

January 07, 2025

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1812686
Samples Received: 12/24/2024
Project Number:
Description: DEQ Forest Creek

Report To: Cathy Brown
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:



Brian Ford
Project Manager

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Pace Analytical National

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¹ Cp

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⁸ Al

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SAMPLE SUMMARY

DU2-ISM L1812686-01 Solid

Collected by
Connor Anderson

Collected date/time
12/17/24 14:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2425038	1	12/27/24 08:26	12/27/24 08:36	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2426165	25	12/26/24 08:01	12/29/24 22:37	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425137	1	12/26/24 08:01	12/27/24 20:05	DWR	Mt. Juliet, TN

¹Cp

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DU2-ISM L1812686-02 Solid

Collected by
Connor Anderson

Collected date/time
12/17/24 14:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2427275	1	01/02/25 09:34	01/02/25 09:47	MT	Mt. Juliet, TN
Mercury by Method 7471B	WG2427192	1	01/01/25 10:11	01/02/25 13:53	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2427250	1	01/01/25 14:30	01/02/25 10:05	JTM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2426694	10	12/31/24 07:35	12/31/24 17:52	SGB	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2425581	1	12/31/24 13:30	01/02/25 16:16	HCS	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG2425581	1	12/31/24 13:30	01/04/25 14:15	MEW	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG2426623	1	12/31/24 10:54	12/31/24 22:21	RDH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2426620	1	12/31/24 11:02	01/01/25 04:45	MBE	Mt. Juliet, TN

⁵Sr

⁶Qc

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TRIP BLANK L1812686-03 GW

Collected by
Connor Anderson

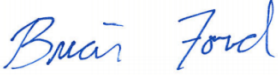
Collected date/time
12/17/24 14:00

Received date/time
12/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2425234	1	12/27/24 02:29	12/27/24 02:29	DYW	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.



Brian Ford
Project Manager

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

Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	75.6		1	12/27/2024 08:36	WG2425038

Volatile Organic Compounds (GC) by Method NWTPHGX

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	6.91	B	1.39	4.11	25	12/29/2024 22:37	WG2426165
(S) a,a,a-Trifluorotoluene(FID)	93.1			77.0-120		12/29/2024 22:37	WG2426165

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0600	0.0822	1	12/27/2024 20:05	WG2425137
Acrylonitrile	U		0.00594	0.0206	1	12/27/2024 20:05	WG2425137
Benzene	0.00411		0.000768	0.00164	1	12/27/2024 20:05	WG2425137
Bromobenzene	U		0.00148	0.0206	1	12/27/2024 20:05	WG2425137
Bromodichloromethane	U		0.00119	0.00411	1	12/27/2024 20:05	WG2425137
Bromoform	U		0.00192	0.0411	1	12/27/2024 20:05	WG2425137
Bromomethane	U		0.00324	0.0206	1	12/27/2024 20:05	WG2425137
n-Butylbenzene	U		0.00863	0.0206	1	12/27/2024 20:05	WG2425137
sec-Butylbenzene	U		0.00474	0.0206	1	12/27/2024 20:05	WG2425137
tert-Butylbenzene	U		0.00321	0.00822	1	12/27/2024 20:05	WG2425137
Carbon tetrachloride	U		0.00148	0.00822	1	12/27/2024 20:05	WG2425137
Chlorobenzene	0.00148	J	0.000345	0.00411	1	12/27/2024 20:05	WG2425137
Chlorodibromomethane	U		0.00101	0.00411	1	12/27/2024 20:05	WG2425137
Chloroethane	U		0.00280	0.00822	1	12/27/2024 20:05	WG2425137
Chloroform	U		0.00169	0.00411	1	12/27/2024 20:05	WG2425137
Chloromethane	U		0.00715	0.0206	1	12/27/2024 20:05	WG2425137
2-Chlorotoluene	U	J4	0.00142	0.00411	1	12/27/2024 20:05	WG2425137
4-Chlorotoluene	U	J4	0.000740	0.00822	1	12/27/2024 20:05	WG2425137
1,2-Dibromo-3-Chloropropane	U		0.00641	0.0411	1	12/27/2024 20:05	WG2425137
1,2-Dibromoethane	U		0.00107	0.00411	1	12/27/2024 20:05	WG2425137
Dibromomethane	U		0.00123	0.00822	1	12/27/2024 20:05	WG2425137
1,2-Dichlorobenzene	U		0.000699	0.00822	1	12/27/2024 20:05	WG2425137
1,3-Dichlorobenzene	U		0.000987	0.00822	1	12/27/2024 20:05	WG2425137
1,4-Dichlorobenzene	U		0.00115	0.00822	1	12/27/2024 20:05	WG2425137
Dichlorodifluoromethane	U		0.00265	0.00822	1	12/27/2024 20:05	WG2425137
1,1-Dichloroethane	U		0.000807	0.00411	1	12/27/2024 20:05	WG2425137
1,2-Dichloroethane	U		0.00107	0.00411	1	12/27/2024 20:05	WG2425137
1,1-Dichloroethene	U		0.000997	0.00411	1	12/27/2024 20:05	WG2425137
cis-1,2-Dichloroethene	U		0.00121	0.00411	1	12/27/2024 20:05	WG2425137
trans-1,2-Dichloroethene	U		0.00171	0.00822	1	12/27/2024 20:05	WG2425137
1,2-Dichloropropane	U		0.00234	0.00822	1	12/27/2024 20:05	WG2425137
1,1-Dichloropropene	U		0.00133	0.00411	1	12/27/2024 20:05	WG2425137
1,3-Dichloropropane	U		0.000824	0.00822	1	12/27/2024 20:05	WG2425137
cis-1,3-Dichloropropene	U		0.00124	0.00411	1	12/27/2024 20:05	WG2425137
trans-1,3-Dichloropropene	U		0.00187	0.00822	1	12/27/2024 20:05	WG2425137
2,2-Dichloropropane	U	C3	0.00227	0.00411	1	12/27/2024 20:05	WG2425137
Di-isopropyl ether	U		0.000674	0.00164	1	12/27/2024 20:05	WG2425137
Ethylbenzene	0.00186	J	0.00121	0.00411	1	12/27/2024 20:05	WG2425137
Hexachloro-1,3-butadiene	U		0.00987	0.0411	1	12/27/2024 20:05	WG2425137
Isopropylbenzene	U		0.000699	0.00411	1	12/27/2024 20:05	WG2425137
p-Isopropyltoluene	0.0237		0.00419	0.00822	1	12/27/2024 20:05	WG2425137
2-Butanone (MEK)	U		0.104	0.164	1	12/27/2024 20:05	WG2425137
Methylene Chloride	U		0.0109	0.0411	1	12/27/2024 20:05	WG2425137
4-Methyl-2-pentanone (MIBK)	U		0.00375	0.0411	1	12/27/2024 20:05	WG2425137

1Cp

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9Sc

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000576	0.00164	1	12/27/2024 20:05	WG2425137
Naphthalene	U		0.00803	0.0206	1	12/27/2024 20:05	WG2425137
n-Propylbenzene	U		0.00156	0.00822	1	12/27/2024 20:05	WG2425137
Styrene	0.00119	U	0.000377	0.0206	1	12/27/2024 20:05	WG2425137
1,1,1,2-Tetrachloroethane	U		0.00156	0.00411	1	12/27/2024 20:05	WG2425137
1,1,2,2-Tetrachloroethane	U		0.00114	0.00411	1	12/27/2024 20:05	WG2425137
1,1,2-Trichlorotrifluoroethane	U		0.00124	0.00411	1	12/27/2024 20:05	WG2425137
Tetrachloroethene	U		0.00147	0.00411	1	12/27/2024 20:05	WG2425137
Toluene	0.00617	U	0.00214	0.00822	1	12/27/2024 20:05	WG2425137
1,2,3-Trichlorobenzene	U		0.0121	0.0206	1	12/27/2024 20:05	WG2425137
1,2,4-Trichlorobenzene	U		0.00724	0.0206	1	12/27/2024 20:05	WG2425137
1,1,1-Trichloroethane	U		0.00152	0.00411	1	12/27/2024 20:05	WG2425137
1,1,2-Trichloroethane	U		0.000982	0.00411	1	12/27/2024 20:05	WG2425137
Trichloroethene	U		0.000960	0.00164	1	12/27/2024 20:05	WG2425137
Trichlorofluoromethane	0.00345	U	0.00136	0.00411	1	12/27/2024 20:05	WG2425137
1,2,3-Trichloropropane	U		0.00266	0.0206	1	12/27/2024 20:05	WG2425137
1,2,4-Trimethylbenzene	0.00288	U	0.00260	0.00822	1	12/27/2024 20:05	WG2425137
1,2,3-Trimethylbenzene	U		0.00260	0.00822	1	12/27/2024 20:05	WG2425137
1,3,5-Trimethylbenzene	U		0.00329	0.00822	1	12/27/2024 20:05	WG2425137
Vinyl chloride	U		0.00191	0.00411	1	12/27/2024 20:05	WG2425137
Xylenes, Total	0.00671	U	0.00145	0.0107	1	12/27/2024 20:05	WG2425137
(S) Toluene-d8	107			75.0-131		12/27/2024 20:05	WG2425137
(S) 4-Bromofluorobenzene	93.2			67.0-138		12/27/2024 20:05	WG2425137
(S) 1,2-Dichloroethane-d4	94.1			70.0-130		12/27/2024 20:05	WG2425137

1Cp

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3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.0		1	01/02/2025 09:47	WG2427275

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.163		0.0226	0.0440	1	01/02/2025 13:53	WG2427192

Metals (ICP) by Method 6010D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.759	2.20	1	01/02/2025 10:05	WG2427250
Arsenic	2.81		0.920	2.20	1	01/02/2025 10:05	WG2427250
Beryllium	0.234		0.0524	0.220	1	01/02/2025 10:05	WG2427250
Cadmium	1.90		0.0718	0.549	1	01/02/2025 10:05	WG2427250
Chromium	143		0.235	1.10	1	01/02/2025 10:05	WG2427250
Copper	225		0.392	2.20	1	01/02/2025 10:05	WG2427250
Lead	61.2		0.358	0.549	1	01/02/2025 10:05	WG2427250
Nickel	204		0.220	2.20	1	01/02/2025 10:05	WG2427250
Selenium	U		1.18	2.20	1	01/02/2025 10:05	WG2427250
Silver	0.464	J	0.140	1.10	1	01/02/2025 10:05	WG2427250
Thallium	U		0.569	2.20	1	01/02/2025 10:05	WG2427250
Zinc	1040		1.07	5.49	1	01/02/2025 10:05	WG2427250

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	83.0		14.6	44.0	10	12/31/2024 17:52	WG2426694
Residual Range Organics (RRO)	431		36.6	110	10	12/31/2024 17:52	WG2426694
(S) o-Terphenyl	76.9			18.0-148		12/31/2024 17:52	WG2426694

Sample Narrative:

L1812686-02 WG2426694: Sample resembles laboratory standard for Hydraulic Oil.

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
2,4-D	U		0.0282	0.0769	1	01/02/2025 16:16	WG2425581
Dalapon	U		0.0484	0.0769	1	01/02/2025 16:16	WG2425581
2,4-DB	U		0.0204	0.0769	1	01/04/2025 14:15	WG2425581
Dicamba	U		0.0248	0.0769	1	01/02/2025 16:16	WG2425581
Dichloroprop	U		0.0201	0.0769	1	01/02/2025 16:16	WG2425581
Dinoseb	U		0.0280	0.0769	1	01/04/2025 14:15	WG2425581
MCPA	U		2.04	7.14	1	01/02/2025 16:16	WG2425581
MCPD	U		2.23	7.14	1	01/02/2025 16:16	WG2425581
2,4,5-T	U		0.0259	0.0769	1	01/02/2025 16:16	WG2425581
2,4,5-TP (Silvex)	U		0.0205	0.0769	1	01/04/2025 14:15	WG2425581
(S) 2,4-Dichlorophenyl Acetic Acid	79.6			22.0-132		01/04/2025 14:15	WG2425581
(S) 2,4-Dichlorophenyl Acetic Acid	60.5			22.0-132		01/02/2025 16:16	WG2425581

1Cp

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5Sr

6Qc

7Gl

8Al

9Sc

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00709	0.0220	1	12/31/2024 22:21	WG2426623
Alpha BHC	U		0.00700	0.0220	1	12/31/2024 22:21	WG2426623
Beta BHC	U		0.00692	0.0220	1	12/31/2024 22:21	WG2426623
Delta BHC	U		0.00698	0.0220	1	12/31/2024 22:21	WG2426623
Gamma BHC	U		0.00743	0.0220	1	12/31/2024 22:21	WG2426623
Chlordane	U		0.109	0.330	1	12/31/2024 22:21	WG2426623
4,4-DDD	U		0.00758	0.0220	1	12/31/2024 22:21	WG2426623
4,4-DDE	U		0.00740	0.0220	1	12/31/2024 22:21	WG2426623
4,4-DDT	U		0.00842	0.0220	1	12/31/2024 22:21	WG2426623
Dieldrin	U		0.00766	0.0220	1	12/31/2024 22:21	WG2426623
Endosulfan I	U		0.00664	0.0220	1	12/31/2024 22:21	WG2426623
Endosulfan II	U		0.00726	0.0220	1	12/31/2024 22:21	WG2426623
Endosulfan sulfate	U		0.00705	0.0220	1	12/31/2024 22:21	WG2426623
Endrin	U		0.00820	0.0220	1	12/31/2024 22:21	WG2426623
Endrin aldehyde	U		0.00648	0.0220	1	12/31/2024 22:21	WG2426623
Endrin ketone	U		0.00764	0.0220	1	12/31/2024 22:21	WG2426623
Hexachlorobenzene	U		0.00668	0.0220	1	12/31/2024 22:21	WG2426623
Heptachlor	U		0.00762	0.0220	1	12/31/2024 22:21	WG2426623
Heptachlor epoxide	U		0.00714	0.0220	1	12/31/2024 22:21	WG2426623
Methoxychlor	U		0.00886	0.0220	1	12/31/2024 22:21	WG2426623
Toxaphene	U		0.235	0.440	1	12/31/2024 22:21	WG2426623
(S) Decachlorobiphenyl	69.8			10.0-135		12/31/2024 22:21	WG2426623
(S) Tetrachloro-m-xylene	71.1			10.0-139		12/31/2024 22:21	WG2426623

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00253	0.00659	1	01/01/2025 04:45	WG2426620
Acenaphthene	U		0.00230	0.00659	1	01/01/2025 04:45	WG2426620
Acenaphthylene	U		0.00237	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(a)anthracene	0.00190	LC	0.00190	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(a)pyrene	U		0.00197	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(b)fluoranthene	0.00310	LC	0.00168	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(g,h,i)perylene	0.00358	LC	0.00195	0.00659	1	01/01/2025 04:45	WG2426620
Benzo(k)fluoranthene	U		0.00236	0.00659	1	01/01/2025 04:45	WG2426620
Chrysene	U		0.00255	0.00659	1	01/01/2025 04:45	WG2426620
Dibenz(a,h)anthracene	U		0.00189	0.00659	1	01/01/2025 04:45	WG2426620
Fluoranthene	0.00510	LC	0.00249	0.00659	1	01/01/2025 04:45	WG2426620
Fluorene	U		0.00225	0.00659	1	01/01/2025 04:45	WG2426620
Indeno(1,2,3-cd)pyrene	U		0.00199	0.00659	1	01/01/2025 04:45	WG2426620
Naphthalene	0.00833	LC	0.00448	0.0220	1	01/01/2025 04:45	WG2426620
Phenanthrene	0.00749		0.00254	0.00659	1	01/01/2025 04:45	WG2426620
Pyrene	0.00499	LC	0.00220	0.00659	1	01/01/2025 04:45	WG2426620
1-Methylnaphthalene	U		0.00493	0.0220	1	01/01/2025 04:45	WG2426620
2-Methylnaphthalene	U		0.00469	0.0220	1	01/01/2025 04:45	WG2426620
2-Chloronaphthalene	U		0.00512	0.0220	1	01/01/2025 04:45	WG2426620
(S) p-Terphenyl-d14	59.4			23.0-120		01/01/2025 04:45	WG2426620
(S) Nitrobenzene-d5	79.9			14.0-149		01/01/2025 04:45	WG2426620
(S) 2-Fluorobiphenyl	63.7			34.0-125		01/01/2025 04:45	WG2426620

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzene	U		0.0941	1.00	1	12/27/2024 02:29	WG2425234
Toluene	U		0.278	1.00	1	12/27/2024 02:29	WG2425234
Ethylbenzene	U		0.137	1.00	1	12/27/2024 02:29	WG2425234
Total Xylenes	U		0.174	3.00	1	12/27/2024 02:29	WG2425234
(S) Toluene-d8	107			80.0-120		12/27/2024 02:29	WG2425234
(S) 4-Bromofluorobenzene	94.2			77.0-126		12/27/2024 02:29	WG2425234
(S) 1,2-Dichloroethane-d4	106			70.0-130		12/27/2024 02:29	WG2425234

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162361-1 12/27/24 08:36

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

L1812686-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1812686-01 12/27/24 08:36 • (DUP) R4162361-3 12/27/24 08:36

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	75.6	71.6	1	5.45		10

Laboratory Control Sample (LCS)

(LCS) R4162361-2 12/27/24 08:36

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163952-1 01/02/25 09:47

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.000			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1813462-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1813462-05 01/02/25 09:47 • (DUP) R4163952-3 01/02/25 09:47

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	82.8	82.9	1	0.118		10

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R4163952-2 01/02/25 09:47

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	90.0-110	

⁹Sc

Method Blank (MB)

(MB) R4163828-1 01/02/25 12:50

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Mercury	U		0.0206	0.0400

Laboratory Control Sample (LCS)

(LCS) R4163828-2 01/02/25 12:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Mercury	0.500	0.466	93.1	80.0-120	

L1811286-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811286-08 01/02/25 12:55 • (MS) R4163828-4 01/02/25 13:00 • (MSD) R4163828-5 01/02/25 13:03

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.663	0.0944	0.715	0.750	93.6	98.9	1	75.0-125			4.75	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163794-1 01/02/25 09:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.691	2.00
Arsenic	U		0.837	2.00
Beryllium	U		0.0477	0.200
Cadmium	U		0.0653	0.500
Chromium	U		0.214	1.00
Copper	U		0.357	2.00
Lead	U		0.326	0.500
Nickel	U		0.200	2.00
Selenium	U		1.07	2.00
Silver	U		0.127	1.00
Thallium	U		0.518	2.00
Zinc	U		0.974	5.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4163794-2 01/02/25 09:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	89.4	89.4	80.0-120	
Arsenic	100	97.3	97.3	80.0-120	
Beryllium	100	96.7	96.7	80.0-120	
Cadmium	100	95.9	95.9	80.0-120	
Chromium	100	99.5	99.5	80.0-120	
Copper	100	104	104	80.0-120	
Lead	100	95.5	95.5	80.0-120	
Nickel	100	97.3	97.3	80.0-120	
Selenium	100	96.9	96.9	80.0-120	
Silver	20.0	19.5	97.7	80.0-120	
Thallium	100	95.8	95.8	80.0-120	
Zinc	100	99.0	99.0	80.0-120	

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

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 %
Antimony	100	U	79.5	79.4	79.5	79.4	1	75.0-125			0.152	20
Arsenic	100	3.87	109	114	105	110	1	75.0-125			4.52	20
Beryllium	100	0.286	100	105	100	105	1	75.0-125			4.90	20

L1813476-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813476-09 01/02/25 09:53 • (MS) R4163794-5 01/02/25 09:58 • (MSD) R4163794-6 01/02/25 10:00

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 %
Cadmium	100	0.224	100	105	99.9	105	1	75.0-125			4.70	20
Chromium	100	8.62	110	111	102	102	1	75.0-125			0.393	20
Copper	100	4.61	112	113	108	109	1	75.0-125			0.883	20
Lead	100	13.4	120	121	106	108	1	75.0-125			1.45	20
Nickel	100	9.83	123	122	113	112	1	75.0-125			0.774	20
Selenium	100	U	104	111	104	111	1	75.0-125			5.67	20
Silver	20.0	1.31	22.8	24.0	108	114	1	75.0-125			5.03	20
Thallium	100	U	102	104	102	104	1	75.0-125			2.23	20
Zinc	100	23.5	122	122	98.4	98.1	1	75.0-125			0.168	20

1
Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

Method Blank (MB)

(MB) R4163428-2 12/29/24 12:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	1.80	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120

Laboratory Control Sample (LCS)

(LCS) R4163428-1 12/29/24 11:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.00	5.56	111	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			98.0	77.0-120	

L1812969-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812969-09 12/30/24 01:15 • (MS) R4163428-3 12/30/24 03:08 • (MSD) R4163428-4 12/30/24 03:31

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	142	U	126	154	89.3	109	25	50.0-150			19.8	27
(S) a,a,a-Trifluorotoluene(FID)					99.6	104		77.0-120				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4163044-3 12/27/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	0.0107	U	0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	103			75.0-131
(S) 4-Bromofluorobenzene	93.8			67.0-138
(S) 1,2-Dichloroethane-d4	108			70.0-130

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

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 %
Acetone	0.625	0.674	0.728	108	116	10.0-160			7.70	31
Acrylonitrile	0.625	0.745	0.731	119	117	45.0-153			1.90	22
Benzene	0.125	0.114	0.121	91.2	96.8	70.0-123			5.96	20
Bromobenzene	0.125	0.140	0.146	112	117	73.0-121			4.20	20
Bromodichloromethane	0.125	0.129	0.135	103	108	73.0-121			4.55	20

1
Cp

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Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

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 %
Bromoform	0.125	0.107	0.114	85.6	91.2	64.0-132			6.33	20
Bromomethane	0.125	0.107	0.108	85.6	86.4	56.0-147			0.930	20
n-Butylbenzene	0.125	0.130	0.141	104	113	68.0-135			8.12	20
sec-Butylbenzene	0.125	0.132	0.149	106	119	74.0-130			12.1	20
tert-Butylbenzene	0.125	0.139	0.149	111	119	75.0-127			6.94	20
Carbon tetrachloride	0.125	0.114	0.124	91.2	99.2	66.0-128			8.40	20
Chlorobenzene	0.125	0.115	0.121	92.0	96.8	76.0-128			5.08	20
Chlorodibromomethane	0.125	0.122	0.130	97.6	104	74.0-127			6.35	20
Chloroethane	0.125	0.107	0.110	85.6	88.0	61.0-134			2.76	20
Chloroform	0.125	0.114	0.119	91.2	95.2	72.0-123			4.29	20
Chloromethane	0.125	0.129	0.141	103	113	51.0-138			8.89	20
2-Chlorotoluene	0.125	0.147	0.158	118	126	75.0-124		J4	7.21	20
4-Chlorotoluene	0.125	0.148	0.160	118	128	75.0-124		J4	7.79	20
1,2-Dibromo-3-Chloropropane	0.125	0.132	0.131	106	105	59.0-130			0.760	20
1,2-Dibromoethane	0.125	0.129	0.137	103	110	74.0-128			6.02	20
Dibromomethane	0.125	0.128	0.131	102	105	75.0-122			2.32	20
1,2-Dichlorobenzene	0.125	0.129	0.135	103	108	76.0-124			4.55	20
1,3-Dichlorobenzene	0.125	0.127	0.134	102	107	76.0-125			5.36	20
1,4-Dichlorobenzene	0.125	0.136	0.146	109	117	77.0-121			7.09	20
Dichlorodifluoromethane	0.125	0.124	0.135	99.2	108	43.0-156			8.49	20
1,1-Dichloroethane	0.125	0.126	0.132	101	106	70.0-127			4.65	20
1,2-Dichloroethane	0.125	0.137	0.140	110	112	65.0-131			2.17	20
1,1-Dichloroethene	0.125	0.126	0.133	101	106	65.0-131			5.41	20
cis-1,2-Dichloroethene	0.125	0.112	0.116	89.6	92.8	73.0-125			3.51	20
trans-1,2-Dichloroethene	0.125	0.110	0.115	88.0	92.0	71.0-125			4.44	20
1,2-Dichloropropane	0.125	0.133	0.141	106	113	74.0-125			5.84	20
1,1-Dichloropropene	0.125	0.126	0.136	101	109	73.0-125			7.63	20
1,3-Dichloropropane	0.125	0.134	0.140	107	112	80.0-125			4.38	20
cis-1,3-Dichloropropene	0.125	0.124	0.133	99.2	106	76.0-127			7.00	20
trans-1,3-Dichloropropene	0.125	0.137	0.143	110	114	73.0-127			4.29	20
2,2-Dichloropropane	0.125	0.0957	0.0953	76.6	76.2	59.0-135			0.419	20
Di-isopropyl ether	0.125	0.142	0.148	114	118	60.0-136			4.14	20
Ethylbenzene	0.125	0.119	0.129	95.2	103	74.0-126			8.06	20
Hexachloro-1,3-butadiene	0.125	0.107	0.115	85.6	92.0	57.0-150			7.21	20
Isopropylbenzene	0.125	0.118	0.129	94.4	103	72.0-127			8.91	20
p-Isopropyltoluene	0.125	0.137	0.152	110	122	72.0-133			10.4	20
2-Butanone (MEK)	0.625	0.788	0.824	126	132	30.0-160			4.47	24
Methylene Chloride	0.125	0.112	0.117	89.6	93.6	68.0-123			4.37	20
4-Methyl-2-pentanone (MIBK)	0.625	0.741	0.763	119	122	56.0-143			2.93	20
Methyl tert-butyl ether	0.125	0.132	0.132	106	106	66.0-132			0.000	20

1Cp

2Tc

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8Al

9Sc

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

(LCS) R4163044-1 12/27/24 12:36 • (LCSD) R4163044-2 12/27/24 12:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	0.125	0.129	0.135	103	108	59.0-130			4.55	20
n-Propylbenzene	0.125	0.131	0.143	105	114	74.0-126			8.76	20
Styrene	0.125	0.127	0.135	102	108	72.0-127			6.11	20
1,1,1,2-Tetrachloroethane	0.125	0.124	0.128	99.2	102	74.0-129			3.17	20
1,1,2,2-Tetrachloroethane	0.125	0.152	0.158	122	126	68.0-128			3.87	20
1,1,2-Trichlorotrifluoroethane	0.125	0.114	0.123	91.2	98.4	61.0-139			7.59	20
Tetrachloroethene	0.125	0.113	0.126	90.4	101	70.0-136			10.9	20
Toluene	0.125	0.118	0.125	94.4	100	75.0-121			5.76	20
1,2,3-Trichlorobenzene	0.125	0.127	0.133	102	106	59.0-139			4.62	20
1,2,4-Trichlorobenzene	0.125	0.117	0.125	93.6	100	62.0-137			6.61	20
1,1,1-Trichloroethane	0.125	0.123	0.127	98.4	102	69.0-126			3.20	20
1,1,2-Trichloroethane	0.125	0.125	0.135	100	108	78.0-123			7.69	20
Trichloroethene	0.125	0.121	0.129	96.8	103	76.0-126			6.40	20
Trichlorofluoromethane	0.125	0.128	0.135	102	108	61.0-142			5.32	20
1,2,3-Trichloropropane	0.125	0.160	0.161	128	129	67.0-129			0.623	20
1,2,4-Trimethylbenzene	0.125	0.144	0.156	115	125	70.0-126			8.00	20
1,2,3-Trimethylbenzene	0.125	0.143	0.152	114	122	74.0-124			6.10	20
1,3,5-Trimethylbenzene	0.125	0.139	0.148	111	118	73.0-127			6.27	20
Vinyl chloride	0.125	0.131	0.143	105	114	63.0-134			8.76	20
Xylenes, Total	0.375	0.349	0.374	93.1	99.7	72.0-127			6.92	20
(S) Toluene-d8				96.8	98.4	75.0-131				
(S) 4-Bromofluorobenzene				95.3	94.8	67.0-138				
(S) 1,2-Dichloroethane-d4				117	120	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4162769-3 12/27/24 01:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Toluene	U		0.278	1.00
Ethylbenzene	U		0.137	1.00
Total Xylenes	U		0.174	3.00
(S) Toluene-d8	105			80.0-120
(S) 4-Bromofluorobenzene	96.6			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

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

(LCS) R4162769-1 12/26/24 23:39 • (LCSD) R4162769-2 12/26/24 23:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.58	5.49	112	110	70.0-123			1.63	20
Toluene	5.00	4.90	4.93	98.0	98.6	79.0-120			0.610	20
Ethylbenzene	5.00	5.30	5.04	106	101	79.0-123			5.03	20
Total Xylenes	15.0	15.4	15.1	103	101	79.0-123			1.97	20
(S) Toluene-d8				95.0	97.3	80.0-120				
(S) 4-Bromofluorobenzene				91.1	90.9	77.0-126				
(S) 1,2-Dichloroethane-d4				105	107	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4163691-1 12/31/24 15:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	90.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R4163691-2 12/31/24 15:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	43.9	87.8	50.0-150	
(S) o-Terphenyl			93.2	18.0-148	

L1812209-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812209-20 12/31/24 16:26 • (MS) R4163691-3 12/31/24 16:38 • (MSD) R4163691-4 12/31/24 16:51

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 %
Diesel Range Organics (DRO)	48.3	1.97	32.3	39.6	62.8	77.6	1	50.0-150		J3	20.3	20
(S) o-Terphenyl					72.2	83.6		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164307-1 01/02/25 11:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.0257	0.0700
Dalapon	U		0.0440	0.0700
2,4-DB	U		0.0186	0.0700
Dicamba	U		0.0226	0.0700
Dichloroprop	U		0.0183	0.0700
Dinoseb	U		0.0255	0.0700
MCPA	U		1.86	6.50
MCPP	U		2.03	6.50
2,4,5-T	U		0.0236	0.0700
2,4,5-TP (Silvex)	U		0.0187	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	73.7			22.0-132

Laboratory Control Sample (LCS)

(LCS) R4164307-2 01/02/25 11:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.0833	0.0730	87.6	40.0-120	
Dalapon	0.0833	0.0393	47.2	15.0-120	
2,4-DB	0.0833	0.0991	119	25.0-143	P
Dicamba	0.0833	0.0690	82.8	43.0-120	
Dichloroprop	0.0833	0.0734	88.1	32.0-129	P
Dinoseb	0.0833	0.0105	12.6	10.0-120	
MCPA	8.33	8.24	98.9	31.0-121	
MCPP	8.33	6.02	72.3	28.0-133	
2,4,5-T	0.0833	0.0626	75.2	41.0-120	
2,4,5-TP (Silvex)	0.0833	0.0661	79.4	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			79.6	22.0-132	

L1812342-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812342-01 01/02/25 12:53 • (MS) R4164307-3 01/02/25 13:05 • (MSD) R4164307-4 01/02/25 13:16

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 %
2,4-D	0.0828	U	0.0691	0.0624	83.5	75.4	1	10.0-160			10.2	24
Dalapon	0.0828	U	ND	ND	29.1	21.5	1	10.0-121		J3	30.1	27
2,4-DB	0.0828	U	0.128	0.110	155	133	1	10.0-160	P	P	15.1	22
Dicamba	0.0828	U	0.0659	0.0591	79.6	71.4	1	10.0-154			10.9	21

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1812342-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1812342-01 01/02/25 12:53 • (MS) R4164307-3 01/02/25 13:05 • (MSD) R4164307-4 01/02/25 13:16

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 %
Dichloroprop	0.0828	U	0.0659	0.0595	79.6	71.9	1	10.0-158			10.2	20
Dinoseb	0.0828	U	ND	ND	20.2	24.0	1	10.0-120			17.5	40
MCPA	8.28	U	7.85	6.24	94.8	75.4	1	10.0-160			22.9	40
MCPP	8.28	U	17.0	15.3	205	185	1	10.0-160	E J5 P	J5 P	10.5	40
2,4,5-T	0.0828	U	0.0729	0.0649	88.0	78.4	1	10.0-157	P		11.6	20
2,4,5-TP (Silvex)	0.0828	U	0.0654	0.0671	79.0	81.0	1	10.0-156			2.57	20
(S) 2,4-Dichlorophenyl Acetic Acid					91.6	76.5		22.0-132				

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R4163677-1 12/31/24 20:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00645	0.0200
Alpha BHC	U		0.00637	0.0200
Beta BHC	U		0.00630	0.0200
Delta BHC	U		0.00635	0.0200
Gamma BHC	U		0.00676	0.0200
Chlordane	U		0.0990	0.300
4,4-DDD	U		0.00690	0.0200
4,4-DDE	U		0.00673	0.0200
4,4-DDT	U		0.00766	0.0200
Dieldrin	U		0.00697	0.0200
Endosulfan I	U		0.00604	0.0200
Endosulfan II	U		0.00661	0.0200
Endosulfan sulfate	U		0.00642	0.0200
Endrin	U		0.00746	0.0200
Endrin aldehyde	U		0.00590	0.0200
Endrin ketone	U		0.00695	0.0200
Hexachlorobenzene	U		0.00608	0.0200
Heptachlor	U		0.00693	0.0200
Heptachlor epoxide	U		0.00650	0.0200
Methoxychlor	U		0.00806	0.0200
Toxaphene	U		0.214	0.400
(S) Decachlorobiphenyl	86.0			10.0-135
(S) Tetrachloro-m-xylene	89.3			10.0-139

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0583	87.5	34.0-136	
Alpha BHC	0.0666	0.0597	89.6	34.0-139	
Beta BHC	0.0666	0.0571	85.7	34.0-133	
Delta BHC	0.0666	0.0458	68.8	34.0-135	
Gamma BHC	0.0666	0.0602	90.4	34.0-136	
4,4-DDD	0.0666	0.0614	92.2	33.0-141	
4,4-DDE	0.0666	0.0568	85.3	34.0-134	
4,4-DDT	0.0666	0.0574	86.2	30.0-143	
Dieldrin	0.0666	0.0585	87.8	35.0-137	
Endosulfan I	0.0666	0.0633	95.0	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R4163677-2 12/31/24 20:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0581	87.2	35.0-132	
Endosulfan sulfate	0.0666	0.0556	83.5	35.0-132	
Endrin	0.0666	0.0607	91.1	34.0-137	
Endrin aldehyde	0.0666	0.0482	72.4	23.0-121	
Endrin ketone	0.0666	0.0604	90.7	35.0-144	
Hexachlorobenzene	0.0666	0.0529	79.4	33.0-129	
Heptachlor	0.0666	0.0500	75.1	36.0-141	
Heptachlor epoxide	0.0666	0.0579	86.9	36.0-134	
Methoxychlor	0.0666	0.0556	83.5	28.0-150	
(S) Decachlorobiphenyl			81.4	10.0-135	
(S) Tetrachloro-m-xylene			88.3	10.0-139	

L1811713-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1811713-01 12/31/24 22:58 • (MS) R4163677-3 12/31/24 23:07 • (MSD) R4163677-4 12/31/24 23:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.0708	U	0.0602	0.0513	85.0	72.1	1	20.0-135			15.8	37
Alpha BHC	0.0708	U	0.0678	0.0570	95.8	80.1	1	27.0-140			17.2	35
Beta BHC	0.0708	U	0.0606	0.0511	85.6	71.8	1	23.0-141			16.9	37
Delta BHC	0.0708	U	0.0490	0.0409	69.2	57.5	1	21.0-138			17.9	35
Gamma BHC	0.0708	U	0.0667	0.0561	94.2	78.7	1	27.0-137			17.3	36
4,4-DDD	0.0708	U	0.0607	0.0520	85.7	73.0	1	15.0-152			15.4	39
4,4-DDE	0.0708	U	0.0576	0.0480	81.3	67.4	1	10.0-152			18.1	40
4,4-DDT	0.0708	U	0.0582	0.0494	82.2	69.4	1	10.0-151			16.4	40
Dieldrin	0.0708	U	0.0607	0.0513	85.7	72.1	1	17.0-145			16.7	37
Endosulfan I	0.0708	U	0.0656	0.0539	92.7	75.7	1	20.0-137			19.6	36
Endosulfan II	0.0708	U	0.0607	0.0509	85.7	71.5	1	15.0-141			17.5	37
Endosulfan sulfate	0.0708	U	0.0593	0.0504	83.8	70.7	1	15.0-143			16.3	38
Endrin	0.0708	U	0.0649	0.0538	91.7	75.6	1	19.0-143			18.6	37
Endrin aldehyde	0.0708	U	0.0536	0.0441	75.7	62.0	1	10.0-139			19.3	40
Endrin ketone	0.0708	U	0.0617	0.0505	87.1	70.9	1	17.0-149			19.9	38
Hexachlorobenzene	0.0708	U	0.0593	0.0502	83.8	70.4	1	25.0-126			16.7	35
Heptachlor	0.0708	U	0.0584	0.0520	82.5	73.0	1	22.0-138			11.7	37
Heptachlor epoxide	0.0708	U	0.0600	0.0504	84.8	70.7	1	22.0-138			17.5	36
Methoxychlor	0.0708	U	0.0557	0.0486	78.8	68.2	1	10.0-159			13.8	40
(S) Decachlorobiphenyl					77.7	73.0		10.0-135				
(S) Tetrachloro-m-xylene					85.6	73.9		10.0-139				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R4164024-2 12/31/24 15:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	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
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	114			23.0-120
(S) Nitrobenzene-d5	112			14.0-149
(S) 2-Fluorobiphenyl	115			34.0-125

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0774	96.8	50.0-126	
Acenaphthene	0.0800	0.0744	93.0	50.0-120	
Acenaphthylene	0.0800	0.0780	97.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0758	94.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0733	91.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0810	101	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0802	100	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0771	96.4	49.0-125	
Chrysene	0.0800	0.0799	99.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0788	98.5	47.0-125	
Fluoranthene	0.0800	0.0813	102	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4164024-1 12/31/24 15:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0813	102	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0748	93.5	46.0-125	
Naphthalene	0.0800	0.0750	93.8	50.0-120	
Phenanthrene	0.0800	0.0806	101	47.0-120	
Pyrene	0.0800	0.0780	97.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0788	98.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0766	95.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0851	106	50.0-120	
(S) p-Terphenyl-d14			103	23.0-120	
(S) Nitrobenzene-d5			100	14.0-149	
(S) 2-Fluorobiphenyl			106	34.0-125	

L1813004-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1813004-06 01/03/25 04:47 • (MS) R4164389-1 01/03/25 05:04 • (MSD) R4164389-2 01/03/25 05:22

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0952	U	0.0387	0.0531	40.6	55.2	1	10.0-145	U3		31.4	30
Acenaphthene	0.0952	U	0.0488	0.0615	51.3	64.0	1	14.0-127			23.0	27
Acenaphthylene	0.0952	U	0.0458	0.0577	48.1	60.0	1	21.0-124			23.1	25
Benzo(a)anthracene	0.0952	U	0.0375	0.0533	39.4	55.5	1	10.0-139	U3		34.9	30
Benzo(a)pyrene	0.0952	U	0.0409	0.0582	42.9	60.5	1	10.0-141	U3		35.0	31
Benzo(b)fluoranthene	0.0952	U	0.0472	0.0655	49.6	68.1	1	10.0-140			32.5	36
Benzo(g,h,i)perylene	0.0952	U	0.0530	0.0742	55.6	77.2	1	10.0-140	U3		33.4	33
Benzo(k)fluoranthene	0.0952	U	0.0425	0.0636	44.6	66.1	1	10.0-137	U3		39.8	31
Chrysene	0.0952	U	0.0453	0.0649	47.6	67.5	1	10.0-145	U3		35.7	30
Dibenz(a,h)anthracene	0.0952	U	0.0502	0.0708	52.7	73.6	1	10.0-132	U3		34.1	31
Fluoranthene	0.0952	U	0.0443	0.0619	46.5	64.3	1	10.0-153	U3		33.1	33
Fluorene	0.0952	U	0.0499	0.0649	52.4	67.5	1	11.0-130			26.1	29
Indeno(1,2,3-cd)pyrene	0.0952	U	0.0481	0.0676	50.5	70.3	1	10.0-137	U3		33.8	32
Naphthalene	0.0952	U	0.0616	0.0682	63.7	69.9	1	10.0-135			10.2	27
Phenanthrene	0.0952	U	0.0461	0.0629	48.5	65.4	1	10.0-144			30.7	31
Pyrene	0.0952	U	0.0459	0.0644	48.2	67.0	1	10.0-148			33.6	35
1-Methylnaphthalene	0.0952	U	0.0576	0.0684	59.8	70.3	1	10.0-142			17.1	28
2-Methylnaphthalene	0.0952	U	0.0561	0.0670	58.1	68.8	1	10.0-137			17.6	28
2-Chloronaphthalene	0.0952	U	0.0539	0.0666	56.6	69.2	1	29.0-120			21.1	24
(S) p-Terphenyl-d14					53.9	150		23.0-120	U1			
(S) Nitrobenzene-d5					62.9	145		14.0-149				
(S) 2-Fluorobiphenyl					64.9	155		34.0-125	U1			

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

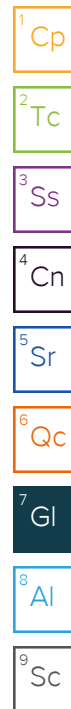
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	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.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.



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Qualifier	Description
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
P	RPD between the primary and confirmatory analysis exceeded 40%.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

ACCREDITATIONS & LOCATIONS

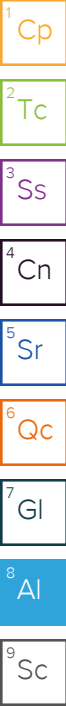
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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	LA000356
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.



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