Table 1 - Methods, Sample Containers, Preservation, Hold Time

effective: 9/17/19
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Method, Sample Contain, Preservative and Holding Time Table **Note: The information contained in this document lists the most common regulatory methods selected and sample container/volume configurations. Please contact your Project Manager for additional offerings or sample kit configurations.**

P-Poly ***G***-Glass ***AG***-Amber Glass ***E***-Encore ***SY***-Syringe-type sampling device* ***TLC*** Teflon®-lined cap ***TLS*** Teflon®-lined septum
PTFE Fluoropolymer Resin / Teflon® ***WMG*** Wide-Mouth Glass ***ZHS*** Zero HeadSpace **W** Water; **S** Soil/Sediment

Analysis	Matrix	Method(s)	Recommended Quantity	Preservation	Minimum Volume / Size	Holding Time
Volatile Organics [1]						
Carbamates	**W**	EPA 531.1	2 x 60 ml, AG-TLS, ZHS not required	Cool 0-6°C, Monochloroacetic Acid pH<3, NaThiosulfate	1x 60 ml	28 days
Dissolved Gasses	**W**	RSK-175 RSK-175 - CO_2	3 x 40 ml G-TLS, ZHS [2]3 x 40 ml G-TLS, ZHS	[3]Cool 0-6°C, HCl Cool 0-6°C	1 x 40 ml	14 days 7 days
EDB, DBCP & 1,2,3-Trichloropropane	**W**	EPA 504.1 / SW 8011	3 x 40 ml AG-TLS, ZHS	[4]Cool 0-6°C, HCl	1 x 40 ml	14 days
	S	SW 8011	2-oz.jar	Cool 0-6°C	10 g	14 days
[5]Gasoline Range Organics (GRO)	**W**	SW 8015 (5030), AK 101	3 x 40 ml G-TLS, ZHS	Cool 0-6°C, HCl	1 x 40 ml	14 days
	S	SW 8015 (Low-Level 5030; High-Level 5035)	2-oz. jar 3 x 5g E or SY 1 x 40 ml G-TLS w/10ml MeOH	Cool 0-6°C [6]Frozen w/in 48 hours	10 g 1 E 1 x 5g E or 1 x 40 ml G-TLS w/10ml MeOH	14 days
		AK101 (mid-level)	4-oz. jar w/ MeOH	Cool <25°C, MeOH	AK 25g-25mL MeOH	28 days
Hydrocarbons (C6-C32)	**S**	Arizona 8015AZ	4-oz. jar	Cool 0-6°C	30 g	14 days
Total Petroleum Hydrocarbons	**W**	Texas 1005	2 x 40 ml G-TLS	Cool 0-6°C	1 x 40 ml	14 days to extract 14 days to analyze
	S	Texas 1005	2 x 40 ml G-PTFE	Prior to extr.: ≤ -12°C. Once extracted, extract should be tightly capped and stored ≤ -12°C until analysis. ***See Note.***	10 g	14 days collection to extraction 14 days extraction to analysis
			Note for Soils: *Upon receipt, the samples can be held a ≤4°C if analyzed within 2 days of collection.*			
Volatile Petroleum Hydrocarbons	**W**	Iowa OA-1	3 x 40 ml G-TLS, ZHS	Cool 0-6°C, HCl	1 x 40 ml	14 days *(preserved)* 7 days *(unpreserved)*
	S	Iowa OA-1	4-oz. jar	Cool 0-6°C	30 g	14 days
Northwest TPH Gx	**W**	NWTPH-Gx	3 x 40 ml G-TLS, ZHS	Cool 0-6°C, HCl	1 x 40 ml	14 days *(preserved)* 7 days *(unpreserved)*
	S	NWTPH-Gx	2-oz. jar	Cool 0-6°C	30 g	14 days
Purgeable Halocarbons	**W**	EPA 601 / SW 8021, 8015 (5030)	3 x 40 ml G-TLS, ZHS	Cool 0-6°C, HCl	1 x 40 ml	14 days *(preserved)* 7 days *(unpreserved)*
	S	SW 8021 / 8015 (5035)	[7]3 x 5g E or SY	Cool 0-6°C	10 g 1 E	14 days
Purgeable Aromatics	**W**	EPA 602 / SW 8021, 8015 (5030)	3 x 40 ml G-TLS, ZHS	Cool 0-6°C, HCl	1 x 40 ml	14 days *(preserved)* 7 days *(unpreserved)*
	S	SW 8021 / 8015 (5030 / 5035)	2-oz. jar [7]3 x 5g E or SY	Cool 0-6°C	10 g 1 E	14 days
Total Trihalomethanes (TTHM) by GC/MS	**DW**	EPA 524.2	3 x 40 ml G-TLS, ZHS	Cool 0-6°C, HCl and Ascorbic Acid	1 x 40 ml	
TPH by GC/MS	**W**	SW 8260 Mod. (5030)	3 x 40 ml G-TLS, ZHS	Cool 0-6°C, HCl	1 x 40 ml	14 days
	S	SW 8260 Mod. (5030/5035)	2-oz. jar [7]3 x 5g E or SY	Cool 0-6°C [7]Frozen w/in 48 hours	10 g 1 E	14 days
[8]Volatile Organics by GC/MS	**W / DW**	EPA 624 or SW 8260(5030) / EPA 524.2	3 x 40 ml G-TLS, ZHS	Cool 0-6oC, HCl and Ascorbic Acid	1 x 40 ml	14 days *(preserved)* 7 days *(unpreserved)* *(3 days - unpreserved for 624 Acrolein and Acrylonotrile), Also see footnote #8*
	S	EPA 8260 (5030/5035)	2-oz. jar [7]3 x 5g E or SY	Cool 0-6°C [7]Frozen w/in 48 hours	10 g 1 E	14 days
Volatile Petroleum Hydrocarbons by GC	W	MA VPH	3 x 40 ml G-TLS, ZHS	Cool 0-6°C, HCl	1 x 40 ml	14 days *(preserved)* 7 days *(unpreserved)*
	S	MA VPH	2-oz. jar [7]3 x 5g E or SY	[7]Frozen w/in 48 hours or 10ml MeOH/10g	10 g 1 E	28 days
[12]Semi-Volatile Organics						
Herbicides	**DW**	EPA 515	2 x 1L-AG or WMG TLC	Cool 0-6°C, NaThiosulfate	1L	14 days
Chlorinated Herbicides	**W**	EPA 615 / SW 8151	2 x 1L-AG or WMG TLC; [14]2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	7 days to extract 40 days to analyze
	S	SW 8151	4-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze

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Analysis	Matrix	Method(s)	Recommended Quantity	Preservation	Minimum Volume / Size	Holding Time
[5] Diesel or Oil Range Organics (DRO/ORO)	**W**	SW 8015	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	7 days to extract 40 days to analyze
		AK102, AK103	2 x 125mL amber-HCl to pH <2 2 x 1L amber-HCl to pH<2	Cool 0-6°C	125 mL 1L	14 days to extract, 40 days to analyze
	S	SW 8015, AK102, AK103	4-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze
Dioxin/Furans	**W**	EPA 1613 / SW 8280, 8290 (See Comments)	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	1 year (1613); 30 days to extract, 45 days to analyze - (8280/8290)
	S	EPA 1613 / SW 8280, 8290	4-oz. AG-jar	Cool 0-6°C	10 g	1 year (1613)* * Freeze if maintained for extended time; 30 days to extract, 45 days to analyze - (8280/8290)
Haloacetic Acids	**DW**	EPA 552.2	250 ml AG, Ammonium Chloride	Cool 0-6°C	40 ml	14 days
Extractable Petroleum Hydrocarbons by GC	**W**	MA EPH	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	14 days to extract 40 days to analyze
	S	MA EPH	4-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze
Extractable Petroleum Hydrocarbons	**W**	Iowa OA-2	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C, HCl	1L	7 days to extract 40 days to analyze
	S	Iowa OA-2	2-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze
Formaldehydes / Acetaldehydes	**W**	SW 8315 A	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	3 days to extract 3 days to analyze
	S	SW 8315 A	4-oz. jar	Cool 0-6°C	30 g	7 days to extract 3 days to analyze
Nitroaromatics/Nitramines (Explosives)	**W**	SW 8321, 8330, 8332	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	7 days to extract 40 days to analyze
	S	SW 8321, 8330, 8332	2-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze
Northwest TPH Dx	**W**	NWTPH-Dx	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS	Cool 0-6°C, HCl	1L	14 days to extract 40 days to analyze
	S	NWTPH-Dx	2-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze
Oil & Grease	**W**	EPA 1664A; SM 5520B & C	2 x 1L-AG or WMG TLC	Cool 0-6°C, H2SO4 or HCl	1L	28 days
	S	SW 9071B Mod.	4-oz. jar	Cool 0-6°C	30 g	28 days
Organophosphorus Pesticides	**W**	EPA 614 / SW 8141	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	7 days to extract 40 days to analyze
	S	SW 8141	4-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze
Pesticides 508 MI DW	**DW**	EPA 508	2 x 1L-AG or WMG TLC	Cool 0-6°C, NaThiosulfate	1L	7 days to extract 40 days to analyze
Pesticides 525 MI DW	**DW**	EPA 525	2 x 1L-AG or WMG TLC	Cool 0-6°C, NaSulfite and HCl	1L	7 days to extract 40 days to analyze
Pesticides	**W**	EPA 608 / SW 8081	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	7 days to extract 40 days to analyze
	S	SW 8081	4-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze

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Analysis	Matrix	Method(s)	Recommended Quantity	Preservation	Minimum Volume / Size	Holding Time
PCBs	**W**	EPA 608	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	365-days to extract 365 days to analyze
PCBs	**W**	SW 8082	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	365 days to extract [15] 40 days to analyze
	S	SW 8082	4-oz. jar	Cool 0-6°C	30 g	365 days to extract [15] 40 days to analyze
Polynuclear Aromatic Hydrocarbons	**W**	EPA 610 / SW 8310, 8270	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	7 days to extract 40 days to analyze
	S	SW 8310, 8270	4-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze
Semi-Volatile Organics	**W**	EPA 625 / SW 8270	2 x 1L-AG or WMG TLC; [14] 2 x 8oz AG WMG TLC or 2 x 4oz AG WMG TLC or 2 x 40mL AG TLS (LVI)	Cool 0-6°C	1L	7 days to extract 40 days to analyze
	S	SW 8270	4-oz. jar	Cool 0-6°C	30 g	14 days to extract 40 days to analyze
General Chemistry						
Acidity	**W / S**	EPA 305.1 / SM 2310B	125 ml, P / 4-oz. jar	Cool 0-6°C	30 ml / 25 g	14 days[9]
Alkalinity	**W / S**	EPA 310.2 / SM 2320B	125 ml, P (limited headspace) / 4-oz. jar	Cool 0-6°C	10 ml / 25 g	14 days[9]
Ammonia (as N)	**W /S**	SM 4500-NH3 G	250 ml, P / 8-oz jar	Cool 0-6°C, H_2SO_4 to pH <2	50 ml / 100 g	28 days[9]
Anions by IC: Cl, F, Br, SO4	**W / S**	EPA 300.0 / SM 4110B / SW 9056	125 ml or 60 ml, P / 4-oz. jar	Cool 0-6°C	10 ml / 50 g	28 days
Biochemical Oxygen Demand (BOD)	**W**	SM 5210B	1L, P	Cool 0-6°C	500 ml	48 hours
Carbon Dioxide	**W**	SM4500-CO2 C	500 ml, P	Cool 0-6°C	100 ml	Immediate[10]
Chemical Oxygen Demand (COD)	**W / S**	EPA 410.4	250 ml, P / 4-oz. jar	Cool 0-6°C, H_2SO_4 to pH <2	10 ml / 25 g	28 days[9]
Chloride	**W / S**	4500-Cl C	125 ml, P / 4-oz. jar	Cool 0-6°C	10 ml / 25 g	28 days[9]
Chlorine, Residual	**W**	SM 4500-Cl G Mod, EPA 330.4, 330.5, HACH 8167	125 ml, P	Cool 0-6°C	20 ml	Immediate[10]
Chromium VI	**W / S**	EPA 218.4, 218.6 / SW 7196, 7199 / SM 3500-Cr B, D	125 ml, P / 4-oz. jar	Cool 0-6°C	25 ml / 25 g	24 hours[9] unpreserved, 28 days preserved[13] *(Aqueous);* 28 days extract, 7 days to analysis (optional 96 hrs. from ext. to analysis in alkaline state) *(Soils)*
	S	EPA 6800	4-oz. jar	Cool 0-6°C	25 g	30 days extract, 7 days to analysis (optional 96 hrs. from ext. to analysis in alkaline state)
Color	**W**	SM 2120 B, EPA 110.1, 110.2, 110.3	500 ml P	Cool 0-6°C	100 ml	48 hours
Conductivity	**W**	SM 2510B / SW 9050	125 ml, P	Cool 0-6°C	50 ml	28 days
Cyanide, Amenable or Total	**W / S**	SM 4500-CN C, E, G / EPA 335.1, 335.3, 335.4 / W 9010, 9012, 9013, 9014 / Lachat 10-201-00-1-A EPA OIA-1677	250 ml, P / 4-oz. jar (Note: NPDES may require field preservation kit.)	Cool 0-6°C, NaOH pH > 12; Cool 0-6°C, reducing agent if oxidizer is present.	50 ml / 5 g	14 days[9]
Cyanide, Available	**W / S**	EPA OIA-1677	Contact the TestAmerica laboratory performing the analysis for method-exclusive containers			14 days
Flashpoint / Ignitability	**W / S**	SW 1010, 1020, 1030	4-oz. jar, G	Cool 0-6°C	70 ml / 50 g	None Specified
Fluoride	**W / S**	EPA 300.0, 340.2 / SW 9056, 9214 / SM 4110B, 4500-F C	125 ml, P / 4-oz. jar	Cool 0-6°C	25 ml / 25 g	28 days[9]
Hardness	**W**	EPA 130.2 / SM 2340C	250 ml, P	Cool 0-6°C, HNO_3 to pH <2	50 ml	180 days

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MBAS (Surfactants)	**W**	SM 5540C	1L, P	Cool 0-6°C	400 ml	48 hours
Nitrate	**W / S**	4500-NO3 F	125 ml, P / 4-oz. jar	Cool 0-6°C	30 ml / 25 g	48 hours[9]
Nitrate + Nitrite	**W / S**	4500-NO3 F	125 ml, P / 4-oz. jar	Cool 0-6°C, H_2S0_4 to pH < 2; Cool 0-6°C	50 ml / 25 g	28 days[9]
Nitrite	**W / S**	4500-NO3 F	125 ml, P / 4-oz. jar	Cool 0-6°C	30 ml / 25 g	48 hours[9]
Nitrogen, Kjeldahl (TKN)	**W / S**	EPA 351.2	250 ml, P / 4-oz. jar	Cool 0-6°C, H_2SO_4 pH < 2; Cool 0-6°C	50 ml / 25 g	28 days[9]
Odor	**W**	SM 2150B	500 ml, G	Cool 0-6°C	100 ml	24 hours
Oxygen, Dissolved (DO)	**W**	SM 4500-O G	1000 ml, P	Cool 0-6°C, no HdSpc	1000 ml	Immediate[10]
Perchlorate	**W / S**	EPA 314.0	500 ml, P / 4-oz. jar	Cool 0-6°C	50 ml/100 g	28 days
Perchlorate	**W**	EPA 331, EPA 332.0 / SW 6850, 6860, 8321	500 ml, P	Cool 0-6°C, Sterile	50 ml	28 days
pH	**W / S**	SM 4500-H+ B /SW 9040, 9045	125 ml, P, / 4-oz. jar	Cool 0-6°C	50 ml / 5 g	Immediate[10] 7 days - MICE
Phenols, Total	**W / S**	EPA 420.1, 420.2, 420.4 / SW 9065, 9066	250 ml, AG, TLC / 4-oz. jar	Cool 0-6°C, H_2SO_4 pH < 2; Cool 0-6°C	50 ml / 5 g	28 days
Phosphate, Ortho	**W / S**	SM 4500-P E	125 ml, P / 4-oz. jar	Cool 0-6°C	10 ml / 5 g	48 hours
Phosphorus (ICP)	**W / S**	EPA 200.7 / SW 6010	250 ml, P / 4-oz. jar	Cool 0-6°C, HNO_3 to pH <2; Cool 0-6°C	10 ml / 10 g	180 days
Phosphorus (Gen Chem)	**W / S**	EPA 365.4	250 ml, P / 4-oz. jar	Cool 0-6°C, H_2SO_4 pH < 2; Cool 0-6°C	10 ml / 5 g	28 days
Silica	**W**	SM 4500-SiO2 F / EPA 200.7	250 ml P or PTFE	Cool 0-6°C / HNO3 to pH <2	50 ml	28 days
Solids, Settleable	**W**	EPA 160.5 / SM 2540F	1L, P	Cool 0-6°C	1000 ml	48 hours
Solids, Total Dissolved (TDS)	**W**	SM 2540C	500 ml, P	Cool 0-6°C	500 ml	7 days
Solids, Total Suspended (TSS)	**W**	SM 2540D	1L, P	Cool 0-6°C	1000 ml	7 days
Solids, Total Volatile (TVS)	**W**	SM 2540E	500 ml, P	Cool 0-6°C	100 ml	7 days
Solids, Total (%)	**W**	SM 2540G	250 ml, P	Cool 0-6°C	30 g	7 days
Sulfate	**W / S**	4500-SO_4 E	250 ml, P / 4-oz. jar	Cool 0-6°C	10 ml / 50 g	28 days[9]
Sulfide, Dissolved	**W**	EPA 376.2 / SM 4500-S2 D	250 ml, P	Cool 0-6°C, NaOH + ZnAcetate, pH >9	50 ml	7 days 24 hours (unpreserved)
Sulfide, Total	**W / S**	EPA 376.1, 376.2 / SM 4500-S-2 D, E, F / SW 9030, 9034 / HACH 8216	250 ml, P / 4-oz. jar	Cool 0-6°C, NaOH+Zn Acetate pH >9; Cool <6°C	50 ml / 50 g	7 days
Total Organic Carbon (TOC)	**W / DW**	SW 9060 / SM 5310B	[16]250 ml, P, 4-oz. jar w/PFTE-lined lid / 3 x 40 ml G,TLC	Cool 0-6°C, H_2SO_4 pH < 2; Cool 0-6°C	50 ml / 50 g	28 days 14 days (Lloyd Khan)
Total Organic Carbon (TOC)	**S**	Walkley-Black	[16]250 ml, P, 4-oz. jar w/PFTE-lined lid	Cool 0-6°C, H_2SO_4 pH < 2; Cool 0-6°C	50 ml / 50 g	28 days
Total Organic Halides (TOX)	**W / S**	EPA 450.1 / SM 5350B / SW 9020 / SW9023	2 x 250 ml, AG, TLS / 4-oz. jar	Cool 0-6°C, H_2SO_4 to pH < 2; Cool ≤6°C	50 ml / 50 g	28 days
Total Petroleum Hydrocarbon (TPH)	**W**	EPA 1664 (SGT HEM)	2 x 1 L- AG, TLC (2 X 1L G, TLC)	Cool 0-6°C, HCl to pH < 2; Cool 0-6°C, H2SO4 to pH < 2)	1000 ml	28 days
	S	SW 9071B Mod.	4-oz. jar	Cool 0-6°C	50 g	28 days
Turbidity	**W**	EPA 180.1	125 ml, P	Cool 0-6°C	50 ml	48 hours

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Metals						
Cation Exchange Capacity (CEC)	S	SW 9081	4-oz. jar	Cool 0-6°C	50 g	28 days
Chromium VI	W / S	EPA 218.4, 218.6 / SW 7196, 7199 / SM 3500-Cr B, D	125 ml, P / 4-oz. jar	Cool 0-6°C	25 ml / 25 g	24 hours[9] unpreserved, 28 days preserved[13] *(Aqueous);* 28 days extract, 7 days to analysis (optional 96 hrs. from ext. to analysis in alkaline state) *(Soils)*
	S	EPA 6800	4-oz. jar	Cool 0-6°C	25 g	30 days extract, 7 days to analysis (optional 96 hrs. from ext. to analysis in alkaline state)
Mercury	W	EPA 245.1, 245.2 / SW 7470	250 ml, P	HNO_3 to pH < 2	30 ml	28 days
	W	EPA 1630	3 x 40 ml AG-TLS	HCl to pH < 2	40 ml	28 days
	W	EPA 1631E	250 ml G-TLC, double bagged	None	25 ml	28 days
	S	EPA 1630, 1631 / SW 7471A	4-oz. jar	Cool 0-6°C	10 g	28 days
Metals, Dissolved (Field Filtered)	W	EPA 200.7, 200.8 / SW 6010, 6020	250 ml, P	HNO_3 to pH < 2	50 ml	180 days
Metals, Total	W	EPA 200.7, 200.8 / SW 6010, 6020	250 ml, P	HNO_3 to pH < 2	50 ml	180 days
	S	SW 6010, 6020	4-oz. jar	Cool 0-6°C	5 g	180 days
Organic Lead by GFAA	W	HML 939-M	1L AG, ZHS	Cool 0-6°C	200 ml	14 days
	S	HML 939-M	4-oz. jar	Cool 0-6°C	50 g	14 days
TCLP, STLC, SPLP metals	W	40 CFR Part 136, Md. 1311, 1312	4 x 40 ml G-TLS, ZHS 4 x 1 L, G 1 x 500 ml, P	Cool 0-6°C	40 ml/2000 ml/500 ml	180 days[11]
	S	40 CFR Part 136, Md. 1311, 1312	1 X 16-oz glass jar 2 X 8-oz glass jar 1 X 4-oz glass jar	Cool 0-6°C	100g / 50g / 100g	180 days[11]
Microbiology						
Chlorophyll a	W	SM 10200 H	1 L, AP or AG foil wrapped	Cool 0-6°C	100 ml	ASAP, 5 days max due to client holding/shipping
Coliform, Total	W	SM 9223B	120 ml P,G (sterile)	>0 and <38°C, $Na_2S_2O_3$	100 ml	30 hours (SDWA); 8 hours (CWA);
Coliform, Fecal	W	Colilert-18	120 ml P,G (sterile)	Cool <10°C, $Na_2S_2O_3$	100 ml	8 hours (CWA)
E. Coli	W	SM 9223B	120 ml P,G (sterile)	>0 and <38°C, $Na_2S_2O_3$	100 ml	30 hours (SDWA); 8 hours (CWA)
Enterococci	W	SM 9230, ENTEROLERT-9230D	120 ml P,G (sterile)	Cool 0-10°C	100 ml	8 hours (CWA)
Hetrotrophic Plate Count	W / S	SM 9060, IDEXX - Quanti-Tray	120 ml P,G (sterile)	Cool 0-10°C, $Na_2S_2O_3$	100 ml	8 hours (SDWA); 8 hours (CWA)
Radiochemistry						
Carbon-14	W	EERF C-01-1	100 mL	None	75 mL	6 months
	S	EERF C-01-1	5 grams, P	None	1 gram	6 months
Cesium-134	W	EPA 901; DOE GA-01-R	1 L, P	None	1 L	6 months
	S	EPA 901; DOE GA-01-R	650 grams, P	None	650 grams	6 months
Gross Alpha/Beta	W	EPA 900 & SW 9000 Series	1 L, P	None	500 ml	6 months
	S	EPA 900 & SW 9000 Series	10 grams, P	None	5 grams	6 months
Iodine-129	W	Standard Method 7500-IB	2 L, P	None	2 L	6 months
Iodine-131	W	EPA 902.0, 901.1	1 L, P	None	1 L	16 days
Isotopic Analysis: Am, Cm, Np, Pu, Th, U	W	DOE A-01-R	1 L, P	HNO_3 pH < 2	1 L	6 months
	S	DOE A-01-R	10 grams, P	None	10 gram	6 months
Nickel 59/63; Iron-55	W	Eichrom Technologies Methods	1 L, P	HNO_3 pH < 2	500 mL	6 months
	S	Eichrom Technologies Methods	5 grams, P	None	5 grams	6 months

Table 1 - Methods, Sample Containers, Preservation, Hold Time

Method, Sample Contain, Preservative and Holding Time Table **Note: The information contained in this document lists the most common regulatory methods selected and sample container/volume configurations. Please contact your Project Manager for additional offerings or sample kit configurations.**

P-Poly ***G***-Glass ***AG***-Amber Glass ***E***-Encore ***SY***-Syringe-type sampling device* ***TLC*** Teflon®-lined cap ***TLS*** Teflon®-lined septum
PTFE Fluoropolymer Resin / Teflon® ***WMG*** Wide-Mouth Glass ***ZHS*** Zero HeadSpace **W** Water; **S** Soil/Sediment

Analysis	Matrix	Method(s)	Recommended Quantity	Preservation	Minimum Volume / Size	Holding Time
Plutonium-241	**W**	Lab SOP/Liquid Scintillation Counting	1 L, P	HNO_3 pH < 2	500 mL	6 months
	S	Lab SOP/Liquid Scintillation Counting	10 grams, P	None	10 gram	6 months
Radium 226	**W**	EPA 903.1, 904.0	1 L, P	None	1 L	6 months
	S	EPA 903.1, 904.0 sw 846 9315/9320	10 grams, P	None	10 gram	6 months
Radium 228	**W**	EPA 903.1, 904.0	1 L, P	None	1 L	6 months
	S	EPA 903.1, 904.0 sw 846 9315/9320	10 grams, P	None	10 gram	6 months
Radon 222	**W**	EPA 913	3 x 40 mL	None	40 mL	4 days
Strontium 89, 90	**W**	EPA 905	1 L, P	HNO_3 pH < 2	1 L	6 months
	S	EPA 905; DOE Sr-03-RC	10 grams, P	None	2 grams	6 months
Technetium-99	**W**	Eichrom Method TCW01	500 mL	HNO_3 pH < 2	250 mL	6 months
	S	Eichrom Method TCS01	10 grams, P	None	5 grams	6 months
Tritium	**W**	EPA 906.0	1 L, P	None	100 mL	6 months
	S	EPA 906.0	100 grams, P	None	30 gram	6 months
Uranium-12	**W**	EPA 908.0, 908.1	2 L, P	HNO_3 pH < 2	2 L	6 months
Bioassay						
Acute-24/48-hr	**W**	EPA 821-R-02-012	2gal Eff & 3gal River (if required)	Cool 0-6°C	See Quantity	36 hours
Acute-96-hr	**W**	EPA 821-R-02-012	2gal Eff & 3gal River (if req)	Cool 0-6°C	See Quantity	36 hours
Chronic-7-day	**W**	EPA 821-R-02-013	2gal Eff & 3gal River (if req) per species x 3days	Cool 0-6°C	See Quantity	36 hours

Footnotes:

* Syringe samplers include ESS Core N' One, Terracore or equivalent. Kits usually include 3-vial kits as (MeOH/H2O/H2O); 3-vial kits as (MeOH/Na2S2O3/Na2S2O3); or 4-vial kits (MeOH/MeOH/H2O/H2O). Some kits come with the % moisture cup/jar, and a disposable t-handle. Contact your project manager if a specific project requirement mandates a customized terracore kit.

> CLP Methods are also available - contact a Project Manager for additional information. <

[1] Additional soil volume of 10-20 grams is required for Total Solids determination. This can be collected in a 2 oz.glass jar or a 60 ml plastic bottle.

[2] Samples for analysis of carbon dioxide should be collected in 40 mL VOA vials without preservative.

[3] Sample temperature to be maintained at 0-6°C.

[4] EPA 504.1: If residual chlorine is expected to be present, samples should be chlorine quenched/neutralized with Sodium Thiosulfate or other quenching agent.

[5] Contact the laboratory for information on other state-specific DRO and GRO methods.

[6] Samples can be frozen within 48-hrs of collection. Preserve prior to analysis. Analyze within 14 days of collection (samples need to be extruded prior to freezing).

[7] Within 48 hours of sample collection, the sample in the EnCore™ sampler must be transferred to the sample vial containing organic-free water and frozen or if required, transferred to vial containing preservative if effervescence test was negative.

[8] Samples where vinyl chloride, styrene, or 2-chloroethyl vinyl ether are analytes of interest, collect a second set of samples without acid preservatives and analyze as soon as possible.
NIOSH & OSHA methods under the Industrial Hygiene Program; and EPA methods for the Clean Air Program are also available for the analysis of Volatile Organics.

[9] For a Solid/Waste matrix, some inorganic parameters will undergo a DI water leach prior to analysis.

[10] Immediate equals 15 minutes from sampling or field test.

[11] TCLP/STLC/SPLP Hold Times:

Metals -Liquids:	Collection to extract 180 (28d Hg), prep to analysis 180d (28d Hg)
Semi-volatile - Liquids:	Collection to extract 14d, extract to prep 7d, prep to analysis 40d
Volatiles - Liquids:	Collection to extraction 14d, extraction to analysis 14d
Metals -Solids:	Collection to extract 180 (28d Hg), prep to analysis 180d (28d Hg)
Semi-volatiles - Solids:	Collection to extract 14d, extract to prep 7d, prep to analysis 40d
Volatiles - Solids:	Collection to extraction 14d, extraction to analysis 14d

[12] NIOSH & OSHA methods under the Industrial Hygiene Program; and EPA methods for the Clean Air Program are also available for the analysis of Semi-Volatile Organics.

[13] To achieve the 28-day holding time, use the ammonium sulfate buffer solution specified in EPA Method 218.6

[14] Large Volume Injection (LVI) Technique containers are as follows:

2 x 8-oz AG WMG TLC, or
2 x 4-oz AG WMG TLC or
2 x 40 mL AG TLS

[16] Standard Methods 5310 requires glass containers for TOC

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Analysis	Matrix	Method(s)	Recommended Quantity	Preservation	Minimum Volume / Size	Holding Time

Additional Comments:

Dioxin/Furans: Per MUR, if residual chlorine is present, add 80 mg/L sodium thiosulfate. If pH > 9, adjust to pH 7-9 with sulfuric acid.

a. For samples requiring MS/MSD, collect triple the quantity.

b. For bacteriological and organic parameters, add sodium thiosulfate if residual chlorine is present.

c. Trademarks & trade names used in this document are the property of their respective owners.

Volume Conversion Guide:

2 oz. Jar = 50g

4 oz. Jar = 100g

8 oz. Jar = 200g

16 oz. Jar = 400g