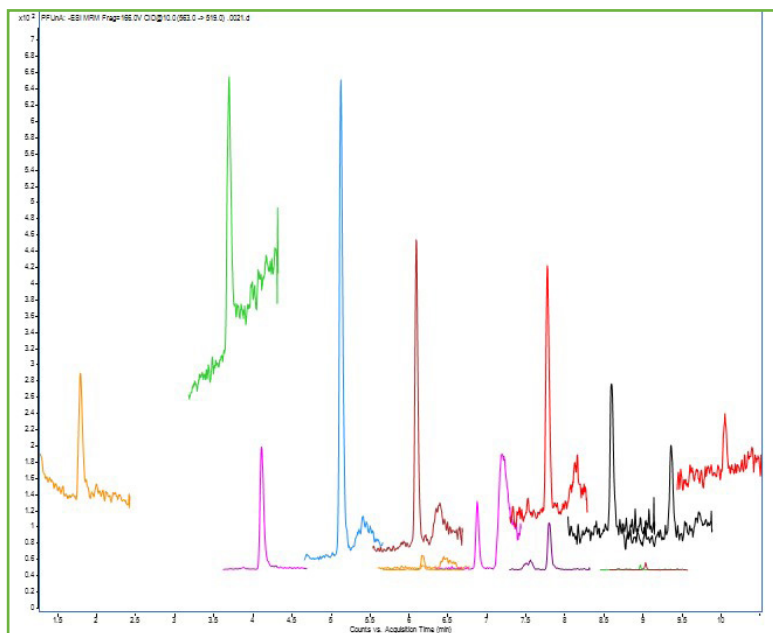




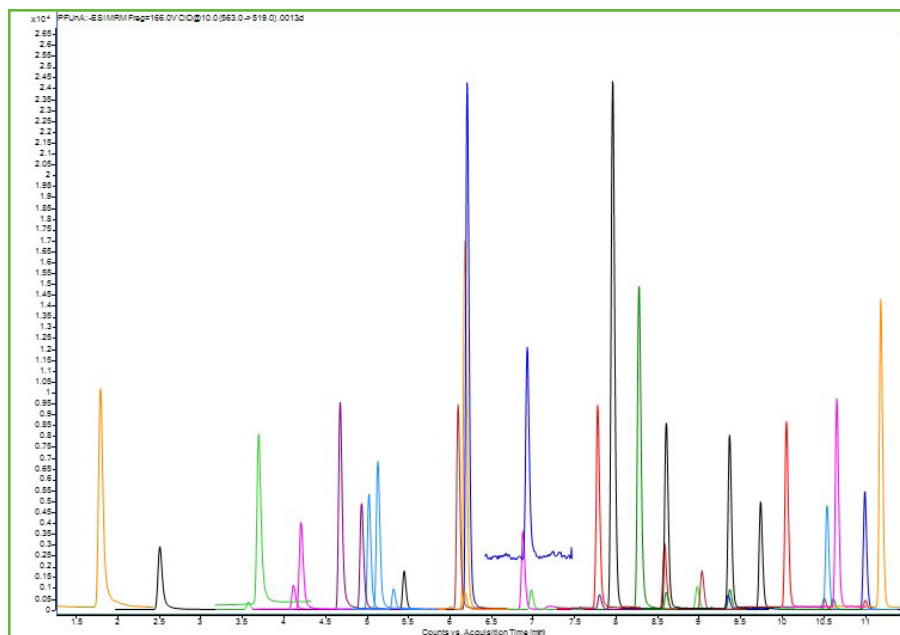
### PFAS in Soil Using EPA Method 1633

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Analyte	Abbreviation	Retention Time (min)
Perfluorobutanoic acid	PFBA	1.79
Perfluoropentanoic acid	PFPeA	3.70
Perfluorobutanesulfonic acid	PFBS	4.12
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	4.94
Perfluorohexanoic acid	PFHxA	5.14
Perfluoroheptanoic acid	PFHpA	6.10
Perfluorohexanesulfonic acid	PFHxS	6.18
2H,2H,3H,3H-Perfluorooctanoic acid	5:3 FTCA	6.18
1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2 FTS	6.89
Perfluorononanoic acid	PFNA	7.79
Perfluorooctanesulfonic acid	PFOS	7.81
Perfluorodecanoic acid	PFDA	8.61
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	8.98
Perfluorooctanesulfonamide	PFOSA	9.04
Perfluoroundecanoic acid	PFUnA	9.37
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	9.37
Perfluorododecanoic acid	PFDaA	10.05





Analyte	Abbreviation	Retention Time (min)
Perfluorobutanoic acid	PFBA	1.79
Perfluoro-3-methoxypropanoic acid	PFMPA	2.51
3-perfluoropropyl propanoic acid	3:3 FTCA	3.57
Perfluoropentanoic acid	PFPeA	3.70
Perfluorobutanesulfonic acid	PFBS	4.12
Perfluoro-4-methoxybutanoic acid	PFMBA	4.21
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	4.68
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	4.94
1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	5.03
Perfluorohexanoic acid	PFHxA	5.14
Perfluoropentanesulfonic acid	PFPeS	5.33
Hexafluoropropylene oxide dimer acid	HFPO-DA	5.45
Perfluoroheptanoic acid	PFHpA	6.10
Perfluorohexanesulfonic acid	PFHxS	6.18
2H,2H,3H,3H-Perfluorooctanoic acid	5:3 FTCA	6.18
4,8-dioxa-3H-perfluorononanoic acid	ADONA	6.21
1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	6.89
Perfluorooctanoic acid	PFOA	6.93
Perfluoroheptanesulfonic acid	PFHpS	6.99
Perfluorononanoic acid	PFNA	7.79
Perfluorooctanesulfonic acid	PFOS	7.81
3-perfluoroheptyl propanoic acid	7:3 FTCA	8.00
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	8.28
1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS	8.59
Perfluorononanesulfonic acid	PFNS	8.61
Perfluorodecanoic acid	PFDA	8.61
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	8.98
Perfluorooctanesulfonamide	PFOSA	9.04
Perfluorodecanesulfonic acid	PFDS	9.35
Perfluoroundecanoic acid	PFUnA	9.37
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	9.37
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	9.74
Perfluorododecanoic acid	PFDoA	10.05
N-Methyl Perfluorooctanesulfonamide	NMeFOFA	10.51
N-Methyl Perfluorooctanesulfonamidoethanol	NMeFOSE	10.54
Perfluorododecanesulfonic acid	PFDoS	10.62
Perfluorotridecanoic acid	PFTriDA	10.66
N-Ethyl Perfluorooctanesulfonamidoethanol	NEtFOSE	11.00
N-Ethyl Perfluorooctanesulfonamide	NEtFOFA	11.00
Perfluorotetradecanoic acid	PFTA	11.19



**TEST CONDITIONS:****Analytical Column:** HALO 90 Å PFAS 2.7µm, 2.1 x 100 mm**Part Number:** 92812-613**Delay Column:** HALO® PFAS Delay, 2.7µm, 3.0 x 50 mm**Part Number:** 92113-415**Mobile Phase A:** 20 mM Ammonium Acetate**Mobile Phase B:** MeOH

Gradient:	Time	% B
	0.0	20
	12.0	90
	15.0	90
	15.1	20
	18.0	END

**MS Conditions:****Gas Temp:** 130 °C**Nebulizer:** 25 psi**Gas Flow:** 11 L/min**Sheath Gas Heater:** 250 °C**Capillary:** 3500 V**Flow Rate:** 0.4 mL/min**Pressure:** 505 bar**Temperature:** 44 °C**Injection Volume:** 2.0 µL**Sample:** Field Soil Sample**Sample Solvent:** 96:4 Methanol/Water**MS System:** Agilent 6400 series**LC System:** Agilent 1200 series**Data Courtesy of:** Center for PFAS Solutions  
(New Castle, DE)**PFAS  
Solutions**

A soil sample was screened for PFAS using a HALO® PFAS column. Due to the stability of PFAS compounds, there will always be a need for testing. By using the HALO® PFAS column, in conjunction with EPA method 1633, PFAS compounds were detected around 1 ppb with excellent peak shape and resolution.

