



## McC Campbell Analytical Capabilities

### Drinking Water Chromatography

Method / Analysis	Description
505	OC Pesticides and PCBs by L-LE and GC-ECD
505	PCBs by L-LE and GC-ECD
505	PCBs by L-LE and GC-ECD (low level, 0.1 µg/L)
515.3	OC Acidic Herbicides by L-LE, Derivatization & GC-ECD
524.2	HVOCs by P&T and GC-MS
524.2	TTHMs (Total Trihalomethanes) by P&T and GC-MS
524.2	VOCs by P&T and GC-MS
524.2	VOCs by P&T and GC-MS, Open Scan (+ \$15 Per identified peak)
524.2	1,2,3,TCP by SRL524m (low level 0.005 µg/L)
524.3	EDB & DBCP by GC-MS
524.3	TTHMs (Total Trihalomethanes) by P&T and GC-MS
525.2	ON/P Pesticides by L-LE and GC-NPD
525.2	SVOCs by L-SE and GC-MS
531.1	Carbamates by HPLC w/ Derivatization
532m	Pesticides by HPLC -Azoxystrobin, Fludioxonil & Penoxsulam
532m	Clopyralid & Imazapyr by SPE and HPLC
532m	Fenhexamide & Oxyfluorfen by SPE and HPLC
532	Phenyl Ureas by SPE and HPLC
532	Phenyl Ureas by SPE and HPLC (low level, 0.1 µg/L)
537.1	Perfluorinated Alkyl Acids by SPE and LC/MS/MS
547	Glyphosate by HPLC w/ Derivatization
548.1	Endothall by GC-MS
549.2	Diquat and Paraquat by LSE and HPLC
550.1m	Nonylphenol by SPE and HPLC
552.2	HAAs by LLE and GC-ECD

### Residential Drinking Water Packages

Package	Description
Package #1	Total Coliform and E.Coli P/A, Nitrate, Nitrite, Fluoride, TDS, pH, Al, Pb & Cu
Package #2	Total Coliform and E.Coli Enumeration, Nitrate, Nitrite, Fluoride, Bromide, Chloride, Orthophosphate, Sulfate, TDS, pH, Al, Sb, As, Ba, Br, Cd, Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, Conductivity, Hardness, Turbidity, & Alkalinity (speciated)
Package #3	Total Coliform and E.Coli Enumeration, Nitrate, Nitrite, Fluoride, Bromide, Chloride, Orthophosphate, Sulfate, TDS, pH, Al, Sb, As, Ba, Br, Cd, Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, Conductivity, Hardness, Turbidity, & Alkalinity (speciated), VOC's, Odor & Color.
Irrigation	Alkalinity (speciated), TDS, Hardness, Ca, Mg, Na, K, B, pH, SC, Sodium Absorption Ratio (SAR)





### McC Campbell Analytical Capabilities

#### Ion Chromatography

Method / Analysis	Description
218.6	Chromium VI by IC
218.6 – DISTLC, Solids	Chromium VI by IC using DISTLC
218.7 - DW	Chromium VI by IC
300.1 - DW	Chlorate by IC
300.1 / 300.0 –W, S	Common Anions: Cl-, Br-, SO4-2, F-, NO3- as N, NO2- as N, PO4-3 as P; CalTrans or DISTLC are optional soil extractions with extra charges
300.1 / 300.0-Water	Uncommon Inorganic Anions: I-, S2O3-2, SCN-, IO3-, SO3-2, etc.
300.1– Water, DBP	CIO2- (Chlorite), CIO3- (Chlorate), BrO3- (Bromate), Br- ( 0.005 µg/L)( Disinf. ByProd)
300.1m –VFA	Volatile Fatty Acids: Formic Acid
314	Perchlorate (CLO4) by IC
7199	Chromium VI by IC; 3060A TTLC (low level, 0.2 mg/Kg)

#### Effluent Water Chromatography

Method / Analysis	Description
608	OC Pesticides and PCBs by L-LE and GC-ECD (w/ Florisil clean up)
608.1	OC Pesticides and PCBs by L-LE and GC-ECD (low level, 0.001 µg/L w/ Florisil & GPC)
608.1	PCBs by L-LE and GC-ECD
610	PAHs/ PNAs by L-LE and HPLC
610	PAHs/ PNAs by L-LE and HPLC (low level, 0.004 µg/L)
614	Nitrogen-Phosphorous Pesticides by GC-MS
624.1	Acrolein, Acrylonitrile & 2-CEVE by P&T and GC-MS
624.1	HVOCs and/or Aromatics by P&T and GC-MS
624.1	TTHMs (Total Trihalomethanes) by P&T and GC-MS
624.1	VOCs by P&T and GC-MS excluding Acrolein, Acrylonitrile, & 2-CEVE
625.1	PAHs/ PNAs by L-LE or SPE and GC-MS
625.1	PAHs/ PNAs and Phenols by L-LE or SPE and GC-MS
625.1	Phenols by L-LE or SPE and GC-MS
625.1	SVOCs by L-LE or SPE and GC-MS
1613	2,3,7,8-TCDD by HRGC-HRMS, RL:W = 5.0 pg/L & S =0.5 pg/g-dry
1613	Full List Dioxins & Dibenzofurans by HRGC-HRMS
1668	PCBs by HRGC-HRMS, 12 Dioxin-like WHO Toxic Congeners
1668	PCBs by HRGC-HRMS, 40 or 66 Effluent Congeners
1668	PCBs by HRGC-HRMS, Full 209 Congeners
BAAQMD 33	CS <sub>2</sub> Extractable C8-C14 Compounds by GC-FID





### McC Campbell Analytical Capabilities

#### Hazardous Waste, Soils, Groundwater Chromatography

Method / Analysis	Description
8015B/ m	TPH Fuel Finger Print (quantitative & qualitative) by Direct Injection GC-FID
8015Bm	TPH Multi- Range (g, d, mo, k, jf, bo, other) by Direct Injection GC-FID
8015B / 8021B	TPH(g, ss, ag) MBTEX by P & T and GC FID/PID
8015B	TPH(d, mo, k, jf, bo, other) by Direct Injection GC FID
8015D	TPH as Methane in ug/Kg (emissions testing for waters only)
8081A	OC Pesticides by GC-ECD
8081A	OC Pesticides by GC-ECD (low level; ESLs) *Clean Up fee included (\$120)
8081A / 8082	OC Pesticides + PCBs by GC-ECD
8081A / 8082	OC Pesticides + PCBs by GC-ECD (low level; ESLs) *Clean Up fee included(\$120)
8082	PCB Aroclors Only by GC ECD
8082	PCB Aroclors Bulk Material (50PPB L)*Clean up fee included
8082	PCB Aroclors in Waste Oil by GC-ECD w/ Clean Up (2 mg/L RL) *Clean Up fee included
8082m	PBBs & PBDEs by GC-MS
8141A	ON/P Pesticides by GC-NPD. Analyzed by E8270 GC-MS
8151A	OC Acidic Herbicides by GC-ECD
8260Bm	1,4-Dioxane by GC-MS, RL: W = 0.5 µg/L & S = 0.02 mg/kg
8260B	Acrolein, Acrylonitrile & 2 CEVE by P&T and GC MS
8260B	Appendix IX / Appendix II Volatiles
8260B	HVOCs and/or Aromatics by P&T and GC-MS
8260B	MBTEX / MTBE by P&T and GC-MS
8260B	Single Compound reported from standard VOC list
8260B	Oxygenates ± EDB-12DCA by P&T and GC-MS
8260B	VOCs by P&T and GC MS excluding Acrolein & 2 CEVE
8260B	VOCs by P&T and GC MS, Open Scan (+ \$15 per identified peak)
8270C	Phenols Only by GC-MS
8270C	PNAs / PAHs Only by GC-MS SIM Mode
8270C	SVOCs by GC-MS
8270C	SVOCs by GC-MS (low level; ESLs) *Clean Up fee included (\$84)
8270C	SVOCs by GC-MS Open Scan (+ \$15 per identified peak)
8280A	2,3,7,8 TCDD by HRGC HRMS, RL: W = 5.0 pg/L & S = 5.0 pg/g
8280A	Full List Dioxins & Dibenzofurans by HRGC HRMS
8290A	2,3,7,8-TCDD by HRGC-HRMS, RL: W = 5.0 pg/L & S = 5.0 pg/g
8290A	Full List Dioxins & Dibenzofurans by HRGC/HRMS
8310	PNAs / PAHs by HPLC
8310m / SM 10200	Chlorophyll a & b by HPLC (Water and Liquid samples only)
8315A	Carbonyls by HPLC
8315A	Formaldehyde by LCMS (Water samples only)
8315A	Acrolein & 3-Hydroxypropanal by HPLC w/ Field Derivatization (SFEI 108)
8316	Acrylamide, Acrylonitrile and Acrolein by HPLC
8318	Carbamates by HPLC
8330	Nitroaromatics & Nitramines by HPLC
8332	Nitroglycerin by HPLC
547m	Glyphosate by HPLC w/ Derivatization (Soils)





## McC Campbell Analytical Capabilities

### Metals

<b>200.8/6020A (ICP-MS), 200.7/6010C (ICP-OES), 245.2/7470 (CV Hg), 1631E (CVAF Hg), NIOSH</b>	
<b>+Groups / Analysis</b>	<b>Description</b>
CAM17 (ICP-MS)	Ag, As, Ba, Be, Cd, Co, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, Tl, V, Zn
503 Metals (Biosolids)	As, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se, Zn
IOC – DW Metals	Al, As, Ba, Be, Cd, Cr, Cu, Pb, Hg, Ni, Sb, Tl
PP13	Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn
RCRA8	Ag, As, Ba, Cd, Cr, Hg, Pb, Se
LUFT5	Cd, Cr, Ni, Pb, Zn
ICP / ICP-MS, Common Metal	Ex, Al, Ag.; generally, special extraction cost is additional – see Extractions
ICP / ICP-MS, Uncommon Metal	Ex, Au, S, P.; generally, special extraction cost is additional – see Extractions
Hg by CVAF	Hg (1631E)
Hg by CVAA	Hg (245.2, 7470A, 7471B)
Ferrous Iron	SM 3500Fe B4c

### Solids

<b>Method / Analysis</b>	<b>Description</b>
Asbestos CARB 435	Asbestos 400 point count (.25%RL) by CARB 435
Asbestos CARB 435	Asbestos 1000 point count (.1%RL) by CARB 435
FTIR for Plastics and Polymer ID	ASTM E1252-98; FTIR ID of plastics and polymers.
XRD for Solids ID	Crystalline Solids ID using Powder, Micro-focus or High Angle XRD by USGS OFR 01-041
XRF on Solids Composition	Semi Quant XRF scan for gross element composition (Na-U)

### Microbiology

<b>Method / Analysis</b>	<b>Description</b>
Aerobes	SM9215AC (SP)
Anaerobes	SM9215ABm (SP)
Coliforms, Total & E Coli (+/-)	SM9223 B (EST), Idexx Colilert
Coliforms, Total & E Coli (Enum)	SM9223 B (EST), Idexx Quanti Tray
Coliforms, Total & E Coli	SM9221 BF (MTF) for Drinking Water
Coliforms, Total & E Coli, Biosolids	SM9223 B (EST – Idexx Colilert); SM9221 B (MTF/MPN); Sewage/Bio-Solids, 2-4 tray test
Coliforms, Total & E Coli & FC	SM9221BEF (MTF) for Drinking, Recreational & Waste Waters
Total Coliforms only	SM9222 B (MF) for Drinking, Recreational & Waste Waters
E Coli	9221BF (MTF)
Fecal Coliform (Soil)	SM9221E2C
Fecal Coliform	SM9221 E (MTF/MPN); SM9222 D (MF)
Fecal Coliform (+/-)	SM9221 E (MTF/MPN)
Enterococci	Idexx Enterolert (EST)
Enterococci	SM9230 B (MTF/MPN)
Fecal Streptococci	SM9230 B (MTF/MPN)
Fungi, Mold, Yeast	SM9610B
Heterotrophs (HPC)	Idexx Simplate; SM9215 AC (SP); SM9215 AB (PP) for Drinking and Natural Waters, 1-2 tray test
Heterotrophs (HPC), Biosolids	Idexx Simplate; SM9215 C (Spread Plate); SM9215 B (Pour Plate) for Sewage and Bio-Solids, 2-4 tray test
Inhibitory Residue	SM9020B





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Iron Related Bacteria (+/-)	SM9240D.1 (BART = Biological Activity Reaction Test)
Iron Related Bacteria	SM9240D.1 (BART = Biological Activity Reaction Test)
Legionella (+/- or En)	CDC Legiolert Method 01/2005-SM9260J (MF-PP)
Microbiologically Influenced Corrosion	Microbiologically Influenced Corrosion (MIC) Sample Kit not Included
Pseudomonas aeruginosa	Pseudolert (EST)
Salmonella (+/-)	SM9260B - E1682 (Plate) FDA BAM
Salmonella	SM9260B - E1682 (Plate) FDA BAM
Staphylococcus aureus	SM9213B - FDA BAM
Sulfate Reducing Bacteria	SM9240D - SM9240D.4a1
Water Suitability	SM9020B

### GC-MS-MS, LC-IT, LC-MS-MS Analysis

Method / Analysis	Description
ASTM D7485	LC-MS-MS for Alkylphenols in Water
ASTM D7574	LC-MS-MS for BisPhenol A (BPA) in Water
LC-MS-MS	E 6850 for Perchlorate in Water and Soil by LC-MS-MS, See Anions, E6850
LC-MS-MS	E 1694m for Thiourea in Waste Water
LC-IT or LC-MS-MS	E 1694 or E536m for Selected N/P Pesticides
ASTM D7485	LC-MS-MS for Alkylphenols in Water
ASTM D7574	LC-MS-MS for BisPhenol A (BPA) in Water
LC-MS-MS	E 6850 for Perchlorate in Water and Soil by LC-MS-MS, See Anions, E6850
LC-MS-MS	E 1694m for Thiourea in Waste Water
LC-IT or LC-MS-MS	E 1694 or E536m for Selected N/P Pesticides

### McC Campbell Proprietary Methods

Method / Analysis	Description
Acrylamide	Acrylamide by LCMS
Alcohols	Alcohols by Derivitization & HPLC
Amines	Amines & Protonatable Nitrogenous Compounds by Aqueous Injection
Amines	Amines & Protonatable Nitrogenous Compounds by LCMS
Amygdalin	Amygdalin by LCMS
Cyclohexylamine	Cyclohexylamine by LCMS
DEHPA	Bis(2-ethylhexyl) Phosphoric Acid
Epichlorohydrin	Epichlorohydrin by Derivitization & HPLC
EthyleneGlycol	Ethylene Glycol by Derivitization & HPLC
Flumioxazin	Flumioxazin by LCMS
Imazamox	Imazamox by Derivitization & HPLC
Isobornyl Acrylate	Isobornyl Acrylate by LCMS
Mesotrione	Mesotrione by LCMS
Tributyl phosphate	Tributyl phosphate by LCMS
Organic Acids	Various Organic Acids by HPLC-UV
Organic Lead, speciated	Tetramethyl & Tetraethyl Lead by GC (RL: S = 0.005 mg/Kg / W = 125 ppt)
Organic Tin, speciated	Mono-, Di-, Tri- & Tetra-Butyl Tin by GC-MS
Isobornyl Acrylate	Isobornyl Acrylate by LCMS
Mesotrione	Mesotrione by LCMS
UV254	SM5910 B Water samples only
UV Scan	MAI Full Spectrum Scan





### McC Campbell Analytical Capabilities

#### Wet Chemistry & Oil and Grease

Method / Analysis	Description
TRPH by IR Spectrometry w/ S.G.CU	418.1, Total Recoverable Petroleum Hydrocarbon by IR w/ Silica Gel Clean Up
Total Oil & Grease ± S.G.	9071B, Total Oil & Grease ± Silica Gel Clean Up
HEM, Oil and Grease ± S.G.	1664A, HEM, Oil & Grease ± Silica Gel Clean Up
Acidity	SM2310 B
AGP, ANP, NNP	EPA 600/2-78-054, Acid Generating Potential, Acid Neutralizing Potential, Net Neutralization Potential
Alkalinity, total, speciated	SM2320 B
Ammonia as N, Colorimetry	350.1 / SM4500-NH3 BG
Ammonia as N, unionized (free)	351.2
Ammonium	E350.1 / E350.1m
Ash (%)	Percent ash by ASTM D2974
BOD / cBOD	SM5210 B; Biochemical Oxygen Demand, carbonaceous BOD, 5 Day Test
B S & W, approximate	ASTM D 1796m-11; Bottom Sediments & Water as Approximate Vol. Phase Proportions
Carbon, DOC	415.3 / SM5310 B; Dissolved Organic Carbon
Carbon, IC	415.3 / SM5310 B; Inorganic Carbon (= Σ CO <sub>2,aq</sub> + HCO <sub>3</sub> <sup>-</sup> + CO <sub>3</sub> <sup>-2</sup> )
Carbon, TC	415.3 / SM5310 B / 9060A; Total Carbon
Carbon, TOC	415.3 / SM5310 B / 9060A; Total Organic Carbon
Chlorine, residual / total	SM4500-Cl E / 330.2 Titrimetric / SM4500G (Free & Total Cl)
Chlorine, specific form (Chloramine)	SM4500-Cl G DPD Colorimetric
Chlorine as Sodium Hypochlorite	SM4500-Cl E (NaClO)
COD	410.4 / SM5220 D; Chemical Oxygen Demand
Color, Apparent	SM2120 B / E110.2 for DW or WW / Apparent / Non-filtered
Color, True	SM2120 B / E110.2 for DW or WW True / Filtered
Conductivity	Conductivity, Resistivity & Salinity 120.1 / 9050A / SM2510 B, ASTM D1125A, SSSA
Corrosivity	pH, corrosivity = pH >2 and pH <12.5, included in RCI
Cyanide, Amenable	9012A / SM 4500-CN G; includes Total Cyanide results
Cyanide, Free	SM9016 using micro diffusion cell
Cyanide, Total, Auto Distillation	Kelada-01 / 335.4 / 9012A / SM4500-CN- CE
Cyanide, WAD	Kelada-01 / SM4500-CN- CE; Buffered Weak Acid Dissociable Cyanides
Density	ASTM D1475, ASTM D2397m
Dissolved O <sub>2</sub>	360.1 / SM 4500-O G
Flashpoint of Liquids	SW1010, included in RCI (Liquid/Oil/Water)
Foaming Agents (surfactants), anionic	SM5540 C / 425.1; MBAS / Anionic Surfactants
Foaming Agents (surfactants), non-ionic	SM5540 BD; CTAS / Non-ionic Surfactants
Freezing / Melting Point	MAI, Freezing Point of Liquids / Melting Point of Solids
Hardness	SM2340 B & 200.7 by ICP / ICPMS
Hardness by Titration	SM2340 C by Titration
Hydrogen Peroxide	USP Titanium Oxylate Spectrophotometric method
Ignitability of Solids/Soils	SW1030 (included in RCI)
Moisture Content of Soils	ASTM D2216-05, ASTM D2974, for organic matter & ash determinations
Nitrate + Nitrite by Cd reduction	353.2 / SM4500NO3 F; NO <sub>3</sub> + NO <sub>2</sub> by Cd reduction
Nitrogen, Organic	351.2 + 350.1 / SM4500-Norg AD + SM4500-NH3 FG; Organic Nitrogen as N (=



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*\*All prices & specifications are subject to change by MAI without notice.\**



### McC Campbell Analytical Capabilities

	TKN - Ammonia)
Nitrogen, TKN	351.2 ;TKN = Total Kjeldahl Nitrogen as N
Nitrogen, total (TOC)	415.3m / 9060Am; Total Nitrogen by combustion & Chemiluminescence / TCD
Odor	140.1 / SM2150 B
Odor with Dechlorination	140.1 / SM2150 B + SM4500-CI DE
Organic Matter	Percent Organic Matter by ASTM D2974
ORP	SM2580 B, Oxidation-Reduction Potential
Ozone	SM4500 O3 B
Paint Filter Test	SW9095A
pH	150.1 / 9045B&C / 9045C&D / SM4500H+ B, ASTM D4972-13a, CT643-2007
pH, field	SM4500H+ B, onsite pH measurement
Phenolics, Total	420.4 / 420.1
Phosphorous, Dissolved	365.1, 365.3, Dissolved Phosphorous as P
Phosphorous, Hydrolyzable	365.1, 365.3, Hydrolyzable Phosphorous as P
Phosphorous, Organic	365.1, 365.3, / SM4500-P BEF; Organic (Total - Ortho - Hydrolyzable ) Phosphorous as P
Phosphorous, Ortho	365.1, 365.3 365.5; SM4500-P BEF / Ortho Phosphorous as P (used when IC is inapplicable)
Phosphorous, Total	365.1, 365.3, / SM4500-P BEF; Total Phosphorous as P
Reactive Cyanide	SW9010, included in RCI, Positive or Negative
Reactive Sulfide	SW9030, included in RCI, Positive or Negative
RCI	Reactivity, Corrosivity & Ignitability
Salinity	SM2520, Salinity by conductivity
Silica, Reactive	SM4500-SiO2 D
Solids, Total (TS)	SM2540B for Liquids, see Moisture for Solids
Solids, Dissolved (TDS)	SM2540C, Total Dissolved Solids
Solids, Suspended (TSS)	SM2540D, Total Suspended Solids
Solids, Total Volatile or Fixed (TVS, TFS)	SM2540E, SM2540G for Solids
Solids, Total Volatile Diss/Fixed	SM2540E, SM2540G for Solids (TVDS, TFDS)
Solids, Volatile or Fixed(Suspended)	SM2540E, SM2540G for Solids (TVSS, TFSS)
Solids, Settleable (SS)	SM2540F, E160.5
Specific Gravity	ASTM D1475, ASTM D2397m
Sulfide, aqueous	SM4500-S-2 D / 376.2 /; SM4500-S-2 F; SM4500-S-2 I / distilled
Sulfide, solids	SM4500-S-2 D & 9030B; Acid Soluble or Acid Insoluble Sulfides
Sulfite by Titration	SM4500-SO3-2 B
Sulfur, Total	415.3m / 9060Am; Total Sulfur by combustion & TCD (ICP-MS rec. for aqueous)
Turbidity	180.1 / SM2130 B
UV254	SM5910 B HPLC
UV Scan	MAI Full Spectrum Scan
Water Content	Karl Fischer, SW9000, Water Content of Liquids
Vapor Pressure, Reid	ASTM D323, BAAQMD 28 (Requires Storage Temperature)
VCC of Coatings	EPA D24, ASTM D2369
Visual Estimate of Particle Size	ASTM E112-13; for granular matrices
VVC of Electrical Varnish	ASTM D6053





### McC Campbell Analytical Capabilities

#### Air Testing

Method/ Analysis	Description
Air Sampling Pump Rentals	Low (0.05 - 0.2L/min) or high (1-5 L/min) flow
Alcohols	NIOSH 1403 / 2000m by HPLC-FLD (ST)
Formaldehyde	NIOSH 2016 by HPLC (FST)
Helium	ASTM D 1946-90 (Tedlar or summa, summa can extra if not part of TO-15)
Helium Leak Check	TO-15 Helium Leak Check
Helium Shroud	Helium Shroud Rental
Hexachrome, Particulates	NIOSH 7605 by IC-Colorimetry (Filter)
Hydrocarbons, Light	ASTM D 1946-90 / EPA 3C by GC- FID (methane, ethane, ethene, actetylene) (Tedlar / Summa; Summa same price as Tedlar if TO-15 requested)
Hydrogen	ASTM D 1946-90 / EPA 3C by GC-PDD (H2) (Tedlar, Summa)
LEED Gases - Indoor	VOCs + Formaldehyde + 4-PCH + CO from summa
Light Gases, Atmospheric	ASTM D 1946-90 / EPA 3C by GC-PDD / TCD (O2, N2, CO, CO2,) (Tedlar / Summa; Summa same price as Tedlar if TO-15 requested)
Light Gases, Atmospheric + Hydrocarbons	ASTM D 1946-90 / EPA 3C by GC-PDD / TCD / FID (O2, N2, CO, CO2, methane, ethane, ethane, actetylene) (Tedlar, Summa)
Metals, Particulates	NIOH 7303 by ICP-MS (Filter)
OC & ON Herbicides	NIOSH 5602 (ST, pricing includes tubes)
OP Pesticides	NIOSH 5600 (ST, pricing includes tubes)
Organic Lead	NIOSH 2534m (Tetramethyl & Tetraethyl Lead) by GC (ST, pricing includes tubes)
Particulates, Respirable	NIOSH 0600
Particulates, Total	NIOSH 0500
PCBs	NIOSH 5503 by GC-ECD (ST)
Phenols	NIOSH 2546 by GC-MS SIM mode (ST)
PNAs	NIOSH 5506 by HPLC UV-FLD (ST)
Silica	NIOSH 7602, Crystalline Silica by IR (Bulk pricing available)
TO17 VOCs	TO-17, Soil gas by GC_MS (ST)
TPH (g/d)	NIOSH 1550 by GC-FID (ST)
TPH (g/d)	TO-17m (ST) TPH gas and Diesel
TPH(g) Fractionated	MA DEP APH by GC-MS (Summa); ali-aro frac. of vapor phase TPH
VOCs +- TPH(g) soil gas	TO-15, soil gas by GC-MS (Summa)
VOCs +- TPH(g) soil gas	TO-15, soil gas by GC-MS (Tedlar)
VOCs +- TPH(d) soil gas	TO-17, soil gas by GC-MS (ST)
VOCs, IPA only	TO-15, IPA only for soil gas from Tedlar by GC-MS; Client / Lab supplied Tedlar
VOCs, SCAN-SIM, indoor air	TO-15, indoor air by GC-MS, RL= 0.1ppbv (Summa), SIM mode for TO-15 compounds having ESL indoor air limits < 0.1 ppbv







## McC Campbell Analytical Capabilities

### Aquatic Toxicology

Test Method	Test Organism	Description
Hazardous Waste Bioassay (CDFG 1988)	Fathead Minnow ( <i>Pimephales promelas</i> )	CA Title 22 Hazardous Waste 96h LC50 Screen
		CA Title 22 Hazardous Waste 96h LC50 Definitive
EPA 2000.0	Fathead Minnow ( <i>Pimephales promelas</i> )	Acute 96hr Static Non-Renewal 100% Concentration Only
		Acute 96hr Static Renewal 100% Concentration Only with a 48hr Renewal
		Acute 96hr Static Renewal 100% Concentration Only with Daily Renewals
		Acute 96hr Static Renewal Dilution Series with a 48hr Renewal
EPA 2019.0	Rainbow Trout ( <i>Oncorhynchus mykiss</i> )	Acute 96hr Static Non-Renewal 100% Concentration Only
		Acute 96hr Static Renewal 100% Concentration Only with a 48hr Renewal
		Acute 96hr Static Renewal 100% Concentration Only with Daily Renewals
		Acute 96hr Static Renewal Dilution Series with a 48hr Renewal
EPA 2004.0	Sheepshead Minnow ( <i>Cyprinodon variegatus</i> )	Acute 96hr Static Non-Renewal 100% Concentration Only
		Acute 96hr Static Renewal 100% Concentration Only with a 48hr Renewal
		Acute 96hr Static Renewal 100% Concentration Only with Daily Renewals
EPA 2002.0	<i>Ceriodaphnia dubia</i>	Acute 96hr Static Non-Renewal 100% Concentration Only
		Acute 96hr Static Renewal 100% Concentration Only with a 48hr Renewal
		Acute 96hr Static Renewal 100% Concentration Only with Daily Renewals
		Acute 96hr Static Renewal Dilution Series with a 48hr Renewal
EPA 2021.0	<i>Daphnia spp.</i> ( <i>Daphnia magna</i> )	Acute 48hr Static Renewal Dilution Series with Daily Renewal
		Acute 96hr Static Non-Renewal 100% Concentration Only
		Acute 96hr Static Renewal 100% Concentration Only with a 48hr Renewal
		Acute 96hr Static Renewal 100% Concentration Only with Daily Renewals
EPA 2006.0	Inland Silverside ( <i>Menidia beryllina</i> )	Acute 96hr Static Renewal Dilution Series with a 48hr Renewal
		Acute 96hr Static Non-Renewal 100% Concentration Only
		Acute 96hr Static Renewal 100% Concentration Only with a 48hr Renewal
		Acute 96hr Static Renewal 100% Concentration Only with Daily Renewals
EPA 2007.0	Mysid shrimp ( <i>Americamysis bahia</i> )	Acute 96hr Static Non-Renewal 100% Concentration Only
		Acute 96hr Static Renewal 100% Concentration Only with a 48hr Renewal
		Acute 96hr Static Renewal 100% Concentration Only with Daily Renewals
EPA 1003.0 / ASTM E1218-04	Green Algae ( <i>Selenastrum Capricornutum</i> )	Acute 96hr Static Renewal Dilution Series with a 48hr Renewal
		Chronic 96hr Algal Growth Test - 100% Concentration Only
		Chronic 96hr Algal Growth Test - Dilution Series
EPA 1002.0	<i>Ceriodaphnia dubia</i>	Chronic 96hr Algal Growth Test - Reference Toxicant Test
		Chronic 3-brood Survival and Reproduction Test - 100% Concentration Only
		Chronic 3-brood Survival and Reproduction Test - Dilution Series
EPA 1000.0	Fathead Minnow ( <i>Pimephales promelas</i> )	Chronic 3-brood Survival and Reproduction Test - Reference Toxicant Test
		Chronic 7-day Survival and Growth Test - 100% Concentration Only
		Chronic 7-day Survival and Growth Test - Dilution Series
EPA 1004.0	Sheepshead Minnow ( <i>Cyprinodon variegatus</i> )	Chronic 7-day Survival and Growth Test - Reference Toxicant Test
		Chronic 7-day Survival and Growth Test - 100% Concentration Only
		Chronic 7-day Survival and Growth Test - Dilution Series
EPA 1006.0	Inland Silverside ( <i>Menidia beryllina</i> )	Chronic 7-day Survival and Growth Test - 100% Concentration Only
		Chronic 7-day Survival and Growth Test - Dilution Series





### McC Campbell Analytical Capabilities

EPA 1007.0	Mysid shrimp ( <i>Americamysis bahia</i> )	Chronic 7-day Survival and Growth Test - Reference Toxicant Test
		Chronic 7-day Survival and Growth Test - 100% Concentration Only
		Chronic 7-day Survival and Growth Test - Dilution Series
		Chronic 7-day Survival and Growth Test - Reference Toxicant Test
EPA 600/R-95/136	Mussels ( <i>Mytilus spp.</i> )	Chronic Embryo-Larval Development and Survival Test - 100% Concentration Only
		Chronic Embryo-Larval Development and Survival Test - Dilution Series
		Chronic Embryo-Larval Development and Survival Test - Reference Toxicant Test

### Extractions Preparations

Method / Analysis	Description
Alumina Bench Column Clean Up (EPA 3630C)	Bench Column Clean Up of solvent extracts, cost depends on complexity
Ashing - food	Thermal combustion preparation for food matrices
Ashing - soils/solids	Thermal combustion preparation for metals or oxide determinations
ASTM C 1580-05	DI Extraction of Soils for Sulfate
Bench Testing / Pilot Studies	Customized bench studies to evaluate pilot processes
Cal Trans 417 / 422	DI Extraction for anions in soil (DI STLC may yield higher values)
CEC, NH4Ac	EPA 9080; Cation Exchange Capacity inapplicable to calcareous soils
CEC, NaAc	EPA 9081; Cation Exchange Capacity that is generally applicable
Copper Clean Up	Copper Clean Up to Remove Sulfur
ESL Clean Up 8081/8082	ESL Clean-up for method 8081/ 8082
Ex. Cations, NH4Ac	Exchangeable Cations using ammonium acetate
Filtration	In-house (laboratory) filtration for dissolved metals using 0.45 um filter
Florisol Clean Up (EPA 3630C)	Bench Column Clean Up of solvent extracts
GPC Clean-up, EPA 3640A	Gel Permeation Clean Up
ISM - ITRC	Incremental Sampling Method per the Interstate Technology & Regulatory Council (ITRC)
Metals Dissolution	Concentrated oxidizing acids dissolution of solid metals
MS/MSD Project specific	Project specific MS/MSDs
Silica Gel Clean Up, in-a-vial style	Silica Gel Clean Up of solvent extracts, in-a-vial style
Silica Gel Bench Column Clean Up	Silica Gel Bench Column Clean Up of solvent extracts (EPA 3630C)
STLC	California WET Test
DI STLC	California WET Test modified to use DI water
ZHE STLC	Zero Head Space California WET Test for Volatiles
Whole Rock Dissolution	Fusion of rock / alumino-silicate solids
Zemo Diss. HCs ± SG c.u.	Dawn Zemo Methodology for Dissolved HCs ± SG cleanup
TCLP EPA 1311	TCLP; Toxic Characteristic Leaching Procedure
ZHE TCLP EPA 1311	Zero Head Space TCLP for Volatiles
SPLP EPA 1312	SPLP; Synthetic Precipitation Leaching Procedure
EPA 3050B Large Volume	Large volume (70g initial sample weight)





### McC Campbell Analytical Capabilities

#### Miscellaneous

Method / Analysis	Description
Air Sampling Pump Rental	Low (0.05 - 0.2L/min) or high (1-5 L/min) flow
Chromatogram Fee	Chromatograms PDF
Compositing	Sample compositing (up to 4:1 free)
Courier – exclusive service	Courier for emergency/urgent picks &/or deliveries
EDF Reporting Fee	CA AB 2886;GeoTracker
EDD Reporting Fee	WriteOn, EQulS, CIWQS, SMARTs, Locus XML, etc.
EPA 5035 EnCore sampler	5g EnCore sampler
Filters & Syringes	One syringe & three 0.45 micron filters for field filtering
Open Scan Fee	The five most significant unidentified peaks in GC-MS chromatogram
Helium Shroud	Helium Shroud Rental
Passive Diffusion Bag (PDB)	PDB filled with DI water
PM10 Monitor	PDR-1000AN Data Logger for continuous PM10 monitoring
Pulverization Fee	Pulverization of solid matrices
Report Reprocessing Fee	Report reprocessing Fee – Price is subject to change
Sample Disposal Fee	Sample Disposal fee
Sample Hold Fee	Short term hold fee (can be refunded if samples are analyzed / per sample)
Sample Storage Fee	For samples stored longer than 60 days (price is per sample/ per month)
Sampling Tube	Stainless steel sampling tube
Sorbent Tube	Single use Sorbent Tube
Tedlar bag	Tedlar air sampling bag
TerraCore	TerraCore sampling kit (5grams)
Unused Summa	Cleaning Fee - Unused Summa Canister

