

Chapter NR 149

APPENDIX I

Analytical Technologies, Analytes, and Analyte Groups for Certification and Registration in the Aqueous and Solid Matrices

**TABLE 1
OXYGEN DEMAND ASSAYS**

Analytical Technology	Class	Analyte
Oxygen Demand Assays	General Chemistry	Biochemical Oxygen Demand (BOD) ¹ Carbonaceous BOD ¹

¹ Certification or registration for BOD and cBOD is available only in the aqueous matrix.

**TABLE 2
COLORIMETRIC OR NEPHELOMETRIC (TURBIDIMETRIC)**

Analytical Technology	Class	Analyte
Colorimetric or Nephelometric (Turbidimetric)	General Chemistry	Ammonia Chemical Oxygen Demand (COD) Chloride Chlorine, Total Residual Chlorophyll Cyanide, Amenable Cyanide, Total Fluoride Hardness, Total as CaCO ₃ Kjeldahl Nitrogen, Total (TKN) Nitrate Nitrate + Nitrite Nitrite Orthophosphate Phenolics, Total Phosphorus, Total Silica Sulfate Sulfide Sulfide Sulfite Surfactants Turbidity
	Metals	Aluminum Arsenic Beryllium Boron Cadmium Chromium, Hexavalent Chromium, Total Copper Iron Lead Magnesium Manganese Nickel Potassium Silicon Silver

Analytical Technology	Class	Analyte
		Zinc
	Pesticides, N-methyl	Carbamates and Substituted Ureas Busan 40 Busan 85 Carbam-S Dazomet KN Methyl Nabam Ziram
	Pesticides, Not Otherwise Specified	Vapam

**TABLE 3
COMBUSTION OR OXIDATION**

Analytical Technology	Class	Analyte
Combustion or Oxidation	General Chemistry	Adsorbable Organic Halides (AOX) Organic Carbon, Total (TOC) Organic Halides, Total (TOX)

**TABLE 4
ELECTROMETRIC ASSAYS**

Analytical Technology	Class	Analyte
Electrometric Assays	General Chemistry	Ammonia as N Bromide Chloride Chlorine, Total Residual Cyanide, Total Fluoride Kjeldahl Nitrogen, Total (TKN) Nitrate Organic Halides, Extractable (EOX) Organic Halides, Purgeable (POX) Oxygen, Dissolved pH Specific Conductance Sulfide

**TABLE 5
GRAVIMETRIC ASSAYS – RESIDUE**

Analytical Technology	Class	Analyte
Gravimetric Assays	General Chemistry	Residue, Filterable (TDS) Residue, Nonfilterable (TSS) Residue, Settleable Residue, Total Residue, Volatile (TVS) Residue, Volatile, Nonfilterable (TVSS) Sulfate

**TABLE 6
GRAVIMETRIC ASSAYS – OIL & GREASE**

Analytical Technology	Class	Analyte
Gravimetric Assays		
	General Chemistry	Oil & Grease, Hexane Extractable Materials (HEM)

**TABLE 7
ION CHROMATOGRAPHY**

Analytical Technology	Class	Analyte
Ion Chromatography		
	Metals	Chromium, Hexavalent
	General Chemistry	Bromide Chloride Fluoride Nitrate Nitrate + nitrite Nitrite Orthophosphate Sulfate

**TABLE 8
TITRIMETRIC OR POTENTIOMETRIC TITRATION ASSAYS**

Analytical Technology	Class	Analyte
Titrimetric or Potentiometric Titrimetric Assays		
	Metals	Calcium
	General Chemistry	Acidity as CaCO ₃ Alkalinity Ammonia as N Bromide Chemical Oxygen Demand (COD) Chloride Chlorine, Total Residual Cyanide, Amenable Cyanide, Total Hardness, Total as CaCO ₃ Kjeldahl Nitrogen, Total (TKN) Sulfide Sulfides, Acid-Soluble and Acid-Insoluble Sulfite

**TABLE 9
COLD VAPOR ATOMIC ABSORPTION OR
GASEOUS HYDRIDE SPECTROPHOTOMETRY**

Analytical Technology	Class	Analyte
Cold Vapor Atomic Absorption or Gaseous Hydride Spectrophotometry		
	Metals	Antimony Arsenic Mercury Selenium

TABLE 10
FLAME ATOMIC ABSORPTION SPECTROPHOTOMETRY

Analytical Technology	Class	Analyte
Flame Atomic Absorption Spectrophotometry	Metals	Aluminum Antimony Barium Beryllium Cadmium Calcium Chromium, Hexavalent Chromium, Total Cobalt Copper Gold Iridium Iron Lead Lithium Magnesium Manganese Molybdenum Nickel Osmium Palladium Platinum Potassium Rhodium Ruthenium Silver Sodium Strontium Thallium Tin Titanium Vanadium Zinc
	General Chemistry	Hardness, Total as CaCO ₃

**TABLE 11
GRAPHITE FURNACE ATOMIC ABSORPTION SPECTROPHOTOMETRY**

Analytical Technology	Class	Analyte
Graphite Furnace Atomic Absorption Spectrophotometry	Metals	Aluminum
		Antimony
		Arsenic
		Barium
		Beryllium
		Cadmium
		Chromium, Total
		Cobalt
		Copper
		Gold
		Iridium
		Iron
		Lead
		Manganese
		Molybdenum
		Nickel
		Osmium
		Palladium
		Platinum
		Rhodium
		Ruthenium
Selenium		
Silver		
Thallium		
Tin		
Titanium		
Vanadium		
Zinc		

TABLE 12
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROPHOTOMETRY

Analytical Technology	Class	Analyte or Analyte Group
Inductively Coupled Plasma Emission Spectrophotometry	Metals	Aluminum Antimony Arsenic Barium Beryllium Bismuth Boron Cadmium Calcium Chromium, Total Cobalt Copper Gold Iridium Iron Lead Magnesium Manganese Molybdenum Nickel Osmium Palladium Platinum Potassium Rhodium Ruthenium Selenium Silicon Silver Sodium Strontium Thallium Tin Titanium Tungsten Vanadium Zinc Zirconium
	General Chemistry	Hardness, Total as CaCO ₃ Silica

**TABLE 13
INDUCTIVELY COUPLED PLASMA –MASS SPECTROMETRY**

Analytical Technology	Class	Analyte
Inductively Coupled Plasma–Mass Spectrometry	Metals	Aluminum Antimony Arsenic Barium Beryllium Cadmium Chromium, Total Cobalt Copper Iron Lead Lithium Manganese Mercury Molybdenum Nickel Selenium Silver Thallium Vanadium Zinc

**TABLE 14
ULTRA-LOW LEVEL METALS ANALYSIS**

Analytical Technology	Class	Analyte
Ultra-Low Level Metals Assays	Metals	Mercury

**TABLE 15
GAS CHROMATOGRAPHY**

Analytical Technology	Class	Analyte or Analyte Group
Gas Chromatography	Base, Neutral, and Acid Extractable Semivolatiles, Aldehydes and Ketones	2–Butanone (Methyl Ethyl Ketone) Crotonaldehyde 2–Hexanone 4–Methyl–2–pentanone (Methyl Isobutyl Ketone) Paraldehyde 2–Pentanone
	Base, Neutral, and Acid Extractable Semivolatiles, Benzidines	Benzidine 3,3'–Dichlorobenzidine 3,3'–Dimethoxybenzidine 3,3'–Dimethylbenzidine
	Base, Neutral, and Acid Extractable Semivolatiles, Chlorinated Hydrocarbons	1,2–Dibromo–3–chloropropane (DBCP) Benzyl Chloride Chloroprene Hexachlorobenzene Hexachlorobutadiene Hexachlorocyclopentadiene Hexachloroethane Pentachlorobenzene

Analytical Technology	Class	Analyte or Analyte Group
		1,2,4,5-Tetrachlorobenzene
	Base, Neutral, and Acid Extractable Semivolatiles, Explosive Residues	1,3-Dinitrobenzene 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene Nitrobenzene 1,3,5-Trinitrobenzene
	Base, Neutral, and Acid Extractable Semivolatiles, Haloethers	Bis(2-chloroethoxy)methane Bis(2-chloroethyl) ether Bis(2-chloroisopropyl) ether 4-Bromophenyl phenyl ether 2,2-Oxybis(1-chloropropane)
	Base, Neutral, and Acid Extractable Semivolatiles, Nitroaromatics and Cyclic Ketones	Isophorone Nitrobenzene
	Base, Neutral, and Acid Extractable Semivolatiles, Nitrosamines	N-Nitrosodiethylamine N-Nitrosodimethylamine N-Nitrosodi-n-butylamine N-Nitrosodi-n-propylamine N-Nitrosodiphenylamine N-Nitrosodipropylamine N-Nitrosomethylethylamine N-Nitrosomorpholine N-Nitrosopiperidine N-Nitrosopyrrolidine
	Base, Neutral, and Acid Extractable Semivolatiles, Nonhalogenated Organics	Acetonitrile Acrolein Acrylonitrile Allyl Alcohol Allyl Chloride n-Butyl Alcohol (1-Butanol) t-Butyl Alcohol Diethyl Ether Diethylene Glycol Ethanol Ethyl Acetate Ethyl Methacrylate Ethylene Glycol Ethylene Oxide Hexafluoro-2-methyl-2-propanol Hexafluoro-2-propanol Isobutyl alcohol (2-Methyl-1-propanol) Isopropyl alcohol (2-Propanol) Methacrylonitrile Methanol Methyl Methacrylate 2-Picoline (2-Methylpyridine) 1-Propanol Propionitrile (Ethyl Cyanide) Pyridine o-Toluidine
	Base, Neutral, and Acid Extractable Semivolatiles, Phenols	4-Chloro-3-methylphenol 2-Chlorophenol p-Chloro-m-cresol

Analytical Technology	Class	Analyte or Analyte Group
		2,4-Dichlorophenol 2,4-Dimethylphenol 2-Methyl-4,6-dinitrophenol 2-Nitrophenol 4-Nitrophenol Pentachlorophenol Phenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol
	Base, Neutral, and Acid Extractable Semivolatiles, Phthalate Esters	Benzyl Butyl Phthalate Bis(2-ethylhexyl)phthalate Diethyl Phthalate Dimethyl Phthalate Di-n-butyl Phthalate Di-n-octyl Phthalate
	Pesticides, Acid Herbicides	Acifluorfen Chloramben 2,4-D 2,4-DB 2,4-DB Salts and Esters Dacthal (DCPA) Dichlorprop Salts and Esters Dinoseb MCPA Salts and Esters MCPP Salts and Esters Picloram 2,4,5-T 2,4,5-TP (Silvex)
	Pesticides, Nitrogen	Alachlor Ametryn Aspon Benfluralin Bentazon Bromacil Salts and Esters Bromoxynil Octanoate Butachlor Chlorothalonil Dalapon Diazinon Dicamba Ethalfuralin Fenarimol Isopropalin Metribuzin Norflurazon Pendimethalin Pronamide Propachlor Propanil Triadimefon Trifluralin
	Pesticides, N-Methyl	Carbamates and Substituted Ureas Barban Busan 41 Busan 85 Carbam-S Carbaryl Carbofuran

Analytical Technology	Class	Analyte or Analyte Group
		Dazomet Diallylate (cis or trans) Ethyl Carbamate KN Methyl Mexacarbate Nabam Nabonate Sulfallate Tebuthiuron Terbacil Ziram
	Pesticides, Organochlorine	<i>Pesticides, Organochlorine Analyte Group</i> Aldrin alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Captafol Captan Chlordane Chloroneb 4,4'-DDD 4,4'-DDE 4,4'-DDT Dichloran Dieldrin Endosulfan I Endosulfan II Endosulfan Sulfate Endrin Endrin Aldehyde Heptachlor Heptachlor Epoxide Isodrin Kepone Methoxychlor Mirex Pentachloronitrobenzene (PCNB) Perthane Strobane Toxaphene
	Pesticides, Organophosphorus	Acephate Azinphos Ethyl Azinphos Methyl Bolstar Carbophenothion Chlorfenvinphos Chlorpyrifos Chlorpyrifos Methyl Coumaphos Crotoxyphos DEF Demeton-O Demeton-S Diazinon Dichlofenthion Dichlorvos Dicrotophos Dimethoate

Analytical Technology	Class	Analyte or Analyte Group
		Dioxathion Disulfoton EPN Ethion Ethoprop Famphur Fenitrothion Fensulfothion Fenthion Fonophos Hexamethylphosphoramide Leptophos Malathion Merphos Methamidophos Mevinphos Monocrotophos Naled Parathion (Parathion Ethyl) Parathion Methyl Phorate Phosalone Phosmet Phosphamidon Ronnel Stirofos Sulfotepp TEPP Thionazin (Zinophos) Tokuthion (Protothiofos) Trichloronate Trichlorphon Tri-o-cresylphosphate (TOCP) Terbufos Tetrachlorvinphos
	Pesticides, Triazines	Atrazine Atraton Cyanazine Deisopropylatrazine Desethylatrazine Diaminoatrazine Prometon Prometryn Propazine Simazine Terbutylazine Terbutryn
	Pesticides, Not Otherwise Specified	Permethrin Vapam
	Petroleum Hydrocarbons	Diesel Range Organics (DRO) Gasoline Range Organics (GRO) Petroleum Volatile Organic Compounds (PVOCs)
	Polychlorinated Biphenyls as Aroclors	Polychlorinated Biphenyls as Aroclors Analyte Group Aroclor 1016 Aroclor 1221 Aroclor 1232

Analytical Technology	Class	Analyte or Analyte Group
		Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260
		Polychlorinated Biphenyl Congeners <i>Polychlorinated Biphenyl Congeners Analyte Group</i> 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl 2,2',3,3',4,4',5-Heptachlorobiphenyl 2,2',3,4,4',5,5'-Heptachlorobiphenyl 2,2',3,4,4',5',6-Heptachlorobiphenyl 2,2',3,4,4',5'-Hexachlorobiphenyl 2,2',3,4',5,5',6-Heptachlorobiphenyl 2,2',3,4,5,5'-Hexachlorobiphenyl 2,2',3,4,5'-Pentachlorobiphenyl 2,2',3,5,5',6-Hexachlorobiphenyl 2,2',3,5'-Tetrachlorobiphenyl 2,2',4,4',5,5'-Hexachlorobiphenyl 2,2',4,5,5'-Pentachlorobiphenyl 2,2',5,5'-Tetrachlorobiphenyl 2,2',5-Trichlorobiphenyl 2,3,3',4',6-Pentachlorobiphenyl 2,3',4,4'-Tetrachlorobiphenyl 2,3-Dichlorobiphenyl 2,4',5-Trichlorobiphenyl Chlorobiphenyl
		Polynuclear Aromatic Hydrocarbons <i>Polynuclear Aromatic Hydrocarbons Analyte Group</i> Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene
		Volatile Organic Compounds <i>Volatile Organic Compounds Analyte Group</i> Acetone Benzene Bromoacetone Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Carbon Tetrachloride Chlorobenzene Chloroethane

Analytical Technology	Class	Analyte or Analyte Group
		2-Chloroethyl Vinyl Ether
		Chloroform
		Chloromethane
		Chloromethyl Methyl Ether
		2-Chloronaphthalene
		2-Chlorotoluene
		4-Chlorotoluene
		Dibromochloromethane
		Dibromomethane (EDB)
		1,2-Dichlorobenzene
		1,3-Dichlorobenzene
		1,4-Dichlorobenzene
		Dichlorobromomethane
		1,1-Dichloroethane
		1,2-Dichloroethane
		cis-1,2-Dichloroethene
		trans-1,2-Dichloroethene
		1,2-Dichloropropane
		1,3-Dichloropropane
		2,2-Dichloropropane
		1,3-Dichloro-2-propanol
		1,1-Dichloropropene
		cis-1,3-Dichloropropene
		trans-1,3-Dichloropropene
		2,3-Dichloropropene
		Dichlorodifluoromethane
		1,4-Dioxane
		Epichlorohydrin
		Ethylbenzene
		Isopropylbenzene
		p-Isopropyltoluene
		Methyl Bromide
		Methyl Chloride
		Methyl Iodide
		Methyl tert-Butyl Ether
		Methylene Bromide
		Methylene Chloride
		n-Propylbenzene
		Styrene
		Tetrachloroethene
		Toluene
		1,1,1,2-Tetrachloroethane
		1,1,2,2-Tetrachloroethane
		1,2,3-Trichlorobenzene
		1,2,4-Trichlorobenzene
		1,1,1-Trichloroethane
		1,1,2-Trichloroethane
		Trichloroethene
		Trichlorofluoromethane
		1,2,3-Trichloropropane
		1,2,4-Trimethylbenzene
		1,3,5-Trimethylbenzene
		m-Xylene
		o-Xylene
		p-Xylene
		Vinyl Chloride

TABLE 16
GAS CHROMATOGRAPHY-MASS SPECTROMETRY

Analytical Technology	Class	Analyte
Gas Chromatography/Mass Spectrometry		<i>Base/Neutral/Acid Extractable Semivolatiles Analyte Group ¹</i>
	Base, Neutral, and Acid Extractable Semivolatiles, Aldehydes and Ketones	2-Butanone (Methyl ethyl ketone) Crotonaldehyde 2-Hexanone 4-Methyl-2-pentanone (Methyl Isobutyl Ketone) Paraldehyde 2-Pentanone
	Base, Neutral, and Acid Extractable Semivolatiles, Benzidines	Benzidine 3,3'-Dichlorobenzidine 3,3'-Dimethoxybenzidine 3,3'-Dimethylbenzidine
	Base, Neutral, and Acid Extractable Semivolatiles, Chlorinated Hydrocarbons	Benzyl chloride Chlorobenzilate 3-(Chloromethyl)pyridine Hydrochloride 1-Chloronaphthalene Chloroprene 1,2-Dibromo-3-chloropropane (DBCP) Hexachlorobenzene Hexachlorobutadiene Hexachlorocyclopentadiene Hexachloroethane Hexachlorophene Hexachloropropene Pentachlorobenzene 1,2,4,5-Tetrachlorobenzene
	Base, Neutral, and Acid Extractable Semivolatiles, Explosive Residues	1,3-Dinitrobenzene 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene Nitrobenzene 1,3,5-Trinitrobenzene
	Base, Neutral, and Acid Extractable Semivolatiles, Haloethers	4-Bromophenyl Phenyl Ether Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroethyl)sulfide Bis(2-chloroisopropyl)ether 2,2-Oxybis(1-chloropropane)
	Base, Neutral, and Acid Extractable Semivolatiles, Nitroaromatics and Cyclic Ketones	4-Aminobiphenyl 3-Amino-9-ethylcarbazole 4-Chloroaniline 5-Chloro-2-methylaniline 4-Chloro-1,2-phenylenediamine 4-Chloro-1,3-phenylenediamine 3-Chloropropionitrile 2,4-Diaminotoluene alpha,alpha-Dimethylphenethylamine 1,2-Dinitrobenzene 1,2-Diphenylhydrazine

Analytical Technology	Class	Analyte
		Isophorone 4,4'-Methylenebis (2-chloroaniline) 4,4'-Methylenebis(N,N-dimethylaniline) 1-Naphthylamine 2-Naphthylamine 5-Nitroacenaphthene 2-Nitroaniline 3-Nitroaniline 4-Nitroaniline 5-Nitro-o-anisidine 4-Nitrobiphenyl 2-Nitropropane 5-Nitro-o-toluidine 4,4'-Oxydianiline 1,4-Phenylenediamine 2-Picoline (2-Methylpyridine) n-Propylamine 2,4,5-Trimethylaniline
	Base, Neutral, and Acid Extractable Semivolatiles, Nitrosamines	N-Nitrosodiethylamine N-Nitrosodimethylamine N-Nitrosodi-n-butylamine N-Nitrosodi-n-propylamine N-Nitrosodiphenylamine N-Nitrosodipropylamine N-Nitrosomethylethylamine N-Nitrosomorpholine N-Nitrosopiperidine N-Nitrosopyrrolidine
	Base, Neutral, and Acid Extractable Semivolatiles, Nonhalogenated Organics	Acetonitrile Acetophenone 2-Acetylaminofluorene 1-Acetyl-2-thiourea Acrolein Acrylonitrile Allyl Alcohol Allyl Chloride 2-Aminoanthraquinone Aminoazobenzene Aniline o-Anisidine Aramite Benzoic Acid p-Benzoquinone Benzyl Alcohol n-Butanol Carbazole Carbon Disulfide p-Chloroaniline p-Cresidine Dibenzofuran 1,2,3,4-Diepoxybutane Diethyl Ether O,O-Diethyl O-2-pyrazinyl phosphorothionate Diethyl Sulfate Diethylstilbestrol Dihydrosaffrole Dimethylaminoazobenzene Diphenylamine

Analytical Technology	Class	Analyte
		5,5-Diphenylhydantoin Ethanol Ethyl Acetate Ethyl Methacrylate Ethyl Methanesulfonate Fluchloralin Hydroquinone 2-Hydroxypropionitrile Isobutyl Alcohol (2-Methyl-1-propanol) Isopropyl Alcohol (2-Propanol) Isosafrole Maleic Anhydride Malononitrile Mestranol Methacrylonitrile Methanol Methapyrilene Methyl Acrylate Methyl Methacrylate Methyl Methanesulfonate 3-Methylcholanthrene 1,4-Naphthoquinone Nicotine Nitrofen 4-Nitroquinoline 1-oxide Octamethyl Pyrophosphoramidate Phenacetin Phenobarbital Phthalic Anhydride Piperonyl Sulfoxide Propargyl Alcohol β-Propiolactone Propionitrile (Ethyl Cyanide) Propylthiouracil Pyridine Resorcinol Safrole Tetraethyl Dithiopyrophosphate Tetraethyl Pyrophosphate Thiophenol (Benzenethiol) Toluene Diisocyanate o-Toluidine Trimethyl Phosphate O,O,O-Triethyl Phosphorothioate Tri-p-tolyl Phosphate Tris(2,3-dibromopropyl) phosphate
	Base, Neutral, and Acid Extractable Semivolatiles, Phenols	p-Chloro-m-cresol 4-Chloro-3-methylphenol 2-Chlorophenol 2-Cyclohexyl-4,6-dinitro-phenol 2,4-Dichlorophenol 2,6-Dichlorophenol 2,4-Dimethylphenol 4,6-Dinitro-2-methylphenol 4,6-Dinitro-o-cresol 2-Methyl-4,6-dinitrophenol 2-Methylphenol (o-Cresol) 3-Methylphenol (m-Cresol) 4-Methylphenol (p-Cresol) 2-Nitrophenol

Analytical Technology	Class	Analyte
		4-Nitrophenol Pentachlorophenol Phenol 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol
	Base, Neutral, and Acid Extractable Semivolatiles, Phthalate Esters	Benzyl Butyl Phthalate Bis(2-ethylhexyl)phthalate Diethyl Phthalate Dimethyl Phthalate Di-n-butyl Phthalate Di-n-octyl Phthalate
	Pesticides, Nitrogen	Alachlor Ametryn Aspon Benfluralin Bentazon Bromacil Salts and Esters Bromoxynil Octanoate Butachlor Chlorothalonil Dalapon Diazinon Dicamba Ethalfuralin Fenarimol Isopropalin Metribuzin Norflurazon Pendimethalin Pronamide Propachlor Propanil Triadimefon Trifluralin
	Pesticides, N-Methyl Carbamates and Substituted Ureas	Barban Busan 41 Busan 85 Carbam-S Carbaryl Carbofuran Dazomet Diallate (cis or trans) Ethyl Carbamate KN Methyl Mexacarbate Nabam Nabonate Sulfallate Tebuthiuron Terbacil Ziram
	Pesticides, Organochlorine	<i>Pesticides, Organochlorine Analyte Group</i> 4,4'-DDD 4,4'-DDE 4,4'-DDT Aldrin

Analytical Technology	Class	Analyte
		alpha-BHC beta-BHC delta-BHC gamma-BHC (Lindane) Captafol Captan Chlordane Dichlone Dieldrin Endosulfan I Endosulfan II Endosulfan Sulfate Endrin Endrin Aldehyde Endrin Ketone Heptachlor Heptachlor Epoxide Isodrin Kepone Methoxychlor Mirex Pentachloronitrobenzene (PCNB) Trifluralin
	Pesticides, Organophosphorus	Acephate Azinphos Ethyl Azinphos Methyl Bolstar Carbophenothion Chlorfenvinphos Chlorpyrifos Chlorpyrifos Methyl Coumaphos Crotoxyphos DEF Demeton-O Demeton-S Diazinon Dichlofenthion Dichlorvos Dicrotophos Dimethoate Dioxathion Disulfoton EPN Ethion Ethoprop Famphur Fenitrothion Fensulfothion Fenthion Fonophos Hexamethylphosphoramide Leptophos Malathion Merphos Methamidophos Mevinphos Monocrotophos Naled Parathion (Parathion Ethyl)

Analytical Technology	Class	Analyte
		Parathion Methyl Phosalone Phorate Phosmet Phosphamidon Ronnel Stirofos Sulfotepp TEPP Thionazin (Zinophos) Tokuthion (Protothiofos) Trichloronate Trichlorphon Tri-o-cresylphosphate (TOCP) Terbufos Tetrachlorvinphos
	Pesticides, Triazines	Atrazine Atraton Cyanazine Deisopropylatrazine Desethylatrazine Diaminoatrazine Prometon Prometryn Propazine Simazine Terbutylazine Terbutryn
	Pesticides, Not Otherwise Specified	Endothall Strychnine
	Petroleum Hydrocarbons	Petroleum Volatile Organic Compounds (PVOC)
	Polychlorinated Dibenzo-p-Dioxins and Furans	Polychlorinated Dibenzo-p-Dioxins and Furans Analyte Group ²
	Polychlorinated Biphenyls as Aroclors	Polychlorinated Biphenyls as Aroclors Analyte Group Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260
	Polychlorinated Biphenyl Congeners	Polychlorinated Biphenyl Congeners Analyte Group 2,6-Dichlorosyringaldehyde 2-Chlorosyringaldehyde 3,3'-Dichlorobiphenyl 3,4,5-Trichlorocatechol 3,4,5-Trichloroguaiacol 3,4,6-Trichlorocatechol 3,4,6-Trichloroguaiacol 3,4-Dichlorocatechol 3,4-Dichloroguaiacol 3,6-Dichlorocatechol 4,5,6-Trichloroguaiacol

Analytical Technology	Class	Analyte
		4,5-Dichlorocatechol 4,5-Dichloroguaiacol 4,6-Dichlorocatechol 4,6-Dichloroguaiacol 4-Chlorocatechol 4-Chloroguaiacol 4-Chlorophenol 5,6-Dichlorovanillin 5-Chlorovanillin 6-Chlorovanillin Tetrachlorocatechol Tetrachloroguaiacol Trichlorosyringol
	Polynuclear Aromatic Hydrocarbons	<i>Polynuclear Aromatic Hydrocarbons Analyte Group</i> 2-Methylnaphthalene 3-Methylcholanthrene 7,12-Dimethylbenz(a)-anthracene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,j)acridine Dibenzo(a,e)pyrene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene
	Volatile Organic Compounds	<i>Volatile Organic Compounds Analyte Group</i> Acetone Benzene Bromoacetone Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Chloromethyl Methyl Ether 2-Chloronaphthalene 2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane

Analytical Technology	Class	Analyte
		Dibromomethane (EDB)
		1,2-Dichlorobenzene
		1,3-Dichlorobenzene
		1,4-Dichlorobenzene
		Dichlorobromomethane
		1,1-Dichloroethane
		1,2-Dichloroethane
		cis-1,2-Dichloroethene
		trans-1,2-Dichloroethene
		1,2-Dichloropropane
		1,3-Dichloropropane
		2,2-Dichloropropane
		1,3-Dichloro-2-propanol
		1,1-Dichloropropene
		cis-1,3-Dichloropropene
		trans-1,3-Dichloropropene
		2,3-Dichloropropene
		Dichlorodifluoromethane
		1,4-Dioxane
		Epichlorohydrin
		Ethylbenzene
		Isopropylbenzene
		p-Isopropyltoluene
		Methyl Bromide
		Methyl Chloride
		Methyl Iodide
		Methyl tert-Butyl Ether
		Methylene Bromide
		Methylene Chloride
		n-Propylbenzene
		Styrene
		Tetrachloroethene
		Toluene
		1,1,1,2-Tetrachloroethane
		1,1,2,2-Tetrachloroethane
		1,2,3-Trichlorobenzene
		1,2,4-Trichlorobenzene
		1,1,1-Trichloroethane
		1,1,2-Trichloroethane
		Trichloroethene
		Trichlorofluoromethane
		1,2,3-Trichloropropane
		1,2,4-Trimethylbenzene
		1,3,5-Trimethylbenzene
		m-Xylene
		o-Xylene
		p-Xylene
		Vinyl Chloride

¹ Certification or registration for Gas Chromatography/Mass Spectrometry Analytical Technology in the Base/Neutral/Acid Analyte Group is comprised of all analytes in the following classes: Base, Neutral, and Acid Extractable Semivolatiles, Aldehydes and Ketones; Base, Neutral, and Acid Extractable Semivolatiles, Benzidines; Base, Neutral, and Acid Extractable Semivolatiles, Chlorinated Hydrocarbons; Base, Neutral, and Acid Extractable Semivolatiles, Explosive Residues; Base, Neutral, and Acid Extractable Semivolatiles, Haloethers; Base, Neutral, and Acid Extractable Semivolatiles, Nitrosamines; Base, Neutral, and Acid Extractable Semivolatiles, Nonhalogenated Organics; Base, Neutral, and Acid Extractable Semivolatiles, Phenols; Base, Neutral, and Acid Extractable Semivolatiles, Phthalate Esters; and Polynuclear Aromatic Hydrocarbons.

² Certification or registration for individual Polychlorinated-p-dibenzo-Dioxins and Furans analytes in the Gas Chromatography/Mass Spectrometry Analytical Technology available upon request.

TABLE 17
HIGH RESOLUTION GAS CHROMATOGRAPHY- MASS SPECTROMETRY

Analytical Technology	Class	Analyte or Analyte Group
High Resolution Gas Chromatography/Mass Spectrometry	Polychlorinated Dibenzo-p-Dioxins and Furans	
		<i>Polychlorinated Dibenzo-p-Dioxins and Furans Analyte Group ¹</i>
	Polychlorinated Biphenyl Congeners	
		<i>Polychlorinated Biphenyl Congeners Analyte Group ²</i>

¹ Certification or registration for individual Tetra through Octa-Chlorinated Dioxins and Furans in the High Resolution Gas Chromatography/Mass Spectrometry Analytical Technology available upon request.

² Certification or registration for individual Polychlorinated Biphenyl Congeners in the High Resolution Gas Chromatography/Mass Spectrometry Analytical Technology available upon request.

TABLE 18
HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

Analytical Technology	Class	Analyte or Analyte Group
High Performance Liquid Chromatography	Metals	
		Mercury Organomercury
	Base, Neutral, and Acid Extractable Semivolatiles, Aldehydes and Ketones	
		Acetaldehyde Acetone Butanal Crotonaldehyde Cyclohexanone Decanal Heptanal Hexanal Isovaleraldehyde Nonanal Octanal o-Tolualdehyde Pentanal (Valeraldehyde) Propanal (Propionaldehyde) m-Tolualdehyde p-Tolualdehyde
	Base, Neutral, and Acid Extractable Semivolatiles, Benzidines	
	Benzidine 3,3'-Dichlorobenzidine	
Base, Neutral, and Acid Extractable Semivolatiles, Explosive Residues		
	2-Amino-4,6-dinitrotoluene 4-Amino-2,6-dinitrotoluene 1,3-Dinitrobenzene 2,4-Dinitrotoluene 2,6-Dinitrotoluene HMX Nitrobenzene Nitroglycerine 2-Nitrotoluene 3-Nitrotoluene 4-Nitrotoluene RDX Tetryl 1,3,5-Trinitrobenzene 2,4,6-Trinitrotoluene	
Base, Neutral, and Acid Extractable Semivolatiles, Nonhalogenated Organics		

Analytical Technology	Class	Analyte or Analyte Group
		Acrolein Acrylamide Acrylonitrile
	Pesticides, Acid Herbicides	2,4-D 2,4-DB Salts and Esters Dichlorprop Salts and Esters Dinoseb MCPA Salts and Esters MCPP Salts and Esters Pentachlorophenol
	Pesticides, N-Methyl	Carbamates and Substituted Ureas Aldicarb Aldicarb Sulfone Aminocarb Barban Benomyl Carbaryl Carbaryl Carbofuran Carbofuran Chloroprotham Dioxacarb Diuron Fenuron Fenuron-TCA 3-Hydroxycarbofuran Linuron Methiocarb Methomyl Mexacarbate Monuron Monuron-TCA Neburon Promecarb Propanil Protham Propoxur Siduron Swep
	Pesticides, Nitrogen	Bromoxynil Secbumeton TCMTB
	Pesticides, Not Otherwise Specified	Diquat Fenvalerate Glyphosate Paraquat Pyrethrin I Pyrethrin II
	Polynuclear Aromatic	Hydrocarbons <i>Polynuclear Aromatic Hydrocarbons Analyte Group</i> Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene

Analytical Technology	Class	Analyte or Analyte Group
		Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene

TABLE 19
LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY

Analytical Technology	Class	Analyte
Liquid Chromatography/Mass Spectrometry	Base, Neutral, and Acid Extractable Semivolatiles, Benzidines	Benzidine 3,3'-Dichlorobenzidine 3,3'-Dimethoxybenzidine 3,3'-Dimethylbenzidine
	Pesticides, Acid Herbicides	2,4,5-T 2,4,5-T, butoxyethanol Ester 2,4,5-T, Butyl Ester 2,4,5-TP (Silvex) 2,4-D 2,4-D, Butoxyethanol Ester 2,4-D, Ethylhexyl Ester 2,4-DB Dichlorprop Dinoseb MCPA Salts and Esters MCPP Salts and Esters
	Pesticides, Nitrogen	Benzoylprop Ethyl Bromacil Dalapon Dicamba Propachlor
	Pesticides, N-Methyl	Carbamates and Substituted Ureas 3-Hydroxycarbofuran Aldicarb Aldicarb Sulfone Aldicarb Sulfoxide Aminocarb Asulam Barban Bendiocarb Benomyl Carbaryl Carbendazim Carbofuran Chloroprotham Chloroxuron Diuron Fenuron Fluometuron Linuron Methiocarb Methomyl Mexacarbate Monuron

Analytical Technology	Class	Analyte
		Neburon o-Chlorophenyl Thiourea Oxamyl Propham Propoxur Siduron Tebuthiuron Thiofanox
	Pesticides, Not Otherwise Specified	Rotenone
	Pesticides, Organophosphorus	Dichlorvos Dimethoate Disulfoton Famphur Fensulfoton Merphos Monocrotophos Naled Parathion Methyl Phorate Trichlorphon

**TABLE 20
WASTE CHARACTERIZATION EXTRACTIONS ¹**

Analytical Technology	Class	Analyte
Waste Characterization Extractions	Waste Characterization Extractions	Extraction Procedure Toxicity Test Method Multiple Extraction Procedure Synthetic Precipitation Leaching Procedure Toxicity Characteristic Leaching Procedure

¹ Certification or registration for Waste Characterization Extractions is available only in the solid matrix.

**TABLE 21
WASTE CHARACTERIZATION ASSAYS ¹**

Analytical Technology	Class	Analyte
Waste Characterization Assays	Waste Characterization Assays	Paint Filters Liquids Test PCB Screening in Waste Solvent Corrosivity Toward Steel Corrosivity, Liquids Ignitability of Solids Ignitability, Oxidizers Ignitability, Pensky–Martens Closed Cup Ignitability, Setaflash Closed Cup Ignitability, Small Scale Closed Cup Waste Analysis, Other Water in Waste by Calcium Hydride Water in Waste by KF Liquid Release Test Procedure

¹ Certification or registration for Waste Characterization Assays is available only in the solid matrix.

**TABLE 22
WHOLE EFFLUENT TOXICITY ASSAYS ¹**

Analytical Technology	Class	Analyte
Whole Effluent Toxicity Assays	Acute Whole Effluent Toxicity	
		<i>Ceriodaphnia dubia</i> <i>Pimephales promelas</i>
	Chronic Whole Effluent Toxicity	
		<i>Ceriodaphnia dubia</i> <i>Pimephales promelas</i>
<i>Selanastrum capricornutum</i>		

¹ Certification or registration for Whole Effluent Toxicity Assays is available only in the aqueous matrix.