

Appendix F
Stormwater Analytical Data

APPENDIX F

Stormwater Analytical Data
 Chromium Transport Study
 Dundalk Marine Terminal, Baltimore, Maryland

Drain ID	OUTFALL	SAMPLE DATE	SAMPLE TIME	SAMPLE PURPOSE	FIELD SAMPLE ID	PARAMETER NAME	REPORT UNITS	REPORT RESULT	VALIDATION QUALIFIER	DETECT FLAG	REPORT METHOD	REPORT DETECTION	REPORT DETECTION	REPORT FILTERED
											LIMIT	LIMIT	FLAG	
12.5TH STREET	M-124	3/28/2007	12:05	REG	MESDMTMH-124	Aluminum	ug/L	3120		Y	80.2	200	N	
12.5TH STREET	M-124	3/28/2007	12:05	REG	MESDMTMH-124	Calcium	ug/L	115000		Y	104	200	N	
12.5TH STREET	M-124	3/28/2007	12:05	REG	MESDMTMH-124	Chromium	ug/L	7660		Y	2.3	15	N	
12.5TH STREET	M-124	3/28/2007	12:05	REG	MESDMTMH-124	Chromium, Hexavalent	ug/L	4800		Y	50	200	N	
12.5TH STREET	M-124	3/28/2007	12:05	REG	MESDMTMH-124	Iron	ug/L	1110		Y	52.2	200	N	
12.5TH STREET	M-124	3/28/2007	12:05	REG	MESDMTMH-124	Magnesium	ug/L	13700		Y	32.2	100	N	
12.5TH STREET	M-124	3/28/2007	12:05	REG	MESDMTMH-124	Manganese	ug/L	67.7		Y	0.36	5	N	
12.5TH STREET	M-124	3/28/2007	12:05	REG	MESDMTMH-124	Vanadium	ug/L	43.3		Y	1.5	5	N	
12.5TH STREET	M-124B	3/28/2007	13:40	REG	MESDMTMH-124B	Aluminum	ug/L	545		Y	80.2	200	N	
12.5TH STREET	M-124B	3/28/2007	13:40	REG	MESDMTMH-124B	Calcium	ug/L	348000		Y	520	1000	N	
12.5TH STREET	M-124B	3/28/2007	13:40	REG	MESDMTMH-124B	Chromium	ug/L	12800		Y	11.5	75	N	
12.5TH STREET	M-124B	3/28/2007	13:40	REG	MESDMTMH-124B	Chromium, Hexavalent	ug/L	8700		Y	50	200	N	
12.5TH STREET	M-124B	3/28/2007	13:40	REG	MESDMTMH-124B	Iron	ug/L	868		Y	52.2	200	N	
12.5TH STREET	M-124B	3/28/2007	13:40	REG	MESDMTMH-124B	Magnesium	ug/L	2890		Y	32.2	100	N	
12.5TH STREET	M-124B	3/28/2007	13:40	REG	MESDMTMH-124B	Manganese	ug/L	81.1		Y	0.36	5	N	
12.5TH STREET	M-124B	3/28/2007	13:40	REG	MESDMTMH-124B	Vanadium	ug/L	7.5		N	7.5	25	N	
13.5TH STREET	I-169	4/11/2007	10:00	REG	DMT1169	Aluminum	ug/L	330		Y	80.2	200	N	
13.5TH STREET	I-169	4/11/2007	10:00	REG	DMT1169	Calcium	ug/L	148000		Y	104	200	N	
13.5TH STREET	I-169	4/11/2007	10:00	REG	DMT1169	Chromium	ug/L	97.3		Y	2.3	15	N	
13.5TH STREET	I-169	4/11/2007	10:00	REG	DMT1169	Chromium, Hexavalent	ug/L	31		Y	5	20	N	
13.5TH STREET	I-169	4/11/2007	10:00	REG	DMT1169	Iron	ug/L	651		Y	52.2	200	N	
13.5TH STREET	I-169	4/11/2007	10:00	REG	DMT1169	Magnesium	ug/L	378000		Y	32.2	100	N	
13.5TH STREET	I-169	4/11/2007	10:00	REG	DMT1169	Manganese	ug/L	142		Y	0.36	5	N	
13.5TH STREET	I-169	4/11/2007	10:00	REG	DMT1169	Vanadium	ug/L	3.4		Y	1.5	5	N	
13.5TH STREET	I-172	4/11/2007	9:45	REG	DMT1172	Aluminum	ug/L	5910		Y	80.2	200	N	
13.5TH STREET	I-172	4/11/2007	9:45	REG	DMT1172	Calcium	ug/L	265000		Y	104	200	N	
13.5TH STREET	I-172	4/11/2007	9:45	REG	DMT1172	Chromium	ug/L	88.5		Y	2.3	15	N	
13.5TH STREET	I-172	4/11/2007	9:45	REG	DMT1172	Chromium, Hexavalent	ug/L	5	U	N	5	20	N	
13.5TH STREET	I-172	4/11/2007	9:45	REG	DMT1172	Iron	ug/L	27600		Y	52.2	200	N	
13.5TH STREET	I-172	4/11/2007	9:45	REG	DMT1172	Magnesium	ug/L	73200		Y	32.2	100	N	
13.5TH STREET	I-172	4/11/2007	9:45	REG	DMT1172	Manganese	ug/L	1190		Y	0.36	5	N	
13.5TH STREET	I-172	4/11/2007	9:45	REG	DMT1172	Vanadium	ug/L	48.8		Y	1.5	5	N	
12TH STREET	M-122	4/26/2007	10:25	REG	12.0-MH122-042607	Chromium	ug/L	11100		Y	11.5	75	N	
12TH STREET	M-122	4/26/2007	10:25	REG	12.0-MH122-042607	Chromium, Hexavalent	ug/L	10000		Y	250	1000	N	
12TH STREET	M-124	4/26/2007	10:40	REG	12.0-MH124-042607	Chromium	ug/L	7660		Y	2.3	15	N	
12TH STREET	M-124	4/26/2007	10:40	REG	12.0-MH124-042607	Chromium, Hexavalent	ug/L	7400		Y	250	1000	N	
13TH STREET	M-127	4/26/2007	9:55	REG	13.0-MH127-042607	Chromium	ug/L	26400		Y	11.5	75	N	
13TH STREET	M-127	4/26/2007	9:55	REG	13.0-MH127-042607	Chromium, Hexavalent	ug/L	27000		Y	500	2000	N	
13TH STREET	M-128	4/26/2007	10:05	REG	13.0-MH128-042607	Chromium	ug/L	27900		Y	11.5	75	N	
13TH STREET	M-128	4/26/2007	10:05	REG	13.0-MH128-042607	Chromium, Hexavalent	ug/L	27000		Y	500	2000	N	
11TH STREET	M-117	4/30/2007	12:35	REG	11.0-MH117-043007	Chromium	ug/L	505		Y	2.3	15	N	
11TH STREET	M-117	4/30/2007	12:35	REG	11.0-MH117-043007	Chromium, Hexavalent	ug/L	510		Y	5	20	N	
11TH STREET	M-118	4/30/2007	12:20	REG	11.0-MH118-043007	Chromium	ug/L	497		Y	2.3	15	N	
11TH STREET	M-118	4/30/2007	12:20	REG	11.0-MH118-043007	Chromium, Hexavalent	ug/L	460		Y	5	20	N	
12.5TH STREET	M-124	4/30/2007	14:00	REG	12.5-MH124-043007	Chromium	ug/L	45500		Y	23	150	N	
12.5TH STREET	M-124	4/30/2007	14:00	REG	12.5-MH124-043007	Chromium, Hexavalent	ug/L	45000	L	Y	500	2000	N	
11.5TH STREET	I-136	5/9/2007	8:30	REG	11.5-IN136-050907	Chromium	ug/L	8.1	J	Y	2.3	15	N	
11.5TH STREET	I-136	5/9/2007	8:30	REG	11.5-IN136-050907	Chromium, Hexavalent	ug/L	5	UJ	N	5	20	N	
10.5TH STREET	I-116	5/12/2007	11:10	REG	10.5-IN116-051207	Chromium	ug/L	20.8		Y	2.3	15	N	
10.5TH STREET	I-116	5/12/2007	11:10	REG	10.5-IN116-051207	Chromium, Hexavalent	ug/L	5	UJ	N	5	20	N	
10.5TH STREET	I-123	5/12/2007	10:55	REG	10.5-IN123-051207	Chromium	ug/L	3.1	J	Y	2.3	15	N	
10.5TH STREET	I-123	5/12/2007	10:55	REG	10.5-IN123-051207	Chromium, Hexavalent	ug/L	5	UJ	N	5	20	N	

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Chromium Transport Study

Dundalk Marine Terminal, Baltimore, Maryland

Drain ID	OUTFALL	SAMPLE DATE	SAMPLE TIME	SAMPLE PURPOSE	FIELD SAMPLE ID	PARAMETER NAME	REPORT UNITS	REPORT RESULT	VALIDATION QUALIFIER	DETECT FLAG	REPORT_METHOD_	REPORT_	FILTERED_
											DETECTION_	DETECTION_	
13.5TH STREET	I-169	5/16/2007	15:57	REG	13.5-IN169-051607	Chromium	ug/L	136		Y	2.3	15	N
13.5TH STREET	I-169	5/16/2007	15:57	REG	13.5-IN169-051607	Chromium, Hexavalent	ug/L	49		Y	5	20	N
13TH STREET	M-125A	5/16/2007	14:37	REG	13.0-MH125A-051607	Chromium	ug/L	21900		Y	11.5	75	N
13TH STREET	M-125A	5/16/2007	14:37	REG	13.0-MH125A-051607	Chromium, Hexavalent	ug/L	20000		Y	250	1000	N
13TH STREET	M-126	5/16/2007	14:36	REG	13.0-MH126-051607	Chromium	ug/L	29200		Y	11.5	75	N
13TH STREET	M-126	5/16/2007	14:36	REG	13.0-MH126-051607	Chromium, Hexavalent	ug/L	26000		Y	250	1000	N
13TH STREET	M-128	5/16/2007	14:10	REG	13.0-MH128-051607	Chromium	ug/L	30200		Y	11.5	75	N
13TH STREET	M-128	5/16/2007	14:10	REG	13.0-MH128-051607	Chromium, Hexavalent	ug/L	25000		Y	250	1000	N
13TH STREET	M-128	5/24/2007	10:05	REG	13.0-MH128-052407	Chromium	ug/L	30300		Y	11.5	75	N
13TH STREET	M-128	5/24/2007	10:05	REG	13.0-MH128-052407	Chromium, Hexavalent	ug/L	33300		Y	2500	5000	N
13TH STREET	M-128	6/6/2007	19:40	REG	13.0-MH128-060607	Chromium	ug/L	29600		Y	11.5	75	N
13TH STREET	M-128	6/6/2007	19:40	REG	13.0-MH128-060607	Chromium, Hexavalent	ug/L	31000		Y	500	2000	N
12TH STREET	M-120	10/4/2007	9:25	REG	12.0-MH120-100407	Chromium	ug/L	10500		Y	11.5	75	N
12TH STREET	M-120	10/4/2007	9:25	REG	12.0-MH120-100407	Chromium, Hexavalent	ug/L	9200		Y	100	400	N
12TH STREET	M-120	10/4/2007	9:35	FD	12.0-MH120-100407-D	Chromium	ug/L	11100		Y	11.5	75	N
12TH STREET	M-120	10/4/2007	9:35	FD	12.0-MH120-100407-D	Chromium, Hexavalent	ug/L	9400		Y	100	400	N
12TH STREET	M-120	10/5/2007	12:30	REG	12.0-MH120-100507	Chromium	ug/L	3030		Y	2.3	15	N
12TH STREET	M-120	10/5/2007	12:30	REG	12.0-MH120-100507	Chromium, Hexavalent	ug/L	3300	J	Y	50	200	N
13TH STREET	M-125	10/5/2007	11:25	REG	13.0-MH125-100507	Chromium	ug/L	23700	J	Y	11.5	75	N
13TH STREET	M-125	10/5/2007	11:25	REG	13.0-MH125-100507	Chromium, Hexavalent	ug/L	24000	J	Y	130	500	N
13TH STREET	M-126	10/5/2007	11:30	REG	13.0-MH126-100507	Chromium	ug/L	32800	J	Y	11.5	75	N
13TH STREET	M-126	10/5/2007	11:30	REG	13.0-MH126-100507	Chromium, Hexavalent	ug/L	25000	J	Y	250	1000	N
13TH STREET	M-128	10/5/2007	11:50	REG	13.0-MH128-100507	Chromium	ug/L	36600		Y	11.5	75	N
13TH STREET	M-128	10/5/2007	11:50	REG	13.0-MH128-100507	Chromium, Hexavalent	ug/L	32000	J	Y	250	1000	N
12TH STREET	M-120	10/8/2007	18:58	REG	12.0-MH120-100807	Chromium	ug/L	3820		Y	2.3	15	N
12TH STREET	M-120	10/8/2007	18:58	REG	12.0-MH120-100807	Chromium, Hexavalent	ug/L	3000	J	Y	50	200	N
12TH STREET	M-121	10/8/2007	17:40	REG	12.0-MH121-100807	Chromium	ug/L	15300		Y	11.5	75	N
12TH STREET	M-121	10/8/2007	17:40	REG	12.0-MH121-100807	Chromium, Hexavalent	ug/L	13000		Y	130	500	N
12TH STREET	M-122	10/8/2007	17:48	REG	12.0-MH122-100807	Chromium	ug/L	30600	J	Y	11.5	75	N
12TH STREET	M-122	10/8/2007	17:48	REG	12.0-MH122-100807	Chromium, Hexavalent	ug/L	21000	J	Y	500	2000	N
12TH STREET	M-123	10/8/2007	17:55	REG	12.0-MH123-100807	Chromium	ug/L	28900		Y	11.5	75	N
12TH STREET	M-123	10/8/2007	17:55	REG	12.0-MH123-100807	Chromium, Hexavalent	ug/L	24000	J	Y	500	2000	N
12TH STREET	M-124	10/8/2007	18:02	REG	12.0-MH124-100807	Chromium	ug/L	37100		Y	11.5	75	N
12TH STREET	M-124	10/8/2007	18:02	REG	12.0-MH124-100807	Chromium, Hexavalent	ug/L	44000	J	Y	1000	4000	N
13TH STREET	M-125	10/8/2007	18:50	REG	13.0-MH125-100807	Chromium	ug/L	14500		Y	11.5	75	N
13TH STREET	M-125	10/8/2007	18:50	REG	13.0-MH125-100807	Chromium, Hexavalent	ug/L	12000	J	Y	130	500	N
13TH STREET	M-125A	10/8/2007	18:40	REG	13.0-MH125A-100807	Chromium	ug/L	25100		Y	11.5	75	N
13TH STREET	M-125A	10/8/2007	18:40	REG	13.0-MH125A-100807	Chromium, Hexavalent	ug/L	22000	J	Y	500	2000	N
13TH STREET	M-126	10/8/2007	18:33	REG	13.0-MH126-100807	Chromium	ug/L	26200		Y	11.5	75	N
13TH STREET	M-126	10/8/2007	18:33	REG	13.0-MH126-100807	Chromium, Hexavalent	ug/L	22000	J	Y	500	2000	N
13TH STREET	M-127	10/8/2007	18:25	REG	13.0-MH127-100807	Chromium	ug/L	25700		Y	11.5	75	N
13TH STREET	M-127	10/8/2007	18:25	REG	13.0-MH127-100807	Chromium, Hexavalent	ug/L	22000	J	Y	500	2000	N
13TH STREET	M-128	10/8/2007	18:18	REG	13.0-MH128-100807	Chromium	ug/L	5320		Y	2.3	15	N
13TH STREET	M-128	10/8/2007	18:18	REG	13.0-MH128-100807	Chromium, Hexavalent	ug/L	5600	J	Y	100	400	N
13TH STREET	M-129	10/8/2007	18:11	REG	13.0-MH129-100807	Chromium	ug/L	5470		Y	2.3	15	N
13TH STREET	M-129	10/8/2007	18:11	REG	13.0-MH129-100807	Chromium, Hexavalent	ug/L	5400	J	Y	100	400	N
11TH STREET	M-115	10/12/2007	10:00	REG	11.0-MH115-101207	Chromium	ug/L	103		Y	2.3	15	N
11TH STREET	M-115	10/12/2007	10:00	REG	11.0-MH115-101207	Chromium, Hexavalent	ug/L	5	UJ	N	5	20	N
11TH STREET	M-116	10/12/2007	10:10	REG	11.0-MH116-101207	Chromium	ug/L	74.7		Y	2.3	15	N
11TH STREET	M-116	10/12/2007	10:10	REG	11.0-MH116-101207	Chromium, Hexavalent	ug/L	5	UJ	N	5	20	N
11TH STREET	M-117	10/12/2007	10:25	REG	11.0-MH117-101207	Chromium	ug/L	155		Y	2.3	15	N
11TH STREET	M-117	10/12/2007	10:25	REG	11.0-MH117-101207	Chromium, Hexavalent	ug/L	140	J	Y	5	20	N

APPENDIX F

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 Chromium Transport Study
 Dundalk Marine Terminal, Baltimore, Maryland

Drain ID	OUTFALL	SAMPLE_ DATE	SAMPLE_ TIME	SAMPLE_ PURPOSE	SAMPLE_ FIELD	SAMPLE_ ID	PARAMETER_NAME	REPORT UNITS	REPORT RESULT	VALIDATION QUALIFIER	DETECT FLAG	REPORT_ METHOD_ DETECTION_ LIMIT	REPORT_ DETECTION_ LIMIT	REPORT_ FILTERED_ FLAG
11TH STREET	M-118	10/12/2007	10:40	REG	11.0-MH118-101207		Chromium	ug/L	920		Y	2.3	15	N
11TH STREET	M-118	10/12/2007	10:40	REG	11.0-MH118-101207		Chromium, Hexavalent	ug/L	1000	J	Y	50	200	N
10TH STREET	M-M1	11/30/2007	10:30	REG	10.0-MHM1-113007		Chromium	ug/L	18		Y	2.3	15	N
10TH STREET	M-M1	11/30/2007	10:30	REG	10.0-MHM1-113007		Chromium, Hexavalent	ug/L	5	U	N	5	20	N
10TH STREET	M-M2	11/30/2007	10:20	REG	10.0-MHM2-113007		Chromium	ug/L	10.9	J	Y	2.3	15	N
10TH STREET	M-M2	11/30/2007	10:20	REG	10.0-MHM2-113007		Chromium, Hexavalent	ug/L	5	U	N	5	20	N
10TH STREET	M-M5	11/30/2007	9:45	REG	10.0-MHM5-113007		Chromium	ug/L	171		Y	2.3	15	N
10TH STREET	M-M5	11/30/2007	9:45	REG	10.0-MHM5-113007		Chromium, Hexavalent	ug/L	5	U	N	5	20	N
10TH STREET	M-S1	11/30/2007	11:00	REG	10.0-MHS1-113007		Chromium	ug/L	17.1		Y	2.3	15	N
10TH STREET	M-S1	11/30/2007	11:00	REG	10.0-MHS1-113007		Chromium, Hexavalent	ug/L	5	U	N	5	20	N
9TH STREET	M-I2	12/21/2007	10:35	REG	9.0-MHI2-122107		Chromium	ug/L	1390		Y	2.3	15	N
9TH STREET	M-I2	12/21/2007	10:35	REG	9.0-MHI2-122107		Chromium, Hexavalent	ug/L	740	J	Y	5	20	N
9TH STREET	M-M1	12/21/2007	10:55	REG	9.0-MHM1-122107		Chromium	ug/L	80.7		Y	2.3	15	N
9TH STREET	M-M1	12/21/2007	10:55	REG	9.0-MHM1-122107		Chromium, Hexavalent	ug/L	90	J	Y	5	20	N
9TH STREET	M-M2	12/21/2007	11:20	REG	9.0-MHM2-122107		Chromium	ug/L	189		Y	2.3	15	N
9TH STREET	M-M2	12/21/2007	11:20	REG	9.0-MHM2-122107		Chromium, Hexavalent	ug/L	5	UJ	N	5	20	N
9TH STREET	M-M3	12/21/2007	11:25	REG	9.0-MHM3-122107		Chromium	ug/L	117		Y	2.3	15	N
9TH STREET	M-M3	12/21/2007	11:25	REG	9.0-MHM3-122107		Chromium, Hexavalent	ug/L	5	UJ	N	5	20	N
9TH STREET	M-M4	12/21/2007	12:30	REG	9.0-MHM4-122107		Chromium	ug/L	53.8		Y	2.3	15	N
9TH STREET	M-M4	12/21/2007	12:30	REG	9.0-MHM4-122107		Chromium, Hexavalent	ug/L	39	J	Y	5	20	N
9TH STREET	M-M6	12/21/2007	12:15	REG	9.0-MHM6-122107		Chromium	ug/L	88.3		Y	2.3	15	N
9TH STREET	M-M6	12/21/2007	12:15	REG	9.0-MHM6-122107		Chromium, Hexavalent	ug/L	5	UJ	N	5	20	N
9TH STREET	M-O53	12/21/2007	10:30	REG	9.0-MHO53-122107		Chromium	ug/L	53.3		Y	2.3	15	N
9TH STREET	M-O53	12/21/2007	10:30	REG	9.0-MHO53-122107		Chromium, Hexavalent	ug/L	5	UJ	N	5	20	N
13TH STREET	13TH STREET	4/1/2009	11:57	REG	13.0-13IRM-040109-02		Chromium	ug/L	15700		Y	15	75	N
13TH STREET	13TH STREET	4/1/2009	11:57	REG	13.0-13IRM-040109-02		Chromium, Hexavalent	ug/L	15100		Y	500	1000	N
13TH STREET	13TH STREET	4/1/2009	11:57	REG	13.0-13IRM-040109-02F		Chromium, Dissolved	ug/L	15400		Y	15	75	Y
13TH STREET	13TH STREET	6/25/2009	11:48	REG	13.0-13IRM-062509-01		Chromium	ug/L	26500		Y	17	75	N
13TH STREET	13TH STREET	6/25/2009	11:48	REG	13.0-13IRM-062509-01		Chromium, Hexavalent	ug/L	27400		Y	500	1000	N
13TH STREET	13TH STREET	6/25/2009	11:48	REG	13.0-13IRM-062509-01		pH	ug/L	12600		Y	0.01	0.01	N
13TH STREET	13TH STREET	6/25/2009	11:48	REG	13.0-13IRM-062509-01F		Chromium, Dissolved	ug/L	26500		Y	17	75	Y

Notes:

All dissolved samples were field filtered except Chromium (VI), which was lab filtered. The "F" was appended to sample IDs during later investigation phases to indicate that the sample was field filtered

U = Analyte not detected above reported MDL

J = Analyte present. Reported value may or may not be accurate or precise.

UJ = estimated non-detect due to associated inaccurate or imprecise spike recoveries, calibration issues, blank contamination, etc.

L = Analyte is present but flagged as a low bias, usually associated with MS/MSD, LCS, LCSD spike recoveries

Filtered Flag = Y indicates that the sample was filtered.

REG = Native Sample

FD = Field Duplicate