

PT15-05 - CALA PT Program - Regression Equations  
Revision 1.3 – April 11, 2011



**CALA**  
Proficiency Testing

# TABLE OF CONTENTS

1.0	<b>Introduction</b> .....	1
2.0	<b>Regression Equations</b> .....	1
3.0	<b>Warning Limit Equations</b> .....	4

# REGRESSION EQUATIONS

## 1.0 INTRODUCTION

The CALA evaluation procedure involves the use of historic data to establish regression equations of sample concentration against inter-laboratory standard deviation. As well, one of the checks performed with every study is to compare the inter-laboratory standard deviation in a study against warning limits established from the past data. This document provides details on how these regression equations are developed.

## 2.0 REGRESSION EQUATIONS

A regression equation is established between sample concentration and inter-laboratory standard deviation for each analyte in the PT program with the exception of C20 (asbestos), C05B (microbiology) and C15 (pH). The steps involved in determining the regression equation for an analyte are as follows:

- i) compile the consensus means and inter-lab standard deviations used from all historic studies;
- ii) remove data that is below the currently published concentration range;
- iii) plot consensus mean against inter-lab standard deviation and remove any data pairs that are inconsistent with the data set as a whole;
- iv) calculate the slope and intercept of consensus mean against inter-lab standard deviation;
- v) If the intercept is negative, force the line through zero to prevent unreasonably low standard deviations at lower concentrations.

The following table contains the slope and intercept currently being used for all applicable analytes, using data from studies between 1991 and January 2012, inclusive.

Analyte	Slope	Intercept
<b>C01A Major Anions in Water</b>		
Alkalinity	0.0385	2.00
Calcium	0.0427	0.1402
Chloride	0.0428	0.174
Conductivity	0.0233	1.838
Fluoride	0.0473	0.0278
Hardness	0.0302	0.705
Magnesium	0.0448	0.0273
Nitrate	0.0395	0.0335
Nitrate+Nitrite	0.0413	0.0315
Potassium	0.0543	0.0319
Silica	0.0508	0.0468
Sodium	0.0476	0.0548
Sulphate	0.045	0.245
<b>C01B Nutrients in Water</b>		
Ammonia	0.0592	0.0177
Bromide	0.0465	0.0237
Organic Carbon	0.0385	0.226
Nitrite	0.0485	0.0072
Phosphate	0.0522	0.0038
<b>C02A Metals (full range) in Water</b>		
Aluminum	0.0493	0.0039
Antimony	0.0906	0.858
Arsenic	0.0609	1.01
Barium	0.0423	0.0
Beryllium	0.0489	0.0004
Boron	0.0559	0.0029
Cadmium	0.0407	0.0004
Chromium	0.040	0.0022
Cobalt	0.0399	0.0016
Copper	0.0392	0.0021
Iron	0.0479	0.0049
Lead	0.0833	0.0033
Manganese	0.0395	0.0011
Molybdenum	0.043	0.0019
Nickel	0.040	0.0026
Selenium	0.0796	0.638
Silver	0.0447	0.0006
Strontium	0.0364	0.001
Thallium	0.0586	0.0001
Tin	0.071	0.0007
Titanium	0.0373	0.0001
Uranium	0.0528	0.0009
Vanadium	0.0399	0.0018
Zinc	0.0521	0.001
<b>C02B Metals (high range) in Water</b>		
Aluminum	0.0442	0.0045
Barium	0.0364	0
Boron	0.0388	0.0031
Chromium	0.0396	0.0006
Cobalt	0.0357	0.001
Copper	0.0378	0.0008
Iron	0.0428	0.0055
Lead	0.0386	0.008
Manganese	0.0372	0
Molybdenum	0.0542	0
Nickel	0.0411	0.0015
Strontium	0.0394	0
Thallium	0.0475	0.006
Titanium	0.034	0.0012
Vanadium	0.0299	0.0021
Zinc	0.0502	0
<b>C02C Metals (total) in Water</b>		
Aluminum	0.0466	0.0055
Boron	0.0457	0.0077
Barium	0.0381	0.0021
Chromium	0.041	0.0014
Cobalt	0.0408	0.0013
Copper	0.0432	0
Iron	0.041	0.0087
Lead	0.038	0.0037
Manganese	0.0401	0.0016
Molybdenum	0.0411	0.0008
Nickel	0.0357	0.0031
Strontium	0.0409	0
Thallium	0.0435	0.0038
Titanium	0.0387	0.0018

Analyte	Slope	Intercept
<b>C02C (cont)</b>		
Vanadium	0.0414	0
Zinc	0.0472	0.0047
<b>C03 Total Nutrients in Water</b>		
Kjeldahl Nitrogen	0.129	0.0429
Phosphorus	0.0505	0.0089
<b>C04A Solids in Water</b>		
Dissolved Solids	0.018	12.8
Suspended Solids	0.069	0.859
Volatile Suspended	0.102	0.523
<b>C04B BOD in Water</b>		
BOD	0.157	0.806
CBOD	0.157	0.806
<b>C04C Turbidity in Water</b>		
Turbidity	0.0887	0
<b>C04D COD in Water</b>		
COD	0.0308	3.15
<b>C05A Microbiology in Water</b>		
E. coli	0.16	1.45
Fecal coliforms	0.252	0.219
Heterotrophic Plate Count	0.140	7.62
Total coliforms	0.144	2.24
<b>C06A/C06B OC Pesticides and PCBs in Water</b>		
Alpha- BHC	0.246	0.0056
Alpha-Chlordane	0.1899	0.0
Aldrin	0.2222	0.0286
Dieldrin	0.203	0.0151
Endosulphan I	0.2416	0.0155
Endosulphan II	0.2028	0.0457
Endrin	0.216	0.0354
Gamma-Chlordane	0.1713	0.0022
Heptachlor	0.329	0.0
Heptachlor epoxide	0.164	0.0471
Lindane	0.234	0.0
Mirex	0.2447	0.0294
o,p-DDT	0.2043	0.031
p,p-DDT	0.243	0.0216
p,p-Methoxychlor	0.2084	0.0499
PCBs	0.2863	0.0336
<b>C07 Polycyclic Aromatic Hydrocarbons in Water</b>		
Acenaphthene	0.1445	0.0613
Acenaphthylene	0.167	0.0323
Anthracene	0.179	0.0714
Benzo(a)anthracene	0.218	0.0402
Benz(a)pyrene	0.2336	0.069
Benzo(b)fluoranthene	0.237	0.0382
Benzo(g,h,i)perylene	0.247	0.065
Benzo(k)fluoranthene	0.239	0.0204
Chrysene	0.1974	0.0417
Dibenzo(a,h)anthracene	0.238	0.1203
Fluoranthene	0.164	0.051
Fluorene	0.158	0.0472
Indeno(1,2,3-cd)pyrene	0.257	0.0523
Naphthalene	0.177	0.0326
Phenanthrene	0.1757	0.0368
Pyrene	0.159	0.0655
<b>C08 PCBs in Oil</b>		
PCBs	0.177	0.653
<b>C09 Metals on Quartz Filters</b>		
Cadmium	0.0777	0.425
Copper	0.101	0.210
Lead	0.108	0.137
Zinc	0.153	0.138
<b>C11/C12/C13 Toxicology</b>		
Trout	0.117	0.040
Daphnia	0.141	0
Microtox	0.200	0
<b>C14 Cyanide in Water</b>		
Cyanide (SAD)	0.126	0.0175
<b>C15 pH in Water</b>		
pH	0	0.1

Analyte	Slope	Intercept
<b>C16 Volatile Organic Compounds in Water</b>		
1,1-Dichloroethane	0.108	0.237
1,1-Dichloroethylene	0.151	0.357
1,1,1-Trichloroethane	0.119	0.174
1,1,2-Trichloroethane	0.0978	0.105
1,1,2,2-Tetrachloroethane	0.138	0
1,2-Dichlorobenzene	0.105	0.275
1,2-Dichloroethane	0.105	0.186
1,2-Dichloropropane	0.0975	0.0326
1,3-Dichlorobenzene	0.118	0.0175
1,4-Dichlorobenzene	0.109	0.461
Acetone	0.233	2.05
Benzene	0.123	0.219
Bromodichloromethane	0.133	0
Bromoform	0.169	0
Carbon Tetrachloride	0.134	0.356
Chlorobenzene	0.0992	0.0693
Chlorodibromomethane	0.136	0
Chloroform	0.140	0
cis(1,2)Dichloroethylene	0.111	0.403
cis(1,3)Dichloropropene	0.142	0.0342
Dichloromethane	0.139	0.290
Ethylbenzene	0.136	0.156
Ethylene Dibromide	0.0989	0
m,p-xylene	0.134	0
Methyl ethyl ketone	0.198	1.59
Methyl isobutyl ketone	0.153	1.24
Methyl-t-butyl ether	0.138	0.142
o-xylene	0.125	0.413
Styrene	0.109	0.827
Tetrachloroethylene	0.132	0.341
Toluene	0.122	0.352
trans(1,2)Dichloroethylene	0.137	0.106
trans(1,3)Dichloropropene	0.145	0.168
Trichloroethylene	0.124	0.162
Trichlorofluoromethane	0.142	0.178
Vinyl Chloride	0.1795	0.276
<b>C17 Metals in Soil</b>		
Aluminum	0.131	400
Antimony	0.573	0
Arsenic	0.111	0.62
Barium	0.0692	2.09
Beryllium	0.132	0.045
Boron	0.438	0
Cadmium	0.0866	0.153
Chromium	0.0761	1.53
Cobalt	0.0978	0
Copper	0.0836	0
Iron	0.0913	0
Lead	0.0746	1.68
Manganese	0.0733	0
Mercury	0.255	0
Nickel	0.103	0
Strontium	0.0871	0.459
Tin	0.240	0.613
Titanium	0.253	14.2
Uranium	0.0872	0.0649
Vanadium	0.141	0.155
Zinc	0.08	0.283
<b>C18 Polycyclic Aromatic Hydrocarbons in Soil</b>		
Acenaphthene	0.209	0.0161
Acenaphthylene	0.445	0
Anthracene	0.321	0
Benzo(a)anthracene	0.241	0
Benzo(a)pyrene	0.232	0.0058
Benzo(b)fluoranthene	0.280	0.0836
Benzo(g,h,i)perylene	0.243	0.039
Benzo(k)fluoranthene	0.372	0
Chrysene	0.221	0.056
Dibenzo(a,h)anthracene	0.303	0.0102
Fluoranthene	0.206	0.0165
Fluorene	0.25	0.112
Indene(1,2,3-cd)pyrene	0.223	0.107
Naphthalene	0.373	0
Phenanthrene	0.209	0
Pyrene	0.200	0.0423

Analyte	Slope	Intercept
<b>C19 Mercury in Water</b>		
Mercury	0.0917	0.0436
<b>C21 Metals on Cellulose Ester Filters</b>		
Cadmium	0.0474	0
Chromium	0.0509	0
Lead	0.0519	0
Zinc	0.0511	0.638
<b>C22 Organophosphorus Pesticides in Water</b>		
Atrazine	0.204	0
Azinphos-methyl	0.250	0.356
Bendiocarb	0.223	0.598
Carbaryl	0.301	0.073
Carbofuran	0.309	0
Chlorpyrifos	0.188	0.147
Cyanazine	0.275	0.164
Diazinon	0.254	0
Dimethoate	0.302	0.227
Diuron	0.238	0.583
Malathion	0.197	0.260
Metolachlor	0.179	0.191
Metribuzin	0.216	0.263
Parathion	0.237	0.0776
Phorate	0.274	0
Simazine	0.25	0.0079
Terbufos	0.279	0.0389
Trifluralin	0.260	0.0121
<b>C24 Aryloxy Acid Pesticides in Water</b>		
2,4-D	0.264	0.0979
2,4,5-T	0.244	0.0761
Bromoxynil	0.230	0.0704
Dicamba	0.290	0.0108
Dichlorofop-methyl	0.363	0
Dinoseb	0.339	0.0979
Picloram	0.482	0.0957
<b>C25 Chlorophenols in Water</b>		
2,3,4,6-Tetrachlorophenol	0.207	0.387
2,4-Dichlorophenol	0.237	0.278
2,4,6-Trichlorophenol	0.240	0
Pentachlorophenol	0.206	0.406
<b>C27 Glyphosate in Water</b>		
Glyphosate	0.138	1.85
<b>C29 Aldicarb in Water</b>		
Aldicarb	0.174	0.326
<b>C31A/C31B BTEX and Petroleum Hydrocarbons in Soil</b>		
Benzene	0.375	1.85
Ethylbenzene	0.243	2.23
F1	0.213	38.9
m/p-xylene	0.232	0
o-xylene	0.251	0
Toluene	0.263	1.45
F2	0.220	40.3
F3	0.227	26
F4	0.300	35
F4 Gravimetric	0.187	570
<b>C32 Chlorine in Water</b>		
Total Chlorine	0.0576	0.0193
Free Chlorine	0.0661	0.00248
<b>C33 Phenolics in Water</b>		
Phenolics	0.0678	0.0035
<b>C34 Oil and Grease in Water</b>		
Oil and Grease	0.185	7.15
<b>C35 PCBs in Soil</b>		
PCBs	0.339	0
<b>C36 Volatile Organic Compounds in Soil*</b>		
1,1-Dichloroethane	0.437	0.025
1,1-Dichloroethylene	0.643	0
1,1,1-Trichloroethane	0.395	0.245
1,1,2-Trichloroethane	0.226	0.426
1,1,2,2-Tetrachloroethane	0.205	0
1,2-Dichlorobenzene	0.223	0.291
1,2-Dichloroethane	0.324	0
1,2-Dichloropropane	0.291	0
1,3-Dichlorobenzene	0.222	0.842
1,4-Dichlorobenzene	0.192	1.65
Acetone	0.392	0
Benzene	0.314	0.351
Bromodichloromethane	0.267	0

Analyte	Slope	Intercept
<b>C36 (cont)</b>		
Bromoform	0.204	0.895
Carbon Tetrachloride	0.378	0.129
Chlorobenzene	0.206	0.193
Chlorodibromomethane	0.223	0.136
Chloroform	0.401	0.225
cis(1,2)Dichloroethylene	0.344	0.296
cis(1,3)Dichloropropene	0.277	0
Dichloromethane	0.606	0.0118
Ethylbenzene	0.160	2.25
Ethylene Dibromide	0.248	0
m,p-xylene	0.162	5.94
Methyl ethyl ketone	0.361	0
Methyl isobutyl ketone	0.313	0
Methyl-t-butyl ether	0.283	0.901
o-xylene	0.155	2.19
Styrene	0.214	0.297

Analyte	Slope	Intercept
Tetrachloroethylene	0.272	0
Toluene	0.182	2.03
trans(1,2)Dichloroethylene	0.389	0.727
trans(1,3)Dichloropropene	0.278	0
Trichloroethylene	0.309	0
Trichlorofluoromethane	0.8366	0.2568
<b>C37 Colour in Water</b>		
True Colour	0	0
<b>P50 Chlorine for Test Kits</b>		
Free Chlorine	0.0576	0.0193
Total Chlorine	0.0661	0.00248
<b>P51 Turbidity for Test Kits</b>		
Turbidity	0.0887	0
<b>P52 pH for Test Kits</b>		
pH	0	0.1

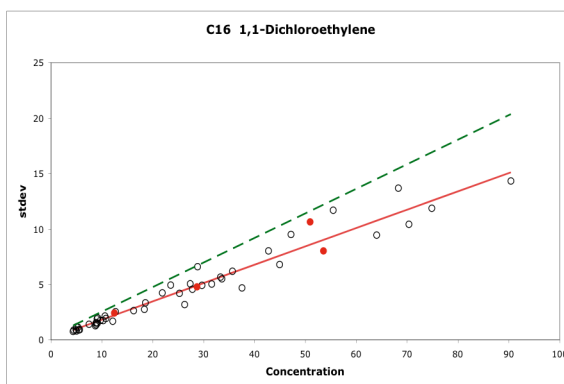
Note: A slope and intercept of zero means that equations have not yet been developed.

\* Fewer than five studies have been completed. Equations will be updated when five studies have been completed.

### 3.0 WARNING LIMIT EQUATIONS

For each analyte, warning limits are established to identify situations where the measured inter-laboratory standard deviation is so high that it requires further investigation. The procedure for assigning the warning limits is as follows,

- Obtain all historic assigned values and assigned standard deviations. Rank them in order of concentration,
- Plot assigned value against standard deviation and remove any data points that are not consistent with the bulk of the data,
- Manually fit a line above the regression equation line that encompasses most of the data points.



The table below contains the regression equations that are currently used to determine the warning limits.

Analyte	Slope	Intercept
<b>C01A Major Ions in Water</b>		
Alkalinity	0.05	2.5
Calcium	0.065	0.2
Chloride	0.06	0.35
Conductivity	0.035	3
Fluoride	0.0473	0.0278
Hardness	0.04	0.8
Magnesium	0.06	0.06
Nitrate	0.06	0.06
Nitrate+Nitrite	0.06	0.06
Potassium	0.065	0.1
Silica	0.07	0.1
Sodium	0.06	0.3
Sulphate	0.055	1
<b>C01B Nutrients in Water</b>		
Ammonia	0.075	0.06
Bromide	0.07	0.05
Organic Carbon	0.06	0.3
Nitrite	0.065	0.01
Phosphate	0.07	0.01
<b>C02A Metals (full range) in Water</b>		
Aluminum	0.06	0.005
Antimony	0.12	2
Arsenic	0.1	2
Barium	0.055	0.003
Beryllium	0.06	0.0008
Boron	0.07	0.006
Cadmium	0.055	0.0006
Chromium	0.055	0.005
Cobalt	0.05	0.004
Copper	0.05	0.004
Iron	0.065	0.008
Lead	0.11	0.005
Manganese	0.053	0.003
Molybdenum	0.055	0.004
Nickel	0.052	0.006
Selenium	0.12	0.638
Silver	0.06	0.001
Strontium	0.047	0.002
Thallium	0.072	0.001
Tin	0.13	00.001
Titanium	0.045	0.002
Uranium	0.07	0.003
Vanadium	0.06	0.003
Zinc	0.065	0.005
<b>C02B Metals (high range) in Water</b>		
Aluminum	0.06	0.01
Barium	0.05	0.002
Boron	0.06	0.005
Chromium	0.05	0.005
Cobalt	0.05	0.002
Copper	0.05	0.003
Iron	0.06	0.01
Lead	0.05	0.01
Manganese	0.05	0.002
Molybdenum	0.07	0.005
Nickel	0.055	0.003
Strontium	0.05	0.005
Thallium	0.06	0.01
Titanium	0.05	0.002
Vanadium	0.045	0.003
Zinc	0.065	0.002
<b>C02C Metals (total) in Water</b>		
Aluminum	0.06	0.007
Barium	0.05	0.003
Boron	0.065	0.01
Chromium	0.055	0.004
Cobalt	0.05	0.003
Copper	0.055	0.003
Iron	0.055	0.011
Lead	0.05	0.005
Manganese	0.055	0.002
Molybdenum	0.06	0.002

Analyte	Slope	Intercept
<b>C02C (cont)</b>		
Nickel	0.048	0.004
Strontium	0.05	0.005
Thallium	0.055	0.006
Titanium	0.05	0.003
Vanadium	0.055	0.005
Zinc	0.06	0.01
<b>C03 Total Nutrients in Water</b>		
Kjeldahl Nitrogen	0.2	0.15
Phosphorus	0.06	0.02
<b>C04A Solids in Water</b>		
Dissolved Solids	0.03	17
Suspended Solids	0.095	3
Volatile Solids	0.12	1.2
<b>C04B BOD in Water</b>		
BOD5	0.2	2
CBOD5	0.2	2
<b>C04C Turbidity in Water</b>		
Turbidity	0.11	0.3
<b>C04D COD in Water</b>		
COD	0.04	5
<b>C05A Microbiology in Water</b>		
E. coli	0.2	3
Fecal coliforms	0.35	2
Heterotrophic Plate Count	0.17	20
Total coliforms	0.18	5
<b>C06 Organochlorine Pesticides in Water</b>		
Alpha- BHC	0.35	0.04
Alpha-Chlordane	0.25	0.02
Aldrin	0.4	0.04
Dieldrin	0.035	0.04
Endosulphan I	0.35	0.04
Endosulphan II	0.32	0.07
Endrin	0.32	0.05
Gamma-Chlordane	0.25	0.02
Heptachlor	0.45	0.02
Heptachlor epoxide	0.25	0.0471
Lindane	0.32	0.05
Mirex	0.4	0.05
o,p-DDT	0.32	0.05
p,p-DDT	0.35	0.05
p,p-Methoxychlor	0.3	0.07
PCBs	0.38	0.2
<b>C07 Polycyclic Aromatic Hydrocarbons in Water</b>		
Acenaphthene	0.25	0.1
Acenaphthylene	0.25	0.1
Anthracene	0.25	0.15
Benzo(a)anthracene	0.32	0.15
Benzo(a)pyrene	0.35	0.15
Benzo(b)fluoranthene	0.35	0.1
Benzo(g,h,i)perylene	0.35	0.15
Benzo(k)fluoranthene	0.32	0.1
Chrysene	0.3	0.1
Dibenzo(a,h)anthracene	0.35	0.2
Fluoranthene	0.25	0.1
Fluorene	0.23	0.1
Indeno(1,2,3-cd)pyrene	0.35	0.15
Nalthalene	0.25	0.1
Phenanthrene	0.25	0.1
Pyrene	0.3	0.15
<b>C08 PCBs in Oil</b>		
PCBs	0.23	2
<b>C09 Metals on Quartz Filters</b>		
Cadmium	0.12	1
Copper	0.150	1
Lead	0.18	1
Zinc	0.25	1
<b>C11/C12/C13 Toxicology</b>		
Trout	0.2	0.1
Daphnia	0.27	1
Microtox	0.32	0.03
<b>C14 Cyanide in Water</b>		
Cyanide (SAD)	0.2	0.03

Analyte	Slope	Intercept
<b>C15 pH in Water</b>		
pH	0	0.1
<b>C16 Volatile Organic Compounds in Water</b>		
1,1-Dichloroethane	0.145	0.5
1,1-Dichloroethylene	0.22	0.8
1,1,1-Trichloroethane	0.15	0.5
1,1,2-Trichloroethane	0.13	0.3
1,1,2,2-Tetrachloroethane	0.165	2
1,2-Dichlorobenzene	0.14	0.6
1,2-Dichloroethane	0.135	0.5
1,2-Dichloropropane	0.125	0.3
1,3-Dichlorobenzene	0.16	0.5
1,4-Dichlorobenzene	0.16	0.8
Acetone	0.3	3
Benzene	0.18	0.5
Bromodichloromethane	0.15	2
Bromoform	0.25	2.5
Carbon Tetrachloride	0.2	0.7
Chlorobenzene	0.12	0.4
Chlorodibromomethane	0.27	1.2
Chloroform	0.18	2
cis(1,2)Dichloroethylene	0.145	0.8
cis(1,3)Dichloropropene	0.18	0.6
Dichloromethane	0.18	1
Ethylbenzene	0.16	0.7
Ethylene Dibromide	0.12	0.5
m,p-xylene	0.16	1.2
Methyl ethyl ketone	0.25	1.8
Methyl isobutyl ketone	0.2	2
Methyl-t-butyl ether	0.18	1
o-xylene	0.16	1
Styrene	0.14	1.5
Tetrachloroethylene	0.16	1
Toluene	0.15	1.7
trans(1,2)Dichloroethylene	0.18	0.6
trans(1,3)Dichloropropene	0.175	0.5
Trichloroethylene	0.16	1
Trichlorofluoromethane	0.17	0.7
Vinyl Chloride	0.215	0.8
<b>C17 Metals in Soil</b>		
Aluminum	0.19	600
Antimony	0.75	0.06
Arsenic	0.16	2
Barium	0.09	3
Beryllium	0.2	0.07
Boron	0.55	0.5
Cadmium	0.1	0.4
Chromium	0.11	1.7
Cobalt	0.12	0.25
Copper	0.11	2.2
Iron	0.12	300
Lead	0.092	4.5
Manganese	0.09	7
Mercury	0.38	50
Nickel	0.13	1
Strontium	0.11	2
Tin	0.35	1
Titanium	0.3	30
Uranium	0.11	0.1
Vanadium	0.165	2
Zinc	0.095	8
<b>C18 Polycyclic Aromatic Hydrocarbons in Soil</b>		
Acenaphthene	0.32	0.03
Acenaphthylene	0.5	0.03
Anthracene	0.4	0.03
Benzo(a)anthracene	0.35	0.15
Benzo(a)pyrene	0.35	0.2
Benzo(b)fluoranthene	0.39	0.3
Benzo(g,h,i)perylene	0.35	0.5
Benzo(k)fluoranthene	0.45	0.2
Chrysene	0.33	0.2
Dibenzo(a,h)anthracene	0.37	0.05
Fluoranthene	0.3	0.5
Fluorene	0.532	0.237
Indene(1,2,3-cd)pyrene	0.3	0.4
Naphthalene	0.5	0.3

Analyte	Slope	Intercept
<b>C18 (cont)</b>		
Phenanthrene	0.33	0.2
Pyrene	0.3	0.5
<b>C19 Mercury in Water</b>		
Mercury	0.13	0.08
<b>C21 Metals on Cellulose Ester Filters</b>		
Cadmium	0.065	0.07
Chromium	0.07	1
Lead	0.07	0.6
Zinc	0.08	2
<b>C22 Organophosphorus Pesticides in Water</b>		
Atrazine	0.31	0.05
Azinphos-methyl	0.4	1
Bendiocarb	0.36	1
Carbaryl	0.42	0.8
Carbofuran	0.4	1.5
Chlorpyrifos	0.33	0.25
Cyanazine	0.4	0.4
Diazinon	0.4	0.2
Dimethoate	0.45	0.6
Diuron	0.35	2
Malathion	0.3	0.5
Metolachlor	0.3	0.3
Metribuzin	0.35	0.5
Parathion	0.35	0.2
Phorate	0.35	0.1
Simazine	0.35	0.2
Terbufos	0.4	0.1
Trifluralin	0.37	0.15
<b>C24 Aryloxy Acid Pesticides in Water</b>		
2,4-D	0.37	0.25
2,4,5-T	0.4	0.15
Bromoxynil	0.35	0.1
Dicamba	0.40	0.10
Dichlorofop-methyl	0.47	0.05
Dinoseb	0.48	0.2
Picloram	0.6	0.2
<b>C25 Chlorophenols in Water</b>		
2,3,4,6-Tetrachlorophenol	0.35	0.5
2,4-Dichlorophenol	0.35	0.7
2,4,6-Trichlorophenol	0.35	0.2
Pentachlorophenol	0.32	0.5
<b>C27 Glyphosate in Water</b>		
Glyphosate	0.25	3
<b>C29 Aldicarb in Water</b>		
Aldicarb	0.320	0.4
<b>C31A/C31B BTEX and Petroleum hydrocarbons in Soil</b>		
Benzene	0.50	5
Ethylbenzene	0.40	7
F1	0.28	60
m/p-xylene	0.3	10
o-xylene	0.3	7
Toluene	0.35	5
F2	0.3	50
F3	0.3	100
F4	0.4	100
F4 Gravimetric	0.3	900
<b>C32 Chlorine in Water</b>		
Total Chlorine	0.08	0.04
Free Chlorine	0.08	0.04
<b>C33 Phenolics in Water</b>		
Phenolics	0.1	0.005
<b>C34 Oils and Grease in Water</b>		
Oil and Grease	0.3	10
<b>C35 PCBs in Soil</b>		
Total PCBs	0.42	1
<b>C36 VOCs in Soil</b>		
1,1-Dichloroethane	0.5	1
1,1-Dichloroethylene	0.8	0.4
1,1,1-Trichloroethane	0.5	1.5
1,1,2-Trichloroethane	0.3	1.0
1,1,2,2-Tetrachloroethane	0.27	1.2
1,2-Dichlorobenzene	0.32	2
1,2-Dichloroethane	0.4	1
1,2-Dichloropropane	0.35	1
1,3-Dichlorobenzene	0.33	2

Analyte	Slope	Intercept
<b>C36 VOCs in Soil (Cont.)</b>		
1,4-Dichlorobenzene	0.27	3
Acetone	0.48	2
Benzene	0.45	1
Bromodichloromethane	0.32	1
Bromoform	0.28	1.5
Carbon Tetrachloride	0.5	1.5
Chlorobenzene	0.27	1.5
Chlorodibromomethane	0.35	1
Chloroform	0.55	1.5
cis(1,2)Dichloroethylene	0.45	1.5
cis(1,3)Dichloropropene	0.33	1
Dichloromethane	0.7	1.5
Ethylbenzene	0.27	3
Ethylene Dibromide	0.35	1.5
m,p-xylene	0.35	5.94
Methyl ethyl ketone	0.45	2
Methyl isobutyl ketone	0.45	2
Methyl-t-butyl ether	0.4	1.5

Analyte	Slope	Intercept
<b>C36 VOCs in Soil (Cont.)</b>		
o-xylene	0.30	3
Styrene	0.3	1.5
Tetrachloroethylene	0.35	1
Toluene	0.3	3
trans(1,2)Dichloroethylene	0.5	1.5
trans(1,3)Dichloropropene	0.35	1.5
Trichloroethylene	0.38	1
Trichlorofluoromethane	0	0
<b>C37 Colour in Water</b>		
True Colour	0	0
<b>P50 Chlorine for Test Kits</b>		
Free Chlorine	0.08	0.04
Total Chlorine	0.08	0.04
<b>P51 Turbidity for Test Kits</b>		
Turbidity	0.11	0.3
<b>P52 pH for Test Kits</b>		
pH	0	0.1