ISLIP RESOURCE RECOVERY AGENCY 401 MAIN STREET, ISLIP, NEW YORK 11751 (631) 224-5644

February 13, 2019

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Construction Services, 12th Floor
625 Broadway
Albany, New York 12233-7013

RECEIVED
FEB 15 2019
Remedial Bureau E

Attn: Jeffrey E. Trad, P.E.
Environmental Engineer II

Re: **Sonia Road Landfill**
NYSDEC Site Number 152013
Post Closure Groundwater Monitoring Program
Fifteen Month Interval Groundwater Monitoring Report 2018 Sampling Results

Dear Mr. Trad:

Transmitted herewith for your review and consideration is two copies of the Post Closure Groundwater Monitoring Program Fifteen Month Interval Groundwater Sampling Results for the Sonia Road Landfill.

Sincerely,

Anthony J. Varrichio, P.E.
Chief Engineer

AJV:vl

Enclosure

cc: Martin Bellew, IRRA President
Thomas P. Fox, P.G., Vice President, D&B
Keith S. Robins, Sr. Hydrogeologist, D&B
Eric Lenio, NYSDEC, Stony Brook
File

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AGENCY

Sonia Road Landfill
Brentwood, New York

Post Closure Groundwater Monitoring Program

2018 Monitoring Report Baseline Sampling Event

February 2019

Prepared by:

D&B ENGINEERS AND ARCHITECTS, P.C.

D&B ENGINEERS AND ARCHITECTS, P.C.

330 Crossways Park Drive, Woodbury, New York 11797
516-364-9890 • 718-460-3634 • Fax: 516-364-9045 • www.db-eng.com

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February 8, 2019

Anthony J. Varrichio, P.E.
Chief Engineer
Islip Resource Recovery Agency
401 Main Street
Islip, NY 11751

Re: Sonia Road Landfill
Post-Closure Groundwater Monitoring Program
2018 Monitoring Report
D&B No. 3371-13B

Dear Mr. Varrichio:

Enclosed please find six copies of the 2018 Post-Closure Groundwater Monitoring Report for the Sonia Road Landfill. In addition, this report is provided in electronic format on the enclosed compact disc.

If you have any questions or require additional information, please contact me at (516) 364-9890, Ext. 3068.

Very truly yours,

Thomas P. Fox, P.G.
Vice President

TPF/KSR/nc
Enclosure
♦3371\TPF19Ltr -01

POST CLOSURE GROUNDWATER MONITORING PROGRAM
2018 MONITORING REPORT
(BASELINE SAMPLING EVENT)

SONIA ROAD LANDILL
BRENTWOOD, NEW YORK

Prepared for:

ISLIP RESOURCE RECOVERY AGENCY
TOWN OF ISLIP, NEW YORK

Prepared by:

D&B ENGINEERS
AND
ARCHITECTS, P.C.

D&B ENGINEERS AND ARCHITECTS, P.C.
WOODBURY, NEW YORK

FEBRUARY 2019

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
2018 MONITORING REPORT

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1.0 INTRODUCTION

This report presents the results of the November 2018 groundwater monitoring event conducted as part of the Post Closure Groundwater Monitoring Program for the Sonia Road Landfill. The sampling program was conducted for the Town of Islip, as administered by the Islip Resource Recovery Agency (IRRA), in conformance with the December 2001 Sampling and Analysis Plan (SAP). The SAP is a part of the Sonia Road Post Closure Monitoring and Maintenance Plan (Volume 3 of 4), which was approved by the New York State Department of Environmental Conservation (NYSDEC) in a letter dated January 18, 2006. At the request of the NYSDEC, selected groundwater monitoring wells were analyzed for emerging contaminants including: Per-and Polyfluoroalkyl Substances (PFAS) and 1,4-dioxane (NYSDEC correspondence dated December 11, 2017).

1.1 Purpose

The purpose of the Post Closure Groundwater Monitoring Program is to monitor groundwater quality and flow direction subsequent to the capping and closure of the Sonia Road Landfill.

This Post Closure Groundwater Monitoring Program report includes discussions of the sample locations, sampling procedures, laboratory analyses, field and analytical results, data validation, groundwater level measurements and groundwater flow direction. In addition, the report includes a comparison of the analytical results of this November 2018 sampling event to applicable New York State groundwater quality standards and guidance values.

1.2 Site Location and Description

The Sonia Road Landfill is a capped and closed inactive municipal solid waste landfill owned by the Town of Islip. The landfill is located at 1355 Howells Road in the hamlet of

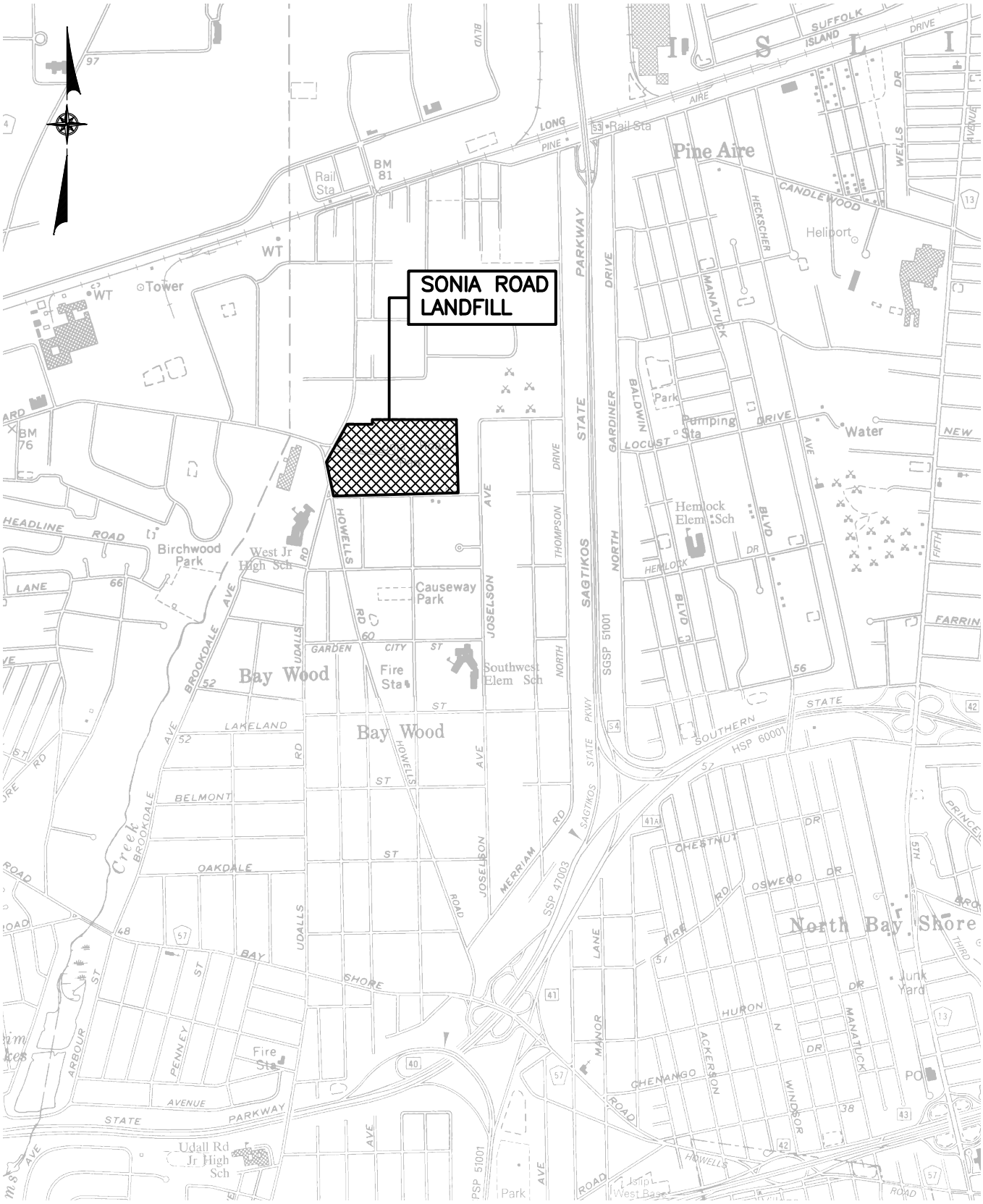
Brentwood in the western portion of the Town and is in close proximity to the western town boundary with the Town of Babylon. The location of the Sonia Road Landfill is illustrated on **Figure 1-1.**

The landfill property is 42.2 acres in area and is approximately rectangular in shape. The landfill is bounded to the north by industrial properties, to the east by residential properties, to the south by Deer Park Street with residential properties beyond, and to the west by Howell's Road, Secatogue Road, and Corbin Avenue with industrial properties beyond. In the southwest corner of the property is one residential parcel (Tax Map No. 221-2-1), which is not part of landfill property described above. At the northwest corner of the property is a 0.5-acre parcel owned by the Town of Islip (Tax Map No. 198-5-7.3), which is identified as a paper street. Given that the waste mass extends onto this parcel, it is considered as part of the landfill property, and as a result, the overall landfill property is considered to be 42.7 acres. At and abutting the northeast corner of the landfill property is the western extension of Sonia Road for which the facility is named.

The landfill property itself is zoned Industrial I and Industrial II with a small portion along the southeastern boundary zoned as residential.

To the southwest of the landfill property is the West Brentwood Middle School, which is located on the west side of Howell's Road. Beyond the school property to the south and west is the headwater of Sampawams Creek. Sampawams Creek is fed by groundwater discharge as well as storm water management systems for the surrounding areas. Sampawams Creek runs from north to south and empties into the Guggenheim Lakes, which are located north of the Southern State Parkway. Sampawams Creek generally describes the western boundary of the Town of Islip and the eastern boundary of the Town of Babylon.

The Sonia Road Landfill Site has been owned by the Town of Islip since 1965. Prior to 1965, the Site was privately owned and used as a source of mined sand and gravel. As a result of



SOURCE: U.S.G.S. GREENLAWN, N.Y. AND BAY SHORE WEST, N.Y. QUADRANGLES

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER
MONITORING PROGRAM

SITE LOCATION MAP

SCALE: 1"=2000'

FIGURE 1-1

F:\3371-05\fig\3371-USGS.dwg, FIG 1-1, 2/8/2019 8:33:58 AM, kalesius

this mining operation, virtually the entire Site was disturbed, including the removal of vegetation, topsoil and underlying minerals. The mining operation was extensive with the removal of minerals progressing to and below the water table. Removal of minerals below the water table was accomplished through the use of dredging equipment. This activity resulted in the formation of a groundwater lake over a significant portion of the site (40% to 50%). It is reported that this dredging operation may have removed materials to a depth of 50 feet below the water table. Soil borings constructed as part of the remedial investigation at the landfill confirmed that waste lies at least 36 feet below the water table.

In 1965, the Town of Islip took title to the Sonia Road property and began a landfilling operation for the disposal of municipal solid waste. Landfilling at the Site occurred between 1965 and 1977, with the most active period of landfilling occurring between 1965 and 1974. It has been estimated that between 1.5 and 2.0 million cubic yards of waste were disposed at the Site. There are no weight records to substantiate this estimate.

The landfill reportedly accepted all municipal solid waste delivered to the Site. This waste is reported to include wood, concrete, metal, plastic, glass, household waste in the form of refuse, rubbish, demolition materials and yard wastes (particularly leaves). It is also reported that junk automobiles were routinely disposed at the facility and that underground fires were common.

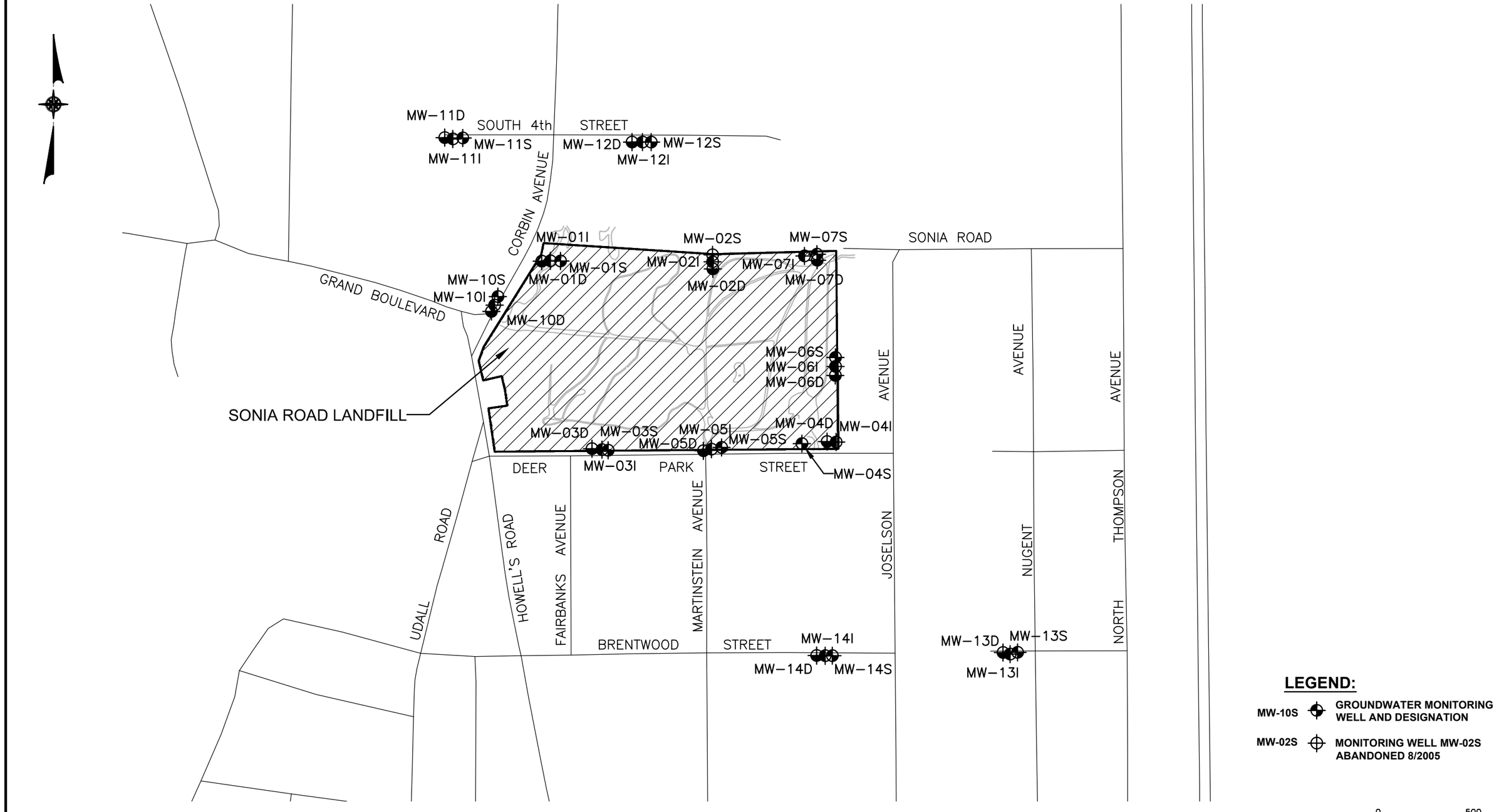
The Sonia Road Landfill was capped in the fall of 2000. The landfill capping system covers an area of approximately 40 acres. The capping system includes an active landfill gas management system, an on-site storm water management system and a perimeter road constructed around the entire Site using recycled concrete aggregate. The storm water management system consists of a series of drainage swales, catch basins, buried storm water piping, dry wells and two recharge basins. Storm water from the northeastern corner of the property is discharged to a series of dry wells (leaching rings) in the area of Sonia Road. The remainder of the site storm water is directed to Recharge Basins 1 and 2 located on the west side of the property. Recharge Basin 1 is located adjacent to the main entrance gate located on

Corbin Avenue, and Recharge Basin 2 is located in the southwest corner of the property. For the majority of the site, drainage swales are located on the in-board side of the perimeter road.

2.0 MONITORING WELL NETWORK AND GROUNDWATER SAMPLE LOCATIONS

The monitoring well network for the Sonia Road Landfill consists of 35 wells. Well locations are illustrated on **Figure 2-1**. The monitoring wells were constructed as 12 well clusters, with each cluster comprised of a shallow (S) well, intermediate (I) well and deep (D) well, with the exception of the MW-02 cluster. Shallow well MW-02S was abandoned in August 2005 and has been eliminated from the Post Closure Monitoring Program. All 35 wells were utilized for water level measurements. Well construction information for all wells is summarized in **Table 2-1.**

Twenty-two (22) wells are included as part of the Post Closure Monitoring Program. The sampled wells are presented in **Table 2-2.** All 22 monitoring wells were sampled during the November 2018 sampling event.



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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

GROUNDWATER MONITORING WELL LOCATIONS

SCALE: 1" = 500'

FIGURE 2-1

F:\3371-08B\dwg\3371-11B-Sonia Landfill.dwg, FG2-1, 2/8/2019 8:35:35 AM, kalesius

Table 2-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS

Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below grade)	Screen Setting		Measuring Point Elevation (feet above mean sea level)
					Depth (feet below measuring point)	Elevation (feet above mean sea level)	
MW-01D[1]	10/14/97	4	SS	106	96-106	(-32) - (-42)	64.53
MW-01I[1]	10/6/97	4	SS	78	68 - 78	(-2) - (-12)	65.36
MW-01S[1]	1/5/95	4	PVC	29	19 - 29	47 - 37	66.01
MW-02D[4]	10/13/97	4	SS	116	106 - 116	(-27) - (-37)	78.43
MW-02I[4]	10/1/97	4	SS	72	62 - 72	16 - 7	78.24
MW-02S	*Abandoned in August 2005*						
MW-03D[1]	9/30/97	4	SS	107	97 - 107	(-26) - (-36)	70.50
MW-03I[1]	1/9/95	4	PVC	84	79 - 84	(-8) - (-13)	70.77
MW-03S[1]	1/6/95	4	PVC	32	22 - 32	49 - 39	70.76
MW-04D[1]	10/6/97	4	SS	114	104 - 114	(-35) - (-45)	69.03
MW-04I[1]	9/29/97	4	SS	71	61 - 71	8 - (-2)	69.31
MW-04S[1]	1/6/95	4	PVC	34	24 - 34	48 - 38	71.10
MW-05D[1]	10/10/97	4	SS	116	106 - 116	(-35) - (-45)	70.96
MW-05I[1]	10/2/97	4	SS	70	60 - 70	11 - 1	70.26
MW-05S[1]	10/4/97	4	SS	34	19 - 34	52 - 37	70.28
MW-06D[5]	10/1/97	4	SS	117	107 - 117	(-32) - (-42)	75.02
MW-06I[4]	9/25/97	4	SS	76	66 - 76	9 - (-1)	74.52
MW-06S[5]	9/24/97	4	SS	37	22 - 37	53 - 38	74.45
MW-07D[1]	10/8/97	4	SS	122	112 - 122	(-37) - (-47)	75.04
MW-07I[4]	9/26/97	4	SS	74	64 - 74	9 - (-1)	73.43
MW-07S[1]	9/28/97	4	SS	34	19 - 34	54 - 39	72.83

Table 2-1 (continued)

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF MONITORING WELL CONSTRUCTION DETAILS

Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below grade)	Screen Setting		Measuring Point Elevation (feet above mean sea level)
					Depth (feet below measuring point)	Elevation (feet above mean sea level)	
MW-10D[2]	10/15/97	4	SS	96	86 - 96	(-29) - (-39)	56.34
MW-10I[2]	10/7/97	4	SS	69	59 - 69	(-3) - (-13)	56.16
MW-10S[2]	10/8/97	4	SS	19	4 - 19	53 - 38	56.65
MW-11D[1]	10/16/97	4	SS	94	84 - 94	(-24) - (-34)	60.19
MW-11I[1]	10/11/97	4	SS	71	61 - 71	(-1) - (-11)	60.38
MW-11S[1]	10/13/97	4	SS	19	4 - 19	56 - 41	59.87
MW-12D[1]	10/15/97	4	SS	98	88 - 98	(-29) - (-39)	58.61
MW-12I[1]	10/10/97	4	SS	70	60 - 70	(-1) - (-11)	58.92
MW-12S[1]	10/13/97	4	SS	19	4 - 19	55 - 40	58.79
MW-13D[3]	10/16/97	4	SS	119	109 - 119	(-38) - (-48)	70.37
MW-13I[3]	10/7/97	4	SS	71	61 - 71	9 - (-1)	70.30
MW-13S[3]	10/8/97	4	SS	37	22 - 37	49 - 34	70.51
MW-14D[3]	10/17/97	4	SS	105	95 - 105	(-30) - (-40)	64.58
MW-14I[3]	10/9/97	4	SS	71	61 - 71	4 - (-6)	64.57
MW-14S[3]	10/14/97	4	SS	30	15 - 30	50 - 35	64.55

Notes:
[1]Monitoring wells surveyed by Municipal Land Survey, P.C., August 2001.
[2]Monitoring wells surveyed by YEC, Inc., November 1997.
[3]Monitoring wells surveyed by YEC, Inc., September 2000.
[4]Monitoring wells surveyed by Municipal Land Survey, P.C., August 11, 2005.
[5]Monitoring wells surveyed by Municipal Land Survey, P.C., August 2006.
SOURCE: Remedial Investigation/Feasibility Study (RI/FS) dated April 1998 and surveys noted above.

Table 2-2

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
GROUNDWATER MONITORING WELLS SAMPLED AS PART OF THE POST CLOSURE GROUNDWATER MONITORING PROGRAM

MW-01D	MW-04D	MW-06D	MW-11S
MW-01I	MW-04I	MW-06I	MW-12D
MW-01S	MW-04S	MW-06S	MW-12I
MW-02D	MW-05D	MW-07I	MW-12S
MW-02I	MW-05I	MW-11D	
MW-03S	MW-05S	MW-11I	

3.0 SAMPLING PROCEDURES AND ANALYSIS

Sampling procedures for the collection of the groundwater samples were implemented in accordance with the protocol described in the Sampling and Analysis Plan (SAP), as well as in accordance with NYSDEC standard protocols utilizing low-flow sampling methodologies specific to Per-and polyfluoroalkyl Substances (PFAS). Dedicated and disposable sampling equipment was used whenever possible in accordance with the SAP. Field decontamination was performed between sampling locations for non-disposable equipment. The following sections provide a brief discussion of the procedures used during groundwater level measurements, organic vapor and combustible gas monitoring, groundwater sampling and sample analysis.

3.1 Groundwater Level Measurement Procedures

Prior to collecting the groundwater samples, synoptic water level measurements were obtained from all 35 monitoring wells for determination of groundwater elevations and groundwater flow direction. Groundwater level measurements were obtained from a surveyed measuring point on each well using an electronic water level indicator to an accuracy of 0.01 foot. A discussion regarding groundwater level measurement results and groundwater flow direction is provided in **Section 6.0.**

3.2 Groundwater Sampling Procedures

Prior to collecting groundwater samples, the monitoring wells were purged to remove the standing water in the well. Well purging was accomplished by first measuring the static water level in the well and calculating the standing water volume. A decontaminated submersible pump was used to purge the water from 19 out of the 22 monitoring wells. The remaining 3 wells (MW-3S, MW-5S and MW-12S) were purged and sampled using low flow sampling protocol (i.e. peristaltic pump, high density polyethylene tubing and a stainless-steel check valve).

For wells purged with the submersible pump, groundwater was monitored and recorded for the following field parameters: pH, specific conductance, temperature, oxidation-reduction potential (ORP), dissolved oxygen (DO) and turbidity. When the values of the field parameters equilibrated within 10% based on the last two readings, the turbidity of the groundwater was less than 50 Nephelometric Turbidity Units (NTUs) and at least three well volumes had been removed, well purging was considered complete.

Following purging with the submersible pump, groundwater samples were collected using dedicated, disposable polyethylene bailers and polyethylene rope. For each sample, groundwater was poured from the bailer directly into pre-cleaned, pre-preserved, laboratory-supplied bottles. The sample bottles were then placed into iced coolers and either picked up by the laboratory or hand delivered by D&B personnel to the laboratory under Chain of Custody procedures.

For wells purged and sampled using low flow protocol, groundwater was monitored and recorded for the following parameters: temperature, specific conductivity, pH, oxidation-reduction potential (ORP), turbidity and dissolved oxygen (DO). These field parameters were measured at approximately five-minute intervals utilizing a Horbia water quality meter and flow through cell. When the field parameters had stabilized within the required ranges for each parameter, as per low flow purging requirements, well purging was considered complete. The groundwater samples were collected directly from the dedicated high-density tubing into pre-cleaned, pre-preserved, laboratory-supplied bottles. The bottles were then placed into iced coolers and delivered to the laboratory by D&B personnel under Chain of Custody procedures.

Appropriate quality assurance/quality control (QA/QC) samples, which included one field blank, one matrix spike and matrix spike duplicate (MS/MSD) set and one blind duplicate, were collected in accordance with the SAP. In addition, a trip blank sample accompanied the laboratory cooler for each day of groundwater sampling.

In accordance with the SAP, purge water from all on-site wells and all wells immediately adjacent to the landfill property was disposed directly into the nearest landfill capping system drainage swale. Purge water generated from off-site well clusters 11 and 12 was pumped into 55- gallon drums, transported to the landfill and the purge water discharged into the landfill's on-site Recharge Basin 1 in accordance with the SAP.

3.3 Volatile Organic Vapor and Combustible Gas Monitoring

Volatile organic vapor and combustible gas measurements were collected in all 35 monitoring wells. Volatile organic vapors were measured using a photoionization detector (PID) and combustible gas was measured using a portable multi-gas meter. The volatile organic vapor and combustible gas monitoring results represent headspace measurements collected during the synoptic groundwater level measurements. The volatile organic vapor and combustible gas monitoring results for November 2018 reporting period are provided in **Section 4.0.**

3.4 Sample Analysis

Groundwater samples collected during the November 2018 sampling event from 22 monitoring wells were analyzed for New York Codes, Rules and Regulations (NYCRR) Part 360 Baseline Parameters. As previously mentioned, monitoring wells MW-3S, MW-5S and MW-12S were also analyzed for emerging contaminants (PFAS and 1,4-dioxane). Other parameters, such as pH, temperature, specific conductance, ORP, dissolved oxygen and turbidity, were measured in the field for groundwater samples collected from each of the monitoring wells. The groundwater analytical results are discussed in **Section 4.2.**

4.0 ANALYTICAL RESULTS

4.1 Field Parameters

A summary of the final field parameter values measured at the time of sample collection during the November 2018 sampling event is provided in **Table 4-1.**

4.2 Monitoring Well Groundwater Results

The analytical results for the groundwater samples collected during the November 2018 sampling event, compared to NYSDEC Class GA groundwater standards and guidance values, are provided in **Appendix A-1** (leachate indicators), **Appendix A-2** (inorganic parameters), **Appendix A-3** (volatile organic compounds) and **Appendix A-4** (emerging contaminants). Historic sample results from 2007 to November 2018 are also included in these tables. Historical data from 1996 to 2006 have been provided to the IRRA in previous post closure groundwater monitoring reports.

4.2.1 Leachate Indicators

As shown in **Appendix A-1**, two leachate indicators (ammonia and total phenols) were detected in one or more wells at concentrations exceeding NYSDEC Class GA groundwater standards. The differences in leachate indicator concentrations for the November 2018 sampling event compared to the previous August 2017 sampling event are summarized in **Table 4-2.** An increase or decrease in concentration is defined by a minimum change of +/- 20% compared to the previous result. If a concentration remained consistent it is defined as within 20% of the previous result.

As part of evaluating changes in groundwater quality, historic results for ammonia were graphed for the shallow, intermediate and deep zones for upgradient wells and downgradient

Table 4-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF FINAL FIELD PARAMETER RESULTS
NOVEMBER 2018 SAMPLING EVENT

Monitoring Well	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/l)	Temperature (°C)	ORP (mV)
MW-01S	6.67	0.605	0	2.40	16.91	-64
MW-01I	5.54	0.159	0	6.00	14.54	229
MW-01D	5.38	1.44	0	2.42	14.15	219
MW-02I	6.08	0.295	0	0.63	14.91	217
MW02D	5.82	0.333	0	6.52	14.69	227
MW-03S	6.54	0.472	22.9	1.60	14.82	-33
MW-04S	6.47	0.972	0	0.40	14.92	-100
MW-04I	6.68	0.860	0	0.25	14.77	-135
MW-04D	6.78	0.903	0	0.26	14.61	-165
MW-05S	6.89	0.531	22	0.41	14.79	-52
MW-05I	6.94	0.742	1.2	0.52	14.71	-147
MW-05D	5.72	0.220	0	3.55	14.03	177
MW-06S	6.55	0.564	0	0.65	15.80	-103
MW-06I	6.49	0.633	0	4.72	14.99	187
MW-06D	5.68	0.309	0	2.83	15.06	257
MW-07I	6.03	0.345	0	1.25	15.08	196
MW-11S	6.56	0.454	0	1.52	15.50	96
MW-11I	5.45	0.121	0	6.82	14.18	253
MW-11D	5.33	0.334	0	4.44	13.75	242
MW-12S	6.47	0.495	27.9	1.40	13.80	164
MW-12I	6.07	0.301	0	0.65	14.83	97
MW-12D	5.49	0.303	0	2.48	14.51	195

Notes:
Mg/l: Milligrams per liter
mS/cm: Millisiemens per centimeter
NTUs: Nephelometric turbidity units
mV: Millivolts
°C: Degrees Celsius
ORP: Oxidation Reduction Potential
DO: Dissolved oxygen

Table 4-2

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY COMPARISON OF 2018 SAMPLING EVENT TO PREVIOUS SAMPLING EVENT FOR LEACHATE INDICATORS

Well	Location	Alkalinity	Ammonia	BOD	Bromide	COD	Chloride	Hardness	Nitrate	Total Phenols	Sulfate	TOC	TDS	TKN
MW-01S	Upgradient	C	D	C	D	I	C	C	I	D	I	I	C	D
MW-01I	Upgradient	I	C	C	C	C	C	C	D	I	C	C	C	D
MW-01D	Upgradient	C	C	C	C	D	I	D	D	D	I	C	I	C
MW-02I	Upgradient	I	C	C	D	C	C	C	C	C	D	C	C	D
MW-02D	Upgradient	C	C	C	C	C	C	D	C	C	C	C	I	C
MW-03S	Downgradient	C	C	C	C	I	I	C	C	C	D	I	C	C
MW-04S	Downgradient	C	D	D	C	C	D	D	C	D	I	I	C	D
MW-04I	Downgradient	D	D	C	C	I	D	D	C	C	C	I	C	D
MW-04D	Downgradient	I	I	C	C	I	D	I	C	I	D	I	I	I
MW-05S	Downgradient	C	I	I	D	I	I	C	C	C	I	I	I	C
MW-05I	Downgradient	I	D	C	C	I	D	I	C	C	D	I	C	D
MW-05D	Downgradient	C	C	C	C	C	I	I	C	D	D	I	C	C
MW-06S	Side gradient	D	C	D	C	I	C	D	C	D	I	I	C	D
MW-06I	Side gradient	I	C	C	C	I	I	I	I	D	C	I	I	C
MW-06D	Side gradient	I	C	C	D	I	I	I	C	D	I	I	I	C
MW-07I	Upgradient	I	C	C	C	C	I	I	I	D	I	C	I	D
MW-11S	Upgradient	I	C	C	C	C	D	C	D	I	D	I	C	D
MW-11I	Upgradient	I	C	C	C	C	C	D	D	I	I	C	D	D
MW-11D	Upgradient	I	C	C	C	D	C	D	C	I	D	C	C	D
MW-12S	Upgradient	I	C	C	D	I	I	C	D	I	D	I	C	D
MW-12I	Upgradient	I	I	C	C	I	D	D	D	C	D	C	D	I
MW-12D	Upgradient	I	C	C	C	C	I	I	I	I	I	C	I	C

I: Increase in concentration (change greater than 20%) in comparison to previous sampling result.
D: Decrease in concentration (change greater than 20%) in comparison to previous sampling result.
C: Consistent in concentration (within 20%) in comparison to previous sampling result.
Parameter exceeds standard/guidance value during the current sampling event.

BOD: Biochemical Oxygen Demand
COD: Chemical Oxygen Demand
TOC: Total Organic Carbon
TKN: Total Kjeldahl Nitrogen

wells. These graphs are presented in **Appendix B.** The leachate indicators which exhibited concentrations exceeding NYSDEC Class GA groundwater standards or guidance values are discussed below.

Ammonia slightly exceeded the groundwater standard of 2 milligrams per liter (mg/l) in upgradient well MW-12I at a concentration of 2.48 mg/l, as wells in downgradient wells MW-4S, MW-4I, MW-5S, MW-6D at concentrations of 2.86 mg/l, 2.32 mg/l, 2.5 mg/l and 2.5 mg/l respectively.

Total phenols exceeded the groundwater standard of 0.001 mg/l in all 22 wells. Total phenol concentrations in the wells ranged from 0.020 mg/l in well MW-01S to 0.115 mg/l in well MW-12I.

4.2.2 Inorganic Parameters

As shown in **Appendix A-2**, four metals (iron, manganese, sodium and total chromium) were detected in one or more wells at concentrations exceeding NYSDEC Class GA groundwater standards or guidance values. The differences in inorganic parameter concentrations for the November 2018 sampling event compared to the previous August 2017 sampling event are summarized in **Table 4-3.** An increase or decrease in concentration is defined by a minimum change of +/- 20% compared to the previous result. If a concentration remained consistent it is defined as within 20% of the previous result.

As part of evaluating changes in groundwater quality, historic results for iron plus manganese and sodium were graphed for the shallow, intermediate and deep zones for upgradient wells and downgradient wells. These graphs are presented in **Appendix B** and the inorganic parameters which exhibited concentrations exceeding NYSDEC Class GA groundwater standards or guidance values are discussed below.

Table 4-3

SONIA ROAED LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY COMPARISON OF 2018 SAMPLING EVENT TO PREVIOUS SAMPLING EVENT FOR INORGANIC PARAMETERS

Well	Location	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Hexavalent Chromium
MW-01S	Upgradient	C	C	C	D	C	C	C	C	C
MW-01I	Upgradient	D	C	C	D	C	I	C	I	C
MW-01D	Upgradient	I	C	C	I	C	C	C	I	C
MW-02I	Upgradient	C	C	C	D	C	C	C	C	C
MW-02D	Upgradient	C	C	I	D	C	D	C	I	C
MW-03S	Downgradient	D	C	C	C	C	D	C	C	C
MW-04S	Downgradient	I	C	I	D	C	D	C	D	C
MW-04I	Downgradient	C	C	I	D	C	D	C	D	C
MW-04D	Downgradient	C	C	C	I	C	D	C	I	C
MW-05S	Downgradient	I	C	I	C	C	D	C	C	C
MW-05I	Downgradient	C	C	I	C	C	C	C	I	C
MW-05D	Downgradient	C	C	C	C	C	D	C	I	C
MW-06S	Side gradient	C	C	C	D	C	D	C	D	C
MW-06I	Side gradient	C	C	C	C	C	D	C	I	C
MW-06D	Side gradient	C	C	C	C	C	D	C	I	C
MW-07I	Upgradient	C	C	C	C	C	D	C	I	C
MW-11S	Upgradient	I	C	C	D	C	I	C	C	C
MW-11I	Upgradient	D	C	C	D	C	D	C	D	C
MW-11D	Upgradient	D	C	C	D	C	D	C	D	C
MW-12S	Upgradient	I	C	C	D	C	D	C	C	C
MW-12I	Upgradient	I	C	C	D	C	C	C	D	C
MW-12D	Upgradient	C	C	C	I	C	D	C	I	C

I: Increase in concentration (change greater than 20%) in comparison to previous sampling result.
D: Decrease in concentration (change greater than 20%) in comparison to previous sampling result.
C: Consistent in concentration (within 20%) in comparison to previous sampling result.
Parameter exceeds standard/guidance value during the current sampling event.

Table 4-3 (continued)

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY COMPARISON OF 2018 SAMPLING EVENT TO PREVIOUS SAMPLING EVENT FOR INORGANIC PARAMETERS

Well	Location	Total Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel
MW-01S	Upgradient	C	C	C	D	C	D	D	C	C
MW-01I	Upgradient	C	C	D	C	C	C	D	C	C
MW-01D	Upgradient	I	C	I	C	C	I	I	C	I
MW-02I	Upgradient	C	C	C	C	C	I	D	C	C
MW-02D	Upgradient	C	C	C	D	C	D	C	C	C
MW-03S	Downgradient	C	C	C	D	C	D	D	C	C
MW-04S	Downgradient	C	C	C	D	D	D	C	C	D
MW-04I	Downgradient	C	C	C	D	C	D	C	C	C
MW-04D	Downgradient	C	C	C	C	C	C	C	C	C
MW-05S	Downgradient	C	C	C	C	C		C	C	C
MW-05I	Downgradient	C	C	C	I	C	C	I	C	C
MW-05D	Downgradient	C	C	D	D	C	I	D	C	C
MW-06S	Side gradient	C	C	C	D	C	I	D	C	C
MW-06I	Side gradient	C	C	C	C	C	C	C	C	C
MW-06D	Side gradient	C	C	C	C	C	I	C	C	C
MW-07I	Upgradient	C	C	C	C	C	I	D	C	C
MW-11S	Upgradient	I	C	C	D	C	D	D	C	I
MW-11I	Upgradient	D	C	D	D	D	D	D	C	C
MW-11D	Upgradient	C	C	C	C	C	D	D	C	D
MW-12S	Upgradient	I	C	C	I	C	I	D	C	I
MW-12I	Upgradient	C	C	C	C	C	C	D	C	C
MW-12D	Upgradient	C	C	C	D	C	I	D	C	C

I: Increase in concentration (change greater than 20%) in comparison to previous sampling result.
D: Decrease in concentration (change greater than 20%) in comparison to previous sampling result.
C: Consistent in concentration (within 20%) in comparison to previous sampling result.
Parameter exceeds standard/guidance value during the current sampling event.

Table 4-3 (continued)

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY COMPARISON OF 2018 SAMPLING EVENT TO PREVIOUS SAMPLING EVENT FOR INORGANIC PARAMETERS

Well	Location	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Cyanide	Iron plus Manganese
MW-01S	Upgradient	C	C	C	I	C	C	C	C	D
MW-01I	Upgradient	D	C	C	C	C	C	C	C	D
MW-01D	Upgradient	I	C	C	I	C	C	C	C	I
MW-02I	Upgradient	D	C	C	I	C	C	D	C	D
MW-02D	Upgradient	C	C	C	I	C	C	C	C	D
MW-03S	Downgradient	D	C	C	I	C	C	C	C	D
MW-04S	Downgradient	D	C	C	I	C	C	C	C	D
MW-04I	Downgradient	D	C	C	I	C	C	C	C	D
MW-04D	Downgradient	I	C	C	C	C	C	C	C	C
MW-05S	Downgradient	C	C	C	I	C	I	C	C	C
MW-05I	Downgradient	C	C	C	I	C	C	C	C	I
MW-05D	Downgradient	C	C	C	I	C	C	C	C	D
MW-06S	Sidegradient	D	C	C	I	C	C	C	C	D
MW-06I	Sidegradient	C	C	C	I	I	C	C	C	C
MW-06D	Sidegradient	C	C	C	I	C	C	C	C	C
MW-07I	Upgradient	C	C	C	I	C	C	C	C	C
MW-11S	Upgradient	D	C	C	I	C	C	C	C	D
MW-11I	Upgradient	D	C	C	I	C	C	C	C	D
MW-11D	Upgradient	D	C	C	I	C	C	C	C	D
MW-12S	Upgradient	C	C	C	I	C	C	C	C	I
MW-12I	Upgradient	I	C	C	I	C	C	C	C	D
MW-12D	Upgradient	I	C	C	I	D	C	C	C	D

I: Increase in concentration (change greater than 20%) in comparison to previous sampling result.
D: Decrease in concentration (change greater than 20%) in comparison to previous sampling result.
C: Consistent in concentration (within 20%) in comparison to previous sampling result.
Parameter exceeds standard/guidance value during the current sampling event.

Iron

The groundwater standard for iron of 300 ug/l was exceeded nine (9) wells (MW-01S, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-06S and MW-12S). Iron concentrations detected in these wells ranged from 920 ug/l in MW-12S to 56,300 ug/l in MW-04D.

Manganese

The groundwater standard for manganese of 300 ug/l was exceeded in fourteen (14) wells (MW-01S, MW-01D, MW-02I, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-06S, MW-06I, MW-06D, MW-07I and MW-12I). Manganese concentrations detected in these wells ranged from 685 ug/l in MW-02I to 7,190 ug/l in MW-04D.

Sodium

The groundwater standard for sodium of 20,000 ug/l was exceeded in fifteen (15) wells (MW-01S, MW-01D, MW-02D, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-06S, MW-06I, MW-11S, MW-11D, MW-12S, MW-12I and MW-12D). Sodium concentrations detected in these wells ranged from 20,300 ug/l in MW-12I to 166,000 ug/l in MW-01D.

Total Chromium

The groundwater standard for total chromium of 50 ug/l was exceeded in upgradient well MW-12S at a concentration of 62.1 ug/l.

4.2.3 Volatile Organic Compounds

Volatile organic compounds (VOCs) were analyzed and compared against the NYSDEC Class GA groundwater standards or guidance values for the 22 wells sampled during the November 2018 sampling event.

As shown in **Appendix A-3**, thirteen (13) of the 22 wells, contained no detectable concentrations of VOCs. The remaining nine (9) wells, contained trace VOCs (less than groundwater standards or guidance value) of one or more VOCs. These VOCs included 1,2-dichloroethane, chloroform, chorobenzene, methylene chloride, trichloroethene and tetrachloroethene. All VOCs in these wells were detected at concentrations below the contract required detection limit, and as such, are considered estimated values.

4.2.4 Emerging Contaminants

Tabulated analytical results for emerging contaminants for wells MW-3S, MW-5S and MW-12S are provided in **Appendix A-4**.

4.3 Volatile Organic Vapor and Combustible Gas Monitoring

The results of the volatile organic vapor and combustible gas monitoring in the headspace of the monitoring wells are presented in **Table 4-4**. The results show that volatile organic vapors were not detected in the headspace of the groundwater monitoring wells. Combustible gas readings for all groundwater monitoring wells were recorded at 0% of the Lower Explosive Limit (LEL).

Table 4-4

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
VOLATILE ORGANIC VAPOR AND COMBUSTIBLE GAS RESULTS
NOVEMBER 2018 SAMPLING EVENT

Well Number	PID (ppm)	Combustible Gas (% LEL)
MW-01D	0.0	0
MW-01I	0.0	0
MW-01S	0.0	0
MW-02D	0.0	0
MW-02I	0.0	0
MW-03S	0.0	0
MW-03I	0.0	0
MW-03D	0.0	0
MW-04D	0.0	0
MW-04I	0.0	0
MW-04S	0.0	0
MW-05D	0.0	0
MW-05I	0.0	0
MW-05S	0.0	0
MW-06D	0.0	0
MW-06I	0.0	0
MW-06S	0.0	0
MW-07D	0.0	0
MW-07I	0.0	0
MW-07S	0.0	0
MW-10D	0.0	0
MW-10I	0.0	0
MW-10S	0.0	0
MW-11D	0.0	0
MW-11I	0.0	0

Table 4-4 (continued)

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
VOLATILE ORGANIC VAPOR AND COMBUSTIBLE GAS RESULTS
NOVEMBER 2018 SAMPLING EVENT

Well Number	PID (ppm)	Combustible Gas (% LEL)
MW-11S	0.0	0
MW-12D	0.0	0
MW-12I	0.0	0
MW-12S	0.0	0
MW-13D	0.0	0
MW-13I	0.0	0
MW-13S	0.0	0
MW-14D	0.0	0
MW-14I	0.0	0
MW-14S	0.0	0

Notes:
PID: Photoionization Detector.
PPM: Parts per million.
% LEL: Percent lower explosive limit for methane.
Volatile organic vapor and combustible gas readings were measured in the headspace of the monitoring wells.

5.0 DATA VALIDATION

Twenty-two (22) groundwater samples, one blind duplicate sample, one matrix spike/matrix spike duplicate (MS/MSD) sample set, three trip blanks and one field blank was collected as part of the November 2018 Post Closure Groundwater Monitoring Program sampling event at the Sonia Road Landfill. The groundwater samples were collected on November 29, 30 and December 3, 2018. All groundwater samples were analyzed for NYCRR Part 360 Baseline VOCs, inorganic parameters and leachate indicators. Laboratory analyses were performed by American Analytical Laboratories, Farmingdale, NY; subcontracted BOD and color to Pace Analytical, Melville, NY. In addition, three groundwater samples from wells MW-3S, MW-5S and MW-12S were submitted to Test America Laboratories, Inc. located in West Sacramento, California for analysis of Per-and Poly-Fluorinated Alkyl Substances (PFAS) by USEPA Method 537 and Pace Analytical in Melville, NY for analysis of 1,4-dioxane by USEPA Method 8270D SIM. All analyses were performed in accordance with United States Environmental Protection Agency (USEPA) SW-846 and New York State Department of Environmental Conservation (NYSDEC) 6/05 Analytical Services Protocol (ASP) methodologies as specified in NYCRR Part 360.

Five data packages (Baseline in 1811193, 1811195 and 1812007; 1,4-dioxane in 7072554 and PFAS in 320-427654) have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/Quality Control (QA/QC) requirements. In accordance with the contract requirements and approved Sampling and Analysis Plan (SAP), 10 percent of the environmental samples and all of the QA/QC samples (calibrations, blanks, spikes, etc.) were reviewed, yielding a "10%" validation". While all of the samples were reviewed for transcription errors, calculations were verified for five environmental samples (MW-03S, MW-04I, MW-06S, MW-07I and MW-12D), as well as all QA/QC data, were reviewed for compliance with analytical specifications. Data Validation Checklists were prepared for each data package and are presented in **Appendix C**.

The findings of the review process are summarized below:

- Numerous metals were detected in the field blank associated with the samples. These metals were qualified as non-detected (UB) in associated samples as provided in the data validation checklists.

- The holding time of 24 hours was exceeded by a few hours for hexavalent chromium in samples MW-01S, MW-01I, MW-01D, MW-12S, MW-12I and MW-12D. Hexavalent chromium was qualified as an estimate detection limit (UJ) in these samples.

- Sulfate was detected in the filed blank associated with the samples. Sulfate was qualified a non-detected (UB) in samples MW-04I, MW-05I, MW-05D and MW-11S.

- 1,4-dioxane was detected in the field blank, therefore 1,4-dioxane was qualified as non-detected (UB) in all the samples.

- Perfluorobutanesulfonic acid was detected in the field blank and was qualified as non-detect (UB) in samples MW-03S, MW-12S and blind duplicate.

- 2-(N-methyl perfluorooctanesulfonamido) acetic acid and sodium 1H, 1H, 2H, 2H Perfluorooctane Sulfonate (6:2) had the percent recoveries below QC limits in the matrix spike and/or matrix spike duplicate. 2-(N-methyl Perfluorooctane Sulfonamido) acetic acid and sodium 1H, 1H, 2H, 2H Perfluorooctane Sulfonate (6:2) were qualified as an estimate detection limit in all samples.

Based on the findings of the data validation process, all results are deemed valid and usable for environmental assessment purposes as qualified above.

6.0 GROUNDWATER LEVEL MEASUREMENTS AND FLOW DIRECTION

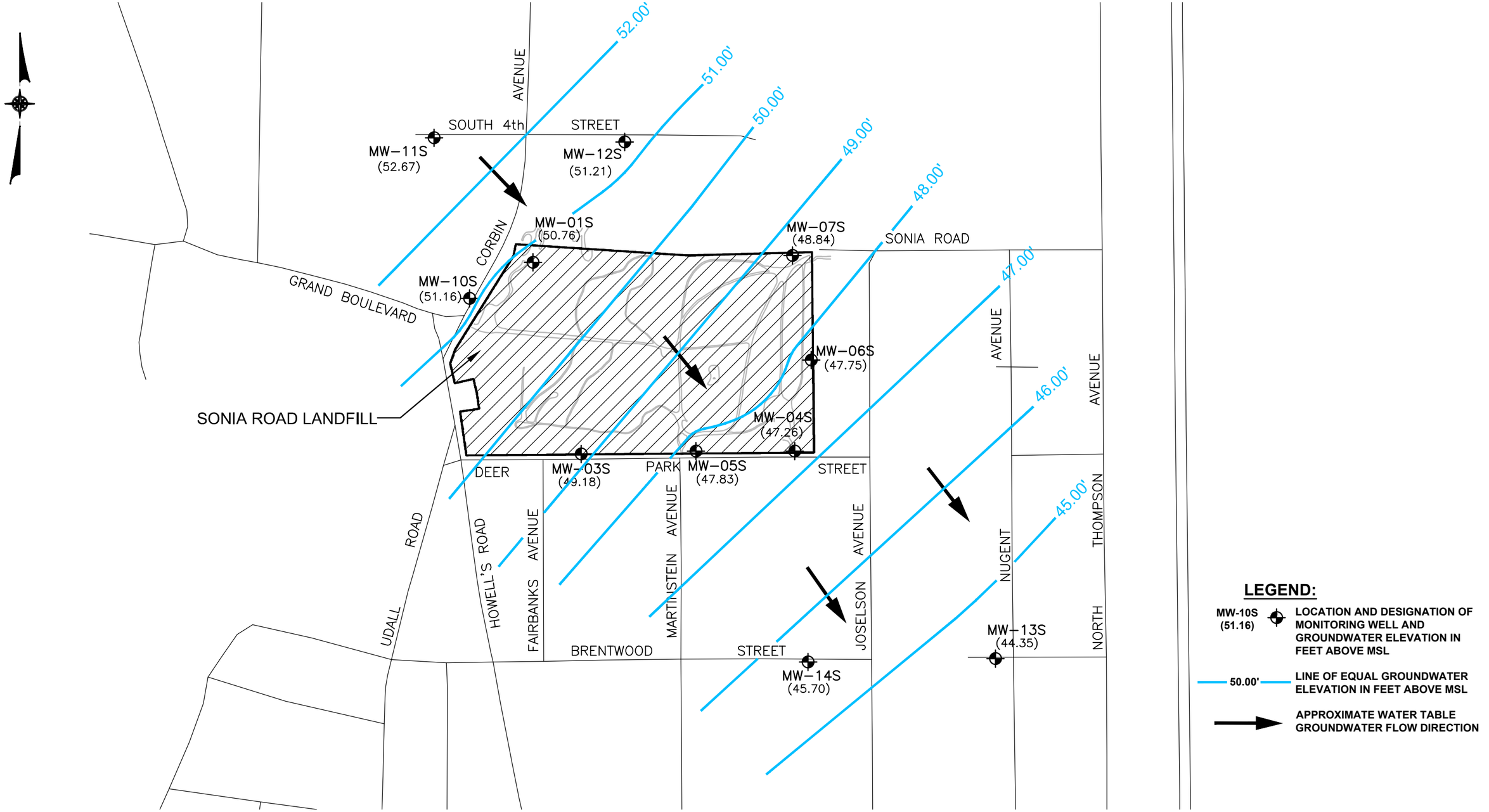
Groundwater level measurements were obtained on November 29, 2018 from the 22 monitoring wells included in the Post-Closure Groundwater Monitoring Program and the 13 additional site-related wells not sampled as part of the program. The depth to groundwater measurements, measuring point elevations, and calculated groundwater elevations for the 35 monitoring wells are summarized in **Table 6-1**.

The November 29, 2018 water level data were used to construct groundwater elevation contour maps for the shallow (water table), intermediate and deep Upper Glacial aquifer wells at and in the immediate vicinity of the Sonia Road Landfill. Water table and potentiometric surface (for the intermediate and deep wells) elevation contour maps are presented on **Figures 6-1, 6-2** and **6-3,** respectively. Groundwater flow in the vicinity of the landfill is toward the southeast for the zones of the Upper Glacial aquifer screened by the shallow, intermediate and deep wells. This flow direction is consistent with historic data for the site.

Table 6-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
MONITORING WELL GROUNDWATER ELEVATION MEASUREMENTS
NOVEMBER 29, 2018

Well	Measuring Point Elevation (feet above msl)	Depth to Water from Measuring Point(feet)	Groundwater Elevation (feet above msl)
MW-01S	66.01	15.25	50.76
MW-01I	65.36	14.62	50.74
MW-01D	64.53	13.78	50.75
MW-02I	78.24	28.40	49.84
MW-02D	78.43	28.84	49.59
MW-03S	70.76	21.58	49.18
MW-03I	70.77	21.84	48.93
MW-03D	70.50	21.66	48.84
MW-04S	71.10	23.84	47.26
MW-04I	69.31	22.19	47.12
MW-04D	69.03	21.81	47.22
MW-05S	70.28	22.45	47.83
MW-05I	70.26	22.40	47.86
MW-05D	70.96	22.84	48.12
MW-06S	74.45	26.70	47.75
MW-06I	74.52	26.81	47.71
MW-06D	75.02	27.30	47.72
MW-07S	72.83	23.99	48.84
MW-07I	73.43	24.57	48.86
MW-07D	75.04	26.25	48.79
MW-10S	56.65	5.49	51.16
MW-10I	56.16	5.33	50.83
MW-10D	56.34	5.54	50.80
MW-11S	59.87	7.20	52.67
MW-11I	60.38	7.39	52.99
MW-11D	60.19	7.29	52.90
MW-12S	58.79	7.58	51.21
MW-12I	58.92	7.98	50.94
MW-12D	58.61	7.70	50.91
MW-13S	70.51	26.16	44.35
MW-13I	70.30	26.15	44.15
MW-13D	70.37	26.11	44.26
MW-14S	64.55	18.85	45.70
MW-14I	64.57	19.10	45.47
MW-14D	64.58	19.01	45.57



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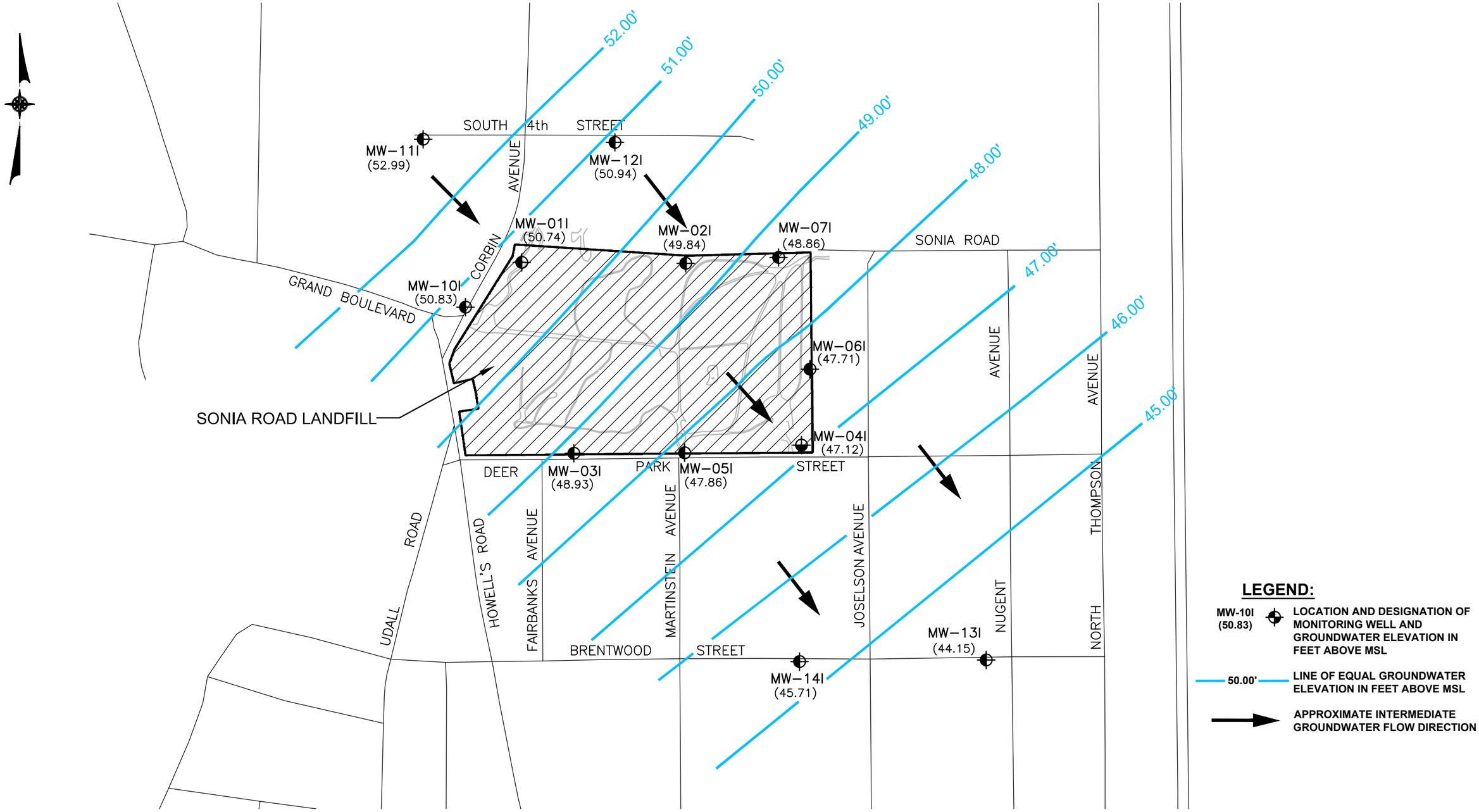
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

WATER TABLE CONTOUR MAP
NOVEMBER 29, 2018

FIGURE 6-1

F:\3371-13B\dwg\3371-13B-SHALLOW_FIG 6-1.dwg, FIG 6-1, 2/8/2019 8:36:33 AM, kalesius



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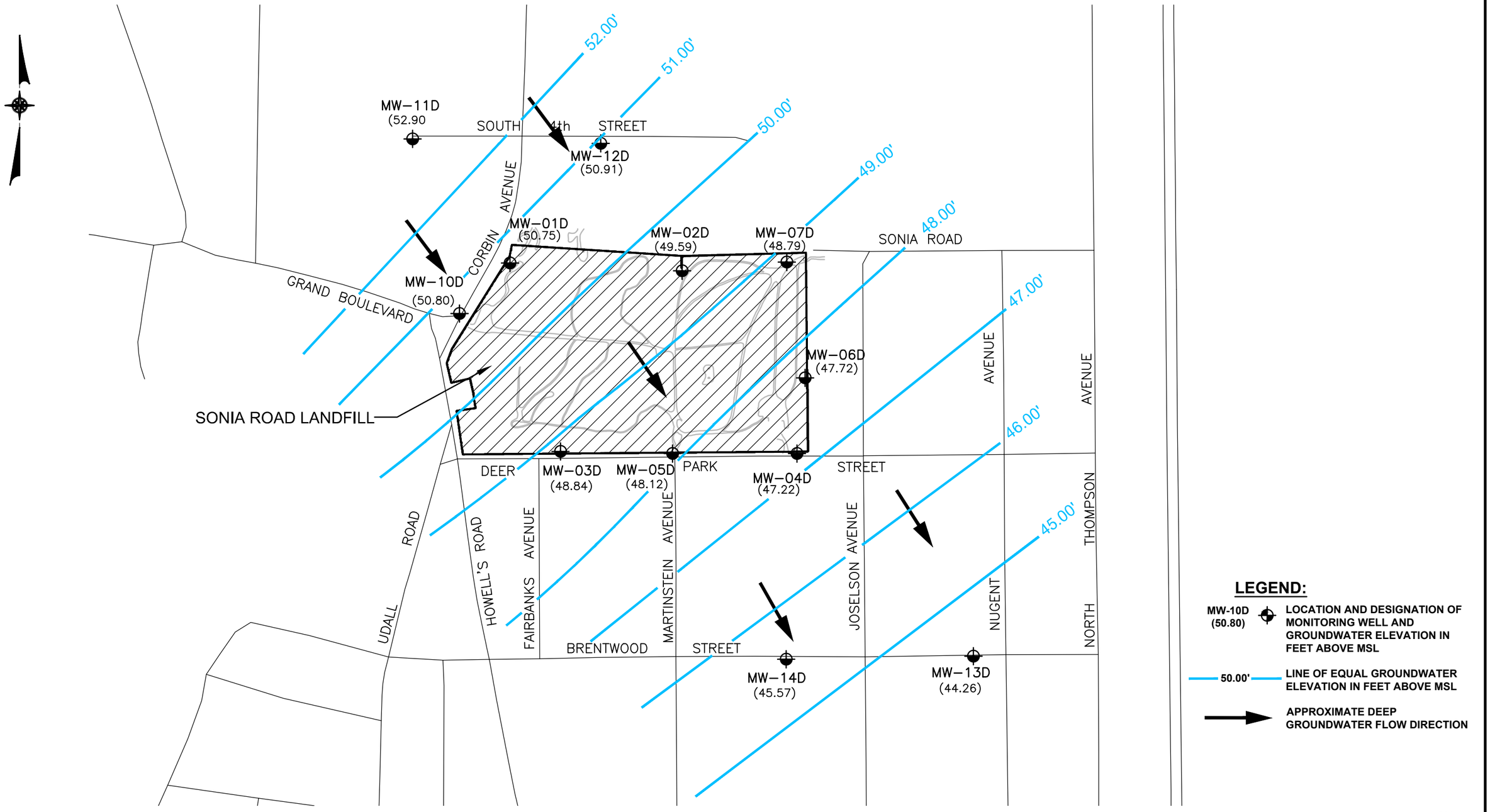
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

POTENTIOMETERIC SURFACE ELEVATION CONTOUR MAP FOR INTERMEDIATE UPPER GLACIAL AQUIFER
NOVEMBER 29, 2018

FIGURE 6-2

F:\3371-13B\dwg\3371-13B-INTER_FIG 6-2.dwg, FIG 6-2, 2/8/2019 8:37:10 AM, kalesius



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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

POTENTIOMETERIC SURFACE ELEVATION CONTOUR MAP FOR DEEP UPPER GLACIAL AQUIFER
NOVEMBER 29, 2018

FIGURE 6-3

F:\3371-13B\dwg\3371-13B-DEEP_FIG 6-3.dwg, FIG 6-3, 2/8/2019 8:37:34 AM, kalesius

7.0 FINDINGS AND RECOMMENDATIONS

7.1 Findings

Groundwater Flow

Based on groundwater level measurements obtained during the November 2018 sampling event and the water table and potentiometric surface elevation contour maps prepared for the Site, groundwater flow in the vicinity of the Sonia Road Landfill is toward the southeast for the zones within the Upper Glacial aquifer screened by the shallow, intermediate and deep wells. This flow direction is consistent with historic data for the site.

Groundwater Quality

Based on a comparison of the November 2018 sample results to the previous sampling event (August 2017), as well as review of the historical trend graphs in **Appendix B**, groundwater quality in the vicinity of the Sonia Road Landfill has not changed substantially.

Approximately 70 percent of the monitoring wells sampled (15 out of 22), exhibited one or more of the following inorganic parameters: iron (9 wells), manganese (14 wells), sodium (15 wells) and total chromium (1 well) at concentrations exceeding their respective groundwater standard/guidance value. The detected concentrations of iron, manganese and sodium are most likely not indicative of landfill-influenced groundwater, since concentrations of these parameters exceeding groundwater standards were detected in monitoring wells located both upgradient and downgradient of the landfill. Total chromium was only detected in one upgradient well.

For leachate indicators, ammonia was detected at a concentration slightly exceeding the groundwater standard in upgradient well MW-12I and in downgradient wells MW-4S, MW-4I, MW-5S and MW-6D.

Total phenols were detected in all monitoring wells at concentrations exceeding the groundwater standard. The detected concentrations of total phenols are presumably not indicative of landfill-influenced groundwater, since concentrations of total phenols were detected in monitoring wells located upgradient, as well as downgradient of the landfill.

VOCs were not detected above groundwater standards or guidance values in any of the monitoring wells.

7.2 Recommendations

Based on the results from the November 2018 sampling event and comparison of these results to historic data for the Sonia Road Landfill, it is recommended to continue to sample the groundwater monitoring wells on a 15-month schedule, as approved by the NYSDEC, and in accordance with the SAP.

APPENDIX A-1

Monitoring Well Sample Results- Leachate Indicator Parameters

Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-01D 11/28/06 (mg/l)	MW-01D 2/21/07 (mg/l)	MW-01D 5/25/07 (mg/l)	MW-01D 8/17/07 (mg/l)	MW-01D 11/9/07 (mg/l)	MW-01D 02/11/08 (mg/l)	MW-01D 5/15/08 (mg/l)	MW-01D 8/5/08 (mg/l)	MW-01D 11/3/08 (mg/l)	MW-01D 2/24/09 (mg/l)
Color (APHA Units)	-	-	(units)	5	20	NA	NA	NA	NA	NA	NA	5	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	77.0	55.2	48.2	34.9	33.4	38.3	42.8	38.8	32.7	30.4
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.68	0.10 U	0.37	0.98	0.57	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	10	2 U	2 U	6	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	67.3	38.3	71.6	66.2	107	39.2	10 U	10 U	86.3	10 U
Chloride	250 ST	16887-00-6	(mg/l)	1,510	689	1,730	1,430	49.5	709	366	195	182	144
Hardness (as CaCO3)	-	-	(mg/l)	200	120	240	180	22.0	80.0	46.0	19.0	26.0	20.0
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.58	0.61	2.8	4.25	0.10 U	12.2	12.0	11.0	11.5	14.9
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	84	36.3	81.6	75.0	5.0 U	42.8	20.9	14.8	7.32	10.6
Total Organic Carbon	-	-	(mg/l)	2.5	11.5	2.5	1.4	12.7	1.0	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	2,840	1,240	2,730	2,350	212	1190	729	446	399	388
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.49	3.65	1.66	1.01	3.65	0.68	0.30	0.1 U	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-01D 8/12/09 (mg/l)	MW-01D 2/4/10 (mg/l)	MW-01D 5/26/11 (mg/l)	MW-01D 2/28/12 (mg/l)	MW-01D 11/12/2013 (mg/l)	MW-01D 03/17/2015 (mg/l)	MW-01D 5/10/2016 (mg/l)	MW-01D 8/21/2017 (mg/l)	MW-01D 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5	30	40	15	1	5 U	5 U	20	5 U
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	22.9	25.6	27.0 D	14.4	13.1	13.0	18.2	12.1 UB	12.1
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1	0.1 U	0.15	.1 U	0.0500 U	0.0500 U	0.0250 U	0.0250 U	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	2 U	4 U	3	4 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5	0.5 U	.50 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	18.2	10 U	37.2	10 U	10.0 U	10.0 U	3.00 U	21.2	3.00 U
Chloride	250 ST	16887-00-6	(mg/l)	104	37.1	3.11	20.8	55.0	205	41.0	57.5 UB	343
Hardness (as CaCO3)	-	-	(mg/l)	15.0	56.0	38	20	9.34	25.4	17.3	22.7 UB	61.4
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	11.4	4.43	1.03 D	3.37 D	3.36 J	5.42 D	6.86 D	8.30 D	4.03
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	12.5	0.005 U	0.005 U	0.0120 UB	0.0100 U	0.0420	0.0635	0.0336
Sulfate	250 ST		(mg/l)	16.9	5 U	5 U	12.4	12.6	33.3	18.3	29.2	39.6
Total Organic Carbon	-	-	(mg/l)	1	2.7	2.8	1 U	1 U	1 U	1.00 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	279	136	50	1820	173	454 D	167 D	250	710
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.1	0.65 U	1.97	0.86	1.37	0.400 U	0.200 U	0.200 U	0.200 U

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-01I 11/28/06 (mg/l)	MW-01I 2/21/07 (mg/l)	MW-01I 5/25/07 (mg/l)	MW-01I 8/15/07 (mg/l)	MW-01I 11/9/07 (mg/l)	MW-01I 2/11/08 (mg/l)	MW-01I 5/15/08 (mg/l)	MW-01I 8/5/08 (mg/l)	MW-01I 11/3/08 (mg/l)	MW-01I 2/24/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	NA	NA	NA	NA	NA	NA	5	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	37.4	25.5	25.2	24.3	14.8	15	12.8	17.7	13.6	7.95
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.65	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2	3	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	13	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	16.7	20.7	19.7	14.6	12.1	30.9	35.6	5.90	5.12	4.86
Hardness (as CaCO3)	-	-	(mg/l)	55.0	50.0	50.0	42.0	35	46	50.0	28.0	24.0	130
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.30	1.01	1.11	1.82	2.66	0.1 U	0.1 U	1.77	1.38	0.83
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	14.3	16.2	14.6	15.0	17.4	11.9	11.9	19.4	14.7	18.4
Total Organic Carbon	-	-	(mg/l)	1 U	2.4	1.5	1 U	1.4	1 U	1 U	1.1	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	100	90	95	94	96	89	134	77	53	58
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.10	0.97	0.94	1.53	0.58	0.93	0.72	0.77	0.20	0.34

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-01I 8/12/09 (mg/l)	MW-01I 2/4/10 (mg/l)	MW-01I 5/26/11 (mg/l)	MW-01I 2/28/12 (mg/l)	MW-01I 11/12/2013 (mg/l)	MW-01I 03/17/2015 (mg/l)	MW-01I 5/10/2016 (mg/l)	MW-01I 8/21/2017 (mg/l)	MW-01I 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5	10	5 U	15	1 U	5 U	5 U	20	5 U
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	10.0	8.90	6.40	10.20	6.06	5.00	3.50 U	10.1 UB	8.08
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1	0.1U	.10 U	1.47	0.280	0.0500 U	0.0250 U	0.0250 U	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	2 U	4 U	2 U	4 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5	0.5 U	.5 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10	10 U	10 U	10 U	10.0 U	10.0 U	3.00 U	3.00 U	3.00 U
Chloride	250 ST	16887-00-6	(mg/l)	6.97	8.25	11.7	19.2	120	46.0	18.5	63.0 UB	18.2
Hardness (as CaCO3)	-	-	(mg/l)	24.0	25.0	22 D	22	95.3	30.3	24.5	35.8 UB	40.5
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.94	1.27	0.80	0.83	0.910 J	0.256	0.252	1.94 D	0.486
Phenols, total	0.001 ST	-	(mg/l)	24.0	5 U	0.005 U	0.005 U	0.0100 U	0.0580	0.175	0.0415	0.0937
Sulfate	250 ST		(mg/l)	21.9	13.2	9.89	6.86	3.34	9.79 UB	13.8	38.1	43.0
Total Organic Carbon	-	-	(mg/l)	1	1 U	1 U	1U	1	1 U	1.00 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	58	63	84	72	265	107 D	66.0 D	150	120
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.13	0.55 U	0.10 U	1.46	1.46	0.400 U	0.200 U	0.226 J	0.200 U

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D&B ENGINEERS AND ARCHITECTS, P.C.

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-01S 11/28/06 (mg/l)	MW-01S 2/21/07 (mg/l)	MW-01S 5/25/07 (mg/l)	MW-01S 8/15/07 (mg/l)	MW-01S 11/9/07 (mg/l)	MW-01S 2/11/08 (mg/l)	MW-01S 5/15/08 (mg/l)	MW-01S 8/5/08 (mg/l)	MW-01S 11/3/08 (mg/l)	MW-01S 2/24/09 (mg/l)
Color (APHA Units)	-	-	(units)	70	30	NA	NA	NA	NA	NA	NA	60.0	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	198	242	181	200	173	192	152	170	170	146
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.33	0.10 U	0.10 U	0.33	0.17	0.1 U	0.1 U	0.34	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	5	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	1.2	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	21.1	40.9	33.3	40.9	28.2	31.7	11.9	26.8	26.8	10 U
Chloride	250 ST	16887-00-6	(mg/l)	78.1	69.3	125	90.8	86.0	57.1	81.0	70.8	61.8	59.1
Hardness (as CaCO3)	-	-	(mg/l)	320	360	280	270	18.0	230	188	240	200	280
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.19	0.36	0.10 U	0.10 U	0.27	0.1 U	0.20	0.1 U	0.1 U	0.1 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	177	141	71.8	56	46.9	65.7	48.0	111	62.7	61.7
Total Organic Carbon	-	-	(mg/l)	10.1	12.0	9.6	9.4	6.8	8.4	6.1	9.7	7.8	6.0
Total Dissolved Solids	-	-	(mg/l)	604	562	498	459	395	379	386	477	365	329
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.84	1.38	1.35	1.26	0.75	0.54	0.50	0.68	0.48	0.41

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-01S 8/12/09 (mg/l)	MW-01S 2/4/10 (mg/l)	MW-01S 5/26/11 (mg/l)	MW-01S 2/28/12 (mg/l)	MW-01S 11/12/2013 (mg/l)	MW-01S 03/17/2015 (mg/l)	MW-01S 5/10/2016 (mg/l)	MW-01S 8/21/2017 (mg/l)	MW-01S 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	50	20	30	55	15	5 U	50	30	25
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	168	157	137 D	120 D	120	144	131	140 UB	143
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1	0.1 U	0.41	0.7	0.543	0.126	0.0250 U	0.454	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	2 U	4 U	3	4 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5	0.5 U	0.5 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0945 J
Chemical Oxygen Demand	-	-	(mg/l)	32.7	19.4	18.6	29.3	11.3	7.35 J	10.3	3.00 U	15.7
Chloride	250 ST	16887-00-6	(mg/l)	106	46.4	175 D	60.9	42.0	47.0	79.0	50.0 UB	42.6
Hardness (as CaCO3)	-	-	(mg/l)	200	170	220 D	220 D	133	158	166	179	164
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.14	0.33	0.16	.1 U	0.100 U	0.442	0.490	0.0500 U	0.471
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.00560 UB	0.0100 U	**0.00995 J**	**0.0319**	**0.0206**
Sulfate	250 ST		(mg/l)	86.0	47.1	57.8 D	39.8	36.9	43.7	26.7	25.0 D	53.4
Total Organic Carbon	-	-	(mg/l)	8.6	6.8	6.4	5.9	4.6	4.5	4.04	3.70	6.30
Total Dissolved Solids	-	-	(mg/l)	421	322	499	336	262	300 D	327 D	330	320
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.81	0.74 U	0.63 U*	0.66	2.05	0.231 J	0.293 J	0.874	0.200 U

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D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-02D 11/30/06 (mg/l)	MW-02D 2/22/07 (mg/l)	MW-02D 5/25/07 (mg/l)	MW-02D 8/14/07 (mg/l)	MW-02D 11/13/07 (mg/l)	MW-02D 2/12/08 (mg/l)	MW-02D 5/19/08 (mg/l)	MW-02D 8/4/08 (mg/l)	MW-02D 11/3/08 (mg/l)	MW-02D 2/24/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	NA	NA	NA	NA	NA	NA	5	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	9.3	8.2	7.8	8.4	7.2	8.6	6.7	6.9	6.85	6.85
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	6.3	6.7	5.8	5.6	6.2	5.7	4.86	4.66	4.98	4.64
Hardness (as CaCO3)	-	-	(mg/l)	28	40.0	25	26	22	28	22.0	21.0	22.0	120
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.64	0.44	0.31	0.34	0.30	0.14	0.1 U	0.1 U	0.18	0.11
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	17.9	19.3	19.3	19.1	13.4	17.0	16.1	15.3	14.7	11.7
Total Organic Carbon	-	-	(mg/l)	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	2.3	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	61	67	59	62	51	68	55	53	47	42
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.18	0.55	0.50	0.50	0.16	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-02D 8/14/09 (mg/l)	MW-02D 2/8/10 (mg/l)	MW-02D 5/31/11 (mg/l)	MW-02D 2/28/12 (mg/l)	MW-02D 11/12/2013 (mg/l)	MW-02D 03/17/2015 (mg/l)	MW-02D 05/10/2016 (mg/l)	MW-02D 8/21/2017 (mg/l)	MW-02D 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5	5	5 U	5 U	1 U	5 U	5 U	20	5 U
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	8.30	7.60	9.60	70.6 D	12.1	25.0	15.2	15.2 UB	18.2
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1	0.1 U	0.10 U	1.81	0.0500 U	0.0500 U	0.0250 U	0.0250 U	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	10 U	4 U	3	4 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0578 J
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	10.0 U	10.0 U	3.00 U	3.00 U	3.00 U
Chloride	250 ST	16887-00-6	(mg/l)	11.3	5.38	5.92	38.4	25.0	32.0	29.0	42.0 UB	41.1
Hardness (as CaCO3)	-	-	(mg/l)	23.0	19.0	23	100	36.2	69.5	59.7	74.1 UB	55.2
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.45	0.46	2.05 D	0.1 U	1.41 J	1.22 D	1.82 D	2.77 D	3
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.0190 UB	**0.0120**	**0.0660**	**0.0647**	**0.0513**
Sulfate	250 ST		(mg/l)	17.5	11.3	13.4	20.8	11.7	18.2	26.4	40.2 D	43.5
Total Organic Carbon	-	-	(mg/l)	1	1 U	1.0 U	1.5	1 U	1 U	1.00 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	62	56	61	183	95.0	119 D	129 D	160	210
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.1U	0.23	0.10 U	1.88	0.817	0.400 U	0.200 U	0.200 U	0.200 U

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POST CLOSURE GROUNDWATER MONITORING PROGRAM
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LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-02I 11/30/06 (mg/l)	MW-02I 2/22/07 (mg/l)	MW-02I 5/25/07 (mg/l)	MW-02I 8/14/07 (mg/l)	MW-02I 11/13/07 (mg/l)	MW-02I 2/12/08 (mg/l)	MW-02I 5/19/08 (mg/l)	MW-02I 8/4/08 (mg/l)	MW-02I 11/3/08 (mg/l)	MW-02I 2/24/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	NA	NA	NA	NA	NA	NA	5	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	31.4	20.9	31.0	41.0	49.8	35.0	34.0	34.7	30.1	23.2
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.53	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.18
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	1035	10 UJ	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	36.8	37.9	35.4	40.3	28.3	16.2	19.1	15.2	14.8	16.5
Hardness (as CaCO3)	-	-	(mg/l)	76.0	64.0	68.0	68.0	54	54	45.0	40.0	38.0	120
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.62	1.74	0.84	1.2	0.93	1.96	0.1 U	1.58	1.47	2.03
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	18.4	23.6	46.6	32.1	24.4	12.8	9.05	8.07	8.98	13.4
Total Organic Carbon	-	-	(mg/l)	1.2	1.3	1.8	1.4	2.3	1 U	1 U	1.1	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	129	159	146	194	139	95	101	86	73	86
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.82	0.71	0.69	0.68	1.92	0.13	0.14	0.50	0.51	0.25

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-02I 8/14/09 (mg/l)	MW-02I 2/8/10 (mg/l)	MW-02I 5/31/11 (mg/l)	MW-02I 2/28/12 (mg/l)	MW-02I 11/12/2013 (mg/l)	MW-02I 03/17/2015 (mg/l)	MW-02I 05/10/2016 (mg/l)	MW-02I 8/21/2017 (mg/l)	MW-02I 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5	5	5	5 U	1	5 U	5 U	20	5 U
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	28.1	29.6	44.9	11.7	52.5	50.0	127	30.3 UB	40.4
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	2.95	0.1 U	4.08	0.886	0.0300 J	1.59	1.49
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	2 U	4 U	2 U	4 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0516 J
Chemical Oxygen Demand	-	-	(mg/l)	10	10 U	10 U	10 U	3.44 J	10.0 U	7.57 J	3.00 U	3.00 U
Chloride	250 ST	16887-00-6	(mg/l)	26.7	20.0	16.9	14.9	34.0	42.5	177	37.5 UB	39.6
Hardness (as CaCO3)	-	-	(mg/l)	44.0	42.0	44	34	73.9	78.2	101	64.9 UB	74.7
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.35	1.80	0.42	1.76	0.900 J	1.92 D	1.41 D	1.59 D	1.37
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	23.4	0.005 U	0.005 U	0.0140 UB	0.0100 U	0.0610	0.0340	0.0671
Sulfate	250 ST		(mg/l)	19.1	9.82	19	91.7	17.8	23.8	43.4	40.0	23.2
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1.2	1 U	1.1	1.1	2.27	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	103	105	98	77	140	149 D	514 D	160	150
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.13	1.74	3.22	2.03	6.38	1.12	0.332 J	2.38	1.64

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Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-02S (mg/l)	MW-02S (mg/l)	MW-02S (mg/l)	MW-02S (mg/l)	MW-02S (mg/l)	MW-02S (mg/l)	MW-02S (mg/l)	MW-02S (mg/l)	MW-02S (mg/l)	MW-02S (mg/l)
Color (APHA Units)	-	-	(units)										
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)										
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	A	A	A	A	A	A	A	A	A	A
Biochemical Oxygen Demand	-	-	(mg/l)	B	B	B	B	B	B	B	B	B	B
Bromide	2 GV	24959-67-9	(mg/l)	A	A	A	A	A	A	A	A	A	A
Chemical Oxygen Demand	-	-	(mg/l)	N	N	N	N	N	N	N	N	N	N
Chloride	250 ST	16887-00-6	(mg/l)	D	D	D	D	D	D	D	D	D	D
Hardness (as CaCO3)	-	-	(mg/l)	O	O	O	O	O	O	O	O	O	O
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	N	N	N	N	N	N	N	N	N	N
Phenols, total	0.001 ST	-	(mg/l)	E	E	E	E	E	E	E	E	E	E
Sulfate	250 ST	14808-79-8	(mg/l)	D	D	D	D	D	D	D	D	D	D
Total Organic Carbon	-	-	(mg/l)										
Total Dissolved Solids	-	-	(mg/l)										
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)										

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-02S (mg/l)	MW-02S (mg/l)	MW-02S (mg/l)
Color (APHA Units)	-	-	(units)			
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)			
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	A	A	A
Biochemical Oxygen Demand	-	-	(mg/l)	B	B	B
Bromide	2 GV	24959-67-9	(mg/l)	A	A	A
Chemical Oxygen Demand	-	-	(mg/l)	N	N	N
Chloride	250 ST	16887-00-6	(mg/l)	D	D	D
Hardness (as CaCO3)	-	-	(mg/l)	O	O	O
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	N	N	N
Phenols, total	0.001 ST	-	(mg/l)	E	E	E
Sulfate	250 ST		(mg/l)	D	D	D
Total Organic Carbon	-	-	(mg/l)			
Total Dissolved Solids	-	-	(mg/l)			
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)			

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-03S 11/29/06 (mg/l)	MW-03S 2/22/07 (mg/l)	MW-03S 6/1/07 (mg/l)	MW-03S 8/14/07 (mg/l)	MW-03S 11/14/07 (mg/l)	MW-03S 2/11/08 (mg/l)	MW-03S 5/15/08 (mg/l)	MW-03S 8/5/08 (mg/l)	MW-03S 11/5/08 (mg/l)	MW-03S 2/25/09 (mg/l)
Color (APHA Units)	-	-	(units)	70	100	NA	NA	NA	NA	NA	NA	50	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	274	288	326	288	259	228	278	240	217	236
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	2.60	2.88	2.96	2.96	2.22	1.17	1.61	1.73	1.3	1.16
Biochemical Oxygen Demand	-	-	(mg/l)	9	21	12	12	19	16	11	11	14.3	14.4
Bromide	2 GV	24959-67-9	(mg/l)	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	43.7	33.3	28.2	33.3	40.9	16.9	10 U	21.8	24.3	13.3
Chloride	250 ST	16887-00-6	(mg/l)	47.7	45.8	43.5	37.5	38.2	37.2	36.3	34.0	33.8	34.9
Hardness (as CaCO3)	-	-	(mg/l)	300	320	340	270	234	240	260	220	220	450
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.10 U	0.10 U	0.10 U	0.13	0.1 U	0.1 U	0.1 U	0.15	0.13
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	11.9	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U
Total Organic Carbon	-	-	(mg/l)	8.3	8.8	9.8	7.9	7.4	6.7	7.1	7.2	6.8	5.7
Total Dissolved Solids	-	-	(mg/l)	404	364	410	360	347	293	337	330	278	329
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	3.60	4.52	4.09	4.57	3.67	2.77	2.70	3.41	2.83	1.90

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-03S 8/14/09 (mg/l)	MW-03S 2/4/10 (mg/l)	MW-03S 6/1/11 (mg/l)	MW-03S 8/28/12 (mg/l)	MW-03S 11/13/2013 (mg/l)	MW-03S 03/18/2015 (mg/l)	MW-03S 05/11/2016 (mg/l)	MW-03S 8/23/2017 (mg/l)	MW-03S 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	200	200	150 D	125 D	25	250	5	30	7
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	304	259	210 D	186 D	222	201	276	184 UB	197
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.67	1.27	2.27	1.75 D	1.70	0.88 J	0.886	1.41	1.44
Biochemical Oxygen Demand	-	-	(mg/l)	9	16	9	14	22	13 J	7 U	2 U	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	30.3	21.8	25.9	29.9	4.07 J	14.6	6.66 J	3.00 UJ	11.5
Chloride	250 ST	16887-00-6	(mg/l)	48.8	53.8	50	49.4	56.0	42.0	51.0	47.5 UB	62.8
Hardness (as CaCO3)	-	-	(mg/l)	300	240	220 D	270 D	183	175	183	203	174
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.24	0.10 U	.1 U	0.100 U	1.89 DJ	0.0500 U	0.0500 U	0.0500 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.00663 UB	0.00989 J	0.111	0.0463	0.0406
Sulfate	250 ST		(mg/l)	9.30	5 U	5 U	5 U	4.48	3.49 UB	2.37	17.2 D	5.63
Total Organic Carbon	-	-	(mg/l)	8.9	6.4	7.5	6.2	6.3	6	5.58	2.99 J	5.88
Total Dissolved Solids	-	-	(mg/l)	419	338	304	324	333	305 D	282 D	330	310
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	2.40	3.55	2.69	2.15	4.82	1.22	1.79	2.92	1.81

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D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-04D 11/30/06 (mg/l)	MW-04D 2/23/07 (mg/l)	MW-04D 5/24/07 (mg/l)	MW-04D 8/10/07 (mg/l)	MW-04D 11/13/07 (mg/l)	MW-04D 2/11/08 (mg/l)	MW-04D 5/15/08 (mg/l)	MW-04D 8/4/08 (mg/l)	MW-04D 11/3/08 (mg/l)	MW-04D 2/23/09 (mg/l)
Color (APHA Units)	-	-	(units)	70	30	NA	NA	NA	NA	NA	NA	80.0	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	49.8	40.0	35.6	U*	39.8	40.7	33.6	25.9	23.2	20.0
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.90	0.10 U	0.10 U	0.89	0.10 U	0.56	0.73	0.52	0.3	0.36
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	10.4	10.4	7.6	U*	9.9	10.7	8.38	6.23	8.47	20.2
Hardness (as CaCO3)	-	-	(mg/l)	64	55.0	60	75	54.0	65.0	56.0	35.0	40.0	190
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.76	0.73	10 U	1.0	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	16.5	21.5	19.8	17.0	19	21.6	18.9	13.8	11.5	10.3
Total Organic Carbon	-	-	(mg/l)	1.6	1.0 U	3.3	1.4	1.1	1 U	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	106	106	95	U*	101	96	99	70	64	90
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.60	0.74	0.69	1.9	0.24	0.89	0.79	0.62	0.73	0.64

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-04D 8/12/09 (mg/l)	MW-04D 2/4/10 (mg/l)	MW-04D 5/26/11 (mg/l)	MW-04D 8/27/12 (mg/l)	MW-04D 11/13/2013 (mg/l)	MW-04D 03/18/2015 (mg/l)	MW-04D 05/11/2016 (mg/l)	MW-04D 8/22/2017 (mg/l)	MW-04D 11/30/2018 (mg/l)
Color (APHA Units)	-	-	(units)	140	20	30	10	10	350	5 U	40	6.5
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	28.5	18.4	18.8	19.7	110	17.0	29.3	43.4 UB	125
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.39	0.1 U	0.10 U	0.22	0.180	0.167 J	0.0840	0.382	0.903
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	8 U	5 J	7 U	2 U	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	10.0 U	7.35 J	9.99 J	3.00 UJ	27.2
Chloride	250 ST	16887-00-6	(mg/l)	39.6	13.0	20.9	17.5	55.0	45.5	52.0	73.0 UB	6.36
Hardness (as CaCO3)	-	-	(mg/l)	54.0	40.0	47	48 D	68.8	50.3	65.0	80.1 UB	115
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.50	0.42	0.37	0.100 U	1.79 DJ	0.0500 U	0.0500 U	0.0500 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	16.3	0.005 U	0.005 U	0.00592 UB	0.0100	0.113	0.0287	0.0595
Sulfate	250 ST		(mg/l)	16.8	11.0	15.3	12.6	37.0	26.5	42.0	52.5 D	1.92 J
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1 U	1 U	1.8	1.5	2.01	1.00 U	2.31 J
Total Dissolved Solids	-	-	(mg/l)	177	72	97	92	209	181 D	191 D	330	410
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.50	0.21 U	0.10 U	0.1 U	1.67	0.400 U	0.547	0.404	1.04

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-04I 11/30/06 (mg/l)	MW-04I 2/23/07 (mg/l)	MW-04I 5/24/07 (mg/l)	MW-04I 8/10/07 (mg/l)	MW-04I 11/13/07 (mg/l)	MW-04I 2/11/08 (mg/l)	MW-04I 5/15/08 (mg/l)	MW-04I 8/5/08 (mg/l)	MW-04I 11/3/08 (mg/l)	MW-04I 2/23/09 (mg/l)
Color (APHA Units)	-	-	(units)	70	20	NA	NA	NA	NA	NA	NA	100	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	104	68.8	76.4	245	102	98.8	50.6	70.2	48.4	65.4
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	1.33	0.10 U	0.10 U	2.63	0.10 U	1.00	0.1 U	1.09	0.5	0.82
Biochemical Oxygen Demand	-	-	(mg/l)	3	2 U	2 U	18	2 U	4	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	13.0	10 U	U*	10 U	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	19.8	20.8	21.3	42.1	26.5	48.7	32.0	47.1	39.6	55.1
Hardness (as CaCO3)	-	-	(mg/l)	100	85	85	230	112	130	88.0	116	94.0	200
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.98	0.99	10 U	294	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	7.8	12.3	12.4	5.0 U	10.5	18.4	13.5	10.3	20.5	32.1
Total Organic Carbon	-	-	(mg/l)	2.4	1.4	2.5	6.6	2.2	3.2	1 U	2.2	1.5	1.3
Total Dissolved Solids	-	-	(mg/l)	151	134	158	338	181	217	147	192	144	219
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.71	0.90	0.82	5.24	0.10 U	1.80	1.07	1.23	3.73	1.00

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-04I 8/12/09 (mg/l)	MW-04I 2/4/10 (mg/l)	MW-04I 5/26/11 (mg/l)	MW-04I 8/27/12 (mg/l)	MW-04I 11/13/2013 (mg/l)	MW-04I 03/18/2015 (mg/l)	MW-04I 05/11/2016 (mg/l)	MW-04I 8/22/2017 (mg/l)	MW-04I 11/30/2018 (mg/l)
Color (APHA Units)	-	-	(units)	200	10	70	75 D	15	150	5	100	6.5
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	243	75.1	52.4 U	141 D	104	63.0	271	435	234
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.37	0.1 U	0.1 U	0.22	1.42	2.36 DJ	1.12	4.76 D	2.32
Biochemical Oxygen Demand	-	-	(mg/l)	17 J*	2 U	2 U	6	8 U	4 UJ	7 U	2 U	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	27.9	10 U	10 U	14.7	10.0 U	10.0 U	6.36 J	3.00 UJ	17.1
Chloride	250 ST	16887-00-6	(mg/l)	79.6	48.8	19.1	83.9 D	93.0	58.5	68.0	77.0 UB	5.19
Hardness (as CaCO3)	-	-	(mg/l)	180	92.0	58 D	180 D	76.3	99.3	155	238	188
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.28	0.83	0.1 U	0.1 U	0.0503 J	1.48 DJ	0.0500 U	0.0500 U	0.0500 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.00780 UB	0.00795 J	0.0730	0.0602	0.0675
Sulfate	250 ST		(mg/l)	11.3 U	19.9	14.8	7.08	22.6	22.4	34.0	2.00 DU	1.35 UB
Total Organic Carbon	-	-	(mg/l)	3.6	1.2	1.1	2.3	2.8	1.9	3.92	2.62 J	4.67
Total Dissolved Solids	-	-	(mg/l)	337	200	111	326	287	223 D	305 D	410	410
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.90	0.64 U	0.15 U*	0.23	3.80	2.50	1.80	7.14 D	2.75

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D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-04S 11/30/06 (mg/l)	MW-04S 3/2/07 (mg/l)	MW-04S 5/24/07 (mg/l)	MW-04S 8/10/07 (mg/l)	MW-04S 11/13/07 (mg/l)	MW-04S 2/11/08 (mg/l)	MW-04S 5/15/08 (mg/l)	MW-04S 8/4/08 (mg/l)	MW-04S 11/3/08 (mg/l)	MW-04S 2/23/09 (mg/l)
Color (APHA Units)	-	-	(units)	80	60	NA	NA	NA	NA	NA	NA	100	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	338	285	321	316	342	296	300	332	288	311
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	5.80	5.47	5.62	4.99	5.28	3.54	4.80	4.97	2.1	3.15
Biochemical Oxygen Demand	-	-	(mg/l)	13	20	12	18	9	12	11	20	15.9	22.0
Bromide	2 GV	24959-67-9	(mg/l)	1.0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	13.5	58.6	25.7	U*	43.4	21.8	26.8	26.8	66.5	10 U
Chloride	250 ST	16887-00-6	(mg/l)	72.9	70.7	71.7	61.2	68.1	57.4	60.2	55.0	49.9	48.6
Hardness (as CaCO3)	-	-	(mg/l)	360	1,100	310	320	290	280	260	268	300	510
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5 U	5 U	5 U
Total Organic Carbon	-	-	(mg/l)	8.0	8.2	8.9	8.5	7.9	7.4	7.0	8.1	8.6	4.8
Total Dissolved Solids	-	-	(mg/l)	424	416	435	460	440	417	422	416	385	396
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	7.14	7.50	8.45	6.49	7.03	5.59	5.79	6.04	4.73	4.27

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-04S 8/12/09 (mg/l)	MW-04S 2/4/10 (mg/l)	MW-04S 5/31/11 (mg/l)	MW-04S 8/27/12 (mg/l)	MW-04S 11/13/2013 (mg/l)	MW-04S 03/18/2015 (mg/l)	MW-04S 05/11/2016 (mg/l)	MW-04S 8/22/2017 (mg/l)	MW-04S 11/30/2018 (mg/l)
Color (APHA Units)	-	-	(units)	120	60	300 D	75 D	30	250	5	100	6.5
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	350	297	292 D	290 D	338	323	136	340	381
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	2.61	2.66	5.73 D	3.64	3.97	1.82 J	1.54	4.40 D	2.86
Biochemical Oxygen Demand	-	-	(mg/l)	19 J*	14	17 J*	17	32	27 J	7 U	18.3	9.9
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.50 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	23.0	36.0	28.6	26	26.2	20.2	21.2	24.9 J	26.1
Chloride	250 ST	16887-00-6	(mg/l)	48.4	49.9	52.4 D	52.7 D	45.0	44.0	48.0	47.0 UB	36.8
Hardness (as CaCO3)	-	-	(mg/l)	290	275	300 D	310 D	245	277	303	383	286
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.11	0.10 U*J*	.1 U	0.0773 J	2.64 DJ	0.0500 U	0.0500 U	0.0500 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.0107 UB	0.0160	0.0220	0.0423	0.0215
Sulfate	250 ST		(mg/l)	10.2	5 U	5.00 U	5 U	2.00 U	2.00 U	2.22	2.00 DU	8.04
Total Organic Carbon	-	-	(mg/l)	6.3	5.4	6.6	5.8	6.7	8.2	8.96	5.84	8.17
Total Dissolved Solids	-	-	(mg/l)	398	378	432	448	394	459 D	419 D	550	480
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	5.38	4.79	6.03 D	4.30 D	8.92	3.90	4.18	7.18 D	4.29

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Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-05D 11/30/06 (mg/l)	MW-05D 2/21/07 (mg/l)	MW-05D 5/25/07 (mg/l)	MW-05D 8/14/07 (mg/l)	MW-05D 11/13/07 (mg/l)	MW-05D 2/11/08 (mg/l)	MW-05D 5/15/08 (mg/l)	MW-05D 8/5/08 (mg/l)	MW-05D 11/5/08 (mg/l)	MW-05D 2/26/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	NA	NA	NA	NA	NA	NA	5	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	77.0	42.3	73	59.8	31.5	48.5	19.2	37.4	27.1	19.6
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.90	0.10 U	0.10 U	0.46	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U	2	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	1.7	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	13.5	20.6	20.6	18.1	20.6	19.4	19.4	10 U	11.9	10 U
Chloride	250 ST	16887-00-6	(mg/l)	63.7	61.0	48.5	44.2	42.6	82.6	65.9	46.7	37.4	35.8
Hardness (as CaCO3)	-	-	(mg/l)	190	160	200	180	120	180	152	132	150	220
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.16	2.84	1.57	2.4	4.33	1.60	3.64	5.60	7.65	9.56
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	112	85.5	157	103	77.1	82.7	80.9	105	90.6	53.2
Total Organic Carbon	-	-	(mg/l)	2.9	2.9	3.6	3.3	2.9	2.4	3.2	2.0	1.4	1 U
Total Dissolved Solids	-	-	(mg/l)	344	303	348	369	275	351	296	292	262	237
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.46	1.00	1.33	1.3	0.58	0.96	0.94	0.52	0.27	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-05D 8/17/09 (mg/l)	MW-05D 2/8/10 (mg/l)	MW-05D 6/1/11 (mg/l)	MW-05D 8/28/12 (mg/l)	MW-05D 11/13/2013 (mg/l)	MW-05D 03/19/2015 (mg/l)	MW-05D 05/11/2016 (mg/l)	MW-05D 8/22/2017 (mg/l)	MW-05D 11/30/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	10	5 U	5	1 U	5 U	5 U	40	5 U
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	23.5	12.4	13.4	14.6 D	9.09	12.0	453	16.2 UB	14.1
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	0.13	.1 U	0.0500 U	0.0500 UJ	0.0250 U	0.0250 U	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 U	7 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	12	10 U	10.0 U	10.0 U	3.00 U	3.00 UJ	3.82 J
Chloride	250 ST	16887-00-6	(mg/l)	67.5	46.4	34.5	9.32	13.0	22.5	39.0	12.0 UB	15.9
Hardness (as CaCO3)	-	-	(mg/l)	110	82.0	70	19	25.5	45.2	53.9	32.9 UB	51.2
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	4.45	5.28	2.3 D	1.6	1.07	0.948 D	0.901	2.07 D	2.35
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.0216 UB	0.0240	0.00805 J	0.0607	0.0440
Sulfate	250 ST		(mg/l)	84.0	29.3	49.9 D	20.1	29.4	38.3	22.3	24.1	0.652 UB
Total Organic Carbon	-	-	(mg/l)	1.0	1.2	1.2	1 U	1.2	1 U	1.00 U	1.00 U	1.76 J
Total Dissolved Solids	-	-	(mg/l)	300	179	163	98	110	122 D	124 D	130	110
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.41	1.37	0.19	0.62	1.07	0.645	0.200 U	0.200 U	0.200 U

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Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-05I 11/30/06 (mg/l)	MW-05I 2/21/07 (mg/l)	MW-05I 5/25/07 (mg/l)	MW-05I 8/14/07 (mg/l)	MW-05I 11/13/07 (mg/l)	MW-05I 2/11/08 (mg/l)	MW-05I 5/15/08 (mg/l)	MW-05I 8/5/08 (mg/l)	MW-05I 11/5/08 (mg/l)	MW-05I 2/26/09 (mg/l)
Color (APHA Units)	-	-	(units)	70	20	NA	NA	NA	NA	NA	NA	40.0	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	79.5	72.5	63.3	70.5	57	57.8	69.4	71.8	42.6	47.8
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.85	0.10 U	0.10 U	1.52	0.10 U	0.28 UJ	0.53	0.1 U	0.1 U	0.1 UJ*
Biochemical Oxygen Demand	-	-	(mg/l)	3	2 U	7	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	25.7	10 U	10.5	18.1	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	35.2	33.7	59.1	62.3	61.6	52.9	51.4	18.1	21.0	22.6
Hardness (as CaCO3)	-	-	(mg/l)	136	120	130	180	124	110	96.0	96.0	14.0	190
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.46	0.11	0.1 U	1.78	0.1 U	0.1 U	0.1 U	0.1 U	0.11
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	76.0	59.3	56.8	52.8	50.0	36.1	36.8	67.3	32.3	38.0
Total Organic Carbon	-	-	(mg/l)	3.3	3.1	3.9	3.4	3.4	3	2.9	3.1	1.4	1.0
Total Dissolved Solids	-	-	(mg/l)	231	207	267	286 J	297	212	223	203	126	151
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.26	1.05	2.45	2.32	0.41	1.28	0.74	0.48	0.18	0.16 J*

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-05I 8/17/09 (mg/l)	MW-05I 2/8/10 (mg/l)	MW-05I 5/31/11 (mg/l)	MW-05I 8/28/12 (mg/l)	MW-05I 11/13/2013 (mg/l)	MW-05I 03/19/2015 (mg/l)	MW-05I 05/11/2016 (mg/l)	MW-05I 8/22/2017 (mg/l)	MW-05I 11/30/2018 (mg/l)
Color (APHA Units)	-	-	(units)	10	60	250 D	100 D	25	150	5 U	100	7
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	42.3	38.3	57.6 D	40.8	67.7	65.0	67.7	96 UB	204
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	0.13	0.66	0.570	0.684 J	0.352	0.575	0.252
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2	2 U	2 U	8 U	2 U	7 U	2 U	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	26.5	10 U	10 U	10.0 U	10.0 U	9.38 J	3.00 UJ	10.1
Chloride	250 ST	16887-00-6	(mg/l)	37.6	28.0	27.0	12.5	70.0	25.0	16.0	39.0 UB	7.37
Hardness (as CaCO3)	-	-	(mg/l)	88.0	64.0	90 D	59	96.5	57.5	43.7	145	176
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.63	0.10 U	.1 U	0.100 U	0.236	0.0500 U	0.0500 U	0.0500 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	16.7	0.005 U	0.005 U	0.0110 UB	0.0100 U	0.0330	0.0838	0.0796
Sulfate	250 ST		(mg/l)	32.7	22.5	28.7	12.9	70.6	29.6	9.48	16.6 D	0.383 UB
Total Organic Carbon	-	-	(mg/l)	1.3	2.6	2.3	1 U	3.2	1.9	1.40 J	1.51 J	3.11
Total Dissolved Solids	-	-	(mg/l)	196	126	164	100	300	152 D	82.0 D	310	340
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.23	1.67	0.20	0.68	1.70	1.41	0.642	0.686	0.260 J

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SONIA ROAD LANDFILL
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CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-05S 11/30/06 (mg/l)	MW-05S 2/21/07 (mg/l)	MW-05S 6/1/07 (mg/l)	MW-05S 8/14/07 (mg/l)	MW-05S 11/13/07 (mg/l)	MW-05S 2/11/08 (mg/l)	MW-05S 5/15/08 (mg/l)	MW-05S 8/5/08 (mg/l)	MW-05S 11/5/08 (mg/l)	MW-05S 2/26/09 (mg/l)
Color (APHA Units)	-	-	(units)	70	50	NA	NA	NA	NA	NA	NA	60.0	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	392	389	386	420	351	328	302	324	277	266
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	6.24	6.07	6.89	7.86	6.46	4.01	5.20	5.75	4.0	3.40
Biochemical Oxygen Demand	-	-	(mg/l)	18	12	12	23	16	10	9	2 U	15.2	15.5
Bromide	2 GV	24959-67-9	(mg/l)	2.3	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	16.0	38.3	38.3	51	43.4	16.9	36.7	26.8	29.3	10.9
Chloride	250 ST	16887-00-6	(mg/l)	60.6	58.4	48.8	46.2	49	45.6	36.3	38.5	38.3	34.2
Hardness (as CaCO3)	-	-	(mg/l)	340	360	360	440	340	310	220	290	300	460
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.22	0.54	0.1 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.20	5 U	5 U	5 U
Total Organic Carbon	-	-	(mg/l)	8.8	10.3	11.1	10.9	9.5	7.9	8.1	1.4	8.9	5.8
Total Dissolved Solids	-	-	(mg/l)	460	451	454	502	456	395	363	403	371	372
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	9.46	8.54	9.15	9.63	8.4	6.90	6.71	7.46	5.77	5.01

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-05S 8/17/09 (mg/l)	MW-05S 2/8/10 (mg/l)	MW-05S 5/31/11 (mg/l)	MW-05S 8/29/12 (mg/l)	MW-05S 11/13/2013 (mg/l)	MW-05S 03/19/2015 (mg/l)	MW-05S 05/11/2016 (mg/l)	MW-05S 8/22/2017 (mg/l)	MW-05S 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	40	50	200 D	150 D	25	250	10	100	6.5
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	334	195	264 D	272 D	294	259	224	238	281
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	2.56	0.50	5.26 D	5.18 D	4.28	1.85 J	1.38	1.46	2.5
Biochemical Oxygen Demand	-	-	(mg/l)	15	18	2	18 UJ	22	11	13	7.8	11.8
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0676 J
Chemical Oxygen Demand	-	-	(mg/l)	32.7	21.8	29.2	26	7.55 J	24.0	15.1	11.2 J	27.9
Chloride	250 ST	16887-00-6	(mg/l)	49.3	35.0	46.6	39.8	47.0	43.0	48.0	24.0 UB	43.2
Hardness (as CaCO3)	-	-	(mg/l)	320	280	270 D	330 D	208	226	222	226	230
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.18	0.17	0.1 UJ	0.100 U	2.02 D	0.0500 U	0.0500 U	0.0500 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5.4	0.005 U	0.005 U	0.00571 UB	0.0100 U	0.0130	0.0246	0.0343
Sulfate	250 ST		(mg/l)	11.6	22.8	5 U	5 U	2.56	2.00 U	2.37	2.00 DU	4.16
Total Organic Carbon	-	-	(mg/l)	8.7	4.8	7.4	1.6	7	8.9	7.57	5.07	9.23
Total Dissolved Solids	-	-	(mg/l)	496	313	357	383	956	355 D	322 D	110	390
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	7.62	5.79	5.66 D	5.42 D	7.66	4.27	3.46	3.58	3.83

NOTES:

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Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-06D 12/1/06 (mg/l)	MW-06D 2/22/07 (mg/l)	MW-06D 5/24/07 (mg/l)	MW-06D 8/10/07 (mg/l)	MW-06D 11/9/07 (mg/l)	MW-06D 2/11/08 (mg/l)	MW-06D 5/15/08 (mg/l)	MW-06D 8/4/08 (mg/l)	MW-06D 11/3/08 (mg/l)	MW-06D 2/23/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	NA	NA	NA	NA	NA	NA	5.00	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	19.9	10.1	6.0	U*	12.2	27.4	17.8	29.8	30.9	29.2
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.14	0.10 U	0.10 U	0.01 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	3.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	23.1	10 U	10 U	14.4	19.4	10 U
Chloride	250 ST	16887-00-6	(mg/l)	12.7	14.7	14.1	U*	13.9	16.8	15.8	23.9	25.5	29.3
Hardness (as CaCO3)	-	-	(mg/l)	52	43.0	24	56	30.0	42.0	48.0	72.0	64.0	150
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.74	0.73	0.70	U*	0.7	0.1 U	0.37	0.60	0.53	1.38
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	13.7	17.9	16.7	16.6	17.7	17.3	16.9	19.8	19.4	14.0
Total Organic Carbon	-	-	(mg/l)	1 U	1.0	1.2	1.0 U	1.7	1.0	1 U	1.4	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	82	74	72	U*	74	85	97	117	109	131
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.26	0.71	0.63	0.50	0.19	0.10	0.18	0.1 U	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-06D 8/11/09 (mg/l)	MW-06D 2/4/10 (mg/l)	MW-06D 5/26/11 (mg/l)	MW-06D 8/27/12 (mg/l)	MW-06D 11/12/2013 (mg/l)	MW-06D 03/18/2015 (mg/l)	MW-06D 05/10/2016 (mg/l)	MW-06D 8/22/2017 (mg/l)	MW-06D 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5	5	5 U	15	1 U	350	5 U	25	30
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	32.3	13.6	16.8	10.9	14.1	11.0	6.06	14.1 UB	21.2
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	0.1 U	0.23	0.868	0.817 J	0.903	1.92	2.5
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 UJ	4 U	2 UJ	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0724 J
Chemical Oxygen Demand	-	-	(mg/l)	10.9	10 U	10 U	10 U	10.0 U	10.0 U	3.00 U	3.00 UJ	7.65 J
Chloride	250 ST	16887-00-6	(mg/l)	25.0	28.0	24.0	24.8	19.0	17.5	20.0	37.0 UB	48.3
Hardness (as CaCO3)	-	-	(mg/l)	40.0	36.0	36 D	36 D	25.1	25.2	29.7	47.4 UB	58.6
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.75	0.68	0.36	0.68	1.55 J	1.54 DJ	1.46 D	0.619	0.511
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.0100 U	0.142	0.0510	0.0638	0.0406
Sulfate	250 ST		(mg/l)	24.5	20.1	26.9	21	14.7	12.8	9.78	15.1	28.6
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1 U	1 U	1 U	1 U	1.00 U	1.00 U	2.50 J
Total Dissolved Solids	-	-	(mg/l)	130	101	99	107	87.0	93.0 D	67.0 D	130	180
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.1 U	0.1 U	0.1 U	.5 U	2.40	0.870	1.59	2.37	2.74

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Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-06I 12/1/06 (mg/l)	MW-06I 2/22/07 (mg/l)	MW-06I 5/24/07 (mg/l)	MW-06I 8/10/07 (mg/l)	MW-06I 11/9/07 (mg/l)	MW-06I 2/11/08 (mg/l)	MW-06I 5/15/08 (mg/l)	MW-06I 8/4/08 (mg/l)	MW-06I 11/3/08 (mg/l)	MW-06I 2/23/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	NA	NA	NA	NA	NA	NA	5.00	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	65.2	27.5	24.7	U*	33	43.0	31.0	37.0	36.8	40.9
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	4.15	4.61	0.10 U	3.34	0.56 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	6	2	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	98.7	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	31.5	31.8	32.3	29.9	36.4	26.3	16.8	25.5	16.7	17.9
Hardness (as CaCO3)	-	-	(mg/l)	68	70.0	72	76	76	58	52.0	56.0	56.0	150 J*
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.64	4.61	5.37	2.79	6.02	2.12	2.48	4.20	6.12	1.65
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	21.0	22.1	19.9	24.1	21.2	14.1	11.6	9.42	9.38	9.31
Total Organic Carbon	-	-	(mg/l)	1.1	1.3	1.0	1.3	1.2	1 U	1.0	1 U	1.0	1.1
Total Dissolved Solids	-	-	(mg/l)	144	147	161	166	184	108	111	137	105	92
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	6.21	1.93	1.28	5.36	0.81 J	2.34	1.53	1.48	1.27	1.66

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-06I 8/11/09 (mg/l)	MW-06I 2/4/10 (mg/l)	MW-06I 5/26/11 (mg/l)	MW-06I 8/27/12 (mg/l)	MW-06I 11/12/2013 (mg/l)	MW-06I 03/18/2015 (mg/l)	MW-06I 05/10/2016 (mg/l)	MW-06I 8/22/2017 (mg/l)	MW-06I 11/30/2018 (mg/l)
Color (APHA Units)	-	-	(units)	10	10	5 U	5	1 U	350	5 U	20	5 U
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	26.3	24.9	37.1	39.3	34.3	48.0	43.4	56.6 UB	91.9
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	0.26	0.35	0.0500 U	0.0500 UJ	0.0320 J	0.590	0.512
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 UJ	4 U	2 UJ	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	.5 U	1.33 J	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	10.0 U	10.0 U	3.03 J	3.00 UJ	8.70 J
Chloride	250 ST	16887-00-6	(mg/l)	30.7	23.2	33.9	27.2	23.0	46.5	48.0	29.5 UB	102
Hardness (as CaCO3)	-	-	(mg/l)	45.0	45.0	80 D	52 D	39.8	46.6	53.3	66.2 UB	121
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	1.11 J*	0.86 D	2.08 U	2.32 J	0.166 J	0.502	0.208	1.17
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.0100 U	0.0110	0.0550	0.0529	0.0308
Sulfate	250 ST		(mg/l)	11.1	9.46	56.2 D	15	8.66	26.6	31.8	37.6 D	36.2
Total Organic Carbon	-	-	(mg/l)	1.0	1 U	1 U	1 U	1 U	1.3	1.00 U	1.00 U	1.67 J
Total Dissolved Solids	-	-	(mg/l)	124	98	188	129	99.0	188 D	178 D	170	320
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.41	0.25 U	0.35 U*	0.28 U	0.961	0.400 U	0.200 U	0.764	0.559

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Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-06S 12/1/06 (mg/l)	MW-06S 2/22/07 (mg/l)	MW-06S 5/24/07 (mg/l)	MW-06S 8/10/07 (mg/l)	MW-06S 11/9/07 (mg/l)	MW-06S 2/11/08 (mg/l)	MW-06S 5/15/08 (mg/l)	MW-06S 8/4/08 (mg/l)	MW-06S 11/3/08 (mg/l)	MW-06S 2/23/09 (mg/l)
Color (APHA Units)	-	-	(units)	80	80	NA	NA	NA	NA	NA	NA	100	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	327	216	258	166	289	291	222	209	286	209
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	6.08	4.42	4.65	3.04	5.15	3.42	4.43	4.23	3.7	2.60
Biochemical Oxygen Demand	-	-	(mg/l)	14	9	10	4	140	8	3	2 U	8.6	10.3
Bromide	2 GV	24959-67-9	(mg/l)	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	35.8	25.7	U*	38.3	24.3	11.9	21.8	26.8	10 U
Chloride	250 ST	16887-00-6	(mg/l)	24.1	28.8	41.0	33.0	32.4	41.9	46.3	30.7	39.3	34.8
Hardness (as CaCO3)	-	-	(mg/l)	312	240	260	160	500	260	210	190	360	480
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	4.48	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.17
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	5.0 U	5.0 U	5.0 U	5.1	5.0 U	5.0 U	8.50	5 U	5 U	5 U
Total Organic Carbon	-	-	(mg/l)	9.1	6.6	9.5	5.0	8.0	7.1	6.3	4.9	8.5	4.5
Total Dissolved Solids	-	-	(mg/l)	364	246	331	233	348	368	327	268	344	324
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	9.50	6.48	7.96	U*	6.56	5.98	5.80	4.87	5.22	3.72

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-06S 8/11/09 (mg/l)	MW-06S 2/4/10 (mg/l)	MW-06S 5/26/11 (mg/l)	MW-06S 8/27/12 (mg/l)	MW-06S 11/13/2013 (mg/l)	MW-06S 03/18/2015 (mg/l)	MW-06S 05/10/2016 (mg/l)	MW-06S 8/22/2017 (mg/l)	MW-06S 11/30/2018 (mg/l)
Color (APHA Units)	-	-	(units)	100	70	100 D	75	20	250	5 U	40	40
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	220	77.7	259 D	223 D	293	96.0	169	148 UB	115
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.41 J*	1.46	5.90 D	3.89	2.60	0.222 J	0.835	0.453	0.371
Biochemical Oxygen Demand	-	-	(mg/l)	8 J*	8	10 J*	13	16	5 J	6	5.2 J	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	25.4	21.8	20.0	25.3	10.0 U	3.26 J	12.7	3.00 UJ	10.8
Chloride	250 ST	16887-00-6	(mg/l)	21.9	23.0	27.9	49.5	27.0	31.0	42.0	57.0 UB	57.4
Hardness (as CaCO3)	-	-	(mg/l)	200	180	240	250 D	180	96.1	169	140	112
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.50	0.20	0.10 U	0.1 U	0.100 U	1.40 DJ	0.0500 U	0.0500 U	0.0500 U
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.0100 U	0.0110	0.00500 U	0.0621	0.0313
Sulfate	250 ST		(mg/l)	7.40	5 U	5 U	5 U	1.99 J	28.2	3.83	1.00 U	12.8
Total Organic Carbon	-	-	(mg/l)	5.4	3.3	8.1 J*	4.1	4	2.7	3.70	1.16 J	1.78 J
Total Dissolved Solids	-	-	(mg/l)	277	228	329	378	276	218 D	257 D	280	270
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	4.08	3.37	7.07 D	0.5 U	5.08	0.303 J	2.23	0.616	0.472

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-07I 11/28/06 (mg/l)	MW-07I 2/22/07 (mg/l)	MW-07I 5/24/07 (mg/l)	MW-07I 8/10/07 (mg/l)	MW-07I 11/14/07 (mg/l)	MW-07I 2/11/08 (mg/l)	MW-07I 5/19/08 (mg/l)	MW-07I 8/5/08 (mg/l)	MW-07I 11/5/08 (mg/l)	MW-07I 2/24/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	NA	NA	NA	NA	NA	NA	5.00	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	20.4	14.7	27.9	U*	33.8	26.4	35.6	40.2	49.6	40.7
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.36	0.10 U	0.10 U	1.68	1.76	1.22	0.93	0.86	0.2	0.32
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	4	3	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	15.5	10 U	10 U	10 U	10 U	10 U	10 U	14.4	10 U
Chloride	250 ST	16887-00-6	(mg/l)	57.5	49.7	43.7	35.0	37.7	46.0	44.3	44.6	49.0	36.5
Hardness (as CaCO3)	-	-	(mg/l)	65.0	54.0	55.0	56.0	44.0	75	62.0	68.0	76.0	160
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.91	1.47	1.52	10 U	1.05	2.74	0.1 U	1.32	1.24	0.75
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	10	11.5	28.9	24.1	21.9	14.7	10.1	6.75	6.98	11.4
Total Organic Carbon	-	-	(mg/l)	1 U	1.2	1.7	3	1.4	1 U	1.1	8.9	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	190	148	147	162	326	126	149	163	157	123
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.52	0.87	1.47	U*	1.98	2.04	1.18	0.88	0.24	0.58

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-07I 8/14/09 (mg/l)	MW-07I 2/8/10 (mg/l)	MW-07I 5/26/11 (mg/l)	MW-07I 8/27/12 (mg/l)	MW-07I 11/12/2013 (mg/l)	MW-07I 03/18/2015 (mg/l)	MW-07I 05/10/2016 (mg/l)	MW-07I 8/22/2017 (mg/l)	MW-07I 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	5 U	5 U	I U	150	5 U	20	5 U
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	29.5	22.0	42.3	30.5	23.2	22.0	17.2	32.3 UB	41.4
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	1.13	0.1 U	0.87	0.51	0.288	0.191 J	0.943	1.53	1.32
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	7	2 U	2 U	4 U	2 UJ	4 U	2 UJ	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	.5 UJ	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	10.0 U	10.0 U	3.63 J	3.00 UJ	3.00 U
Chloride	250 ST	16887-00-6	(mg/l)	74.0	43.3	67.8 D	44.3 D	33.0	50.0	43.0	28.0 UB	48.6
Hardness (as CaCO3)	-	-	(mg/l)	68.0	41.0	120 D	58 D	38.4	43.0	36.3	50.1 UB	71.8
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.77	2.60	1.51 D	2.78 D	1.08 J	0.920 J	3.60 D	0.625	1.54
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	5 U	0.0100 U	0.0100 U	0.0520	0.0646	0.0481
Sulfate	250 ST		(mg/l)	20.6	12.9	28.1	7.7	9.37	15.0	10.2	14.2	18.1
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1.1	1 U	1 U	1 U	1.00 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	243	136	298	167	117	151 D	116 D	130	190
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.70	1.78	0.99 U*	1.36	1.93	0.363 J	1.49	2.35	1.73

NOTES:

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D&B ENGINEERS AND ARCHITECTS, P.C.

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
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CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-11D 11/29/06 (mg/l)	MW-11D 2/28/07 (mg/l)	MW-11D 6/1/07 (mg/l)	MW-11D 8/17/07 (mg/l)	MW-11D 11/14/07 (mg/l)	MW-11D 2/12/08 (mg/l)	MW-11D 5/14/08 (mg/l)	MW-11D 8/6/08 (mg/l)	MW-11D 11/5/08 (mg/l)	MW-11D 2/25/09 (mg/l)
Color (APHA Units)	-	-	(units)	10	5	NA	NA	NA	NA	NA	NA	5	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	8.6	9.0	20.6	10.0	8.0	5.6	5.2	4.2	5.30	3.90
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.7	0.5 U	0.5 U	0.5 U	0.05 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	30.7	10 U	10.5	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	19.6	25.0	21.9	22.9	23.1	21.4	19.6	20.6	20.7	15.6
Hardness (as CaCO3)	-	-	(mg/l)	40.0	44.0	52.0	50.0	42.0	36.0	36.0	30.0	34.0	120
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	3.43	5.86	5.38	6.05	6.57	5.48	5.90	5.87	28.6	4.16
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	20.9	21.7	27.8	21.8	18.7	18.6	16.7	15.8	16.4	19.3
Total Organic Carbon	-	-	(mg/l)	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	133	130	155	166	169	128	121	115	103	211
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.46	0.63	1.07	0.1 U	0.2	0.15	0.1 U	0.1 U	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-11D 8/13/09 (mg/l)	MW-11D 2/5/10 (mg/l)	MW-11D 5/27/11 (mg/l)	MW-11D 8/29/12 (mg/l)	MW-11D 11/14/2013 (mg/l)	MW-11D 03/19/2015 (mg/l)	MW-11D 05/12/2016 (mg/l)	MW-11D 8/23/2017 (mg/l)	MW-11D 12/3/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	250	5 U	15	1 U	100	5 U	30	5
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	9.55	101	95.0 D	55.4 D	11.1	18.0	3.50 U	6.06 UB	12.1
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	0.14	0.1 U	0.0500 U	0.0500 UJ	0.0250 U	0.0250 U	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	16	2 U	4 U	2 U	4 U	2 U	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	136	10 U	5.34 J	4.52 J	3.00 U	5.87 J	3.00 U
Chloride	250 ST	16887-00-6	(mg/l)	19.9	39.0	10.3	60 D	21.0	25.0	61.0	32.0 UB	29.8
Hardness (as CaCO3)	-	-	(mg/l)	27.0	105	270 D	460 DJ	43.6	62.8	66.1	82.5 UB	64.1
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.77	2.22	0.10 U	0.42	4.25	4.86 D	6.14 D	5.95 D	6.18
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.0254	0.005 U	0.0100 U	0.0100 U	0.0590	0.0320	0.0599
Sulfate	250 ST		(mg/l)	24.4	15.9	16.3	38.1	28.7	46.9	47.5	86.6 D	49.4
Total Organic Carbon	-	-	(mg/l)	1U	2.5	3.3	1.6	1 U	1.4	1.00 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	104	197	138 D	252	161	166 D	175 D	220	210
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.1 U	7.58	0.77	0.5 U	2.02	1.48	0.938	0.368 J	0.200 U

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CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-11I 11/29/06 (mg/l)	MW-11I 2/28/07 (mg/l)	MW-11I 6/1/07 (mg/l)	MW-11I 8/16/07 (mg/l)	MW-11I 11/14/07 (mg/l)	MW-11I 2/12/08 (mg/l)	MW-11I 5/14/08 (mg/l)	MW-11I 8/6/08 (mg/l)	MW-11I 11/5/08 (mg/l)	MW-11I 2/25/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5 U	NA	NA	NA	NA	NA	NA	5.00	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	11.8	5.8	8.8	4.4	4.9	3.4	3.4	2.8	3.05	1.45
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.29	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	1.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	4.9	5.3	6.3	5.2	4.8	7.1	22.5	12.3	10.1	9.10
Hardness (as CaCO3)	-	-	(mg/l)	16.0	12.0	19.0	18.0	24.0	18.0	36.0	15.0	60.0	90.0
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.78	0.70	1.12	0.53	0.62	0.60	2.38	0.65	0.30	0.20
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	11.0	13.1	14.5	16.9	18.9	15.1	8.93	11.5	12.7	11.1
Total Organic Carbon	-	-	(mg/l)	1 U	1.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	58	47	53	71	78	60	104	63	53	82
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.28	0.62	0.72	0.1 U	0.10 U	0.1 U	0.1 U	0.23	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-11I 8/13/09 (mg/l)	MW-11I 2/5/10 (mg/l)	MW-11I 5/27/11 (mg/l)	MW-11I 8/29/12 (mg/l)	MW-11I 11/14/2013 (mg/l)	MW-11I 03/19/2015 (mg/l)	MW-11I 05/12/2016 (mg/l)	MW-11I 8/23/2017 (mg/l)	MW-11I 12/3/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5 U	150 D	5 U	1 U	5 U	5 U	25	5
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	2.05	2.95	2.10	2.45	5.00 U	4.00 J	5.05	5.05 UB	7.07 J
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	0.10 U	0.15 U	0.0500 U	0.0500 UJ	0.0250 U	0.0250 U	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2U	2 U	4 U	2 U	4 U	2 U	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	10 U	10 U	10.0 U	10.0 U	3.00 U	3.00 UJ	3.13 J
Chloride	250 ST	16887-00-6	(mg/l)	8.38	5.77	4.64	50.9 D	8.00	7.00 UB	34.0	13.0 UB	12.9
Hardness (as CaCO3)	-	-	(mg/l)	13	11.0	5 U	23	8.72	13.2	25.0	37.7 UB	26.9
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.23	0.16	0.10 U	0.55	0.101	0.100	2.00 D	0.779	0.487
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.0100 U	0.00929 J	0.0600	0.00816 J	0.0928
Sulfate	250 ST		(mg/l)	16.7	10.6	9.22	12.2	9.51	14.7	6.73	15.9	20.2
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1.0 U	1 U	1 U	1 U	1.00 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	64	47	33	138	49.0	41.0 D	75.0 D	110	90.0
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.1 U	0.1 U	0.1 U	0.5 U	1.31	0.275 J	0.441	0.391 J	0.200 U

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Color (APHA Units)	-	-	(units)	5 U	30	NA	NA	NA	NA	NA	NA	20.0	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	140	136	136	151	151	152	148	129	108	100
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	1.64	0.10 U	0.10 U	2.06	1.19	0.70	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	4	4	2 U	2 U	2 U	6	3	4.2	2 U
Bromide	2 GV	24959-67-9	(mg/l)	1.4	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	16.0	51.0	89	23.1	28.2	21.8	71.4	41.7	14.4	10.9
Chloride	250 ST	16887-00-6	(mg/l)	46.6	39.8	53.9	62.8	60.3	41.0	53.3	64.9	84.5	49.1
Hardness (as CaCO3)	-	-	(mg/l)	130	140	180	160	128	122	200	156	180	240
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.59	0.41	1.09	0.93	0.63	0.64	0.85	0.68	0.46	0.35
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	31.4	27.7	51.1	63.4	47.8	35.0	38.2	54.9	38.1	33.3
Total Organic Carbon	-	-	(mg/l)	3.4	3.8	8.0	6.6	5.9	4.1	5.7	5.4	3.8	2.6
Total Dissolved Solids	-	-	(mg/l)	277	276	322	373	345	283	323	369	317	265
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	2.04	3.82	4.8	3.36	2.7	3.05	1.90	4.21	2.92	0.92

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-11S 8/13/09 (mg/l)	MW-11S 2/5/10 (mg/l)	MW-11S 5/27/11 (mg/l)	MW-11S 8/29/12 (mg/l)	MW-11S 11/14/2013 (mg/l)	MW-11S 03/19/2015 (mg/l)	MW-11S 05/12/2016 (mg/l)	MW-11S 8/23/2017 (mg/l)	MW-11S 12/3/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	10	5 U	1 U	5 U	5	25	5
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	118	150	84 D	105 D	158	101	136	118 UB	145
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	0.64	0.13 U	0.0500 U	0.596 J	0.385	0.0250 U	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 U	4 U	2 U	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	23.0	10 U	10 U	10 U	10.0 U	10.5	7.57 J	14.2 UJ	10.4
Chloride	250 ST	16887-00-6	(mg/l)	61.6	92.0	64.4 D	82.3 D	53.5	49.5	80.0	42.0 UB	4.11
Hardness (as CaCO3)	-	-	(mg/l)	145	170	130 D	148 D	146	107	158	146	145
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.21	1.42	0.65	1.27	0.279	0.384	0.902	1.23 D	0.899
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.00564 UB	0.0100 U	0.0620	0.00500 U	0.0338
Sulfate	250 ST		(mg/l)	63.3	49.2	37.0	41.1	32.4	22.9	27.5	33.1	1.30 UB
Total Organic Carbon	-	-	(mg/l)	3.8	5.0	3.2	3.6	4.5	3.3	4.18	2.33 J	3.72
Total Dissolved Solids	-	-	(mg/l)	286	380	276	321	323	227 D	285 D	280	240
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	1.01 UJ*	1.19 U	0.57	0.5 U	2.06	1.06	0.742	0.401	0.200 U

NOTES:

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: Concentration exceeds Standard/Guidance Value

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-: No standard or guildance value

D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-12D 11/29/06 (mg/l)	MW-12D 2/23/07 (mg/l)	MW-12D 6/1/07 (mg/l)	MW-12D 8/16/07 (mg/l)	MW-12D 11/14/07 (mg/l)	MW-12D 2/12/08 (mg/l)	MW-12D 5/14/08 (mg/l)	MW-12D 8/6/08 (mg/l)	MW-12D 11/5/08 (mg/l)	MW-12D 2/25/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	NA	NA	NA	NA	NA	NA	5.00	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	1 U	23.9	12.3	8.8	7.8	8.8	10.1	10	9.75	7.95
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.10	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	6	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	1.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	13.5	23.1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	5.5	6.9	7.7	10.6	20.5	21.7	27.6	31.0	29.3	33.6
Hardness (as CaCO3)	-	-	(mg/l)	26.0	50.0	32.0	40.0	52.0	50.0	56.0	52.0	52.0	130
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.67	0.70	1.84	2.3	2.25	1.55	1.67	1.67	2.04	2.05
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	14.8	16.4	18.8	22.0	25.8	28.7	25.0	24.0	21.1	20.1
Total Organic Carbon	-	-	(mg/l)	1 U	1.0 U	1.0 U	1.0 U	1.3	1 U	1 U	1 U	109	1 U
Total Dissolved Solids	-	-	(mg/l)	71	70	69	85	128	112	128	140	1 U	127
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.14	0.95	0.55	0.1 U	0.10 U	0.1 U	0.1 U	0.18	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-12D 8/13/09 (mg/l)	MW-12D 2/5/10 (mg/l)	MW-12D 5/27/11 (mg/l)	MW-12D 8/29/12 (mg/l)	MW-12D 11/14/2013 (mg/l)	MW-12D 03/20/2015 (mg/l)	MW-12D 05/12/2016 (mg/l)	MW-12D 8/23/2017 (mg/l)	MW-12D 12/3/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5 U	5 U	5 U	1 U	5 U	5 U	30	5 U
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	9.15	12.8	16	9.4	9.09	5.00	7.07	14.1 UB	18.2
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	0.10 U	0.1 U	0.0500 U	0.0500 UJ	0.0250 U	0.0250 U	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 U	4 U	2 U	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	12	10 U	10.0 U	10.0 U	3.00 U	3.00 UJ	3.00 U
Chloride	250 ST	16887-00-6	(mg/l)	40.1	26.4	8.80	9.06	8.00	10.0 UB	25.0	22.0 UB	44.6
Hardness (as CaCO3)	-	-	(mg/l)	53.0	42.0	30	22	22.8	22.2	34.9	45.5 UB	61.4
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.79	1.79	2.70 D	2.94 D	1.46	1.70 D	0.999	0.774	2.35
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.0100 U	0.0200	0.0590	0.00825 J	0.143
Sulfate	250 ST		(mg/l)	30.8	20.8	15.7	10.2	17.0	9.15 UB	14.4	10.9	20.0
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1.0 U	0.1 U	1 U	1 U	1.00 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	119	110	73	70	76.0	56.0 D	66.0 D	120	170
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.1 U	0.1 U	0.44	0.5 U	1.77	0.363 J	0.831	0.200 U	0.200 U

NOTES:

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-12I 11/29/06 (mg/l)	MW-12I 2/23/07 (mg/l)	MW-12I 6/1/07 (mg/l)	MW-12I 8/16/07 (mg/l)	MW-12I 11/14/07 (mg/l)	MW-12I 2/12/08 (mg/l)	MW-12I 5/14/08 (mg/l)	MW-12I 8/6/08 (mg/l)	MW-12I 11/5/08 (mg/l)	MW-12I 2/25/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	5	NA	NA	NA	NA	NA	NA	5.00	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	21.8	58.8	4	24.6	17.8	20.2	22.4	31.1	23.7	34.0
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	3.71	1.02	0.10 U	2.42	0.64	0.23	3.96	3.92 J*	0.2	2.32
Biochemical Oxygen Demand	-	-	(mg/l)	5	50	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	1.0	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	78.8	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	12.9	21.7	12.6	14.8	18.1	14.2	17.9	12.2	10.7	23.1
Hardness (as CaCO3)	-	-	(mg/l)	24.0	84.0	14.0	13.0	22.0	23.0	24.0	23.0	26.0	140
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.61	0.11	1.46	1.03	2.14	1.92	1.48	1.61	1.72	1.48
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	26.4	31.1	20.8	8.0	5.0 U	11.7	14.80	14.3	15.2	14.0
Total Organic Carbon	-	-	(mg/l)	1.1	21.3	1.1	1.0 U	1.0 U	1 U	1 U	1	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	97	124	74	62	54	72	84	79	58	105
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	7.67	3.99	3.95	3.11	3.32	3.84	4.45	5.58	3.31	3.81

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-12I 8/13/09 (mg/l)	MW-12I 2/5/10 (mg/l)	MW-12I 5/27/11 (mg/l)	MW-12I 8/29/12 (mg/l)	MW-12I 11/14/2013 (mg/l)	MW-12I 03/20/2015 (mg/l)	MW-12I 05/12/2016 (mg/l)	MW-12I 8/23/2017 (mg/l)	MW-12I 12/3/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	20	10	20	1	5 U	5 U	40	5 U
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	17.0	1 U	2.80	23.6 D	27.3	11.0	8.08	35.4 UB	58.6
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	1.64	0.1 U	0.74	1.75	2.80	5.80 DJ	2.46 D	1.06	2.48
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	10	2 U	4 U	2 U	4 U	2 U	4 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0500 U
Chemical Oxygen Demand	-	-	(mg/l)	10.9	10 U	12	10 U	10.0 U	10.0 U	3.00 U	3.00 UJ	6.26 J
Chloride	250 ST	16887-00-6	(mg/l)	46.1	20.0	12.6	31.8	40.5	34.5	9.00	54.0 UB	35.0
Hardness (as CaCO3)	-	-	(mg/l)	30.0	24.0	26	38	58.9	106	41.1	91.7 UB	70.3
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.48	3.88	3.32 D	0.79	0.455	0.578	1.33 D	3.62 D	2.03
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.0100 U	0.0100 U	0.0530	0.110	0.115
Sulfate	250 ST		(mg/l)	23.2	11.0	7.03	31	39.9	58.9	7.72	39.4 D	9.35
Total Organic Carbon	-	-	(mg/l)	1 U	1.0	2.1	1.3	1.3	2.1	1.00 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	155	77	74	110	177	179 D	88.0 D	250	150
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	6.49	1.13 U	2.18	2.03	4.98	7.31 D	4.22	1.56	2.56

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D&B ENGINEERS AND ARCHITECTS, P.C.

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
LEACHATE INDICATORS

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-12S 11/29/06 (mg/l)	MW-12S 2/23/07 (mg/l)	MW-12S 6/1/07 (mg/l)	MW-12S 8/16/07 (mg/l)	MW-12S 11/14/07 (mg/l)	MW-12S 2/12/08 (mg/l)	MW-12S 5/14/08 (mg/l)	MW-12S 8/6/08 (mg/l)	MW-12S 11/5/08 (mg/l)	MW-12S 2/25/09 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	20	NA	NA	NA	NA	NA	NA	30.0	NA
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	73.0	71.2	60.6	60.8	67.2	68	67.2	76.2	86.8	68.4
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 UJ*	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	6.0	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	1.1	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	10 U	40.9	10 U	10 U	10 U	10 U	10 U	34.2	19.4	10 U
Chloride	250 ST	16887-00-6	(mg/l)	25.2	25.5	27.7	17.8	23.9	32.9	28.5	32.4	44.1	38.0
Hardness (as CaCO3)	-	-	(mg/l)	110	80.0	72.0	64.0	80.0	82	70.0	88.0	85.0	190
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.33	2.30	2.32	1.71	2.03	1.46	1.54	1.12	1.37	0.79
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	5 U
Sulfate	250 ST	14808-79-8	(mg/l)	22.8	25.0	21.6	33.2	29.9	33.2	32.0	34.6	36.2	28.3
Total Organic Carbon	-	-	(mg/l)	1.5	1.4	2.0	1.5	1.1	1.4	1.5	1.9	212	1 U
Total Dissolved Solids	-	-	(mg/l)	189	183	159	167	193	196	185	199	2.0	195
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.16	0.75	0.69	0.1 U	0.10 U	0.14	0.10	0.85	0.22	0.13

CONSTITUENT	NYSDEC Class GA Groundwater Standards and Guidance Values	CAS #	SITE : DATE : UNITS	MW-12S 8/13/09 (mg/l)	MW-12S 2/5/10 (mg/l)	MW-12S 5/27/11 (mg/l)	MW-12S 8/29/12 (mg/l)	MW-12S 11/14/2013 (mg/l)	MW-12S 03/20/2015 (mg/l)	MW-12S 05/12/2016 (mg/l)	MW-12S 8/23/2017 (mg/l)	MW-12S 11/29/2018 (mg/l)
Color (APHA Units)	-	-	(units)	5 U	20	20	15	1 U	5 U	5 U	30	20
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	63.9	81.6	88.0 D	288 D	107	93.0	97.0	101 UB	142
Ammonia (as N)	2 ST	7664-41-7	(mg/l)	0.1 U	0.1 U	0.10 U	0.21 U	0.0500 U	0.0500 UJ	0.0250 U	0.0250 U	0.0250 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 U	4 U	2 U	2 U
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	2.00 U	2.00 U	1.00 U	1.30 U	0.0645 J
Chemical Oxygen Demand	-	-	(mg/l)	10.9	10 U	18.6	19.3	10.0 U	10.0 U	3.00 U	3.00 UJ	7.65 J
Chloride	250 ST	16887-00-6	(mg/l)	48.6	42.1	49.0	42.4	48.0	245	36.0	32.0 UB	74.6
Hardness (as CaCO3)	-	-	(mg/l)	90.0	80.0	120 D	88 D	43.2	122	95.8	152	132
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.81	1.34	1.22	0.37	0.347	1.06 D	1.68 D	4.22 D	1.57
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.00671 UB	0.00727 J	0.0500	0.00740 J	0.0313
Sulfate	250 ST		(mg/l)	49.4	29.0	37.8	16.8	26.9	38.1	27.0	82.0 D	37.2
Total Organic Carbon	-	-	(mg/l)	1.4	1.2	3.3	5.1	1.8	2.1	1.92 J	1.65 J	4.21
Total Dissolved Solids	-	-	(mg/l)	200	192	233	227	258	532 D	222 D	360	350
Total Kjeldahl Nitrogen (as N)	-	7727-37-9	(mg/l)	0.1 U	0.56 U	0.63	0.15	1.48	0.418	0.770	0.328 J	0.200 U

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D&B ENGINEERS AND ARCHITECTS, P.C.

APPENDIX A-2

Monitoring Well Sample Results - Inorganic Parameters

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-01D 11/9/2007 (ug/l)	MW-01D 2/11/2008 (ug/l)	MW-01D 5/15/2008 (ug/l)	MW-01D 8/5/2008 (ug/l)	MW-01D 11/3/2008 (ug/l)	MW-01D 2/24/2009 (ug/l)	MW-01D 8/12/2009 (ug/l)	MW-01D 2/4/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	75.1 B	NA	1,130	268
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	6.2 B
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	59.8 B	NA	35.8 B	30.2 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.10 B	NA	0.13 U	0.91 B
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	54.5 BN	NA	52.0 B	32.0 B
Cadmium	5 ST	7440-43-9	ug/l	2.0 B	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.60 B	4.0 B
Calcium	-	7440-70-2	ug/l	5,160	24,200	11,900	5,180	3,420 B	3,680 B	4,810 B	11,100
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	1.1 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	2.6 B	2.1 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	1.9 B	NA	1.5 B	1.4 B
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	3.1 B	NA	3.3 B	10.6 B
Iron	300 ST	7439-89-6	ug/l	1,280	97.2 B	180	276	78.6 B	69.6 B	1,040	315 J*
Lead	25 ST	7439-92-1	ug/l	4.9 J	1.5 B	2.3 U	2.3 U	1.3 U	1.3 U	33	3.8
Magnesium	35,000 GV	7439-95-4	ug/l	1,320 B	5,250	2,840 B	1,330 B	811 B	892 B	1,210 B	2,900 B
Manganese	300 ST	7439-96-5	ug/l	106	990	352	184	126	137	123	72.7
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.7 B	NA	2.0 B	2.9 B
Potassium	-	7440-09-7	ug/l	33,400 J	33,400 J	2,360 B	2,040 B	1,550 B	1,750 B	1,840 B	6370
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	5.3 U	2.5 B
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	23,700	462,000	250,000	159,000	150,000	130,000	78,100	15,100
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	4.0 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	2.1 B	1.9 B
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	8.3 B	NA	30.8	49.7
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	1,386	1,087.2	532	460	204.6	206.6	1,163	387.7

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.

U* or UB: Result qualified as non-detect based on validation criteria

J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Concentration exceeds Standard/Guidance Value.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-01D 5/26/2011 (ug/l)	MW-01D 8/28/2012 (ug/l)	MW-01D 11/12/2013 (ug/l)	MW-01D 03/17/2015 (ug/l)	MW-01D 05/10/2016 (ug/l)	MW-01D 8/21/2017 (ug/l)	MW-01D 11/29/2018 (ug/l)	MW-01D (ug/l)
Aluminum	-	7429-90-5	ug/l	3,070	133 B	39.2	48.6	195 UB	34.1 UB	94.2	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	22.4 B	16.3 B	43.8	172	65.1 UB	99.8	234	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	5.5 B	66.3 B	44	20 U	58.4	73.2	65.4 UB	
Cadmium	5 ST	7440-43-9	ug/l	3.3 B	0.6 B	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	9,050	7,140	2,670	7,750	5,080	6,800	18,600	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	8.9 B	10 U	10.0 U	2.5 UJ	2.50 U	2.5 UJ	
Chromium Total	50 ST	7440-47-3	ug/l	6.9 B	8.0 B	20 U	20 U	5 U	4 U	5.7 J	
Cobalt	-	7440-48-4	ug/l	1.8 B	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	12.0 B	.7 U	20 U	20 U	5 U	3.16 J	4.7 UB	
Iron	300 ST	7439-89-6	ug/l	3,780	104	20.1 UB	14.2 UB	27.8 UB	22.3 UB	43.7 UB	
Lead	25 ST	7439-92-1	ug/l	20.4	18.5	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	2,410 B	1,510 B	650	1,470	1,120 UB	1,400 UB	3,620	
Manganese	300 ST	7439-96-5	ug/l	104	23.2	24.1	866	13.2 J	111	1,260	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	.1 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	3.9 B	1.7 B	20 U	6.98 J	5 U	3 U	16.7 J	
Potassium	-	7440-09-7	ug/l	5,000	6,760	3,470	7,950	3,550 UB	5,430	6,740	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	2,980 B	26,300	13,000	31,700	19,100 UB	17,300 UB	166,000	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	8.2 B	.6 B	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	76.4	29.8	11 UB	20 U	14.6 UB	19.4 UB	20.3 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	47.6 UB	6.38 J	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	3,884	127.2	44.2	866	13.2 J	111	1,260	

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.
U* or UB: Result qualified as non-detect based on validation criteria
J: Estimated due to data validation criteria.
J*: Value is an approximate concentration of the analyte as determined by data validation.
UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-01I 11/9/2007 (ug/l)	MW-01I 2/11/2008 (ug/l)	MW-01I 5/15/2008 (ug/l)	MW-01I 8/5/2008 (ug/l)	MW-01I 11/3/2008 (ug/l)	MW-01I 2/24/2009 (ug/l)	MW-01I 8/12/2009 (ug/l)	MW-01I 2/4/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	12.5 U	118 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	6.7 B	NA	8.0 B	7.9 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	62.8 BN	NA	52.2 B	47.9 B
Cadmium	5 ST	7440-43-9	ug/l	0.55 B	0.32 U	0.45 B	0.27 U	0.35 U	0.35 U	0.26 U	0.34 U
Calcium	-	7440-70-2	ug/l	9,220	12,200	13,600	8,380	6,510	6,160	6,620	6,500
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.41 U	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02U	NA	0.60 B	1.2 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	0.76 U	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	1.5 B	NA	0.70 B	2.4 B
Iron	300 ST	7439-89-6	ug/l	122	24.2 U	31.7 B	21.4 B	27.6 B	13.3 B	31.8 B	390 J*
Lead	25 ST	7439-92-1	ug/l	1.5 JB	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	10.4	2.0 B
Magnesium	35,000 GV	7439-95-4	ug/l	2,800	3,420 B	3,960 B	2,280 B	1,830 B	1,740 B	1,750 B	2,060 B
Manganese	300 ST	7439-96-5	ug/l	178	463	343	336	148	64.8	107	112
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	14.5	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.7 B	NA	0.82 U	2.4 B
Potassium	-	7440-09-7	ug/l	2,020 J	1,650 B	1,950 B	1,970 B	1,390 B	1,130 B	1,400 B	1,580 B
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	10,200	12,300	15,400	11,400	8,450	6,950	6,450	5,790
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	4.2 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	9.9 B	NA	10.1 B	46.8
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	300	487.2	375	357.4	175.6	78.1	138.8	502

NOTES:

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J: Estimated due to data validation criteria.
J*: Value is an approximate concentration of the analyte as determined by data validation.
UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-01I 5/26/2011 (ug/l)	MW-01I 8/28/2012 (ug/l)	MW-01I 11/12/2013 (ug/l)	MW-01I 03/17/2015 (ug/l)	MW-01I 05/10/2016 (ug/l)	MW-01I 8/21/2017 (ug/l)	MW-01I 11/29/2018 (ug/l)	MW-01I (ug/l)
Aluminum	-	7429-90-5	ug/l	8.2 U	38.2 B	10.8 J	9.19 J	166 UB	8.78 UB	18.8 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	4.9 B	10.1 B	83	52.3	26.8 UB	59.9	24.5	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	24.4 B	33.8 B	83	20 U	25.9 UB	24.5	39.1 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	5,290	6,230	27,400	8,930	7,110	10,600 UB	11,900	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	97.3	10.0 U	2.5 UJ	2.50 U	2.5 UJ	
Chromium Total	50 ST	7440-47-3	ug/l	1.3 B	8.0 B	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	0.49 U	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	1.9 B	.7 U	20 U	20 U	5 U	3.49 J	5 U	
Iron	300 ST	7439-89-6	ug/l	71.0 B	13.8 B	8.88 UB	5.75 UB	32 UB	45 UB	24.8 UB	
Lead	25 ST	7439-92-1	ug/l	1.5 U	6.6	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	1,940 B	1,340 B	6,560	1,940	1,650 UB	2,250 UB	2,620	
Manganese	300 ST	7439-96-5	ug/l	9.6 B	1,440	1,720	1,180	13.4 J	16.3 J	9 J	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	.1 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U	2.1 B	20 U	20 U	5 U	3 U	5 U	
Potassium	-	7440-09-7	ug/l	1,620 B	4,150 B	6,850	5,360	2,630 UB	3,990 UB	2,730	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	6,510	1,820	8,930	8,060	4,470 UB	7,600 UB	7,170	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.9 B	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	0.56 U	.23 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	9.1 B	23.7	9.84 UB	20 U	11.2 UB	18.5 UB	12.4 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10 U	48 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	80.6	1,453.8	1,728.9	1,180	13.4 J	16.3	9	

NOTES:

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Concentration exceeds Standard/Guidance Value.

ST: Standard.
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NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-01S 11/9/2007 (ug/l)	MW-01S 2/11/2008 (ug/l)	MW-01S 5/15/2008 (ug/l)	MW-01S 8/5/2008 (ug/l)	MW-01S 11/3/2008 (ug/l)	MW-01S 2/24/2009 (ug/l)	MW-01S 8/14/2009 (ug/l)	MW-01S 2/4/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	63.5 B	NA	197 B	44.6 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	3.5 B	NA	11.2	3.2 B
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	45.7 B	NA	103 B	48.6 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	125 BN	NA	76.5 B	107
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.50 B	0.34 U
Calcium	-	7440-70-2	ug/l	63,100	71,000	60,800	79,700	62,900	58,000	64,100	55,300
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.49 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	0.80 B	1.0 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	2.0 B	NA	2.7 B	1.6 B
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	3.3 B	NA	2.1 B	2.4 B
Iron	300 ST	7439-89-6	ug/l	5,240	2,370	7,210	8,300	6,500	6,150	24,700	4,040 J*
Lead	25 ST	7439-92-1	ug/l	1.4 UJ	2.1 B	2.3 U	2.5 B	1.3 U	1.3 U	11.9	2.1 B
Magnesium	35,000 GV	7439-95-4	ug/l	9,110	11,000	8,960	11,700	9,990	8,690	8,020	7,650
Manganese	300 ST	7439-96-5	ug/l	735	465	950	1080	799	1,030	1,190	591
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	1.4 U
Potassium	-	7440-09-7	ug/l	13,900 J	11,800	12,600	14,700	15,900	12,400	13,100	13,500
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	59,800	54,300	57,400	58,100	56,200	51,000	66,100	52,800
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	4.1 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.90 B	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	14.8 B	NA	78.3	30.6
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	5,975	2,835	8,160	9,380	7,299	7,180	25,890	4,631

NOTES:

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Concentration exceeds Standard/Guidance Value.

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NA: Not analyzed.

D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-01S 5/26/2011 (ug/l)	MW-01S 8/28/2012 (ug/l)	MW-01S 11/12/2013 (ug/l)	MW-01S 03/17/2015 (ug/l)	MW-01S 05/10/2016 (ug/l)	MW-01S 8/21/2017 (ug/l)	MW-01S 11/29/2018 (ug/l)	MW-01S (ug/l)
Aluminum	-	7429-90-5	ug/l	8.2 U	53.8 B	13.4 J	10.2 J	447	15.2 UB	33 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	12.5 J	5.41 J	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	43.7 B	44 B	49.3	67.6	109 UB	88.1	61.4	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	64.1 B	80.5 B	49	20 U	64.2	78.3	89.7	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	61,800	61,600	44,700	53,000	55,500	60,100	55,700	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.02 U	10 U	10.0 U	2.5 UJ	2.50 U	2.5 UJ	
Chromium Total	50 ST	7440-47-3	ug/l	1.9 B	8.0 B	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	.88 B	1.7 B	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	2.4 B	.7 U	20 U	20 U	5 U	3.5 J	3.7 UB	
Iron	300 ST	7439-89-6	ug/l	2,480	3,910	1,690	3670	1800	6050	4500	
Lead	25 ST	7439-92-1	ug/l	1.5 U	5.4	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	8,650	6,620	5,270	6,270	6,660	7,020 UB	5,930	
Manganese	300 ST	7439-96-5	ug/l	1,000	723	377	1,660	937	2,380	1,380	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U	1.4 B	20 U	20 U	5 U	3 U	5 U	
Potassium	-	7440-09-7	ug/l	16,500	16,200	13,300	11,400	13,100	13,100	11,100	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	90,200	49,100	7,860	12,400	27,000 UB	10,700 UB	28,000	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.5 B	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	0.56 U	.23 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	13.8	46	14 UB	6.97 J	25.4 UB	34.6 UB	22.8 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	41.6 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	3,480	4,633	2,067	5,330	2,737	8,430	5,880	

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.
U* or UB: Result qualified as non-detect based on validation criteria
J: Estimated due to data validation criteria.
J*: Value is an approximate concentration of the analyte as determined by data validation.
UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-02D 11/13/2007 (ug/l)	MW-02D 2/12/2008 (ug/l)	MW-02D 5/19/2008 (ug/l)	MW-02D 8/4/2008 (ug/l)	MW-02D 11/3/2008 (ug/l)	MW-02D 2/24/2009 (ug/l)	MW-02D 8/14/2009 (ug/l)	MW-02D 2/8/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	181 B	132 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	3.3 B	NA	225	4.2 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.20 B	0.30 B
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	13.5 BN	NA	196	18.8 B
Cadmium	5 ST	7440-43-9	ug/l	0.32 B	0.60 B	0.27 U	0.27 U	0.35 U	0.35 U	1.1 B	0.34 U
Calcium	-	7440-70-2	ug/l	5,460	5,540	4,990 B	4,830 B	4,620B	4,600 B	95,700	4,150 B
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	1.2 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	1.4 B	2.2 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	1.0 B	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	1.8 B	NA	1.4 B	1.8 B
Iron	300 ST	7439-89-6	ug/l	446	50.4	23.8 B	90.2 B	19.7 B	30.7 B	26,900	215
Lead	25 ST	7439-92-1	ug/l	2.2 JB	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	17.5	2.7 B
Magnesium	35,000 GV	7439-95-4	ug/l	2,630 B	2,570 B	2,380 B	2,330 B	2,290 B	2,230 B	14,000	2,130 B
Manganese	300 ST	7439-96-5	ug/l	11.6 B	1.8 B	1.7 B	4.2 B	1.0 B	1.2 B	4,920	5.2 B
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	1.6 B
Potassium	-	7440-09-7	ug/l	997 JB	642 B	637 B	874 B	654 B	622 B	13,200	759 J*
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	4.6 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	4,240 B	4,950 B	4,960 B	4,630 B	5,010	4,500 B	29,300	4,890 B
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	2.9 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	10.5 B	NA	27.5	21.9
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	457.6	52.2	25.5	94.4	20.7	31.9	31,820	220.2

NOTES:

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N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-02D 5/31/2011 (ug/l)	MW-02D 8/28/2012 (ug/l)	MW-02D 11/12/2013 (ug/l)	MW-02D 03/17/2015 (ug/l)	MW-02D 05/10/2016 (ug/l)	MW-02D 8/21/2017 (ug/l)	MW-02D 11/29/2018 (ug/l)	MW-02D (ug/l)
Aluminum	-	7429-90-5	ug/l	36.7 B	45.1 B	20 U	24.1	259	30.6 UB	18.1 UB	
Antimony	3 GV	7440-36-0	ug/l	6.0 B	1.1 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	10.3 J	
Barium	1,000 ST	7440-39-3	ug/l	5.3 B	72.8 B	15.2 J	28.1	41.5 UB	49.6 UB	37	
Beryllium	3 GV	7440-41-7	ug/l	0.73 B	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	23.6 B	35.6 B	15 J	20 U	21.3 UB	14.7	32.3 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	5,380	34,500	7,980	16,600	13,400	16,500 UB	12,300	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	2.2 B	8.0 B	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	0.70 B	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	1.4 B	.7 U	20 U	20 U	5 U	3.8 J	3.7 UB	
Iron	300 ST	7439-89-6	ug/l	39.0 B	37.7 B	29.9 UB	47.6 UB	53 UB	76	30.3 UB	
Lead	25 ST	7439-92-1	ug/l	2.1 B	4	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	2,720 B	3,340 B	3,950	6,810	6,370	7,990 UB	5,950	
Manganese	300 ST	7439-96-5	ug/l	2.4 B	43.3	20 U	20 U	5 U	5.08 J	5 U	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 UN	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	2.3 B	1 B	20 U	20 U	5 U	3 U	5 U	
Potassium	-	7440-09-7	ug/l	1,290 B	5,330	826	1,580	1,390 UB	1,670 UB	1,490	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 UN	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	7,690	20,400	3,390	5,710	9,700 UB	7,660 UB	26,800	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	0.76 B	.3 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	21.6	18.5 B	12.1 UB	20 U	12.1 UB	28.3 UB	17.6 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	41.4	81	29.9	0	0	81.08	0	

NOTES:

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N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-02I 11/13/2007 (ug/l)	MW-02I 2/12/2008 (ug/l)	MW-02I 5/19/2008 (ug/l)	MW-02I 8/4/2008 (ug/l)	MW-02I 11/3/2008 (ug/l)	MW-02I 2/24/2009 (ug/l)	MW-02I 8/14/2009 (ug/l)	MW-02I 2/8/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	81.1 B	39.3 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	32.3 B	NA	38.2 B	37.8 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	106 BN	NA	53.3 B	51.6 B
Cadmium	5 ST	7440-43-9	ug/l	0.35 B	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.26 U	0.34 U
Calcium	-	7440-70-2	ug/l	18,200	18,600	16,300	14,000	13,500	13,800	15,500	14,700
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.41 U	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	1.9 B	0.60 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	0.76 U	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	2.0 B	NA	1.2 B	2.1 B
Iron	300 ST	7439-89-6	ug/l	183	24.2 U	20.3 B	10.0 B	13.7 B	26.0 B	42.1 B	63.7 B
Lead	25 ST	7439-92-1	ug/l	1.4 UJ	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	4.1	3.3
Magnesium	35,000 GV	7439-95-4	ug/l	2,230 B	1,560 B	1,390 B	1,150 B	1,080 B	1,260 B	1,250 B	1,550 B
Manganese	300 ST	7439-96-5	ug/l	332	20.3	23.3	20.6	26.9	39.6	38.4	28.2
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	1.4 U
Potassium	-	7440-09-7	ug/l	3,430 JB	1,590 B	1,670 B	3,900 B	4,610 B	3,600 B	3,940 B	3,990 J*
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	4.6 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	22,400	16,000	15,000	11,900	11,500	10,800	10,600	10,400
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	3.9 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	5.6 B	NA	6.8 B	12.6 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	515	44.5	43.6	30.6	40.6	65.6	80.5	91.9

NOTES:

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Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-02I 5/31/2011 (ug/l)	MW-02I 8/28/2012 (ug/l)	MW-02I 11/12/2013 (ug/l)	MW-02I 03/17/2015 (ug/l)	MW-02I 05/10/2016 (ug/l)	MW-02I 8/21/2017 (ug/l)	MW-02I 11/29/2018 (ug/l)	MW-02I (ug/l)
Aluminum	-	7429-90-5	ug/l	32.3 B	49.5 B	7.35 J	5.15 J	63.5 UB	9.99 UB	20.7 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	6.58 J	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	45.0 B	5.4 B	62.9	83.7	281	86.6	54.6	
Beryllium	3 GV	7440-41-7	ug/l	0.26 B	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	36.9 B	20.6 B	63	20 U	54.7	53.1	52.5 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	13,900	7,540	25,400	26,600	34,300	21300 UB	23,400	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	10 U	10.0 U	2.5 UJ	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	2.1 B	8.0 B	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	0.49 U	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	1.0 B	.7 U	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	110	35.2 B	20 U	6.53 UB	6.46 UB	23.9 UB	20.6 UB	
Lead	25 ST	7439-92-1	ug/l	2.1 B	8	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	1,620 B	3,270 B	2,550	2,860	3,810	2,860 UB	3,940	
Manganese	300 ST	7439-96-5	ug/l	25.6	2.4 B	14.8 J	79.2	70	1,100	685	
Mercury	0.7 ST	7439-97-6	ug/l	0.12 BNU*	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.8 B	2.3 B	20 U	20 U	5 U	3 U	5 U	
Potassium	-	7440-09-7	ug/l	3,790 B	978 B	5,050	5,110	19,400	5,330	2,950	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 UN	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	18,600	7,630	4,130	10,900	41,300 UB	7,040 UB	12,500	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	0.56 U	.23 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	17.8 B	20.8	12.6 UB	20 U	8.81 UB	17.6 UB	11.4 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	45.4 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	135.6	37.6	14.8	79.2	70	1,100	685	

NOTES:

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Concentration exceeds Standard/Guidance Value.

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GV: Guidance value.

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Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)
Aluminum	-	7429-90-5	ug/l								
Antimony	3 GV	7440-36-0	ug/l								
Arsenic	25 ST	7440-38-2	ug/l								
Barium	1,000 ST	7440-39-3	ug/l								
Beryllium	3 GV	7440-41-7	ug/l								
Boron	1,000 ST	7440-42-8	ug/l								
Cadmium	5 ST	7440-43-9	ug/l								
Calcium	-	7440-70-2	ug/l	W	W	W	W	W	W	W	W
Chromium Hexavalent	50 ST	18540-29-9	ug/l	E	E	E	E	E	E	E	E
Chromium Total	50 ST	7440-47-3	ug/l	L	L	L	L	L	L	L	L
Cobalt	-	7440-48-4	ug/l	L	L	L	L	L	L	L	L
Copper	200 ST	7440-50-8	ug/l								
Iron	300 ST	7439-89-6	ug/l	A	A	A	A	A	A	A	A
Lead	25 ST	7439-92-1	ug/l	B	B	B	B	B	B	B	B
Magnesium	35,000 GV	7439-95-4	ug/l	A	A	A	A	A	A	A	A
Manganese	300 ST	7439-96-5	ug/l	N	N	N	N	N	N	N	N
Mercury	0.7 ST	7439-97-6	ug/l	D	D	D	D	D	D	D	D
Nickel	100 ST	7440-02-0	ug/l	O	O	O	O	O	O	O	O
Potassium	-	7440-09-7	ug/l	N	N	N	N	N	N	N	N
Selenium	10 ST	7782-49-2	ug/l	E	E	E	E	E	E	E	E
Silver	50 ST	7440-22-4	ug/l	D	D	D	D	D	D	D	D
Sodium	20,000 ST	7440-23-5	ug/l								
Thallium	0.5 GV	7440-28-0	ug/l								
Vanadium	-	7440-62-2	ug/l								
Zinc	2,000 ST	7440-66-6	ug/l								
Cyanide	200 ST	0057-12-5	ug/l								
Iron + Manganese	500 ST*	-	ug/l								

NOTES:

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GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)	MW-02S (ug/l)
Aluminum	-	7429-90-5	ug/l								
Antimony	3 GV	7440-36-0	ug/l								
Arsenic	25 ST	7440-38-2	ug/l								
Barium	1,000 ST	7440-39-3	ug/l								
Beryllium	3 GV	7440-41-7	ug/l								
Boron	1,000 ST	7440-42-8	ug/l								
Cadmium	5 ST	7440-43-9	ug/l								
Calcium	-	7440-70-2	ug/l	W	W	W	W	W	W	W	W
Chromium Hexavalent	50 ST	18540-29-9	ug/l	E	E	E	E	E	E	E	E
Chromium Total	50 ST	7440-47-3	ug/l	L	L	L	L	L	L	L	L
Cobalt	-	7440-48-4	ug/l	L	L	L	L	L	L	L	L
Copper	200 ST	7440-50-8	ug/l								
Iron	300 ST	7439-89-6	ug/l	A	A	A	A	A	A	A	A
Lead	25 ST	7439-92-1	ug/l	B	B	B	B	B	B	B	B
Magnesium	35,000 GV	7439-95-4	ug/l	A	A	A	A	A	A	A	A
Manganese	300 ST	7439-96-5	ug/l	N	N	N	N	N	N	N	N
Mercury	0.7 ST	7439-97-6	ug/l	D	D	D	D	D	D	D	D
Nickel	100 ST	7440-02-0	ug/l	O	O	O	O	O	O	O	O
Potassium	-	7440-09-7	ug/l	N	N	N	N	N	N	N	N
Selenium	10 ST	7782-49-2	ug/l	E	E	E	E	E	E	E	E
Silver	50 ST	7440-22-4	ug/l	D	D	D	D	D	D	D	D
Sodium	20,000 ST	7440-23-5	ug/l								
Thallium	0.5 GV	7440-28-0	ug/l								
Vanadium	-	7440-62-2	ug/l								
Zinc	2,000 ST	7440-66-6	ug/l								
Cyanide	200 ST	0057-12-5	ug/l								
Iron + Manganese	500 ST*	-	ug/l								

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.

U* or UB: Result qualified as non-detect based on validation criteria

J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-03S 11/14/2007 (ug/l)	MW-03S 2/11/2008 (ug/l)	MW-03S 5/15/2008 (ug/l)	MW-03S 8/5/2008 (ug/l)	MW-03S 11/5/2008 (ug/l)	MW-03S 2/25/2009 (ug/l)	MW-03S 8/14/2009 (ug/l)	MW-03S 2/5/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	183 B	277
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 B	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	166 B	NA	221	251
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	134 B	NA	183	160
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	1.4 B	0.41 B	0.27 U	0.35 U	0.35 U	0.80 B	0.34 U
Calcium	-	7440-70-2	ug/l	73,600 J	67,300	76,100	69,500	66,200	73,600	93,600	75,700
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.02 U	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	1.3 B	NA	0.80 B	1.5 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	1.4 B	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	2.5 B	NA	2.0 B	0.83 U
Iron	300 ST	7439-89-6	ug/l	24,600	17,200	25,200	21,500	18,500	24,300	26,600	25,400 J*
Lead	25 ST	7439-92-1	ug/l	1.4 U	1.4 U	2.3 B	2.3 U	1.3 U	1.3 U	17.9	2.4 B
Magnesium	35,000 GV	7439-95-4	ug/l	11,200 J	10,400	11,900	11,400	10,300	11,100	13,800	11,800
Manganese	300 ST	7439-96-5	ug/l	5,920 J	5,110	5,050	4,530	5,190	5,000	4,780	5,420
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	1.4
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	2.1 B	NA	0.82 U	2.4 B
Potassium	-	7440-09-7	ug/l	12,500	10,700	12,400	13,300	12,400	12,200	12,900	13,900
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	4.6 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.85 B	NA	0.33 B	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	29,100 J	27,200	28,900	27,600	25,200	27,800	28,400	36,400
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	1.9 U	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	1.2 B	NA	0.77 U	3.4 B
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	1.5 U	NA	30.4	39.3
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	30,520	22,310	30,250	26,030	23,690	29,300	31,380	30,820

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.
U* or UB: Result qualified as non-detect based on validation criteria
J: Estimated due to data validation criteria.
J*: Value is an approximate concentration of the analyte as determined by data validation.
UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-03S 6/1/2011 (ug/l)	MW-03S 8/28/2012 (ug/l)	MW-03S 11/13/2013 (ug/l)	MW-03S 03/18/2015 (ug/l)	MW-03S 05/11/2016 (ug/l)	MW-03S 8/23/2017 (ug/l)	MW-03S 11/29/2018 (ug/l)	MW-03S (ug/l)
Aluminum	-	7429-90-5	ug/l	40.4	66 B	13 J	10.1 J	23.4 UB	123 B	35.4	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	7.2 J	
Barium	1,000 ST	7440-39-3	ug/l	145 B	202	199	196	223	220	191	
Beryllium	3 GV	7440-41-7	ug/l	0.24 B	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	126	202	97	20 U	110	184 J	134	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	57,600	64,500	58,900	57,600	60,100 J	66,800	57,900	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	1.6 B	8.0 B	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	0.49 U	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	0.55 U	.7 U	20 U	20 U	5 U	3 U	3.6 UB	
Iron	300 ST	7439-89-6	ug/l	17,100	19,900	13,600	16400	18500	19200	17300	
Lead	25 ST	7439-92-1	ug/l	6.3	4.8	15 U	14.5 J	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	9,270	8,370	8,640	7,590	7,990 J	8,800 UB	7,030	
Manganese	300 ST	7439-96-5	ug/l	4,530	5,440	5,100	4,790	5,150	6,660	2,970	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 UN	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	2.0 B	1.6 B	20 U	20 U	5 U	8.52 UB	5 U	
Potassium	-	7440-09-7	ug/l	12,500	11,100	12,400	11,400 J	11,100	10,600 J	8,590	
Selenium	10 ST	7782-49-2	ug/l	2.6 U*J*	4.5 B	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.54 BN	.48 B	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	34,100	33,100	12,200	12,200	12,700 UB	9,870 UBJ	30,000	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	6.4 B	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	1.8 B	.23 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	18.0 B	13.1 B	12.8 UB	32.9	60.5 J	80 UB	42.5 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	47.1 UBJ	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	21,630	25,340	18,700	21,190	23,650	25,860	20,270	

NOTES:

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N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-04D 11/13/2007 (ug/l)	MW-04D 02/1108 (ug/l)	MW-04D 5/15/2008 (ug/l)	MW-04D 8/4/2008 (ug/l)	MW-04D 11/3/2008 (ug/l)	MW-04D 2/23/2009 (ug/l)	MW-04D 8/12/2009 (ug/l)	MW-04D 2/4/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	12.5 U	35.6 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.6 B	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	12.9	NA	12.5	3.1 B
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	21.6 B	NA	44.9 B	23.6 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	40.6 BN	NA	28.1 B	39.1 B
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.58 B	0.27 U	0.47 B	0.35 U	0.48 B	0.26 U	0.34 U
Calcium	-	7440-70-2	ug/l	16,600	15,700	12,700	9,450	9,600	12,500	18,400	10,600
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.57 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	0.49 U	0.51 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88U	NA	1.6 B	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	2.6 B	NA	0.62 U	3.6 B
Iron	300 ST	7439-89-6	ug/l	4,130	21,100	16,800	12,700	13,000	17,700	24,400	4,240 J*
Lead	25 ST	7439-92-1	ug/l	1.4 UJ	1.4 U	2.3 U	2.3 U	4.0	1.3 U	13.2	1.8 U
Magnesium	35,000 GV	7439-95-4	ug/l	2,570 B	2,350 B	1,950 B	1,490 B	1,460 B	1,850 B	2,380 B	1,490 B
Manganese	300 ST	7439-96-5	ug/l	251	680	506	403	419	552	915	253
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	1.4 U
Potassium	-	7440-09-7	ug/l	4,360 J	3,830 B	3,720 B	3,800 B	3870 B	3,720 B	4,680 B	3650 B
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	7,480	9,590	9,100	7,280	7,150	7,130	10,800	5,900
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	2.9 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	6.2 B	NA	11.2 B	24.5
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	4,381	21,780	17,306	13,103	13,419	18,252	25,315	4,493

NOTES:

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N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-04D 5/26/2011 (ug/l)	MW-04D 8/27/2012 (ug/l)	MW-04D 11/13/2013 (ug/l)	MW-04D 03/18/2015 (ug/l)	MW-04D 05/11/2016 (ug/l)	MW-04D 8/22/2017 (ug/l)	MW-04D 11/30/2018 (ug/l)	MW-04D (ug/l)
Aluminum	-	7429-90-5	ug/l	8.2 U	51.5 B	15.1 J	20 U	14.6 UB	7.18 UB	25.4 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	5.75 J	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	17.1 J	16.9 J	17.8 J	16.4 J	19.5 J	
Barium	1,000 ST	7440-39-3	ug/l	27.0 B	1.3 U	115	86	115 UB	146 J	208	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	25.7 B	41.1 B	85	20 U	92	295	120	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	12,900	13,100	22,300	16,200	19,800 J	23,000 UB	35,200	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	0.89 B	0.02 U	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	0.62 B	1.2 B	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	1.6 B	0.52 U	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	1,570	2,630	40,800	37300	51200	58000	56300	
Lead	25 ST	7439-92-1	ug/l	1.5 U	8.5	5.82 J	15 U	5 U	8.68 J	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	1,870 B	2000 B	3,180	2,410	3,740 J	5,530 UB	6,490	
Manganese	300 ST	7439-96-5	ug/l	81.4	226	2,190	2,510	4,940	6,400	7,190	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	.1 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	8.5 B	3.0 B	5.25 J	20 U	5.22 J	7.76 UB	7.2 J	
Potassium	-	7440-09-7	ug/l	4,520 B	4,780 B	6,090	5,130 J	5,370 UB	6,070 J	8,010	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.4 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	9,120	10,000	12,900	9,640	12,200 UB	11,800 UBJ	51,300	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	.56 U	0.32 U	20 U	20 U	5 U	3 U	3.1 J	
Zinc	2,000 ST	7440-66-6	ug/l	51.2	26.1	15.7 UB	20 U	56.7 J	19.2 UB	20.3 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10 U	41.7 UBJ	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	1,651.4	2,856	42,990	39,810	56,140	64,400	63,490	

NOTES:

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Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: / DATE: / UNITS:	MW-04I 11/13/2007 (ug/l)	MW-04I 02/1108 (ug/l)	MW-04I 5/15/2008 (ug/l)	MW-04I 8/5/2008 (ug/l)	MW-04I 11/3/2008 (ug/l)	MW-04I 2/23/2009 (ug/l)	MW-04I 8/12/2009 (ug/l)	MW-04I 2/4/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	12.5	24.6 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	11.8	NA	12.5	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	33.6 B	NA	103 B	35.9 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	81.8 BN	NA	125	94.3 B
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.58 B	0.27 U	0.27 U	0.35 U	0.35 U	0.40 B	0.34 U
Calcium	-	7440-70-2	ug/l	36,400	42,300	24,600	32,600	28,100	33,300	61,000	30,000
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.45 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	0.49 U	0.44 U
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	0.80 B	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	3.3B	NA	0.62 U	3.1 B
Iron	300 ST	7439-89-6	ug/l	1,610	30,900	20,400	25,900	21,400	25,700	53,000	1,720 J*
Lead	25 ST	7439-92-1	ug/l	1.4 UJ	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	10.7	2.0 B
Magnesium	35,000 GV	7439-95-4	ug/l	3,800 B	4,560	2,700 B	3,760 B	3,060 B	3,520 B	6,110	3,250 B
Manganese	300 ST	7439-96-5	ug/l	75.1	999	765	1,100	1,060	1,230	3,060	366
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	1.4 U
Potassium	-	7440-09-7	ug/l	7,640 J	7,430	5,510	7,140	6600	8,460	9,960	8,490
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	14,600	26,600	14,400	19,600	17,500	34,700	53,000	31,000
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	3.9 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	6.1 B	NA	15.2 B	16.0 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	1,685	31,899	21,165	27,000	22,460	26,930	56,060	2,086

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.

U* or UB: Result qualified as non-detect based on validation criteria

J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-04I 5/26/2011 (ug/l)	MW-04I 8/27/2012 (ug/l)	MW-04I 11/13/2013 (ug/l)	MW-04I 03/18/2015 (ug/l)	MW-04I 05/11/2016 (ug/l)	MW-04I 8/22/2017 (ug/l)	MW-04I 11/30/2018 (ug/l)	MW-04I (ug/l)
Aluminum	-	7429-90-5	ug/l	8.2 U	38.2 B	7.13 J	6.67 J	22.6 UB	5.64 UB	31.8 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	7.56 J	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	11.4	10.2	12.4 J	11.1 J	13.2 J	13.3 J	22 J	
Barium	1,000 ST	7440-39-3	ug/l	24.3 B	38.6 B	134	116	178	221 J	142	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	113	72.4 B	71	20 U	93	271	120	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	16,200	48,800	26,800	35,300	53,200 J	80,900	64,000	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	1.8 B	10.6	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	.55 B	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	1.6 B	.7 U	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	16,600	36,400	19,700	15300	19400	37500	23300	
Lead	25 ST	7439-92-1	ug/l	5.1	1.8 B	15 U	15 U	5 U	5.42 J	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	2,040 B	4,530 B	2,250	2,700	5,390 J	8,640 UB	6,820	
Manganese	300 ST	7439-96-5	ug/l	1,180	4,690	2,700	1,550	1,430	2,400	1,980	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U	.64 U	20 U	20 U	5 U	3.17 UB	5 U	
Potassium	-	7440-09-7	ug/l	4,510 B	5,450	13,100	19,700 J	23,100	19,600 J	10,000	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	3.7 B	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.49 B	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	19,600	54,200	20,800	9,350	17,700 UB	12,400 UBJ	46,300	
Thallium	0.5 GV	7440-28-0	ug/l	3.4 B	3.2 B	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	1.0 B	.23 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	17.6 B	47.1	15.1 UB	20 U	39.1 UBJ	13 UB	13.7 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43.5 UBJ	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	17,780	41,090	22,400	16,850	20,830	39,900	25,280	

NOTES:

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J*: Value is an approximate concentration of the analyte as determined by data validation.

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N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-04S 11/13/2007 (ug/l)	MW-04S 2/11/2008 (ug/l)	MW-04S 2/11/2008 (ug/l)	MW-04S 8/4/2008 (ug/l)	MW-04S 11/3/2008 (ug/l)	MW-04S 2/23/2009 (ug/l)	MW-04S 8/12/2009 (ug/l)	MW-04S 2/4/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	2630	NA	42.3 B	1540
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.6 B	NA	2.5 U	2.4 B
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	11.0	NA	6.5 B	7.5 B
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	306	NA	284	304
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.21 B	NA	0.13 U	0.32 B
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	195 BN	NA	154	179
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	1.0 B	0.27 U	0.73 B	0.63 B	0.35 U	0.50 B	0.34 U
Calcium	-	7440-70-2	ug/l	98,000	93,300	91,900	94,900	95,400	96,400	93,800	92,200
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	5.1 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	2.3 B	3.7 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	1.4 B	NA	0.90 B	1.4 B
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	15.0 B	NA	0.62 U	0.83 U
Iron	300 ST	7439-89-6	ug/l	51,600	43,400	46,400	46,300	53,700	49,800	45,300	48,800 J*
Lead	25 ST	7439-92-1	ug/l	1.4 UJ	1.4 U	2.3 U	3.0 B	3.1	1.3 U	17.7	5.0
Magnesium	35,000 GV	7439-95-4	ug/l	12,800	11,100	11,100	11,700	11,400	11,000	9,290	10,700
Manganese	300 ST	7439-96-5	ug/l	2,490	2,300	2,290	2,240	2,250	2,350	2,270	2,580
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	4.9 B	NA	0.82 U	3.7 B
Potassium	-	7440-09-7	ug/l	1,880 J	16,300	17,600	18,600	18,200	16,600	15,500	16,200
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	2.7 BN	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	42,700	42,500	43,200	41,000	39,500	38,700	32,400	35,900
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	3.9 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	10.5 B	NA	0.77 U	8.3 B
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	15.7 B	NA	13.5 B	17.6 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	54,090	45,700	48,690	48,540	55,950	52,150	47,570	51,380

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.
U* or UB: Result qualified as non-detect based on validation criteria
J: Estimated due to data validation criteria.
J*: Value is an approximate concentration of the analyte as determined by data validation.
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N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

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GV: Guidance value.
NA: Not analyzed.

D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-04S 5/31/2011 (ug/l)	MW-04S 8/27/2012 (ug/l)	MW-04S 11/13/2013 (ug/l)	MW-04S 03/18/2015 (ug/l)	MW-04S 05/11/2016 (ug/l)	MW-04S 8/22/2017 (ug/l)	MW-04S 11/30/2018 (ug/l)	MW-04S (ug/l)
Aluminum	-	7429-90-5	ug/l	28.0 B	73.9 B	17.5 J	14.6 J	54 UB	24.5 UB	41.5	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	7.92 J	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	2.7 B	8.1 B	10.2 J	25 U	10 U	8.58 J	14.9 J	
Barium	1,000 ST	7440-39-3	ug/l	298	379	282	293	335	414 J	303	
Beryllium	3 GV	7440-41-7	ug/l	0.19 B	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	181	213	158	20 U	186	443	186	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	90,100	129,000	84,500	96,400	105,000 J	133,000 UB	98,800	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.02 U	10 U	10.0 U	2.5 UJ	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	1.7 B	13.3	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	1.1 B	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	0.55 U	.7 U	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	39,000	60,200	37,200	39100	43200	50800	38900	
Lead	25 ST	7439-92-1	ug/l	11.3	9.6	15 U	15 U	5 U	7.18 J	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	10,700	12,400	8,300	8,880	10,200 J	12,400 UB	9,450	
Manganese	300 ST	7439-96-5	ug/l	2,250	3,240	2,520	2,800	3,220	3,090	3,040	
Mercury	0.7 ST	7439-97-6	ug/l	0.19 BNU*	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	2.2 B	.64 U	5.04 J	20 U	5.09 J	5.16 UB	3.7 J	
Potassium	-	7440-09-7	ug/l	18,400	20,600	15,200	17200 J	17,500	19,400 J	13,100	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.75 BN	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	39,300	51,000	11,500	13,300	14,100 UB	10,400 UBJ	27,100	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	2.9 B	1.5 B	20 U	20 U	5 U	3 U	3.2 J	
Zinc	2,000 ST	7440-66-6	ug/l	13.5	10.2 B	17 UB	20 U	13.7 UBJ	19.7 UB	35.6 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	45.4 UBJ	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	41,250	63,440	39,720	41,900	46,420	53,890	41,940	

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.

U* or UB: Result qualified as non-detect based on validation criteria

J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

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NA: Not analyzed.

D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-05D 8/14/2007 (ug/l)	MW-05D 2/11/2008 (ug/l)	MW-05D 5/15/2008 (ug/l)	MW-05D 8/5/2008 (ug/l)	MW-05D 11/5/2008 (ug/l)	MW-05D 2/26/2009 (ug/l)	MW-05D 8/17/2009 (ug/l)	MW-05D 2/8/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	43.2 B	NA	108 B	1700
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	48.4 B	NA	42.9 B	25.4 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	46.1 B	NA	36.6 B	42.0 B
Cadmium	5 ST	7440-43-9	ug/l	0.99 B	0.88 B	0.52 B	0.62 B	0.43 B	0.72 B	0.70 B	4.8 B
Calcium	-	7440-70-2	ug/l	24,700	41,500	32,000	32,500	28,600	28,200	27,500	17,500
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.96 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	0.90 B	4.3 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	2.2 B	NA	2.1 B	1.4 B
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	2.7 B	NA	1.4 B	7.4 B
Iron	300 ST	7439-89-6	ug/l	315	85.0 B	926	12.5 B	48.6 B	10.2 B	21.2 B	2,650
Lead	25 ST	7439-92-1	ug/l	1.4 UJ	2.2 B	8.0	2.3 U	1.3 U	1.5 B	20.6	21.1
Magnesium	35,000 GV	7439-95-4	ug/l	6,890	12,800	10,500	10,500	8,930	7,600	7,760	7,960
Manganese	300 ST	7439-96-5	ug/l	9,980	13,800	3,290	10,200	7,760	7,740	6,820	1,870
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	6.5 B	NA	7.9 B	6.1 B
Potassium	-	7440-09-7	ug/l	5,710 J	5,920	5,840	6,170	5,100	4,600 B	3,940 B	3,050 J*
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	4.6 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	1.3 B	NA	0.81 B	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	33,600	41,000	37,700	41,100	35,300	29,200	26,800	22,300
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	1.9 U	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	4.2 B
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	4.3 B	NA	8.0 B	206
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	10,295	13,885	4,216	10,213	7,809	7,750.2	6,830.2	4,520

NOTES:

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Concentration exceeds Standard/Guidance Value.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-05D 6/1/2011 (ug/l)	MW-05D 8/28/2012 (ug/l)	MW-05D 11/13/2013 (ug/l)	MW-05D 03/19/2015 (ug/l)	MW-05D 05/11/2016 (ug/l)	MW-05D 8/22/2017 (ug/l)	MW-05D 11/30/2018 (ug/l)	MW-05D (ug/l)
Aluminum	-	7429-90-5	ug/l	196 B	36.3 D	20 U	20 U	58.4 UB	3 U	16.9 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	27.0 B	9.3 B	27.7	45.1	54.3 UB	40.5 UBJ	40.6	
Beryllium	3 GV	7440-41-7	ug/l	0.17 B	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	31.4 B	29.1 B	24	20 U	26.9 UB	21.3	40.5 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	14,900	4290 B	6,230	11,100	13,300 J	8,210	12,600	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	2.2 B	8.4	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	1..2 B	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	1.8 B	.7 U	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	295	31.9 B	12.7 UB	13.5 UB	43.8 UB	71.9	36 UB	
Lead	25 ST	7439-92-1	ug/l	5.6	9	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	7,380	1560 B	2,420	4,260	5,040 J	3,010 UB	4,790	
Manganese	300 ST	7439-96-5	ug/l	1,560	25.2	352	244	169	66.6	41.6	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 UNU*J*	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	19.0 B	5.6	20 U	20 U	5 U	3 U	5 U	
Potassium	-	7440-09-7	ug/l	2850 B	1400 B	1,620	2,670	3,840 UB	3,100 UBJ	3,050	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	4.7 B	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 UN	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	23,500	18,500	5,450	6,850	6,710 UB	4,740 UBJ	11,300	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3..2 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	.68 B	.23 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	40.6	12 B	11.8 UB	20 U	108 J	17.7 UB	14.9 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43.4 UBJ	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	1,855	25.2	352	244	169	138.5	41.6	

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.

U* or UB: Result qualified as non-detect based on validation criteria

J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-05I 11/13/2007 (ug/l)	MW-05I 2/11/2008 (ug/l)	MW-05I 5/15/2008 (ug/l)	MW-05I 8/5/2008 (ug/l)	MW-05I 11/5/2008 (ug/l)	MW-05I 2/26/2009 (ug/l)	MW-05I 8/17/2009 (ug/l)	MW-05I 2/8/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	105 B	2680
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	4.3 B	NA	3.2 B	3.5 B
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	20.4 B	NA	21.9 B	46.8 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	84.5 B	NA	52.7 B	69.6 B
Cadmium	5 ST	7440-43-9	ug/l	0.38 B	0.35 B	0.27 U	0.27 U	0.35 U	0.35 U	0.50 B	3.0 B
Calcium	-	7440-70-2	ug/l	41,100	30,000	34,300	28,600	16,300	22,300	22,800	19,300
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.57 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	0.60 B	5.0 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	0.76 U	1.3 B
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	1.2 B	NA	0.80 B	7.7 B
Iron	300 ST	7439-89-6	ug/l	1,750	8,920	10,700	8,490	5,020	7,920	8,690	9,230
Lead	25 ST	7439-92-1	ug/l	1.4 UJ	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	6.9	14.8
Magnesium	35,000 GV	7439-95-4	ug/l	6,340	4,350 B	5,350	4,580 B	2,480 B	3,360 B	3,660	3450 B
Manganese	300 ST	7439-96-5	ug/l	398	2,290	2,880	2,410	1,580	2,520	3,150	1,840
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.28	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	3.1 B
Potassium	-	7440-09-7	ug/l	12,400 J	13,300	12,100	13,800	9250	7,510	7,650	9,130 J*
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	4.6 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.44 B	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	33,700	30,000	26,300	28,100	21,600	21,400	17,000	16,700
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	1.9 U	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	5.7 B
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	5.0 B	NA	9.5 B	386
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	2,148	11,210	13,580	10,900	6,600	10,440	12,040	11,070

NOTES:

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B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-05I 5/31/2011 (ug/l)	MW-05I 8/28/2012 (ug/l)	MW-05I 11/13/2013 (ug/l)	MW-05I 03/19/2015 (ug/l)	MW-05I 05/11/2016 (ug/l)	MW-05I 8/22/2017 (ug/l)	MW-05I 11/30/2018 (ug/l)	MW-05I (ug/l)
Aluminum	-	7429-90-5	ug/l	36.4 B	42.9 B	7.67 J	9.05 J	18 UB	10 UB	31.4 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	6.59 J	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.8 B	25 U	25 U	10 U	7 U	12.8 J	
Barium	1,000 ST	7440-39-3	ug/l	34.1 B	20.6 B	107	65.2	38.2 UB	96.1 J	98.9	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	54.4 B	43.9 B	51	20 U	48.7	74.9	70.3	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.6 B	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	20,500	15,600	32,800	19,700	14,000 J	46,600	57,900	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	1.5 B	7.9	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	.49 U	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	0.55 U	.7 U	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	12,600	4,330	6,110	3180	2460	8140	11700	
Lead	25 ST	7439-92-1	ug/l	4.9	1.9 B	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	3,830 B	1840 B	3,510	2,010	2,150 J	6,850 UB	7,710	
Manganese	300 ST	7439-96-5	ug/l	5,070	1,730	2,450	1,170	803	1,750	3,520	
Mercury	0.7 ST	7439-97-6	ug/l	0.16 BNU*	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.7 B	1.1 B	20 U	20 U	5 U	3 U	5 U	
Potassium	-	7440-09-7	ug/l	10,600	9,200	26,200	21,200	12,300	17,100 J	14,100	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 UN	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	19,300	10,400	14,100	8,190	5,170 UB	10,000 UBJ	39,000	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	.98 B	.23 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	7.1 B	13 B	11.1 UB	20 U	97.4 J	15.8 UB	14.4 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	40.3 UBJ	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	17,670	6,060	8,560	4,350	3,263	9,890	15,220	

NOTES:

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J*: Value is an approximate concentration of the analyte as determined by data validation.
UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-05S 11/13/2007 (ug/l)	MW-05S 2/11/2008 (ug/l)	MW-05S 5/15/2008 (ug/l)	MW-05S 8/5/2008 (ug/l)	MW-05S 11/5/2008 (ug/l)	MW-05S 2/26/2009 (ug/l)	MW-05S 8/17/2009 (ug/l)	MW-05S 2/8/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	85.0 B	NA	214	541
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	3.4 B	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	300	NA	322	199 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.55 B
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	223 B	NA	279	146
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	1.2 B	0.27 U	0.78 B	0.35 U	0.35 U	0.90 B	0.34 U
Calcium	-	7440-70-2	ug/l	96,400	97,500	83,500	97,300	91500	89,400	103,000	62,600
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	1.8 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	1.3 B	2.6 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	3.4 B	NA	1.4 B	5.5 B
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	4.5 B	NA	0.62 U	0.83 U
Iron	300 ST	7439-89-6	ug/l	55,300	42,500	38,400	42,100	40,000	36,900	41,000	20,500
Lead	25 ST	7439-92-1	ug/l	1.4 UJ	1.4 U	2.3 U	2.3 B	1.3 U	1.3 U	18.5	4.5
Magnesium	35,000 GV	7439-95-4	ug/l	12,500	12,300	10,900	12,800	11,700	11,400	13,000	8,300
Manganese	300 ST	7439-96-5	ug/l	42,400	4,850	4,100	4,480	4,550	4,420	4,710	2,520
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	5.9 B	NA	0.82 U	4.4 B
Potassium	-	7440-09-7	ug/l	15,300 J	14,300	13,400	15,400	14900	12,900	13,800	10,800 J*
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	4.6 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.65 B	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	31,800	32,900	28,400	30,600	28,500	25,900	27,800	2,400
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	4.4 B	NA	3,9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	3.4 B	NA	0.77 U	3.8 B
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	1.5 U	NA	14.3 B	22.7
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	97,700	47,350	42,500	46,580	44,550	41,320	45,710	23,020

NOTES:

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Concentration exceeds Standard/Guidance Value.

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Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-05S 5/31/2011 (ug/l)	MW-05S 8/29/2012 (ug/l)	MW-05S 11/13/2013 (ug/l)	MW-05S 03/19/2015 (ug/l)	MW-05S 05/11/2016 (ug/l)	MW-05S 8/22/2017 (ug/l)	MW-05S 11/29/2018 (ug/l)	MW-05S (ug/l)
Aluminum	-	7429-90-5	ug/l	39.8 B	1050	19 J	19.6 J	5 U	7.77 UB	105	
Antimony	3 GV	7440-36-0	ug/l	2.1 B	1.8 B	20 U	20 U	6.16 J	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.3 B	25 U	25 U	10 U	7.01 J	11.4 J	
Barium	1,000 ST	7440-39-3	ug/l	283	272	268	275	268 UB	275 J	255	
Beryllium	3 GV	7440-41-7	ug/l	0.26 B	.3 B	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	197	163 B	144	20 U	115	207	162	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.9 B	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	79,500	78,600	69,500	75,600	73,300 J	74,100	75,600	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	2.1 B	11.5	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	1.0 B	1.5 B	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	0.55 U	11.1 B	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	29,200	35,900	24,800	25,300	23400	26200	23800	
Lead	25 ST	7439-92-1	ug/l	9.5	11.7	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	10,600	8,880	8,360	8,950	9,500 J	9,940 UB	10,000	
Manganese	300 ST	7439-96-5	ug/l	4,280	5,260	4,770	5,460	5,630	5,760	5,170	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 UN	0.1 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	4.6 B	5.6 B	20 U	20 U	5 U	3.53 UB	5 U	
Potassium	-	7440-09-7	ug/l	15,400	12,900	12,900	14,500	13,300	13,000 J	11,200	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 UN	.29 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	30,600	27,900	10,400	11,800	12,900 UB	10,700 UBJ	25,900	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	7 U	8.8 J	
Vanadium	-	7440-62-2	ug/l	2.7 B	8.6 B	20 U	20 U	5 U	3 U	5.1 J	
Zinc	2,000 ST	7440-66-6	ug/l	13..9 B	82.5	13.3 UB	5.51 J	118 J	17.8 UB	18.6 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	47.2 UBJ	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	29,209.5	35,911.7	29,570	30,760	29,030	31,960	28,970	

NOTES:

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Concentration exceeds Standard/Guidance Value.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-06D 11/9/2007 (ug/l)	MW-06D 2/11/2008 (ug/l)	MW-06D 5/15/2008 (ug/l)	MW-06D 8/4/2008 (ug/l)	MW-06D 11/3/2008 (ug/l)	MW-06D 2/23/2009 (ug/l)	MW-06D 8/11/2009 (ug/l)	MW-06D 2/4/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	38.6 B	26.4 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	40.5 B	NA	49.5	3.5 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	151 BN	NA	186	157
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.33 B	0.27 U	0.39 B	0.35U	0.35 U	0.30 B	0.34 U
Calcium	-	7440-70-2	ug/l	5,670	7,010	6,330	8,040	7920	8,540	8,130	7,860
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	2.3B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	0.60 B	0.72 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	9.5 B	NA	11.1 B	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	2.7 B	NA	0.62 U	2.2 B
Iron	300 ST	7439-89-6	ug/l	1,010	4,600	2,210	5,190	5,920	6,670	6,080	232 J*
Lead	25 ST	7439-92-1	ug/l	**6.5 J**	1.4 U	2.7 B	2.3 U	1.3 U	1.3 U	14.9	1.8 U
Magnesium	35,000 GV	7439-95-4	ug/l	2,340 B	3,410 B	3,070 B	4,540 B	4,270 B	4,580 B	4,250 B	4,430 B
Manganese	300 ST	7439-96-5	ug/l	1,300	9,690	6,440	10,100	9,930	11,100	9,010	581
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	6.8 B	NA	7.2 B	1.4 U
Potassium	-	7440-09-7	ug/l	1,580 J	1,290 B	1,400 B	1,910 B	1,780 B	1,800 B	2,030 B	1,910 B
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	5.5	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	1.7 B	NA	0.34 B	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	9,930	10,500	11,300	15,200	17,300	16,100	18,100	15,600
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	2.4 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	1.5 U	NA	10.8 B	9.6 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	2,310	14,290	8,650	15,290	15,850	17,770	15,090	813

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.

U* or UB: Result qualified as non-detect based on validation criteria

J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-06D 5/26/2011 (ug/l)	MW-06D 8/27/2012 (ug/l)	MW-06D 11/12/2013 (ug/l)	MW-06D 03/18/2015 (ug/l)	MW-06D 05/10/2016 (ug/l)	MW-06D 8/22/2017 (ug/l)	MW-06D 11/29/2018 (ug/l)	MW-06D (ug/l)
Aluminum	-	7429-90-5	ug/l	8.2 U	36.7 B	20 U	20 U	26.1 UB	18.5 UB	22 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	31.6 B	1.3 U	54.1	49.9	56.4 UB	94.5 J	113	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	105	120	54	20 U	35.1 UB	28.2	43.1 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	5,960	7,260	6,130	5,360	6,730	10,500 UB	12,800	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.02 U	10 U	10.0 U	2.5 U	2.50 UJ	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	1.8 B	7	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	10.7 B	2 B	20 U	20 U	5 U	5.17 J	5.1 J	
Copper	200 ST	7440-50-8	ug/l	1.6 B	.7 U	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	159	1,060	122	10.3 UB	31.1 UB	24.1 UB	43 UB	
Lead	25 ST	7439-92-1	ug/l	1.6 B	8.6	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	3,580 B	3610 B	3,370	2,870	3,140	5,170 UB	6,460	
Manganese	300 ST	7439-96-5	ug/l	3,370	761	3,190	2,220	1,550	1,300	1,230	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	.1 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	4.8 B	1.9 B	8.11 J	6.67 J	6.57 J	8.94 UB	10 J	
Potassium	-	7440-09-7	ug/l	2,000 B	1560 B	2,060	2,020 J	1,910 UB	2,750 UBJ	3,140	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	18,500	17,800	3,260	4,460	4,070 UB	4,090 UBJ	16,800	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	.56 U	.23 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	7.4 B	103	15.8 UB	20 U	10.4 UB	23.4 UB	22.6 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	42.1 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	3,529	1,821	3,312	2,220	1,550	1,300	1,230	

NOTES:

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J*: Value is an approximate concentration of the analyte as determined by data validation.
UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-06I 11/9/2007 (ug/l)	MW-06I 2/11/2008 (ug/l)	MW-06I 5/15/2008 (ug/l)	MW-06I 8/4/2008 (ug/l)	MW-06I 11/3/2008 (ug/l)	MW-06I 2/23/2009 (ug/l)	MW-06I 8/11/2009 (ug/l)	MW-06I 2/4/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	22.5 B	29.5 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.3 B
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	34.1 B	NA	39.1 B	40.2 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	91.8 BN	NA	99.2 B	74.6 B
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.26 U	0.34 U
Calcium	-	7440-70-2	ug/l	22,800	20,600	17,600	20,800	18,300	16,000	17,100	14,600
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.41 U	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	1.2 B	0.67 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	1.2 B	1.2 B
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	10.9 B	NA	11.8 B	14.2 B
Iron	300 ST	7439-89-6	ug/l	660	406	1,530	124	146	20.0 B	1,960	875 J*
Lead	25 ST	7439-92-1	ug/l	1.8 JB	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	7.0	1.8 U
Magnesium	35,000 GV	7439-95-4	ug/l	1,940 B	1,870 B	1,680 B	2,120 B	1,850 B	1,610 B	1,580 B	1,560 B
Manganese	300 ST	7439-96-5	ug/l	190	224	172	198	198	180	202	182
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.16 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	1.4 U
Potassium	-	7440-09-7	ug/l	7,120 J	4,010 B	3,400 B	4,120 B	4,470 B	3,760 B	4,020 B	3,520 B
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	5.3 U	3.1 B
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	18,000	16,900	13,600	14,500	17,000	13,800	14,800	12,700
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	5.9 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	8.0 B	NA	19.7 B	22.8
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	850	630	1,702	322	344	200	222	1,057

NOTES:

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N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-06I 5/26/2011 (ug/l)	MW-06I 8/27/2012 (ug/l)	MW-06I 11/12/2013 (ug/l)	MW-06I 03/18/2015 (ug/l)	MW-06I 05/10/2016 (ug/l)	MW-06I 8/22/2017 (ug/l)	MW-06I 11/30/2018 (ug/l)	MW-06I (ug/l)
Aluminum	-	7429-90-5	ug/l	8.2 U	97.4 B	5.36 J	20 U	9.19 UB	5.77 UB	25 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	7.7 J	
Barium	1,000 ST	7440-39-3	ug/l	53.0 B	46.8 B	58.3	138	127 UB	111 J	133	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	32.3 B	56.1 B	58	20 U	36 UB	27.8	54 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	23,900	19,700	13,500	16,000	17,700	21,500 UB	39,000	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 UJ	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	1.0 B	8.5	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	.49 U	2.8 B	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	1.9 B	22.7 B	20 U	20 U	5 U	3 U	3.5 UB	
Iron	300 ST	7439-89-6	ug/l	90.1 B	3,940	7.46 UB	9.48 UB	29.1 UB	21.1 UB	17.4 UB	
Lead	25 ST	7439-92-1	ug/l	1.5 U	6	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	4,030 B	1,900 B	1,450	1,630	2,210	3,060 UB	5,790	
Manganese	300 ST	7439-96-5	ug/l	530	643	556	802	731	848	897	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U	2.8 B	20 U	20 U	5.79 J	3 U	5 U	
Potassium	-	7440-09-7	ug/l	3,610 B	4,920 B	8,220	16,700 J	13,900	7,670 J	7,050	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	29,700	19,200	4,110	14,500	15,000 UB	8,710 UBJ	43,400	
Thallium	0.5 GV	7440-28-0	ug/l	3.7 B	3.2 U	15 U	15 U	10 U	7 U	9.6 J	
Vanadium	-	7440-62-2	ug/l	.56 U	.4 B	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	13.3 B	95.4	10.7 UB	20 U	16.8 UB	18.9 UB	11.6 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	46.3 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	620.1	4,583	563.5	802	731	848	897	

NOTES:

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B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-06S 11/9/2007 (ug/l)	MW-06S 2/11/2008 (ug/l)	MW-06S 5/15/2008 (ug/l)	MW-06S 8/4/2008 (ug/l)	MW-06S 11/3/2008 (ug/l)	MW-06S 2/23/2009 (ug/l)	MW-06S 8/11/2009 (ug/l)	MW-06S 2/4/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	157 B	NA	165 B	40.5 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	3.7 B	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	6.8 B	NA	35.0 J*	6.3 B
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	320	NA	261	246
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	273 BN	NA	184	162
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	1.4 B	0.27 U	0.67 B	1.0 B	0.35 U	1.1 B	0.34 U
Calcium	-	7440-70-2	ug/l	78,900	91,000	77,600	64,000	97,600	79,700	68,500	58,500
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	1.9 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	2.3 B	2.3 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	1.7 B	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	7.4 B	NA	0.62 U	0.83 U
Iron	300 ST	7439-89-6	ug/l	51,100	53,000	51,200	42,700	65,100	51,600	93,800 J*	50,600 J*
Lead	25 ST	7439-92-1	ug/l	1.4 UJ	1.4 U	2.3 U	2.3	1.3 U	1.3 U	13.8	2.5 B
Magnesium	35,000 GV	7439-95-4	ug/l	10,200	10,500	8,810	6 ,950	10,700	8,570	6,440	5,920
Manganese	300 ST	7439-96-5	ug/l	609	1,140	716	790	668	461	491	538
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82U	2.5 B
Potassium	-	7440-09-7	ug/l	11,200 J	10,100	10,500	8,880	12,200	9,410	8,210	9650
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 UN	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	20,000	24,000	27,600	24,600	31,600	23,800	18,700	16,300
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	7.2 B	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	3.5 B	NA	5.9 B	4.6 B
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	8.0 B	NA	23.0	11.8 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	51,709	54,140	51,916	43,490	65,768	52,061	94,291	51,138

NOTES:

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Concentration exceeds Standard/Guidance Value.

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D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-06S 5/26/2011 (ug/l)	MW-06S 8/27/2012 (ug/l)	MW-06S 11/13/2013 (ug/l)	MW-06S 03/18/2015 (ug/l)	MW-06S 05/10/2016 (ug/l)	MW-06S 8/22/2017 (ug/l)	MW-06S 11/30/2018 (ug/l)	MW-06S (ug/l)
Aluminum	-	7429-90-5	ug/l	8.2 U	32.4 B	11.6 J	8 J	31.8 UB	4.8 UB	26.4 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	372	418	220	206	265	281 J	184	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	244	245	161	20 U	134	181	78.9	
Cadmium	5 ST	7440-43-9	ug/l	0.38 B	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	74,800	115,000	64,000	33,800	59,500	49,100	38,900	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 UJ	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	3.0 B	15.5	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	0.62 B	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	0.55 U	.7 U	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	**36,400**	**82,300**	**46,400**	**17300**	**41100**	**32800**	**21000**	
Lead	25 ST	7439-92-1	ug/l	8.7	9.3	5.63 J	15 U	5 U	4.4 J	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	9,920	9,710	5,020	2,820	4,940	4,130 UB	3,500	
Manganese	300 ST	7439-96-5	ug/l	**494**	**664**	**500**	**341**	**928**	**1,280**	**1,030**	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U	.64 U	5.5 J	20 U	5 U	3.08 UB	5 U	
Potassium	-	7440-09-7	ug/l	11,900	14,200	8,360	16500 J	11,200	11,900 J	6,450	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	**21,700**	**39,000**	7,990	11,100	11,600 UB	11,300 UBJ	**30,300**	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	**3.6 B**	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	2.7 B	2.1 B	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	17.7 B	11.3 B	17 UB	20 U	18.2 UB	15.4 UB	15.3 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	39.7 UBJ	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	**73,294**	**165,264**	**46,900**	**17,641**	**42,028**	**34,080**	**22,030**	

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.
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J*: Value is an approximate concentration of the analyte as determined by data validation.
UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-07I 11/9/2007 (ug/l)	MW-07I 2/11/2008 (ug/l)	MW-07I 5/19/2008 (ug/l)	MW-07I 8/5/2008 (ug/l)	MW-07I 11/5/2008 (ug/l)	MW-07I 2/24/2009 (ug/l)	MW-07I 8/14/2009 (ug/l)	MW-07I 2/8/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	40.6 B	28.8 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	36.3 B	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	33.5 B	NA	75.0 B	57.5 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	33.7 B	NA	51.9 B	23.2 B
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.40 B	0.34 U
Calcium	-	7440-70-2	ug/l	73,600 J	18,700	20,900	21,600	28,400	19,800	24,800	14,000
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.52 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	5.3 B	0.58 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	0.76 U	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	1.0 B	NA	0.62 U	2.4 B
Iron	300 ST	7439-89-6	ug/l	24,600	24.2 U	13.2 B	30.8 B	7.6 B	9.4 B	26.6 B	62.6 B
Lead	25 ST	7439-92-1	ug/l	1.4 U	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	2.1 U	2.1 B
Magnesium	35,000 GV	7439-95-4	ug/l	11,200 J	2,350 B	2,230 B	2,070 B	1,730 B	1,050 B	1,760 B	1,550 B
Manganese	300 ST	7439-96-5	ug/l	5,920 J	663	434	428	282	212	347	414
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	3.0 B	1.4 U
Potassium	-	7440-09-7	ug/l	12,500	3,770 B	2,930 B	3,330 B	3,460 B	6,790	8,840	5630 J*
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	95.7	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	29,100 J	23,300	23,400	22,500	26,700	20,900	35,000	23,200
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	1.9 U	NA	20.0	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	7.8 B	NA	7.6 B	14.9 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	30,520	687	447.2	458.8	289.6	221.4	356.4	476.6

NOTES:

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N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-07I 5/26/2011 (ug/l)	MW-07I 8/27/2012 (ug/l)	MW-07I 11/12/2013 (ug/l)	MW-07I 03/18/2015 (ug/l)	MW-07I 05/10/2016 (ug/l)	MW-07I 8/22/2017 (ug/l)	MW-07I 11/29/2018 (ug/l)	MW-07I (ug/l)
Aluminum	-	7429-90-5	ug/l	8.2 U	46.7 B	5.13 J	6.44 J	35.4 UB	38.8 UB	20.5 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	46.3 B	23.7 B	37.5	67.7	76.8 UB	61.6 J	60.9	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	51.0 B	45.7 B	37	20 U	25 UB	28.2	51.7 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	38,000	21,900	12,700	14,200	11,700	16,200 UB	23,500	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 UJ	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	1.6 B	8.0 B	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	.49 U	.52 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	1.9 B	.7 U	20 U	20 U	5 U	3 U	3.7 UB	
Iron	300 ST	7439-89-6	ug/l	31.8 B	20.1 B	13.5 UB	8.62 UB	28.5 UB	25.1 UB	18.5 UB	
Lead	25 ST	7439-92-1	ug/l	1.5 U	3.6	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	6,020	1980 B	1,650	1,850	1,700 UB	2,350 UB	3,180	
Manganese	300 ST	7439-96-5	ug/l	971	506	1,600	2,320	1,490	1,130	872	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	0.1	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U*J*	.8 B	20 U	20 U	5 U	3.6 UB	5 U	
Potassium	-	7440-09-7	ug/l	3440 B	2850 B	1,790	2420 J	3,700 UB	3,160 UBJ	2,870	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.32 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	22,900	442	5,870	12,700	12,900 UB	5,050 UBJ	19,600	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	.56 U	.23 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	8.1 B	57.7	10.8 UB	20 U	11.8 UB	19.2 UB	18.1 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	44.3 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	971	506	1,613.5	2,320	1,490	1,130	872	

NOTES:

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Concentration exceeds Standard/Guidance Value.

ST: Standard.

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NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-11D 11/14/2007 (ug/l)	MW-11D 2/12/2008 (ug/l)	MW-11D 5/14/2008 (ug/l)	MW-11D 8/6/2008 (ug/l)	MW-11D 11/5/2008 (ug/l)	MW-11D 2/25/2009 (ug/l)	MW-11D 8/13/2009 (ug/l)	MW-11D 2/5/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	659	NA	494	16700
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	10.5
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	36.5 B	NA	20.0 B	120 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.21 B	NA	0.20 B	0.72 B
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	64.9 B	NA	57.8 B	42.6 B
Cadmium	5 ST	7440-43-9	ug/l	0.41 B	0.45 B	0.27 U	0.50 B	0.35 U	0.35 U	0.26 U	0.82 B
Calcium	-	7440-70-2	ug/l	11,300 J	9,390	7,730	7,600	7,350	6,450	8,020	43,500
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	1.6 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	1.5 B	38.5
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	0.76 U	9.9 B
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	0.98 B	NA	0.80 B	42.8
Iron	300 ST	7439-89-6	ug/l	956	264	116	107	27.7 B	42.0 B	128	19000 J*
Lead	25 ST	7439-92-1	ug/l	4.3	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	21.1	65.6
Magnesium	35,000 GV	7439-95-4	ug/l	3,390 JB	2,740 B	2,510 B	2,730 B	2,530 B	2,130 B	1,900	6950
Manganese	300 ST	7439-96-5	ug/l	462 J	328	240	240	242	180	118	375
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	16.4 B	NA	9.2 B	23.3 B
Potassium	-	7440-09-7	ug/l	3,450	2,550 B	2,260 B	2,600 B	2,260 B	2,090 B	2,440 B	14,900
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	5.3 U	3.0 B
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	17,400 J	17,800	17,700	17,800	18,300	16,700	35,000	39,400
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	1.9 U	NA	20.0	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	39.8 B
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	11.2 B	NA	7.6 B	209
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	1,418	592	356	347	270	222	160	19,375

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Concentration exceeds Standard/Guidance Value.

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Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-11D 5/27/2011 (ug/l)	MW-11D 8/29/2012 (ug/l)	MW-11D 11/14/2013 (ug/l)	MW-11D 03/19/2015 (ug/l)	MW-11D 05/12/2016 (ug/l)	MW-11D 8/23/2017 (ug/l)	MW-11D 12/3/2018 (ug/l)	MW-11D (ug/l)
Aluminum	-	7429-90-5	ug/l	29,600	330	692	2550	1080	787 B	653	
Antimony	3 GV	7440-36-0	ug/l	3.1 B	2.8 B	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	18.3	1.8 B	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	261	48.0 B	77.6	120	136 UB	132	106	
Beryllium	3 GV	7440-41-7	ug/l	1.0 B	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	30.0 B	41 B	48	20 U	62.3	48.9	67.3 UB	
Cadmium	5 ST	7440-43-9	ug/l	1.8 B	0.3 B	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	75,500	27,800	11,400	16,300	15,900	18,800 UB	14,500	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 UJ	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	73.1	1.0 B	20 U	8.39 J	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	18.5 B	0.4 B	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	124	2.5 B	20 U	13.8 J	5 U	3 U	3.2 UB	
Iron	300 ST	7439-89-6	ug/l	37,000	765	424	2020	354	86.3	70.1 UB	
Lead	25 ST	7439-92-1	ug/l	174	20.6	15 U	18.2	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	17,000	5,800	3,660	5,370	6,430	8,660 UB	6,780	
Manganese	300 ST	7439-96-5	ug/l	1,020	150	147	131	191	276	147	
Mercury	0.7 ST	7439-97-6	ug/l	0.22 J*	0.1 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	57.7	15.2 B	17.9 J	25.8	40.6	46.7	30	
Potassium	-	7440-09-7	ug/l	13,700	7,370	3,780	5,320	5,450 UB	4,280 J	2,990	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	0.29 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	15,900	40,000	6,830	8,650	8,560 UB	6,920 UBJ	28,800	
Thallium	0.5 GV	7440-28-0	ug/l	5.1 B	2.9 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	74.7	3.0 B	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	535	34.1	30.8 UB	160	254 J	41.9 UB	26.1 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43.4 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	38,020	915	571	2,151	545	362.3	147	

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Concentration exceeds Standard/Guidance Value.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-11I 11/14/2007 (ug/l)	MW-11I 2/12/2008 (ug/l)	MW-11I 5/14/2008 (ug/l)	MW-11I 8/6/2008 (ug/l)	MW-11I 11/5/2008 (ug/l)	MW-11I 2/25/2009 (ug/l)	MW-11I 8/13/2009 (ug/l)	MW-11I 2/5/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	70.4 B	86.2 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	7.6 B	NA	2.9 U	6.2 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	28.2 B	NA	4.3 U	22.7 B
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.26 U	0.39 B
Calcium	-	7440-70-2	ug/l	5,980 J	5,370	9,040	5,030	5,030	4,340 B	49.0 B	3,260 B
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.80 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	0.49 U	0.88 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	0.76 U	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	0.65 U	NA	0.90 B	2.0 B
Iron	300 ST	7439-89-6	ug/l	25.1	24.2 U	280	6.6 U	10 B	13.7 B	10.9 B	125 J*
Lead	25 ST	7439-92-1	ug/l	1.4	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	2.1 U	1.8 U
Magnesium	35,000 GV	7439-95-4	ug/l	1,420 J	1,260 B	2,440 B	1,450 B	1,700 B	1,390 B	43 U	895 B
Manganese	300 ST	7439-96-5	ug/l	100 J	47.0	92.2	28.3	11.8 B	8.6 B	0.40 B	111
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	1.9 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	1.6 B
Potassium	-	7440-09-7	ug/l	1,410	1,410 B	1,970 B	1,890 B	1,600 B	1,420 B	57 U	1,480 B
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	0.54 U	NA	4.6 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	1.9 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	5,510 J	5,430	7,860	6,770	5,500	4,960 B	55 U	4,510 B
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	0.74 U	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	6.0 B	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	0.13 U	NA	6.7 U	16.8 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10 U	10.0U
Iron + Manganese	500 ST*	-	ug/l	125.1	71.2	372.2	34.9	21.8	22.3	11.3	236

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.
U* or UB: Result qualified as non-detect based on validation criteria
J: Estimated due to data validation criteria.
J*: Value is an approximate concentration of the analyte as determined by data validation.
UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-11I 5/27/2011 (ug/l)	MW-11I 8/29/2012 (ug/l)	MW-11I 11/14/2013 (ug/l)	MW-11I 03/19/2015 (ug/l)	MW-11I 05/12/2016 (ug/l)	MW-11I 8/23/2017 (ug/l)	MW-11I 12/3/2018 (ug/l)	MW-11I (ug/l)
Aluminum	-	7429-90-5	ug/l	8.2 U	30.0 B	20 U	11.2 J	19.8 UB	371 B	21.3 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	1.9 B	42 B	13.4 J	17.7 J	31.2 UB	107	35.8	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	0.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	10.9 B	19.5 B	13	20 U	17.2 UB	21.7 J	35.6 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	0.10 B	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	968 B	7,740	2,480	3,640	6,840	10,600 UB	7,300	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	1.6 B	0.34 U	20 U	20 U	5 U	102	5 U	
Cobalt	-	7440-48-4	ug/l	.49 U	0.28 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	1.6 B	.52 U	7.89 J	20 U	5 U	17.4 J	5 U	
Iron	300 ST	7439-89-6	ug/l	37.9 B	3.7 B	15 UB	21.2 UB	30 UB	725	14 UB	
Lead	25 ST	7439-92-1	ug/l	1.5 U	7.8	15 U	15 U	5 U	8.14 J	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	242 B	1,660 B	612	989	1,920 UB	2,750 UB	2,100	
Manganese	300 ST	7439-96-5	ug/l	25.8	188	34.1	40.8	107	117	11.7 J	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	0.10 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U	1.4 U	20 U	20 U	5 U	12.3 UB	5 U	
Potassium	-	7440-09-7	ug/l	1,050 B	4,210 B	2,140	2,910	3,350 UB	3,070 UBJ	2,180	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	.29 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	7,660	24,700	1,500	1,770	3,000 UB	5,050 UBJ	10,100	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	0.56 U	0.18 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	10.3 B	6.1 B	12.7 UB	7.61 J	31.5 UBJ	144 UB	15.4 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43.5 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	63.7	191.7	49.1	40.8	107	842	11.7	

NOTES:

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UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-11S 11/14/2007 (ug/l)	MW-11S 2/12/2008 (ug/l)	MW-11S 5/14/2008 (ug/l)	MW-11S 8/6/2008 (ug/l)	MW-11S 11/5/2008 (ug/l)	MW-11S 2/25/2009 (ug/l)	MW-11S 8/13/2009 (ug/l)	MW-11S 2/5/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	2730	NA	52.0 B	47.6 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 B	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	57.4 B	NA	32.3 B	41.4 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.14 B	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	68.6 B	NA	55.5 B	73.9 B
Cadmium	5 ST	7440-43-9	ug/l	0.32	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.26 U	0.34 U
Calcium	-	7440-70-2	ug/l	44,000 J	45,600	55,600	58,100	46,500	43,000	44,300	60,800
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.02 U	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	109	NA	6.8 B	47.9
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	3.6 B	NA	0.80 B	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	12.6 B	NA	1.9 B	3.6 B
Iron	300 ST	7439-89-6	ug/l	36.0 B	111	5,540	2,260	3,440	990	111	172 J*
Lead	25 ST	7439-92-1	ug/l	1.4 U	1.4 U	8.40	6.9	7.7	3.2	12.4	1.8 U
Magnesium	35,000 GV	7439-95-4	ug/l	4,990 J	5,050	6,440	6,160	5,880	4,900 B	4,490 B	6,900
Manganese	300 ST	7439-96-5	ug/l	3,120 J	3,020	4,070	2,910	3,070	3,270	3,250	4,450
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	7.3 B	NA	1.8 B	3.1 B
Potassium	-	7440-09-7	ug/l	29,900	19,900	17,100	25,200	25,300	12,900	15,700	19000
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.55 B	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	54,900 J	36,500	45,300	52,400	56,200	38,300	38,900	56,800
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	1.9 U	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	7.6 B	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	17.2 B	NA	12.0 B	5.0 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	3,156.0	3,131.0	9,610	5,170	6,510	4,260	3,361	4,622

NOTES:

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Concentration exceeds Standard/Guidance Value.

ST: Standard.

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NA: Not analyzed.

D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-11S 5/27/2011 (ug/l)	MW-11S 8/29/2012 (ug/l)	MW-11S 11/14/2013 (ug/l)	MW-11S 03/19/2015 (ug/l)	MW-11S 05/12/2016 (ug/l)	MW-11S 8/23/2017 (ug/l)	MW-11S 12/3/2018 (ug/l)	MW-11S (ug/l)
Aluminum	-	7429-90-5	ug/l	133 B	26.1 B	11.2 J	21.1	30.3 UB	31 UB	57.1	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	6.01 J	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	28.5 B	30.0 B	63.7	65.2	73.1 UB	73.1	58.2	
Beryllium	3 GV	7440-41-7	ug/l	.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	38.5 B	52.8 B	62	20 U	52.2	72.1	90.8	
Cadmium	5 ST	7440-43-9	ug/l	.27 U	0.087 U	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	39,500	47,500	47,900	33,400	55,400	50,000	51,700	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 UJ	2.5 U	
Chromium Total	50 ST	7440-47-3	ug/l	9.1 B	0.70 B	20 U	20 U	5 U	4 U	7.3 J	
Cobalt	-	7440-48-4	ug/l	.68 B	0.30 B	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	3.9 B	2.0 B	20 U	20 U	5 U	3 U	4.1 UB	
Iron	300 ST	7439-89-6	ug/l	454	11.3 B	23.3 UB	50.1 UB	107 UB	68.6	25.4 UB	
Lead	25 ST	7439-92-1	ug/l	1.5 U	6.2	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	5,940	6,300	6,500	5,630	4,700	5,040 UB	3,940	
Manganese	300 ST	7439-96-5	ug/l	2,440	1,140	668	541	957	286	51.6	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	0.10 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U	3.6 B	20 U	20 U	5 U	3 U	15 J	
Potassium	-	7440-09-7	ug/l	14,600	8,510	11,100	12,900	18,100	15,300 J	11,000	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	0.29 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	44,100	57,000	14,900	13,700	13,000 UB	8,290 UBJ	24,800	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	.72 B	0.18 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	12.5 B	6.0 B	8.65 UB	20 U	142 J	27.5 UB	9.7 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	42.9 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	2,894	1,140	691.3	541	957	354.6	51.6	

NOTES:

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Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-12D 11/14/2007 (ug/l)	MW-12D 2/12/2008 (ug/l)	MW-12D 5/14/2008 (ug/l)	MW-12D 8/6/2008 (ug/l)	MW-12D 11/5/2008 (ug/l)	MW-12D 2/25/2009 (ug/l)	MW-12D 8/13/2009 (ug/l)	MW-12D 2/5/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	12.5 U	101 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	4.7 B	NA	6.6 B	7.5 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	19.5 B	NA	9.5 B	19.0 B
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.26 U	0.34 U
Calcium	-	7440-70-2	ug/l	11,500 J	11,100	12,000	11,200	11,600	12,500	11,500	9,410
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.80 B	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	1.1 B	0.65 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	0.76 U	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	0.65 U	NA	0.90 B	2.9 B
Iron	300 ST	7439-89-6	ug/l	28.8 B	24.2 U	37.4 B	6.6 U	9.2 B	12.6 B	12.4 B	139 J*
Lead	25 ST	7439-92-1	ug/l	1.4 U	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	12.3	1.8 U
Magnesium	35,000 GV	7439-95-4	ug/l	5,770 J	5,480	6,130	6,260	6,100	6,560	5,420	5190
Manganese	300 ST	7439-96-5	ug/l	1.9 JB	2.7 B	4.7 B	3.0 B	3.1 B	3.6 B	2.6 B	8.9 B
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	1.4 U
Potassium	-	7440-09-7	ug/l	878 B	945 B	1,030 B	1,340 U	1,060 B	1,150 B	1,210 B	1,400 B
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	9,580 J	12,000	11,900	13,400	11,700	13,600	15,300	14,800
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	1.9 U	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	5.2 B	NA	22.3	13.7 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	30.7	26.9	42.1	9.6	12.3	16.2	15.0	147.9

NOTES:

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D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-12D 5/27/2011 (ug/l)	MW-12D 8/29/2012 (ug/l)	MW-12D 11/14/2013 (ug/l)	MW-12D 03/20/2015 (ug/l)	MW-12D 05/12/2016 (ug/l)	MW-12D 8/23/2017 (ug/l)	MW-12D 12/3/2018 (ug/l)	MW-12D (ug/l)
Aluminum	-	7429-90-5	ug/l	290	70.9 B	20 U	9.22 J	15.2 UB	11.5 UB	28.8 UB	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	8.0 B	4.3 B	7.67 J	9.53 J	14.2 UB	19 UB	32.5	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	0.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	9.0 B	11 B	13	20 U	16.2 UB	12.3 J	49.1 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	0.1 B	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	6,990	5,030	4,950	4,710	7,880	10,400 UB	14,100	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 UJ	
Chromium Total	50 ST	7440-47-3	ug/l	2.4 B	1.1 B	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	0.49 U	.28 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	4.1 B	1.2 B	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	**541**	83.8 B	11.2 UB	10.5 UB	41 UB	83.6	13.3 UB	
Lead	25 ST	7439-92-1	ug/l	2.8 B	7.9	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	3,520 B	2,400 B	2,540	2,430	3,680	4,720 UB	6,370	
Manganese	300 ST	7439-96-5	ug/l	14.8 B	23.5	20 U	21.2	5 U	16.3 J	5.2 J	
Mercury	0.7 ST	7439-97-6	ug/l	0.10U U*J*	0.10 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U	1.1 B	20 U	20 U	5 U	6.8 UB	5 U	
Potassium	-	7440-09-7	ug/l	1,590 B	65.3 U	659	746	855 UB	1,080 UBJ	2,150	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	0.29 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	12,000	8,580	2,810	2,780	2,740 UB	2,660 UBJ	**24,500**	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	8.99 J	10 U	
Vanadium	-	7440-62-2	ug/l	1.1 B	0.20 B	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	25.1	12.9 B	10.8 UB	20 U	19.8 UBJ	50.9 UB	8.2 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	36.3 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	**555.8**	107.3	11.2	21.2	0	99.9	5.2	

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.

U* or UB: Result qualified as non-detect based on validation criteria

J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-12I 11/14/2007 (ug/l)	MW-12I 2/12/2008 (ug/l)	MW-12I 5/14/2008 (ug/l)	MW-12I 8/6/2008 (ug/l)	MW-12I 11/5/2008 (ug/l)	MW-12I 2/25/2009 (ug/l)	MW-12I 8/13/2009 (ug/l)	MW-12I 2/5/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	8.7 U	NA	12.5 U	190 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	1.8 U	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	13.0 B	NA	28.5 B	23.4 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.096 U	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	30.7 B	NA	23.9 B	22.4 B
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.26 U	0.97 B
Calcium	-	7440-70-2	ug/l	5,780 J	6,480	7,190	7,480	6,570	11,800	9,260	8,260
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.41 U	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	0.02 U	NA	0.49 U	1.0 B
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	0.88 U	NA	0.76 U	1.2 U
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	0.65 U	NA	0.70 B	4.1 B
Iron	300 ST	7439-89-6	ug/l	24.2 U	264	66.6 B	12.0 B	7.8 B	9.2 B	14.9 B	161 J*
Lead	25 ST	7439-92-1	ug/l	1.4 U	1.4 U	2.3 U	2.3 U	1.3 U	1.3 U	9.1	1.8 U
Magnesium	35,000 GV	7439-95-4	ug/l	889 JB	960 B	1,120 B	1,040 B	899 B	1,530 B	1,070 B	984 B
Manganese	300 ST	7439-96-5	ug/l	650 J	918	1,040	1,540	1,200	2,650	3,760	457
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	1.2 U	NA	0.82 U	1.6 B
Potassium	-	7440-09-7	ug/l	2,150 B	2,750 B	3,300 B	3,950 B	3,320 B	3,870 B	5,630	5020
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	10,700 J	11,400	12,400	11,700	10,700	14,900	14,500	9,940
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	1.9 U	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	0.74 U	NA	0.77 U	1.4 U
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	2.8 B	NA	29	65.5
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	674	1,182	1,106.6	1552	1207.8	2,659.2	3,769.2	618

NOTES:

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J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-12I 5/27/2011 (ug/l)	MW-12I 8/29/2012 (ug/l)	MW-12I 11/14/2013 (ug/l)	MW-12I 03/20/2015 (ug/l)	MW-12I 05/12/2016 (ug/l)	MW-12I 8/23/2017 (ug/l)	MW-12I 12/3/2018 (ug/l)	MW-12I (ug/l)
Aluminum	-	7429-90-5	ug/l	562	299	7.24 J	6.86 J	12.4 UB	5.65 UB	37.2	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	20 U	20 U	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 U	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	18.8 B	22.1 B	37.3	56.8	21.1 UB	58.8	38.7	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	13.0 B	18.3 B	19	20 U	23.9 UB	67.8	73.6	
Cadmium	5 ST	7440-43-9	ug/l	2.5 B	4.2 B	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	6,930	9,490	20,100	34,700	13,900	30,300 UB	22,000	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 UJ	
Chromium Total	50 ST	7440-47-3	ug/l	2.6 B	3.0 B	20 U	20 U	5 U	4 U	5 U	
Cobalt	-	7440-48-4	ug/l	0.49 U	0.28 U	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	6.4 B	1.9 B	20 U	20 U	5 U	3 U	5 U	
Iron	300 ST	7439-89-6	ug/l	878	343	23.5 UB	13.8 UB	24.6 UB	49.5 UB	15 UB	
Lead	25 ST	7439-92-1	ug/l	5.0	5.5	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	1,210 B	1,470 B	4,510	4,790	1,570 UB	3,880 UB	3,730	
Manganese	300 ST	7439-96-5	ug/l	1,620	3,710	2,830	819	398	5,250	1,060	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	0.10 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	1.2 U	1.4 B	20 U	20 U	5 U	3 U	5 U	
Potassium	-	7440-09-7	ug/l	4050 B	6,670	2,910	4,160	1,730 UB	2,500 UB	2,090	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.5 BJ	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	0.60 B	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	8,910	29,300	6,140	7,740	3,130 UB	8,940 UBJ	20,300	
Thallium	0.5 GV	7440-28-0	ug/l	3.8 B	2.9 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	2.3 B	0.18 U	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	53.4	27	14.7 UB	20 U	13.7 UBJ	25.4 UB	8.1 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10	45.1 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	2,498	4,053	2,853.5	819	398	5,250	1,060	

NOTES:

U: Analyzed for but not detected, value shown is instrument detection limit.

U* or UB: Result qualified as non-detect based on validation criteria

J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-12S 11/14/2007 (ug/l)	MW-12S 2/12/2008 (ug/l)	MW-12S 5/14/2008 (ug/l)	MW-12S 8/6/2008 (ug/l)	MW-12S 11/5/2008 (ug/l)	MW-12S 2/25/2009 (ug/l)	MW-12S 8/13/2009 (ug/l)	MW-12S 2/5/2010 (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA	NA	NA	6710	NA	12.5 U	157 B
Antimony	3 GV	7440-36-0	ug/l	NA	NA	NA	NA	2.3 U	NA	2.5 U	2.1 U
Arsenic	25 ST	7440-38-2	ug/l	NA	NA	NA	NA	6.0 B	NA	3.0 U	2.3 U
Barium	1,000 ST	7440-39-3	ug/l	NA	NA	NA	NA	47.1 B	NA	26.7 B	25.1 B
Beryllium	3 GV	7440-41-7	ug/l	NA	NA	NA	NA	0.38 B	NA	0.13 U	0.26 U
Boron	1,000 ST	7440-42-8	ug/l	NA	NA	NA	NA	55.4 B	NA	38.1 B	42.9 B
Cadmium	5 ST	7440-43-9	ug/l	0.32 U	0.32 U	0.27 U	0.27 U	0.35 U	0.35 U	0.26 U	0.34 U
Calcium	-	7440-70-2	ug/l	27,000 J	30,400	26,900	29,200	29,900	28,200	30,800	28,900
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA	NA	NA	0.02 U	NA	0.02 U	0.02 U
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA	NA	NA	203	NA	3.2 B	152
Cobalt	-	7440-48-4	ug/l	NA	NA	NA	NA	5.4 B	NA	0.76 U	2.4 B
Copper	200 ST	7440-50-8	ug/l	NA	NA	NA	NA	12.8 B	NA	0.90 B	3.2 B
Iron	300 ST	7439-89-6	ug/l	132	3,060	864	3,630	10,500	110	64.6 B	1,100 J*
Lead	25 ST	7439-92-1	ug/l	1.4 U	1.4 U	2.3 U	2.8 B	5.0	1.3 U	7.9	1.8 U
Magnesium	35,000 GV	7439-95-4	ug/l	1,720 JB	1,860 B	2,210 B	2,490 B	2,770	2,440 B	2,410 B	2,620 B
Manganese	300 ST	7439-96-5	ug/l	2.8 JB	17.7	28.5	139	357	24.4	10.0 B	136
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA	NA	NA	0.13 U	NA	0.10 U	0.10 U
Nickel	100 ST	7440-02-0	ug/l	NA	NA	NA	NA	19.7 B	NA	2.1 B	7.9 B
Potassium	-	7440-09-7	ug/l	17,600	14,400	11,200	19,900	20,100	15,300	15,400	19500
Selenium	10 ST	7782-49-2	ug/l	NA	NA	NA	NA	1.9 U	NA	5.3 U	2.5 U
Silver	50 ST	7440-22-4	ug/l	NA	NA	NA	NA	0.54 U	NA	0.33 U	0.83 U
Sodium	20,000 ST	7440-23-5	ug/l	22,000 J	26,300	22,400	28,200	39,800	31,600	24,400	30,800
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA	NA	NA	1.9 U	NA	3.9 U	3.2 U
Vanadium	-	7440-62-2	ug/l	NA	NA	NA	NA	15.9 B	NA	0.77 U	2.6 B
Zinc	2,000 ST	7440-66-6	ug/l	NA	NA	NA	NA	23.9	NA	8.3 B	11.6 B
Cyanide	200 ST	0057-12-5	ug/l	NA	NA	NA	NA	10.0 U	NA	10.0 U	10.0 U
Iron + Manganese	500 ST*	-	ug/l	134.8	3,062.8	892.5	3,769	10,857	134.4	74.6	1,236

NOTES:

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J: Estimated due to data validation criteria.
J*: Value is an approximate concentration of the analyte as determined by data validation.
UJ: Value was not detected above quantitation limit but was an appoximate.
B: Concentration is above instrument detection limit but below contract required detection limit.
N: Matrix spike sampe recovery not within control limits.
Concentration exceeds Standard/Guidance Value.

ST: Standard.
GV: Guidance value.
NA: Not analyzed.

D&B ENGINEERS AND ARCHITECTS, P.C.

Appendix A-2
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/ Guidance Values	CAS #	SITE: DATE: UNITS:	MW-12S 5/27/2011 (ug/l)	MW-12S 8/29/2012 (ug/l)	MW-12S 11/14/2013 (ug/l)	MW-12S 03/20/2015 (ug/l)	MW-12S 05/12/2016 (ug/l)	MW-12S 8/23/2017 (ug/l)	MW-12S 11/29/2018 (ug/l)	MW-12S (ug/l)
Aluminum	-	7429-90-5	ug/l	1480	64.3 B	13.1 J	56.5	9.89 UB	7.04 UB	35.8	
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	6.04 J	6.6 J	5 U	9 U	5 U	
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 B	25 U	25 U	10 U	7 U	10 U	
Barium	1,000 ST	7440-39-3	ug/l	52.0 B	19.6 B	55.1	163	62.7 UB	79.4	61	
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	0.12 U	20 U	20 U	5 U	3 U	5 U	
Boron	1,000 ST	7440-42-8	ug/l	26.5 B	41.0 B	36	20 U	32 UB	46.9 J	63.1 UB	
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	0.10 B	10 U	10 U	5 U	3 U	5 U	
Calcium	-	7440-70-2	ug/l	35,200	41,600	30,900	43,400	33,400	53,500	48,800	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	0.2 U	10 U	10.0 U	2.5 U	2.50 U	2.5 UJ	
Chromium Total	50 ST	7440-47-3	ug/l	1,350	53.1	20 U	5.39 J	36.1	15.7 J	62.1	
Cobalt	-	7440-48-4	ug/l	10.1 B	1.4 B	20 U	20 U	5 U	4 U	5 U	
Copper	200 ST	7440-50-8	ug/l	35.6	4.3 B	20 U	5.15 J	6.12 J	3 U	6.3 UB	
Iron	300 ST	7439-89-6	ug/l	9,280	524	40.3 UB	94	450	234	920	
Lead	25 ST	7439-92-1	ug/l	9.7	5.9	15 U	15 U	5 U	4 U	5 U	
Magnesium	35,000 GV	7439-95-4	ug/l	3,980 B	3540 B	2,400	3,430	3,030	4,390 UB	3,560	
Manganese	300 ST	7439-96-5	ug/l	552	596	17.8 J	122	31.9	212	74.8	
Mercury	0.7 ST	7439-97-6	ug/l	0.10 U*J*	0.10 U	0.25 U	0.25 U	0.15 U	0.15 U	0.15 U	
Nickel	100 ST	7440-02-0	ug/l	74.7	11.6 B	7.38 J	19 J	22.7	22.3 UB	81.7	
Potassium	-	7440-09-7	ug/l	18,300	15,300	22,000	27,200	17,400	28,800	27,900	
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.4 BJ	25 U	25 U	10 U	10 U	10 U	
Silver	50 ST	7440-22-4	ug/l	0.52 U*J*	0.29 U	20 U	20 U	5 U	3 U	5 U	
Sodium	20,000 ST	7440-23-5	ug/l	38,800	29,100	12,500	32,100	14,700 UB	9,760 UBJ	34,700	
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	7 U	10 U	
Vanadium	-	7440-62-2	ug/l	16.9 B	0.80 B	20 U	20 U	5 U	3 U	5 U	
Zinc	2,000 ST	7440-66-6	ug/l	42.9	37.6	12.7 UB	34	22 UBJ	29.7 UB	16 UB	
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	50.7 UB	10 U	5 U	5 U	5 U	
Iron + Manganese	500 ST*	-	ug/l	9,832	1,120	58.1	216	481.9	446	994.8	

NOTES:

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J: Estimated due to data validation criteria.

J*: Value is an approximate concentration of the analyte as determined by data validation.

UJ: Value was not detected above quantitation limit but was an appoximate.

B: Concentration is above instrument detection limit but below contract required detection limit.

N: Matrix spike sampe recovery not within control limits.

Concentration exceeds Standard/Guidance Value.

ST: Standard.

GV: Guidance value.

NA: Not analyzed.

APPENDIX A-3

Monitoring Well Sample Results - Volatile Organic Compounds

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-01D 2/21/2007 (ug/l)	MW-01D 11/3/2008 (ug/l)	MW-01D 8/12/2009 (ug/l)	MW-01D 2/4/2010 (ug/l)	MW-01D 5/26/2011 (ug/l)	MW-01D 8/28/2012 (ug/l)	MW-01D 11/12/2013 (ug/l)	MW-01D 3/17/2015 (ug/l)	MW-01D 05/10/2016 (ug/l)	MW-01D 8/21/2017 (ug/l)	MW-01D 11/29/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	0.53 J	0.72 J	0.76 J	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	3 J*	5 U	5 U	5 U	3 J	0.65 J	1.0 J	1.1 J	1.0 J	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	1 J*	3 J	5 U	5 U	1 J	2.0 U	2.0 U	0.55 J	0.66 J	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	0.90 J	1.8 J	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	-
Acetone	000067-64-1	U*	U*	5 U	1 BJ	5 U*	5 U	5.0 U	2.7 UB	2.7 UB	3.9 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.34 J	0.33 J	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	0.52 J	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	5.5 UB	9.7 UB	6.6 UB	1.0 U	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	2 J	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	1.0 U	1.0 U	5 ST
TOTAL VOCs		11	6	3 J	5 U	5 U	4 J	0.65	2.95	4.17	2.76	0.33	-

See Last page for Qualifiers and Notes

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APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-01I 2/21/2007 (ug/l)	MW-01I 11/3/2008 (ug/l)	MW-01I 8/12/2009 (ug/l)	MW-01I 2/4/2010 (ug/l)	MW-01I 5/26/2011 (ug/l)	MW-01I 8/28/2012 (ug/l)	MW-01I 11/12/2013 (ug/l)	MW-01I 3/17/2015 (ug/l)	MW-01I 05/10/2016 (ug/l)	MW-01I 8/21/2017 (ug/l)	MW-01I 11/29/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 UJ*	5 U	1 J	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 J*	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 UJ*	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 UJ*	5 U*	5 U	5.0 U	2.5 UB	4.1 UB	2.7 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 J*	5 U	5 UJ*	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 UJ*	5 U	2 J	2.0 U	0.53 J	0.53 J	0.25 U	0.47 J	7 ST
Chloromethane	000074-87-3	5 U	5 J*	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 U	5 UJ*	5 U	5 U	5.0 UB	9.6 UB	7.7 UB	1.0 U	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	1 J*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 J*	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 UJ*	5 U	5 U	NA	NA	NA	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	U	5 UJ*	5 U	3 J	0	0.53	0.53	0	0.47	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-01S 2/21/2007 (ug/l)	MW-01S 11/3/2008 (ug/l)	MW-01S 8/12/2009 (ug/l)	MW-01S 2/4/2010 (ug/l)	MW-01S 5/26/2011 (ug/l)	MW-01S 8/28/2012 (ug/l)	MW-01S 11/12/2013 (ug/l)	MW-01S 3/17/2015 (ug/l)	MW-01S 05/10/2016 (ug/l)	MW-01S 8/21/2017 (ug/l)	MW-01S 11/29/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	1 BJ	5 U*	5 U	5.0 U	2.2 UB	2.7 UB	1.5 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	5.7 UB	9.4 UB	6.9 UB	1.0 U	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U*J*	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	5 U	0	0	0	0	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-02D 02/22/07 (ug/l)	MW-02D 11/3/2008 (ug/l)	MW-02D 8/14/2009 (ug/l)	MW-02D 2/8/2010 (ug/l)	MW-02D 5/31/2011 (ug/l)	MW-02D 8/28/2012 (ug/l)	MW-02D 11/12/2013 ug/l)	MW-02D 3/17/2015 ug/l)	MW-02D 05/10/2016 (ug/l)	MW-02D 8/21/2017 (ug/l)	MW-02D 11/29/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 UJ	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 UJ	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 UJ*	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 U	5 U*	5 U	5.0 U	2.2 UB	5.0 UB	3.6 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 UJ	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 UJ*	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	1 J*	1 J	1 J	5 U	5 U	0.50 J	2.0 U	0.50 U	0.25 J	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	3.9 UB	9.9 UB	7.1 UB	1.1 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 UJ	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 UJ*	5 U	5 UJ	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	1 J*	1 J	5 U	5 U	5 U	0.5	0	0	0.25	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-02I 02/22/07 (ug/l)	MW-02I 11/3/2008 (ug/l)	MW-02I 8/14/2009 (ug/l)	MW-02I 2/8/2010 (ug/l)	MW-02I 5/31/2011 (ug/l)	MW-02I 8/28/2012 (ug/l)	MW-02I 11/12/2013 (ug/l)	MW-02I 3/17/2015 (ug/l)	MW-02I 05/10/2016 (ug/l)	MW-02I 8/21/2017 (ug/l)	MW-02I 11/29/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 U	5 U*	5 U	5.0 U	2.7 UB	2.2 UB	2.6 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 UJ*	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	6.0 UB	8.7 UB	8.5 UB	2.5 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	5 U	0	0	0	0	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-03S 2/22/2007 (ug/l)	MW-03S 11/5/2008 (ug/l)	MW-03S 8/14/2009 (ug/l)	MW-03S 2/4/2010 (ug/l)	MW-03S 6/1/2011 (ug/l)	MW-03S 8/28/2012 (ug/l)	MW-03S 11/13/2013 (ug/l)	MW-03S 3/18/2015 (ug/l)	MW-03S 05/11/2016 (ug/l)	MW-03S 8/23/2017 (ug/l)	MW-03S 11/29/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 UJ	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	0.56 J	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	0.70 J	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 UJ	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	1 BJ	5 U*	5 U	5.0 U	4.4 UB	2.4 UB	4.0 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 UJ	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 UJ	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.9 UB	8.2 UB	8.4 UB	1.0 U	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 UJ	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 UJ	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	5 U	1.26	0	0	0	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-04D 02/23/07 (ug/l)	MW-04D 11/3/2008 (ug/l)	MW-04D 8/12/2009 (ug/l)	MW-04D 2/4/2010 (ug/l)	MW-04D 5/26/2011 (ug/l)	MW-04D 8/27/2012 (ug/l)	MW-04D 11/13/2013 (ug/l)	MW-04D 3/18/2015 (ug/l)	MW-04D 05/11/2016 (ug/l)	MW-04D 8/22/2017 (ug/l)	MW-04D 11/30/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 U	5 U*	5 U	5.0 U	4.8 UB	3.2 UB	4.3 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.7 UB	8.1 UB	8.1 UB	1.0 U	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	5 U	0	0	0	0	0	-

See Last page for Qualifiers and Notes

D&B ENGINEERS AND ARCHITECTS, P.C.

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-04I 02/23/07 (ug/l)	MW-04I 11/4/2008 (ug/l)	MW-04I 8/12/2009 (ug/l)	MW-04I 2/4/2010 (ug/l)	MW-04I 5/26/2011 (ug/l)	MW-04I 8/27/2012 (ug/l)	MW-04I 11/13/2013 (ug/l)	MW-04I 3/18/2015 (ug/l)	MW-04I 05/11/2016 (ug/l)	MW-04I 8/22/2017 (ug/l)	MW-04I 11/30/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	1 J	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 U	5 U*	5 U	5.0 U	3.4 UB	2.9 UB	4.9 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.27 J	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.2 UB	7.8 UB	8.3 UB	1.0 U	1.1 J	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	1 J	5 U	5 U	5 J	0	0	0	0.27	1.1	-

See Last page for Qualifiers and Notes

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APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-04S 3/2/2007 (ug/l)	MW-04S 11/3/2008 (ug/l)	MW-04S 8/12/2009 (ug/l)	MW-04S 2/4/2010 (ug/l)	MW-04S 5/31/2011 (ug/l)	MW-04S 8/27/2012 (ug/l)	MW-04S 11/13/2013 (ug/l)	MW-04S 3/18/2015 (ug/l)	MW-04S 05/11/2016 (ug/l)	MW-04S 8/22/2017 (ug/l)	MW-04S 11/30/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 UJ	5 UJ	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 UJ	5 UJ	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 J	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	1 BJ	5 U*	5 U	5.0 U	4.1 UB	2.8 UB	6.3 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	2 J	2 J*	5 U	2 J	2 J	3 J	0.75 J	0.72 J	0.50 U	0.25 U	0.67 J	5 ST
Chloroethane	000075-00-3	2 J	5 U	5 U	1 J	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.6 UB	7.9 UB	8.4 UB	6.2 UB	1.1 J	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		4	2 J*	U	5 U	5 U	3 J	0.75	0.72	0	0	1.77	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-05D 02/21/07 (ug/l)	MW-05D 11/5/2008 (ug/l)	MW-05D 8/17/2009 (ug/l)	MW-05D 2/8/2010 (ug/l)	MW-05D 6/1/2011 (ug/l)	MW-05D 8/28/2012 (ug/l)	MW-05D 11/13/2013 (ug/l)	MW-05D 3/19/2015 (ug/l)	MW-05D 05/11/2016 (ug/l)	MW-05D 8/22/2017 (ug/l)	MW-05D 11/30/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.40 J	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.32 J	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 U	5 U*	5 U	5.0 U	2.8 UB	3.8 UB	6.3 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 UJ*	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50J	0.30 J	0.29 J	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.5	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.7 UB	8.3 UB	6.2 UB	8.7 UB	1.2 J	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	1 J*	5 U	5 U	5 U	5 U	2.0 U	0.56 J	2.3	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	1 J*	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	0.74 J	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 UJ	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	2	U	5 U	5 U	5 U	0	3.8	2.8	0.3	2.21	-

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APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-05I 02/21/07 (ug/l)	MW-05I 11/5/2008 (ug/l)	MW-05I 8/17/2009 (ug/l)	MW-05I 2/8/2010 (ug/l)	MW-05I 5/31/2011 (ug/l)	MW-05I 8/28/2012 (ug/l)	MW-05I 11/13/2013 (ug/l)	MW-05I 3/19/2015 (ug/l)	MW-05I 05/11/2016 (ug/l)	MW-05I 8/22/2017 (ug/l)	MW-05I 11/30/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U*J*	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U*J*	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	2 BJ	5 U*	5 U	5.0 U	4.6 UB	2.4 UB	3.8 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 UJ*	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	1 J	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	1.4 J	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.1 UB	10 UB	5.4 UB	1.0 U	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	0.58 J	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U*J*	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	1 J	5 U	5 U	5 U	0	1.98	0	0	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-05S 02/21/07 (ug/l)	MW-05S 11/5/2008 (ug/l)	MW-05S 8/17/2009 (ug/l)	MW-05S 2/8/2010 (ug/l)	MW-05S 5/31/2011 (ug/l)	MW-05S 8/29/2012 (ug/l)	MW-05S 11/13/2013 (ug/l)	MW-05S 3/19/2015 (ug/l)	MW-05S 05/11/2016 (ug/l)	MW-05S 8/22/2017 (ug/l)	MW-05S 11/29/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	2 BJ	5 U*	5 U	5.0 U	2.9 UB	3.5 UB	2.5 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 UJ*	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	3 J*	5 U	2 J	2 J	2 J	2.0 U	0.61 J	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.4 UB	8.1 UB	8.8 UB	3.9 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	3	U	5 U	2	2	0	0.61	0	0	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-06D 02/22/07 (ug/l)	MW-06D 11/3/2008 (ug/l)	MW-06D 8/11/2009 (ug/l)	MW-06D 2/4/2010 (ug/l)	MW-06D 5/26/2011 (ug/l)	MW-06D 8/27/2012 (ug/l)	MW-06D 11/12/2013 (ug/l)	MW-06D 3/18/2015 (ug/l)	MW-06D 05/10/2016 (ug/l)	MW-06D 8/22/2017 (ug/l)	MW-06D 11/29/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 U	5 U*	5 U	5.0 U	3.7 UB	2.8 UB	4.3 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	1 J	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.4 UB	7.2 UB	7.1 UB	4.7 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	1 J*	5 U	5 U	1 J	5 U	0.54 J	2.0 U	0.50 U	0.27 J	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	1	U	5 U	1	5 U	0.54	0	0	0.27	0	-

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APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-06I 02/22/07 (ug/l)	MW-06I 11/4/2008 (ug/l)	MW-06I 8/11/2009 (ug/l)	MW-06I 2/4/2010 (ug/l)	MW-06I 5/26/2011 (ug/l)	MW-06I 8/27/2012 (ug/l)	MW-06I 11/12/2013 (ug/l)	MW-06I 3/18/2015 (ug/l)	MW-06I 05/10/2016 (ug/l)	MW-06I 8/22/2017 (ug/l)	MW-06I 11/30/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 UJ*	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 UJ*	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 UJ*	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 UJ*	5 U	5 U*	5 U	5.0 U	3.3 UB	2.8 UB	5.1 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 UJ*	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	0.51 J	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 UJ*	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	5.7 UB	7.7 UB	6.8 UB	3.8 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.38 J	5 ST
Toluene	000108-88-3	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	UJ*	5 U	5 U	5 U	0.51	0	0	0	0.38	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-06S 02/22/07 (ug/l)	MW-06S 11/4/2008 (ug/l)	MW-06S 8/11/2009 (ug/l)	MW-06S 2/4/2010 (ug/l)	MW-06S 5/26/2011 (ug/l)	MW-06S 8/27/2012 (ug/l)	MW-06S 11/13/2013 (ug/l)	MW-06S 3/18/2015 (ug/l)	MW-06S 05/10/2016 (ug/l)	MW-06S 8/22/2017 (ug/l)	MW-06S 11/30/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	5 UJ*	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	1 J*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	4 J*	5 U	5 UJ*	2 J	3 J	0.67 J	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 UJ*	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	1 BJ*	5 U*	5 U	5.0 U	3.8 UB	3.0 UB	4.3 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 UJ*	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	1 J	4 J*	5 U	2 J*	3 J	3 J	0.90 J	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	18	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 UJ*	5 U	5 U	4.5 UB	7.7 UB	7.8 UB	1.0 U	1.2 J	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	0.77 J	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	3.8	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 UJ*	5 U	5 U	NA	NA	NA	1.0 U	1.0 U	5 ST
TOTAL VOCs		1	8	U	5 UJ*	5	6 J	1.57	22.57	0	0	1.2	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-07I 02/22/07 (ug/l)	MW-07I 11/4/2008 (ug/l)	MW-07I 8/14/2009 (ug/l)	MW-07I 2/8/2010 (ug/l)	MW-07I 5/26/2011 (ug/l)	MW-07I 8/27/2012 (ug/l)	MW-07I 11/12/2013 (ug/l)	MW-07I 3/18/2015 (ug/l)	MW-07I 05/10/2016 (ug/l)	MW-07I 8/22/2017 (ug/l)	MW-07I 11/29/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.3 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 U	5 U*	5 U	5.0 U	4.0 UB	2.5 UB	2.1 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 UJ*	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	19	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.2 UB	7.5 UB	7.4 UB	3.4 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	4 J*	5 U	5 U	5 U	2 J	12	1.4 J	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	40	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 UJ*	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	NA	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	23	U	5 U	5 U	2	12	1.4	0	0	0	-

See Last page for Qualifiers and Notes

D&B ENGINEERS AND ARCHITECTS, P.C.

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-11D 02/28/07 (ug/l)	MW-11D 11/5/2008 (ug/l)	MW-11D 8/13/2009 (ug/l)	MW-11D 2/5/2010 (ug/l)	MW-11D 5/27/2011 (ug/l)	MW-11D 8/29/2012 (ug/l)	MW-11D 11/14/2013 (ug/l)	MW-11D 3/19/2015 (ug/l)	MW-11D 05/12/2016 (ug/l)	MW-11D 8/23/2017 (ug/l)	MW-11D 12/3/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5	3 J*	5 U	5 U	5 U	5 U	0.95 J	0.68 J	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5	3 J*	5 U	5 U	5 U	1 J	1.1 J	0.79 J	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	2 J	3 J*	5 U	5 U	5 U	5 U	0.67 J	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.3	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	2 BJ	5 U*	5 U	2.4 UB	2.6 UB	3.0 UB	1.0 U	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.39 J	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	3.9 UB	8.4 UB	8.5 UB	6.2 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	1 J*	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	2 J*	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		12	12	U	5 U	5 U	1	5.02	1.47	0	0.39	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-11I 02/28/07 (ug/l)	MW-11I 11/4/2008 (ug/l)	MW-11I 8/13/2009 (ug/l)	MW-11I 2/5/2010 (ug/l)	MW-11I 5/27/2011 (ug/l)	MW-11I 8/29/2012 (ug/l)	MW-11I 11/14/2013 (ug/l)	MW-11I 3/19/2015 (ug/l)	MW-11I 05/12/2016 (ug/l)	MW-11I 8/23/2017 (ug/l)	MW-11I 12/3/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 UJ	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.0006 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 UJ	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 U	5 U*	5 U	2.4 UB	2.5 UB	3.2 UB	1.0 U	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 UJ	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	2 J*	5 U	2 J	5 U	2 J	0.63 J	0.74 J	0.50 U	0.58 J	0.48 J	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	3.6 UB	8.9 UB	8.1 UB	5.4 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	2 J*	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 UJ	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 UJ	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	4	U	5 U	5 U	2	0.63	0.74	0	0.58	0.48	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-11S 02/23/07 (ug/l)	MW-11S 11/4/2008 (ug/l)	MW-11S 8/13/2009 (ug/l)	MW-11S 2/5/2010 (ug/l)	MW-11S 5/27/2011 (ug/l)	MW-11S 8/29/2012 (ug/l)	MW-11S 11/14/2013 (ug/l)	MW-11S 3/19/2015 (ug/l)	MW-11S 05/12/2016 (ug/l)	MW-11S 8/23/2017 (ug/l)	MW-11S 12/3/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	4 J*	5 U	5 U	5 U*	5 U	3.0 UB	2.8 UB	3.3 UB	1.0 U	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	5.1 UB	8.4 UB	9.0 UB	3.2 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	2 J	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	1.8 J	0.60 J	0.77 J	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	4	U	5 U	5 U	2	0	0	1.8	0.6	0.77	-

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APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-12D 02/23/07 (ug/l)	MW-12D 11/4/2008 (ug/l)	MW-12D 8/13/2009 (ug/l)	MW-12D 2/5/2010 (ug/l)	MW-12D 5/27/2011 (ug/l)	MW-12D 8/29/2012 (ug/l)	MW-12D 11/14/2013 (ug/l)	MW-12D 3/20/2015 (ug/l)	MW-12D 05/12/2016 (ug/l)	MW-12D 8/23/2017 (ug/l)	MW-12D 12/3/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 UJ*	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 UJ*	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	1 BJ	5 U*	5 U	2.7 UB	2.2 UB	2.7 UB	1.0 U	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.30 J	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.9 UB	10 UB	8.0 UB	7.2 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 UJ*	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	U	U	5 U	5 U	0	0	0	0.3	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-12I 02/23/07 (ug/l)	MW-12I 11/4/2008 (ug/l)	MW-12I 8/13/2009 (ug/l)	MW-12I 2/5/2010 (ug/l)	MW-12I 5/27/2011 (ug/l)	MW-12I 8/29/2012 (ug/l)	MW-12I 11/14/2013 (ug/l)	MW-12I 3/20/2015 (ug/l)	MW-12I 05/12/2016 (ug/l)	MW-12I 8/23/2017 (ug/l)	MW-12I 12/3/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U*J*	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U*J*	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	1 BJ	5 U*	2 JU	2.1 UB	3.1 UB	2.8 UB	1.0 U	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.7 UB	10 UB	8.2 UB	5.8 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U*J*	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	U	1	5 U	2	0	0	0	0	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

Sample ID Date of Collection Volatile Organic Compounds	CAS #	MW-12S 02/23/07 (ug/l)	MW-12S 11/4/2008 (ug/l)	MW-12S 8/13/2009 (ug/l)	MW-12S 2/5/2010 (ug/l)	MW-12S 5/27/2011 (ug/l)	MW-12S 8/29/2012 (ug/l)	MW-12S 11/14/2013 (ug/l)	MW-12S 3/20/2015 (ug/l)	MW-12S 05/12/2016 (ug/l)	MW-12S 8/23/2017 (ug/l)	MW-12S 12/3/2018 (ug/l)	NYSDEC Class GA GROUNDWATER ST/GV
1,1,1,2-Tetrachloroethane	000630-20-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,1-Trichloroethane	000071-55-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1,2-Trichloroethane	000079-00-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethane	000075-34-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloroethene	000075-35-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2,3-Trichloropropane	000096-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.04 ST
1,2-Dibromo-3-chloropropane	000096-12-8	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.030 U	0.030 U	0.04 ST
1,2-Dibromoethane	000106-93-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
1,2-Dichlorobenzene	000095-50-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
1,2-Dichloroethane	000107-06-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5 ST
1,2-Dichloropropane	000078-87-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
1,4-Dichlorobenzene	000106-46-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	3 ST
2-Butanone	000078-93-3	5 U	5 U	5 U	5 U	5 U	1 J	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
2-Hexanone	000591-78-6	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	50 GV
4-Methyl-2-pentanone	000108-10-1	5 U	5 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	1.0 U	0.50 U	0.50 U	-
Acetone	000067-64-1	5 U	5 U	5 U	5 U	5 U*	3 JU	2.2 UB	2.9 UB	3.1 UB	2.3 UB	1.0 U	50 GV
Acrylonitrile	000107-13-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Benzene	000071-43-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	1 ST
Bromochloromethane	000074-97-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Bromodichloromethane	000075-27-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromoform	000075-25-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Bromomethane	000074-83-9	5 U	5 U	5 U	5 U	5 U*J*	5 U	2.0 U	4.0 U	1.0 U	0.25 U	0.25 U	5 ST
Carbon disulfide	000075-15-0	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	60 GV
Carbon tetrachloride	000056-23-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chlorobenzene	000108-90-7	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroethane	000075-00-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Chloroform	000067-66-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	7 ST
Chloromethane	000074-87-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,2-Dichloroethene	000156-59-2	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
cis-1,3-Dichloropropene	010061-01-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
Dibromochloromethane	000124-48-1	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	50 GV
Dibromomethane	000074-95-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Ethylbenzene	000100-41-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Iodomethane	000074-88-4	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	NA	0.50 U	0.50 U	0.50 U	5 ST
Methylene chloride	000075-09-2	5 U	5 U	5 UJ*	5 U	5 U	5 U	4.1 UB	9.6 UB	8.4 UB	5.5 UB	1.0 U	5 ST
Styrene	000100-42-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Tetrachloroethene	000127-18-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Toluene	000108-88-3	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,2-Dichloroethene	000156-60-5	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
trans-1,3-Dichloropropene	010061-02-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	0.4 ST
trans-1,4-Dichloro-2-butene	000110-57-6	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	2.0 U	0.50 U	0.50 U	0.50 U	5 ST
Trichloroethene	000079-01-6	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Trichlorofluoromethane	000075-69-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Vinyl Acetate	000108-05-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	-
Vinyl chloride	000075-01-4	5 U	5 U	5 U	5 U	5 U	5 U	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	2 ST
m,p-Xylene	001330-20-7	NA	NA	NA	NA	NA	NA	4.0 U	4.0 U	1.0 U	0.50 U	0.50 U	5 ST
o-Xylene	000095-47-6	NA	NA	NA	NA	NA	NA	2.0 U	2.0 U	0.50 U	0.25 U	0.25 U	5 ST
Xylene (total)	001330-20-7	5 U	5 U	5 U	5 U	5 U	5 U	NA	NA	1.5 U	1.0 U	1.0 U	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	4	0	0	0	0	0	-

See Last page for Qualifiers and Notes

APPENDIX A-3
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
VOLATILE ORGANIC COMPOUNDS

QUALIFIERS
B: Compound was found in the method blank as well as the sample
U: Compound was analyzed for but not detected at the detection limit shown.
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.
U* or UB: Result qualified as non-detect based on validation criteria
J or J*:: Compound was found at a concentration below the detection limit, value estimated based on validation criteria
Parameter exceeds Standard/Guidance Value

NOTES
GV: Guidance Value
ST: Standard
-: No standard or guildance value
NA: Not Analyzed

APPENDIX A-4

Monitoring Well Sample Results – Emerging Contaminants

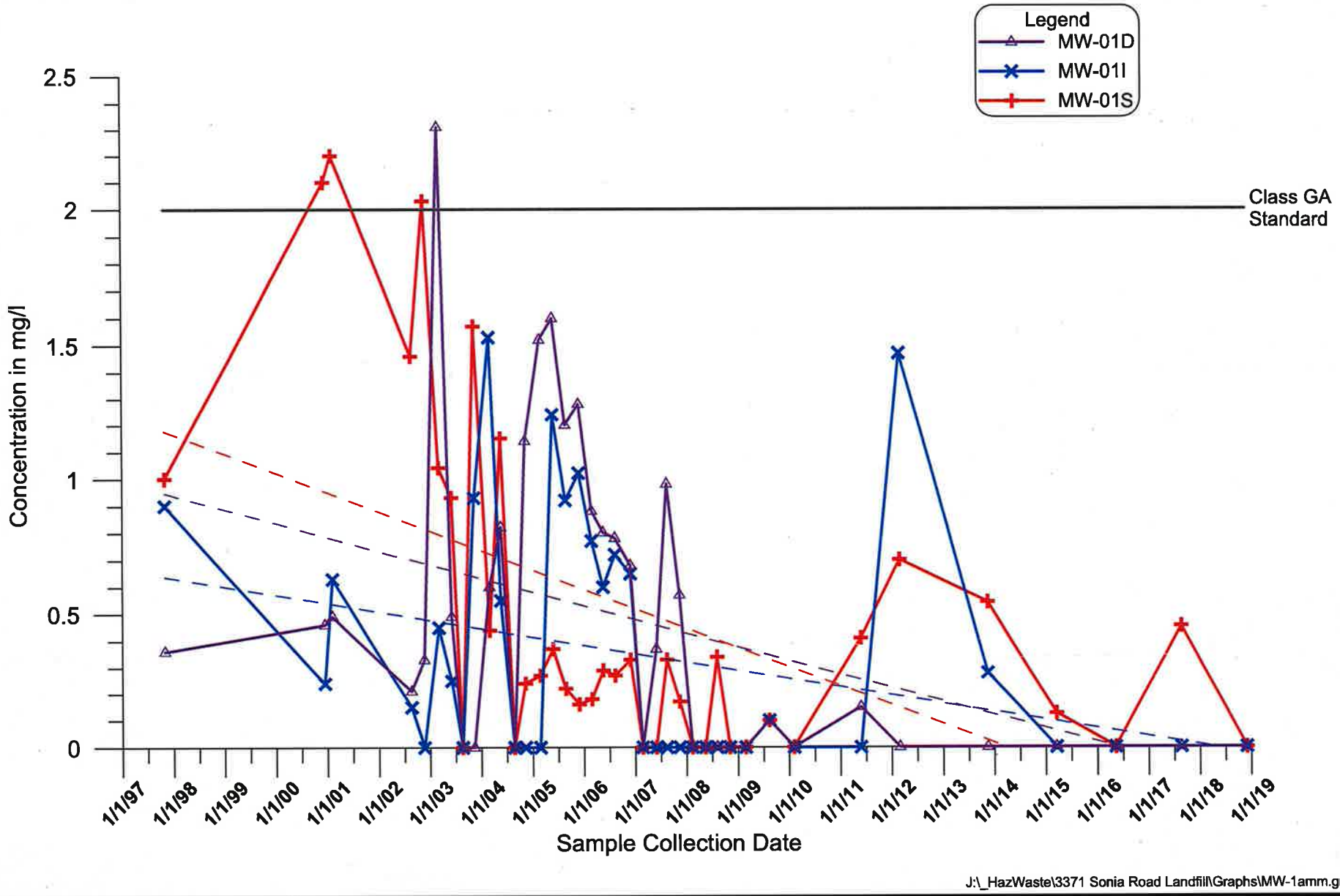
Appendix A-4
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
PFAs AND 1,4-DIOXANE SAMPLE RESULTS

	SITE: / DATE:	MW-12S 11/29/2018	MW-3S 11/29/2018	BLIND DUP 11/29/2018	MW-5S 11/29/2018	FIELD BLANK-1 11/29/2018
PFAs	UNITS					
2-(N-methyl perfluorooctanesulfonamido) acetic acid	ng/l	1.1 UJ	2.4 UJ	2.4 UJ	2.5 UJ	0.97 UJ
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	ng/l	1.1 U	2.4 U	2.4 U	2.5 U	0.97 U
Perfluorobutanesulfonic acid (PFBS)	ng/l	2.3 UB	4.3 UB	4.1 UB	7.6	1
Perfluorobutanoic Acid	ng/l	7.8	9.7 J	10 J	13 J	1.9 U
Perfluorodecane Sulfonic Acid	ng/l	0.63 U	1.5 U	1.4 U	1.5 U	0.58 U
Perfluorodecanoic acid (PFDA)	ng/l	1.2 J	2.2 U	2.2 U	2.3 U	0.87 U
Perfluorododecanoic acid (PFDoA)	ng/l	0.53 U	1.2 U	1.2 U	1.3 U	0.49 U
Perfluoroheptane Sulfonate (PFHPS)	ng/l	0.42 U	0.98 U	0.96 U	1 U	0.39 U
Perfluoroheptanoic acid (PFHpA)	ng/l	3.3	3.9	4.4	6.5	0.39 U
Perfluorohexanesulfonic acid (PFHxS)	ng/l	2 J	7.3	7.4	6.6	0.39 U
Perfluorohexanoic acid (PFHxA)	ng/l	5.1	7.8	8.2	13	0.39 U
Perfluorononanoic acid (PFNA)	ng/l	2.6	4 J	4.4 J	5.5	0.39 U
Perfluorooctane Sulfonamide (FOSA)	ng/l	0.53 U	1.2 U	1.2 U	1.3 U	0.49 U
Perfluorooctanesulfonic acid (PFOS)	ng/l	22	30	26	35	0.56 J
Perfluorooctanoic acid (PFOA)	ng/l	9.7	9.7	11	20	0.38 J
Perfluoropentanoic Acid (PFPeA)	ng/l	7.6	8.9 J	9 J	15 J	1.9 U
Perfluorotetradecanoic acid (PFTA)	ng/l	0.32 U	0.73 U	0.72 U	0.76 U	0.29 U
Perfluorotridecanoic Acid (PFTriA)	ng/l	0.42 U	0.98 U	0.96 U	1 U	0.39 U
Perfluoroundecanoic Acid (PFUnA)	ng/l	0.42 U	0.98 U	0.96 U	1.5 J	0.39 U
Sodium 1H,1H,2H,2H-Perfluorodecane Sulfonate (8:2)	ng/l	2.1 U	4.9 U	4.8 U	5.1 U	1.9 U
Sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	ng/l	1.1 UJ	2.4 UJ	2.4 UJ	2.5 UJ	0.97 UJ
1,4-DIOXANE (P-DIOXANE)	ug/l	0.091 UB	0.22 UB	0.22 UBJ	0.27 UB	0.18 J

Footnotes/Qualifiers:
- ng/l: Nanogram per liter
- ug/l: Micrograms per liter
- U: Analyzed for but not detected
- UB: Qualified as non detect due to blank result
- J: Estimated value or limit
- --: Not analyzed

APPENDIX B

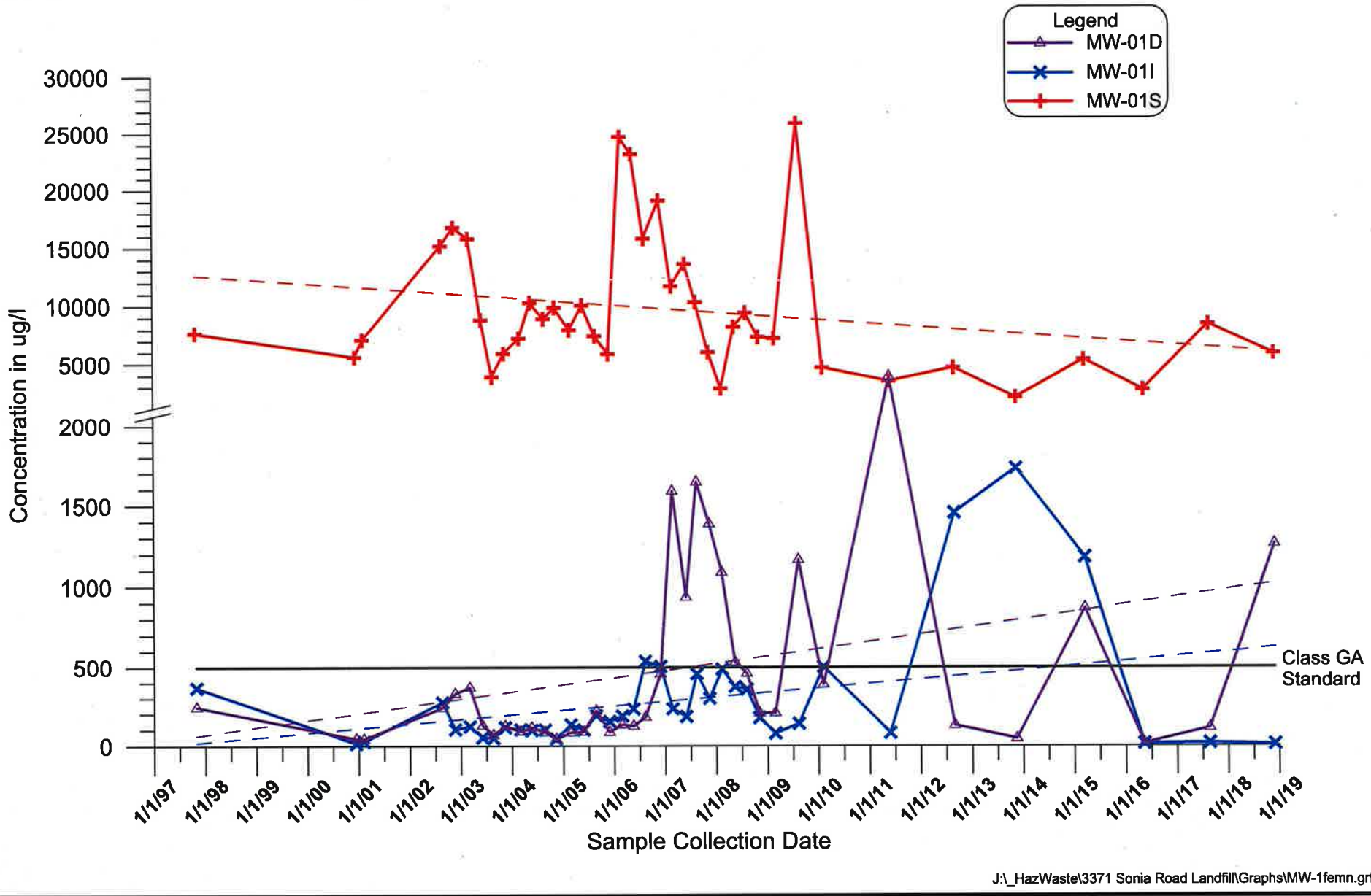
Water Quality Graphs



D&B Engineers and Architects, P.C.

Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 1

Appendix B



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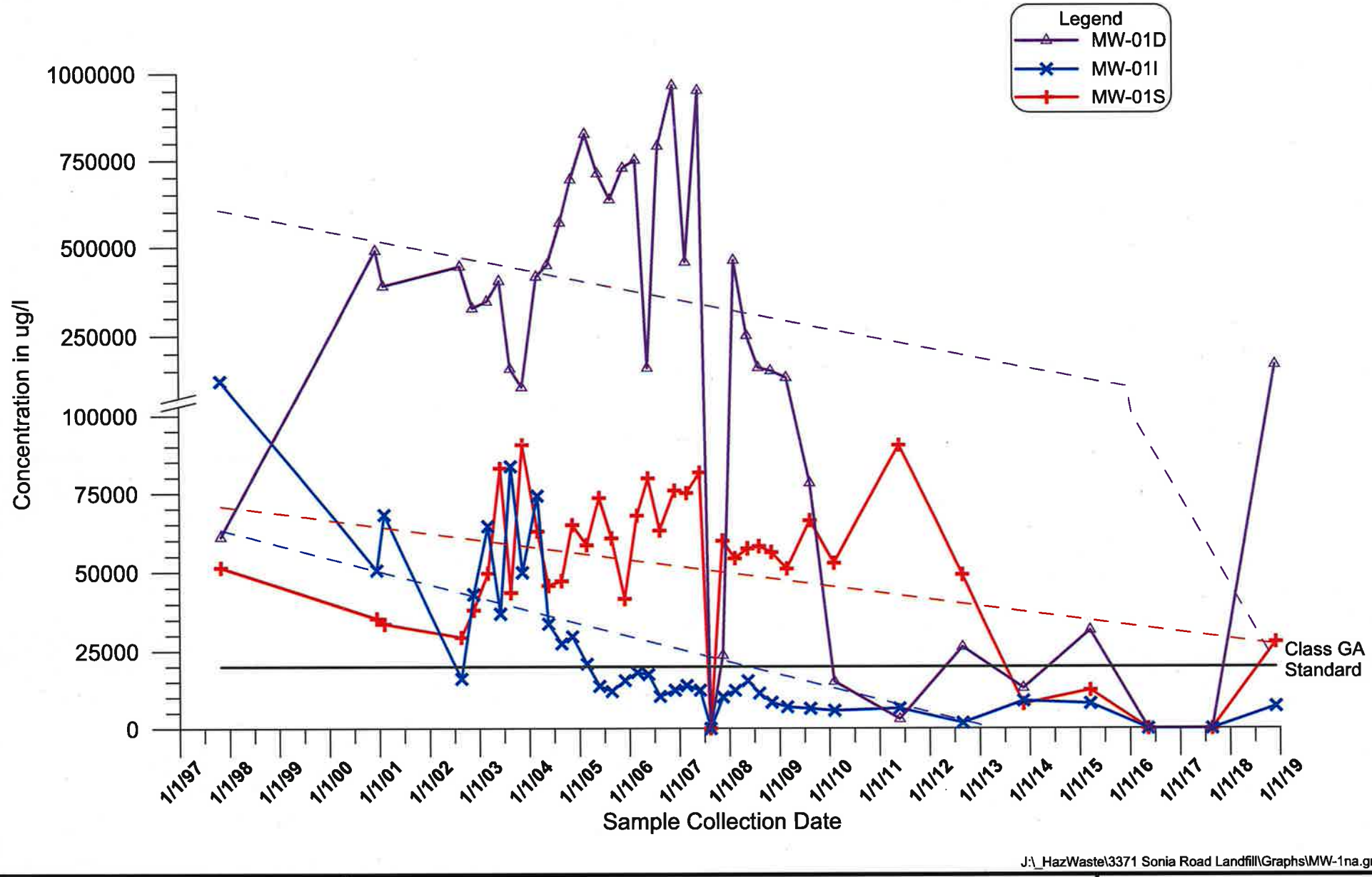
D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sum of Iron and Manganses Data for Monitoring Well Cluster 1

Appendix B



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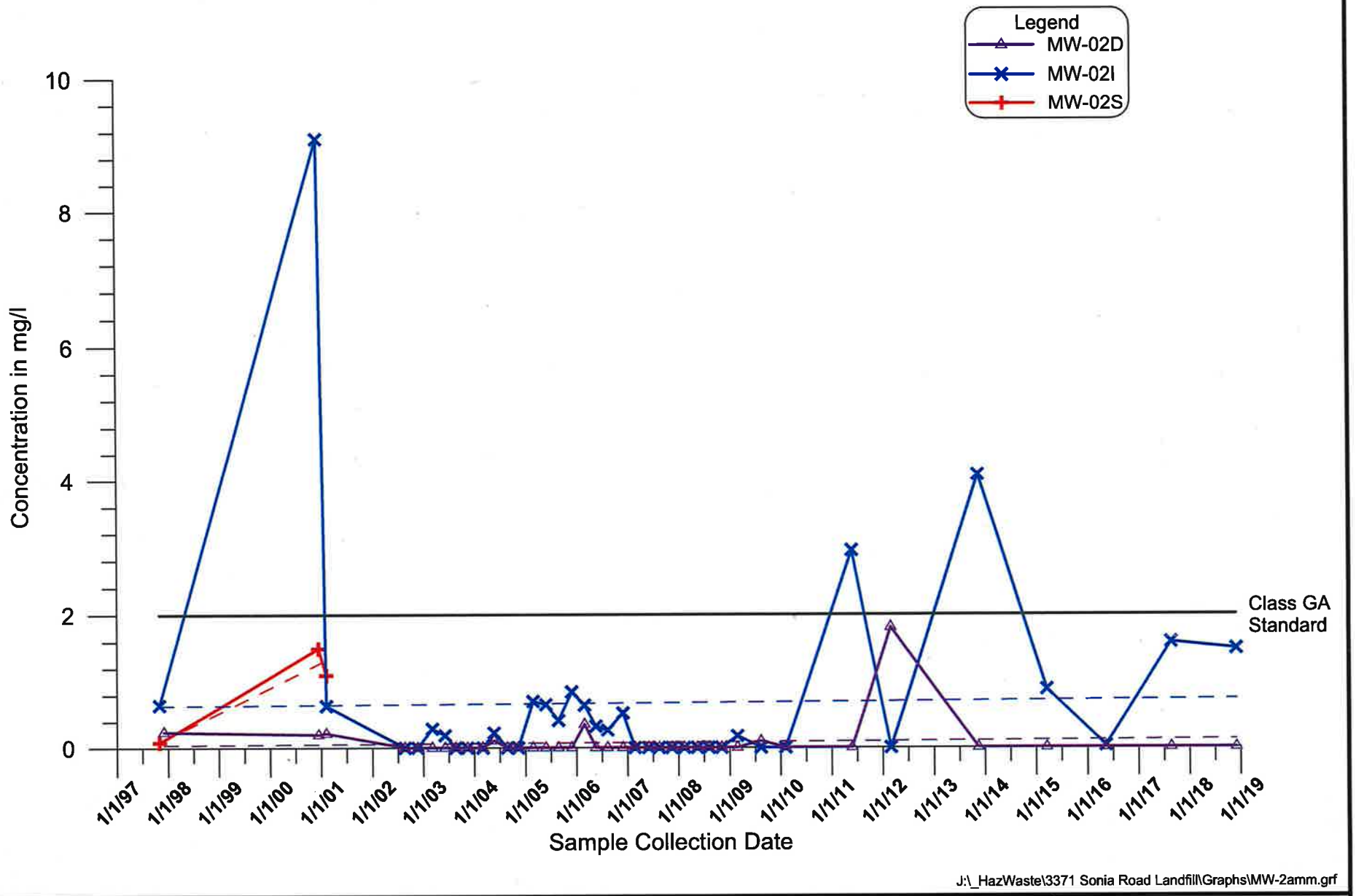
Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 1

Appendix
B



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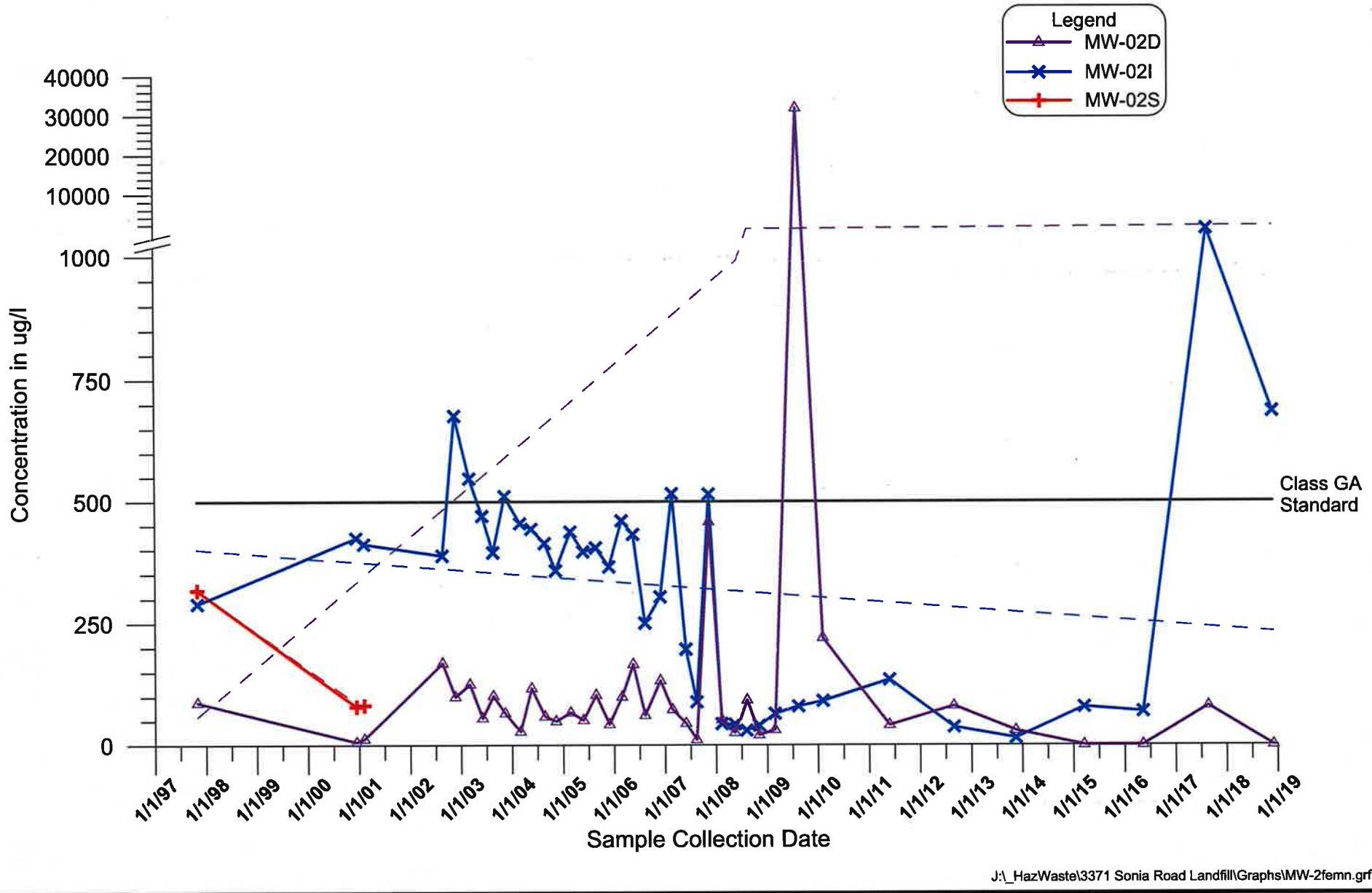
Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 2

Appendix B



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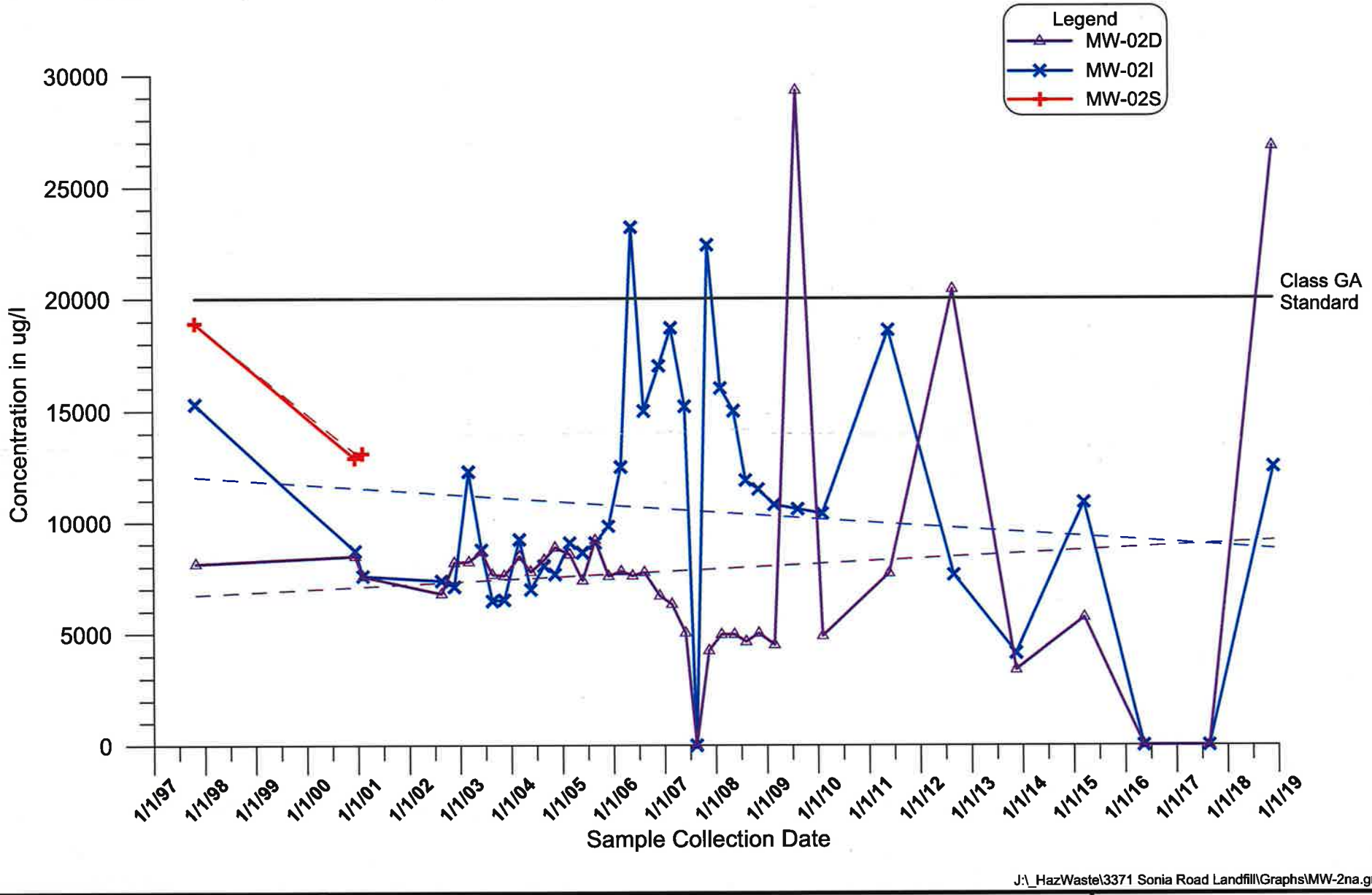
Sonia Road Landfill
Historical Sum of Iron and Manganses Data for Monitoring Well Cluster 2

Appendix B



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Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 2

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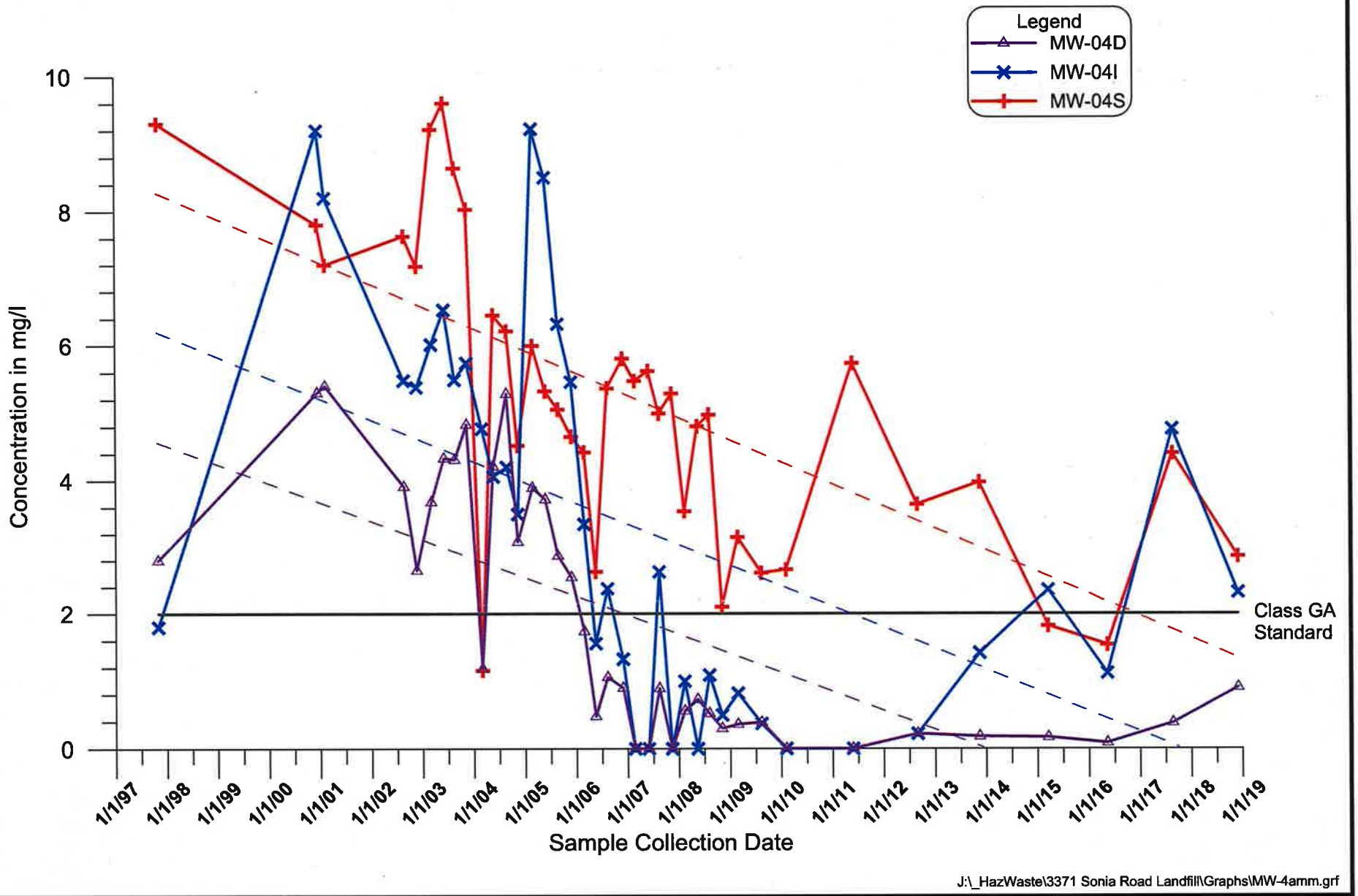

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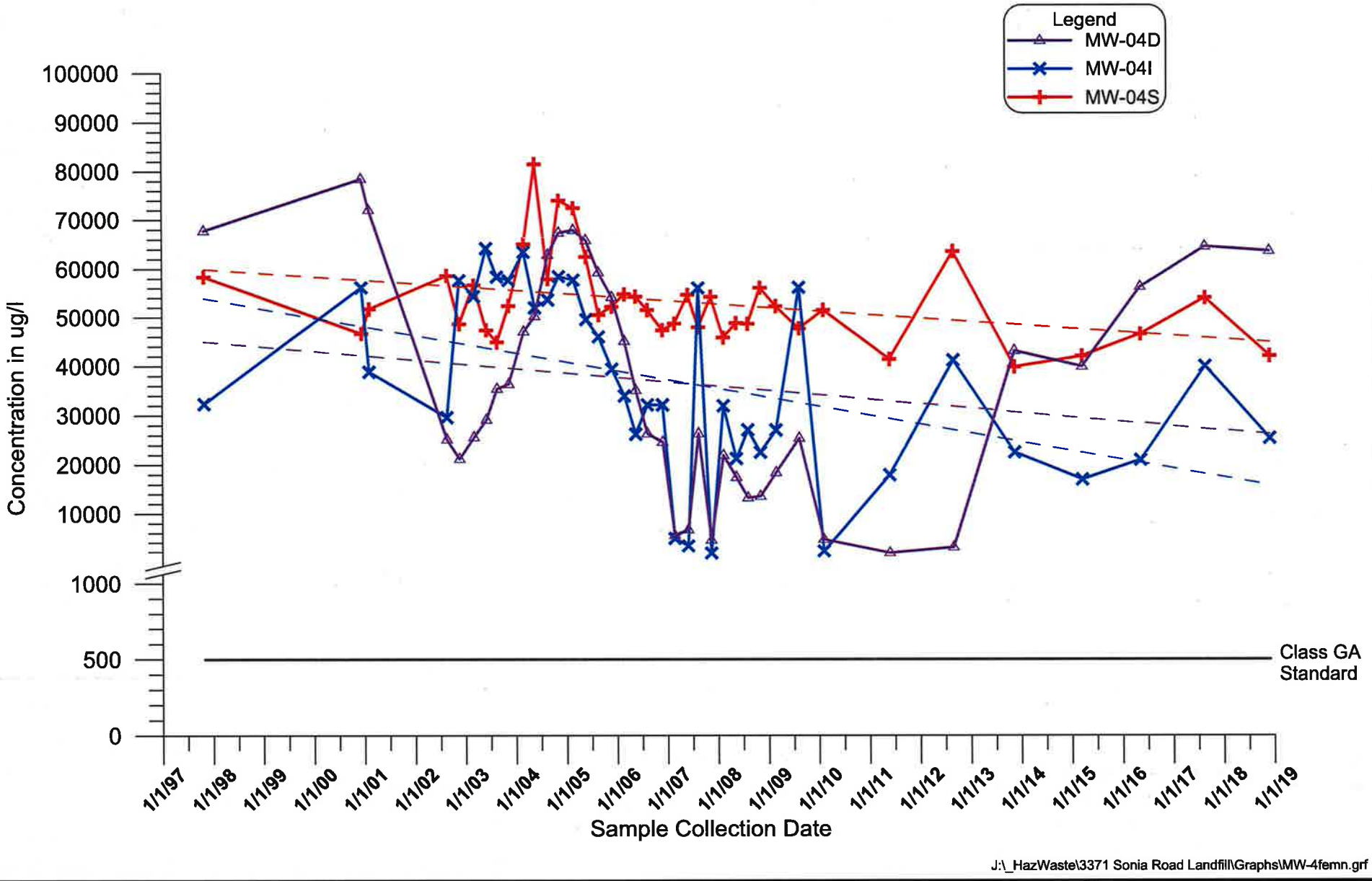
Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 4

Appendix B



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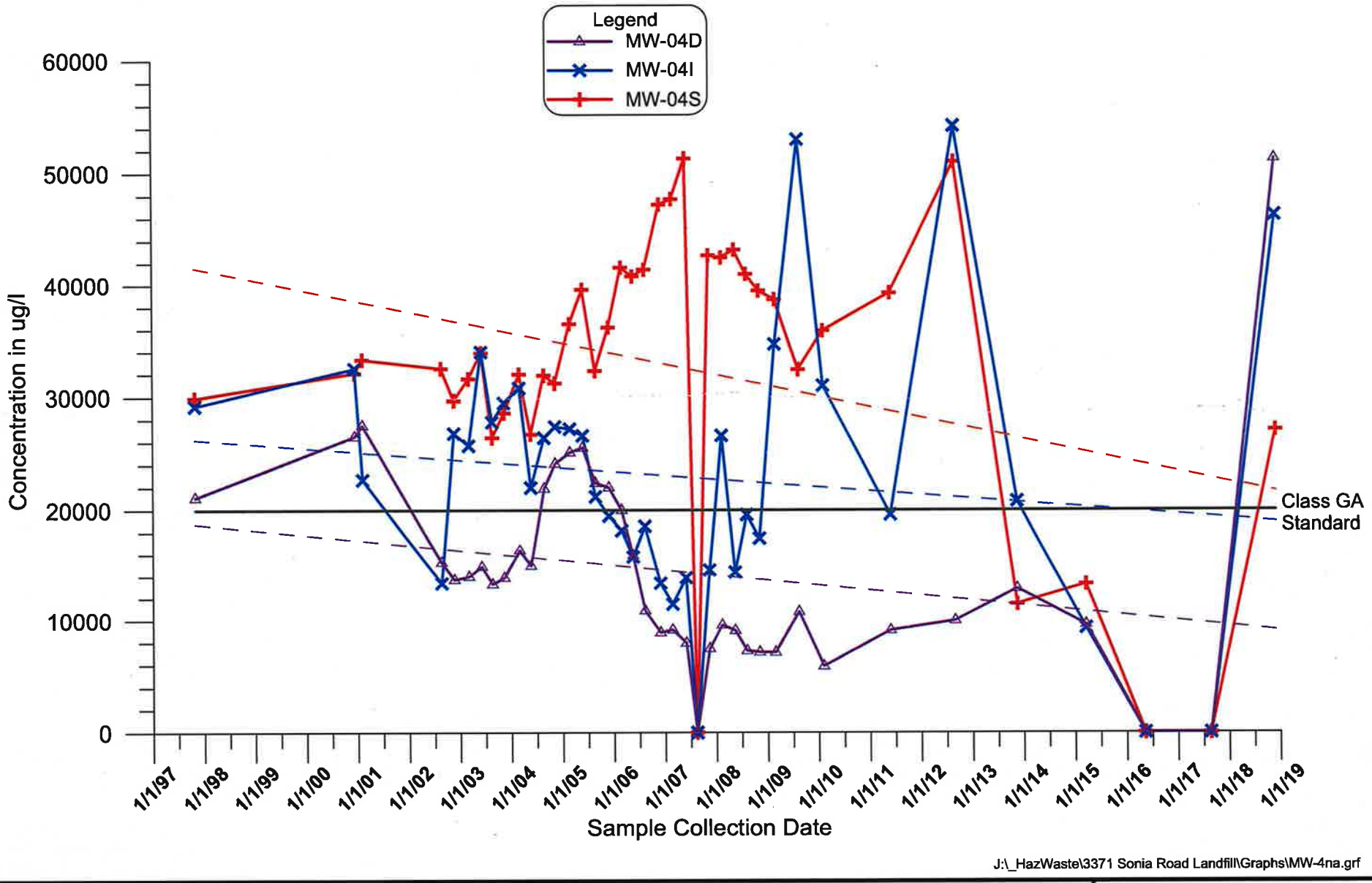
Sonia Road Landfill
Historical Sum of Iron and Manganses Data for Monitoring Well Cluster 4

Appendix B



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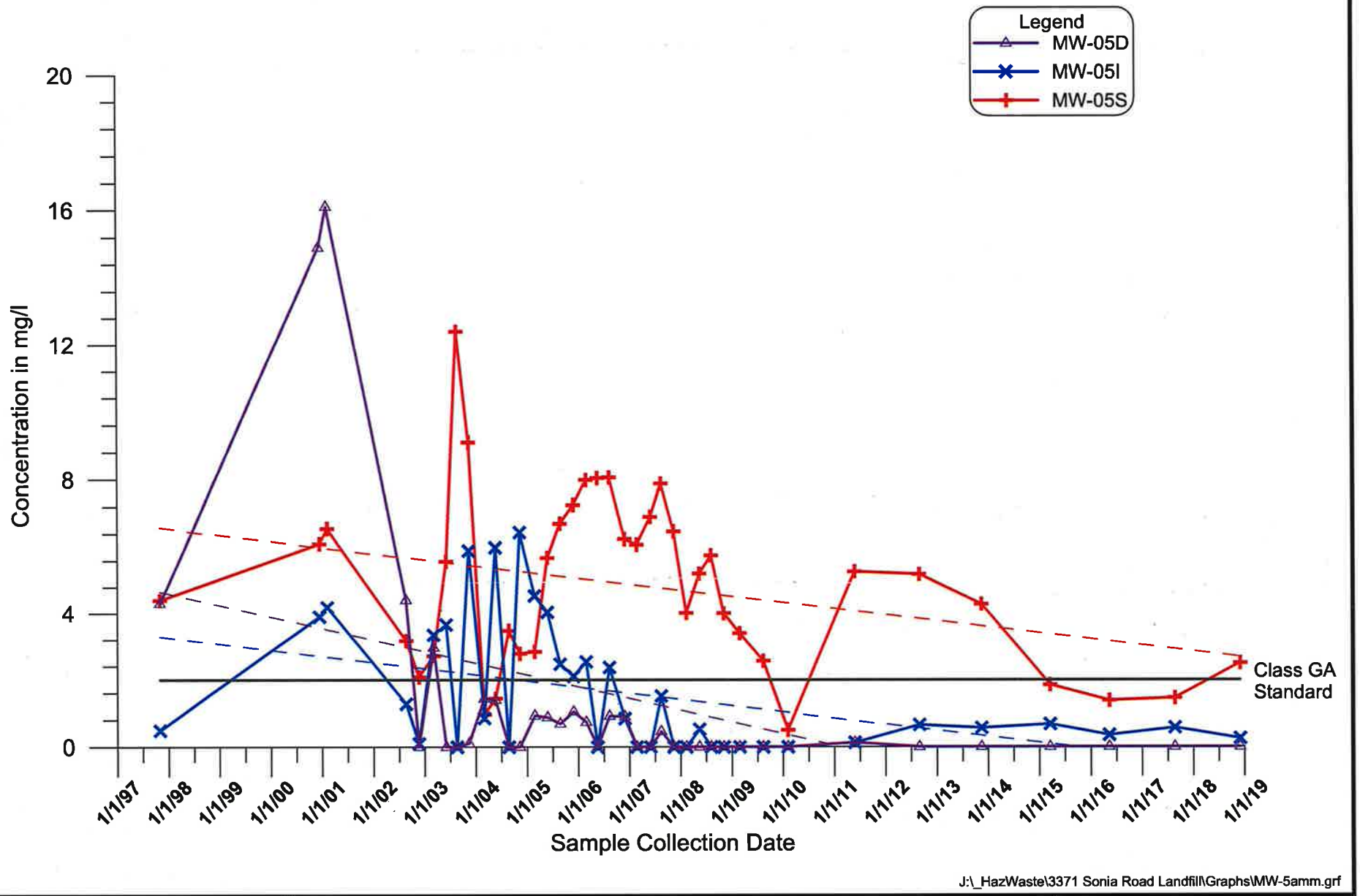
Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 4

Appendix B



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Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 5

Appendix
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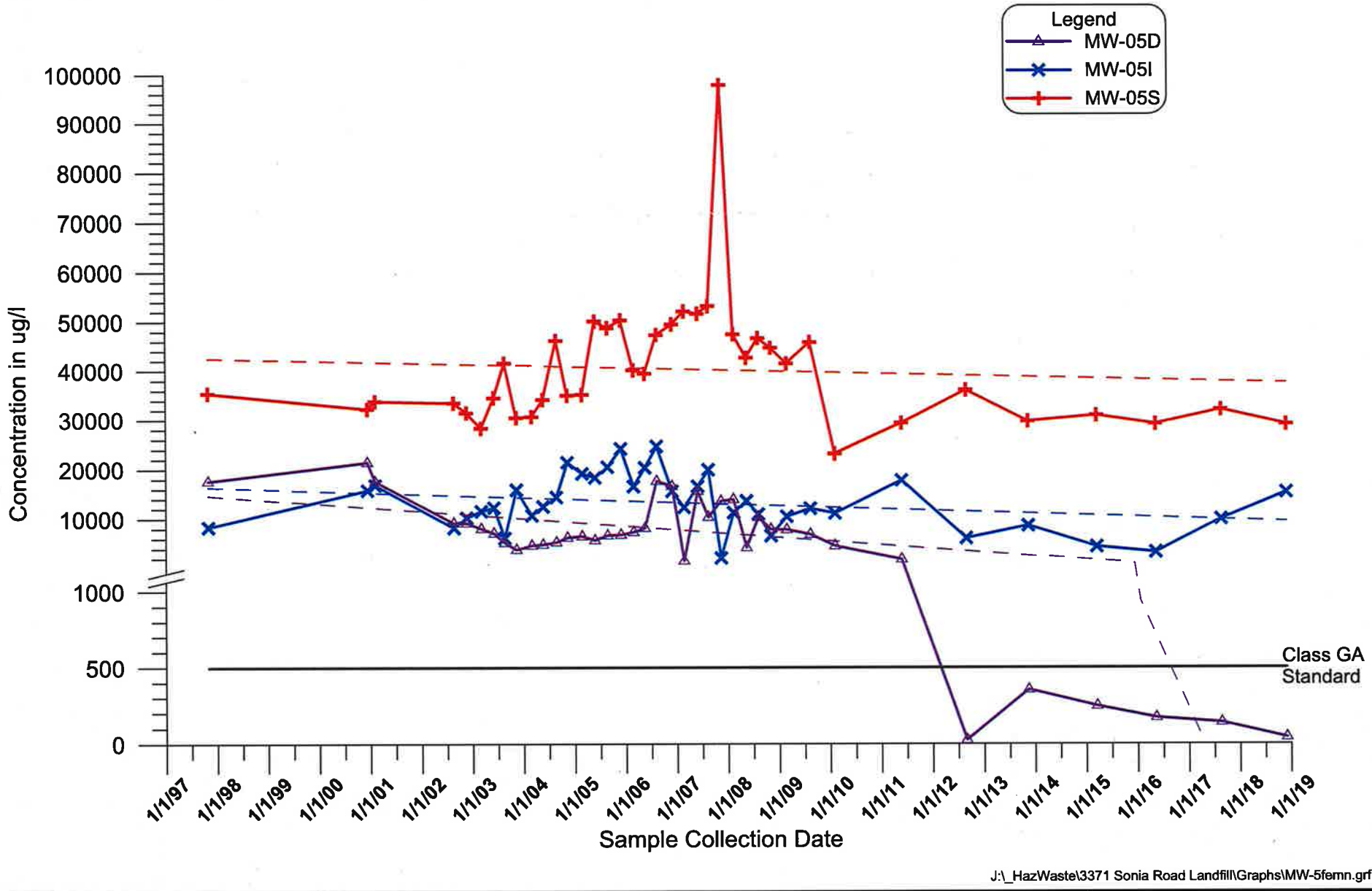

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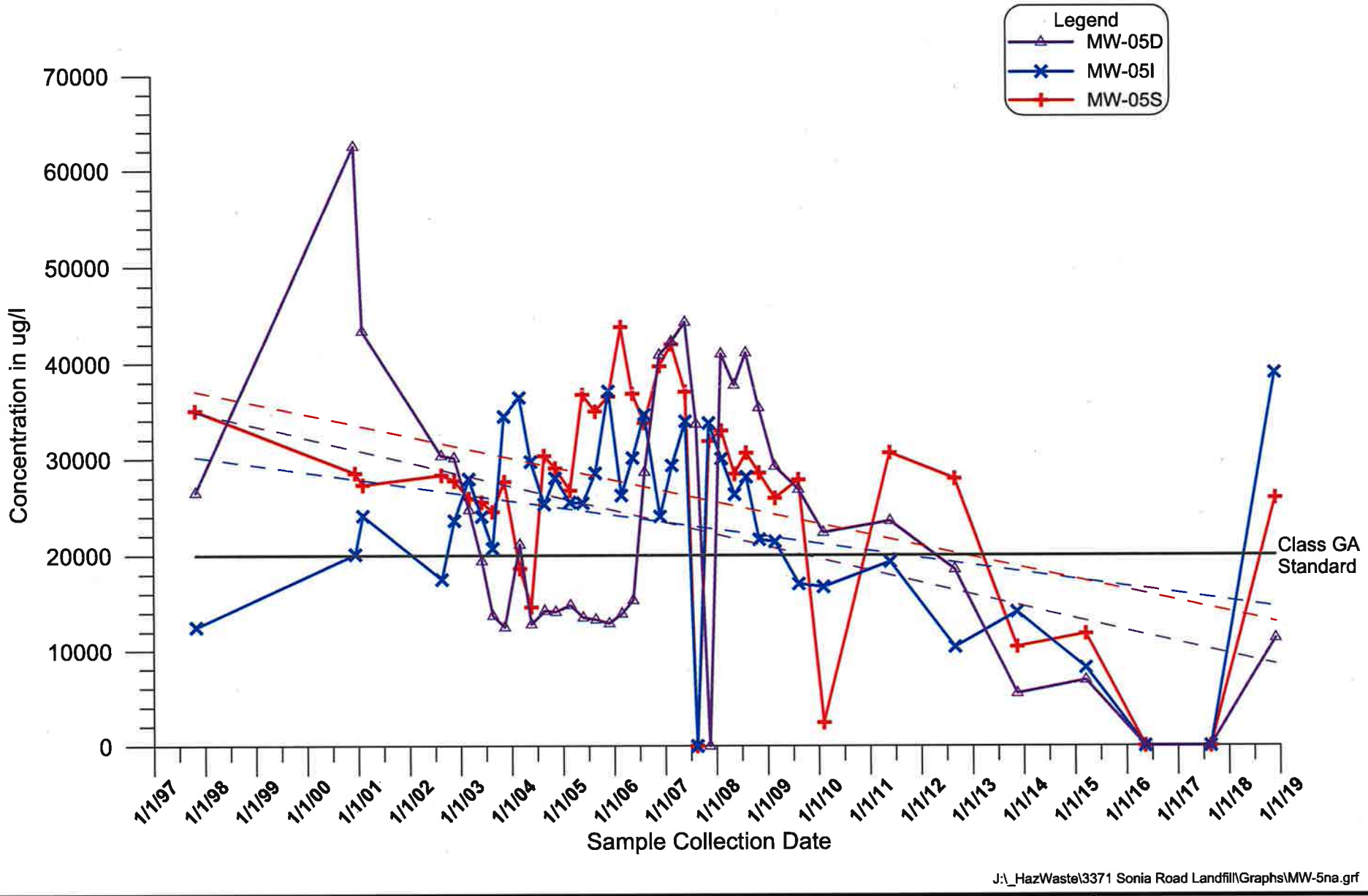
Sonia Road Landfill
Historical Sum of Iron and Manganses Data for Monitoring Well Cluster 5

Appendix B



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Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 5

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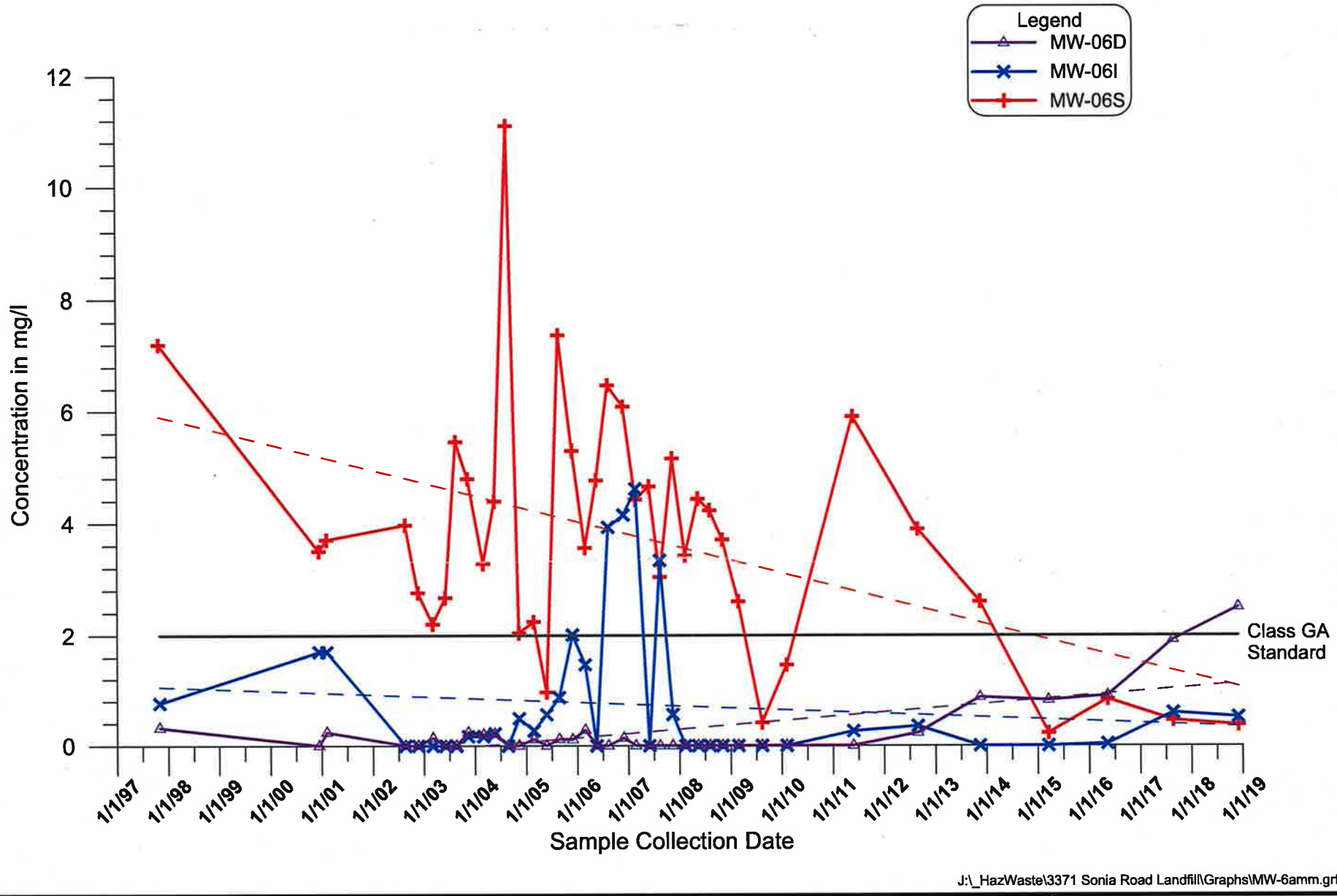

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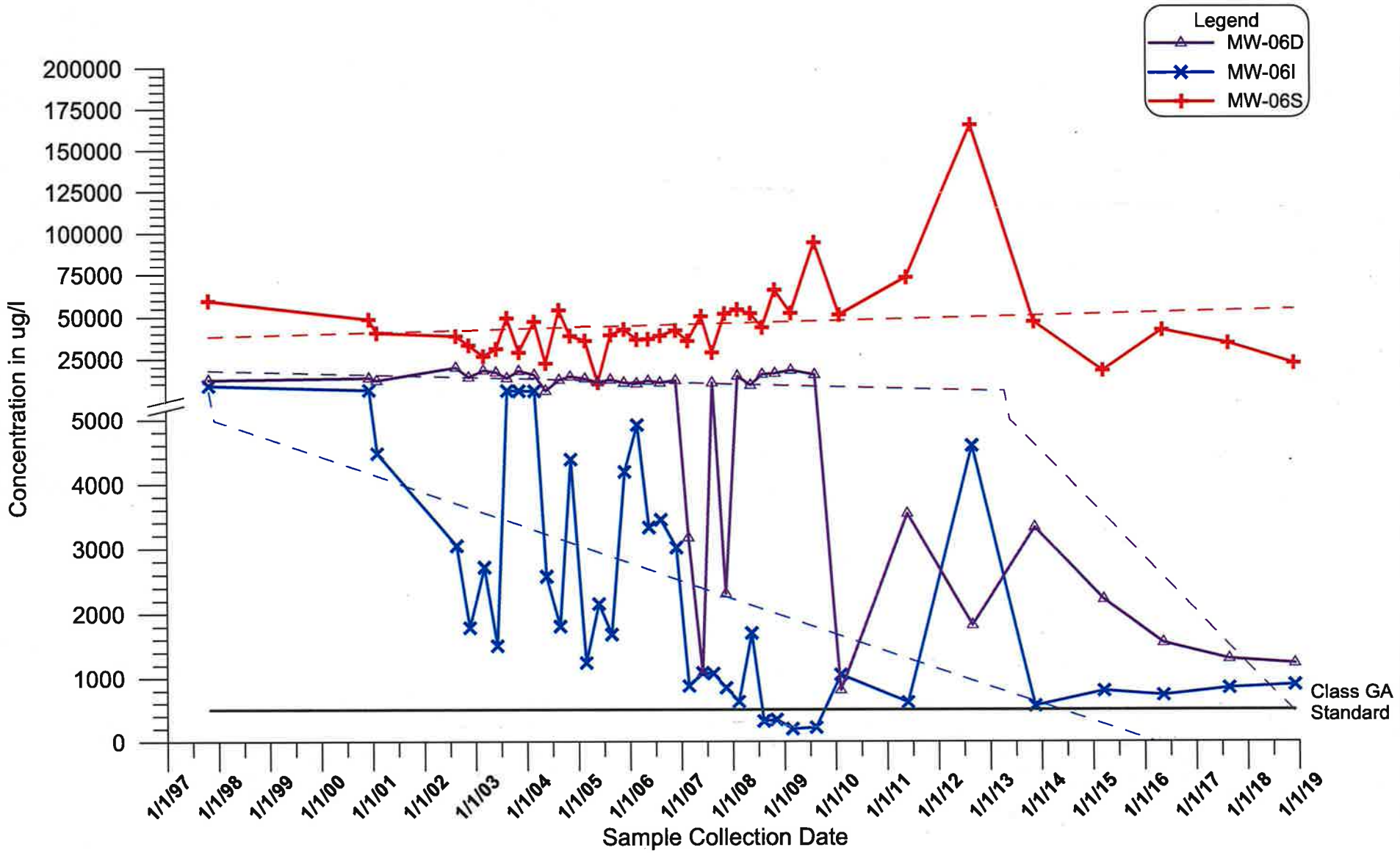
Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 6

Appendix B



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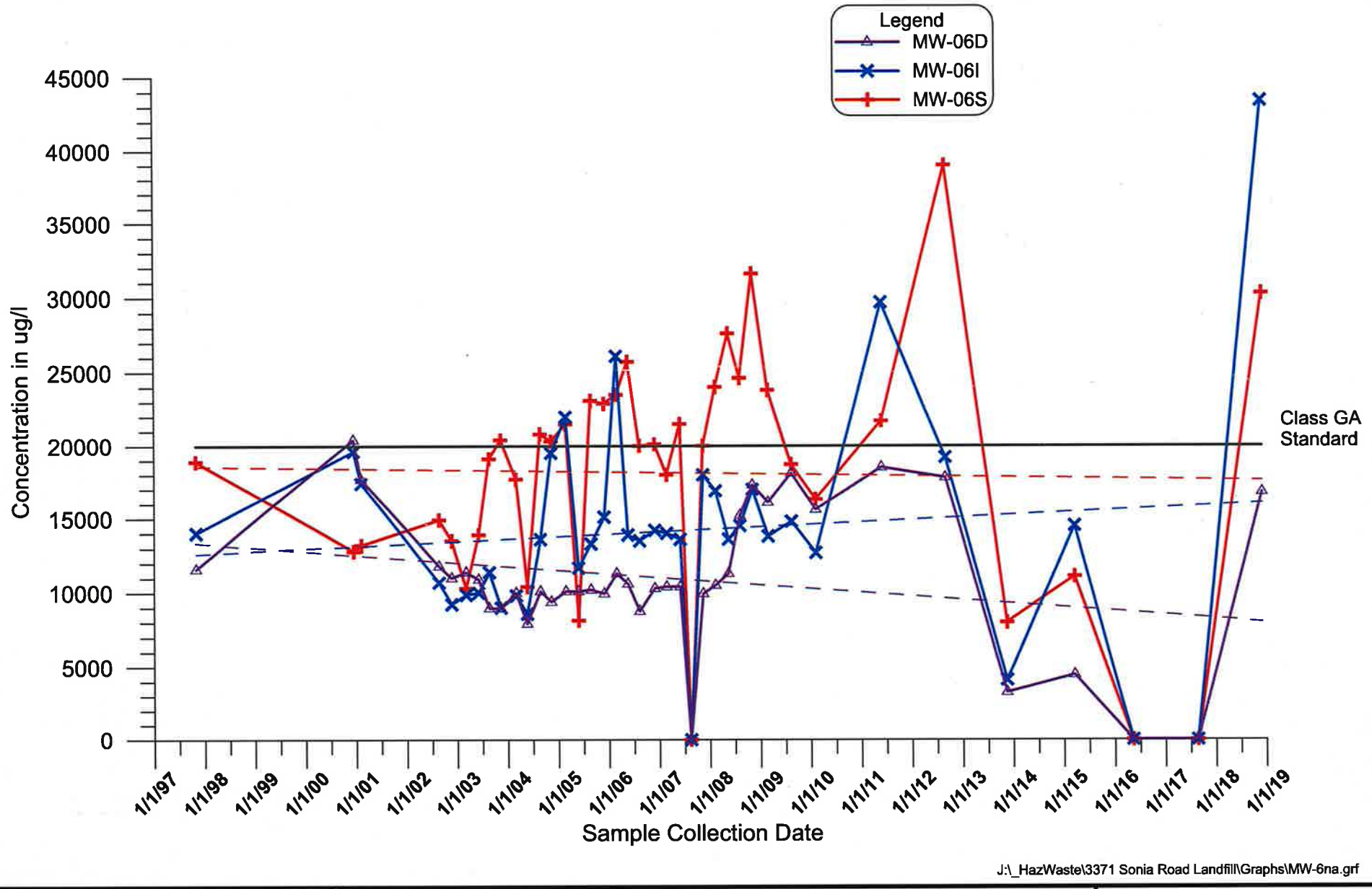
Sonia Road Landfill
Historical Sum of Iron and Manganses Data for Monitoring Well Cluster 6

Appendix B



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Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 6

Appendix
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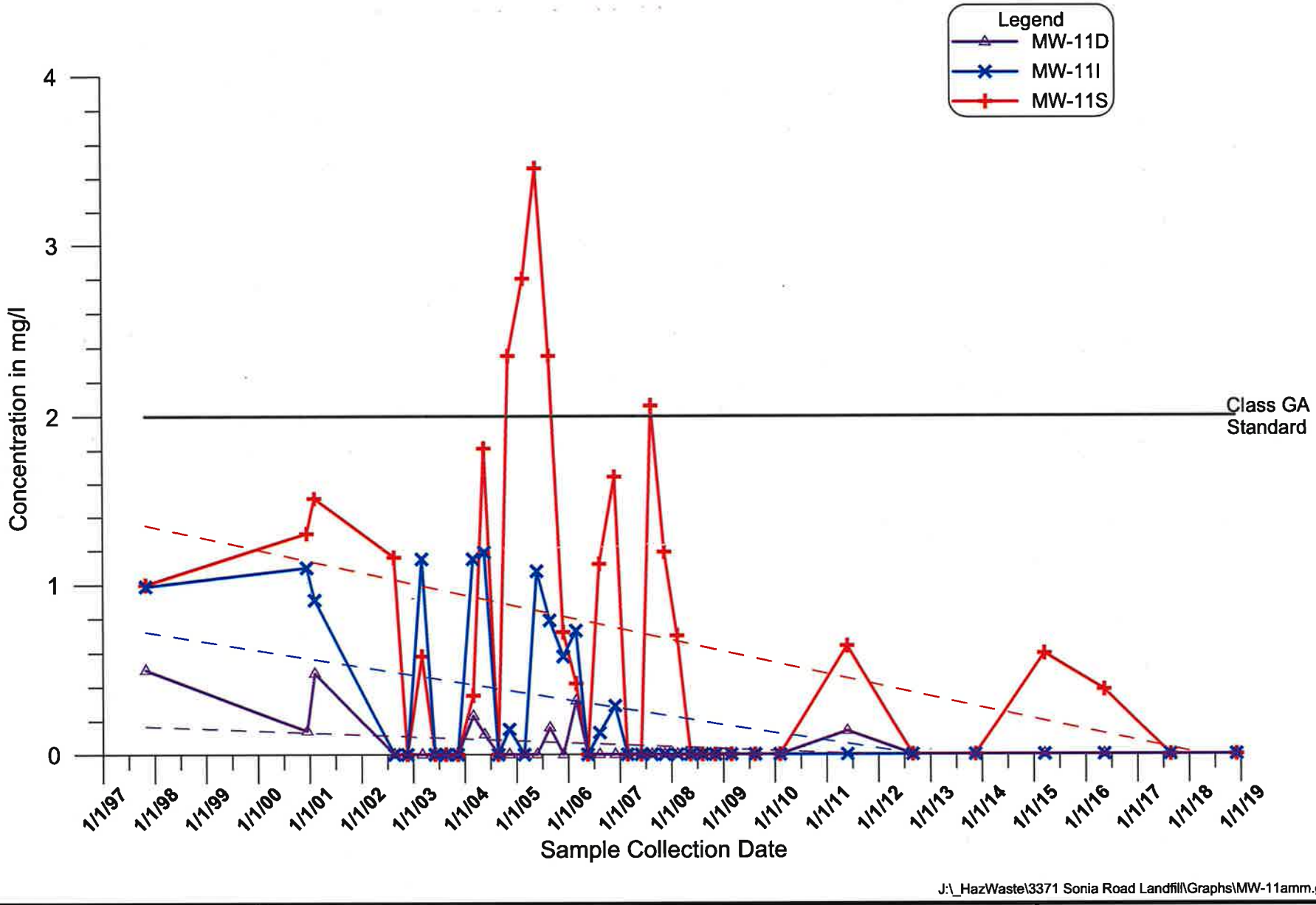

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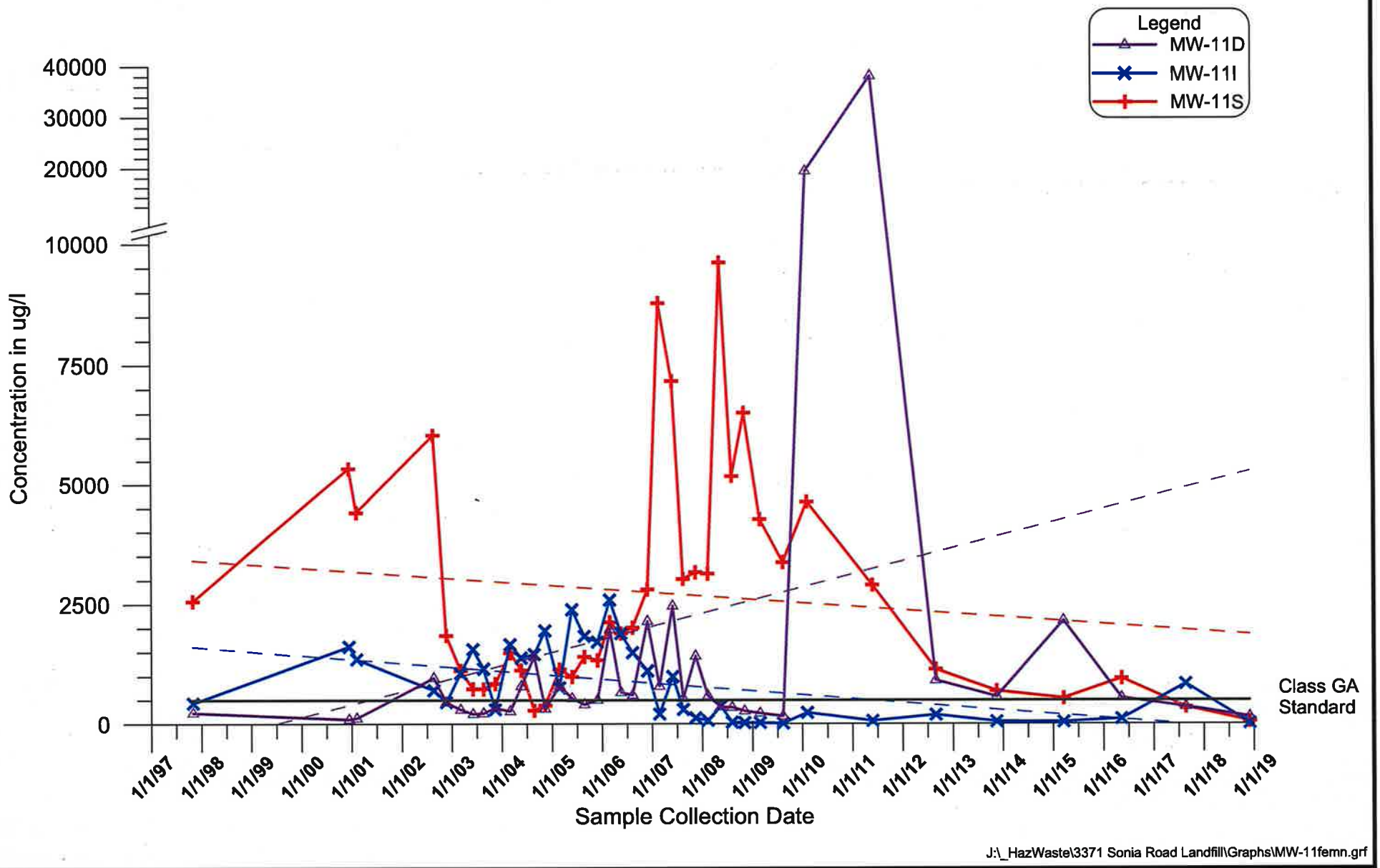
Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 11

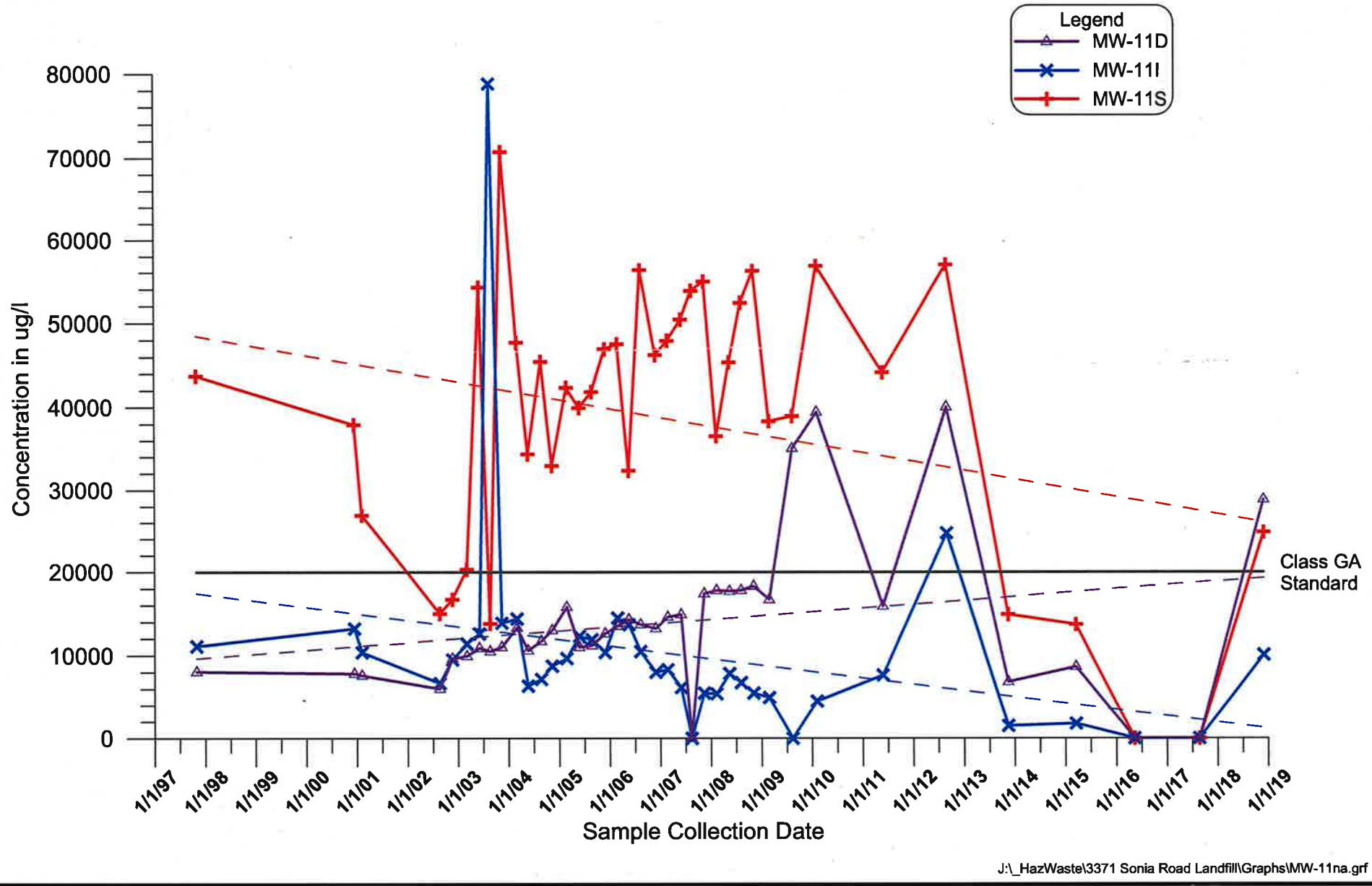
Appendix B



D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sum of Iron and Manganses Data for Monitoring Well Cluster 11

Appendix B



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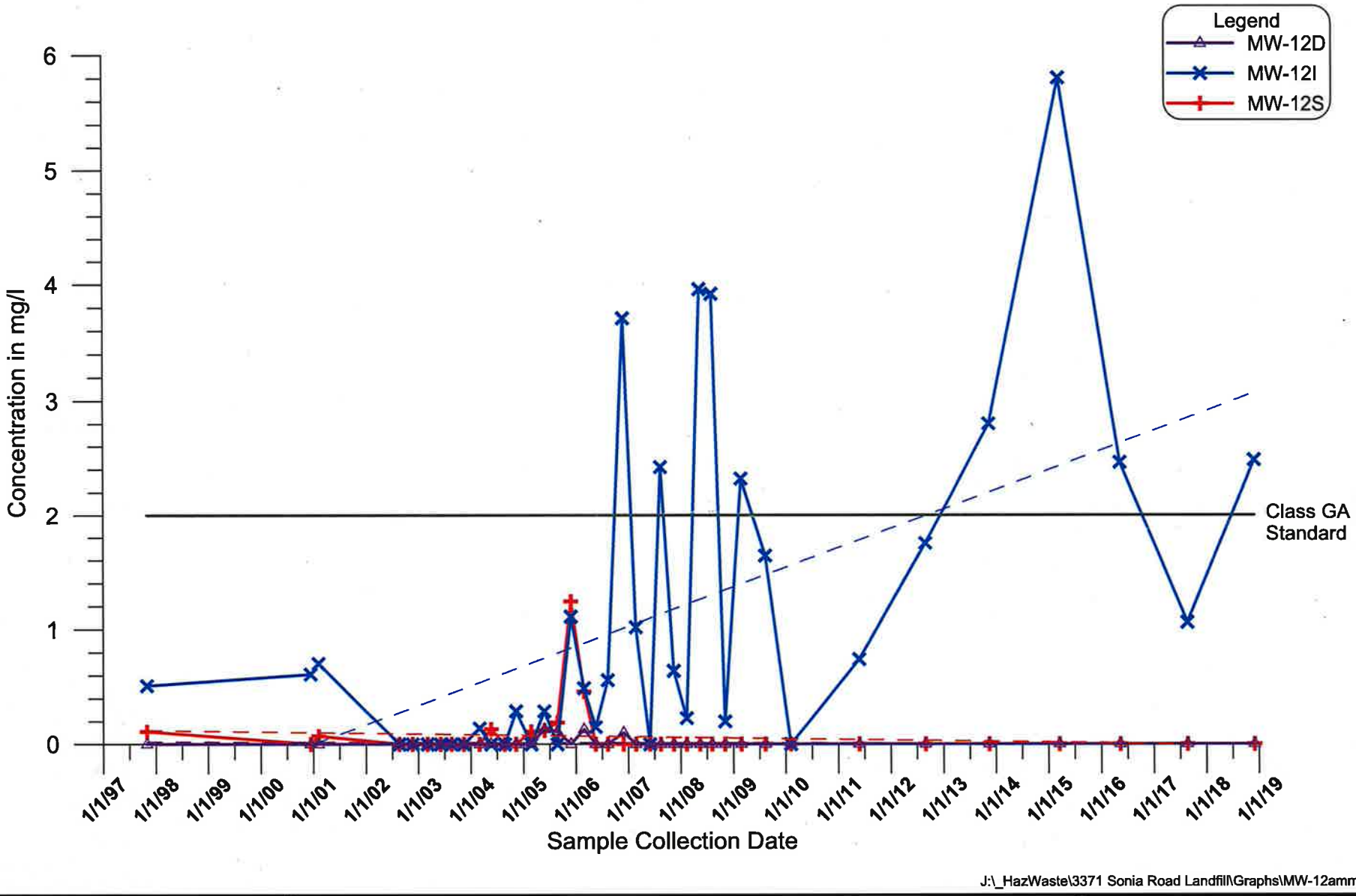
Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 11

Appendix B



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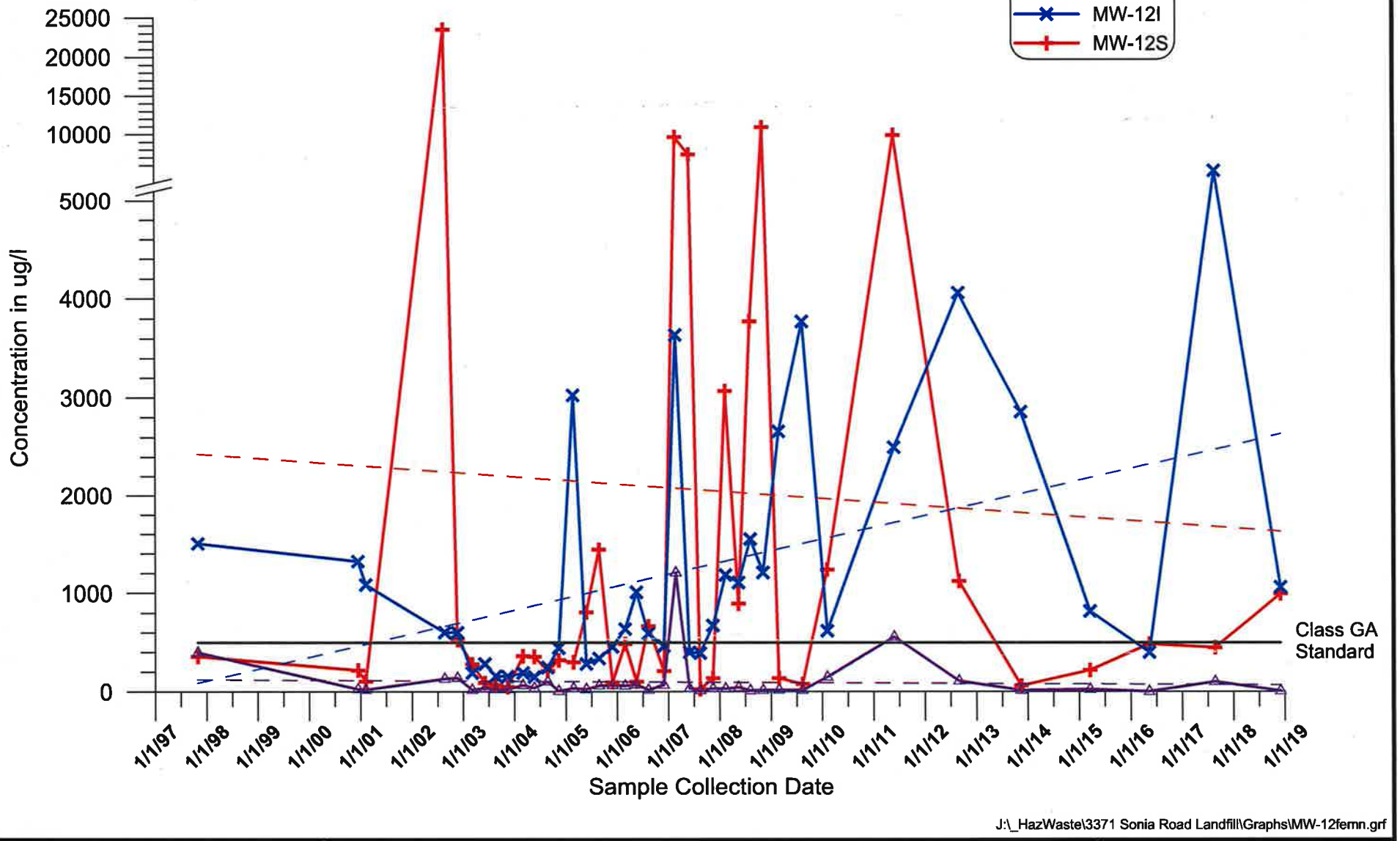
Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 12

Appendix
B

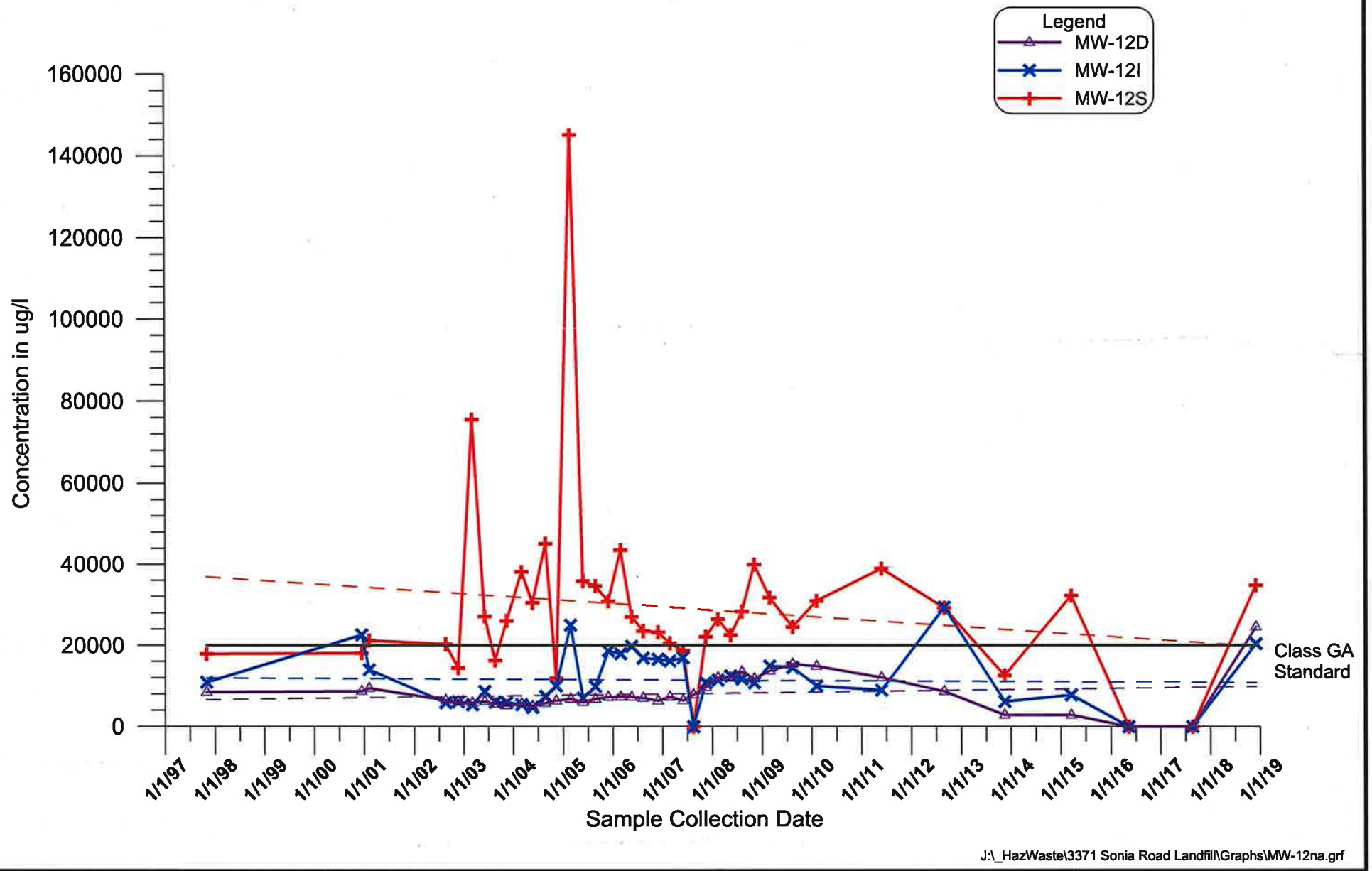


J:_HazWaste\3371 Sonia Road Landfill\Graphs\MW-12femn.grf

D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sum of Iron and Manganses Data for Monitoring Well Cluster 12

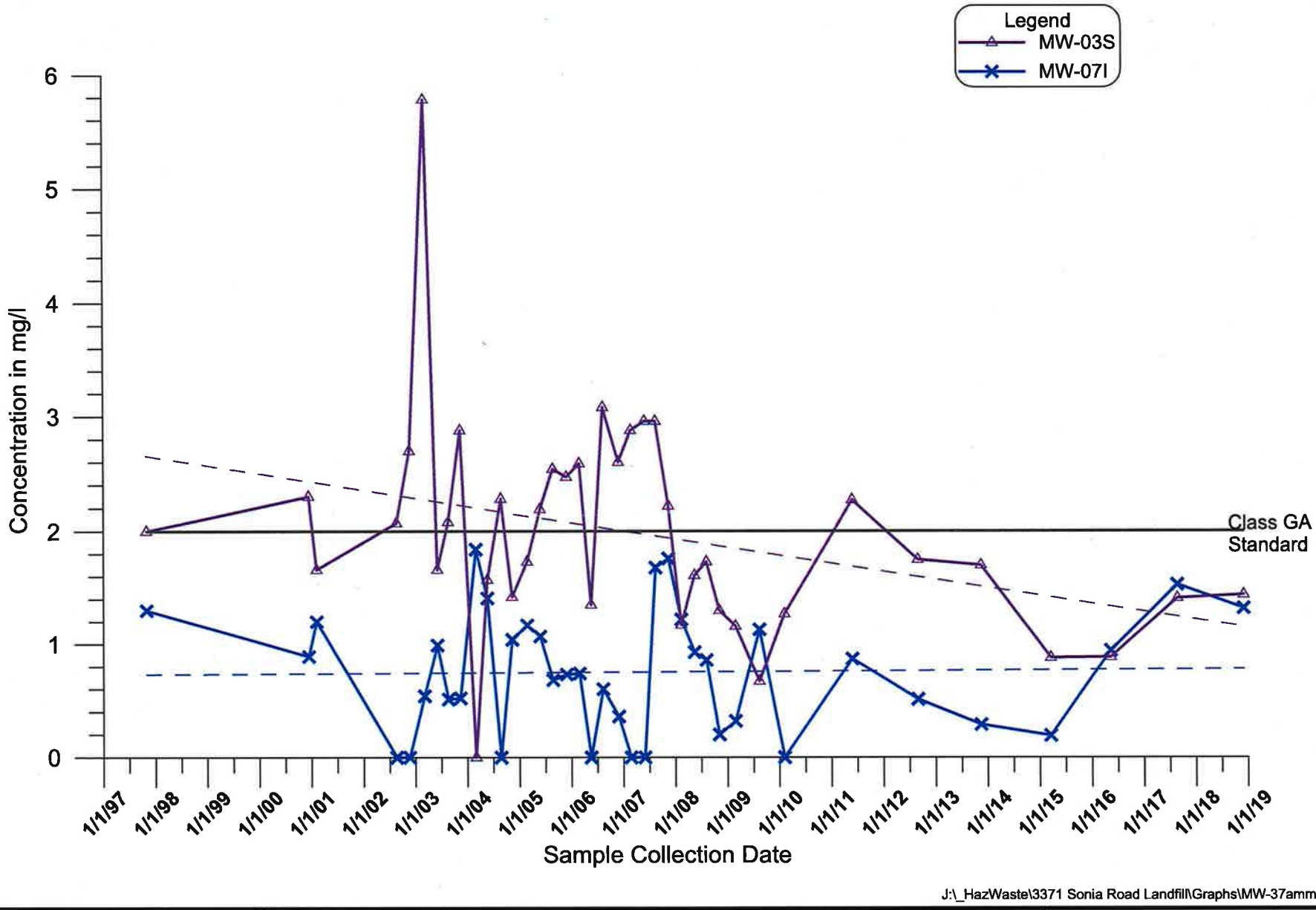
Appendix B



D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 12

Appendix
B

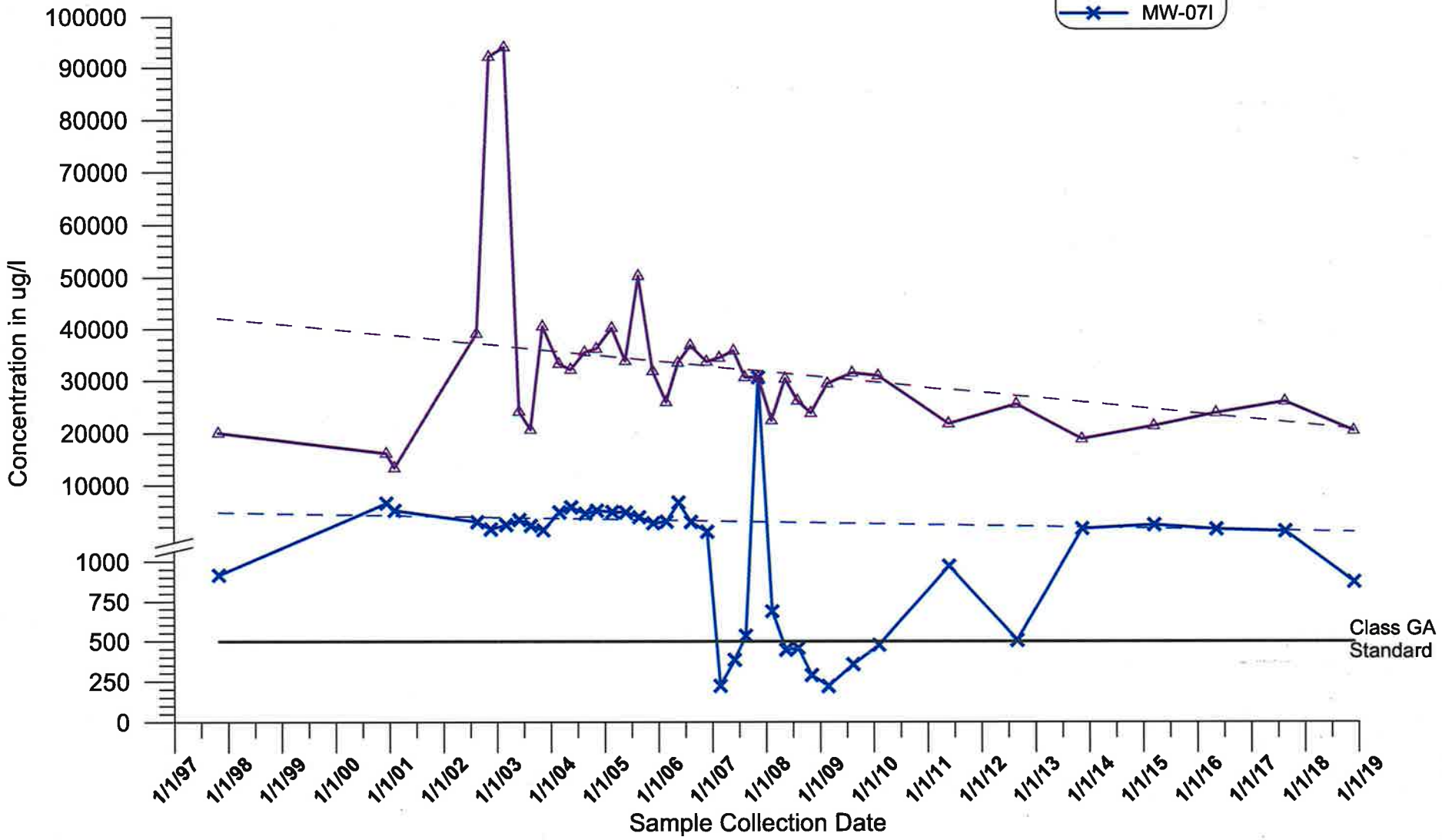


J:_HazWaste\3371 Sonia Road Landfill\Graphs\MW-37amm.grf

D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Ammonia Data for Monitoring Wells 3S and 7I

Appendix
B

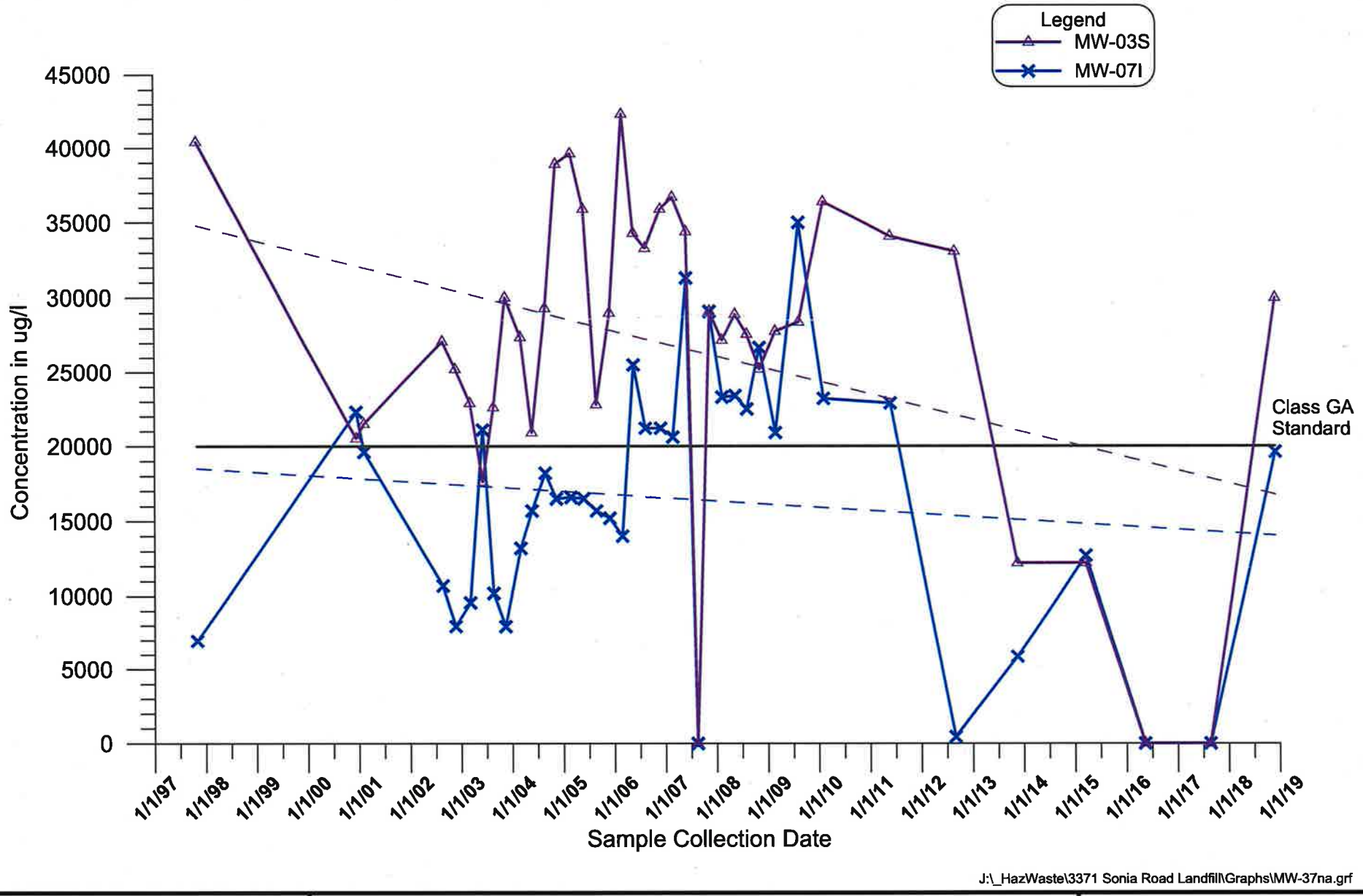


J:_HazWaste\3371 Sonia Road Landfill\Graphs\MW-37femn.grf

D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Iron and Manganese Data for
Monitoring Wells 3S and 7I

Appendix
B



J:_HazWaste\3371 Sonia Road Landfill\Graphs\MW-37na.grf

D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sodium Data for Monitoring Wells 3S and 7I

Appendix B

APPENDIX C

Data Validation Forms

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Sonia Road Landfill
Project Number:	3371-13A
Sample Date(s):	November 29, 2018
Sample Team:	Keith Robins
Matrix/Number of Samples:	Water/ 10 Field Duplicates/ 1 Trip Blanks / 1 Field Blanks/ 1
Analyzing Laboratory:	American Analytical Laboratories, Farmingdale, NY or Pace Analytical, Melville, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C Metals: by SW846 Method E200.7 and mercury by Method E245.1 General Chemistry: Hexavalent Chromium (SM3500-CR), Amenable cyanide (SW9021B), Cyanide by Method E335.4, Hardness (E200.7), Bromide, Chloride & Sulfate (EPA 300.0), Total Dissolved Solids (SM2540C), Alkalinity (SM2320B), Ammonia (E350.1), Nitrate (E353.2), Total Kjeldahl Nitrogen (E351.2), Phenolics (EPA 420.4) and Chemical Oxygen Demand (COD) (E410.4) and Total Organic Carbon (SM 5310B) analyzed by American Analytical Laboratories; and Biochemical Oxygen Demand (BOD) (SM5210B) and Color (SM 2120B) analyzed by Pace Analytical
Laboratory Report No:	1811193 Date: 12/12/2018

ANALYTICAL DATA PACKAGE DOCUMENTATION GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

The data packages have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/ Quality Control (QA/QC) requirements. The monitoring program requires a 20% validation. A validation was conducted on the data package and any applicable qualification of the data

was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, or USEPA National Functional Guidelines of Inorganic Data Review, January 2017, method performance criteria, and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

Custody Numbers:1811193
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-12S	1811193-001	11/29/2018		X			X	X
MW-1S	1811193-002	11/29/2018		X			X	X
MW-1I	1811193-003	11/29/2018		X			X	X
MW-1D	1811193-004	11/29/2018		X			X	X
MW-3S	1811193-005	11/29/2018		X			X	X
Blind Dup	1811193-006	11/29/2018	MW-3S	X			X	X
MW-5S	1811193-007	11/29/2018		X			X	X
MW-2D	1811193-008	11/29/2018		X			X	X
MW-2I	1811193-009	11/29/2018		X			X	X
MW-6D	1811193-010	11/29/2018		X			X	X
MW-7I	1811193-011	11/29/2018		X			X	X
Field Blank	1811193-012	11/29/2018		X			X	X
Trip Blank	1811193-013	11/29/2018		X				

ORGANIC ANALYSE
VOCS

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Method blanks		X		X	
B. Trip blanks		X		X	
C. Field blanks		X		X	
3. Matrix spike (MS) %R		X		X	
4. Matrix spike duplicate (MSD) %R		X		X	
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample (LCS) %R		X		X	
7. Surrogate spike recoveries		X		X	
8. Instrument performance check		X		X	
9. Internal standard responses		X		X	
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Transcriptions – quant report vs. Form I		X		X	
13. Field duplicates RPD		X		X	
14. Tentatively Identified Compounds (TICs)					X

VOCs - volatile organic compounds
%R - percent recovery
%D - percent difference
%RSD - percent relative standard deviation
RRF - relative response factor
RPD - relative percent difference

Comments:
Performance was acceptable.

INORGANIC ANALYSES
METALS

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Preparation, method and calibration blanks		X		X	
B. Field blanks		X	X		
3. Initial calibration verification %R		X		X	
4. Continuing calibration verification %R		X		X	
5. CRQL standard %R		X		X	
6. Interference check sample %R		X		X	
7. Laboratory control sample %R		X		X	
8. Spike sample %R		X		X	
9. Post digestive spike sample %R					X
10. Duplicate %RPD		X		X	
11. Serial dilution check %D		X		X	
12. Field duplicates RPD		X		X	

%R - percent recovery %D - percent difference RPD - relative percent difference

Comments:
Performance was acceptable, except the following:

2B. Aluminum, boron, calcium, copper, iron, magnesium, sodium and zinc were detected in the Field Blank. The following metals were qualified as non-detect (UB): aluminum in samples MW-01S, MW-01I, MW-02D MW-02I, MW-06D and MW-07I; boron in samples MW-12S, MW-01I, MW-01D MW-2D, MW-02I, MW-06D and MW-07I; copper in samples MW-12S, MW-01S, MW-01D, MW-03S, MW-2D and MW-07I; iron in samples MW-01I, MW-01D, MW-02D, MW-02I, MW-06D and MW-07I; and zinc in all samples.

INORGANIC ANALYSES
GENERAL CHEMISTRY

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Laboratory blanks		X		X	
B. Field blanks		X	X		
3. Initial & Continuing calibration verification %R		X		X	
4. Laboratory spike %R		X		X	
5. Laboratory duplicate RPD		X		X	
6. Matrix spike and matrix spike duplicate %R		X		X	
7. Field duplicates RPD		X		X	

%R percent recovery RPD - relative percent difference %D – percent difference
RSD - relative standard deviation

Comments:
Performance was acceptable, except the following:

1. Hexavalent chromium exceeded the holding time for samples MW-12S, MW-1S, MW-1I and MW-1D. Hexavalent chromium was qualified as an estimated detection limit (UJ) in samples MW-12S, MW-1S, MW-1I and MW-1D.

2B. Sulfate was detected in the Field Blank. Qualification of the data was not necessary.

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers:1811193

Sample ID	Analyte(s)	Qualifier	Reason(s)
VOCs			
No qualification of the data was necessary.			
Metals			
MW-12S, MW-1S, MW-1I and MW-1D	Hexavalent chromium	UJ	Exceeded the holding time
MW-01S, MW-01I, MW-02D MW-02I, MW-06D and MW-07I	Aluminum	UB	Detected in the Field Blank
MW-12S, MW-01I, MW-01D MW-2D, MW-02I, MW-06D and MW-07I	Boron		
MW-12S, MW-01S, MW-01D, MW-03S, MW-2D and MW-07I	Copper		
MW-01I, MW-01D, MW-02D, MW-02I, MW-06D and MW-07I	Iron		
All samples	Zinc		
General Chemistry			
No qualification of the data was necessary.			

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 1/14/2019
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Sonia Road Landfill
Project Number:	3371-13B
Sample Date(s):	November 30, 2018
Sample Team:	Keith Robins
Matrix/Number of Samples:	Water/7 Field Duplicates/ 0 Trip Blanks / 1 Field Blanks/ 0
Analyzing Laboratory:	American Analytical Laboratories, Farmingdale, NY or Pace Analytical, Melville, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C Metals: by SW846 Method E200.7 and mercury by Method E245.1 General Chemistry: Hexavalent Chromium (SM3500-CR), Amenable cyanide (SW9021B), Cyanide by Method E335.4, Hardness (E200.7), Bromide, Chloride & Sulfate (EPA 300.0), Total Dissolved Solids (SM2540C), Alkalinity (SM2320B), Ammonia (E350.1), Nitrate (E353.2), Total Kjeldahl Nitrogen (E351.2), Phenolics (EPA 420.4) and Chemical Oxygen Demand (COD) (E410.4) and Total Organic Carbon (SM 5310B) analyzed by American Analytical Laboratories; and Biochemical Oxygen Demand (BOD) (SM5210B) and Color (SM 2120B) analyzed by Pace Analytical
Laboratory Report No:	1811195 Date: 12/12/2018

ANALYTICAL DATA PACKAGE DOCUMENTATION
GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

The data packages have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/ Quality Control (QA/QC) requirements. The monitoring program requires a 20% validation. A validation was conducted on the data package and any applicable qualification of the data was determined using the

USEPA National Functional Guidelines of Organic Data Review, August 2014, or USEPA National Functional Guidelines of Inorganic Data Review, August 2014, method performance criteria, and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

D&B ENGINEERS AND ARCHITECTS, P.C.

Custody Numbers:1811195
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-6I	1811195-001	11/30/2018		X			X	X
MW-6S	1811195-002	11/30/2018		X			X	X
MW-4D	1811195-003	11/30/2018		X			X	X
MW-4I	1811195-004	11/30/2018		X			X	X
MW-4S	1811195-005	11/30/2018		X			X	X
MW-5D	1811195-006	11/30/2018		X			X	X
MW-5I	1811195-007	11/30/2018		X			X	X
Trip Blank	1811195-008	11/30/2018		X				

ORGANIC ANALYSE
VOCS

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Method blanks		X		X	
B. Trip blanks		X		X	
C. Field blanks		X		X	
3. Matrix spike (MS) %R		X		X	
4. Matrix spike duplicate (MSD) %R		X		X	
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample %R		X		X	
7. Surrogate spike recoveries		X		X	
8. Instrument performance check		X		X	
9. Internal standard responses		X		X	
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Transcriptions – quant report vs. Form I		X		X	
13. Field duplicates RPD					X
14. Tentatively Identified Compounds (TICs)					X

VOCs - volatile organic compounds
%R - percent recovery
%D - percent difference
%RSD - percent relative standard deviation
RRF - relative response factor
RPD - relative percent difference

Comments:
Performance was acceptable.

INORGANIC ANALYSES
METALS

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Preparation, method and calibration blanks		X		X	
B. Field blanks		X	X		
3. Initial calibration verification %R		X		X	
4. Continuing calibration verification %R		X		X	
5. CRQL standard %R		X		X	
6. Interference check sample %R		X		X	
7. Laboratory control sample %R		X		X	
8. Spike sample %R		X		X	
9. Post digestive spike sample %R					X
10. Duplicate %RPD		X		X	
11. Serial dilution check %D		X		X	
12. Field duplicates RPD					X

%R - percent recovery %D - percent difference RPD - relative percent difference

Comments:
Performance was acceptable, except the following:

2B. Aluminum, boron, calcium, copper, iron, magnesium, sodium and zinc were detected in the Field Blank analyzed in package 1811193. The following metals were qualified as non-detect (UB): aluminum in samples MW-06I, MW-06S, MW-04D, MW-04I, MW-05D and MW-05I; boron in samples MW-06I and MW-05D; copper in sample MW-06I; iron in samples MW-6I and MW-5D; and zinc in all samples.

INORGANIC ANALYSES
GENERAL CHEMISTRY

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Laboratory blanks		X		X	
B. Field blanks		X	X		
3. Initial & Continuing calibration verification %R		X		X	
4. Laboratory spike %R		X		X	
5. Laboratory duplicate RPD		X		X	
6. Matrix spike and matrix spike duplicate %R		X		X	
8. Field duplicates RPD					X

%R percent recovery RPD - relative percent difference %D – percent difference
RSD - relative standard deviation

Comments:
Performance was acceptable, except the following:

2B. Sulfate was detected in the Field Blank analyzed in package 1811193. Sulfate was qualified as non-detect (UB) in samples MW-04I, MW-05D and MW-05I.

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers:1811195

Sample ID	Analyte(s)	Qualifier	Reason(s)
VOCs			
No qualification of the data was necessary.			
Metals			
MW-06I, MW-06S, MW-04D, MW-04I, MW-05D and MW-05I	Aluminum	UB	Detected in the Field Blank analyzed in package 1811193
MW-06I and MW-05D	Boron		
MW-06I	Copper		
MW-6I and MW-5D	Iron		
All samples	Zinc		
General Chemistry			
MW-04I, MW-05D and MW-05I	Sulfate	UB	Detected in the Field Blank analyzed in package 1811193

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 1/15/2019
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Sonia Road Landfill
Project Number:	3371-13A
Sample Date(s):	December 3, 2018
Sample Team:	Keith Robins
Matrix/Number of Samples:	Water/ 5 Field Duplicates/ 0 Trip Blanks / 1 Field Blanks/ 0
Analyzing Laboratory:	American Analytical Laboratories, Farmingdale, NY or Pace Analytical, Melville, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C Metals: by SW846 Method E200.7 and mercury by Method E245.1 General Chemistry: Hexavalent Chromium (SM3500-CR), Amenable cyanide (SW9021B), Cyanide by Method E335.4, Hardness (E200.7), Bromide, Chloride & Sulfate (EPA 300.0), Total Dissolved Solids (SM2540C), Alkalinity (SM2320B), Ammonia (E350.1), Nitrate (E353.2), Total Kjeldahl Nitrogen (E351.2), Phenolics (EPA 420.4) and Chemical Oxygen Demand (COD) (E410.4) and Total Organic Carbon (SM 5310B) analyzed by American Analytical Laboratories; and Biochemical Oxygen Demand (BOD) (SM5210B) and Color (SM 2120B) analyzed by Pace Analytical
Laboratory Report No:	1812007 Date: 12/14/2018

ANALYTICAL DATA PACKAGE DOCUMENTATION GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

The data packages have been reviewed in accordance with the NYSDEC 6/05 ASP Quality Assurance/ Quality Control (QA/QC) requirements. The monitoring program requires a 20% validation. A validation was conducted on the data package and any applicable qualification of the data

was determined using the USEPA National Functional Guidelines of Organic Data Review, August 2014, or USEPA National Functional Guidelines of Inorganic Data Review, August 2014, method performance criteria, and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

Custody Numbers:1812007
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-11S	1812007-001	12/3/2018		X			X	X
MW-11I	1812007-002	12/3/2018		X			X	X
MW-11D	1812007-003	12/3/2018		X			X	X
MW-12D	1812007-004	12/3/2018		X			X	X
MW-12I	1812007-005	12/3/2018		X			X	X
Trip Blank	1812007-006	12/3/2018		X				

ORGANIC ANALYSE
VOCS

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Method blanks		X		X	
B. Trip blanks		X		X	
C. Field blanks		X		X	
3. Matrix spike (MS) %R		X		X	
4. Matrix spike duplicate (MSD) %R		X		X	
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample %R		X		X	
7. Surrogate spike recoveries		X		X	
8. Instrument performance check		X		X	
9. Internal standard responses		X		X	
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Transcriptions – quant report vs. Form I		X		X	
13. Field duplicates RPD					X
14. Tentatively Identified Compounds (TICs)					X

VOCs - volatile organic compounds
%R - percent recovery
%D - percent difference
%RSD - percent relative standard deviation
RRF - relative response factor
RPD - relative percent difference

Comments:
Performance was acceptable.

INORGANIC ANALYSES
METALS

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Preparation, method and calibration blanks		X		X	
B. Field blanks		X	X		
3. Initial calibration verification %R		X		X	
4. Continuing calibration verification %R		X		X	
5. CRQL standard %R		X		X	
6. Interference check sample %R		X		X	
7. Laboratory control sample %R		X		X	
8. Spike sample %R		X		X	
9. Post digestive spike sample %R					X
10. Duplicate %RPD		X		X	
11. Serial dilution check %D		X		X	
12. Field duplicates RPD					X

%R - percent recovery %D - percent difference RPD - relative percent difference

Comments:
Performance was acceptable, except the following:

2B. Aluminum, boron, calcium, copper, iron, magnesium, sodium and zinc were detected in the Field Blank analyzed in package 1811193. The following metals were qualified as non-detect (UB): aluminum in samples MW-11I and MW-12D; boron in samples MW-11I, MW-11D and MW-12D; copper in sample MW-11D; and iron and zinc in all samples.

INORGANIC ANALYSES
GENERAL CHEMISTRY

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Laboratory blanks		X		X	
B. Field blanks		X	X		
3. Initial & Continuing calibration verification %R		X		X	
4. Laboratory spike %R		X		X	
5. Laboratory duplicate RPD		X		X	
6. Matrix spike and matrix spike duplicate %R		X		X	
8. Field duplicates RPD					X

%R percent recovery RPD - relative percent difference %D – percent difference
RSD - relative standard deviation

Comments:
Performance was acceptable, except the following:

1. Hexavalent chromium exceeded the holding time for samples MW-12D and MW-12I. Hexavalent chromium was qualified as an estimated detection limit (UJ) in samples MW-12D and MW-12I.

2B. Sulfate was detected in the Field Blank analyzed in package 1811193. Sulfate was qualified as non-detect (UB) in sample MW-11S.

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers:1812007

Sample ID	Analyte(s)	Qualifier	Reason(s)
VOCs			
No qualification of the data was necessary.			
Metals			
MW-12D and MW-12I	Hexavalent chromium	UJ	Exceeded the holding time
MW-11I and MW-12D	Aluminum	UB	Detected in the Field Blank analyzed in package 1811193
MW-11I, MW-11D and MW-12D	Boron		
MW-11S and MW-11D	Copper		
All samples	Iron and Zinc		
General Chemistry			
MW-11S	Sulfate	UB	Detected in the Field Blank analyzed in package 1811193

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 1/14/2019
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Sonia Road Landfill
Project Number:	3371-13B
Sample Date(s):	November 20, 2018
Sample Team:	Keith Robins
Matrix/Number of Samples:	Water/3 [MW-12S, MW-3S & MW-5S] Field Duplicates/ 1 [BLIND DUP=MW-3S] Trip Blanks / 0 Equipment Blank/ 1
Analyzing Laboratory:	Pace Analytical Services, LLC, Melville, NY 11747 & TestAmerica Laboratories, Inc., West Sacramento, CA
Analyses:	1,4-Dioxane: by method 8270D SIM in Melville, NY Per- and Polyfluoroinated Alkyl Substances (PFAS): by method EPA 537 modified in West Sacramento, CA
Laboratory Report No:	7072554 & 320-457654 Date:1/02/18 & 12/26/18

ANALYTICAL DATA PACKAGE DOCUMENTATION GENERAL INFORMATION

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Sample collection date		X		X	
5. Laboratory sample received date		X		X	
6. Sample analysis date		X		X	
7. Copy of chain-of-custody form signed by Lab sample custodian		X		X	
8. Narrative summary of QA or sample problems provided		X		X	

QA - quality assurance

Comments:

A validation was conducted on the data package and any applicable qualification of the data was determined using the USEPA National Functional Guidelines of Organic Data Review, January 2017, method performance criteria, and D&B Engineers and Architects, P.C. professional judgment. The qualification of data discussed within this data validation checklist did not impact the usability of the sample results.

ORGANIC ANALYSES
PFAS and 1,4-Dioxane

	Reported		Performance Acceptable		Not
	No	Yes	No	Yes	Required
1. Holding times		X		X	
2. Blanks					
A. Method blank		X		X	
B. Equipment blank		X	X		
3. Matrix spike (MS) %R		X	X		
4. Matrix spike duplicate (MSD) %R		X	X		
5. MS/MSD precision (RPD)		X		X	
6. Laboratory control sample (LCS) %R		X		X	
7. Surrogate spike or isotope dilution recoveries		X		X	
8. Instrument performance check		X		X	
9. Internal standard retention times and areas		X	X		
10. Initial calibration RRF's and %RSD's		X		X	
11. Continuing calibration RRF's and %D's		X		X	
12. Field duplicates RPD		X		X	

VOCs - volatile organic compounds
%R - percent recovery
%D - percent difference
%RSD - percent relative standard deviation
RRF - relative response factor
RPD - relative percent difference

Comments:
Performance was acceptable except the following:

2B. 1,4-Dioxane was detected in the FIELD BLANK, therefore 1,4-dioxane was qualified as non-detected (UB) in all samples.

Perfluorobutanesulfonic acid, perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) were detected in the FIELD BLANK. Perfluorobutanesulfonic acid was qualified as non-detect (UB) in samples MW-12S, MW-3S and BLIND DUP.

3&4. 2-(N-methyl perfluorooctanesulfonamido) acetic acid and sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2) had the %Rs below QC limits in the MS and/or MSD. 2-(N-methyl perfluorooctanesulfonamido) acetic acid and sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2) were qualified as an estimated detection limit (UJ) in all samples.

7. The surrogate D3-NMEFOSAA was above the limit in samples MW-12S, MW-3S and MW-5S. The associated PFAS was not detected in the samples therefore qualification of the data was not necessary.

9. The internal area was below the QC limit for 1,4-dioxane-d8 for the FIELD BLANK and BLIND DUP. 1,4-Dioxane was qualified as estimated (J/UJ) FIELD BLANK and BLIND DUP.

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers: 7072554 & 320-457654

Sample ID	Analyte(s)	Qualifier	Reason(s)
1,4-Dioxane			
All samples	1,4-Dioxane	UB	detected in the FIELD BLANK
FIELD BLANK and BLIND DUP	1,4-Dioxane	J/UJ	The internal area was below the QC limit for 1,4-dioxane-d8
PFAs			
MW-12S, MW-3S and BLIND DUP	Perfluorobutanesulfonic acid	UB	Detected in the Equipment blank and/or method blank
All samples	2-(N-methyl perfluorooctanesulfonamido) acetic acid and sodium 1H,1H,2H,2H-Perfluorooctane Sulfonate (6:2)	UJ	%Rs below QC limits in the MS and/or MSD

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 1/15/19
VALIDATION PERFORMED BY SIGNATURE:	