

**APPENDIX H
Hours Per Test**

Analysis	A	B	C	D	E	F	G	H	I	J	BENCHMARKING STATISTICS			
	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	Agency Count	Minimum Hours	Maximum Hours	Average Hours
CHEMISTRY, METALS														
Chromium, Hexavalent (VI), Spectrometric (liquid)			0.75	1.15			0.25			0.60	4	0.25	1.15	0.69
Flame AA, Liquids	0.45	0.90		0.75	0.25		0.59	1.00			6	0.25	1.00	0.66
Flame AA, Solids (SW-846)	0.45	1.00									2	0.45	1.00	0.73
Graphite Furnace AA, Liquids		1.40	0.66	0.32	0.35		0.66	0.64		0.45	7	0.32	1.40	0.64
Graphite Furnace AA, Solids (SW-846)		1.45	0.66				1.84				3	0.66	1.84	1.32
Hydride Generation AA, Liquids		1.00	0.71	0.75			0.96	0.82			5	0.71	1.00	0.85
Hydride Generation AA, Solids (SW-846)			0.73								1	0.73	0.73	0.73
ICP, Liquids	0.25		0.12		0.23	0.10	0.35	0.64		0.15	7	0.10	0.64	0.26
ICP, Solids (SW-846)	0.25		0.07			0.20	0.29				4	0.07	0.29	0.20
ICP/MS, Liquids	0.25		0.14	0.32		0.20	0.70	0.56			6	0.14	0.70	0.36
ICP/MS, Preconcentration (water)						0.50					1	0.50	0.50	0.50
ICP/MS, Solids (SW-846)	0.25		0.07		0.26	0.40					4	0.07	0.40	0.25
Mercury, Liquids	0.45	1.20	0.75	0.60	0.51	0.50	0.88	1.35		0.55	9	0.45	1.35	0.75
Mercury, Solids (SW-846)	0.45	1.30	0.80			0.75	1.20			0.78	6	0.45	1.30	0.88
Miscellaneous Metals by Hach Method							0.39				1	0.39	0.39	0.39
	8	7	11	6	5	7	11	6	0	5	15	0	11	7
BIOLOGY/MICROBIOLOGY														
Algae, Planktonic - ID, Proportional Count				0.46							1	0.46	0.46	0.46
Algae, Planktonic - ID, Relative Abundance						1.50					1	1.50	1.50	1.50
Algae, Planktonic - Phytoplankton: Total Cell/Colony Count			0.75	0.46							2	0.46	0.75	0.61
Algae, Planktonic - Zooplankton: Total Cell Count			0.50								1	0.50	0.50	0.50
Bacterial - Anaerobic Bacteria, Total			1.75								1	1.75	1.75	1.75
Bacterial - Coliform, Fecal - MF	0.60					0.80	0.39	0.53		0.40	5	0.39	0.80	0.54
Bacterial - Coliform, Fecal - MPN, Aqueous		0.42	0.50	0.47	0.38	0.80	2.20	0.96			7	0.38	2.20	0.82
Bacterial - Coliform, Fecal - MPN, Aqueous (A-1)					0.25						1	0.25	0.25	0.25
Bacterial - Coliform, Fecal - MPN, Solid	0.60			1.02		2.00	2.12			0.69	5	0.60	2.12	1.29
Bacterial - Coliform, Fecal/ <i>E. coli</i> - EC-MUG	0.55		0.50			1.20		2.87			4	0.50	2.87	1.28
Bacterial - Coliform, Fecal/ <i>E. coli</i> - Quantitray					0.08						1	0.08	0.08	0.08
Bacterial - Coliform, Total - MF	0.45		0.50			0.45	0.66	0.35		0.40	6	0.35	0.66	0.47
Bacterial - Coliform, Total - MPN, Aqueous	0.55	0.42	0.50	0.47	0.38	0.90		1.58			7	0.38	1.58	0.69
Bacterial - Coliform, Total - Presence/Absence				0.21			0.20				2	0.20	0.21	0.21
Bacterial - Coliform, Total & Fecal, MPN, Aqueous						1.00					1	1.00	1.00	1.00
Bacterial - Coliform, Total & Fecal, MPN, Solid			0.75								1	0.75	0.75	0.75
Bacterial - Coliform, Total/ <i>E. coli</i> - MMO-MUG, Colilert			0.40		0.04		0.16	0.10			4	0.04	0.40	0.17
Bacterial - Disinfectant Challenge						20.00					1	20.00	20.00	20.00
Bacterial - <i>E. coli</i> , Nutrient Agar-MUG			0.20								1	0.20	0.20	0.20
Bacterial - Enterococcus, Enterolert								0.35			1	0.35	0.35	0.35
Bacterial - Fecal Streptococcus/Enterococci, MF	0.60		0.50			1.20	0.41			0.40	5	0.40	1.20	0.62
Bacterial - Fecal Streptococcus/Enterococci, MPN, Aqueous		0.40		0.55		2.00		1.04			4	0.40	2.00	1.00
Bacterial - Fecal Streptococcus/Enterococci, MPN, Solid						2.50					1	2.50	2.50	2.50
Bacterial - Heterotrophic Plate Count, MF						1.50				0.40	2	0.40	1.50	0.95
Bacterial - Heterotrophic Plate Count, Pour Plate		0.50	0.50				1.12	1.47		0.40	5	0.40	1.47	0.80
Bacterial - Heterotrophic Plate Count, Pour Plate, R2A Agar, Rm. Temp.					0.50						1	0.50	0.50	0.50
Bacterial - Heterotrophic Plate Count, Spread Plate			0.50								1	0.50	0.50	0.50
Bacterial - <i>Listeria monocytocolitica</i> , MPN, Aqueous						11.00					1	11.00	11.00	11.00
Bacterial - <i>Listeria monocytogenes</i> , MPN, Solid						13.20					1	13.20	13.20	13.20
Bacterial - Microorganism I.D., API Strip			1.25								1	1.25	1.25	1.25
Bacterial - Ribosomal RNA Processing						2.50					1	2.50	2.50	2.50
Bacterial - Salmonella, MPN, Aqueous						8.50					1	8.50	8.50	8.50

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Bacterial - Salmonella, MPN, Solid			2.50	4.75		11.00	5.12				4	2.50	11.00	5.84
Bacterial - Yersinia enterocolitica, MPN, Aqueous						14.00					1	14.00	14.00	14.00
Bacterial - Yersinia enterocolitica, MPN, Solid						16.80					1	16.80	16.80	16.80
Germination Index				3.00							1	3.00	3.00	3.00
Microscopic - Filamentous Bacteria Identification/Enumeration							0.15	0.25			2	0.15	0.25	0.20
Microscopic - Identification/Enumeration of Organisms			1.25					0.14			2	0.14	1.25	0.70
Microscopic - Mixed Liquor Assesment		0.30		0.30			0.85				3	0.30	0.85	0.48
Microscopic - Nocardia and/or Filament Count				0.97							1	0.97	0.97	0.97
Oxygen Consumption - Oxygen Consumption Rate				0.64							1	0.64	0.64	0.64
Oxygen Consumption - Respiration Rate/Sludge Volume Index		0.30	1.25			0.26					3	0.26	1.25	0.60
Parasites - Cryptosporidium, oocysts/100 L			2.50	4.00							2	2.50	4.00	3.25
Parasites - Giardia lamblia, cysts/100 L			2.50	4.00							2	2.50	4.00	3.25
Parasites - Helminth Ova			4.50	6.00							2	4.50	6.00	5.25
Parasites - Nematode Enumeration			1.00								1	1.00	1.00	1.00
Parasites - Parasites ID/Enumeration						4.00					1	4.00	4.00	4.00
Virus - Bacteriophage					1.90		4.00	1.13			3	1.13	4.00	2.34
Virus - Enteric Virus			7.50		28.00						2	7.50	28.00	17.75
Virus - Enteric Virus, Solid; (Glycine/AIC12-/Beef Extract)						12.00					1	12.00	12.00	12.00
	6	6	22	15	8	23	12	12	0	6	50	0	23	11
Biototoxicity - Bacterial Growth Support Potential, 100 day, % Survival			22.00								1	22.00	22.00	22.00
Biototoxicity - Ceriodaphnia, Acute, Static Renewal, 48 hr., % Survival						12.30					1	12.30	12.30	12.30
Biototoxicity - Ceriodaphnia, Chronic, Static Renewal, 7-day, Repro./Surv.						25.60	89.00	33.75			3	25.60	89.00	49.45
Biototoxicity - Daphnia pulex, Acute						12.00					1	12.00	12.00	12.00
Biototoxicity - Echinoderm, Chronic, 2 hr., % Fertilization			9.00								1	9.00	9.00	9.00
Biototoxicity - Fathead & Stickleback, Acute, Cont. Flow, 96 hr., % Survival			7.00								1	7.00	7.00	7.00
Biototoxicity - Fathead Minnow, Acute, Cont. Flow, 96 hr., % Survival		4.00									1	4.00	4.00	4.00
Biototoxicity - Fathead Minnow, Acute, Static Renewal, 96 hr. % Survival		4.00									2	4.00	6.00	5.00
Biototoxicity - Fathead Minnow, Acute, Static Renewal, 96 hr. % Survival			6.00			17.00					2	6.00	17.00	11.50
Biototoxicity - Fathead Minnow, Acute, Static, 96 hr. % Survival							27.00				1	27.00	27.00	27.00
Biototoxicity - Fathead Minnow, Acute, Static, 96 hr. LC ₅₀		3.00					30.00				2	3.00	30.00	16.50
Biototoxicity - Fathead Minnow, Chronic, Larval Survival/Growth						36.00	68.50				2	36.00	68.50	52.25
Biototoxicity - Golden Shiner, Acute, Cont. Flow, 96 hr., % Survival				7.00							1	7.00	7.00	7.00
Biototoxicity - Golden Shiner, Acute, Static Renewal, 96 hr., % Surv.				8.00							1	8.00	8.00	8.00
Biototoxicity - Golden Shiner, Acute, Static, 96 hr., % Survival				7.00							1	7.00	7.00	7.00
Biototoxicity - Haliotis, Chronic							33.50				1	33.50	33.50	33.50
Biototoxicity - Macrocystis, Chronic							40.00				1	40.00	40.00	40.00
Biototoxicity - Menidia, Chronic						40.00	83.00				2	40.00	83.00	61.50
Biototoxicity - Microtox, Bacterial Bioluminescence				1.00						0.75	3	0.75	1.50	1.08
Biototoxicity - Mysidopsis, Chronic, Survival/Growth						52.00					1	52.00	52.00	52.00
Biototoxicity - Mytilus spp., Bivalve Larval Shell Development Test								3.86			1	3.86	3.86	3.86
Biototoxicity - Rainbow Trout, Acute, Cont. Flow, 96 hr., % Survival			6.00								1	6.00	6.00	6.00
Biototoxicity - Rainbow Trout, Acute, Static Renewal, 96 hr., % Survival			6.00			24.20					2	6.00	24.20	15.10
Biototoxicity - Selenastrum, Chronic							15.00				1	15.00	15.00	15.00
Biototoxicity - Stickleback, Acute, Static Renewal, 96 hr. % Survival			6.00					7.90			2	6.00	7.90	6.95
	0	3	8	4	0	9	8	3	0	1	25	0	9	4
	6	9	30	19	8	32	20	15	0	7	75	0	32	15
CHEMISTRY, ORGANICS														
Air Toxics						6.00	3.90				2	3.90	6.00	4.95
Butyltins, Mono-, Di-, & Tri-, by GC/MS			4.25								1	4.25	4.25	4.25
Carbon Dioxide by GC				0.65							1	0.65	0.65	0.65
Chloral Hydrate			1.25								1	1.25	1.25	1.25
Cyanogen Chloride, by GC/MS										1.60	1	1.60	1.60	1.60
Dalapon, by GC/ECD			1.50								1	1.50	1.50	1.50

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Digester Gas, by GC			1.50		1.52						2	1.50	1.52	1.51
EDB/DBCP, by GC/ECD			1.40								1	1.40	1.40	1.40
Endothall, by GC/MS			2.50								1	2.50	2.50	2.50
Ethylene Glycol, by GC/MS			4.00								1	4.00	4.00	4.00
Fixed Gas Analysis							3.70				1	3.70	3.70	3.70
Formaldehyde by Deriv., by HPLC										5.00	1	5.00	5.00	5.00
Geosmin, MIB, CLSA, by GC/MS			4.50								1	4.50	4.50	4.50
Glyphosphate, by HPLC			1.25								1	1.25	1.25	1.25
Haloacetic Acids			1.50								1	1.50	1.50	1.50
Herbicides - Chlorinated Acids, by GC/ECD, Liquid			2.50				7.70				2	2.50	7.70	5.10
Herbicides - Chlorinated Acids, by GC/ECD, Solid			2.50				8.80				2	2.50	8.80	5.65
Hydrogen Sulfide (H ₂ S) Gas, by Draeger Tube			1.00	0.55	0.38		0.30	0.14			5	0.14	1.00	0.47
Lipids						1.00	3.60				2	1.00	3.60	2.30
Methane by GC				0.65							1	0.65	0.65	0.65
Nitrogen Gas by GC				0.65							1	0.65	0.65	0.65
Organic Lead, by Cal. DOHS LUFT			0.40								1	0.40	0.40	0.40
Organochlorine - Pesticides/PCBs, by GC/ECD			1.50								1	1.50	1.50	1.50
Organochlorine - Pesticides/PCBs, by GC/ECD			1.75	1.75	3.36	3.25	5.79	4.52		4.00	7	1.75	5.79	3.49
Organochlorine - Pesticides/PCBs, by GC/ECD, Solid	3.00		2.00			5.00	16.81			5.00	5	2.00	16.81	6.36
Organochlorine - Solvents, Pesticides/Herbicides			1.25								1	1.25	1.25	1.25
Oxygen Gas by GC				0.65							1	0.65	0.65	0.65
PAHs by GC/MS			2.00				5.50				2	2.00	5.50	3.75
PAHs by HPLC			2.25					6.06			2	2.25	6.06	4.16
PAHs by SIM		3.50									1	3.50	3.50	3.50
Paraquat/Diquat, by HPLC			2.00								1	2.00	2.00	2.00
PCB Congeners by GC/ECD			2.00			3.25		0.57			3	0.57	3.25	1.94
PCB, by GC/ECD			1.50								1	1.50	1.50	1.50
PCB, by GC/ECD			1.50			2.00		3.88			3	1.50	3.88	2.46
PCB, by GC/ECD, Solid			1.50			3.00					2	1.50	3.00	2.25
PCB, by SIM		3.50									1	3.50	3.50	3.50
PCBs, Perchlorination, by GC/ECD			2.50								1	2.50	2.50	2.50
Pesticides and Herbicides, Carbamates, by HPLC			1.25								1	1.25	1.25	1.25
Pesticides, Organophosphorous, liquid						3.00		1.48			2	1.48	3.00	2.24
Pesticides, Organophosphorous, solid						3.50		1.72			2	1.72	3.50	2.61
Pesticides, Organophosphorous by SIM		3.50									1	3.50	3.50	3.50
Pesticides, Phosphorous & Nitrogen, by GC/NPD			1.50					0.72			2	0.72	1.50	1.11
Petroleum Hydrocarbons - by GC/FID										2.60	1	2.60	2.60	2.60
Petroleum Hydrocarbons - Diesel, Extraction, by GC/FID, Liquids			2.00			1.50					2	1.50	2.00	1.75
Petroleum Hydrocarbons - Diesel, Extraction, by GC/FID, Solid						1.50					1	1.50	1.50	1.50
Petroleum Hydrocarbons - Extractable										5.20	1	5.20	5.20	5.20
Petroleum Hydrocarbons - Gasoline, Purge & Trap, by GC/FID, liquid			1.00			1.50					2	1.00	1.50	1.25
Petroleum Hydrocarbons - Identification						1.50					1	1.50	1.50	1.50
Petroleum Hydrocarbons - Total						0.90				1.00	2	0.90	1.00	0.95
Petroleum Hydrocarbons - Total Purgeable								1.94			1	1.94	1.94	1.94
Petroleum Hydrocarbons - Volatile										5.20	1	5.20	5.20	5.20
Purgeable Aromatics, by GC				1.15				0.63			2	0.63	1.15	0.89
Purgeable Halocarbons, by GC				1.15				0.63			2	0.63	1.15	0.89
Semivolatile Organics (BNA), by GC/MS			2.25								1	2.25	2.25	2.25
Semivolatile Organics (BNA), by GC/MS	2.75	2.40	2.50		4.26	4.00	5.72	4.91			7	2.40	5.72	3.79
Semivolatile Organics (BNA), by GC/MS, for TICs						5.00				3.70	2	3.70	5.00	4.35
Semivolatile Organics (BNA), by GC/MS, Solid			2.00			6.00	9.36			4.65	4	2.00	9.36	5.50
Sulfide Gas				0.32							1	0.32	0.32	0.32
Sulfur Compounds, by GC					3.04		4.14				2	3.04	4.14	3.59
Trihalomethane, Formation Potential, 7 Day, by GC/HECD			1.50								1	1.50	1.50	1.50
Trihalomethane, Total, by GC/HECD			1.00								1	1.00	1.00	1.00
Volatile Aromatics, by GC/PID			1.10								1	1.10	1.10	1.10
Volatile Organics, by GC/MS			1.50								1	1.50	1.50	1.50
Volatile Organics, by GC/MS, for TICs						2.50				1.60	2	1.60	2.50	2.05
Volatile Organics, by GC/MS, Purgeable	0.80	1.40	1.75		2.28	2.00	1.55	1.37			7	0.80	2.28	1.59

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Volatile Organics, by GC/MS, Solids			1.50			2.50	3.30			1.67	4	1.50	3.30	2.24
	3	5	39	9	6	20	14	13	0	12	66	0	39	12
CONVENTIONAL CHEMISTRY														
Acidity in Liquid SO ₂				0.40							1	0.40	0.40	0.40
Acidity, Titration			0.70							0.40	2	0.40	0.70	0.55
Alkalinity - CO ₃			0.10	0.30	0.27		0.25				4	0.10	0.30	0.23
Alkalinity - Electrometric Titration to pH 4.5	0.35	0.06					0.25	0.23			4	0.06	0.35	0.22
Alkalinity - HCO ₃			0.10	0.30			0.20				3	0.10	0.30	0.20
Alkalinity - OH ⁻			0.33								1	0.33	0.33	0.33
Alkalinity - Total			0.33	0.30		0.21	0.57			0.40	5	0.21	0.57	0.36
Ammonia - Automated, liquid	0.25			0.32		0.25				0.25	4	0.25	0.32	0.27
Ammonia - Automated, solid			0.50	0.32	0.24	0.75	1.58				5	0.24	1.58	0.68
Ammonia - Distillation & Titrimetric		0.30	0.60	0.63			0.50			0.65	5	0.30	0.65	0.54
Ammonia - Electrode, Known Addition						0.20		0.17			2	0.17	0.20	0.19
Ammonia - Nesslerization			0.25								1	0.25	0.25	0.25
Ammonia - Titration								0.42			1	0.42	0.42	0.42
Ammonia - Total, Spectroscopy			0.50								1	0.50	0.50	0.50
Ammonia - Undissociated, Calculation		0.10	0.10								2	0.10	0.10	0.10
Biochemical Oxygen Demand - Carbonaceous	0.35		0.50	0.50	0.50		0.61			0.55	6	0.35	0.61	0.50
Biochemical Oxygen Demand - Soluble			0.65	0.42	0.60		0.61			0.55	5	0.42	0.65	0.57
Biochemical Oxygen Demand - Total		0.42	0.50	0.42	0.40	0.30	0.71	0.59		0.55	8	0.30	0.71	0.49
Bromate/Bromide			0.80								1	0.80	0.80	0.80
Carbon Dioxide						0.05				0.02	2	0.02	0.05	0.04
Carbon, Particulate										0.63	1	0.63	0.63	0.63
Caustic Titer (Odor Control)						1.38					1	1.38	1.38	1.38
Caustic, % of Solution, Titration				0.25							1	0.25	0.25	0.25
Chemical Oxygen Demand - Open Reflux						0.33					1	0.33	0.33	0.33
Chemical Oxygen Demand - Spectrophotometric, Dissolved			0.60	0.55						0.16	3	0.16	0.60	0.44
Chemical Oxygen Demand - Spectrophotometric, Total	0.45	0.30	0.50	0.40	0.18	0.18				0.16	7	0.16	0.50	0.31
Chlorate/Chlorite			1.50								1	1.50	1.50	1.50
Chloride - Argentometric							0.20			0.25	2	0.20	0.25	0.23
Chloride - Automated, Ferricyanide		1.00		0.30							2	0.30	1.00	0.65
Chloride - Ion Chromatography, liquid	0.35		0.50			0.35	0.25			0.70	5	0.25	0.70	0.43
Chloride - Ion Chromatography, solid			0.50			1.00					2	0.50	1.00	0.75
Chloride - Titration, Colorimetric, liquid			0.50			0.32					2	0.32	0.50	0.41
Chlorine Residual - Amperometric, Back Titration, Total/Free	0.30	0.12	0.50	0.22		0.50					5	0.12	0.50	0.33
Chlorine Residual - Amperometric, Mono-, Di-, Tri-chloramine						0.33		0.36			2	0.33	0.36	0.35
Chlorine Residual - DPD, Free & Total			0.20	0.22		0.10	0.30	0.36		0.06	6	0.06	0.36	0.21
Chlorine Residual - Titration, Iodometric			0.50							0.70	2	0.50	0.70	0.60
Chlorophyll a, Fluorometric	0.45			0.25						0.50	3	0.25	0.50	0.40
Chlorophyll, Spectrophotometric			1.25			0.35					2	0.35	1.25	0.80
CO ₂ Generation Rate				5.00							1	5.00	5.00	5.00
Color - Spectrophotometric			0.50								1	0.50	0.50	0.50
Color - Visual Comparison	0.10	0.05	0.50			0.18		0.22			5	0.05	0.50	0.21
Cyanide - Amenable to Chlorination	0.50				0.81	0.60		11.25		0.70	5	0.50	11.25	2.77
Cyanide - Solid			1.50			1.75				0.75	3	0.75	1.75	1.33
Cyanide - Total	0.55		1.50	0.90		0.60	1.80	1.31		0.70	7	0.55	1.80	1.05
Cyanide - Weak Acid Dissociable (WAD)						0.60		6.00			2	0.60	6.00	3.30
Flash Point, Pensky-Martens Closed-cup	0.30		0.66				0.58				3	0.30	0.66	0.51
Floatables, Wastewater					2.30		3.50				2	2.30	3.50	2.90
Fluorescence, Percent, Selected Wavelength			0.50								1	0.50	0.50	0.50
Fluoride, Ion Selective Electrode			0.50				0.70	2.42		0.60	4	0.50	2.42	1.06
Foam Test				0.55							1	0.55	0.55	0.55
Hardness - Calcium, EDTA Titrimetric	0.35		0.50			0.05	0.50				4	0.05	0.50	0.35
Hardness - Magnesium, Gravimetric						0.05					1	0.05	0.05	0.05
Hardness - Total, EDTA Titration		0.05	0.50	0.30		0.05		5.39			5	0.05	5.39	1.26

Analysis	A	B	C	D	E	F	G	H	I	J	BENCHMARKING STATISTICS			
	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	Agency Count	Minimum Hours	Maximum Hours	Average Hours
Hydrogen Sulfide by Spectroscopy			1.25			0.11					2	0.11	1.25	0.68
Lime Requirement				0.40							1	0.40	0.40	0.40
Moisture, %				0.40							1	0.40	0.40	0.40
Nitrogen - Nitrate, Colorimetric						0.11					1	0.11	0.11	0.11
Nitrogen - Nitrate, Electrode			0.55	0.25							2	0.25	0.55	0.40
Nitrogen - Nitrate, UV Spectrophotometric Screening							0.30				1	0.30	0.30	0.30
Nitrogen - Nitrate:Nitrite, Automated	0.25			0.32		0.25				0.25	4	0.25	0.32	0.27
Nitrogen - Nitrate:Nitrite, Cadmium Reduction				0.55		1.00	0.80	0.31			4	0.31	1.00	0.67
Nitrogen - Nitrate:Nitrite, Ion Chromatography	0.25		0.66					0.33		0.25	4	0.25	0.66	0.37
Nitrogen - Nitrate:Nitrite, Manual, Chromatographic Acid		0.50									1	0.50	0.50	0.50
Nitrogen - Nitrite, Colorimetric						0.11					1	0.11	0.11	0.11
Nitrogen - Nitrite, Spectrophotometric, Manual			0.50	0.38		0.50					3	0.38	0.50	0.46
Nitrogen - Nitrite, Spectrophotometric, Std. Add., Manual		0.20	0.75				0.51			0.25	4	0.20	0.75	0.43
Nitrogen - Organic, Calculation			0.20			0.03					2	0.03	0.20	0.12
Nitrogen - Organic, TKN-NH3	0.50	0.50	0.66	0.72		0.26	0.95	5.06		0.85	8	0.26	5.06	1.19
Nitrogen - Organic, TKN-NH3, Semi-Automatic					0.56	1.25				0.85	3	0.56	1.25	0.89
Nitrogen - Total, Dissolved										0.73	1	0.73	0.73	0.73
Nitrogen - Total, Particulate										0.63	1	0.63	0.63	0.63
Nitrogen - Total, liquids						0.35					1	0.35	0.35	0.35
Oil & Grease - Hydrocarbons, Silica Gel, liquid	0.45		1.00			1.00	1.30				4	0.45	1.30	0.94
Oil & Grease - Hydrocarbons, Silica Gel, solid			2.00			1.50					2	1.50	2.00	1.75
Oil & Grease - IR Spectrophotometric							10.00				1	10.00	10.00	10.00
Oil & Grease - Liquid/Liquid Extraction							1.77			1.00	2	1.00	1.77	1.39
Oil & Grease - Solid Phase Extraction										1.00	1	1.00	1.00	1.00
Oil & Grease - Total, Gravimetric, liquids	0.80	0.60	0.75			0.75		3.92		1.00	6	0.60	3.92	1.30
Oil & Grease - Total, Gravimetric, solids					0.86	1.25					2	0.86	1.25	1.06
Organic Carbon - Dissolved (DOC), Combustion IR						0.25					1	0.25	0.25	0.25
Organic Carbon - Dissolved (DOC), Persulfate-UV Oxidation			1.10								1	1.10	1.10	1.10
Organic Carbon - Total (TOC), Combustion IR, liquid						0.35	0.70	0.20		0.40	4	0.20	0.70	0.41
Organic Carbon - Total (TOC), Combustion IR, solids						2.10	1.17				2	1.17	2.10	1.64
Organic Carbon - Total (TOC), Persulfate-UV Oxidation			1.00								1	1.00	1.00	1.00
Organic Halide - Total (TOX)			0.75				2.80				2	0.75	2.80	1.78
Oxidation Reduction Potentital (ORP)							0.25				1	0.25	0.25	0.25
Oxygen, Dissolved, Azide Modification						0.18	0.23				2	0.18	0.23	0.21
Oxygen, Dissolved, Electrode		0.10	0.33	0.22		0.17		0.40		0.08	6	0.08	0.40	0.22
Paint Filter Liquids Test (Free Moisture)			0.50	0.25							2	0.25	0.50	0.38
Particle Size Distribution			1.00				3.28				2	1.00	3.28	2.14
Particle Size Range Analysis				0.64							1	0.64	0.64	0.64
pH - Electrometric, Aqueous	0.15	0.03	0.30	0.22	0.09	0.18	0.14	0.12		0.06	9	0.03	0.30	0.14
pH - Electrometric, Non-liquid			0.40			0.50					2	0.40	0.50	0.45
Phenolics, Total, Spectrophotometric	0.35	0.70	0.75				1.52	4.92		0.70	6	0.35	4.92	1.49
Phosphorous - Bioavailable						0.35					1	0.35	0.35	0.35
Phosphorous - Citrate-Insoluble in Fertilizers, P ₂ O ₅			1.50							3.50	2	1.50	3.50	2.50
Phosphorous - Dissolved, for Boiler							0.21				1	0.21	0.21	0.21
Phosphorous - Dissolved, Total										0.73	1	0.73	0.73	0.73
Phosphorous - Particulate										0.75	1	0.75	0.75	0.75
Phosphorous - Total/Ortho-, Ascorbic Acid Method	0.30	0.40	0.50	0.38		0.35				0.73	6	0.30	0.73	0.44
Phosphorous - Total/Ortho-, Automated, Ascorbic Acid	0.25			0.55		0.16				0.25	4	0.16	0.55	0.30
Phosphorous - Total/Ortho-, Ion Chromatography										0.50	1	0.50	0.50	0.50
Phosphorous - Total/Ortho-, Manual (Modified)						0.32					1	0.32	0.32	0.32
Phosphorous - Total/Ortho-, Vanadomolybdophos. Acid	0.50					1.00	0.46				3	0.46	1.00	0.65
Polymer, % Active			6.00								1	6.00	6.00	6.00
Polymer, Friction Reduction							0.20				1	0.20	0.20	0.20
Radicle Length, %				6.72			6.65				2	6.65	6.72	6.69
Radiological, Total Gross Alpha & Beta			0.50								1	0.50	0.50	0.50
Residue - Filterable Solids, Dried at 180°C (TDS)		0.30	0.22	0.47	0.27	0.10	1.95	0.43		0.80	8	0.10	1.95	0.57
Residue - Non-Filterable Solids Dried at 103-105°C (TSS)	0.25	0.15	0.33	0.47	0.16	0.14	0.42	0.16		0.23	9	0.14	0.47	0.26
Residue - Settleable Solids (SS)	0.25	0.33	0.33	0.30	0.09	0.05	0.35	0.08		0.11	9	0.05	0.35	0.21
Residue - Sludge Volume Index, 30 Minutes (SVI)		0.25		0.90		0.05	0.17				4	0.05	0.90	0.34

Analysis	A	B	C	D	E	F	G	H	I	J	BENCHMARKING STATISTICS			
	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	# of Hours per Test	Agency Count	Minimum Hours	Maximum Hours	Average Hours
Residue - Total Solids Dried at 103-105°C (TS)	0.25	0.10	0.33	0.32	0.24	0.13		0.17		0.24	8	0.10	0.33	0.22
Residue - Volatile Filterable Solids, 550°C (VDS)	0.25			0.60		0.09	0.15				4	0.09	0.60	0.27
Residue - Volatile Non-Filterable Solids, 550°C (VSS)		0.50	0.33	0.32	0.16	0.11		0.11		0.20	7	0.11	0.50	0.25
Residue - Volatile Solids, Ignited at 500°C (VS)		0.25	0.33	0.32	0.24	0.12	0.30	0.09		0.20	8	0.09	0.33	0.23
Salinity, Electrical Conductivity		0.17				0.18	0.23			0.50	4	0.17	0.50	0.27
Silica, Heteropoly Blue, Spectrophotometric						0.35					1	0.35	0.35	0.35
Solid Profile						0.27					1	0.27	0.27	0.27
Specific Conductance, Conductivity Meter or TDS Calculation	0.20	0.10	0.33	0.21		0.17	0.13	0.27		0.50	8	0.10	0.50	0.24
Specific Gravity			0.50	0.30		0.15				0.50	4	0.15	0.50	0.36
Sulfate - Ion Chromatographic, liquids	0.25		0.50			0.35	0.35			0.70	5	0.25	0.70	0.43
Sulfate - Ion Chromatographic, solids						1.00					1	1.00	1.00	1.00
Sulfate - Turbidimetric				0.32		0.30	0.49				3	0.30	0.49	0.37
Sulfide - Dissolved, as S		0.04	0.33				0.97			0.50	4	0.04	0.97	0.46
Sulfide - Total, as S				0.22			0.22				2	0.22	0.22	0.22
Sulfide - Total, as S		0.04	0.33							0.50	3	0.04	0.50	0.29
Sulfide - Total, as S, Ion Selective Electrode						0.25					1	0.25	0.25	0.25
Sulfite, Titration (KIO ₃)			0.33							0.50	2	0.33	0.50	0.42
Sulfur, Total				0.75							1	0.75	0.75	0.75
Surface Tension				0.25							1	0.25	0.25	0.25
Surfactants, Colorimetric (MBAS)	0.55		0.75	0.97			1.77			0.90	5	0.55	1.77	0.99
Taste and Odor - Flavor Profile Analysis			0.50								1	0.50	0.50	0.50
Taste and Odor - Threshold Odor Number		0.52	0.33								2	0.33	0.52	0.43
TCLP Extraction - Metals, Semi-Vol, Pest., Herb., & TEPH			1.50				7.14				2	1.50	7.14	4.32
TCLP Extraction - Zero Headspace for Volatiles & TPPH/BTEX			1.50								1	1.50	1.50	1.50
Temperature		0.03		0.15		0.06		0.29		0.06	5	0.03	0.29	0.12
Thiocyanate, Spectrophotometric			0.33							0.70	2	0.33	0.70	0.52
Thiosulfate							0.45				1	0.45	0.45	0.45
Turbidity, Nephelometric	0.20	0.04	0.33	0.33	0.09	0.15	0.38	0.11		0.20	9	0.04	0.38	0.20
UV Absorbance at 254 nm		0.04	0.40								2	0.04	0.40	0.22
Viscosity, Viscosimeter			0.33	0.47		2.00	0.56				4	0.33	2.00	0.84
Volatile Acids	0.45		0.50		0.61	0.26	0.21	0.23		0.30	7	0.21	0.61	0.37
Waste Extraction Test (WET)			1.50				6.14				2	1.50	6.14	3.82
	31	32	79	53	19	71	55	30	0	58	58	0	79	43
	48	53	159	87	38	130	100	64	0	82	214	0	161	76