0.324	82.9	86.4	72.0-127			4.09	20
1,2,4-Trimethylbenzene	0.125	0.135	0.135	108	108	70.0-126			0.000	20
1,3,5-Trimethylbenzene	0.125	0.141	0.133	113	106	73.0-127			5.84	20
(S) Toluene-d8				*97.6*	*102*	*75.0-131*				
(S) 4-Bromofluorobenzene				*91.1*	*94.8*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*114*	*114*	*70.0-130*				

Method Blank (MB)

(MB) R4125602-1 09/27/24 17:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*80.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R4125602-2 09/27/24 17:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	41.6	83.2	50.0-150	
(S) o-Terphenyl			*59.6*	*18.0-148*	

L1780144-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780144-21 09/27/24 18:23 • (MS) R4125602-3 09/27/24 18:36 • (MSD) R4125602-4 09/27/24 18:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	48.2	4.41	44.7	43.4	83.6	81.2	1	50.0-150			2.95	20
(S) o-Terphenyl					*55.1*	*50.5*		*18.0-148*				

Method Blank (MB)

(MB) R4125594-1 09/27/24 15:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*63.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R4125594-2 09/27/24 15:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	33.4	66.8	50.0-150	
(S) o-Terphenyl			*57.8*	*18.0-148*	

L1780144-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780144-01 09/27/24 16:51 • (MS) R4125594-3 09/27/24 17:04 • (MSD) R4125594-4 09/27/24 17:17

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	48.5	3.64	33.5	37.8	61.6	70.0	1	50.0-150			12.1	20
(S) o-Terphenyl					*58.4*	*60.6*		*18.0-148*				

Method Blank (MB)

(MB) R4126438-1 09/30/24 13:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	*70.1*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R4126438-2 09/30/24 14:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.0	76.0	50.0-150	
(S) o-Terphenyl			*67.0*	*18.0-148*	

L1780406-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780406-03 09/30/24 14:18 • (MS) R4126438-3 09/30/24 14:31 • (MSD) R4126438-4 09/30/24 14:44

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	40.2	245	329	410	580	1	50.0-150	J5	J3 J5	29.3	20
(S) o-Terphenyl					*32.4*	*54.5*		*18.0-148*				

Method Blank (MB)

(MB) R4125803-2 09/27/24 23:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*81.7*			*23.0-120*
(S) Nitrobenzene-d5	*92.4*			*14.0-149*
(S) 2-Fluorobiphenyl	*86.5*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4125803-1 09/27/24 22:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0675	84.4	50.0-120	
Anthracene	0.0800	0.0660	82.5	50.0-126	
Benzo(a)anthracene	0.0800	0.0701	87.6	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0682	85.3	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0651	81.4	49.0-125	
Benzo(a)pyrene	0.0800	0.0612	76.5	42.0-120	
Chrysene	0.0800	0.0713	89.1	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0747	93.4	47.0-125	
Fluoranthene	0.0800	0.0741	92.6	49.0-129	
Fluorene	0.0800	0.0740	92.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0715	89.4	46.0-125	
1-Methylnaphthalene	0.0800	0.0750	93.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0724	90.5	50.0-120	
Naphthalene	0.0800	0.0688	86.0	50.0-120	
Pyrene	0.0800	0.0687	85.9	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4125803-1 09/27/24 22:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*91.6*	*23.0-120*	
(S) Nitrobenzene-d5			*109*	*14.0-149*	
(S) 2-Fluorobiphenyl			*98.8*	*34.0-125*	

L1780144-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780144-11 09/28/24 02:30 • (MS) R4125803-3 09/28/24 02:48 • (MSD) R4125803-4 09/28/24 03:06

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0792	U	0.0548	0.0532	69.2	67.2	1	14.0-127			2.96	27
Anthracene	0.0792	U	0.0531	0.0517	67.0	65.3	1	10.0-145			2.67	30
Benzo(a)anthracene	0.0792	U	0.0595	0.0559	75.1	70.6	1	10.0-139			6.24	30
Benzo(b)fluoranthene	0.0792	U	0.0536	0.0517	67.7	65.3	1	10.0-140			3.61	36
Benzo(k)fluoranthene	0.0792	U	0.0522	0.0502	65.9	63.4	1	10.0-137			3.91	31
Benzo(a)pyrene	0.0792	U	0.0536	0.0513	67.7	64.8	1	10.0-141			4.39	31
Chrysene	0.0792	U	0.0586	0.0548	74.0	69.2	1	10.0-145			6.70	30
Dibenz(a,h)anthracene	0.0792	U	0.0587	0.0559	74.1	70.6	1	10.0-132			4.89	31
Fluoranthene	0.0792	U	0.0610	0.0584	77.0	73.7	1	10.0-153			4.36	33
Fluorene	0.0792	U	0.0621	0.0569	78.4	71.8	1	11.0-130			8.74	29
Indeno(1,2,3-cd)pyrene	0.0792	U	0.0567	0.0532	71.6	67.2	1	10.0-137			6.37	32
1-Methylnaphthalene	0.0792	0.00474	0.0654	0.0622	76.6	72.6	1	10.0-142			5.02	28
2-Methylnaphthalene	0.0792	0.00690	0.0682	0.0638	77.4	71.8	1	10.0-137			6.67	28
Naphthalene	0.0792	U	0.0584	0.0561	73.7	70.8	1	10.0-135			4.02	27
Pyrene	0.0792	0.00330	0.0577	0.0558	68.7	66.3	1	10.0-148			3.35	35
(S) p-Terphenyl-d14					*74.5*	*68.5*		*23.0-120*				
(S) Nitrobenzene-d5					*93.5*	*92.3*		*14.0-149*				
(S) 2-Fluorobiphenyl					*80.1*	*74.6*		*34.0-125*				

Method Blank (MB)

(MB) R4127789-2 10/01/24 20:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00209	0.00600
Anthracene	U		0.00230	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
Naphthalene	U		0.00408	0.0200
Pyrene	U		0.00200	0.00600
(S) p-Terphenyl-d14	*87.2*			*23.0-120*
(S) Nitrobenzene-d5	*91.1*			*14.0-149*
(S) 2-Fluorobiphenyl	*85.9*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4127789-1 10/01/24 20:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0800	0.0588	73.5	50.0-120	
Anthracene	0.0800	0.0645	80.6	50.0-126	
Benzo(a)anthracene	0.0800	0.0645	80.6	45.0-120	
Benzo(b)fluoranthene	0.0800	0.0611	76.4	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0592	74.0	49.0-125	
Benzo(a)pyrene	0.0800	0.0593	74.1	42.0-120	
Chrysene	0.0800	0.0649	81.1	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0698	87.3	47.0-125	
Fluoranthene	0.0800	0.0669	83.6	49.0-129	
Fluorene	0.0800	0.0618	77.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0670	83.8	46.0-125	
1-Methylnaphthalene	0.0800	0.0698	87.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0664	83.0	50.0-120	
Naphthalene	0.0800	0.0648	81.0	50.0-120	
Pyrene	0.0800	0.0632	79.0	43.0-123	

Laboratory Control Sample (LCS)

(LCS) R4127789-1 10/01/24 20:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) p-Terphenyl-d14			*87.1*	*23.0-120*	
(S) Nitrobenzene-d5			*91.5*	*14.0-149*	
(S) 2-Fluorobiphenyl			*86.6*	*34.0-125*	

L1780144-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1780144-30 10/02/24 01:52 • (MS) R4127789-6 10/02/24 02:27 • (MSD) R4127789-5 10/02/24 02:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0764	U	0.0495	U	64.8	0.000	1	14.0-127		J3 J6	200	27
Anthracene	0.0764	U	0.0531	U	69.5	0.000	1	10.0-145		J3 J6	200	30
Benzo(a)anthracene	0.0764	U	0.0554	0.00173	72.5	0.000	1	10.0-139		J J3 J6	200	30
Benzo(b)fluoranthene	0.0764	U	0.0513	0.00174	67.1	2.25	1	10.0-140		J J3 J6	187	36
Benzo(k)fluoranthene	0.0764	U	0.0481	U	63.0	0.000	1	10.0-137		J3 J6	200	31
Benzo(a)pyrene	0.0764	U	0.0531	U	69.5	0.000	1	10.0-141		J3 J6	200	31
Chrysene	0.0764	U	0.0550	U	72.0	0.000	1	10.0-145		J3 J6	200	30
Dibenz(a,h)anthracene	0.0764	U	0.0567	U	74.2	0.000	1	10.0-132		J3 J6	200	31
Fluoranthene	0.0764	U	0.0586	0.00347	76.7	4.49	1	10.0-153		J J3 J6	178	33
Fluorene	0.0764	0.00225	0.0548	0.00213	68.8	0.000	1	11.0-130		J J3 J6	185	29
Indeno(1,2,3-cd)pyrene	0.0764	U	0.0549	U	71.9	0.000	1	10.0-137		J3 J6	200	32
1-Methylnaphthalene	0.0764	0.00941	0.0689	0.0108	77.9	1.80	1	10.0-142		J J3 J6	146	28
2-Methylnaphthalene	0.0764	0.00538	0.0617	0.00741	73.7	2.63	1	10.0-137		J J3 J6	157	28
Naphthalene	0.0764	U	0.0581	U	76.0	3.94	1	10.0-135		J J3 J6	180	27
Pyrene	0.0764	U	0.0532	0.00302	69.6	3.91	1	10.0-148		J J3 J6	179	35
(S) p-Terphenyl-d14					*73.5*	*84.0*		*23.0-120*				
(S) Nitrobenzene-d5					*79.4*	*87.7*		*14.0-149*				
(S) 2-Fluorobiphenyl					*74.2*	*82.2*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	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.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information: SAME AS LEFT

Report to: Jake Janicek

Email To: jjanicek@caerusoilandgas.com

Project Description: Corral Creek 4508 Facility Decommissioning

City/State Collected: Piceance Crk, CO

Please Circle: PT MT CT ET

Phone: (970) 778-2314

Client Project # /

Lab Project # /

Collected by (print): Trevor Lakin

Site/Facility ID # Corral Creek 4508

P.O. # -

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote # -

Date Results Needed: Standard TAT

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	COGCC Table 915-1	EC, pH, SAR	Arsenic, Boron	COGCC Table 910-1	Remarks	Sample # (lab only)
20240919-MZ9 199-(FL-T-BASE)@5	Grab	SS	5ft	9/19/24	9:42	4	X					-01
20240919-MZ9 199-(FL-T-NW)@5					9:43	4	X					-02
20240919-MZ9 199-(FL-T-EW)@5					9:45	4	X					-03
20240919-MZ9 199-(FL-T-SW)@5					9:47	4	X					-04
20240919-MZ9 199-(FL-T-WW)@5					9:49	4	X					-05
20240919-MZ9 199-(FL-T-STACK)@5	Comp				9:51	4	X					-06
20240919-MZ9 199-(WH-BASE)@9	Grab		9ft		10:38	4	X					-07
20240919-MZ9 199-(WH-[redacted])@9					10:39	4	X					-08
20240919-MZ9 199-(WH-EW)@9					10:41	4	X					-09
20240919-MZ9 199-(WH-WW)@9					10:43	4	X					-10

Analysis / Container / Preservative

Pres Chk

Chain of Custody Page 1 of 3

Pace Analytical®
National Center for Testing & Innovation

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

SDG # L1760144
B053

Acctnum:
Template:
Prelogin:
PM:
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	9/19/24	17:15			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 119	
	9/19/24	1800			
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 09.20.24 Time: 0900	Hold: Condition: NCF / OK
			CRonero		

Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information: SAME AS LEFT

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

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City/State Collected: Piceance Crk, CO

Please Circle: PT MT CT ET

Phone: (970) 778-2314

Client Project # –

Lab Project # –

SDG # L1780144

Collected by (print): Trevor Lakin

Site/Facility ID # Corral Creek 4508

P.O. # –

Table #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote # –

Date Results Needed: Standard TAT

Immediately Packed on Ice N ___ Y X

Acctnum:
Template:
Prelogin:
PM:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	COGCC Table 915-1	EC, pH, SAR	Arsenic, Boron	COGCC Table 910-1	Remarks	Sample # (lab only)
20240919-MZ9 199-(WH-SW)@9	Grab	SS	9ft	9/19/24	10:45	4	X	X				-11
20240919-MZ9 199-(WH-STOCK)	Comp		–		10:48	4	X	X				-12
20240919-MZ9 199-(SEP-BASE)@4	Grab		4ft		11:38	4	X	X				-13
20240919-MZ9 199-(SEP-NW)@4					11:39	4	X	X				-14
20240919-MZ9 199-(SEP-EW)@4					11:40	4	X	X				-15
20240919-MZ9 199-(SEP-SW)@4					11:42	4	X	X				-16
20240919-MZ9 199-(SEP-WW)@4					11:43	4	X	X				-17
20240919-MZ9 199-(SEP-STOCK)	Comp		–		11:44	4	X	X				-18
20240919-MZ9 199-(MH-BASE)@4	Grab		4ft		12:37	4	X	X				-19
20240919-MZ9 199-(MH-NW)@4	↓	↓	↓	↓	12:38	4	X	X				-20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

	Date:	Time:		
Relinquished by: (Signature)	9/19/24	17:15	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature)	9.19.24	1800	Received by: (Signature)	Temp: °C Bottles Received: 119
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 09.20.24 Time: 0915

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Caerus Oil and Gas
143 Diamond Avenue
Parachute, CO 81635

Billing Information: SAME AS LEFT

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

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Quote # –

Date Results Needed: Standard TAT

SDG # L1780144

Table #

Acctnum:

Template:

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Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	COGCC Table 915-1	EC, pH, SAR	Arsenic, Boron	COGCC Table 910-1	Remarks	Sample # (lab only)
20240919-MZ9 199-(MH-EW)@4	Grab	SS	4ft	9/19/24	12:39	4	X					-21
20240919-MZ9 199-(MH-SW)@4					12:40	4	X					-22
20240919-MZ9 199-(MH-WW)@4					12:42	4	X					-23
20240919-MZ9 199-(MH-STOCK)	Comp				12:43	4	X					-24
20240919-MZ9 199-(TØ3-BASE)@10	Grab		10ft		13:45	4	X					-25
20240919-MZ9 199-(TØ3-NW)@10					13:46	4	X					-26
20240919-MZ9 199-(TØ3-EW)@10					13:47	4	X					-27
20240919-MZ9 199-(TØ3-SW)@10					13:48	4	X					-28
20240919-MZ9 199-(TØ3-WW)@10					13:50	4	X					-29
20240919-MZ9 199-(TØ3-STOCK)	Comp				13:53	4	X					-30

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		X N
Bottles arrive intact:		X N
Correct bottles used:		X N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

	Date:	Time:		
Relinquished by: (Signature)	9/19/24	17:15	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature)	9/19/24	1800	Received by: (Signature)	Temp: °C Bottles Received: 119
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) C Rosero	Date: 09.20.24 Time: 0900

If preservation required by Login: Date/Time 9/20/24

Hold:

Condition: NCF / OK

LT80144

Tracking Numbers	Temperature
7411 4578 2250	1.9 ± 0.3 - 2.2 TLAG
7411 4578 2217	1.2 ± 0.3 - 1.5 TLAG
7411 4578 2228	1.5 ± 0.3 - 1.8 TLAG

Name

Date

9/20-NCF-L1780144 CAERUSPCO

R5

Time estimate: oh **Time spent:** oh

Members

Hailey Robertson (responsible) CW Chris Ward

Due on *24 September 2024 8:00 AM* for target *Done*

- [ ] Parameter(s) past holding time
- [ ] Temperature not in range
- [ ] Improper container type
- [ ] pH not in range
- [ ] Insufficient sample volume
- [ ] Sample is biphasic
- [ ] Vials received with headspace
- [x] Broken container
- [ ] Sufficient sample remains
- [ ] If broken container: Insufficient packing material around container
- [ ] If broken container: Insufficient packing material inside cooler
- [ ] If broken container: Improper handling by carrier:_____
- [ ] If broken container: Sample was frozen
- [ ] If broken container: Container lid not intact
- [ ] Client informed by Call
- [ ] Client informed by Email
- [ ] Client informed by Voicemail
- [ ] Date/Time:_____
- [ ] PM initials:_____
- [ ] Client Contact:_____

Comments

Hailey Robertson *20 September 2024 5:54 PM*

1-8oz jar received broken for ID: 20240919-M292 199-(T03-WW)@10

Chris Ward *23 September 2024 11:30 AM*

Please note limited volume and proceed

Hailey Robertson *24 September 2024 8:02 AM*

Done