TETRA TECH, INC.

TECHNICAL MEMORANDUM

To: Jack Faulk, EPA
From: Jon Harcum and John Kosco, Tetra Tech
Subject: Review of Discharge Monitoring Report data from the 2000 NPDES Industrial Storm Water Permit Program
Date: May 18, 2006

SUMMARY

This technical memorandum is an update of a February 10, 2005 memorandum providing a review of the discharge monitoring report data from the 2000 NPDES industrial storm water permit program. This analysis includes the presentation of summary statistics in tabular and graphical form for parameters included in the benchmark monitoring program. In October 2005, EPA mailed approximately 1,500 post cards to industrial facilities requesting copies of their missing DMRs. DMR data submitted to EPA as of March 30, 2006 were entered into a database and included in this analysis.

DATA PROCESSING

Discharge Monitoring Reports (DMRs) for 775 facilities (an increase from the 434 facilities analyzed in the February 2005 memorandum) covered by the MSGP were available for analysis. To be included in the analysis, the facility must have an SIC code that could be linked back to an appropriate sector/subsector and at least one DMR record with an acceptable date.

FACILITY INFORMATION

The number of facilities evaluated by state in decreasing order are: Massachusetts (197), New Mexico (115), Maine (104), New Hampshire (99), Arizona (82), Puerto Rico (55), Idaho (53), Alaska (45), Washington (9), Texas (4), District of Columbia (4), Colorado (4), Florida (1), California (1), and Utah (1). Johnston Atoll airfield (located in the Pacific Ocean) also included one facility.

Because of the apparent differences in reporting by state, the summary statistics presented in this document might not be representative of the country, and might not be representative of a particular sector or subsector. Thus, use of the information provided in this memo to make generalizations about, or changes to, the MSGP should be done with caution.

Table 1 presents the number of facilities and reported DMR data by subsector. This table also indicates the number of facilities that only reported "no discharge", only reported discharge events, or reported a combination of discharge and no discharge events. For example, in sector **A** (timber products), subsector 1 (general sawmills and planing mills), 64 facilities reported data that were considered for this analysis. Eight of these facilities only reported no discharge events, 13 facilities reported a combination of discharge and no discharge events, and 43 facilities only reported discharge events. Only subsectors

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A-1, A-3, A-4, C-1*, D-1, E-4, F-5, J-1, J-2, K*, L, M, N, O, Q, S*, Y, and AA-1 provide data for 10 or more total facilities.[1] Any interpretations of data provided for subsectors with fewer facilities should use an even higher level of caution than described earlier.

Table 1. Number of facilities reporting DMR data by subsector.

Sector	Subsector	Total Facilities	Facilities that Only Reported No Discharge	Facilities that Reported Discharge and No Discharge	Facilities that Only Reported Discharge Events
A	1	64	8	13	43
	2	3			3
	3	26	2	17	7
	4	23	5	2	16
B	1	1		1	
	2	4		2	2
	3	2			2
C	1	10		3	7
	2	9		4	5
	3	2			2
	4	3			3
	5	2			2
	6	3	2	1	
	7	4		4	
	8	2	1		1
D	1	28	9	8	11
E	2	5	2	3	
	3	1			1
	4	68	34	16	18
F	1	3		1	2
	2	4			4
	3	1			1
	5	10		5	5
	6	2		1	1
	7	2	1		1
G	2	3		3	
	4	8	4		4
	5	1	1		
H	N/A	5		3	2
J	1	32	9	8	15
	2	42	23	7	12
	4	5	3		2
K	N/A	13	1	5	7

[1] Subsectors C-1, K, and S had fewer than 10 total facilities in the January 2005 analysis.

Table 1. Number of facilities reporting DMR data by subsector.					
Sector	**Subsector**	**Total Facilities**	**Facilities that Only Reported No Discharge**	**Facilities that Reported Discharge and No Discharge**	**Facilities that Only Reported Discharge Events**
L	N/A	46	15	18	13
M	N/A	111	43	18	50
N	N/A	55	13	19	23
O	N/A	20	1	9	10
P	3	6		2	4
Q	N/A	15	2	6	7
R	N/A	3			3
S	N/A	12		4	8
T	N/A	1			1
U	1	1			1
	2	1		1	
	4	3	1		2
	7	1		1	
	8	1			1
	9	1			1
V	2	1			1
W	N/A	1			1
Y	1	14		6	8
Y	2	8	2	1	5
AA	1	40	6	10	24
	2	3		1	2
AB	N/A	9	2	1	6
AC	N/A	7	2		5
Other		24	3	6	15

BENCHMARK MONITORING ASSESSMENT

In this section, both tabular and graphical summaries are developed to depict the data reported as part of the benchmark monitoring program. Data indicating no discharge or parameters for a particular subsector that are not identified in the benchmark monitoring program were eliminated from consideration. During exploratory analysis, it was determined that most, if not all, of the data associated with common benchmark monitoring program parameters were positively skewed and would best be displayed using lognormal plots. So, for consistency between the tabular and graphical summaries, censored observations (i.e., concentration data reported as “less than” or “non detect” or concentrations reported as zero) were set to 1.0 mg/L for TSS, COD, and BOD. For the remaining parameters, mostly metals, a simple substituion of 0.001 mg/L was used. This approach was used in lieu of a) simple substitution of zero to allow for log-scale plotting, and b) simple substitution of one-half the detection limit because of the multitude of detection limits that were present in the raw data.

Attachment 1 provides the summary statistics for the 2000 MSGP DMR monitoring by subsector, parameter, and year. The value present under year column could be "Pre-2001", "Year 2", or "Year 4"; and is intended to represent the various monitoring periods under the MSGP program. For simplicity in this analysis, "Year 2" represents monitoring from the years 2001 and 2002; "Year 4" represents monitoring from the years 2003 and forward; and "Pre-2001" represents monitoring from the year 2000. Most likely, "Pre-2001" represents year 2 monitoring under the 1995 MSGP.

Most data were reported for either the average or maximum concentrations expressed in milligrams per liter (mg/L). Attachment 1 provides the number of records analyzed; the number and percent of records exceeding (and not exceeding) the benchmark; the minimum, average, standard deviation, and maximum concentrations; and the number of censored observations. Figures 1 through 8 present average and maximum concentration box plots for Year 2 and Year 4 DMR data for selected parameters by sector and subsector. Pre-2001 data were excluded since they are most likely from the 1995 MSGP.

Box plots are useful for visualizing the distribution of concentrations. For each plot, the box represents the middle 50 percent (or interquartile range) of the data, from the 25th percentile to the 75th percentile. A horizontal line located inside the box represents the median (or 50th percentile). The lines (or whiskers) extend to the upper and lower adjacent values. The upper adjacent value is defined as largest value less than the 75th percentile plus 1.5 times the interquartile range. The lower adjacent value is defined as the smallest value greater than the 25th percentile minus 1.5 times the interquartile range. Observations outside the adjacent values are plotted as 'outliers' and 'extremes' depending on the distance from the adjacent value. For the purposes of this memorandum outliers and extremes should not be viewed as 'low-quality data,' but rather as a representation of the highly skewed nature of the data. Plots that do not have fully formed boxes or lines are likely due low sample sizes.

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: A Timber Products

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
1	COD	120	Year 2	36	Average	72	25	34.7%	47	65.3%	1	136.0229 *	166.7215	1020	2
					Maximum	93	44	47.3%	49	52.7%	1	263.0527 *	389.1653	2700	4
	COD	120	Year 4	27	Average	37	16	43.2%	21	56.8%	19	215.0892 *	265.0226	1086	0
					Maximum	79	35	44.3%	44	55.7%	1	318.6392 *	535.5256	2820	1
	TSS	100	Year 2	37	Average	74	30	40.5%	44	59.5%	1	271.6703 *	542.416	2900	4
					Maximum	95	47	49.5%	48	50.5%	1	503.0126 *	1081.676	6800	2
	TSS	100	Year 4	27	Average	38	20	52.6%	18	47.4%	9.8	322.5474 *	501.2998	1995	0
					Maximum	81	35	43.2%	46	56.8%	1	389.3457 *	826.7924	4200	4
	Zn	0.117	Year 2	35	Average	70	19	27.1%	51	72.9%	0.001	0.117717 *	0.155798	0.8	4
					Maximum	93	45	48.4%	48	51.6%	0.001	0.215591 *	0.261494	1.2	9
	Zn	0.117	Year 4	26	Average	39	14	35.9%	25	64.1%	0.02	0.148051 *	0.164715	0.564	0
					Maximum	78	32	41.0%	46	59.0%	0.001	0.198655 *	0.331521	1.5	7
2	As	0.16854	Year 4	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.024	0.024		0.024	0
	Cu	0.0636	Year 4	2	Average	0	0	-	0	-					0
					Maximum	2	2	100.0%	0	0.0%	0.227	1.3985 *	1.656751	2.57	0
3	TSS	100	Year 2	10	Average	19	0	0.0%	19	100.0%	1	24.56842	26.34027	92.5	1
					Maximum	16	8	50.0%	8	50.0%	13	292.875 *	464.9003	1840	0
	TSS	100	Year 4	9	Average	0	0	-	0	-					0
					Maximum	20	7	35.0%	13	65.0%	1	243.73 *	574.7708	2373	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: A Timber Products

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
4	COD	120	Year 2	12	Average	20	9	45.0%	11	55.0%	1	346.075 *	566.4213	2160	2
					Maximum	39	23	59.0%	16	41.0%	1	260.1282 *	424.1564	2160	2
	COD	120	Year 4	9	Average	25	15	60.0%	10	40.0%	1	249.98 *	422.047	2060	1
					Maximum	33	19	57.6%	14	42.4%	1	222.4697 *	376.2539	2060	1
	TSS	100	Year 2	14	Average	20	7	35.0%	13	65.0%	1	235.725 *	577.9403	2610	1
					Maximum	48	19	39.6%	29	60.4%	1	190.3729 *	396.6272	2610	3
	TSS	100	Year 4	10	Average	26	10	38.5%	16	61.5%	1	327.2731 *	728.0678	3600	1
					Maximum	40	16	40.0%	24	60.0%	1	361.0275 *	983.6437	5300	1

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: B Paper and Allied Products

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
1	COD	120	Year 2	1	Average	0	0	-	0	-					0
					Maximum	4	4	100.0%	0	0.0%	147	304.5 *	177.8586	498	0
	COD	120	Year 4	1	Average	0	0	-	0	-					0
					Maximum	1	1	100.0%	0	0.0%	191.1	191.1 *		191.1	0
2	COD	120	Year 2	3	Average	3	0	0.0%	3	100.0%	28	38.16667	15.08587	55.5	0
					Maximum	7	4	57.1%	3	42.9%	55.5	317.9286 *	287.7575	796	0
	COD	120	Year 4	2	Average	1	0	0.0%	1	100.0%	116	116		116	0
					Maximum	9	5	55.6%	4	44.4%	24.1	195.1222 *	235.1449	675	0
3	COD	120	Year 2	1	Average	0	0	-	0	-					0
					Maximum	16	5	31.3%	11	68.8%	1	104.25	81.81972	300	2
	COD	120	Year 4	2	Average	0	0	-	0	-					0
					Maximum	13	4	30.8%	9	69.2%	10	86.07692	50.80922	172	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: C Chemical and Allied Products

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
1	Al	0.75	Year 2	7	Average	17	3	17.6%	14	82.4%	0.001	1.128353 *	3.437491	14.4	2
					Maximum	27	9	33.3%	18	66.7%	0.001	15.57896 *	52.72461	270	4
	Al	0.75	Year 4	6	Average	13	12	92.3%	1	7.7%	0.469	58.21762 *	85.35889	280	0
					Maximum	21	7	33.3%	14	66.7%	0.001	0.951995 *	1.216175	3.5	1
	Fe	1	Year 2	7	Average	17	9	52.9%	8	47.1%	0.1	3.612353 *	7.828469	32.8	0
					Maximum	27	13	48.1%	14	51.9%	0.0612	10.44418 *	33.30051	170	0
	Fe	1	Year 4	6	Average	13	12	92.3%	1	7.7%	0.33	11.01615 *	11.7494	43.2	0
					Maximum	21	7	33.3%	14	66.7%	0.1024	1.180995 *	1.315041	3.8	0
	NO2	0.68	Year 2	2	Average	0	0	-	0	-					0
					Maximum	10	0	0.0%	10	100.0%	0.001	0.1515	0.110055	0.29	2
	NO3	0.68	Year 2	2	Average	0	0	-	0	-					0
					Maximum	10	9	90.0%	1	10.0%	0.001	5.1901 *	4.10878	11	1
	NOX	0.68	Year 2	4	Average	17	9	52.9%	8	47.1%	0.001	12.35018 *	19.81563	57.8	3
					Maximum	17	8	47.1%	9	52.9%	0.001	1.273706 *	1.604832	4.85	3
	NOX	0.68	Year 4	5	Average	13	11	84.6%	2	15.4%	0.48	46.83138 *	30.54204	91.15	0
					Maximum	21	15	71.4%	6	28.6%	0.04	0.994762 *	0.719296	2.93	0
2	Zn	0.117	Year 2	5	Average	10	7	70.0%	3	30.0%	0.06	0.3388 *	0.317345	0.93	0
					Maximum	35	25	71.4%	10	28.6%	0.023	13.53157 *	35.89968	156	0
	Zn	0.117	Year 4	6	Average	1	1	100.0%	0	0.0%	0.48	0.48 *		0.48	0
					Maximum	51	29	56.9%	22	43.1%	0.001	11.00714 *	43.18395	220	1
4	NOX	0.68	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	3	1	33.3%	2	66.7%	0.07	0.533333	0.437759	0.94	0
	NOX	0.68	Year 2	2	Average	2	0	0.0%	2	100.0%	0.0125	0.12625	0.160867	0.24	0
					Maximum	8	0	0.0%	8	100.0%	0.001	0.10925	0.12514	0.29	4
	Zn	0.117	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	3	2	66.7%	1	33.3%	0.061	0.590333 *	0.468156	0.95	0
	Zn	0.117	Year 2	2	Average	2	1	50.0%	1	50.0%	0.001	0.2075 *	0.292035	0.414	0
					Maximum	8	2	25.0%	6	75.0%	0.047	0.109625	0.071954	0.25	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: C Chemical and Allied Products

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
7	Fe	1	Year 2	3	Average	6	6	100.0%	0	0.0%	2.56	6.788333 *	5.955537	18.7	0
					Maximum	13	10	76.9%	3	23.1%	0.001	19.96562 *	31.59971	97	3
	Fe	1	Year 4	3	Average	1	1	100.0%	0	0.0%	6.4	6.4 *		6.4	0
					Maximum	22	18	81.8%	4	18.2%	0.3	23.21132 *	55.50364	260	0
	NO2	0.68	Year 2	1	Average	6	1	16.7%	5	83.3%	0.05	1.576667 *	3.249416	8.2	0
					Maximum	0	0	-	0	-					0
	NO2	0.68	Year 4	1	Average	1	0	0.0%	1	100.0%	0.09	0.09		0.09	0
					Maximum	5	0	0.0%	5	100.0%	0.04	0.192	0.190578	0.4	0
	NO3	0.68	Year 2	1	Average	6	5	83.3%	1	16.7%	0.14	12.56333 *	19.97731	53	0
					Maximum	0	0	-	0	-					0
	NO3	0.68	Year 4	1	Average	1	1	100.0%	0	0.0%	10.8	10.8 *		10.8	0
					Maximum	5	4	80.0%	1	20.0%	0.4	9.04 *	8.260932	20	0
	NOX	0.68	Year 2	2	Average	0	0	-	0	-					0
					Maximum	10	7	70.0%	3	30.0%	0.32	2.712 *	4.390484	15	0
	NOX	0.68	Year 4	2	Average	0	0	-	0	-					0
					Maximum	17	11	64.7%	6	35.3%	0.089	3.875529 *	5.880482	18	0
	P	2	Year 2	3	Average	6	6	100.0%	0	0.0%	10.6	21.83333 *	10.18600	37.1	0
					Maximum	9	2	22.2%	7	77.8%	0.001	1.275444	1.880711	5.67	4
	P	2	Year 4	3	Average	1	1	100.0%	0	0.0%	16.4	16.4 *		16.4	0
					Maximum	32	23	71.9%	9	28.1%	0.1	13.14556 *	10.85800	32	0
	Pb	0.0816	Year 2	3	Average	6	4	66.7%	2	33.3%	0.045	0.090333 *	0.03457	0.134	0
					Maximum	11	0	0.0%	11	100.0%	0.001	0.016385	0.016748	0.046	2
	Pb	0.0816	Year 4	3	Average	1	0	0.0%	1	100.0%	0.06	0.06		0.06	0
					Maximum	22	3	13.6%	19	86.4%	0.001	0.036386	0.046514	0.168	2
	Zn	0.117	Year 2	3	Average	6	6	100.0%	0	0.0%	0.72	1.205 *	0.345239	1.58	0
					Maximum	11	8	72.7%	3	27.3%	0.001	0.656127 *	1.057612	3.54	2
	Zn	0.117	Year 4	3	Average	1	1	100.0%	0	0.0%	0.67	0.67 *		0.67	0
					Maximum	22	21	95.5%	1	4.5%	0.051	1.479818 *	2.221056	9.13	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: D Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturers

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
1	TSS	100	Pre-2001	2	Average	0	0	-	0	-					0
					Maximum	2	1	50.0%	1	50.0%	24	147.5 *	174.6554	271	0
	TSS	100	Year 2	9	Average	3	0	0.0%	3	100.0%	1	6.666667	7.371115	15	1
					Maximum	7	2	28.6%	5	71.4%	1	197.8571 *	357.8246	996	1
	TSS	100	Year 4	15	Average	18	6	33.3%	12	66.7%	1	298.15 *	538.4210	2024.7	0
					Maximum	36	20	55.6%	16	44.4%	1	515.9444 *	930.6167	5080	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: E Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
3	Al	0.75	Year 2	1	Average	4	3	75.0%	1	25.0%	0.001	2.01525 *	2.128871	5.02	1
					Maximum	0	0	-	0	-					0
4	Fe	1	Year 2	19	Average	5	5	100.0%	0	0.0%	1.66	8.772 *	4.31844	12.9	0
					Maximum	38	27	71.1%	11	28.9%	0.001	15.61582 *	34.67529	173	4
	Fe	1	Year 4	21	Average	20	15	75.0%	5	25.0%	0.1	57.18 *	142.0417	572.9	0
					Maximum	56	49	87.5%	7	12.5%	0.001	52.96679 *	202.4150	1300	1
	TSS	100	Year 2	19	Average	6	6	100.0%	0	0.0%	278	735.5833 *	627.4334	1956	0
					Maximum	38	27	71.1%	11	28.9%	1	970.5447 *	2143.425	10300	4
	TSS	100	Year 4	25	Average	25	14	56.0%	11	44.0%	4	7610.24 *	17908.79	67066	0
					Maximum	69	37	53.6%	32	46.4%	1	5274.411 *	19747.04	120000	5

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: F Primary Metals

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
1	Al	0.75	Year 2	3	Average	16	1	6.3%	15	93.8%	0.001	0.375375	1.007158	4.1	6
					Maximum	40	17	42.5%	23	57.5%	0.001	2.0209 *	3.728015	18	6
	Al	0.75	Year 4	1	Average	15	2	13.3%	13	86.7%	0.001	3.570533 *	12.85410	50	8
					Maximum	30	4	13.3%	26	86.7%	0.001	3.570533 *	12.63054	50	16
	Zn	0.117	Year 2	3	Average	16	4	25.0%	12	75.0%	0.001	0.07625	0.133687	0.46	10
					Maximum	40	21	52.5%	19	47.5%	0.001	0.60745 *	1.205603	6.9	10
	Zn	0.117	Year 4	1	Average	15	3	20.0%	12	80.0%	0.001	0.345667 *	1.044014	4.1	5
					Maximum	30	6	20.0%	24	80.0%	0.001	0.345667 *	1.025856	4.1	10
2	Al	0.75	Year 2	3	Average	0	0	-	0	-					0
					Maximum	34	5	14.7%	29	85.3%	0.001	0.589735	0.93388	3.93	9
	Al	0.75	Year 4	2	Average	1	0	0.0%	1	100.0%	0.59	0.59		0.59	0
					Maximum	8	2	25.0%	6	75.0%	0.001	1.4365 *	2.771721	8.19	2
	Cu	0.0636	Year 2	3	Average	0	0	-	0	-					0
					Maximum	34	8	23.5%	26	76.5%	0.001	0.042206	0.055925	0.26	14
	Cu	0.0636	Year 4	2	Average	1	1	100.0%	0	0.0%	0.25	0.25 *		0.25	0
					Maximum	21	6	28.6%	15	71.4%	0.001	0.072619 *	0.105992	0.357	7
	Fe	1	Year 2	3	Average	1	0	0.0%	1	100.0%	0.097	0.097		0.097	0
					Maximum	37	14	37.8%	23	62.2%	0.001	1.437378 *	2.765641	16	1
	Fe	1	Year 4	2	Average	1	1	100.0%	0	0.0%	1.75	1.75 *		1.75	0
					Maximum	18	10	55.6%	8	44.4%	0.059	1.905722 *	2.586089	10.5	0
	TSS	100	Year 2	3	Average	0	0	-	0	-					0
					Maximum	32	2	6.3%	30	93.8%	1	30.96875	54.11605	264	10
	TSS	100	Year 4	1	Average	1	0	0.0%	1	100.0%	21.5	21.5		21.5	0
					Maximum	1	0	0.0%	1	100.0%	30	30		30	0
	Zn	0.117	Year 2	3	Average	0	0	-	0	-					0
					Maximum	38	29	76.3%	9	23.7%	0.001	0.337184 *	0.341121	1.54	2
	Zn	0.117	Year 4	2	Average	1	1	100.0%	0	0.0%	0.52	0.52 *		0.52	0
					Maximum	28	21	75.0%	7	25.0%	0.028	0.254179 *	0.171407	0.72	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: F Primary Metals

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
5	Cu	0.0636	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	4	1	25.0%	3	75.0%	0.042	0.0557	0.015133	0.0745	0
	Cu	0.0636	Year 2	8	Average	13	7	53.8%	6	46.2%	0.001	0.072385 *	0.043863	0.14	1
					Maximum	113	14	12.4%	99	87.6%	0.001	0.040172	0.086268	0.76	27
	Cu	0.0636	Year 4	6	Average	19	11	57.9%	8	42.1%	0.015	0.310526 *	0.516943	2.2	0
					Maximum	62	5	8.1%	57	91.9%	0.001	0.100581 *	0.392778	2.96	1
	Zn	0.117	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	20	16	80.0%	4	20.0%	0.101	0.2164 *	0.096622	0.423	0
	Zn	0.117	Year 2	9	Average	13	12	92.3%	1	7.7%	0.06	0.26 *	0.151438	0.66	0
					Maximum	180	83	46.1%	97	53.9%	0.001	0.186227 *	0.263575	2.07	35
	Zn	0.117	Year 4	7	Average	19	17	89.5%	2	10.5%	0.07	3.212947 *	4.796836	17	0
					Maximum	149	64	43.0%	85	57.0%	0.001	0.199154 *	0.417287	4.23	20
6	Cu	0.0636	Year 2	2	Average	1	0	0.0%	1	100.0%	0.042	0.042		0.042	0
					Maximum	7	1	14.3%	6	85.7%	0.022	0.046714	0.02933	0.109	0
	Cu	0.0636	Year 4	1	Average	1	0	0.0%	1	100.0%	0.04	0.04		0.04	0
					Maximum	1	1	100.0%	0	0.0%	0.118	0.118 *		0.118	0
	Zn	0.117	Year 2	2	Average	1	0	0.0%	1	100.0%	0.038	0.038		0.038	0
					Maximum	7	6	85.7%	1	14.3%	0.073	1.341143 *	1.671916	4.5	0
	Zn	0.117	Year 4	1	Average	1	0	0.0%	1	100.0%	0.08	0.08		0.08	0
					Maximum	1	1	100.0%	0	0.0%	0.21	0.21 *		0.21	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: G Metal Mining (Ore Mining and Dressing)

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
2	Ag	0.318	Year 4	2	Average	0	0	-	0	-					0
					Maximum	3	0	0.0%	3	100.0%	0.001	0.001	0	0.001	3
	As	0.16854	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	0	0.0%	20	100.0%	0.001	0.001	3.38E-11	0.001	20
	Be	0.13	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	0	0.0%	20	100.0%	0.001	0.001	3.38E-11	0.001	20
	Cd	0.0159	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	3	15.0%	17	85.0%	0.001	0.00633	0.009544	0.0351	10
	COD	120	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	0	0.0%	20	100.0%	6.6	19.285	11.03202	47.8	0
	Cu	0.0636	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	11	55.0%	9	45.0%	0.01	54.49795 *	242.3201	1084	0
	Fe	1	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	3	15.0%	17	85.0%	0.001	0.58065	1.388964	4.9	11
	Hg	0.0024	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	0	0.0%	20	100.0%	0.001	0.001	3.38E-11	0.001	20
	Mn	1	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	6	30.0%	14	70.0%	0.0046	1.02518 *	1.922555	7.47	0
	Ni	1.417	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	0	0.0%	20	100.0%	0.001	0.00785	0.011622	0.045	13
	NOX	0.68	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	4	20.0%	16	80.0%	0.103	0.62175	0.601343	2.34	0
	NTU	5	Year 4	3	Average	0	0	-	0	-					0
					Maximum	19	18	94.7%	1	5.3%	0.354	99.89495 *	103.7280	378	0
	Pb	0.0816	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	1	5.0%	19	95.0%	0.001	0.007855	0.020136	0.0872	16
	Sb	0.636	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	0	0.0%	20	100.0%	0.001	0.001	3.38E-11	0.001	20

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: G Metal Mining (Ore Mining and Dressing)

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
2	Se	0.2385	Year 4	2	Average	0	0	-	0	-					0
					Maximum	3	0	0.0%	3	100.0%	0.001	0.001	0	0.001	3
	TSS	100	Year 4	3	Average	0	0	-	0	-					0
					Maximum	20	12	60.0%	8	40.0%	15	794.15 *	896.3693	3000	0
	Zn	0.117	Year 4	2	Average	0	0	-	0	-					0
					Maximum	3	3	100.0%	0	0.0%	0.429	5.876333 *	5.163824	10.7	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: G Metal Mining (Ore Mining and Dressing)

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
4	Ag	0.318	Year 2	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.005	0.005		0.005	0
	As	0.16854	Year 2	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.032	0.032		0.032	0
	Cd	0.0159	Year 2	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.002	0.002		0.002	0
	Cd	0.0159	Year 4	2	Average	0	0	-	0	-					0
					Maximum	0	0	-	0	-					0
	Cu	0.0636	Year 2	2	Average	0	0	-	0	-					0
					Maximum	2	0	0.0%	2	100.0%	0.005	0.0145	0.013435	0.024	0
	Cu	0.0636	Year 4	2	Average	0	0	-	0	-					0
					Maximum	3	2	66.7%	1	33.3%	0.039	0.142333 *	0.144143	0.307	0
	Fe	1	Year 2	2	Average	0	0	-	0	-					0
					Maximum	14	0	0.0%	14	100.0%	0.001	0.168857	0.353955	1	4
	Fe	1	Year 4	3	Average	1	0	0.0%	1	100.0%	0.056	0.056		0.056	0
					Maximum	4	2	50.0%	2	50.0%	0.123	4.87875 *	8.320842	17.3	0
	Hg	0.0024	Year 2	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.001	0.001		0.001	0
	Hg	0.0024	Year 4	2	Average	0	0	-	0	-					0
					Maximum	3	0	0.0%	3	100.0%	0.001	0.001	0	0.001	2
	Mn	1	Year 4	2	Average	0	0	-	0	-					0
					Maximum	3	1	33.3%	2	66.7%	0.193	0.707667	0.666098	1.46	0
	NTU	5	Year 2	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	3.4	3.4		3.4	0
	NTU	5	Year 4	2	Average	0	0	-	0	-					0
					Maximum	4	3	75.0%	1	25.0%	0.56	203.34 *	335.4893	705	0
	Pb	0.0816	Year 2	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.025	0.025		0.025	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: G Metal Mining (Ore Mining and Dressing)

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
4	Pb	0.0816	Year 4	2	Average	0	0	-	0	-					0
					Maximum	3	1	33.3%	2	66.7%	0.003	0.252133 *	0.388682	0.7	0
	Sb	0.636	Year 2	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.01	0.01		0.01	0
	Se	0.2385	Year 2	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.025	0.025		0.025	0
	TSS	100	Year 2	2	Average	0	0	-	0	-					0
					Maximum	14	0	0.0%	14	100.0%	1	7.842857	17.01966	48	11
	TSS	100	Year 4	3	Average	1	0	0.0%	1	100.0%	1.75	1.75		1.75	0
					Maximum	4	0	0.0%	4	100.0%	1	27.25	29.18693	64.2	0
	Zn	0.117	Year 2	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.052	0.052		0.052	0
	Zn	0.117	Year 4	2	Average	0	0	-	0	-					0
					Maximum	2	1	50.0%	1	50.0%	0.001	0.1435 *	0.201525	0.286	1

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: H Coal Mines and Coal Mining-Related Facilities

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	Al	0.75	Year 2	2	Average	10	10	100.0%	0	0.0%	48.6	109.94 *	83.54332	264.5	0
					Maximum	15	15	100.0%	0	0.0%	48.6	181.9467 *	244.9266	1010	0
	Al	0.75	Year 4	4	Average	6	6	100.0%	0	0.0%	138	313.3333 *	260.8560	650	0
					Maximum	12	11	91.7%	1	8.3%	0.72	218.06 *	236.2366	650	0
	Fe	1	Year 2	2	Average	10	10	100.0%	0	0.0%	58.5	128.7 *	101.3191	315	0
					Maximum	15	15	100.0%	0	0.0%	58.5	185.0867 *	207.6902	866	0
	Fe	1	Year 4	4	Average	6	6	100.0%	0	0.0%	585	1305 *	1050.267	2660	0
					Maximum	12	11	91.7%	1	8.3%	0.73	712.5692 *	947.7677	2660	0
	TSS	100	Year 2	2	Average	10	10	100.0%	0	0.0%	1195	17147 *	17158.19	38650	0
					Maximum	15	15	100.0%	0	0.0%	1195	19903.33 *	22415.58	80500	0
	TSS	100	Year 4	4	Average	6	6	100.0%	0	0.0%	22100	44766.67 *	19505.55	65600	0
					Maximum	12	11	91.7%	1	8.3%	28	25501.17 *	25052.32	65600	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: J Mineral Mining and Dressing

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
1	TSS	100	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	1	1	100.0%	0	0.0%	271	271 *		271	0
	TSS	100	Year 2	10	Average	5	5	100.0%	0	0.0%	385	8131.4 *	16075.88	36874	0
					Maximum	28	7	25.0%	21	75.0%	1	176.7893 *	389.1393	1900	6
	TSS	100	Year 4	17	Average	15	5	33.3%	10	66.7%	1	1861.667 *	6895.289	26784	0
					Maximum	76	34	44.7%	42	55.3%	1	1423.526 *	8430.379	73560	2
2	NO2	0.68	Year 2	1	Average	0	0	-	0	-					0
					Maximum	0	0	-	0	-					0
	NO2	0.68	Year 4	4	Average	1	0	0.0%	1	100.0%	0.001	0.001		0.001	1
					Maximum	8	0	0.0%	8	100.0%	0.001	0.0375	0.059503	0.172	4
	NO3	0.68	Year 2	1	Average	0	0	-	0	-					0
					Maximum	0	0	-	0	-					0
	NO3	0.68	Year 4	5	Average	1	1	100.0%	0	0.0%	0.7	0.7 *		0.7	0
					Maximum	6	1	16.7%	5	83.3%	0.001	0.1175	0.285366	0.7	5
	NOX	0.68	Year 2	2	Average	0	0	-	0	-					0
					Maximum	0	0	-	0	-					0
	NOX	0.68	Year 4	3	Average	0	0	-	0	-					0
					Maximum	9	2	22.2%	7	77.8%	0.001	0.458667	0.66181	2.07	1
	TSS	100	Year 2	4	Average	1	0	0.0%	1	100.0%	10.25	10.25		10.25	0
					Maximum	9	7	77.8%	2	22.2%	35	952 *	1214.063	3550	0
	TSS	100	Year 4	11	Average	2	0	0.0%	2	100.0%	5.29	6.145	1.209153	7	0
					Maximum	19	8	42.1%	11	57.9%	1	1165.415 *	2741.641	9070	4
4	TSS	100	Year 2	1	Average	3	0	0.0%	3	100.0%	9	30.33333	23.79776	56	0
					Maximum	3	1	33.3%	2	66.7%	12	58.66667	49.16638	110	0
	TSS	100	Year 4	1	Average	4	1	25.0%	3	75.0%	11	44.5	50.67873	120	0
					Maximum	4	1	25.0%	3	75.0%	20	102.75 *	132.0792	300	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: K Hazardous Waste Treatment Storage or Disposal Facilities

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	Ag	0.0318	Year 2	5	Average	0	0	-	0	-					0
					Maximum	24	0	0.0%	24	100.0%	0.001	0.002152	0.002218	0.0098	15
	Ag	0.0318	Year 4	6	Average	0	0	-	0	-					0
					Maximum	25	0	0.0%	25	100.0%	0.001	0.003447	0.006878	0.025	21
	As	0.16854	Year 2	5	Average	0	0	-	0	-					0
					Maximum	32	0	0.0%	32	100.0%	0.001	0.007578	0.00385	0.018	2
	As	0.16854	Year 4	6	Average	0	0	-	0	-					0
					Maximum	27	0	0.0%	27	100.0%	0.001	0.008411	0.013767	0.073	11
	Cd	0.0159	Year 2	5	Average	0	0	-	0	-					0
					Maximum	35	0	0.0%	35	100.0%	0.001	0.001434	0.000970	0.004	12
	Cd	0.0159	Year 4	6	Average	0	0	-	0	-					0
					Maximum	26	0	0.0%	26	100.0%	0.001	0.001393	0.001317	0.006	22
	COD	120	Year 2	6	Average	0	0	-	0	-					0
					Maximum	45	21	46.7%	24	53.3%	53	173.1467 *	131.1321	528	0
	COD	120	Year 4	6	Average	0	0	-	0	-					0
					Maximum	39	4	10.3%	35	89.7%	1	40.50051	56.52152	220	19
	Cyn	0.0636	Year 2	5	Average	0	0	-	0	-					0
					Maximum	28	2	7.1%	26	92.9%	0.001	0.011064	0.024595	0.094	11
	Cyn	0.0636	Year 4	6	Average	0	0	-	0	-					0
					Maximum	24	0	0.0%	24	100.0%	0.001	0.001898	0.003683	0.019	21
	Hg	0.0024	Year 2	5	Average	0	0	-	0	-					0
					Maximum	24	0	0.0%	24	100.0%	0.001	0.001	3.43E-11	0.001	13
	Hg	0.0024	Year 4	6	Average	0	0	-	0	-					0
					Maximum	24	0	0.0%	24	100.0%	0.001	0.001008	4.08E-05	0.0012	23
	Mg	0.0636	Year 2	5	Average	0	0	-	0	-					0
					Maximum	35	35	100.0%	0	0.0%	1.87	8.744571 *	6.071514	24	0
	Mg	0.0636	Year 4	6	Average	0	0	-	0	-					0
					Maximum	28	24	85.7%	4	14.3%	0.001	4.888143 *	5.447830	15.1	4

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Sector: K Hazardous Waste Treatment Storage or Disposal Facilities

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	NH3	19	Year 2	5	Average	0	0	-	0	-					0
					Maximum	30	0	0.0%	30	100.0%	0.001	0.728167	0.91105	2.7	9
	NH3	19	Year 4	6	Average	0	0	-	0	-					0
					Maximum	19	0	0.0%	19	100.0%	0.001	0.173889	0.228621	0.91	3
	Pb	0.0816	Year 2	5	Average	0	0	-	0	-					0
					Maximum	47	0	0.0%	47	100.0%	0.001	0.0131	0.008005	0.0435	2
	Pb	0.0816	Year 4	6	Average	0	0	-	0	-					0
					Maximum	40	1	2.5%	39	97.5%	0.001	0.017608	0.029407	0.19	6
	Se	0.2385	Year 2	5	Average	0	0	-	0	-					0
					Maximum	20	0	0.0%	20	100.0%	0.001	0.00141	0.001262	0.0051	18
	Se	0.2385	Year 4	6	Average	0	0	-	0	-					0
					Maximum	24	0	0.0%	24	100.0%	0.001	0.002138	0.003074	0.0101	21

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: L Landfills and Land Application Sites

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	Fe	1	Year 2	16	Average	19	18	94.7%	1	5.3%	0.79	14.56737 *	21.00107	91.6	0
					Maximum	87	49	56.3%	38	43.7%	0.001	10.44814 *	30.59418	190	10
	Fe	1	Year 4	17	Average	34	25	73.5%	9	26.5%	0.001	15.80709 *	25.00368	100	1
					Maximum	124	67	54.0%	57	46.0%	0.001	10.67991 *	53.50012	416	6
	TSS	100	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	16.4	16.4		16.4	0
	TSS	100	Year 2	17	Average	19	6	31.6%	13	68.4%	4	247.3921 *	525.6423	2000	0
					Maximum	88	16	18.2%	72	81.8%	1	265.6705 *	919.3928	6360	31
	TSS	100	Year 4	22	Average	39	12	30.8%	27	69.2%	1	234.9949 *	490.4518	2600	4
					Maximum	160	26	16.3%	134	83.8%	1	242.9025 *	821.4303	5260	34

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: M Automobile Salvage Yards

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	Al	0.75	Pre-2001	2	Average	1	0	0.0%	1	100.0%	0.32	0.32		0.32	0
					Maximum	3	0	0.0%	3	100.0%	0.2	0.24	0.069282	0.32	0
	Al	0.75	Year 2	38	Average	29	9	31.0%	20	69.0%	0.02	0.563793	0.600068	2.04	0
					Maximum	48	24	50.0%	24	50.0%	0.001	3.676354 *	9.239747	62.1	1
	Al	0.75	Year 4	57	Average	45	16	35.6%	29	64.4%	0.001	1.070022 *	1.673898	8.4	1
					Maximum	82	51	62.2%	31	37.8%	0.001	5.433061 *	11.47042	67.6	2
	Fe	1	Pre-2001	2	Average	1	0	0.0%	1	100.0%	0.19	0.19		0.19	0
					Maximum	3	2	66.7%	1	33.3%	0.19	0.743333	0.479201	1.02	0
	Fe	1	Year 2	38	Average	29	8	27.6%	21	72.4%	0.02	0.891379	1.055925	3.63	0
					Maximum	49	26	53.1%	23	46.9%	0.04	5.411837 *	10.36622	59.3	0
	Fe	1	Year 4	58	Average	45	19	42.2%	26	57.8%	0.001	1.515556 *	2.521338	14.1	1
					Maximum	82	53	64.6%	29	35.4%	0.001	8.474146 *	19.97297	121	1
	Pb	0.0816	Pre-2001	2	Average	1	0	0.0%	1	100.0%	0.01	0.01		0.01	0
					Maximum	3	0	0.0%	3	100.0%	0.001	0.004	0.005196	0.01	2
	Pb	0.0816	Year 2	38	Average	29	3	10.3%	26	89.7%	0.001	0.027710	0.046191	0.18	0
					Maximum	49	15	30.6%	34	69.4%	0.001	0.097984 *	0.159055	0.66	0
	Pb	0.0816	Year 4	57	Average	44	3	6.8%	41	93.2%	0.001	0.026161	0.031544	0.13	3
					Maximum	80	27	33.8%	53	66.3%	0.001	0.196058 *	0.515918	2.72	3
	TSS	100	Pre-2001	2	Average	1	0	0.0%	1	100.0%	1	1		1	1
					Maximum	3	0	0.0%	3	100.0%	1	5.666667	4.041452	8	1
	TSS	100	Year 2	38	Average	29	3	10.3%	26	89.7%	1	25.34483	39.94127	147	3
					Maximum	49	14	28.6%	35	71.4%	1	145.2041 *	364.2976	2170	3
	TSS	100	Year 4	56	Average	44	3	6.8%	41	93.2%	1	28.17045	41.57468	237	3
					Maximum	80	19	23.8%	61	76.3%	1	158.8579 *	341.5082	2120	4

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: N Scrap Recycling Facilities

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	Al	0.75	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.3	0.3		0.3	0
	Al	0.75	Year 2	24	Average	11	6	54.5%	5	45.5%	0.142	3.633818 *	5.756421	20	0
					Maximum	45	31	68.9%	14	31.1%	0.001	3.564956 *	4.890867	20	3
	Al	0.75	Year 4	29	Average	12	9	75.0%	3	25.0%	0.17	8.17125 *	16.37563	59.32	0
					Maximum	65	47	72.3%	18	27.7%	0.075	13.25531 *	31.88798	226	0
	COD	120	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	32	32		32	0
	COD	120	Year 2	24	Average	11	3	27.3%	8	72.7%	13	123.2118 *	182.5607	633.33	0
					Maximum	46	22	47.8%	24	52.2%	1	235.9457 *	293.4333	1400	1
	COD	120	Year 4	29	Average	12	7	58.3%	5	41.7%	1	260.1833 *	295.0746	764	3
					Maximum	62	27	43.5%	35	56.5%	1	582.0548 *	1677.155	9947	4
	Cu	0.0636	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	1	1	100.0%	0	0.0%	0.099	0.099 *		0.099	0
	Cu	0.0636	Year 2	24	Average	11	5	45.5%	6	54.5%	0.001	0.084727 *	0.090866	0.31	1
					Maximum	47	34	72.3%	13	27.7%	0.001	0.205606 *	0.228212	1.07	3
	Cu	0.0636	Year 4	29	Average	12	5	41.7%	7	58.3%	0.001	5.345917 *	18.27309	63.37	2
					Maximum	65	28	43.1%	37	56.9%	0.001	4.106062 *	31.23608	252	8
	Fe	1	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.625	0.625		0.625	0
	Fe	1	Year 2	24	Average	14	11	78.6%	3	21.4%	0.03	6.164286 *	6.299274	22	0
					Maximum	50	43	86.0%	7	14.0%	0.001	9.46054 *	19.54626	134	1
	Fe	1	Year 4	29	Average	10	6	60.0%	4	40.0%	0.053	15.5233 *	22.63037	59.1	0
					Maximum	64	51	79.7%	13	20.3%	0.1	18.54819 *	31.41859	121	0
	Pb	0.0816	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	0.02	0.02		0.02	0
	Pb	0.0816	Year 2	24	Average	11	6	54.5%	5	45.5%	0.001	0.235909 *	0.322863	1	3
					Maximum	46	29	63.0%	17	37.0%	0.001	0.360254 *	0.768546	3.92	4

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: N Scrap Recycling Facilities

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	Pb	0.0816	Year 4	29	Average	12	5	41.7%	7	58.3%	0.001	5.65375 *	18.65091	64.86	2
					Maximum	62	23	37.1%	39	62.9%	0.001	4.73136 *	32.79498	258	11
	TSS	100	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	1	0	0.0%	1	100.0%	1	1		1	1
	TSS	100	Year 2	24	Average	14	5	35.7%	9	64.3%	1	122.95 *	130.1899	440	1
					Maximum	49	19	38.8%	30	61.2%	1	136.4592 *	181.9558	964	3
	TSS	100	Year 4	29	Average	12	7	58.3%	5	41.7%	1	175.0625 *	165.515	513.5	1
					Maximum	64	33	51.6%	31	48.4%	1	605.0781 *	1385.776	7390	1
	Zn	0.117	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	1	1	100.0%	0	0.0%	0.258	0.258 *		0.258	0
	Zn	0.117	Year 2	24	Average	11	9	81.8%	2	18.2%	0.02	0.401818 *	0.291918	0.95	0
					Maximum	48	38	79.2%	10	20.8%	0.001	0.731696 *	1.358932	9.18	2
	Zn	0.117	Year 4	28	Average	12	9	75.0%	3	25.0%	0.031	18.37442 *	61.12415	212.45	0
					Maximum	66	44	66.7%	22	33.3%	0.006	13.55956 *	103.8068	844	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: O Steam Electric Generating Facilities

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	Fe	1	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	7	0	0.0%	7	100.0%	0.02	0.262857	0.224849	0.59	0
	Fe	1	Year 2	13	Average	16	7	43.8%	9	56.3%	0.0186	1.985044 *	3.749611	15.5	0
					Maximum	56	35	62.5%	21	37.5%	0.001	12.49836 *	26.46491	146	8
	Fe	1	Year 4	13	Average	12	7	58.3%	5	41.7%	0.0299	2.522567 *	2.724145	7.8	0
					Maximum	76	31	40.8%	45	59.2%	0.001	2.994947 *	6.630458	47	15

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: Q Water Transportation

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	Al	0.75	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	0	0	-	0	-					0
	Al	0.75	Year 2	7	Average	2	1	50.0%	1	50.0%	0.42	0.65	0.325269	0.88	0
					Maximum	50	22	44.0%	28	56.0%	0.001	1.37182 *	2.034712	11	1
	Al	0.75	Year 4	6	Average	0	0	-	0	-					0
					Maximum	20	12	60.0%	8	40.0%	0.001	2.75955 *	3.38064	13	1
	Fe	1	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	0	0	-	0	-					0
	Fe	1	Year 2	7	Average	2	1	50.0%	1	50.0%	0.97	1.47 *	0.707107	1.97	0
					Maximum	50	27	54.0%	23	46.0%	0.001	2.13688 *	3.448381	20	4
	Fe	1	Year 4	6	Average	0	0	-	0	-					0
					Maximum	20	10	50.0%	10	50.0%	0.091	3.5326 *	4.549747	16	0
	Pb	0.0816	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	0	0	-	0	-					0
	Pb	0.0816	Year 2	7	Average	2	0	0.0%	2	100.0%	0.016	0.03	0.019799	0.044	0
					Maximum	50	2	4.0%	48	96.0%	0.001	0.0181	0.024830	0.12	17
	Pb	0.0816	Year 4	6	Average	0	0	-	0	-					0
					Maximum	20	7	35.0%	13	65.0%	0.001	0.131845 *	0.228987	0.92	6
	Zn	0.117	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	0	0	-	0	-					0
	Zn	0.117	Year 2	7	Average	2	2	100.0%	0	0.0%	0.38	0.475 *	0.134350	0.57	0
					Maximum	50	37	74.0%	13	26.0%	0.001	0.38212 *	0.442464	2.1	1
	Zn	0.117	Year 4	6	Average	0	0	-	0	-					0
					Maximum	20	15	75.0%	5	25.0%	0.056	0.7544 *	1.630181	7.5	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: S Air Transportation Facilities

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
N/A	BOD	30	Year 2	7	Average	14	13	92.9%	1	7.1%	25	429.5286 *	559.7441	2120	0
					Maximum	29	10	34.5%	19	65.5%	1	104.8297 *	230.4743	990	1
	BOD	30	Year 4	5	Average	28	23	82.1%	5	17.9%	3.5	168.6786 *	164.0027	460	0
					Maximum	39	20	51.3%	19	48.7%	2	104.2151 *	158.9342	460	0
	COD	120	Year 2	10	Average	19	12	63.2%	7	36.8%	22	641.0526 *	1323.992	5880	0
					Maximum	46	7	15.2%	39	84.8%	19	119.4848	236.4909	1300	0
	COD	120	Year 4	8	Average	29	17	58.6%	12	41.4%	1	536.8966 *	1623.082	8900	1
					Maximum	52	19	36.5%	33	63.5%	1	163.1173 *	200.3076	606	1
	NH3	19	Year 2	7	Average	14	3	21.4%	11	78.6%	0.29	50.72357 *	90.53974	255	0
					Maximum	21	0	0.0%	21	100.0%	0.2	2.954143	2.926792	11	0
	NH3	19	Year 4	5	Average	32	3	9.4%	29	90.6%	0.001	6.505031	13.82861	65.5	1
					Maximum	47	1	2.1%	46	97.9%	0.001	2.432681	5.842497	40.5	1

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: U Food and Kindred Products

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
4	TSS	100	Year 2	2	Average	0	0	-	0	-					0
					Maximum	10	2	20.0%	8	80.0%	1	85.63	122.1867	391	1
7	BOD	30	Year 4	1	Average	0	0	-	0	-					0
					Maximum	2	0	0.0%	2	100.0%	14.4	20.7	8.909545	27	0
	COD	120	Year 4	1	Average	0	0	-	0	-					0
					Maximum	3	0	0.0%	3	100.0%	47	70.2	29.20822	103	0
	NOX	0.68	Year 4	1	Average	0	0	-	0	-					0
					Maximum	4	1	25.0%	3	75.0%	0.001	0.28825	0.5745	1.15	3
	TSS	100	Year 4	1	Average	0	0	-	0	-					0
					Maximum	3	0	0.0%	3	100.0%	8.4	25.73333	15.01644	34.8	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Sector: Y Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
1	Zn	0.117	Pre-2001	1	Average	1	1	100.0%	0	0.0%	0.7625	0.7625 *		0.7625	0
					Maximum	1	1	100.0%	0	0.0%	2.1	2.1 *		2.1	0
	Zn	0.117	Year 2	11	Average	9	8	88.9%	1	11.1%	0.117	1.362444 *	1.675993	5.6	0
					Maximum	139	58	41.7%	81	58.3%	0.001	0.495353 *	1.342058	6.9	13
	Zn	0.117	Year 4	9	Average	8	5	62.5%	3	37.5%	0.06	0.26625 *	0.257179	0.84	0
					Maximum	72	37	51.4%	35	48.6%	0.001	0.26875 *	0.388736	1.4	5

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: AA Fabricated Metal Products

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
1	Al	0.75	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	4	2	50.0%	2	50.0%	0.41	2.405 *	2.440362	5.7	0
	Al	0.75	Year 2	14	Average	8	2	25.0%	6	75.0%	0.001	0.566625	0.77561	1.9	3
					Maximum	110	66	60.0%	44	40.0%	0.001	53.90707 *	211.2499	1070	9
	Al	0.75	Year 4	22	Average	33	21	63.6%	12	36.4%	0.02	2.640364 *	3.320476	13	0
					Maximum	170	94	55.3%	76	44.7%	0.001	3.2743 *	9.070907	96.6	9
	Fe	1	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	4	4	100.0%	0	0.0%	1.3	6.1 *	6.203762	15	0
	Fe	1	Year 2	14	Average	7	3	42.9%	4	57.1%	0.1	1.308571 *	1.212868	2.9	0
					Maximum	111	71	64.0%	40	36.0%	0.001	88.87459 *	358.8772	2000	1
	Fe	1	Year 4	21	Average	31	22	71.0%	9	29.0%	0.001	6.880645 *	11.11701	50	0
					Maximum	173	93	53.8%	80	46.2%	0.001	5.210572 *	14.6683	155	0
	NO2	0.68	Year 2	7	Average	10	0	0.0%	10	100.0%	0.001	0.0285	0.034128	0.1	5
					Maximum	33	0	0.0%	33	100.0%	0.001	0.027485	0.090674	0.5	27
	NO2	0.68	Year 4	6	Average	1	0	0.0%	1	100.0%	0.03	0.03		0.03	0
					Maximum	33	0	0.0%	33	100.0%	0.001	0.097333	0.186538	0.54	22
	NO3	0.68	Year 2	7	Average	10	5	50.0%	5	50.0%	0.001	0.7033 *	0.782204	2.24	3
					Maximum	34	10	29.4%	24	70.6%	0.001	0.485265	0.645281	2.24	13
	NO3	0.68	Year 4	6	Average	4	4	100.0%	0	0.0%	0.74	0.9875 *	0.241851	1.3	0
					Maximum	36	11	30.6%	25	69.4%	0.001	0.860167 *	1.542196	6.51	6
	NOX	0.68	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	3	0	0.0%	3	100.0%	0.18	0.213333	0.035119	0.25	0
	NOX	0.68	Year 2	11	Average	2	1	50.0%	1	50.0%	0.43	1.445 *	1.435427	2.46	0
					Maximum	112	59	52.7%	53	47.3%	0.001	1.242339 *	1.300013	5.28	8
	NOX	0.68	Year 4	16	Average	26	9	34.6%	17	65.4%	0.001	1.321962 *	2.620760	10.7	1
					Maximum	109	61	56.0%	48	44.0%	0.001	4.734982 *	34.79736	364	2
	Zn	0.117	Pre-2001	1	Average	0	0	-	0	-					0
					Maximum	4	4	100.0%	0	0.0%	0.37	0.5425 *	0.223812	0.87	0

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

Attachment 1. Summary Statistics for 2000 MSGP DMR Monitoring.

Sector: AA Fabricated Metal Products

Sub-sector	Parameter	Benchmark Conc. (mg/L)	Year	Number of Permits	Average/ Maximum Concentration	Number of Records	Benchmark Exceeded		Benchmark Not Exceeded		Minimum	Average	Standard Deviation	Maximum	Number of Censored Observations
							Num	%	Num	%					
1	Zn	0.117	Year 2	17	Average	21	17	81.0%	4	19.0%	0.001	0.927905 *	1.433774	4.95	2
					Maximum	117	65	55.6%	52	44.4%	0.001	34.18539 *	193.079	1913	8
	Zn	0.117	Year 4	24	Average	37	30	81.1%	7	18.9%	0.001	0.405757 *	0.431095	2.2	1
					Maximum	175	121	69.1%	54	30.9%	0.001	0.350434 *	0.477189	3.48	3
2	NOX	0.68	Year 2	3	Average	0	0	-	0	-					0
					Maximum	9	5	55.6%	4	44.4%	0.001	2.126889 *	3.187494	9.7	1
	NOX	0.68	Year 4	3	Average	0	0	-	0	-					0
					Maximum	10	2	20.0%	8	80.0%	0.001	0.4914	0.4117	1.4	1
	Zn	0.117	Year 2	3	Average	0	0	-	0	-					0
					Maximum	9	8	88.9%	1	11.1%	0.001	120.108 *	178.5122	450	1
	Zn	0.117	Year 4	3	Average	0	0	-	0	-					0
					Maximum	10	7	70.0%	3	30.0%	0.001	51.1689 *	82.1368	180	1

A value of 1.0 mg/L was substituted for censored observations (i.e., less than, non detect, or zero) of TSS, BOD, and COD. Similarly, 0.001 mg/L was substituted for other parameters. This substitution approach was selected for consistency with log-scale plots included with this memorandum.

** Indicates that the average concentration is greater than the benchmark concentration.*

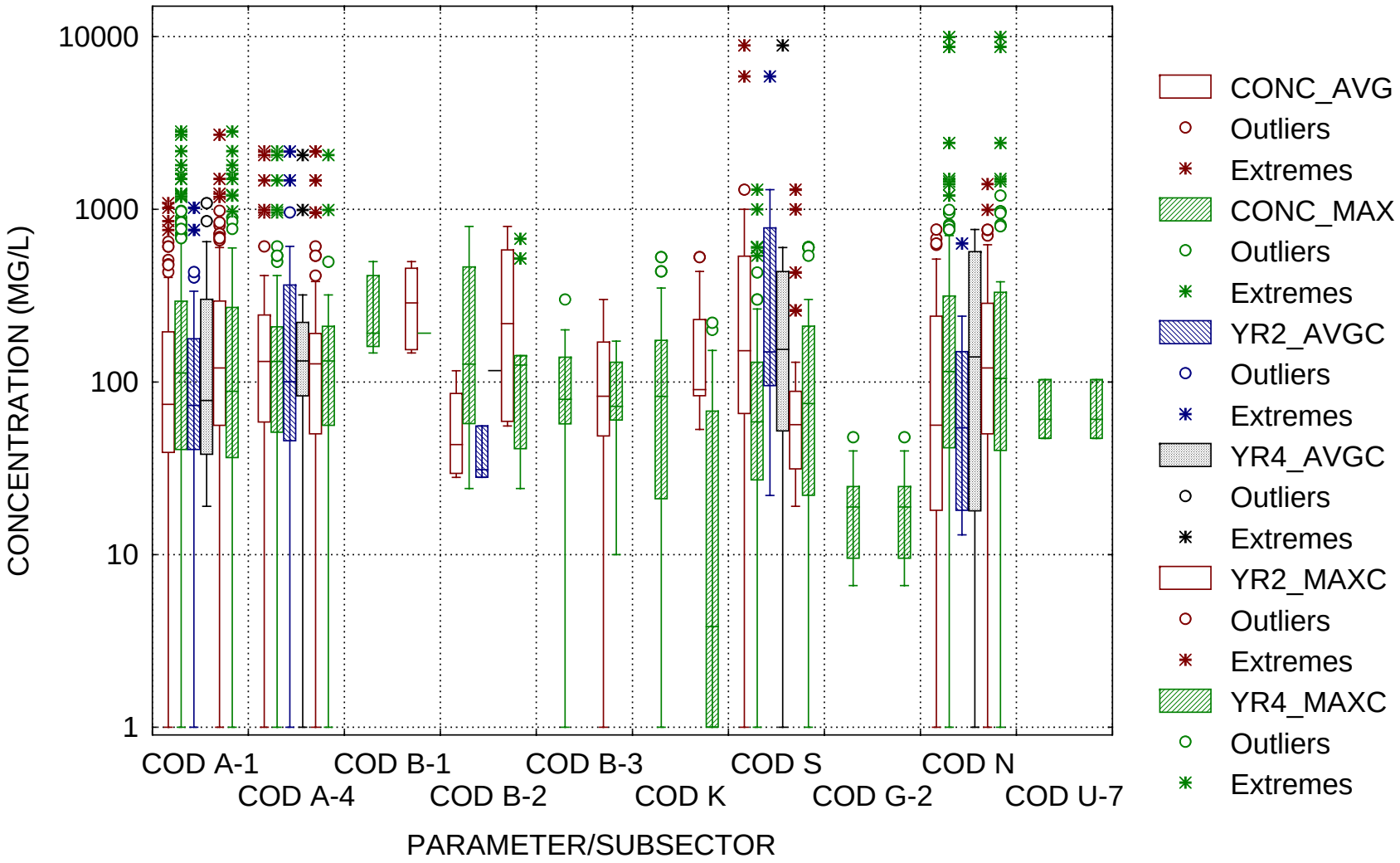

Figure 1. Average and maximum COD concentration boxplots from DMR data provided by Sectors A, B, G, K, N, S, and U for Year 2 and Year 4 under the 2000 MSGP. Benchmark monitoring cutoff concentration is 120 mg/L.

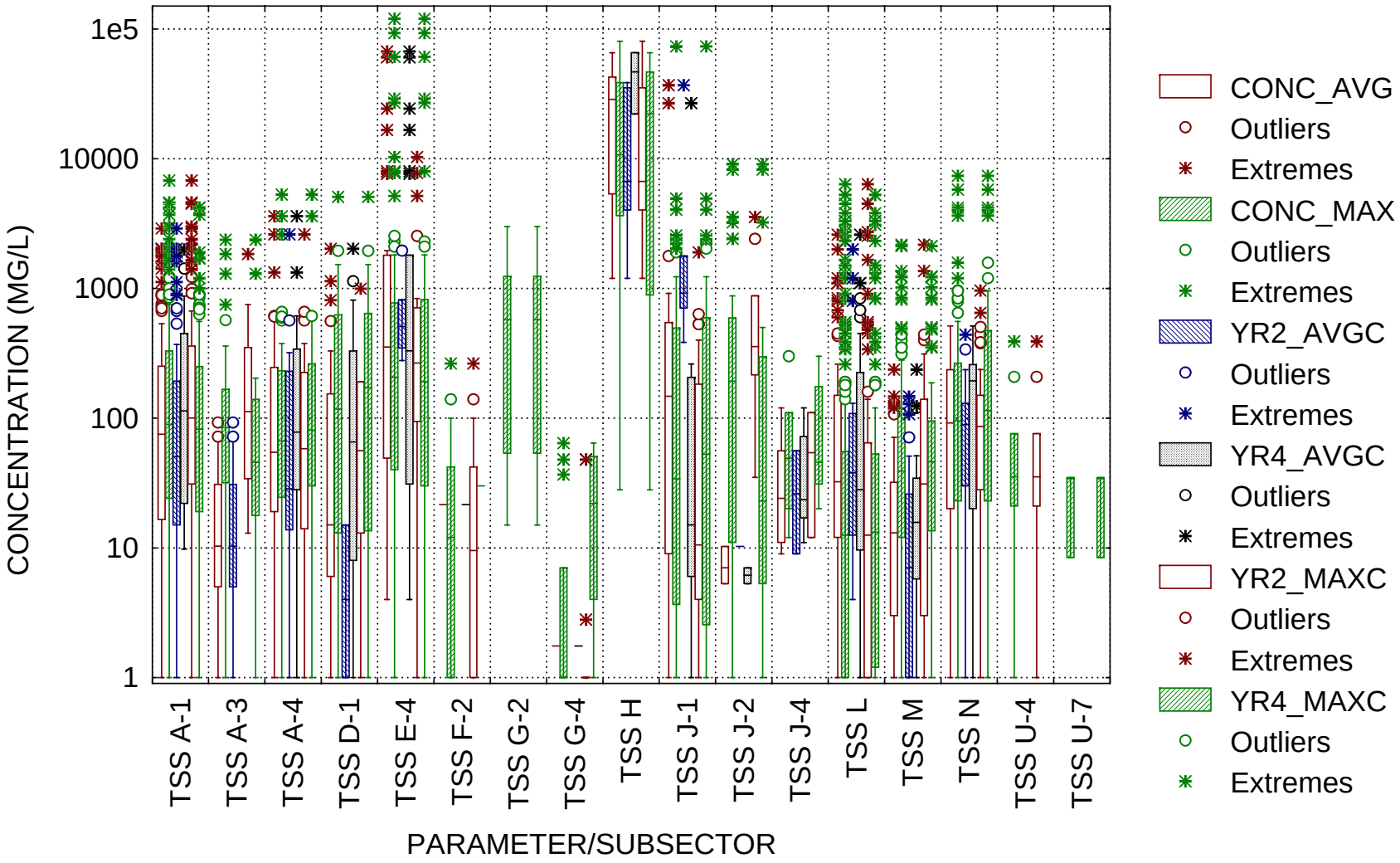

Figure 2. Average and maximum TSS concentration boxplots from DMR data provided by Sectors A, D, E, F, G, H, J, L, M, N, and U for Year 2 and Year 4 under the 2000 MSGP. Benchmark monitoring cutoff concentration is 100 mg/L.

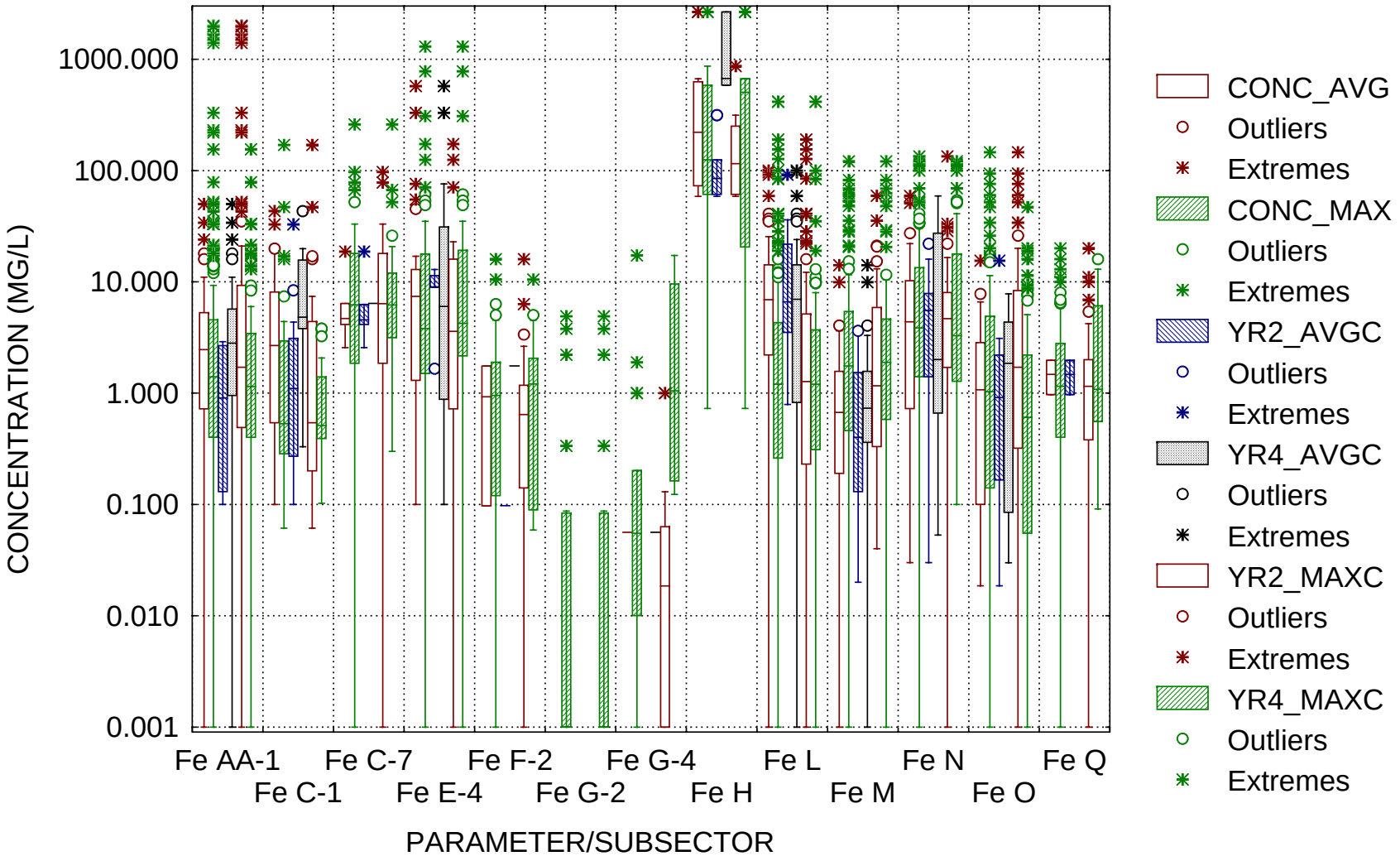

Figure 3. Average and maximum Iron (Fe) concentration boxplots from DMR data provided by Sectors AA, C, E, F, G, H, L, M, N, O, and Q for Year 2 and Year 4 under the 2000 MSGP. Benchmark monitoring cutoff concentration is 1 mg/L.

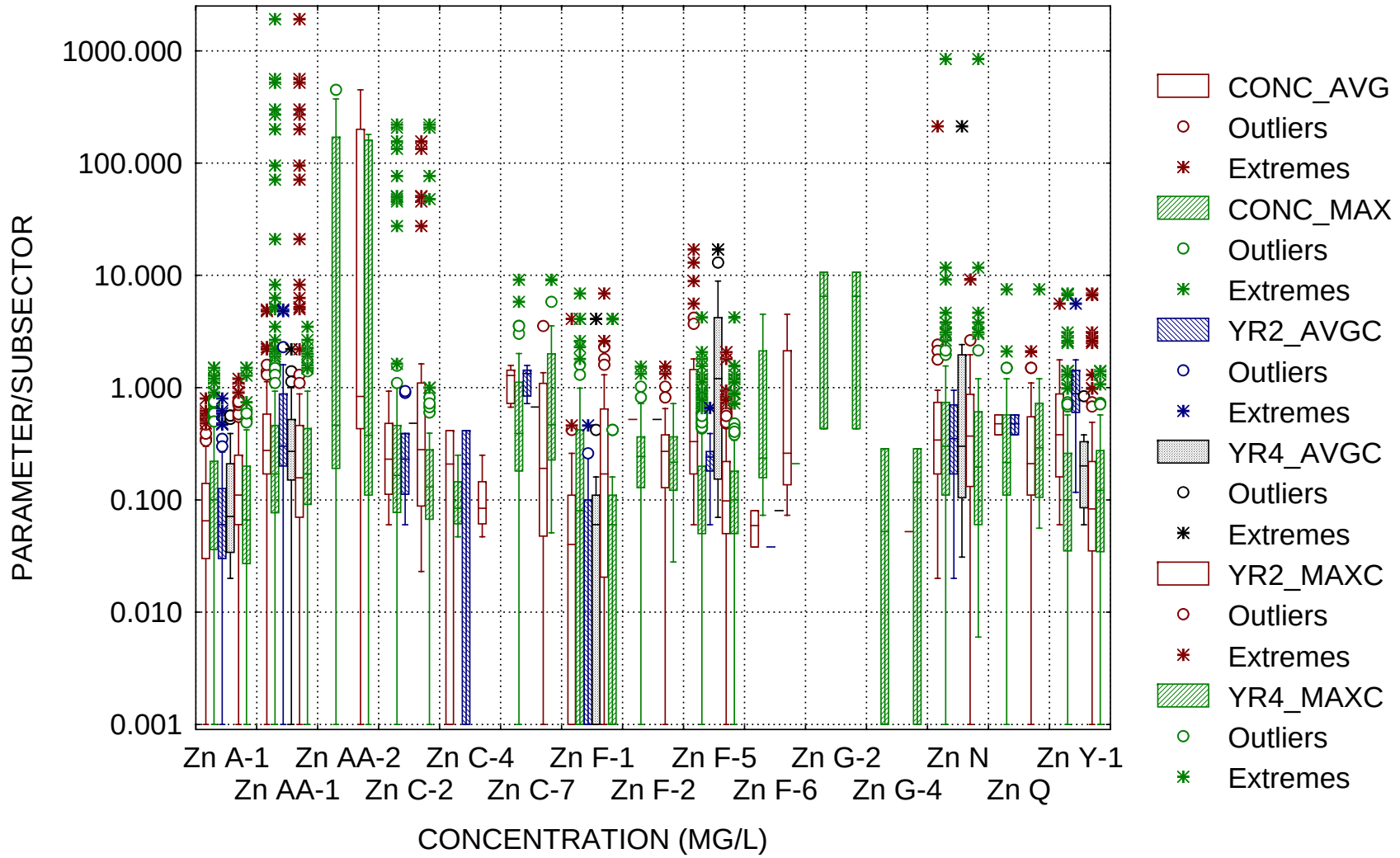

Figure 4. Average and maximum zinc (Zn) concentration boxplots from DMR data provided by Sectors A, AA, C, F, G, N, Q, and Y for Year 2 and Year 4 under the 2000 MSGP. Benchmark monitoring cutoff concentration is 0.117 mg/L.

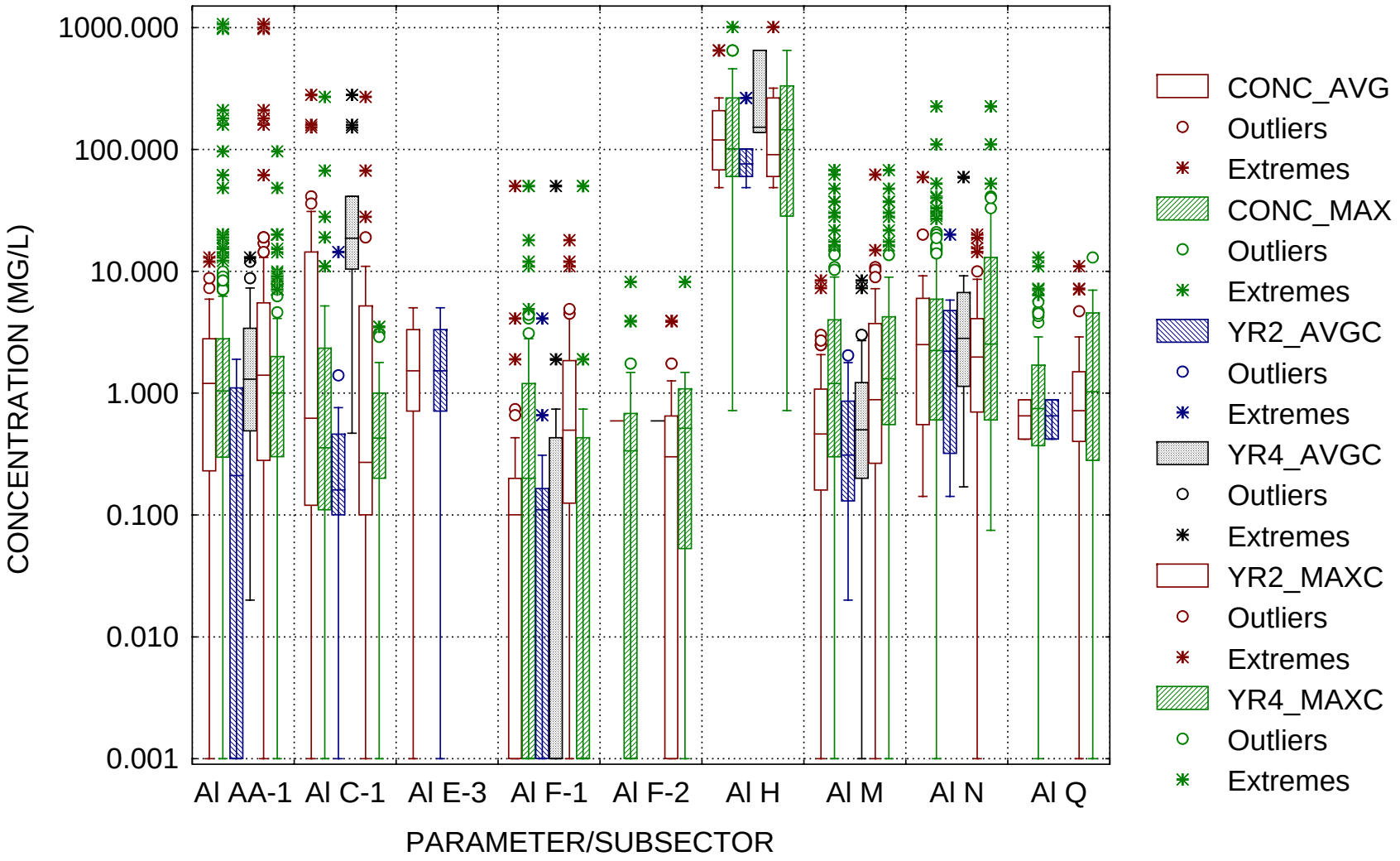

Figure 5. Average and maximum aluminum (Al) concentration boxplots from DMR data provided by Sectors AA, C, E, F, H, M, N, and Q for Year 2 and Year 4 under the 2000 MSGP. Benchmark monitoring cutoff concentration is 0.75 mg/L.

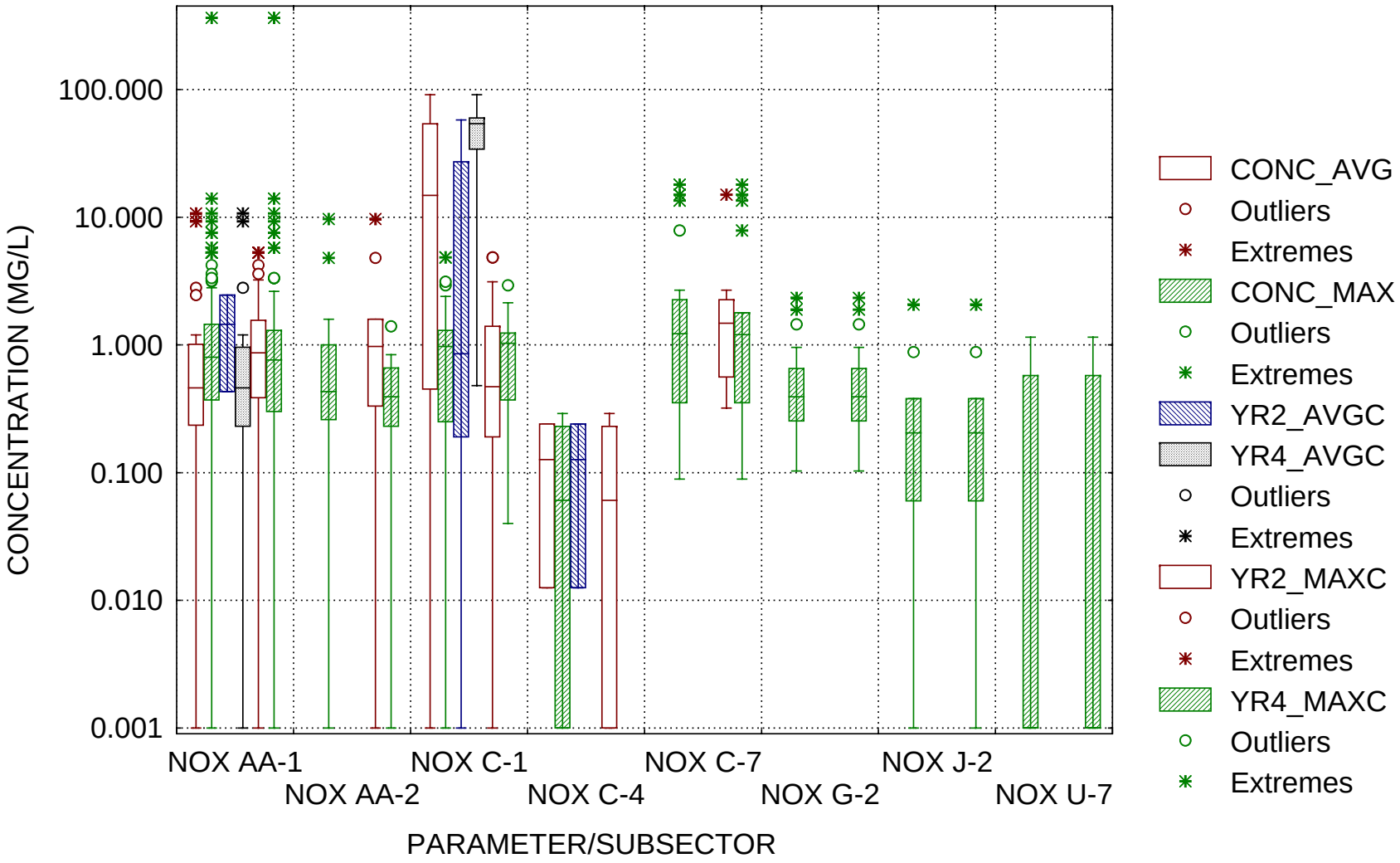

Figure 6. Average and maximum nitrite + nitrate concentration boxplots from DMR data provided by Sectors AA, C, G, J, and U for Year 2 and Year 4 under the 2000 MSGP. Benchmark monitoring cutoff concentration is 0.68 mg/L.

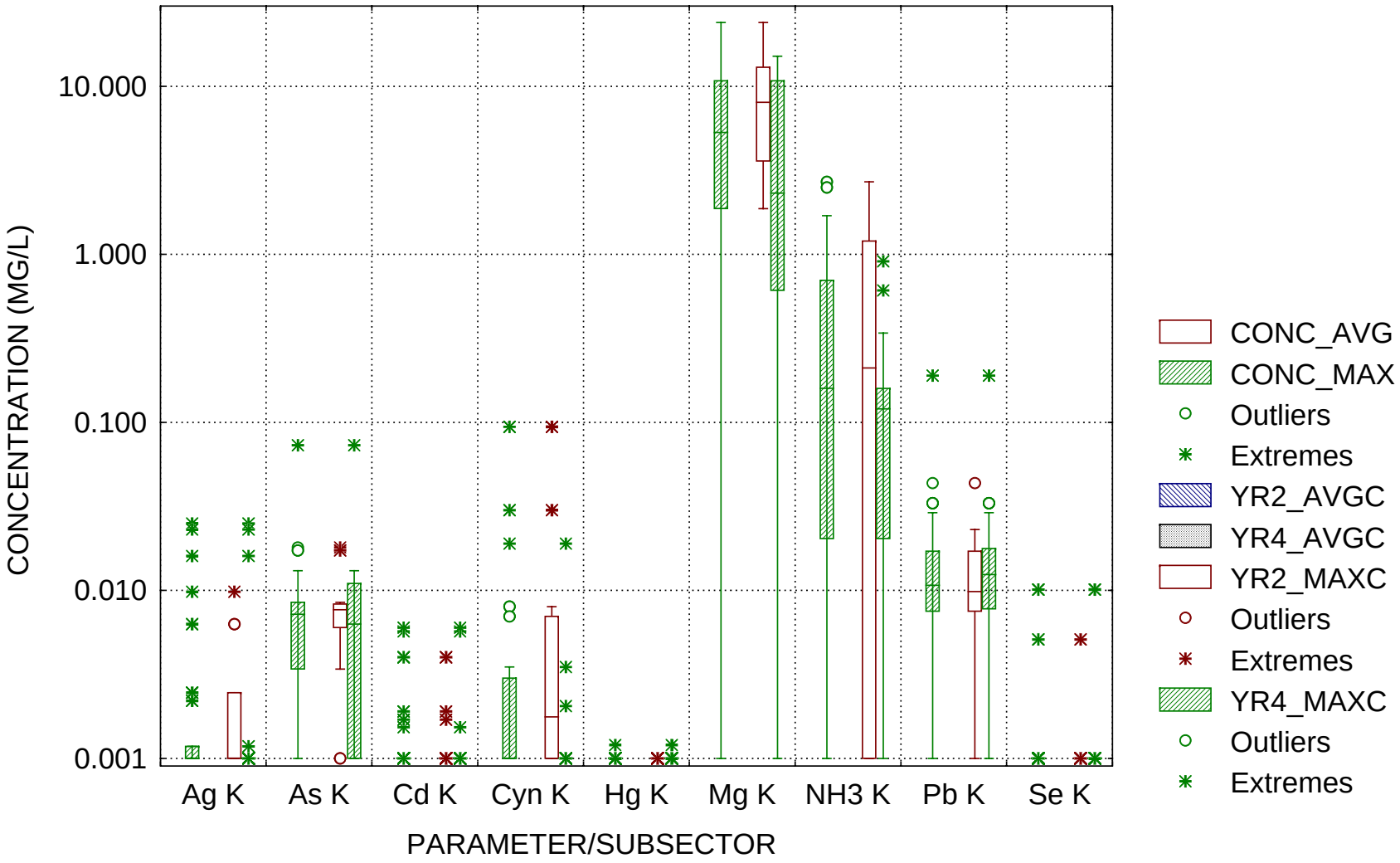

Figure 7. Average and maximum silver (Ag), arsenic (As), cadmium (Cd), cyanide (Cyn), mercury (Hg), magnesium (Mg), ammonia (NH3), lead (Pb), and selenium (Se) concentration boxplots from DMR data provided by Sector K for Year 2 and Year 4 under the 2000 MSGP.

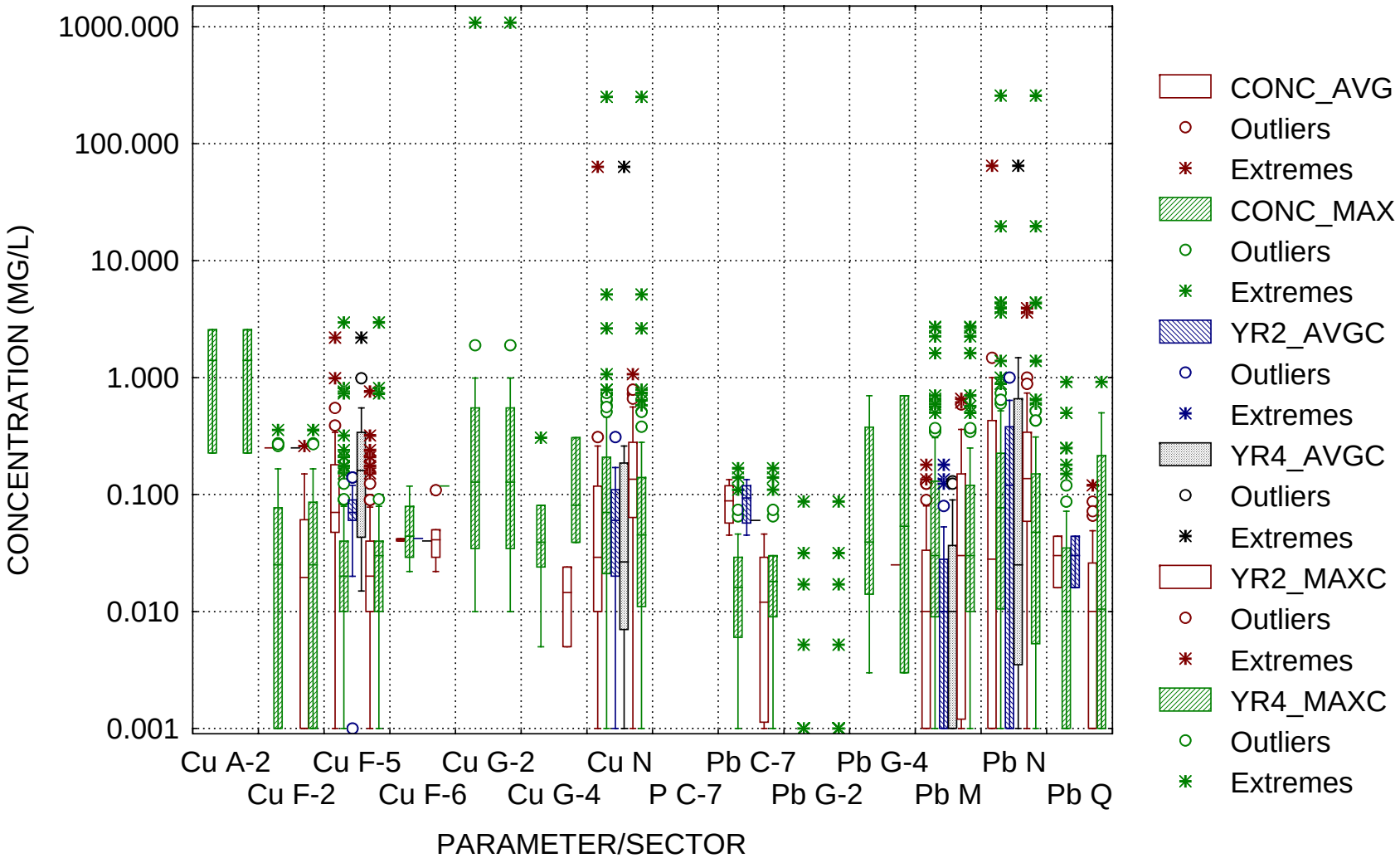

Figure 8. Average and maximum copper (Cu) and lead (Pb) concentration boxplots from DMR data provided by Sectors A, C, F, G, N, K, M, N, and Q for Year 2 and Year 4 under the 2000 MSGP.