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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 30, 2010

To: Owners and/or Operators for Type I Municipal Solid Waste (MSW) Landfills

Re: Background Evaluation Report for Groundwater Constituent Concentrations

Dear MSW Owner and/or Operator:

To ensure consistency in the reporting of background data for groundwater constituent concentrations in accordance to Title 30 Texas Administrative Code (TAC), Chapter 330, Section (§)330.405 and §330.407 and to facilitate the agency's review, the MSW Permits Section of the Texas Commission on Environmental Quality (TCEQ) requires that future background evaluation/monitoring report submittals include the following:

- A narrative explanation of the statistical process used to select and evaluate data to be incorporated into the facility's background population pool, including methods for evaluating data distribution and for identifying outliers.
- Documentation of the values of the intermediate statistics, and the values of the statistical limits before and after the update and a comparison of the newly developed background limit to the historical background limit.
- A summary table that is labeled Table 1-Background Data for the 40 Code of Federal Regulation §258.53(h)(5)Appendix I Metals (see enclosed example). This table should include the groundwater monitoring results identifying which of these data is included in background and which were removed as outliers in **bold** print.
- A summary table that is labeled Table 2-Summary Statistics/Intermediate Computations and Appropriate Statistical Limits (see enclosed example). This table should include the intermediate statistics (mean, standard deviation, and appropriate/calculated limit) for each well and constituent, in every well.
- Graphical time series plots of the data for each well and constituent to help visualize the data.

For facilities collecting new background monitoring data for total metals, based on the initial benchmark MSW Practical Quantitation Limits (PQLs)¹, the collection period for the existing monitoring program should be performed until background updates have been completed.

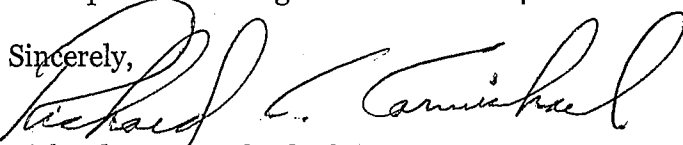
¹ Please note that PQL is equivalent to the National Environmental Laboratory Accreditation (NELAC) standards terminology for Limit of Quantitation (LOQ)

If the data collection of the background population pools has already been initiated and/or completed, the MSW Permits Section is suggesting that the newly acquired groundwater monitoring data be assimilated directly into the existing population of background data pools until there are a rolling sum of eight (n=8) data points based on the MSW-PQL benchmark concentrations. Background pools should be updated as soon as there are a total of eight data points.

In addition, the background evaluation report must be submitted to the TCEQ before the next subsequent groundwater monitoring event following the updated background period. Please submit an original and one copy of the report to the TCEQ Central office and a copy to the applicable Region office.

If you have any questions, please contact Diane Barnes at (512) 239-2626 or through correspondence using mail code MC 124.

Sincerely,



Richard C. Carmichael, Ph.D., P.E.
Manager, Municipal Solid Waste Permits Section
Waste Permits Division
Texas Commission on Environmental Quality

RCC/DMB/dd

Enclosure

EXAMPLE TABLES

TABLE 1 - BACKGROUND DATA FOR APPENDIX I TOTAL METALS

Date	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)	Lead (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
MW-01 (point of compliance well/background well)															
1/15/08	<5	20	180	<4	<2	30	16	<10	<15	<20	<50	<10	<1	45	<100
4/15/08	<5	24	200	<4	<2	37	11	<10	<15	<20	<50	<10	<1	<10	<100
7/15/08	<5	32	210	<4	<2	23	<5	<10	<15	<20	<50	<10	<1	<10	<100
10/15/08	<5	<5	220	<4	<2	25	6	<10	<15	<20	<50	<10	<1	11	<100
1/15/09	<5	120	190	<4	<2	35	<5	<10	<15	<20	<50	<10	<1	<10	<100
4/15/09	<5	15	150	<4	<2	31	9	<10	<15	<20	<50	<10	<1	<10	<100
7/15/09	<5	19	250	<4	<2	29	<5	<10	<15	<20	<50	<10	<1	15	<100
10/15/09	<5	10	200	<4	<2	30	<5	<10	<15	<20	<50	<10	<1	<10	<100

120 outlier

TABLE 2 - SUMMARY STATISTICS/INTERMEDIATE COMPUTATIONS AND APPROPRIATE STATISTICAL LIMITS

Constituent	Units	Well	N	Mean	SD	Upper Control Limit
Antimony	µg/L	MW-01	8	5	0	5
Arsenic	µg/L	MW-01	7	18	9	20
Barium	µg/L	MW-01	8	200	29	250
Beryllium	µg/L	MW-01	8	4	0	4
Cadmium	µg/L	MW-01	8	2	0	2
Chromium	µg/L	MW-01	8	30	5	36
Cobalt	µg/L	MW-01	8	8	4	12
Copper	µg/L	MW-01	8	10	0	10
Lead	µg/L	MW-01	8	15	0	15
Nickel	µg/L	MW-01	8	20	0	20
Selenium	µg/L	MW-01	8	50	0	50
Silver	µg/L	MW-01	8	10	0	10
Thallium	µg/L	MW-01	8	1	0	1
Vanadium	µg/L	MW-01	7	11	2	12
Zinc	µg/L	MW-01	8	100	0	100