

Table 5-2. Sample Preservation and Container Requirements for Pre-Remedy Monitoring

Matrix	Parameter ^{1,2}	Container ^{3,4}	Preservation ⁵	Maximum Holding Times ⁶	
				Extraction	Analysis
Water	Volatiles	3 x 40-mL G, Septa Vial	Ice to 4°C 4 drops conc. Hydrochloric acid (HCl) or sodium bisulfate (NaHSO ₄) to pH<2	N/A	7 days (unpreserved) 14 days (preserved)
Water	Ethylene dibromide	3 x 40-mL G, Septa Vial	Ice to 4°C	N/A	7 days
Water	Total and dissolved metals	1 x 1-L P	Nitric acid (HNO ₃) to pH<2	N/A	6 months
Water	TPH – gas/VPH ¹	2 x 40-mL G, Septa Vial/	Ice to 4°C 4 drops conc. Hydrochloric acid Ice to 4°C	N/A	14 days
	TPH – diesel / EPH ¹	2 x 1-L G		7 days	40 days
Water	Anions (Cl, NO ₃ , SO ₄) ²	1 x 1-L P	Ice to 4°C	N/A	48 hours, 28 days ²
	Alkalinity				14 days
Water	Ammonia nitrogen	1 x 1-L P	Ice to 4°C Sulfuric acid (H ₂ SO ₄) to pH<2	N/A	28 days
Water	Total sulfide	1 x 1-L P	Ice to 4°C Zinc acetate	N/A	14 days
Vapor	VOCs/ TPH gas/ APH ¹	1 x 1-L Bottle Vac	None	N/A	30 days
Vapor	Fixed gases	1 x 1-L Tedlar bag	None	N/A	30 days

NOTES:

- 1 TPH = total petroleum hydrocarbon; VPH = volatile petroleum hydrocarbon; EPH = extractable petroleum hydrocarbon; APH = air phase petroleum hydrocarbon.
- 2 Chloride (Cl), nitrate (NO₃), sulfate (SO₄); holding time for extraction is 48 hours for nitrate.
- 3 All containers must have Teflon-lined seals (Teflon-lined septa for volatile organic analysis [VOA] vials).
- 4 G = glass; L = liter; mL = milliliter; P = high-density polyethylene. Sample preservation will be done in the field immediately upon sample collection. If water samples are filtered in the field, differential pressure methods using 45-micron filters will be used, and preservatives added after filtration.
- 5 Samples with residual chlorine present will be dechlorinated with sodium thiosulfate as specified in SW-846 (third edition).
- 6 When N/A is specified, it implies total holding time from sampling until analysis.

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