24 Davis Avenue, Poughkeepsie, NY 12603 phone 845.452.1658 | fax 845.485.7083 | ecosystemsstrategies.com

July 1, 2013

Michael Mason NYSDEC 625 Broadway Albany, New York 12233

via EMAIL: mamason@gw.dec.state.ny.us

Re: Operation and Maintenance Services for the property known as the "400 Block", 413-441 Main

Street and 366-372 Mill Street, City of Poughkeepsie, Dutchess County, New York

ESI File: CP9920.81

Dear Mr. Mason:

This letter is being prepared on behalf of the City of Poughkeepsie regarding groundwater sampling at the above-referenced site. The Site was fully remediated in 2003 per NYSDEC requirements. Contaminated soil was disposed of off-site and monitoring wells were installed to document residual impacts to groundwater quality. Implementation of the Site Management Plan (SMP) has documented the integrity of the on-site barrier layer and vapor extraction system, and all engineering controls are intact and functioning as expected. Groundwater quality testing, first conducted in 1999, has documented a continuing absence of any significant concentrations of VOCs since at least 2004, and metals since 2009. A Monitoring Well Location Map, and Data Summary Tables indicating detected hydrocarbons and metals in Site groundwater, are provided as attachments.

These data demonstrate that overall groundwater quality has significantly improved at the Site. Existing hydrocarbon and RCRA metal concentrations are 1) not at levels warranting further remediation, and 2) at sufficiently low levels that any further improvement over time is likely to be minimal. Sufficient data have now been generated to conclude that low grade contamination exists on the Site, but such contamination does not represent a threat to on-Site users or off-site properties.

ESI requests that the requirement for groundwater monitoring at this Site be ended, and that the monitoring wells be properly closed.

Please review this information and call me at (845) 452-1658 should you have any questions or comments.

Sincerely,

ECOSYSTEMS STRATEGIES, INC.

Sail & Catto

Paul H. Ciminello President

PHC:ndc:cla

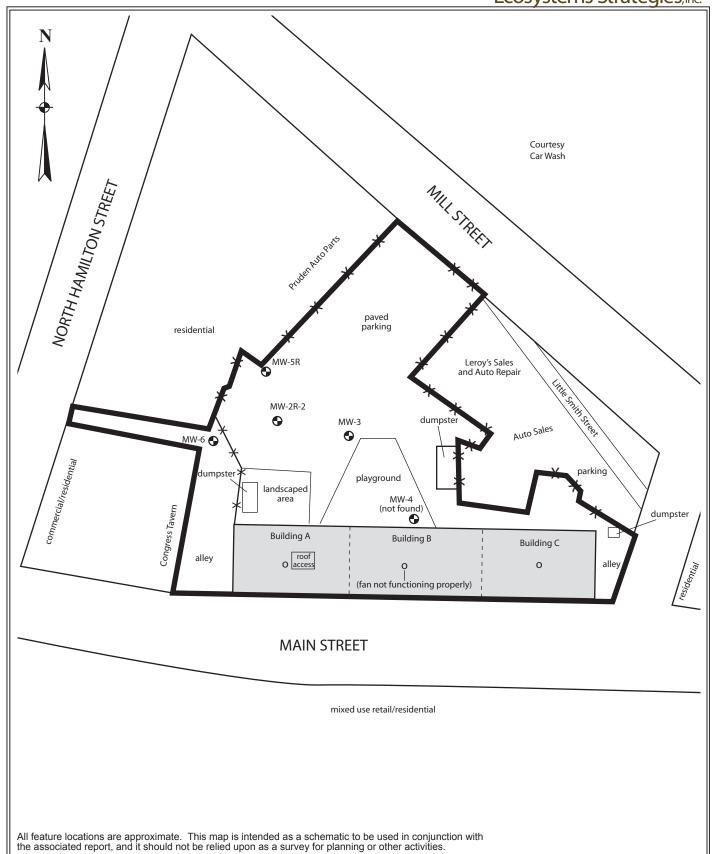
cc: Richard L. DuPilka, P.E rdupilka@cityofpoughkeepsie.com

Attachments:

A Monitoring Well Location Map

B Data Summary Tables

Ecosystems Strategies, Inc.



# **Monitoring Well Location Map**

400 Block Property 413-441 Main Street and 336-372 Mill Street City of Poughkeepsie, Dutchess County, New York subject property border
monitoring well location
o SSDS vent pipe in roof
X X Chain link fence

ESI File: CP9920.81

June 2012

Scale: 1" = 75' approximately

Attachment A

Table 2A: Summary of VOCs and PAHs in Groundwater

All data provided in µg/L

<u> азын рээтгэг нэ руг — </u>														Sample Io	dentificat	tion											
VOCs (Method 8260)	Guidance						MV	V-2R-2													MW-3						
	Levels	Apr-04	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12	July-03	Jan-04	Apr-04	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12
Benzene	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Chloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Tert-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
1,2-Dichloroethylene (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Methylene chloride	5	ND	3.9 J,B	7.1 J,B	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9 J,B	5.2 J,B									
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
MTBE	10	ND	ND	ND	ND	16	27	17	19	ND	ND	ND	8	5	5.7	3.2 J	3.2 J										
Naphthalene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Tetrachloro-ethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
o-Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
P-& m-Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										

												Samp	le Identifi	cation										
VOCs (Method 8260)	Guidance				M	W-5R											MW-6							
	Levels	Oct-05		Apr-07		Apr-09	Apr-10		May-12	,	July-03	Jan-04	_	Aug-04	Dec-04	Apr-05	Oct-05			May-08	Apr-09	_	May -11	May-12
2-Butanone	50	ND	ND	ND	ND	ND	ND	ND	9. 4 J	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethylene (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	ND	ND	eq	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	Š	ND	ND	훁	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	ND	ND	ga I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	Ď	ND	ND	١ ä	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	el el	ND	ND	2 =	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	5	ND	ND	ND	ND	ND	ND	11 B	5 J,B	ND	≥ .	ND	ND	× ×	ND	ND	ND	ND	ND	ND	ND	ND	7.0 J,B	5,2 J,B
MTBE	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ing	1	ND	JG.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ţ	ND	ND	=	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	o	ND	ND	Ė	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	1 J	ND	ND	ND	ND	Σ	ND	ND	l≗	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloro-ethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P-& m-Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Guidance levels based on Title 6 NYCRR Part 703 Water Quality Standards or NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda, as appropriate ND = Not Detected

Wells MW-1, MW-2R, and MW 5 are no longer present. Data from these wells can be found in previous reports.

Blue shade indicates detectable concentrations

Bold and green shade indicates exceedance of applicable regulatory criteria

J = Data indicate the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

B = Analyte is found in the associated analysis batch blank



Table 2B: Summary of VOCs and PAHs in Groundwater

All data provided in µg/L

\(\(\text{O}\) \(\text{III}\) \(\text{I}\) \(\text{I}\) \(\text{O}\) \(\text{O}\) \(\text{O}\)							S	ample Ide						
VOCs (Method 8260)	Guidance							MW						
	Levels	May-99	July-03	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12
Benzene	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	]	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
Chloroform	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
Chloromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
Tert-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
1,2-Dichloroethylene (Total)	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	פַ	ND
Ethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	not found	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 🛱	ND
Toluene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
Methylene chloride	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	well	5.9 J,B
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND
MTBE	10	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	i ĕ	ND
Naphthalene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ţ	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Monitoring	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Š	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND
Tetrachloro-ethylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND
o-Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND
P-& m-Xylene	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND

Notes:

Guidance levels based on Title 6 NYCRR Part 703 Water Quality Standards or NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda, as appropriate ND = Not Detected

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# Table 3: Summary of Total RCRA Metals in Groundwater

All data provided in µg/L

														San	nple Identifi	cation												
	Guidance						MW-2F														MW-3							
Metals	Level	Apr-04	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12	May-99	July-03	Jan-04	Apr-04	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12
Arsenic	25	30	48	83	43	18	16	71	ND	15	ND	ND	ND	10	ND	ND	5	10	ND	7	ND							
Barium	1,000	652	477	970	518	233	40	115	84	122	219	130	206	780	75	60	148	181	251	65	99	40	89	90	162	71	81	157
Cadmium	5	ND	ND	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND										
Chromium	50	20	18	29	15	12	ND	9	6	ND	ND	ND	ND	60	7	5	7	10	15	6	6	ND	8	8	9	ND	ND	ND
Lead	25	1,010	683	1,860	864	307	5	75	6	ND	ND	ND	ND	13	46	ND	108	275	574	16	31	ND	7	6	5	ND	ND	ND
Mercury	0.7	4.3	8	12.7	9.4	1.4	ND	0.3	ND	ND	ND	ND	ND	ND	5.2	ND	ND	0.8	2.7	ND								
Selenium	10	ND	16	22	ND	ND	ND	11	ND																			
Silver	50	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											

											Sam	ple Identi	fication									
	Guidance							MW-4										MW.	-5R			
Metals	Level	May-99	July-03	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12
Arsenic	25	ND	ND	11	ND	t	ND	ND	ND	ND	ND	ND	191	ND	ND							
Barium	1,000	320	144	191	141	106	175	99	110	284	101	97	2	89	111	108	256	189	94	ND	102	76
Cadmium	5	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	e e	ND								
Chromium	50	ND	ND	10	8	6	12	6	10	9	9	ND	g ≥	ND	11	7	39	18	15	18	12	5
Lead	25	6	10	245	114	58	115	12	14	51	ND	ND	i je jo	ND	ND	6	ND	6	ND	ND	ND	5
Mercury	0.7	ND	ND	1.2	1	0.3	ND	ND	ND	ND	ND	ND	<u>ē</u> .	ND								
Selenium	10	ND	ND	12	ND	] 5	ND															
Silver	50	ND	2.1	ND	] ≥	ND																

								MW-6							
	May-99	July-03	Jan-04	Apr-04	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May -11	May-12
Arsenic	8	Ť	ND	9	با	ND	ND	ND	ND	ND	ND	9	159	ND	ND
Barium	140	2	28	84	2	94	103	112	169	201	112	87	ND	98	85
Cadmium	ND	llə/	ND	ND	le l	ND	ND								
Chromium	ND	y g	7	10	g w	11	12	10	7	8	8	12	ND	ND	ND
Lead	60	r in Q	ND	26	i i i	38	18	9	5	ND	7	ND	ND	ND	ND
Mercury	ND	ito	ND	ND	ito	ND	ND								
Selenium	ND	l on	ND	ND	] <u>6</u>	ND	ND								
Silver	ND	Σ	ND	ND	Ž	ND	ND								

#### Notes:

Guidance levels based on Title 6 NYCRR Part 703 Water Quality Standards or NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda, as appropriate

ND = Not Detected

Wells MW-1, MW-2R, and MW 5 are no longer present. Data from these wells can be found in previous reports.

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## Table 4: Summary of Dissolved RCRA Metals in Groundwater

All data provided in µg/L

														Sam	ole Identific	ation												
	Guidance						MW-	2R-2													MW-3							
Metals	Level	Apr-04	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	Apr-11	May-12	May-99	July-03	Jan-04	Apr-04	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND													
Barium	1,000	170	96	49	55	74	25	68	69	98	197	117	186	700	44	57	111	95	82	58	83	36	80	81	150	63	68	156
Cadmium	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND													
Chromium	50	6	5	5	ND	ND	ND	6	7	ND	ND	ND	ND	60	ND	ND	ND	6	6	5	6	ND	8	7	ND	ND	ND	ND
Lead	25	5	ND	ND	5	ND	ND	ND	ND	ND	5	ND																
Mercury	0.7	ND	0.9	ND																								
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND													
Silver	50	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND											

											Sample Ide	entification										1
	Guidance							MW-4										MW	/-5R			
Metals	Level	May-99	July-03	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12
Arsenic	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ř	ND								
Barium	1,000	280	134	90	76	76	98	85	99	138	96	94	2	86	111	98	252	182	82	174	97	63
Cadmium	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	J ≡	ND								
Chromium	50	ND	ND	5	5	6	5	6	9	7	ND	ND	g × pu	ND	11	ND	38	17	ND	17	11	ND
Lead	25	ND	ND	ND	ND	6	ND	ND	ND	ND	ND	ND	i je jo	ND								
Mercury	0.7	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND	흹	ND								
Selenium	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND								
Silver	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND								

							Sam	ple Identific	ation						
								MW-6							
Metals	May-99	July-03	Jan-04	Apr-04	Aug-04	Dec-04	Apr-05	Oct-05	Mar-06	Apr-07	May-08	Apr-09	Apr-10	May-11	May-12
Arsenic	ND	ıt	ND	ND	ıt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	80	2	18	51	2	40	45	59	132	191	96	61	144	81	70
Cadmium	ND	le le	ND	ND	를 p	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	1	g w	7	8	g ×	6	8	ND	7	8	9	ND	ND	ND	ND
Lead	ND	ri fo	ND	ND	훈톭	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	ND	ito	ND	ND	ي إذ	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	ND	lon	ND	ND	lo Lo	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND		ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

### Notes:

Guidance levels based on Title 6 NYCRR Part 703 Water Quality Standards or NYSDEC Division of Water TOGS 1.1.1 (June 1998) and subsequent NYSDEC Memoranda, as appropriate

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