



HERST & ASSOCIATES, INC.®

**Global Presence  
Personal Attention**

**Submitted via Electronic Mail**

Ms. Jaclynne Drummond  
North Carolina Department of Environment and Natural Resources  
Division of Waste Management - Solid Waste Section  
1646 Mail Service Center  
Raleigh, North Carolina 27699-1646

November 25, 2013

Dear Ms. Drummond:

**Notification of Appendix II Detections  
Charlotte Motor Speedway, Landfill V, Permit 13-04**

On behalf of the Charlotte Motor Speedway, Landfill V, Herst & Associates, Inc. is submitting notification of Appendix II constituents detected in site groundwater monitoring wells during the Second Semi-Annual 2013 sampling event. This notification is in accordance with NCDENR Requirements for Municipal Solid Waste Landfill Facilities Section .1634(d), which states the following:

*“After obtaining the results from the initial or subsequent sampling events required in Paragraph (b) of this Rule, the owner or operator shall: (1) Within 14 days, submit a report to the Division and place a notice in the operating record identifying the Appendix II constituents that have been detected;”*

Groundwater sampling was completed by Analytical Services, Inc. (ASI) in October 2013. Analytical testing was performed by ASI for the assessment monitoring wells (MW-17, MW-18A, MW-19, MW-19A, MW-20B, and MW-25). Results were received by Herst & Associates, Inc. on November 18, 2013. The attached Table 1 summarizes the Appendix II constituents that were detected above the solid waste section limit (SWSL) in assessment monitoring wells during the Second Semi-Annual 2013 event. The inorganic and organic constituents on Table 1 are also on the Appendix I Detection Monitoring list. The attached Table 2 summarizes the Appendix II constituents that were reported at estimated values between the method detection limit (MDL) and the SWSL. The inorganic and organic constituents on Table 2 are also on the Appendix I Detection Monitoring list, with the exception of estimated values of dichlorodifluoromethane and total tin, which are consistent with past events. The parameters detected above the SWSLs appear to be consistent with past events.

Any analyte detected at a concentration greater than the MDL but less than the SWSL is believed to be present, but the uncertainty in the value is high (i.e. laboratory interferences). As a result, the actual concentration is estimated. The full groundwater report and statistical evaluation will be submitted per Sections .1632 and .1633.

Should you have any questions or concerns, please contact the undersigned at your convenience.

Sincerely,

HERST & ASSOCIATES, INC.



Ward E. Herst  
Managing Partner



Steve Jett  
Senior Hydrogeologist

*Attachment: Table 1 - Appendix II Detections Above the SWSL  
Table 2 - Appendix II Estimated Results Below the SWSL*

*cc: Mike Gurley, Republic Services, Inc. (via electronic mail)*

<b>Table 1 - Appendix II Detections Above the SWSL Second Semi-Annual 2013 Sampling Event Charlotte Motor Speedway, Landfill V</b>					
<b>Well</b>	<b>Constituent</b>	<b>Results</b>	<b>SWSL</b>	<b>MDL</b>	<b>Units</b>
MW-17	1,2-Dichloroethane	2.2	1	0.2	ug/L
	Benzene	6.3	1	0.3	ug/L
	cis-1,2-Dichloroethene	18	5	0.4	ug/L
	Tetrachloroethene	1.2	1	0.4	ug/L
	Total Barium	161	100	0.25	ug/L
	Trichloroethene	1.8	1	0.3	ug/L
	Vinyl Chloride	2	1	0.2	ug/L
MW-18A	Benzene	1.4	1	0.3	ug/L
	Total Barium	463	100	0.25	ug/L
	Total Cobalt	33.7	10	0.12	ug/L
	Total Zinc	62.8	10	0.87	ug/L
MW-19	1,4-Dichlorobenzene	6.1	1	0.4	ug/L
	Benzene	2.4	1	0.3	ug/L
	Total Barium	576	100	0.25	ug/L
	Total Cobalt	10.4	10	0.12	ug/L
	Total Nickel	129	50	0.41	ug/L
MW-19A	1,4-Dichlorobenzene	7.9	1	0.4	ug/L
	Benzene	2.9	1	0.3	ug/L
	Chlorobenzene	3.8	3	0.3	ug/L
	Total Barium	715	100	0.25	ug/L
	Total Cobalt	23.7	10	0.12	ug/L
	Total Nickel	116	50	0.41	ug/L
	Total Zinc	884	10	0.87	ug/L
MW-20B	1,4-Dichlorobenzene	1.3	1	0.4	ug/L
	Total Barium	524	100	0.25	ug/L
	Total Cadmium	1.02	1	0.06	ug/L
	Total Zinc	21.2	10	0.87	ug/L
MW-25	1,4-Dichlorobenzene	13	1	0.4	ug/L
	Total Barium	115	100	0.25	ug/L
	Total Cobalt	11.6	10	0.12	ug/L
	Vinyl Chloride	1.2	1	0.2	ug/L

*SWSL: Solid Waste Section Limit.*

*MDL: Laboratory Method Detection Limit.*

**Table 2 - Appendix II Estimated Results Below the SWSL  
Second Semi-Annual 2013 Sampling Event  
Charlotte Motor Speedway, Landfill V**

Well	Constituent	Flag	Results	SWSL	MDL	Units	Well	Constituent	Flag	Results	SWSL	MDL	Units
MW-17	1,1-Dichloroethane	J	1.4	5	0.4	ug/L	MW-19A	Acetone	J	4.1	100	1.6	ug/L
	1,2-Dichloropropane	J	0.4	1	0.3	ug/L		cis-1,2-Dichloroethene	J	0.5	5	0.4	ug/L
	Chloroethane	J	0.9	10	0.6	ug/L		Methyl Ethyl Ketone (2-Butanone)	J	23	100	0.8	ug/L
	Dichlorodifluoromethane	J	0.7	5	0.4	ug/L		Total Arsenic	B J	3.49	10	0.78	ug/L
	Methylene Chloride	J	0.6	1	0.3	ug/L		Total Cadmium	J	0.08	1	0.06	ug/L
	Total Cobalt	J	1.41	10	0.12	ug/L		Total Copper	J	6.24	10	0.38	ug/L
	Total Copper	J	0.73	10	0.38	ug/L		Total Lead	J	0.1	10	0.05	ug/L
	Total Nickel	J	2.04	50	0.41	ug/L		Total Thallium	J	0.1	5.5	0.06	ug/L
	Total Zinc	B J	2.98	10	0.87	ug/L		Total Tin	J	1.2	100	0.4	ug/L
MW-18A	trans-1,2-Dichloroethene	J	0.6	5	0.4	ug/L	Vinyl Chloride	J	0.3	1	0.2	ug/L	
	1,1-Dichloroethane	J	0.6	5	0.4	ug/L	1,1-Dichloroethane	J	4.5	5	0.4	ug/L	
	Acetone	J	2	100	1.6	ug/L	Benzene	J	0.5	1	0.3	ug/L	
	Carbon Disulfide	J	6	100	1.2	ug/L	Chlorobenzene	J	0.5	3	0.3	ug/L	
	Chlorobenzene	J	0.8	3	0.3	ug/L	cis-1,2-Dichloroethene	J	3.3	5	0.4	ug/L	
	cis-1,2-Dichloroethene	J	1.7	5	0.4	ug/L	Total Arsenic	B J	1.74	10	0.78	ug/L	
	Total Arsenic	B J	3.43	10	0.78	ug/L	Total Chromium	J	1.36	10	0.58	ug/L	
	Total Cadmium	J	0.17	1	0.06	ug/L	Total Cobalt	J	2.25	10	0.12	ug/L	
	Total Copper	J	5.52	10	0.38	ug/L	Total Copper	J	2.41	10	0.38	ug/L	
MW-19	Total Lead	J	0.15	10	0.05	ug/L	Total Lead	J	0.09	10	0.05	ug/L	
	Total Nickel	J	14.1	50	0.41	ug/L	Total Nickel	J	31.4	50	0.41	ug/L	
	Total Selenium	J	9.4	10	0.77	ug/L	Total Selenium	J	2.13	10	0.77	ug/L	
	Total Tin	J	0.4	100	0.4	ug/L	Total Vanadium	B J	4.55	25	1.97	ug/L	
	Trichloroethene	J	0.4	1	0.3	ug/L	1,1-Dichloroethane	J	0.9	5	0.4	ug/L	
	1,1-Dichloroethane	J	0.7	5	0.4	ug/L	Benzene	J	0.5	1	0.3	ug/L	
	Chlorobenzene	J	3	3	0.3	ug/L	Chlorobenzene	J	1.4	3	0.3	ug/L	
	cis-1,2-Dichloroethene	J	0.7	5	0.4	ug/L	cis-1,2-Dichloroethene	J	4.2	5	0.4	ug/L	
	Methyl Ethyl Ketone (2-Butanone)	J	19	100	0.8	ug/L	Total Cadmium	J	0.18	1	0.06	ug/L	
Total Arsenic	B J	2.87	10	0.78	ug/L	Total Copper	J	2.64	10	0.38	ug/L		
Total Cadmium	J	0.17	1	0.06	ug/L	Total Lead	J	0.1	10	0.05	ug/L		
Total Copper	J	4.86	10	0.38	ug/L	Total Nickel	J	24.6	50	0.41	ug/L		
Total Selenium	J	7.42	10	0.77	ug/L	Total Selenium	J	1.68	10	0.77	ug/L		
Total Tin	J	0.7	100	0.4	ug/L	Total Vanadium	B J	7.24	25	1.97	ug/L		
Total Zinc	B J	2.71	10	0.87	ug/L	Total Zinc	J	6.01	10	0.87	ug/L		
Vinyl Chloride	J	0.8	1	0.2	ug/L	Total Arsenic	J	1.18	10	0.78	ug/L		
							Equipment Blank	Total Barium	J	1.92	100	0.25	ug/L
								Total Vanadium	B J	5.8	25	1.97	ug/L
							Field Blank	Total Barium	J	2.38	100	0.25	ug/L
								Total Mercury	J	0.067	0.2	0.061	ug/L
								Total Zinc	B J	0.93	10	0.87	ug/L

B: Denotes detected in a field, equipment, or laboratory method blank.

J: Denotes sample result above the MDL but below the SWSL;  
estimated value; value may not be accurate.

SWSL: Solid Waste Section Limit.

MDL: Laboratory Method Detection Limit.