

APPENDIX A

Regional Laboratories Core Capabilities

Appendix A: Regional Laboratories Core Capabilities

I. CHEMISTRY

ANALYTE / GROUP NAME	SAMPLE MEDIA	ANALYTICAL TECHNIQUE	REGIONAL CAPABILITY									
			1	2	3	4	5	6	7	8	9	10
INORGANIC CHEMISTRY:												
Acidity	Water	Titrimetric		X	X	X	X			X		
Alkalinity	Water	Titrimetric	X	X	X	X	X	X	X	X	X	X
Asbestos	Solids/Bulk material	PLM	X						X	X	X	X
	Soil/Sediment	PLM	X						X			X
Chloride	Water	Colorimetric							X			
	Water	IC	X	X	X	X	X	X	X	X	X	X
	Water	Titrimetric		X	X							
Chromium, Hexavalent (Cr+6)	Water	Colorimetric		X		X		X	X			X
	Soil/Sediment	Colorimetric		X		X						X
	Water	IC			X		X				X	
	Soil/Sediment	IC			X		X					
Cyanide, Amenable	Water	Colorimetric	X	X		X	X	X	X	X	X	X
	Soil/Sediment	Colorimetric	X	X		X		X	X	X		X
Cyanide, Total	Water	Colorimetric	X	X	X	X	X	X	X	X	X	X
	Soil/Sediment	Colorimetric	X	X	X	X	X	X	X	X		X
	Waste	Colorimetric	X	X	X	X	X	X		X		X

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Fluoride	Water	ISE	X	X		X	X		X			
	Water	IC	X	X	X	X		X	X	X	X	X
Hardness	Water	Colorimetric										X
	Water	Titrimetric		X	X			X			X	
	Water	ICP/Calculation	X	X	X	X	X	X	X	X	X	X
Mercury, Total	Water	CVAA	X	X	X	X	X	X		X	X	X
	Soil/Sediment	CVAA	X	X	X	X	X	X		X	X	X
	Tissue (fish &/or plant)	CVAA	X	X	X	X				X	X	X
	Waste (oil, drum, etc..)	CVAA	X	X	X	X	X	X		X	X	X
Mercury (TCLP)	Soil/Waste (oil, drum, etc..)	CVAA	X	X	X	X	X	X		X	X	X
Metals, Total	Water	ICP /AES	X	X	X	X	X	X	X	X	X	X
	Soil /Sediment	ICP /AES	X	X	X	X	X	X	X	X	X	X
	Tissue (fish &/or plant)	ICP /AES	X	X	X	X			X	X	X	X
	Waste (oil, drum, etc..)	ICP /AES	X	X	X	X	X	X	X	X	X	X
Metals (TCLP)	Soil/Waste (oil, drum, etc..)	ICP /AES	X	X	X	X	X	X	X	X	X	X
Metals, Total	Water	GFAA	X				X	X				X
	Soil/Sediment	GFAA	X				X	X				X
	Tissue (Fish &/or plant)	GFAA	X									X
	Waste (oil, drum, etc..)	GFAA	X				X	X				X

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Metals (TCLP)	Soil/Waste (oil, drum, etc.)	GFAA	X				X	X					X
Metals, Total	Water	ICP/MS	X	X	X	X	X	X	X	X	X	X	X
	Soil/Sediment	ICP/MS	X	X	X	X		X	X	X			X
	Tissue (Fish &/or plant)	ICP/MS		X	X	X			X	X	X	X	X
	Waste (oil, drum, etc..)	ICP/MS			X	X		X	X	X			
Metals (TCLP)	Soil/Waste (oil, drum, etc..)	ICP/MS				X		X	X	X			
Nitrogen (Ammonia)	Water	Colorimetric		X	X	X	X	X	X	X	X	X	X
	Soil/Sediment	Colorimetric			X	X	X						X
	Water	Electrode		X									
Nitrogen (NO3 &/or NO2)	Water	Colorimetric		X	X	X	X	X	X	X	X	X	X
	Soil	Colorimetric				X	X		X				X
	Water	IC	X	X	X	X	X		X	X	X	X	X
	Soil	IC	X		X	X	X		X			X	
Nitrogen, Total Kjeldahl	Water	Colorimetric		X	X	X	X	X	X	X		X	X
	Soil	Colorimetric			X	X	X	X	X	X			X
Perchlorate	Water	IC					X		X			X	
	Soil	IC							X			X	
	Water	IC with LC/MS confirm			X		X		X				X
	Water, Soil/Sediment	LC/MS			X								X

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			1	2	3	4	5	6	7	8	9	10	
	Water	LC/MS/MS	X								X	X	
Phosphorus, Ortho	Water	Colorimetric	X	X		X		X	X	X			X
	Water	IC	X	X	X	X	X		X	X	X	X	X
Phosphorus, Total	Water	Colorimetric	X	X	X	X	X	X	X	X	X	X	X
	Soil	Colorimetric	X		X	X	X						X
Sulfate	Water	IC			X	X			X	X	X	X	X
	Soil	IC			X	X			X	X	X		
	Water	Turbidimetric	X	X		X	X	X	X				
	Soil	Turbidimetric	X			X	X						
Sulfide	Water	Colorimetric		X		X	X		X				X
	Soil	Colorimetric				X	X						
	Water	IC, Turbidimetric						X					
	Water	Titrimetric		X			X					X	X
ORGANIC CHEMISTRY:													
BNA	Water	GC/MS	X	X	X	X	X	X	X	X	X	X	X
	Soil/Sediment	GC/MS	X	X	X	X	X	X	X	X	X	X	X
	Waste (oil, drum, etc..)	GC/MS	X	X	X	X		X	X	X	X	X	X
	Tissue (fish &/or plant)	GC/MS				X							X
BNA (TCLP)	Solid/Waste	GC/MS	X	X	X	X	X	X	X	X	X	X	X

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BNA (TPH)	Water	GC/MS or GC				X	X	X	X	X	X	X	X
	Soil/Sediment	GC/MS or GC				X	X	X	X	X	X	X	X
BOD	Water	Membrane Electrode		X	X	X	X	X	X	X	X	X	X
COD	Water	Photometric						X					
	Water	Colorimetric		X	X		X		X	X			
EDB & DBCP	Water	GC/ECD	X			X	X	X	X	X	X	X	X
Herbicides	Water	GC/ECD; GC/NPD		X		X		X	X				X
	Soil/Sediment	GC/ECD; GC/NPD				X		X	X				X
	Waste (oil, drum, etc..)	GC/ECD; GC/NPD				X			X				X
	Tissue (fish &/or plant)	GC/ECD; GC/NPD							X				
Herbicides (TCLP)	Solid/Waste	GC/ECD		X		X		X	X				X
	Solid/Waste	HPLC/UV Detection			X								
Oil & Grease	Water	Gravimetric		X	X	X	X	X	X				X
	Soil/Sediment	Gravimetric		X			X		X	X			
Pesticides / PCBs	Water	GC/ECD	X	X	X	X	X	X	X	X	X	X	X
	Soil/Sediment	GC/ECD	X	X	X	X	X	X	X	X	X	X	X
	Waste (oil, drum, etc..)	GC/ECD	X	X	X	X	X	X	X	X	X	X	X
	Tissue (fish &/or plant)	GC/ECD	X	X		X			X	X			X
Pesticides (TCLP)	Solid/Waste	GC/ECD	X	X	X	X	X	X	X	X	X	X	X

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Phenolics	Water	Colorimetric		X	X	X				X	X		X
	Soil/Sediment	Colorimetric			X					X	X		
PAHs	Water	GC/MS	X	X	X	X	X	X	X	X	X	X	X
	Soil/Sediment	GC/MS	X	X	X	X	X	X	X	X	X	X	X
	Air	GC/MS	X			X				X			X
	Tissue (fish &/or plant)	GC/MS	X			X				X			X
	Waste (oil, drum, etc..)	GC/MS	X	X	X	X		X	X	X	X		X
TOC	Water	Combustion / IR		X	X	X	X			X	X	X	X
	Soil	Combustion / IR		X	X	X	X			X	X		X
	Water	Combustion/Oxidation									X		
	Water	UV/Persulfate			X		X	X			X	X	X
VOA	Water	GC/MS	X	X	X	X	X	X	X	X	X	X	X
	Soil/Sediment	GC/MS	X	X	X	X	X	X	X	X		X	
	Air	GC/MS	X	X	X	X	X	X	X	X	X	X	X
	Waste (oil, drum, etc..)	GC/MS	X	X		X		X	X	X	X	X	X
	Water	GC				X							X
	Soil/Sediment	GC				X							X
	Waste (oil, drum, etc..)	GC	X		X	X	X						X
VOA (TCLP)	Solid/Waste	GC/MS		X		X		X	X	X			

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VOA (TPH)	Water	GC/MS or GC				X	X		X	X	X	X
	Soil/Sediment	GC/MS or GC				X	X		X	X	X	

II. PHYSICAL & OTHER DETERMINATIONS

ANALYTE / GROUP NAME	SAMPLE MEDIA	ANALYTICAL TECHNIQUE	REGIONAL CAPABILITY									
			1	2	3	4	5	6	7	8	9	10
Conductivity	Water	Specific Conductance	X	X	X	X	X	X	X	X	X	X
Flash Point	Aqueous/Liquid Waste (oil, drum, etc.)	Pensky-Marten or Seta	X	X	X	X	X	X	X		X	
Ignitability	Soil/Sediment	Pensky-Marten or Seta Closed Cup	X	X		X	X	X	X			X
	Waste (oil, drum, etc..)	Pensky-Marten or Seta Closed Cup	X	X	X	X	X	X	X	X	X	X
pH	Water	Electrometric	X	X	X	X	X	X	X	X	X	X
	Soil/Sediment	Electrometric	X	X	X	X	X	X	X	X	X	X
	Waste (oil, drum, etc..)	Electrometric	X	X	X	X	X	X	X	X	X	X
Solids, Non-Filterable	Water	Gravimetric	X	X	X	X	X	X	X	X	X	X
Solids, Percent	Soil/Sediment	Gravimetric	X	X	X	X	X	X	X	X	X	X

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Solids, Total	Water	Gravimetric	X	X	X	X	X	X	X	X	X	X	X	X
Solids, Total Dissolved	Water	Gravimetric	X	X	X	X	X	X	X	X	X	X	X	X
Solids, Total Volatile	Water	Gravimetric	X	X		X	X	X	X	X	X	X	X	X
Turbidity	Water	Nephelometric	X	X	X	X		X	X	X	X	X	X	X

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III. BIOLOGY

ANALYTE / GROUP NAME	SAMPLE MEDIA	ANALYTICAL TECHNIQUE	REGIONAL CAPABILITY									
			1	2	3	4	5	6	7	8	9	10
Coliform, Total	Water, Soil &/or Sludge	Various	X	X	X			X	X	X	X	X
Coliform, Fecal	Water, Soil &/or Sludge	Various	X	X	X			X	X	X	X	X
E. coli	Water, Soil &/or Sludge	Various	X	X	X			X	X	X	X	X
Toxicity (Acute & Chronic)	Water	Fathead, Ceriodaphnia	X	X	X			X		X	X	X
Heterotrophic Plate Count	Water	Various			X			X	X		X	

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ABBREVIATIONS

BNA	Base/Neutrals and Acids Extractable Organics
BOD	Biological Oxygen Demand
COD	Chemical Oxygen Demand
CVAA	Cold Vapor Atomic Absorption Spectrometry
DBCP	Dibromochloropropane
EDB	Ethylene dibromide
GC	Gas Chromatography
GC/ECD	GC/Electron Capture Detector
GC/NPD	GC/Nitrogen - Phosphorus Detector
GC/MS	GC/Mass Spectrometry
GFAA	Graphic Furnace Atomic Absorption Spectrometry
IC	Ion Chromatography
ICP	Inductively Coupled (Argon) Plasma
ICP/AES	ICP/Atomic Emission Spectrometry
ICP/MS	ICP/Mass Spectrometry
IR	Infrared
ISE	Ion Selective Electrode
LC/MS	Liquid Chromatography/Mass Spectrometry
LC/MS/MS	Liquid Chromatography/Dual MS
NO ₃	Nitrate
NO ₂	Nitrite
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated biphenyls
PLM	Polarized Light Microscopy
TCLP	Toxicity Characteristic Leaching Procedure
TOC	Total Organic Carbon
VOA	Volatile Organic Analytes/Analyses