CALCULATION OF METALS TREATMENT STANDARDS FROM GRAB PERFORMANCE DATA FROM INMETCO'S HTMR PROCESS

	SB	AS	BA	BE	CD	CR	PB	NI	SE	AG	V	ZN
# OF SAMPLES	40	40	40	40	40	40	40	122	122	40	40	40
MEAN OF TREATED DATA	0.00153	0.0012	0.841	0.0011	0.0039	0.126	0.003	2.81	0.005	0.0036	0.0011	0.274
VARIAB-ILITY FACTOR	28.1	21.6	3.9	16.1	51	6.7	39.7	4.84	57.8	30.5	14.2	13.8
FORMULA	1	1	1	1	1	1	1	1	1	1	1	1
STAND DEV OF LOG TRANSFORM DATA	0.5084	0.358	0.695	0.225	0.988	1.052	0.678	0.782	0.895	0.637	-4.578	1.458
MEAN OF TRANSFORM DATA	-4.341	-4.48	-0.43	-4.52	-3.903	-2.611	-3.73	0.787	-3.33	-3.72	0.173	-2.05
TREATMENT STANDARD	0.043	0.026	3.3	0.018	0.20	0.85	0.12	13.6	0.29	0.11	0.015	3.8

1-Treatment Standard (TS)= Exponent(mean of log transformed data + 2.33 (standard deviation of log transforme data)). The INMETCO data consisted of both nondetects (detection limits) and detect values. The applicabl formula (according to the various data scenarios) was the standard BDAT formula shown above. All calculation were performed in accordance with the criteria specified in the "BDAT Methodology Document"

NOTE- No QA/QC information (i.e., matrix spike recovery data) was provided by INMETCO, thus for the purpos of this proposed rule the Agency is assuming 100 percent recovery.

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APPENDIX B

CALCULATION OF THE TREATMENT STANDARDS FROM COMPANY X DATA

STIX 3.0
'C-METALS

EW DATA

ASE	ANTIMONY	LN
1	0.0100	-4.6052
2	0.0100	-4.6052
3	0.0100	-4.6052
4	0.0100	-4.6052
5	0.0100	-4.6052
6	0.0100	-4.6052
7	0.0100	-4.6052
8	0.0100	-4.6052
9	0.0100	-4.6052
10	0.0100	-4.6052
11	0.0100	-4.6052
12	0.0100	-4.6052
13	0.0300	-3.5066
14	0.0300	-3.5066
15	0.0200	-3.9120
16	0.0100	-4.6052
17	0.0100	-4.6052
18	0.0100	-4.6052
19	0.0100	-4.6052
20	0.0100	-4.6052
21	0.0100	-4.6052
22	0.0530	-2.9375
23	0.0100	-4.6052
24	0.0100	-4.6052
25	0.0420	-3.1701
26	0.0100	-4.6052
27	0.0100	-4.6052
28	0.0100	-4.6052
29	0.0200	-3.9120
30	0.0200	-3.9120
31	0.0100	-4.6052
32	0.0200	-3.9120
33	0.0100	-4.6052
34	0.0600	-2.8134
35	0.0100	-4.6052
36	0.0100	-4.6052
37	0.0200	-3.9120
38	0.0100	-4.6052
39	0.0100	-4.6052
40	0.0100	-4.6052

STATISTIX 3.0
ID: TC-METALS

DESCRIPTIVE STATISTICS

	ANTIMONY	LN
CASES	40	40
MEAN	1.538E-02	-4.341
S.D.	1.189E-02	5.084E-01
S.E. (MEAN)	1.881E-03	8.039E-02
LOWER 99.9% C.I.	8.683E-03	-4.627
UPPER 99.9% C.I.	2.207E-02	-4.055
C.V.	77.36	11.71
MEDIAN	1.000E-02	-4.605
MINIMUM	1.000E-02	-4.605
MAXIMUM	6.000E-02	-2.813

Treatment Standard (TS) = Exponent (mean of Log transformed data + 2.33) mean of the standard deviation of the Log transformed data.

$$TS = Exp(-4.341 + 2.33(0.5084))$$

$$TS = 0.043$$

STATISTIX 3.0
ID: TC-DATA

VIEW DATA

CASE	ARSENIC	LN
1	0.0100	-4.6052
2	0.0100	-4.6052
3	0.0100	-4.6052
4	0.0100	-4.6052
5	0.0100	-4.6052
6	0.0100	-4.6052
7	0.0100	-4.6052
8	0.0100	-4.6052
9	0.0100	-4.6052
10	0.0100	-4.6052
11	0.0100	-4.6052
12	0.0100	-4.6052
13	0.0100	-4.6052
14	0.0100	-4.6052
15	0.0100	-4.6052
16	0.0300	-3.5066
17	0.0100	-4.6052
18	0.0100	-4.6052
19	0.0100	-4.6052
20	0.0100	-4.6052
21	0.0100	-4.6052
22	0.0100	-4.6052
23	0.0100	-4.6052
24	0.0100	-4.6052
25	0.0100	-4.6052
26	0.0100	-4.6052
27	0.0100	-4.6052
28	0.0100	-4.6052
29	0.0100	-4.6052
30	0.0300	-3.5066
31	0.0400	-3.2189
32	0.0300	-3.5066
33	0.0100	-4.6052
34	0.0100	-4.6052
35	0.0100	-4.6052
36	0.0100	-4.6052
37	0.0100	-4.6052
38	0.0100	-4.6052
39	0.0100	-4.6052
40	0.0100	-4.6052

STATISTIX 3.0
ID: TC-DATA

DESCRIPTIVE STATISTICS

	ARSENIC	LN
CASES	40	40
MEAN	1.225E-02	-4.488
S.D.	6.975E-03	3.579E-01
S.E. (MEAN)	1.103E-03	5.658E-02
LOWER 99.9% C.I.	8.326E-03	-4.689
UPPER 99.9% C.I.	1.617E-02	-4.287
C.V.	56.94	7.97
MEDIAN	1.000E-02	-4.605
MINIMUM	1.000E-02	-4.605
MAXIMUM	4.000E-02	-3.219

$$TS = Exp(-4.488 + 2.33(0.3579))$$

$$TS = 0.026$$

ATISTIX 3.0
TC-METALS

RW DATA

ASE	BARIUM	LN
1	1.2600	0.2311
2	0.2300	-1.4697
3	0.5800	-0.5447
4	0.2300	-1.4697
5	1.8100	0.5933
6	0.9200	-0.0834
7	1.5200	0.4187
8	1.1600	0.1484
9	0.6000	-0.5108
10	0.8100	-0.2107
11	0.9500	-0.0513
12	0.4600	-0.7765
13	0.6800	-0.3857
14	0.3600	-1.0217
15	0.8900	-0.1165
16	0.2600	-1.3471
17	0.2600	-1.3471
18	0.2900	-1.2379
19	0.2400	-1.4271
20	0.4500	-0.7985
21	0.5100	-0.6733
22	1.1000	0.0953
23	1.2000	0.1823
24	0.6300	-0.4620
25	0.3300	-1.1087
26	0.5000	-0.6931
27	0.3800	-0.9676
28	0.6300	-0.4620
29	0.4200	-0.8675
30	0.6100	-0.4943
31	0.6900	-0.3711
32	0.6500	-0.4308
33	3.5900	1.2782
34	3.2300	1.1725
35	1.5900	0.4637
36	1.4500	0.3716
37	0.5900	-0.5276
38	0.3200	-1.1394
39	0.9500	-0.0513
40	0.3300	-1.1087

DESCRIPTIVE STATISTICS

	BARIUM	LN
CASES	40	40
MEAN	8.415E-01	-4.300E-01
S.D.	7.258E-01	6.951E-01
S.E. (MEAN)	1.148E-01	1.099E-01
LOWER 99.9% C.I.	4.332E-01	-8.210E-01
UPPER 99.9% C.I.	1.250	-3.898E-02
C.V.	86.25	161.64
MEDIAN	6.200E-01	-4.782E-01
MINIMUM	2.300E-01	-1.470
MAXIMUM	3.590	1.278

$TS = Exp(-0.43 + 2.33(0.695))$

$TS = 3.3$

TISTIX 3.0
TC-METALS

W DATA

SE	BERYLLIUM	LN
1	0.0100	-4.6052
2	0.0200	-3.9120
3	0.0100	-4.6052
4	0.0100	-4.6052
5	0.0100	-4.6052
6	0.0200	-3.9120
7	0.0100	-4.6052
8	0.0100	-4.6052
9	0.0100	-4.6052
10	0.0100	-4.6052
11	0.0100	-4.6052
12	0.0100	-4.6052
13	0.0100	-4.6052
14	0.0100	-4.6052
15	0.0100	-4.6052
16	0.0100	-4.6052
17	0.0100	-4.6052
18	0.0100	-4.6052
19	0.0100	-4.6052
20	0.0100	-4.6052
21	0.0180	-4.0174
22	0.0100	-4.6052
23	0.0100	-4.6052
24	0.0100	-4.6052
25	0.0100	-4.6052
26	0.0100	-4.6052
27	0.0100	-4.6052
28	0.0100	-4.6052
29	0.0100	-4.6052
30	0.0100	-4.6052
31	0.0100	-4.6052
32	0.0100	-4.6052
33	0.0200	-3.9120
34	0.0100	-4.6052
35	0.0100	-4.6052
36	0.0100	-4.6052
37	0.0100	-4.6052
38	0.0200	-3.9120
39	0.0100	-4.6052
40	0.0100	-4.6052

STATISTIX 3.0
ID: TC-METALS

DESCRIPTIVE STATISTICS

	BERYLLIUM	LN
CASES	40	40
MEAN	1.120E-02	-4.521
S.D.	3.228E-03	2.256E-01
S.E. (MEAN)	5.104E-04	3.567E-02
LOWER 99.9% C.I.	9.384E-03	-4.648
UPPER 99.9% C.I.	1.302E-02	-4.394
C.V.	28.82	4.99
MEDIAN	1.000E-02	-4.605
MINIMUM	1.000E-02	-4.605
MAXIMUM	2.000E-02	-3.912

$TS = Exp(-4521 + 2.33(0.2256))$

$TS = 0.018$

TISTIX 3.0
TC-METALS

W DATA

SE	CADMIUM	LN
1	0.0100	-4.6052
2	0.0100	-4.6052
3	0.0100	-4.6052
4	0.0100	-4.6052
5	0.0500	-2.9957
6	0.1000	-2.3026
7	0.2500	-1.3863
8	0.3800	-0.9676
9	0.0200	-3.9120
10	0.0100	-4.6052
11	0.0500	-2.9957
12	0.0300	-3.5066
13	0.0100	-4.6052
14	0.0100	-4.6052
15	0.0300	-3.5066
16	0.0700	-2.6593
17	0.0100	-4.6052
18	0.0300	-3.5066
19	0.0900	-2.4079
20	0.0300	-3.5066
21	0.0100	-4.6052
22	0.0100	-4.6052
23	0.0100	-4.6052
24	0.0100	-4.6052
25	0.0100	-4.6052
26	0.0100	-4.6052
27	0.0100	-4.6052
28	0.0100	-4.6052
29	0.0200	-3.9120
30	0.0200	-3.9120
31	0.0100	-4.6052
32	0.0500	-2.9957
33	0.0400	-3.2189
34	0.0100	-4.6052
35	0.0100	-4.6052
36	0.0800	-2.5257
37	0.0100	-4.6052
38	0.0100	-4.6052
39	0.0100	-4.6052
40	0.0100	-4.6052

STATISTIX 3.0
ID: TC-METALS

DESCRIPTIVE STATISTICS

	CADMIUM	LN
CASES	40	40
MEAN	3.925E-02	-3.903
S.D.	6.996E-02	0.988 SD
S.E. (MEAN)	1.106E-02	1.563E-01
LOWER 99.9% C.I.	-1.082E-04	-4.459
UPPER 99.9% C.I.	7.861E-02	-3.347
C.V.	178.24	25.32
MEDIAN	1.000E-02	-4.605
MINIMUM	1.000E-02	-4.605
MAXIMUM	3.800E-01	-0.968

$TS = Exp(-3.903 + 2.33(0.988))$
$TS = 0.20$

ATISTIX 3.0
: TC-METALS

EW DATA

ASE	CHROMIUM	LN
1	0.3200	-1.1394
2	0.2900	-1.2379
3	0.0100	-4.6052
4	0.0200	-3.9120
5	0.0900	-2.4079
6	0.1100	-2.2073
7	0.0700	-2.6593
8	0.0700	-2.6593
9	0.0400	-3.2189
10	0.0400	-3.2189
11	0.5600	-0.5798
12	0.0400	-3.2189
13	0.0400	-3.2189
14	0.0300	-3.5066
15	0.0700	-2.6593
16	0.0300	-3.5066
17	0.0400	-3.2189
18	0.1100	-2.2073
19	0.1400	-1.9661
20	0.0700	-2.6593
21	0.6100	-0.4943
22	0.0100	-4.6052
23	0.0100	-4.6052
24	0.0100	-4.6052
25	0.0700	-2.6593
26	0.0600	-2.8134
27	0.0700	-2.6593
28	0.0700	-2.6593
29	0.0800	-2.5257
30	0.0800	-2.5257
31	0.1600	-1.8326
32	0.6500	-0.4308
33	0.2000	-1.6094
34	0.0900	-2.4079
35	0.0800	-2.5257
36	0.1200	-2.1203
37	0.0600	-2.8134
38	0.2900	-1.2379
39	0.0700	-2.6593
40	0.0700	-2.6593

STATISTIX 3.0
ID: TC-METALS

DESCRIPTIVE STATISTICS

	CHROMIUM	LN
CASES	40	40
MEAN	1.263E-01	-2.611
S.D.	1.571E-01	1.052
S.E. (MEAN)	2.484E-02	1.663E-01
LOWER 99.9% C.I.	3.788E-02	-3.203
UPPER 99.9% C.I.	2.146E-01	-2.020
C.V.	124.42	40.28
MEDIAN	7.000E-02	-2.659
MINIMUM	1.000E-02	-4.605
MAXIMUM	6.500E-01	-4.308E-01

$TS = Exp(-2.611 + 2.33(1.052))$

$TS = 0.85$

TISTIX 3.0
TC-METALS

W DATA

SE	LEAD	LN
1	0.0300	-3.5066
2	0.0200	-3.9120
3	0.0100	-4.6052
4	0.0100	-4.6052
5	0.0500	-2.9957
6	0.0100	-4.6052
7	0.0300	-3.5066
8	0.0400	-3.2189
9	0.0200	-3.9120
10	0.0200	-3.9120
11	0.1400	-1.9661
12	0.0200	-3.9120
13	0.0400	-3.2189
14	0.0300	-3.5066
15	0.0200	-3.9120
16	0.0100	-4.6052
17	0.0100	-4.6052
18	0.0400	-3.2189
19	0.0400	-3.2189
20	0.0300	-3.5066
21	0.0500	-2.9957
22	0.0100	-4.6052
23	0.0100	-4.6052
24	0.0100	-4.6052
25	0.0200	-3.9120
26	0.0200	-3.9120
27	0.0200	-3.9120
28	0.0200	-3.9120
29	0.0700	-2.6593
30	0.0500	-2.9957
31	0.0500	-2.9957
32	0.0600	-2.8134
33	0.0300	-3.5066
34	0.0300	-3.5066
35	0.0300	-3.5066
36	0.0300	-3.5066
37	0.0100	-4.6052
38	0.0100	-4.6052
39	0.0500	-2.9957
40	0.0100	-4.6052

STATISTIX 3.0
ID: TC-METALS

DESCRIPTIVE STATISTICS

	LEAD	LN
CASES	40	40
MEAN	3.025E-02	-3.730
S.D.	2.391E-02	6.786E-01
S.E. (MEAN)	3.781E-03	1.073E-01
LOWER 99.9% C.I.	1.680E-02	-4.112
UPPER 99.9% C.I.	4.370E-02	-3.348
C.V.	79.04	18.19
MEDIAN	2.500E-02	-3.709
MINIMUM	1.000E-02	-4.605
MAXIMUM	1.400E-01	-1.966

$TS = Exp(-3.73 + 2.33(0.678))$

$TS = 0.12$

STATISTIX 3.0
ID: inmetco

DATE: 6 FEB 97

VIEW DATA

CASE	LN	NI						
1	1.2641	3.5400	52	-1.5141	0.2200	103	1.3661	3.9200
2	1.5063	4.5100	53	1.7047	5.5000	104	0.5933	1.8100
3	0.8416	2.3200	54	0.6780	1.9700	105	0.6931	2.0000
4	0.5306	1.7000	55	-0.1744	0.8400	106	1.9755	7.2100
5	1.0260	2.7900	56	-1.6094	0.2000	107	0.8587	2.3600
6	1.3350	3.8000	57	-0.0408	0.9600	108	1.3962	4.0400
7	1.0188	2.7700	58	0.6523	1.9200	109	2.1541	8.6200
8	1.5041	4.5000	59	-1.3093	0.2700	110	0.2624	1.3000
9	0.9969	2.7100	60	-0.1278	0.8800	111	0.5128	1.6700
10	1.0473	2.8500	61	-1.6094	0.2000	112	0.4383	1.5500
11	0.8329	2.3000	62	1.5151	4.5500	113	0.3148	1.3700
12	0.3853	1.4700	63	0.2469	1.2800	114	1.3056	3.6900
13	-0.2485	0.7800	64	0.3853	1.4700	115	1.1663	3.2100
14	0.0770	1.0800	65	-0.3425	0.7100	116	1.3218	3.7500
15	1.0080	2.7400	66	-0.6539	0.5200	117	0.6152	1.8500
16	1.5151	4.5500	67	-1.1087	0.3300	118	0.7839	2.1900
17	0.8796	2.4100	68	0.0862	1.0900	119	1.0543	2.8700
18	1.0852	2.9600	69	0.0296	1.0300	120	1.4255	4.1600
19	1.5913	4.9100	70	0.1823	1.2000	121	2.1713	8.7700
20	0.9123	2.4900	71	0.0000	1.0000	122	1.1019	3.0100
21	1.1184	3.0600	72	-0.1278	0.8800			
22	0.7655	2.1500	73	1.2470	3.4800			
23	1.4398	4.2200	74	1.7544	5.7800			
24	1.4061	4.0800	75	1.5518	4.7200			
25	1.5644	4.7800	76	1.7011	5.4800			
26	1.5019	4.4900	77	1.5326	4.6300			
27	1.5129	4.5400	78	0.9969	2.7100			
28	1.3191	3.7400	79	1.4816	4.4000			
29	0.3920	1.4800	80	2.2834	9.8100			
30	0.4637	1.5900	81	1.9879	7.3000			
31	0.3436	1.4100	82	1.7334	5.6600			
32	0.6313	1.8800	83	1.6332	5.1200			
33	1.0260	2.7900	84	1.0367	2.8200			
34	0.8755	2.4000	85	1.0403	2.8300			
35	0.9783	2.6600	86	0.5822	1.7900			
36	1.3191	3.7400	87	0.8502	2.3400			
37	0.4318	1.5400	88	0.9042	2.4700			
38	0.8502	2.3400	89	1.3218	3.7500			
39	1.3788	3.9700	90	1.0188	2.7700			
40	1.5644	4.7800	91	1.5686	4.8000			
41	0.1484	1.1600	92	1.5282	4.6100			
42	-0.1625	0.8500	93	1.4816	4.4000			
43	-0.6733	0.5100	94	1.0818	2.9500			
44	0.4447	1.5600	95	0.7467	2.1100			
45	0.3577	1.4300	96	0.1655	1.1800			
46	1.2000	3.3200	97	0.8629	2.3700			
47	0.0488	1.0500	98	0.3577	1.4300			
48	0.2852	1.3300	99	1.4679	4.3400			
49	0.9282	2.5300	100	0.7419	2.1000			
50	1.1314	3.1000	101	0.4947	1.6400			
51	-0.4308	0.6500	102	-0.7765	0.4600			

STATISTIX 3.0 DATE: 6 FEB 97
ID: inmetco

DESCRIPTIVE STATISTICS

	LN	NI
CASES	122	122
MEAN	7.871E-01	2.811
S.D.	7.825E-01	1.833
S.E. (MEAN)	7.085E-02	1.659E-01
LOWER 99.0% C.I.	6.016E-01	2.377
UPPER 99.0% C.I.	0.972	3.245
C.V.	99.43	65.20
MEDIAN	9.083E-01	2.480
MINIMUM	-1.609	2.000E-01
MAXIMUM	2.283	9.810

Calculation of Standard for Nickel from 122 data pts from Inmetco's grab data

Treatment Standard (TS) = Exponent (mean of log transformed data + 2.33 (Standard deviation of log transf. data))
C99

$TS = Exp(.7871 + 2.33(.7825))$

$TS = 13.6$

STATISTIX 3.0
ID: inmetco

DATE: 6 FEB 97

VIEW DATA

CASE	LN	SE
1	-2.4079	0.0900
2	-3.2189	0.0400
3	-3.5066	0.0300
4	-2.9957	0.0500
5	-3.5066	0.0300
6	-2.8134	0.0600
7	-3.5066	0.0300
8	-2.4079	0.0900
9	-1.9661	0.1400
10	-1.8971	0.1500
11	-2.3026	0.1000
12	-2.6593	0.0700
13	-2.4079	0.0900
14	-2.9957	0.0500
15	-2.9957	0.0500
16	-4.6052	0.0100
17	-3.2189	0.0400
18	-2.9957	0.0500
19	-3.9120	0.0200
20	-3.5066	0.0300
21	-3.9120	0.0200
22	-2.3026	0.1000
23	-2.4079	0.0900
24	-2.4079	0.0900
25	-3.5066	0.0300
26	-2.9957	0.0500
27	-3.5066	0.0300
28	-3.2189	0.0400
29	-2.5257	0.0800
30	-3.5066	0.0300
31	-3.6119	0.0270
32	-4.7105	0.0090
33	-3.1942	0.0410
34	-4.6052	<0.0100
35	-4.6052	<0.0100
36	-4.6052	<0.0100
37	-4.6052	<0.0100
38	-4.6052	<0.0100
39	-4.6052	<0.0100
40	-4.6052	<0.0100
41	-2.4079	0.0900
42	-4.6052	<0.0100
43	-4.6052	<0.0100
44	-3.2189	0.0400
45	-2.4079	0.0900
46	-2.9957	0.0500
47	-2.9957	0.0500
48	-2.8134	0.0600
49	-4.6052	<0.0100
50	-4.6052	<0.0100
51	-4.6052	<0.0100
52	-4.6052	<0.0100
53	-2.1203	0.1200
54	-1.9661	0.1400
55	-2.4079	0.0900
56	-2.4079	0.0900
57	-2.5257	0.0800
58	-3.5066	0.0300
59	-2.9957	0.0500
60	-2.8134	0.0600
61	-2.6593	0.0700
62	-1.9661	0.1400
63	-2.2073	0.1100
64	-2.6593	0.0700
65	-2.1203	0.1200
66	-2.3026	0.1000
67	-2.0402	0.1300
68	-1.8326	0.1600
69	-2.8134	0.0600
70	-4.6052	<0.0100
71	-4.6052	0.0100
72	-4.6052	<0.0100
73	-3.5066	0.0300
74	-2.6593	0.0700
75	-2.5257	0.0800
76	-2.9957	0.0500
77	-2.4079	0.0900
78	-4.6052	0.0100
79	-4.6052	0.0100
80	-4.6052	<0.0100
81	-4.6052	<0.0100
82	-4.6052	<0.0100
83	-4.6052	<0.0100
84	-4.6052	<0.0100
85	-4.6052	<0.0100
86	-4.6052	<0.0100
87	-2.9957	0.0500
88	-3.2189	0.0400
89	-2.8134	0.0600
90	-2.8134	0.0600
91	-2.8134	0.0600
92	-2.9957	0.0500
93	-3.2189	0.0400
94	-2.9957	0.0500
95	-3.2189	0.0400
96	-2.9957	0.0500
97	-3.9120	0.0200
98	-3.9120	0.0200
99	-2.9957	0.0500
100	-2.6593	0.0700
101	-2.8134	0.0600
102	-2.9957	0.0500
103	-4.6052	0.0100
104	-4.6052	<0.0100
105	-4.6052	<0.0100
106	-3.9120	0.0200
107	-2.5257	0.0800
108	-2.9957	0.0500
109	-2.5257	0.0800
110	-2.8134	0.0600
111	-2.5257	0.0800
112	-3.9120	0.0200
113	-4.6052	0.0100
114	-2.9957	0.0500
115	-2.6593	0.0700
116	-2.6593	0.0700
117	-2.8134	0.0600
118	-2.8134	0.0600
119	-4.6052	0.0100
120	-4.6052	0.0100
121	-2.4079	0.0900
122	-2.6593	0.0700

STATISTIX 3.0
ID: inmetco

DATE: 6 FEB 97

Calculation of Standard for Selenium from 122 data pts from Inmetco's grab data

DESCRIPTIVE STATISTICS

	LN	SE
CASES	122	122
MEAN	-3.330	5.014E-02
S.D.	8.953E-01	3.684E-02
S.E. (MEAN)	8.106E-02	3.335E-03
LOWER 99.0% C.I.	-3.542	4.141E-02
UPPER 99.0% C.I.	-3.118	5.887E-02
C.V.	26.89	73.47
MEDIAN	-2.996	5.000E-02
MINIMUM	-4.711	9.000E-03
MAXIMUM	-1.833	1.600E-01

Treatment Standard (TS) = Exponent (mean of Log transformed data + 2.33 (Standard deviation of Log transformed data))
C99

$$TS = Exp(-3.330 + 2.33(.8953))$$

$$TS = 0.29$$

ATISTIX 3.0
: TC-METALS

EW DATA

ASE	CHROMIUM	LN
1	0.3200	-1.1394
2	0.2900	-1.2379
3	0.0100	-4.6052
4	0.0200	-3.9120
5	0.0900	-2.4079
6	0.1100	-2.2073
7	0.0700	-2.6593
8	0.0700	-2.6593
9	0.0400	-3.2189
10	0.0400	-3.2189
11	0.5600	-0.5798
12	0.0400	-3.2189
13	0.0400	-3.2189
14	0.0300	-3.5066
15	0.0700	-2.6593
16	0.0300	-3.5066
17	0.0400	-3.2189
18	0.1100	-2.2073
19	0.1400	-1.9661
20	0.0700	-2.6593
21	0.6100	-0.4943
22	0.0100	-4.6052
23	0.0100	-4.6052
24	0.0100	-4.6052
25	0.0700	-2.6593
26	0.0600	-2.8134
27	0.0700	-2.6593
28	0.0700	-2.6593
29	0.0800	-2.5257
30	0.0800	-2.5257
31	0.1600	-1.8326
32	0.6500	-0.4308
33	0.2000	-1.6094
34	0.0900	-2.4079
35	0.0800	-2.5257
36	0.1200	-2.1203
37	0.0600	-2.8134
38	0.2900	-1.2379
39	0.0700	-2.6593
40	0.0700	-2.6593

STATISTIX 3.0
ID: TC-METALS

DESCRIPTIVE STATISTICS

	CHROMIUM	LN
CASES	40	40
MEAN	1.263E-01	-2.611
S.D.	1.571E-01	1.052
S.E. (MEAN)	2.484E-02	1.663E-01
LOWER 99.9% C.I.	3.788E-02	-3.203
UPPER 99.9% C.I.	2.146E-01	-2.020
C.V.	124.42	40.28
MEDIAN	7.000E-02	-2.659
MINIMUM	1.000E-02	-4.605
MAXIMUM	6.500E-01	-4.308E-01

$TS = Exp(-2.611 + 2.33(1.052))$

$TS = 0.85$

TIX 3.0
-METALS

ATA

LN	VANADIUM
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-4.6052	0.0100
-3.5066	0.0300
-4.6052	0.0100
-4.6052	0.0100

STATISTIX 3.0
ID: TC-METALS

DESCRIPTIVE STATISTICS

	LN	VANADIUM
CASES	40	40
MEAN	-4.578	1.050E-02
S.D.	1.737E-01	3.162E-03
S.E. (MEAN)	2.747E-02	5.000E-04
LOWER 99.9% C.I.	-4.675	8.721E-03
UPPER 99.9% C.I.	-4.480	1.228E-02
C.V.	3.79	30.12
MEDIAN	-4.605	1.000E-02
MINIMUM	-4.605	1.000E-02
MAXIMUM	-3.507	3.000E-02

$TS = Exp(-4.578 + 2.33(0.173))$

$TS = 0.015$

ATISTIX 3.0
: TCMETALS

EW DATA

ASE	LN	ZINC
1	-3.9120	0.0200
2	-1.3863	0.2500
3	-4.6052	0.0100
4	-4.6052	0.0100
5	-1.3093	0.2700
6	0.5008	1.6500
7	-1.9661	0.1400
8	-0.8210	0.4400
9	-1.0217	0.3600
10	-1.2379	0.2900
11	-2.2073	0.1100
12	-2.9957	0.0500
13	-2.2073	0.1100
14	-3.5066	0.0300
15	-2.6593	0.0700
16	-1.2379	0.2900
17	-3.9120	0.0200
18	-1.8326	0.1600
19	-0.9943	0.3700
20	-1.5606	0.2100
21	-4.6052	0.0100
22	-4.6052	0.0100
23	-4.6052	0.0100
24	-4.6052	0.0100
25	-1.1394	0.3200
26	-2.6593	0.0700
27	-1.2379	0.2900
28	-0.5978	0.5500
29	-1.0498	0.3500
30	-1.5606	0.2100
31	-1.3863	0.2500
32	-1.5141	0.2200
33	-0.9943	0.3700
34	-1.0217	0.3600
35	-1.7720	0.1700
36	-0.5108	0.6000
37	-3.2189	0.0400
38	0.3001	1.3500
39	-1.3093	0.2700
40	-0.4308	0.6500

STATISTIX 3.0
ID: TCMETALS

DESCRIPTIVE STATISTICS

	LN	ZINC
CASES	40	40
MEAN	-2.050	2.742E-01
S.D.	1.458	3.339E-01
S.E. (MEAN)	2.306E-01	5.279E-02
LOWER 99.9% C.I.	-2.870	8.642E-02
UPPER 99.9% C.I.	-1.230	4.621E-01
C.V.	71.14	121.74
MEDIAN	-1.537	2.150E-01
MINIMUM	-4.605	1.000E-02
MAXIMUM	5.008E-01	1.650

$TS = Exp(-2.05 + 2.33(1.458))$

$TS = 3.8$