ISLIP
RESOURCE
RECOVERY
AGENCY

Sonia Road Landfill
Brentwood, New York

Post Closure Groundwater Monitoring Program

2017 Monitoring Report Baseline Sampling Event

November 2017

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

November 10, 2017

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
2017 Monitoring Report
D&B No. 3371-11B

Dear Mr. Varrichio:

Enclosed please find six copies the 2017 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
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POST CLOSURE GROUNDWATER MONITORING PROGRAM
2017 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

NOVEMBER 2017

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
2017 MONITORING REPORT

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

Section | Title | Page

List of Appendices

List of Figures

List of Tables

1.0 INTRODUCTION

This report presents the results of the August 2017 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.

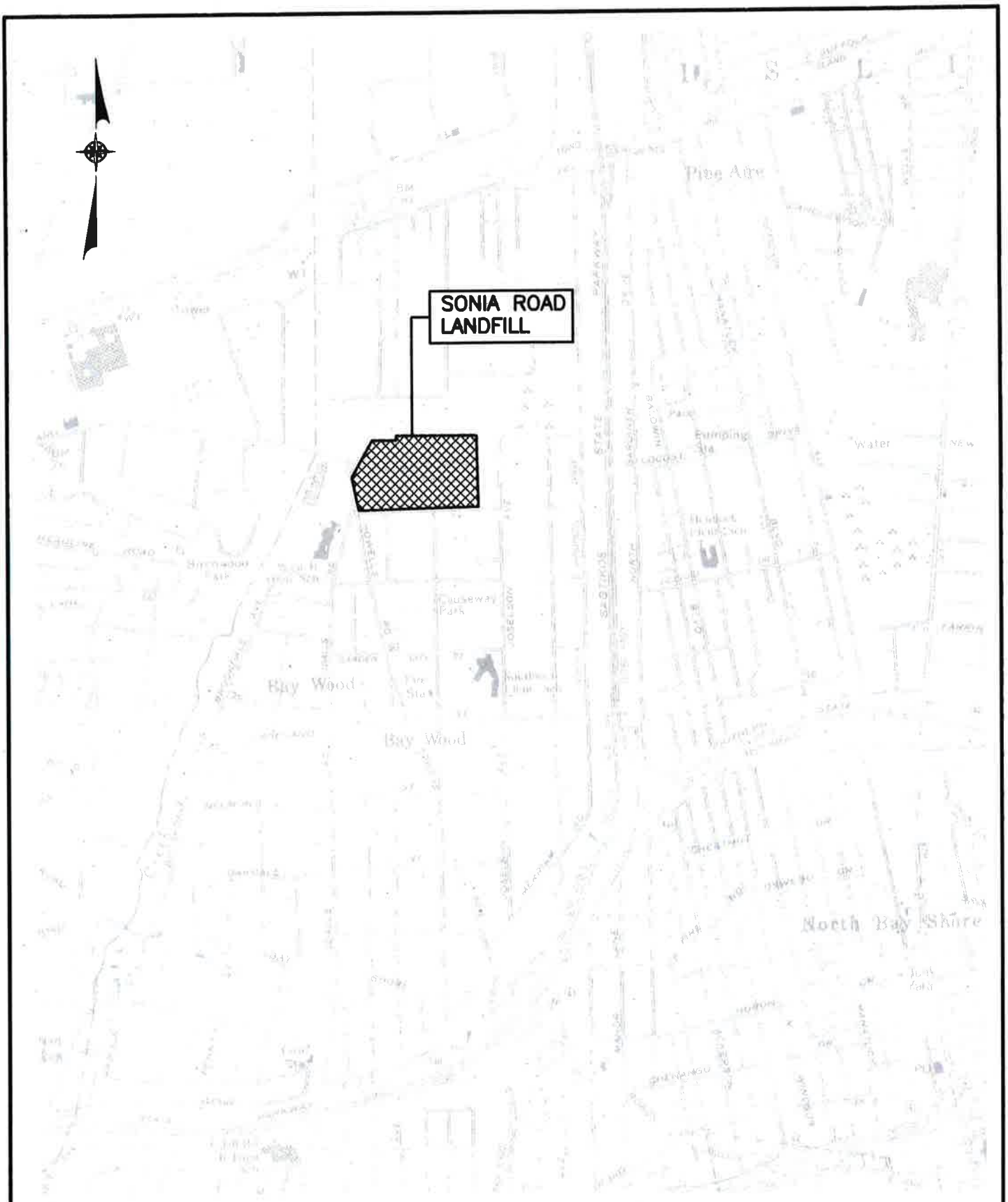
1.1 Purpose

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 August 2017 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.**



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

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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 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.

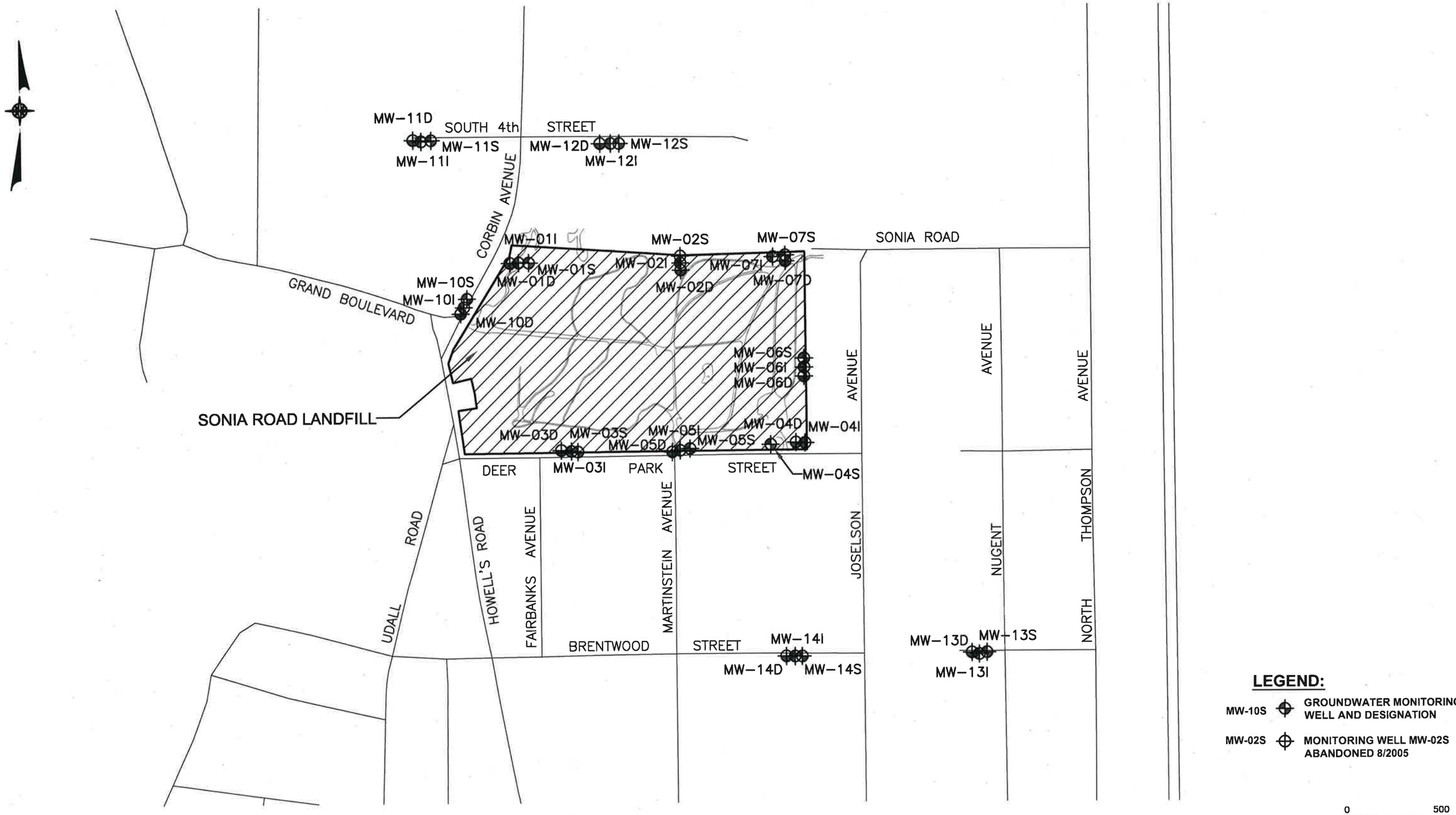
The landfill reportedly accepted all municipal solid waste delivered to the Site. This waste is reported to include wood, concrete, metal, plastic, glass, household waste in the form of refuse, rubbish, demolition materials and yard wastes (particularly leaves). It is also reported that junk automobiles 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 August 2017 sampling event.



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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

GROUNDWATER MONITORING WELL LOCATIONS

SCALE: 1" = 500'

FIGURE 2-1

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). 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 the well.

During the purging process, groundwater was monitored and recorded for the following field parameters: pH, specific conductance, temperature, oxidation-reduction potential (ORP), dissolved oxygen 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.

In accordance with the SAP, groundwater samples were collected using new, dedicated, disposable polyethylene bailers and polypropylene rope. Samples for VOC analysis were collected first, followed by inorganic parameters and leachate indicators. Each sample was stored in an ice-filled cooler with the chain of custody forms and picked up by American Analytical Laboratories, LLC.

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 August 2017 reporting period are provided in **Section 4.0.**

3.4 Sample Analysis

Groundwater samples collected during the August 2017 sampling event from 22 monitoring wells were analyzed for New York Codes, Rules and Regulations (NYCRR) Part 360 Baseline Parameters. 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 August 2017 sampling event is provided in **Table 4-1.**

4.2 Monitoring Well Groundwater Results

The analytical results for the groundwater samples collected during the August 2017 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) and **Appendix A-3** (volatile organic compounds). Historic sample results from 2007 to August 2017 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 August 2017 sampling event compared to the previous May 2016 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 wells. These graphs are presented in **Appendix B** and the leachate indicators which exhibited

Table 4-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF FINAL FIELD PARAMETER RESULTS
AUGUST 2017 SAMPLING EVENT

Monitoring Well	pH	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/l)	Temperature (°C)	ORP (mV)
MW-01S	7.49	0.447	0	2.81	14.50	-45
MW-01I	5.93	0.175	0	1.33	14.96	243
MW-01D	6.06	0.305	0	3.44	14.64	241
MW-02I	6.56	0.227	0	0.39	15.44	234
MW-02D	6.42	0.231	0	6.27	15.22	226
MW-03S	7.49	0.496	0	0.48	16.62	-98
MW-04S	7.31	0.832	0	0.28	15.48	-80
MW-04I	7.45	0.668	0	0.61	15.60	-88
MW-04D	7.71	0.460	0	0.85	15.59	-139
MW-05S	7.39	0.550	0	0.66	17.06	-79
MW-05I	7.94	0.417	0	0.23	15.57	-131
MW-05D	6.64	0.122	0	4.87	14.46	241
MW-06S	7.27	0.452	0	0.29	16.24	-91
MW-06I	6.82	0.241	0	0.19	15.63	201
MW-06D	6.32	0.163	0	2.33	15.73	265
MW-07I	6.53	0.170	0	0.42	15.34	192
MW-11S	7.61	0.349	0	1.45	18.62	140
MW-11I	6.07	0.089	0	5.63	14.78	302
MW-11D	5.57	0.250	0	6.04	15.70	340
MW-12S	7.55	0.413	0	4.04	18.69	140
MW-12I	6.85	0.297	0	0.97	15.58	229
MW-12D	6.46	0.111	0	2.81	15.91	260

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 2017 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	D	I	C	C	D	D	I	D	I	C	C	C	I
MW-01I	Upgradient	C	C	C	C	C	D	D	I	D	I	C	I	C
MW-01D	Upgradient	D	C	C	C	I	I	I	I	I	I	C	I	C
MW-02I	Upgradient	D	I	C	C	I	D	D	C	D	C	D	D	I
MW-02D	Upgradient	C	C	C	C	C	D	D	I	C	D	C	I	C
MW-03S	Downgradient	D	I	C	C	C	D	C	C	D	I	D	C	I
MW-04S	Downgradient	I	I	I	C	C	D	I	C	I	D	D	I	I
MW-04I	Downgradient	I	I	C	C	D	D	I	C	D	D	D	I	I
MW-04D	Downgradient	I	I	C	C	C	D	D	C	D	D	D	I	I
MW-05S	Downgradient	C	C	D	C	D	D	C	C	I	D	D	D	C
MW-05I	Downgradient	D	I	C	C	D	D	I	D	I	I	C	I	C
MW-05D	Downgradient	D	C	C	C	C	D	D	I	I	C	C	C	C
MW-06S	Side gradient	D	D	C	C	D	D	C	C	I	D	D	I	D
MW-06I	Side gradient	D	I	C	C	C	D	D	D	C	C	C	I	I
MW-06D	Side gradient	I	C	C	C	C	D	D	D	I	I	C	I	I
MW-07I	Upgradient	D	I	C	C	C	D	D	D	I	I	C	I	I
MW-11S	Upgradient	D	D	C	C	C	D	C	I	D	I	D	I	D
MW-11I	Upgradient	D	C	C	C	C	D	D	D	D	I	C	I	D
MW-11D	Upgradient	C	C	C	C	I	D	D	C	D	I	C	I	D
MW-12S	Upgradient	D	C	C	C	C	D	I	I	D	D	C	I	D
MW-12I	Upgradient	D	D	C	C	C	D	D	I	I	D	C	I	D
MW-12D	Upgradient	D	C	C	C	C	D	D	D	D	I	C	I	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.

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

concentrations exceeding NYSDEC Class GA groundwater standards or guidance values are discussed below.

Ammonia exceeded the groundwater standard of 2 milligrams per liter (mg/l) in downgradient wells MW-04S and MW-04I at a concentrations of 4.40 mg/l and 4.76 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 0.005 mg/l in well MW-11S to 0.110 mg/l in well MW-12D. It should be noted, total phenol concentrations exceeded the groundwater standard in both upgradient and downgradient wells.

4.2.2 Inorganic Parameters

As shown in **Appendix A-2**, two metals (iron and manganese) 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 August 2017 sampling event compared to the previous May 2016 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.

Iron

The groundwater standard for iron of 300 ug/l was exceeded in nine (9) wells (MW-01S, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-06S and MW-11I). Iron concentrations detected in these wells ranged from 725 ug/l in MW-11I to 58,000 ug/l in MW-04D.

Manganese

The groundwater standard for manganese of 300 ug/l was exceeded in thirteen (13) wells (MW-01S, 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 848 ug/l in MW-06I to 6,660 ug/l in MW-03S.

Table 4-3

SONIA ROAED LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY COMPARISON OF 2017 SAMPLING EVENT TO PREVIOUS SAMPLING EVENT FOR INORGANIC PARAMETERS

Well	Location	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Hexavalent Chromium
MW-01S	Upgradient	D	C	C	I	C	I	C	C	C
MW-01I	Upgradient	C	C	C	I	C	I	C	D	C
MW-01D	Upgradient	C	C	C	I	C	I	I	C	C
MW-02I	Upgradient	C	C	C	D	C	C	C	D	C
MW-02D	Upgradient	D	C	C	C	C	I	C	D	C
MW-03S	Downgradient	I	C	C	C	C	I	C	C	C
MW-04S	Downgradient	C	C	I	I	C	I	C	C	C
MW-04I	Downgradient	C	C	C	I	C	I	C	I	C
MW-04D	Downgradient	C	C	C	I	C	I	C	D	C
MW-05S	Downgradient	C	D	I	I	C	I	C	C	C
MW-05I	Downgradient	C	C	C	I	C	I	C	I	C
MW-05D	Downgradient	C	C	C	C	C	I	C	D	C
MW-06S	Side gradient	C	C	C	C	C	I	C	C	C
MW-06I	Side gradient	C	C	C	D	C	I	C	D	C
MW-06D	Side gradient	C	C	C	I	C	I	C	D	C
MW-07I	Upgradient	C	C	C	C	C	C	C	D	C
MW-11S	Upgradient	C	C	C	I	C	I	C	C	C
MW-11I	Upgradient	I	C	C	I	C	I	C	D	C
MW-11D	Upgradient	D	C	C	I	C	C	C	D	C
MW-12S	Upgradient	C	C	C	I	C	I	C	I	C
MW-12I	Upgradient	C	C	C	I	C	I	C	D	C
MW-12D	Upgradient	C	C	C	C	C	I	C	D	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 2017 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	C	D	C	C
MW-01I	Upgradient	C	C	I	C	C	D	C	C	C
MW-01D	Upgradient	C	C	C	I	C	C	I	C	C
MW-02I	Upgradient	C	C	C	C	C	D	I	C	C
MW-02D	Upgradient	C	C	I	I	C	D	I	C	C
MW-03S	Downgradient	C	C	C	C	C	C	I	C	C
MW-04S	Downgradient	C	C	C	I	I	D	C	C	D
MW-04I	Downgradient	C	C	C	I	I	D	C	C	C
MW-04D	Downgradient	C	C	C	C	I	D	I	C	D
MW-05S	Downgradient	C	C	C	C	C	D	C	C	C
MW-05I	Downgradient	C	C	C	I	C	D	I	C	D
MW-05D	Downgradient	C	C	C	I	C	D	D	C	C
MW-06S	Side gradient	C	C	C	D	C	D	I	C	D
MW-06I	Side gradient	C	C	C	C	C	D	C	C	C
MW-06D	Side gradient	C	I	C	C	C	I	D	C	D
MW-07I	Upgradient	C	C	C	C	C	C	D	C	C
MW-11S	Upgradient	C	C	C	I	C	D	C	C	C
MW-11I	Upgradient	I	C	I	I	I	C	I	C	C
MW-11D	Upgradient	C	C	D	D	C	D	I	C	C
MW-12S	Upgradient	D	C	C	D	C	D	I	C	D
MW-12I	Upgradient	C	C	C	C	C	C	I	C	C
MW-12D	Upgradient	C	C	C	I	C	D	I	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 2017 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	C	C	C	C	C	I
MW-01I	Upgradient	C	C	C	C	C	C	C	C	C
MW-01D	Upgradient	I	C	C	C	C	C	C	C	I
MW-02I	Upgradient	D	C	C	C	C	C	C	C	I
MW-02D	Upgradient	C	C	C	C	C	C	C	C	C
MW-03S	Downgradient	C	C	C	C	C	C	D	C	C
MW-04S	Downgradient	C	C	C	C	C	C	C	C	C
MW-04I	Downgradient	D	C	C	C	C	C	C	C	I
MW-04D	Downgradient	I	C	C	C	C	C	D	C	C
MW-05S	Downgradient	C	C	C	C	C	C	D	C	C
MW-05I	Downgradient	I	C	C	C	C	C	D	C	I
MW-05D	Downgradient	D	C	C	C	C	C	D	C	C
MW-06S	Sidegradient	C	C	C	C	C	C	C	C	D
MW-06I	Sidegradient	D	C	C	C	C	C	C	C	C
MW-06D	Sidegradient	D	C	C	C	C	C	C	C	D
MW-07I	Upgradient	C	C	C	C	C	C	C	C	D
MW-11S	Upgradient	D	C	C	C	C	C	D	C	I
MW-11I	Upgradient	C	C	C	C	C	C	C	C	I
MW-11D	Upgradient	I	C	C	C	C	C	D	C	D
MW-12S	Upgradient	I	C	C	C	C	C	C	C	C
MW-12I	Upgradient	C	C	C	C	C	C	C	C	I
MW-12D	Upgradient	C	C	C	C	I	C	C	C	I

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.

4.2.3 Volatile Organic Compounds

Volatile organic compounds (VOCs) were analyzed and compared against the NYSDEC Class GA groundwater standards and guidance values for the 22 wells sampled during the August 2017 sampling event.

As shown in **Appendix A-3**, groundwater samples for the 22 wells showed individual VOC constituents below their respective NYSDEC Class GA groundwater standards or guidance values.

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
AUGUST 2017 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
AUGUST 2017 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 August 2017 Post Closure Groundwater Monitoring Program sampling event at the Sonia Road Landfill. The groundwater samples were collected on August 21, 22 and 23, 2016. All groundwater samples were analyzed for Baseline NYCRR 360 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. 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.

Three data packages (1708106, 1708112 and 1708123) 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, 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-01D, MW-06S, MW-04I, MW-03S and MW-11D), 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:

- Methylene chloride and acetone were detected in the method, trip and field blanks associated with all samples. Methylene chloride and acetone were qualified as non-detected (UB) for all samples.

- 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 percent differences (%Ds) were above QC limits in the serial dilution for barium, potassium and sodium in data packages 1708112 and 1708123; and potassium and sodium in package 1708123. These metals were qualified as estimated (J/UJ) for the associated samples.

- The holding time of 24 hours was exceeded by a few hours for hexavalent chromium in samples MW-06D, MW-06I, MW-06S, MW-07I, MW-11D and MW-11S. Hexavalent chromium was qualified as an estimated detection limit (UJ) in these samples.

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

- The percent recovery (%R) was below the QC limit in the matrix spike duplicate for chemical oxygen demand. Chemical oxygen demand was qualified as estimated (UJ/J) in all samples in data packages 1708112 and 1708123.

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

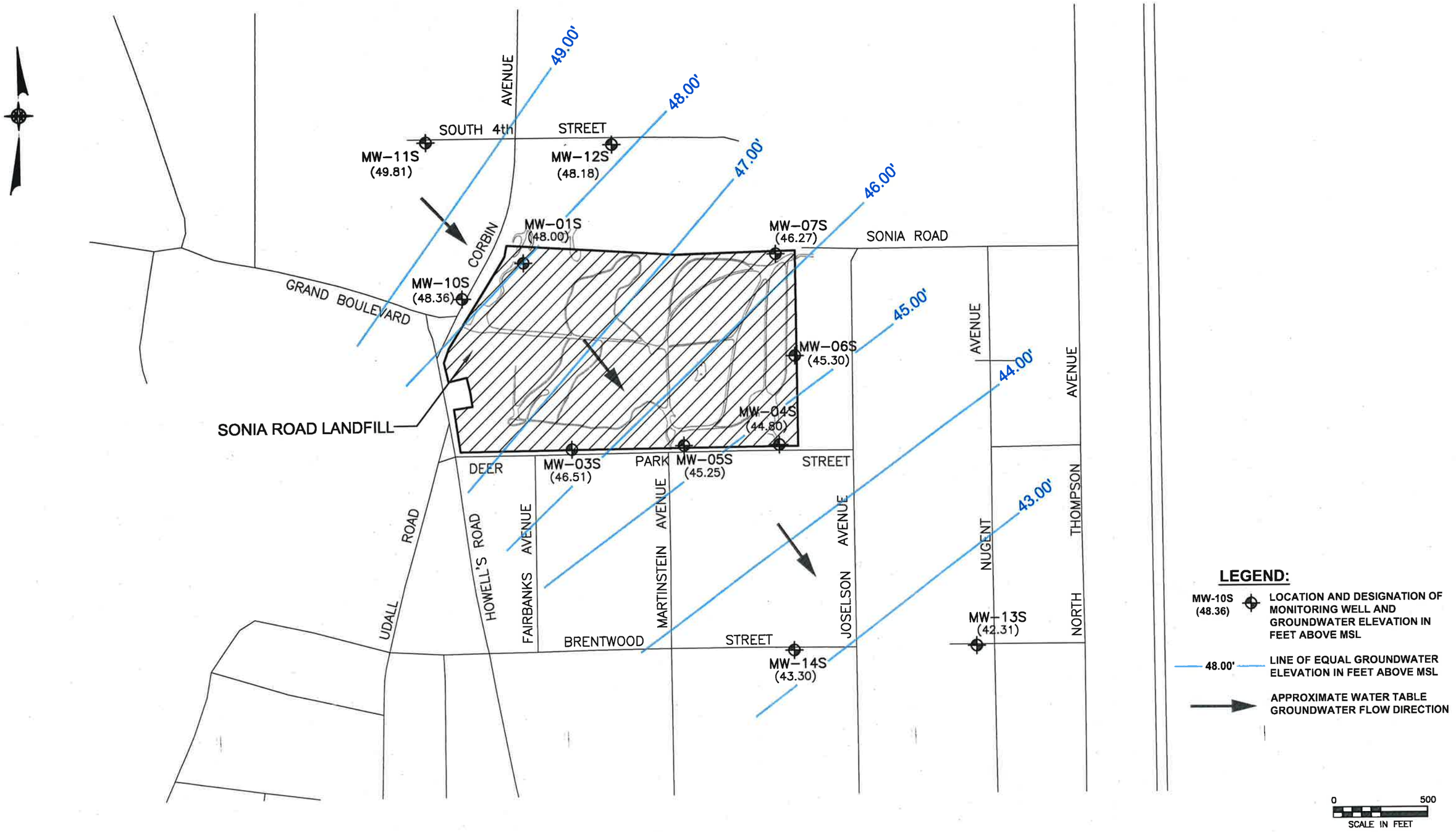
Groundwater level measurements were obtained on August 21, 2017, from the 22 monitoring wells included in the Post-Closure Groundwater Monitoring Program and the 13 additional site-related wells not sampled as part of the program. The depth to groundwater measurements, measuring point elevations, and calculated groundwater elevations for the 35 monitoring wells are summarized in **Table 6-1**.

The August 21, 2017 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
AUGUST 21, 2017

Well	Measuring Point Elevation (feet above msl)	Depth to Water from Measuring Point(feet)	Groundwater Elevation (feet above msl)
MW-01S	66.01	18.01	48.00
MW-01I	65.36	17.35	48.01
MW-01D	64.53	16.54	47.99
MW-02I	78.24	31.02	47.22
MW-02D	78.43	31.50	46.93
MW-03S	70.76	24.25	46.51
MW-03I	70.77	24.55	46.22
MW-03D	70.50	24.33	46.17
MW-04S	71.10	26.30	44.80
MW-04I	69.31	24.60	44.71
MW-04D	69.03	24.27	44.76
MW-05S	70.28	25.03	45.25
MW-05I	70.26	25.00	45.26
MW-05D	70.96	25.42	45.54
MW-06S	74.45	29.15	45.30
MW-06I	74.52	29.25	45.27
MW-06D	75.02	29.78	46.27
MW-07S	72.83	26.56	46.24
MW-07I	73.43	27.19	46.21
MW-07D	75.04	28.83	48.36
MW-10S	56.65	8.29	48.08
MW-10I	56.16	8.08	48.08
MW-10D	56.34	8.30	48.04
MW-11S	59.87	10.06	49.81
MW-11I	60.38	10.25	50.13
MW-11D	60.19	10.04	50.05
MW-12S	58.79	10.61	48.18
MW-12I	58.92	10.75	48.17
MW-12D	58.61	10.48	48.13
MW-13S	70.51	28.20	42.31
MW-13I	70.30	28.17	42.20
MW-13D	70.37	28.14	42.23
MW-14S	64.55	21.25	43.30
MW-14I	64.57	21.39	43.18
MW-14D	64.58	21.33	43.25



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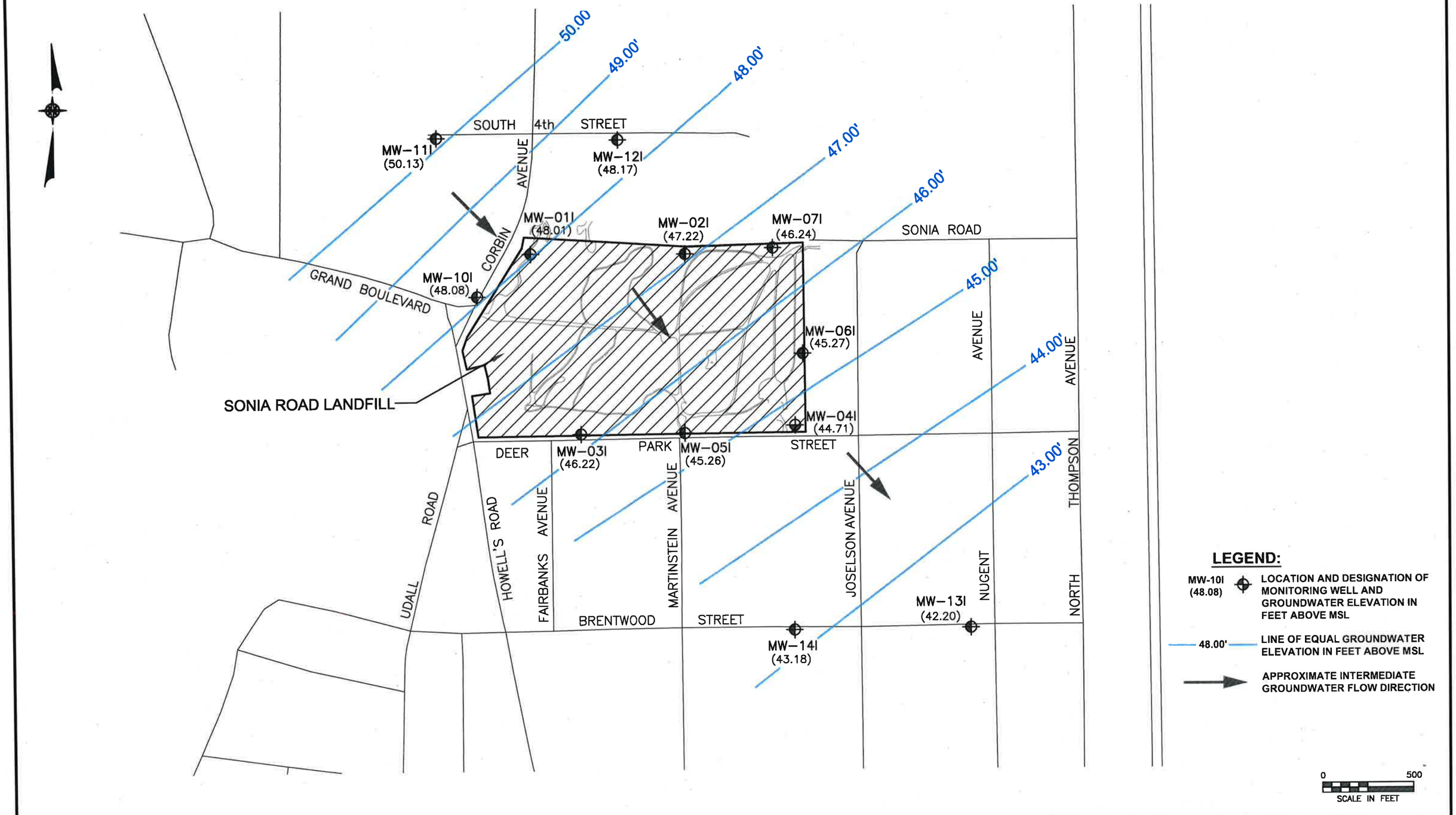
D&B ENGINEERS AND ARCHITECTS, P.C.

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

WATER TABLE CONTOUR MAP
AUGUST 21, 2017

SCALE: 1" = 500'

FIGURE 6-1



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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

POTENTIOMETERIC SURFACE ELEVATION CONTOUR MAP FOR INTERMEDIATE UPPER GLACIAL AQUIFER
AUGUST 21, 2017

SCALE: 1" = 500'

FIGURE 6-2

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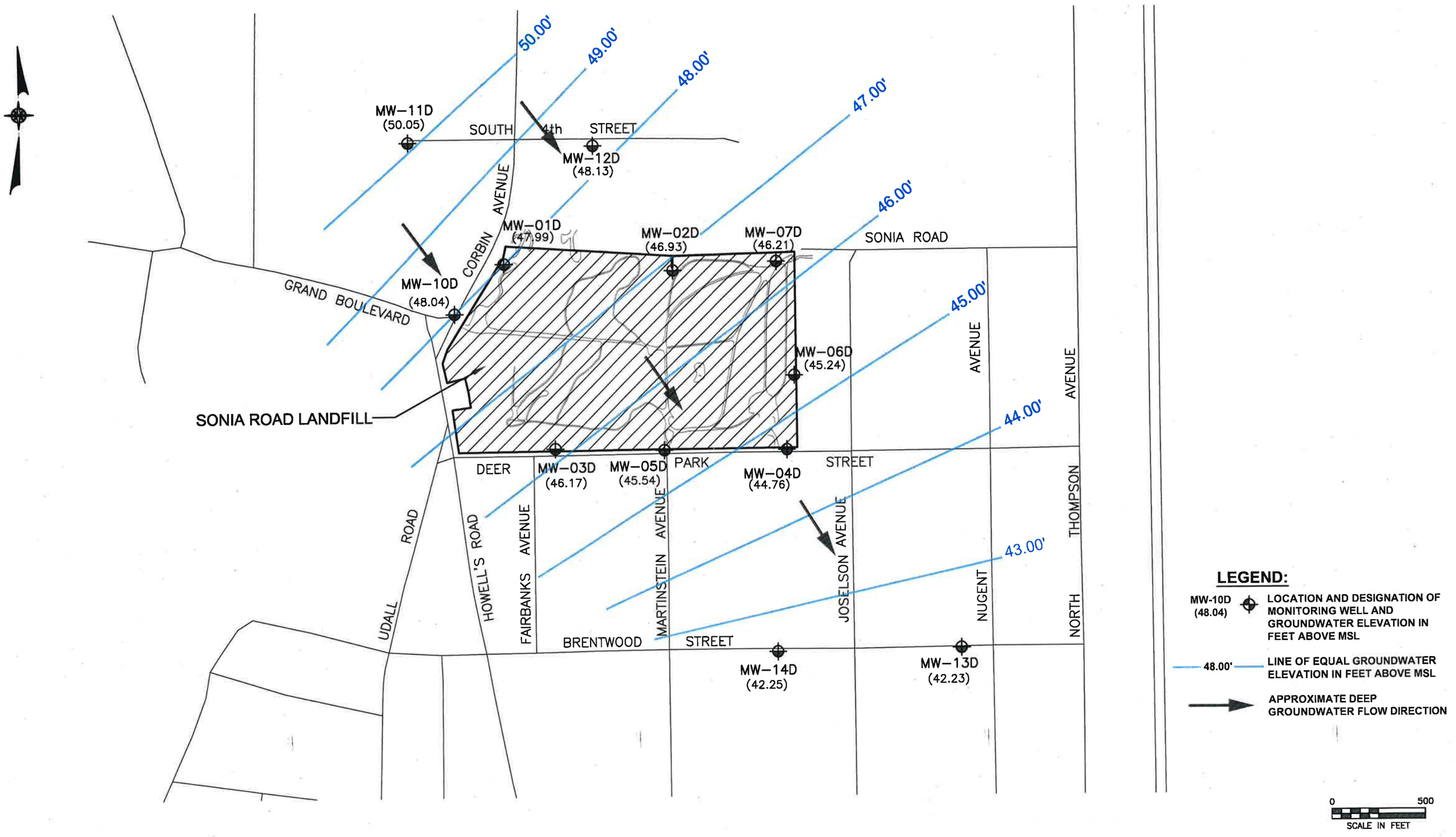

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

POTENTIOMETERIC SURFACE ELEVATION CONTOUR MAP FOR DEEP UPPER GLACIAL AQUIFER
AUGUST 21, 2017

SCALE: 1" = 500'

FIGURE 6-3

7.0 FINDINGS AND RECOMMENDATIONS

7.1 Findings

Groundwater Flow

Based on groundwater level measurements obtained during the August 2017 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 August 2017 sample results to the previous sampling event (May 2016), 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.

Slightly more than 50 percent of the monitoring wells sampled (12 out of 22), exhibited one or more of the following inorganic parameters: iron (8 wells) and manganese (12 wells) at concentrations exceeding their respective groundwater standard/guidance value. The detected concentrations of iron and manganese are likely not indicative of landfill-influenced groundwater, since concentrations of those parameters exceeding groundwater standards were detected in monitoring wells located upgradient and downgradient of the landfill.

For leachate indicators, ammonia was detected at concentrations exceeding the groundwater standard in downgradient wells MW-04S and MW-04I. It should be noted, ammonia concentrations for both wells MW-04S and MW-04I exhibited a decreasing trend in comparison to historical results.

All 22 monitoring wells exhibited total phenols at concentrations that exceeded 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 22 monitoring wells.

7.2 Recommendations

Based on the results from the August 2017 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)
Color (APHA Units)	-	-	(units)	5	30	40	15	1	5 U	5 U	20
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	2 U	4 U	3	4 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
Chemical Oxygen Demand	-	-	(mg/l)	18.2	10 U	37.2	10 U	10.0 U	10.0 U	3.00 U	21.2
Chloride	250 ST	16887-00-6	(mg/l)	104	37.1	3.11	20.8	55.0	205	41.0	57.5 UB
Hardness (as CaCO3)	-	-	(mg/l)	15.0	56.0	38	20	9.34	25.4	17.3	22.7 UB
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
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**
Sulfate	250 ST		(mg/l)	16.9	5 U	5 U	12.4	12.6	33.3	18.3	29.2
Total Organic Carbon	-	-	(mg/l)	1	2.7	2.8	1 U	1 U	1 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	279	136	50	1820	173	454 D	167 D	250
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

NOTES:

NA: Not analyzed

U* or UB: Analyzed for but not detected, value shown is instrument detection limit

J: Estimated value

D: Diluted.

UJ* or UJ: Value was not detected above quantitation limit but was an appoximate concentration as determined by data validation.

: Concentration exceeds Standard/Guidance Value

U* or UB: Analyte considered undetected based on data validation criteria.

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

-: No standard or guildance value

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)
Color (APHA Units)	-	-	(units)	5	10	5 U	15	1 U	5 U	5 U	20
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	2 U	4 U	2 U	4 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
Chemical Oxygen Demand	-	-	(mg/l)	10	10 U	10 U	10 U	10.0 U	10.0 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
Hardness (as CaCO3)	-	-	(mg/l)	24.0	25.0	22 D	22	95.3	30.3	24.5	35.8 UB
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
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**
Sulfate	250 ST		(mg/l)	21.9	13.2	9.89	6.86	3.34	9.79 UB	13.8	38.1
Total Organic Carbon	-	-	(mg/l)	1	1 U	1 U	1U	1	1 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	58	63	84	72	265	107 D	66.0 D	150
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

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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)
Color (APHA Units)	-	-	(units)	50	20	30	55	15	5 U	50	30
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	168	157	137 D	120 D	120	144	131	140 UB
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
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	2 U	4 U	3	4 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
Chemical Oxygen Demand	-	-	(mg/l)	32.7	19.4	18.6	29.3	11.3	7.35 J	10.3	3.00 U
Chloride	250 ST	16887-00-6	(mg/l)	106	46.4	175 D	60.9	42.0	47.0	79.0	50.0 UB
Hardness (as CaCO3)	-	-	(mg/l)	200	170	220 D	220 D	133	158	166	179
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
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**
Sulfate	250 ST		(mg/l)	86.0	47.1	57.8 D	39.8	36.9	43.7	26.7	25.0 D
Total Organic Carbon	-	-	(mg/l)	8.6	6.8	6.4	5.9	4.6	4.5	4.04	3.70
Total Dissolved Solids	-	-	(mg/l)	421	322	499	336	262	300 D	327 D	330
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

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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)
Color (APHA Units)	-	-	(units)	5	5	5 U	5 U	1 U	5 U	5 U	20
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	10 U	4 U	3	4 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
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
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
Hardness (as CaCO3)	-	-	(mg/l)	23.0	19.0	23	100	36.2	69.5	59.7	74.1 UB
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
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**
Sulfate	250 ST		(mg/l)	17.5	11.3	13.4	20.8	11.7	18.2	26.4	40.2 D
Total Organic Carbon	-	-	(mg/l)	1	1 U	1.0 U	1.5	1 U	1 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	62	56	61	183	95.0	119 D	129 D	160
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

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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)
Color (APHA Units)	-	-	(units)	5	5	5	5 U	1	5 U	5 U	20
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	28.1	29.6	44.9	11.7	52.5	50.0	127	30.3 UB
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
Biochemical Oxygen Demand	-	-	(mg/l)	2	2 U	2 U	2 U	4 U	2 U	4 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
Chemical Oxygen Demand	-	-	(mg/l)	10	10 U	10 U	10 U	3.44 J	10.0 U	7.57 J	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
Hardness (as CaCO3)	-	-	(mg/l)	44.0	42.0	44	34	73.9	78.2	101	64.9 UB
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
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
Sulfate	250 ST		(mg/l)	19.1	9.82	19	91.7	17.8	23.8	43.4	40.0
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1.2	1 U	1.1	1.1	2.27	1.00 U
Total Dissolved Solids	-	-	(mg/l)	103	105	98	77	140	149 D	514 D	160
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

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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)			

NOTES:

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SONIA ROAD LANDFILL
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-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)
Color (APHA Units)	-	-	(units)	200	200	150 D	125 D	25	250	5	30
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	304	259	210 D	186 D	222	201	276	184 UB
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
Biochemical Oxygen Demand	-	-	(mg/l)	9	16	9	14	22	13 J	7 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
Chemical Oxygen Demand	-	-	(mg/l)	30.3	21.8	25.9	29.9	4.07 J	14.6	6.66 J	3.00 UJ
Chloride	250 ST	16887-00-6	(mg/l)	48.8	53.8	50	49.4	56.0	42.0	51.0	47.5 UB
Hardness (as CaCO3)	-	-	(mg/l)	300	240	220 D	270 D	183	175	183	203
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
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
Sulfate	250 ST		(mg/l)	9.30	5 U	5 U	5 U	4.48	3.49 UB	2.37	17.2 D
Total Organic Carbon	-	-	(mg/l)	8.9	6.4	7.5	6.2	6.3	6	5.58	2.99 J
Total Dissolved Solids	-	-	(mg/l)	419	338	304	324	333	305 D	282 D	330
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

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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)
Color (APHA Units)	-	-	(units)	140	20	30	10	10	350	5 U	40
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	28.5	18.4	18.8	19.7	110	17.0	29.3	43.4 UB
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	8 U	5 J	7 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
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
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
Hardness (as CaCO3)	-	-	(mg/l)	54.0	40.0	47	48 D	68.8	50.3	65.0	80.1 UB
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
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**
Sulfate	250 ST		(mg/l)	16.8	11.0	15.3	12.6	37.0	26.5	42.0	52.5 D
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1 U	1 U	1.8	1.5	2.01	1.00 U
Total Dissolved Solids	-	-	(mg/l)	177	72	97	92	209	181 D	191 D	330
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

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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

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Color (APHA Units)	-	-	(units)	200	10	70	75 D	15	150	5	100
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	243	75.1	52.4 U	141 D	104	63.0	271	435
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
Biochemical Oxygen Demand	-	-	(mg/l)	17 J*	2 U	2 U	6	8 U	4 UJ	7 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
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
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
Hardness (as CaCO3)	-	-	(mg/l)	180	92.0	58 D	180 D	76.3	99.3	155	238
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
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
Sulfate	250 ST		(mg/l)	11.3 U	19.9	14.8	7.08	22.6	22.4	34.0	2.00 DU
Total Organic Carbon	-	-	(mg/l)	3.6	1.2	1.1	2.3	2.8	1.9	3.92	2.62 J
Total Dissolved Solids	-	-	(mg/l)	337	200	111	326	287	223 D	305 D	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

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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)
Color (APHA Units)	-	-	(units)	120	60	300 D	75 D	30	250	5	100
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	350	297	292 D	290 D	338	323	136	340
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
Biochemical Oxygen Demand	-	-	(mg/l)	19 J*	14	17 J*	17	32	27 J	7 U	18.3
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
Chemical Oxygen Demand	-	-	(mg/l)	23.0	36.0	28.6	26	26.2	20.2	21.2	24.9 J
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
Hardness (as CaCO3)	-	-	(mg/l)	290	275	300 D	310 D	245	277	303	383
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
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
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
Total Organic Carbon	-	-	(mg/l)	6.3	5.4	6.6	5.8	6.7	8.2	8.96	5.84
Total Dissolved Solids	-	-	(mg/l)	398	378	432	448	394	459 D	419 D	550
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

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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-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)
Color (APHA Units)	-	-	(units)	5 U	10	5 U	5	1 U	5 U	5 U	40
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 U	7 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
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	12	10 U	10.0 U	10.0 U	3.00 U	3.00 UJ
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
Hardness (as CaCO3)	-	-	(mg/l)	110	82.0	70	19	25.5	45.2	53.9	32.9 UB
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
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**
Sulfate	250 ST		(mg/l)	84.0	29.3	49.9 D	20.1	29.4	38.3	22.3	24.1
Total Organic Carbon	-	-	(mg/l)	1.0	1.2	1.2	1 U	1.2	1 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	300	179	163	98	110	122 D	124 D	130
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

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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-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)
Color (APHA Units)	-	-	(units)	10	60	250 D	100 D	25	150	5 U	100
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2	2 U	2 U	8 U	2 U	7 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
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
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
Hardness (as CaCO3)	-	-	(mg/l)	88.0	64.0	90 D	59	96.5	57.5	43.7	145
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
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**
Sulfate	250 ST		(mg/l)	32.7	22.5	28.7	12.9	70.6	29.6	9.48	16.6 D
Total Organic Carbon	-	-	(mg/l)	1.3	2.6	2.3	1 U	3.2	1.9	1.40 J	1.51 J
Total Dissolved Solids	-	-	(mg/l)	196	126	164	100	300	152 D	82.0 D	310
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

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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-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)
Color (APHA Units)	-	-	(units)	40	50	200 D	150 D	25	250	10	100
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	334	195	264 D	272 D	294	259	224	238
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
Biochemical Oxygen Demand	-	-	(mg/l)	15	18	2	18 UJ	22	11	13	7.8
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
Chemical Oxygen Demand	-	-	(mg/l)	32.7	21.8	29.2	26	7.55 J	24.0	15.1	11.2 J
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
Hardness (as CaCO3)	-	-	(mg/l)	320	280	270 D	330 D	208	226	222	226
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
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**
Sulfate	250 ST		(mg/l)	11.6	22.8	5 U	5 U	2.56	2.00 U	2.37	2.00 DU
Total Organic Carbon	-	-	(mg/l)	8.7	4.8	7.4	1.6	7	8.9	7.57	5.07
Total Dissolved Solids	-	-	(mg/l)	496	313	357	383	956	355 D	322 D	110
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

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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)
Color (APHA Units)	-	-	(units)	5	5	5 U	15	1 U	350	5 U	25
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 UJ	4 U	2 UJ
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
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
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
Hardness (as CaCO3)	-	-	(mg/l)	40.0	36.0	36 D	36 D	25.1	25.2	29.7	47.4 UB
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
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
Sulfate	250 ST		(mg/l)	24.5	20.1	26.9	21	14.7	12.8	9.78	15.1
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1 U	1 U	1 U	1 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	130	101	99	107	87.0	93.0 D	67.0 D	130
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

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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-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)
Color (APHA Units)	-	-	(units)	10	10	5 U	5	1 U	350	5 U	20
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 UJ	4 U	2 UJ
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
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
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
Hardness (as CaCO3)	-	-	(mg/l)	45.0	45.0	80 D	52 D	39.8	46.6	53.3	66.2 UB
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
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
Sulfate	250 ST		(mg/l)	11.1	9.46	56.2 D	15	8.66	26.6	31.8	37.6 D
Total Organic Carbon	-	-	(mg/l)	1.0	1 U	1 U	1 U	1 U	1.3	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	124	98	188	129	99.0	188 D	178 D	170
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

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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-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)
Color (APHA Units)	-	-	(units)	100	70	100 D	75	20	250	5 U	40
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	220	77.7	259 D	223 D	293	96.0	169	148 UB
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
Biochemical Oxygen Demand	-	-	(mg/l)	8 J*	8	10 J*	13	16	5 J	6	5.2 J
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
Chemical Oxygen Demand	-	-	(mg/l)	25.4	21.8	20.0	25.3	10.0 U	3.26 J	12.7	3.00 UJ
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
Hardness (as CaCO3)	-	-	(mg/l)	200	180	240	250 D	180	96.1	169	140
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
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
Sulfate	250 ST		(mg/l)	7.40	5 U	5 U	5 U	1.99 J	28.2	3.83	1.00 U
Total Organic Carbon	-	-	(mg/l)	5.4	3.3	8.1 J*	4.1	4	2.7	3.70	1.16 J
Total Dissolved Solids	-	-	(mg/l)	277	228	329	378	276	218 D	257 D	280
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

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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)
Color (APHA Units)	-	-	(units)	5 U	5	5 U	5 U	I U	150	5 U	20
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	7	2 U	2 U	4 U	2 UJ	4 U	2 UJ
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
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
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
Hardness (as CaCO3)	-	-	(mg/l)	68.0	41.0	120 D	58 D	38.4	43.0	36.3	50.1 UB
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
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**
Sulfate	250 ST		(mg/l)	20.6	12.9	28.1	7.7	9.37	15.0	10.2	14.2
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1.1	1 U	1 U	1 U	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	243	136	298	167	117	151 D	116 D	130
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

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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)
Color (APHA Units)	-	-	(units)	5 U	250	5 U	15	1 U	100	5 U	30
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	16	2 U	4 U	2 U	4 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
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	136	10 U	5.34 J	4.52 J	3.00 U	5.87 J
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
Hardness (as CaCO3)	-	-	(mg/l)	27.0	105	270 D	460 DJ	43.6	62.8	66.1	82.5 UB
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
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
Sulfate	250 ST		(mg/l)	24.4	15.9	16.3	38.1	28.7	46.9	47.5	86.6 D
Total Organic Carbon	-	-	(mg/l)	1U	2.5	3.3	1.6	1 U	1.4	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	104	197	138 D	252	161	166 D	175 D	220
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

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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-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)
Color (APHA Units)	-	-	(units)	5 U	5 U	150 D	5 U	1 U	5 U	5 U	25
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2U	2 U	4 U	2 U	4 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
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
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
Hardness (as CaCO3)	-	-	(mg/l)	13	11.0	5 U	23	8.72	13.2	25.0	37.7 UB
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
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**
Sulfate	250 ST		(mg/l)	16.7	10.6	9.22	12.2	9.51	14.7	6.73	15.9
Total Organic Carbon	-	-	(mg/l)	1 U	1 U	1.0 U	1 U	1 U	1 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
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

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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-11S 11/29/06 (mg/l)	MW-11S 2/23/07 (mg/l)	MW-11S 6/1/07 (mg/l)	MW-11S 8/16/07 (mg/l)	MW-11S 11/14/07 (mg/l)	MW-11S 2/12/08 (mg/l)	MW-11S 5/14/08 (mg/l)	MW-11S 8/6/08 (mg/l)	MW-11S 11/5/08 (mg/l)	MW-11S 2/25/09 (mg/l)
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)
Color (APHA Units)	-	-	(units)	5 U	5	10	5 U	1 U	5 U	5	25
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	118	150	84 D	105 D	158	101	136	118 UB
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 U	4 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
Chemical Oxygen Demand	-	-	(mg/l)	23.0	10 U	10 U	10 U	10.0 U	10.5	7.57 J	14.2 UJ
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
Hardness (as CaCO3)	-	-	(mg/l)	145	170	130 D	148 D	146	107	158	146
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
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**
Sulfate	250 ST		(mg/l)	63.3	49.2	37.0	41.1	32.4	22.9	27.5	33.1
Total Organic Carbon	-	-	(mg/l)	3.8	5.0	3.2	3.6	4.5	3.3	4.18	2.33 J
Total Dissolved Solids	-	-	(mg/l)	286	380	276	321	323	227 D	285 D	280
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

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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-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)
Color (APHA Units)	-	-	(units)	5 U	5 U	5 U	5 U	1 U	5 U	5 U	30
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	9.15	12.8	16	9.4	9.09	5.00	7.07	14.1 UB
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 U	4 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
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U	12	10 U	10.0 U	10.0 U	3.00 U	3.00 UJ
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
Hardness (as CaCO3)	-	-	(mg/l)	53.0	42.0	30	22	22.8	22.2	34.9	45.5 UB
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
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**	**0.00826 J**
Sulfate	250 ST		(mg/l)	30.8	20.8	15.7	10.2	17.0	9.15 UB	14.4	10.9
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
Total Dissolved Solids	-	-	(mg/l)	119	110	73	70	76.0	56.0 D	66.0 D	120
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

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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-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)
Color (APHA Units)	-	-	(units)	5 U	20	10	20	1	5 U	5 U	40
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
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	10	2 U	4 U	2 U	4 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
Chemical Oxygen Demand	-	-	(mg/l)	10.9	10 U	12	10 U	10.0 U	10.0 U	3.00 U	3.00 UJ
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
Hardness (as CaCO3)	-	-	(mg/l)	30.0	24.0	26	38	58.9	106	41.1	91.7 UB
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
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
Sulfate	250 ST		(mg/l)	23.2	11.0	7.03	31	39.9	58.9	7.72	39.4 D
Total Organic Carbon	-	-	(mg/l)	1 U	1.0	2.1	1.3	1.3	2.1	1.00 U	1.00 U
Total Dissolved Solids	-	-	(mg/l)	155	77	74	110	177	179 D	88.0 D	250
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

NOTES:

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: Concentration exceeds Standard/Guidance Value

U* or UB: Analyte considered undetected based on data validation criteria.

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

-: No standard or guildance value

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)
Color (APHA Units)	-	-	(units)	5 U	20	20	15	1 U	5 U	5 U	30
Alkalinity (as CaCO3)	-	471-34-1	(mg/l)	63.9	81.6	88.0 D	288 D	107	93.0	97.0	101 UB
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
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	4 U	2 U	4 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
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
Chloride	250 ST	16887-00-6	(mg/l)	48.6	42.1	49.0	42.4	48.0	245	36.0	32.0 UB
Hardness (as CaCO3)	-	-	(mg/l)	90.0	80.0	120 D	88 D	43.2	122	95.8	152
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
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	5 U	0.005 U	0.005 U	0.00671 UB	**0.00727 J**	**0.0600**	**0.00740 J**
Sulfate	250 ST		(mg/l)	49.4	29.0	37.8	16.8	26.9	38.1	27.0	82.0 D
Total Organic Carbon	-	-	(mg/l)	1.4	1.2	3.3	5.1	1.8	2.1	1.92 J	1.65 J
Total Dissolved Solids	-	-	(mg/l)	200	192	233	227	258	532 D	222 D	360
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

NOTES:

NA: Not analyzed

U* or UB: Analyzed for but not detected, value shown is instrument detection limit

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UJ* or UJ: Value was not detected above quantitation limit but was an appoximate concentration as determined by data validation.

: Concentration exceeds Standard/Guidance Value

U* or UB: Analyte considered undetected based on data validation criteria.

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

-: No standard or guildance value

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.
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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	22.4 B	16.3 B	43.8	172	65.1 UB	99.8		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	5.5 B	66.3 B	44	20 U	58.4	73.2		
Cadmium	5 ST	7440-43-9	ug/l	3.3 B	0.6 B	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	9,050	7,140	2,670	7750	5080	6800		
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		
Chromium Total	50 ST	7440-47-3	ug/l	6.9 B	8.0 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	1.8 B	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	12.0 B	.7 U	20 U	20 U	5 U	3.16 J		
Iron	300 ST	7439-89-6	ug/l	**3,780**	104	20.1 UB	14.2 UB	27.8 UB	22.3 UB		
Lead	25 ST	7439-92-1	ug/l	20.4	18.5	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	2,410 B	1510 B	650	1470	1120 UB	1400 UB		
Manganese	300 ST	7439-96-5	ug/l	104	23	24.1	**866**	13.2 J	111		
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		
Nickel	100 ST	7440-02-0	ug/l	3.9 B	1.7 B	20 U	6.98 J	5 U	3 U		
Potassium	-	7440-09-7	ug/l	5,000	6,760	3470	7950	3550 UB	5430		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	2,980 B	**26,300**	13,000	**31700**	19100 UB	17300 UB		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	8.2 B	.6 B	20 U	20 U	5 U	3 U		
Zinc	2,000 ST	7440-66-6	ug/l	76.4	29.8	11 UB	20 U	14.6 UB	19.4 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		
Iron + Manganese	500 ST*	-	ug/l	**3,884**	127	44.2	**866**	13.2 J	111.0		

NOTES:

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Concentration exceeds Standard/Guidance Value.

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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-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:

U: Analyzed for but not detected, value shown is instrument detection limit.
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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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	4.9 B	10.1 B	83	52.3	26.8 UB	59.9		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	24.4 B	33.8 B	83	20 U	25.9 UB	24.5		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	5,290	6,230	27,400	8930	7110	10600 UB		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	**97.3**	10.0 U	2.5 UJ	2.50 U		
Chromium Total	50 ST	7440-47-3	ug/l	1.3 B	8.0 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	0.49 U	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	1.9 B	.7 U	20 U	20 U	5 U	3.49 J		
Iron	300 ST	7439-89-6	ug/l	71.0 B	13.8 B	8.88 UB	5.75 UB	32 UB	45 UB		
Lead	25 ST	7439-92-1	ug/l	1.5 U	6.6	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	1,940 B	1340 B	6,560	1940	1650 UB	2250 UB		
Manganese	300 ST	7439-96-5	ug/l	9.6 B	**1440**	**1,720**	**1180**	13.4 J	16.3 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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U	2.1 B	20 U	20 U	5 U	3 U		
Potassium	-	7440-09-7	ug/l	1620 B	4150 B	6,850	5360	2630 UB	3990 UB		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	6,510	1,820	8,930	8060	4470 UB	7600 UB		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	**3.9 B**	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	0.56 U	.23 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10 U	48 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	80.6	**1453.8**	**1,728.88**	**1180**	13.4 J	16.3		

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.

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-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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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	**12.5 J**	**5.41 J**	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	43.7 B	44 B	49.3	67.6	109 UB	88.1		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	64.1 B	80.5 B	49	20 U	64.2	78.3		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	61,800	61,600	44,700	53000	55500	60100		
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		
Chromium Total	50 ST	7440-47-3	ug/l	1.9 B	8.0 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	.88 B	1.7 B	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	2.4 B	.7 U	20 U	20 U	5 U	3.5 J		
Iron	300 ST	7439-89-6	ug/l	**2,480**	**3,910**	**1,690**	**3670**	**1800**	**6050**		
Lead	25 ST	7439-92-1	ug/l	1.5 U	5.4	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	8,650	6,620	5,270	6270	6660	7020 UB		
Manganese	300 ST	7439-96-5	ug/l	**1,000**	**723**	**377**	**1660**	**937**	**2380**		
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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U	1.4 B	20 U	20 U	5 U	3 U		
Potassium	-	7440-09-7	ug/l	16,500	16,200	13,300	11400	13100	13100		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	**90,200**	**49,100**	7,860	12400	27000 UB	10700 UB		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	**3.5 B**	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	0.56 U	.23 U	20 U	20 U	5 U	3 U		
Zinc	2,000 ST	7440-66-6	ug/l	13.8	46	14 UB	6.97 J	25.4 UB	34.6 UB		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	41.6 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**3,480**	**4,633**	**2,067**	**5330**	**2737**	**8,430**		

NOTES:

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Concentration exceeds Standard/Guidance Value.

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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-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

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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	**6.0 B**	1.1 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U		
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		
Beryllium	3 GV	7440-41-7	ug/l	0.73 B	.12 U	20 U	20 U	5 U	3 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		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	5,380	34,500	7,980	16600	13400	16500 UB		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	10 U	10.0 U	2.5 U	2.50 U		
Chromium Total	50 ST	7440-47-3	ug/l	2.2 B	8.0 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	0.70 B	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	1.4 B	.7 U	20 U	20 U	5 U	3.8 J		
Iron	300 ST	7439-89-6	ug/l	39.0 B	37.7 B	29.9 UB	47.6 UB	53 UB	76		
Lead	25 ST	7439-92-1	ug/l	2.1 B	4	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	2,720 B	3340 B	3,950	6810	6370	7990 UB		
Manganese	300 ST	7439-96-5	ug/l	2.4 B	43.3	20 U	20 U	5 U	5.08 J		
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		
Nickel	100 ST	7440-02-0	ug/l	2.3 B	1 B	20 U	20 U	5 U	3 U		
Potassium	-	7440-09-7	ug/l	1290 B	5330	826	1580	1390 UB	1670 UB		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	7,690	**20,400**	3,390	5710	9700 UB	7660 UB		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	0.76 B	.3 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	41.4	81.0	29.9	0	0	81.08		

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.

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-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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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	**6.58 J**	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	45.0 B	5.4 B	62.9	83.7	281	86.6		
Beryllium	3 GV	7440-41-7	ug/l	0.26 B	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	36.9 B	20.6 B	63	20 U	54.7	53.1		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	13,900	7,540	25,400	26600	34300	21300 UB		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	10 U	10.0 U	2.5 UJ	2.50 U		
Chromium Total	50 ST	7440-47-3	ug/l	2.1 B	8.0 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	0.49 U	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	1.0 B	.7 U	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	110	35.2 B	20 U	6.53 UB	6.46 UB	23.9 UB		
Lead	25 ST	7439-92-1	ug/l	2.1 B	8	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	1,620 B	3270 B	2,550	2860	3810	2860 UB		
Manganese	300 ST	7439-96-5	ug/l	25.6	2.4 B	14.8 J	79.2	70	**1100**		
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		
Nickel	100 ST	7440-02-0	ug/l	1.8 B	2.3 B	20 U	20 U	5 U	3 U		
Potassium	-	7440-09-7	ug/l	3790 B	978 B	5,050	5110	19400	5330		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	18,600	7,630	4,130	10900	41300 UB	7040 UB		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	0.56 U	.23 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	45.4 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	135.6	37.6	14.8	79.2	70	**1100**		

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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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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-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.

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-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:

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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	145 B	202	199	196	223	220		
Beryllium	3 GV	7440-41-7	ug/l	0.24 B	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	126	202	97	20 U	110	184 J		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	57,600	64,500	58,900	57600	60100 J	66800		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	10 U	10.0 U	2.5 U	2.50 U		
Chromium Total	50 ST	7440-47-3	ug/l	1.6 B	8.0 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	0.49 U	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	0.55 U	.7 U	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	**17,100**	**19,900**	**13,600**	**16400**	**18500**	**19200**		
Lead	25 ST	7439-92-1	ug/l	6.3	4.8	15 U	14.5 J	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	9,270	8,370	8640	7590	7990 J	8800 UB		
Manganese	300 ST	7439-96-5	ug/l	**4,530**	**5,440**	**5,100**	**4790**	**5150**	**6660**		
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		
Nickel	100 ST	7440-02-0	ug/l	2.0 B	1.6 B	20 U	20 U	5 U	8.52 UB		
Potassium	-	7440-09-7	ug/l	12,500	11,100	12,400	11400 J	11100	10600 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 U*J*	4.5 B	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	**34,100**	**33,100**	12,200	12200	12700 UB	9870 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	**6.4 B**	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	1.8 B	.23 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	47.1 UBJ	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**21,630**	**25,340**	**18,700**	**21190**	**23650**	**25,860**		

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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	**5.75 J**	5 U	9 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		
Barium	1,000 ST	7440-39-3	ug/l	27.0 B	1.3 U	115	86	115 UB	146 J		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	25.7 B	41.1 B	85	20 U	92	295		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	12,900	13,100	22,300	16200	19800 J	23000 UB		
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		
Chromium Total	50 ST	7440-47-3	ug/l	0.89 B	0.02 U	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	0.62 B	1.2 B	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	1.6 B	0.52 U	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	**1,570**	**2,630**	**40,800**	**37300**	**51200**	**58000**		
Lead	25 ST	7439-92-1	ug/l	1.5 U	8.5	5.82 J	15 U	5 U	8.68 J		
Magnesium	35,000 GV	7439-95-4	ug/l	1,870 B	2000 B	3,180	2410	3740 J	5530 UB		
Manganese	300 ST	7439-96-5	ug/l	81	226	**2,190**	**2510**	**4940**	**6400**		
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		
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		
Potassium	-	7440-09-7	ug/l	4520 B	4780 B	6,090	5130 J	5370 UB	6070 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.4 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	9,120	10,000	12,900	9640	12200 UB	11800 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	.56 U	0.32 U	20 U	20 U	5 U	3 U		
Zinc	2,000 ST	7440-66-6	ug/l	51.2	26.1	15.7 UB	20 U	56.7 J	19.2 UB		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10 U	41.7 UBJ	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**1,651**	**2,856**	**42,990**	**39810**	**56140**	**64,400**		

NOTES:

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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-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:

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Concentration exceeds Standard/Guidance Value.

ST: Standard.
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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	7.56 J	5 U	9 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		
Barium	1,000 ST	7440-39-3	ug/l	24.3 B	38.6 B	134	116	178	221 J		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	113	72.4 B	71	20 U	93	271		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	16,200	48,800	26,800	35300	53200 J	80900		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.2 U	10 U	10.0 U	2.5 U	2.50 U		
Chromium Total	50 ST	7440-47-3	ug/l	1.8 B	10.6	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	.55 B	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	1.6 B	.7 U	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	16,600	36,400	19,700	15300	19400	37500		
Lead	25 ST	7439-92-1	ug/l	5.1	1.8 B	15 U	15 U	5 U	5.42 J		
Magnesium	35,000 GV	7439-95-4	ug/l	2,040 B	4530 B	2,250	2700	5390 J	8640 UB		
Manganese	300 ST	7439-96-5	ug/l	1,180	4,690	2,700	1550	1430	2400		
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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U	.64 U	20 U	20 U	5 U	3.17 UB		
Potassium	-	7440-09-7	ug/l	4510 B	5,450	13,100	19700 J	23100	19600 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	3.7 B	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	19,600	54,200	20,800	9350	17700 UB	12400 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	3.4 B	3.2 B	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	1.0 B	.23 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43.5 UBJ	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	17,780	41,090	22,400	16850	20830	39,900		

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-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.
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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	7.92 J	20 U	5 U	9 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		
Barium	1,000 ST	7440-39-3	ug/l	298	379	282	293	335	414 J		
Beryllium	3 GV	7440-41-7	ug/l	0.19 B	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	181	213	158	20 U	186	443		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	90,100	129,000	84,500	96400	105000 J	133000 UB		
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		
Chromium Total	50 ST	7440-47-3	ug/l	1.7 B	13.3	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	1.1 B	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	0.55 U	.7 U	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	39,000	60,200	37,200	39100	43200	50800		
Lead	25 ST	7439-92-1	ug/l	11.3	9.6	15 U	15 U	5 U	7.18 J		
Magnesium	35,000 GV	7439-95-4	ug/l	10,700	12,400	8,300	8880	10200 J	12400 UB		
Manganese	300 ST	7439-96-5	ug/l	2,250	3,240	2,520	2800	3220	3090		
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		
Nickel	100 ST	7440-02-0	ug/l	2.2 B	.64 U	5.04 J	20 U	5.09 J	5.16 UB		
Potassium	-	7440-09-7	ug/l	18,400	20,600	15,200	17200 J	17500	19400 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	39,300	51,000	11,500	13300	14100 UB	10400 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	2.9 B	1.5 B	20 U	20 U	5 U	3 U		
Zinc	2,000 ST	7440-66-6	ug/l	13.5	10.2 B	17 UB	20 U	13.7 UBJ	19.7 UB		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	45.4 UBJ	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	41,250	63,440	39,720	41900	46420	53,890		

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-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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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 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		
Beryllium	3 GV	7440-41-7	ug/l	0.17 B	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	31.4 B	29.1 B	24	20 U	26.9 UB	21.3		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	14,900	4290 B	6,230	11100	13300 J	8210		
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		
Chromium Total	50 ST	7440-47-3	ug/l	2.2 B	8.4	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	1..2 B	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	1.8 B	.7 U	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	295	31.9 B	12.7 UB	13.5 UB	43.8 UB	71.9		
Lead	25 ST	7439-92-1	ug/l	5.6	9	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	7,380	1560 B	2,420	4260	5040 J	3010 UB		
Manganese	300 ST	7439-96-5	ug/l	**1,560**	25	**352**	244	169	66.6		
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		
Nickel	100 ST	7440-02-0	ug/l	19.0 B	5.6	20 U	20 U	5 U	3 U		
Potassium	-	7440-09-7	ug/l	2850 B	1400 B	1,620	2670	3840 UB	3100 UBJ		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	4.7 B	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	**23,500**	18,500	5,450	6850	6710 UB	4740 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3..2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	.68 B	.23 U	20 U	20 U	5 U	3 U		
Zinc	2,000 ST	7440-66-6	ug/l	40.6	12 B	11.8 UB	20 U	108 J	17.7 UB		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43.4 UBJ	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**1,855**	25	352	244	169	**138.5**		

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-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	8,890	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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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	6.59 J	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.8 B	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	34.1 B	20.6 B	107	65.2	38.2 UB	96.1 J		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	54.4 B	43.9 B	51	20 U	48.7	74.9		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.6 B	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	20,500	15,600	32,800	19700	14000 J	46600		
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		
Chromium Total	50 ST	7440-47-3	ug/l	1.5 B	7.9	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	.49 U	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	0.55 U	.7 U	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	12,600	4,330	6,110	3180	2460	8140		
Lead	25 ST	7439-92-1	ug/l	4.9	1.9 B	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	3,830 B	1840 B	3,510	2010	2150 J	6850 UB		
Manganese	300 ST	7439-96-5	ug/l	5,070	1,730	2,450	1170	803	1750		
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		
Nickel	100 ST	7440-02-0	ug/l	1.7 B	1.1 B	20 U	20 U	5 U	3 U		
Potassium	-	7440-09-7	ug/l	10,600	9,200	26,200	21200	12300	17100 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	19,300	10,400	14,100	8190	5170 UB	10000 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	.98 B	.23 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	40.3 UBJ	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	17,670	6,060	8,560	4350	3263	9,890		

NOTES:

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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-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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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 B	1.8 B	20 U	20 U	6.16 J	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.3 B	25 U	25 U	10 U	7.01 J		
Barium	1,000 ST	7440-39-3	ug/l	283	272	268	275	268 UB	275 J		
Beryllium	3 GV	7440-41-7	ug/l	0.26 B	.3 B	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	197	163 B	144	20 U	115	207		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.9 B	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	79,500	78,600	69,500	75600	73300 J	74100		
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		
Chromium Total	50 ST	7440-47-3	ug/l	2.1 B	11.5	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	1.0 B	1.5 B	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	0.55 U	11.1 B	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	29,200	35,900	24,800	25300	23400	26200		
Lead	25 ST	7439-92-1	ug/l	9.5	11.7	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	10,600	8,880	8,360	8950	9500 J	9940 UB		
Manganese	300 ST	7439-96-5	ug/l	4,280	5,260	4,770	5460	5630	5760		
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		
Nickel	100 ST	7440-02-0	ug/l	4.6 B	5.6 B	20 U	20 U	5 U	3.53 UB		
Potassium	-	7440-09-7	ug/l	15,400	12,900	12,900	14500	13300	13000 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	30,600	27,900	10,400	11800	12900 UB	10700 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	2.7 B	8.6 B	20 U	20 U	5 U	3 U		
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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	47.2 UBJ	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	29,210	35,912	29,570	30,760	29030	31,960		

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-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:

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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 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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 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		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	105	120	54	20 U	35.1 UB	28.2		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	5,960	7,260	6,130	5360	6730	10500 UB		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	.02 U	10 U	10.0 U	2.5 U	2.50 UJ		
Chromium Total	50 ST	7440-47-3	ug/l	1.8 B	7	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	10.7 B	2 B	20 U	20 U	5 U	5.17 J		
Copper	200 ST	7440-50-8	ug/l	1.6 B	.7 U	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	159	**1,060**	122	10.3 UB	31.1 UB	24.1 UB		
Lead	25 ST	7439-92-1	ug/l	1.6 B	8.6	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	3,580 B	3610 B	3,370	2870	3140	5170 UB		
Manganese	300 ST	7439-96-5	ug/l	**3,370**	**761**	**3,190**	**2220**	**1550**	**1300**		
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		
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		
Potassium	-	7440-09-7	ug/l	2,000 B	1560 B	2,060	2020 J	1910 UB	2750 UBJ		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	18,500	17,800	3,260	4460	4070 UB	4090 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	.56 U	.23 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	42.1 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**3,529**	**1,821**	**3,312**	**2220**	**1550**	**1,300**		

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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**

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B: Concentration is above instrument detection limit but below contract required detection limit.
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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	53.0 B	46.8 B	58.3	138	127 UB	111 J		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	32.3 B	56.1 B	58	20 U	36 UB	27.8		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	23,900	19,700	13,500	16000	17700	21500 UB		
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		
Chromium Total	50 ST	7440-47-3	ug/l	1.0 B	8.5	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	.49 U	2.8 B	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	1.9 B	22.7 B	20 U	20 U	5 U	3 U		
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		
Lead	25 ST	7439-92-1	ug/l	1.5 U	6	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	4,030 B	1900 B	1,450	1630	2210	3060 UB		
Manganese	300 ST	7439-96-5	ug/l	**530**	**643**	**556**	**802**	**731**	**848**		
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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U	2.8 B	20 U	20 U	5.79 J	3 U		
Potassium	-	7440-09-7	ug/l	3,610 B	4920 B	8,220	16700 J	13900	7670 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	**29,700**	19,200	4,110	14500	15000 UB	8710 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	**3.7 B**	3.2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	.56 U	.4 B	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	46.3 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**620.1**	**4,583.0**	**563.46**	**802**	**731**	**848**		

NOTES:

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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-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

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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	372	418	220	206	265	281 J		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	244	245	161	20 U	134	181		
Cadmium	5 ST	7440-43-9	ug/l	0.38 B	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	74,800	115,000	64,000	33800	59500	49100		
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		
Chromium Total	50 ST	7440-47-3	ug/l	3.0 B	15.5	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	0.62 B	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	0.55 U	.7 U	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	**36,400**	**82,300**	**46,400**	**17300**	**41100**	**32800**		
Lead	25 ST	7439-92-1	ug/l	8.7	9.3	5.63 J	15 U	5 U	4.4 J		
Magnesium	35,000 GV	7439-95-4	ug/l	9,920	9,710	5,020	2820	4940	4130 UB		
Manganese	300 ST	7439-96-5	ug/l	**494**	**664**	**500**	**341**	**928**	**1280**		
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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U	.64 U	5.5 J	20 U	5 U	3.08 UB		
Potassium	-	7440-09-7	ug/l	11,900	14,200	8,360	16500 J	11200	11900 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	**21,700**	**39,000**	7,990	11100	11600 UB	11300 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	**3.6 B**	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	2.7 B	2.1 B	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	39.7 UBJ	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**73,294**	**165,264**	**46,900**	**17641**	**42028**	**34,080**		

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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-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

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Aluminum	-	7429-90-5	ug/l	8.2 U	46.7 B	5.13 J	6.44 J	35.4 UB	38.8 UB		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.1 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	4.4 U	25 U	25 U	10 U	7 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		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	51.0 B	45.7 B	37	20 U	25 UB	28.2		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	.18 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	38,000	21,900	12,700	14200	11700	16200 UB		
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		
Chromium Total	50 ST	7440-47-3	ug/l	1.6 B	8.0 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	.49 U	.52 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	1.9 B	.7 U	20 U	20 U	5 U	3 U		
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		
Lead	25 ST	7439-92-1	ug/l	1.5 U	3.6	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	6,020	1980 B	1,650	1850	1700 UB	2350 UB		
Manganese	300 ST	7439-96-5	ug/l	**971**	**506**	**1,600**	**2320**	**1490**	**1130**		
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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U*J*	.8 B	20 U	20 U	5 U	3.6 UB		
Potassium	-	7440-09-7	ug/l	3440 B	2850 B	1,790	2420 J	3700 UB	3160 UBJ		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.8 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	**22,900**	442	5,870	12700	12900 UB	5050 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	3.2 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	.56 U	.23 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	44.3 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**971**	**506**	**1,613.50**	**2320**	**1490**	**1,130**		

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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

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-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 (ug/l)	MW-11D (ug/l)
Aluminum	-	7429-90-5	ug/l	29,600	330	692	2550	1080	787 B		
Antimony	3 GV	7440-36-0	ug/l	**3.1 B**	2.8 B	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	18.3	1.8 B	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	261	48.0 B	77.6	120	136 UB	132		
Beryllium	3 GV	7440-41-7	ug/l	1.0 B	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	30.0 B	41 B	48	20 U	62.3	48.9		
Cadmium	5 ST	7440-43-9	ug/l	1.8 B	0.3 B	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	75,500	27,800	11,400	16300	15900	18800 UB		
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		
Chromium Total	50 ST	7440-47-3	ug/l	**73.1**	1.0 B	20 U	8.39 J	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	18.5 B	0.4 B	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	124	2.5 B	20 U	13.8 J	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	**37,000**	**765**	**424**	**2020**	**354**	86.3		
Lead	25 ST	7439-92-1	ug/l	**174**	20.6	15 U	18.2	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	17,000	5,800	3,660	5370	6430	8660 UB		
Manganese	300 ST	7439-96-5	ug/l	**1,020**	150	147	131	191	276		
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		
Nickel	100 ST	7440-02-0	ug/l	57.7	15.2 B	17.9 J	25.8	40.6	46.7		
Potassium	-	7440-09-7	ug/l	13,700	7,370	3,780	5320	5450 UB	4280 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	15,900	**40,000**	6,830	8650	8560 UB	6920 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	**5.1 B**	2.9 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	74.7	3.0 B	20 U	20 U	5 U	3 U		
Zinc	2,000 ST	7440-66-6	ug/l	535	34.1	30.8 UB	160	254 J	41.9 UB		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43.4 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**38,020**	**915**	**571**	**2151**	**545**	362		

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-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:

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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 U	25 U	25 U	10 U	7 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		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	0.12 U	20 U	20 U	5 U	3 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		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	0.10 B	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	968 B	7,740	2,480	3640	6840	10600 UB		
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		
Chromium Total	50 ST	7440-47-3	ug/l	1.6 B	0.34 U	20 U	20 U	5 U	102		
Cobalt	-	7440-48-4	ug/l	.49 U	0.28 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	1.6 B	.52 U	7.89 J	20 U	5 U	17.4 J		
Iron	300 ST	7439-89-6	ug/l	37.9 B	3.7 B	15 UB	21.2 UB	30 UB	**725**		
Lead	25 ST	7439-92-1	ug/l	1.5 U	7.8	15 U	15 U	5 U	8.14 J		
Magnesium	35,000 GV	7439-95-4	ug/l	242 B	1660 B	612	989	1920 UB	2750 UB		
Manganese	300 ST	7439-96-5	ug/l	25.8	188.0	34.1	40.8	107	117		
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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U	1.4 U	20 U	20 U	5 U	12.3 UB		
Potassium	-	7440-09-7	ug/l	1050 B	4210 B	2140	2910	3350 UB	3070 UBJ		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	7,660	**24,700**	1,500	1770	3000 UB	5050 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	0.56 U	0.18 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	43.5 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	63.7	191.7	49.1	40.8	107	**842.0**		

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-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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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 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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	**6.01 J**	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 U	25 U	25 U	10 U	7 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		
Beryllium	3 GV	7440-41-7	ug/l	.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	38.5 B	52.8 B	62	20 U	52.2	72.1		
Cadmium	5 ST	7440-43-9	ug/l	.27 U	0.087 U	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	39,500	47,500	47,900	33400	55400	50000		
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		
Chromium Total	50 ST	7440-47-3	ug/l	9.1 B	0.70 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	.68 B	0.30 B	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	3.9 B	2.0 B	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	**454**	11.3 B	23.3 UB	50.1 UB	107 UB	68.6		
Lead	25 ST	7439-92-1	ug/l	1.5 U	6.2	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	5,940	6,300	6,500	5630	4700	5040 UB		
Manganese	300 ST	7439-96-5	ug/l	**2,440**	**1,140**	**668**	**541**	**957**	286		
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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U	3.6 B	20 U	20 U	5 U	3 U		
Potassium	-	7440-09-7	ug/l	14,600	8,510	11,100	12900	18100	15300 J		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	**44,100**	**57,000**	14,900	13700	13000 UB	8290 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	.72 B	0.18 U	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	42.9 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**2,894**	**1,140**	**691.3**	**541**	**957**	355		

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-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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UJ: Value was not detected above quantitation limit but was an appoximate.
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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 U	25 U	25 U	10 U	7 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		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	0.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	9.0 B	11 B	13	20 U	16.2 UB	12.3 J		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	0.1 B	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	6,990	5,030	4,950	4710	7880	10400 UB		
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		
Chromium Total	50 ST	7440-47-3	ug/l	2.4 B	1.1 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	0.49 U	.28 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	4.1 B	1.2 B	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	541	83.8 B	11.2 UB	10.5 UB	41 UB	83.6		
Lead	25 ST	7439-92-1	ug/l	2.8 B	7.9	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	3,520 B	2400 B	2,540	2430	3680	4720 UB		
Manganese	300 ST	7439-96-5	ug/l	14.8 B	23.5	20 U	21.2	5 U	16.3 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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U	1.1 B	20 U	20 U	5 U	6.8 UB		
Potassium	-	7440-09-7	ug/l	1,590 B	65.3 U	659	746	855 UB	1080 UBJ		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.1 U	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	12,000	8,580	2,810	2780	2740 UB	2660 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	8.99 J		
Vanadium	-	7440-62-2	ug/l	1.1 B	0.20 B	20 U	20 U	5 U	3 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		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	36.3 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	555.8	107.3	11.2	21.2	0	99.9		

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Concentration exceeds Standard/Guidance Value.

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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-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**

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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-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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	20 U	20 U	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 U	25 U	25 U	10 U	7 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		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	13.0 B	18.3 B	19	20 U	23.9 UB	67.8		
Cadmium	5 ST	7440-43-9	ug/l	2.5 B	4.2 B	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	6,930	9,490	20,100	34700	13900	30300 UB		
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		
Chromium Total	50 ST	7440-47-3	ug/l	2.6 B	3.0 B	20 U	20 U	5 U	4 U		
Cobalt	-	7440-48-4	ug/l	0.49 U	0.28 U	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	6.4 B	1.9 B	20 U	20 U	5 U	3 U		
Iron	300 ST	7439-89-6	ug/l	**878**	**343**	23.5 UB	13.8 UB	24.6 UB	49.5 UB		
Lead	25 ST	7439-92-1	ug/l	5.0	5.5	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	1210 B	1470 B	4510	4790	1570 UB	3880 UB		
Manganese	300 ST	7439-96-5	ug/l	**1,620**	**3,710**	**2,830**	**819**	**398**	**5250**		
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		
Nickel	100 ST	7440-02-0	ug/l	1.2 U	1.4 B	20 U	20 U	5 U	3 U		
Potassium	-	7440-09-7	ug/l	4050 B	6,670	2910	4160	1730 UB	2500 UB		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.5 BJ	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	8,910	**29,300**	6,140	7740	3130 UB	8940 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	**3.8 B**	2.9 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	2.3 B	0.18 U	20 U	20 U	5 U	3 U		
Zinc	2,000 ST	7440-66-6	ug/l	53.4	27	14.7 UB	20 U	13.7 UBJ	25.4 UB		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10	45.1 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**2,498**	**4,053**	**2,853.5**	**819**	398	**5,250**		

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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-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:

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 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 (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		
Antimony	3 GV	7440-36-0	ug/l	2.1 U	1.8 U	**6.04 J**	**6.6 J**	5 U	9 U		
Arsenic	25 ST	7440-38-2	ug/l	1.9 U	1.5 B	25 U	25 U	10 U	7 U		
Barium	1,000 ST	7440-39-3	ug/l	52.0 B	19.6 B	55.1	163	62.7 UB	79.4		
Beryllium	3 GV	7440-41-7	ug/l	0.13 U	0.12 U	20 U	20 U	5 U	3 U		
Boron	1,000 ST	7440-42-8	ug/l	26.5 B	41.0 B	36	20 U	32 UB	46.9 J		
Cadmium	5 ST	7440-43-9	ug/l	0.27 U	0.10 B	10 U	10 U	5 U	3 U		
Calcium	-	7440-70-2	ug/l	35,200	41,600	30,900	43400	33400	53500		
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		
Chromium Total	50 ST	7440-47-3	ug/l	**1,350**	53.1	20 U	5.39 J	36.1	15.7 J		
Cobalt	-	7440-48-4	ug/l	10.1 B	1.4 B	20 U	20 U	5 U	4 U		
Copper	200 ST	7440-50-8	ug/l	35.6	4.3 B	20 U	5.15 J	6.12 J	3 U		
Iron	300 ST	7439-89-6	ug/l	**9,280**	**524**	40.3 UB	94	**450**	234		
Lead	25 ST	7439-92-1	ug/l	9.7	5.9	15 U	15 U	5 U	4 U		
Magnesium	35,000 GV	7439-95-4	ug/l	3,980 B	3540 B	2,400	3430	3030	4390 UB		
Manganese	300 ST	7439-96-5	ug/l	**552**	**596**	17.8 J	122	31.9	212		
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		
Nickel	100 ST	7440-02-0	ug/l	74.7	11.6 B	7.38 J	19 J	22.7	22.3 UB		
Potassium	-	7440-09-7	ug/l	18,300	15,300	22,000	27200	17400	28800		
Selenium	10 ST	7782-49-2	ug/l	2.6 UNU*J*	2.4 BJ	25 U	25 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		
Sodium	20,000 ST	7440-23-5	ug/l	**38,800**	**29,100**	12,500	**32100**	14700 UB	9760 UBJ		
Thallium	0.5 GV	7440-28-0	ug/l	2.7 U	2.9 U	15 U	15 U	10 U	7 U		
Vanadium	-	7440-62-2	ug/l	16.9 B	0.80 B	20 U	20 U	5 U	3 U		
Zinc	2,000 ST	7440-66-6	ug/l	42.9	37.6	12.7 UB	34	22 UBJ	29.7 UB		
Cyanide	200 ST	0057-12-5	ug/l	10.0 U	10.0 U	50.7 UB	10 U	5 U	5 U		
Iron + Manganese	500 ST*	-	ug/l	**9,832**	**1,120**	58.1	216	481.9	446		

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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		11	6	3 J	5 U	5 U	4 J	0.65	2.95	4.17	2.76	-

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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	U	5 UJ*	5 U	3 J	0	0.53	0.53	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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	5 U	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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	1 J*	1 J	5 U	5 U	5 U	0.5	0	0	0.25	-

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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	5 U	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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	5 U	1.26	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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	5 U	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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	1 J	5 U	5 U	5 J	0	0	0	0.27	-

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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		4	2 J*	U	5 U	5 U	3 J	0.75	0.72	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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	2	U	5 U	5 U	5 U	0	3.8	2.8	0.3	-

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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	1 J	5 U	5 U	5 U	0	1.98	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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	3	U	5 U	2	2	0	0.61	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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	1	U	5 U	1	5 U	0.54	0	0	0.27	-

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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	UJ*	5 U	5 U	5 U	0.51	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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	5 UJ*	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		1	8	U	5 UJ*	5	6 J	1.57	22.57	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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	23	U	5 U	5 U	2	12	1.4	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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		12	12	U	5 U	5 U	1	5.02	1.47	0	0.39	-

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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	0.0006 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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	4	U	5 U	5 U	2	0.63	0.74	0	0.58	-

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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	4	U	5 U	5 U	2	0	0	1.8	0.6	-

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-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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	U	U	5 U	5 U	0	0	0	0.3	-

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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	U	1	5 U	2	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)	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	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	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	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	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	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	5 ST
1,1-Dichloropropene	000563-58-6	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	0.04 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	0.04 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	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	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	0.6 ST
1,2-Dichloroethene (total)	000540-59-0	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	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	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	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	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	-
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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	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	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	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	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	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	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	0.4 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	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	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	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	-
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	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	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	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	5 ST
TOTAL VOCs		U	U	U	5 U	5 U	4	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

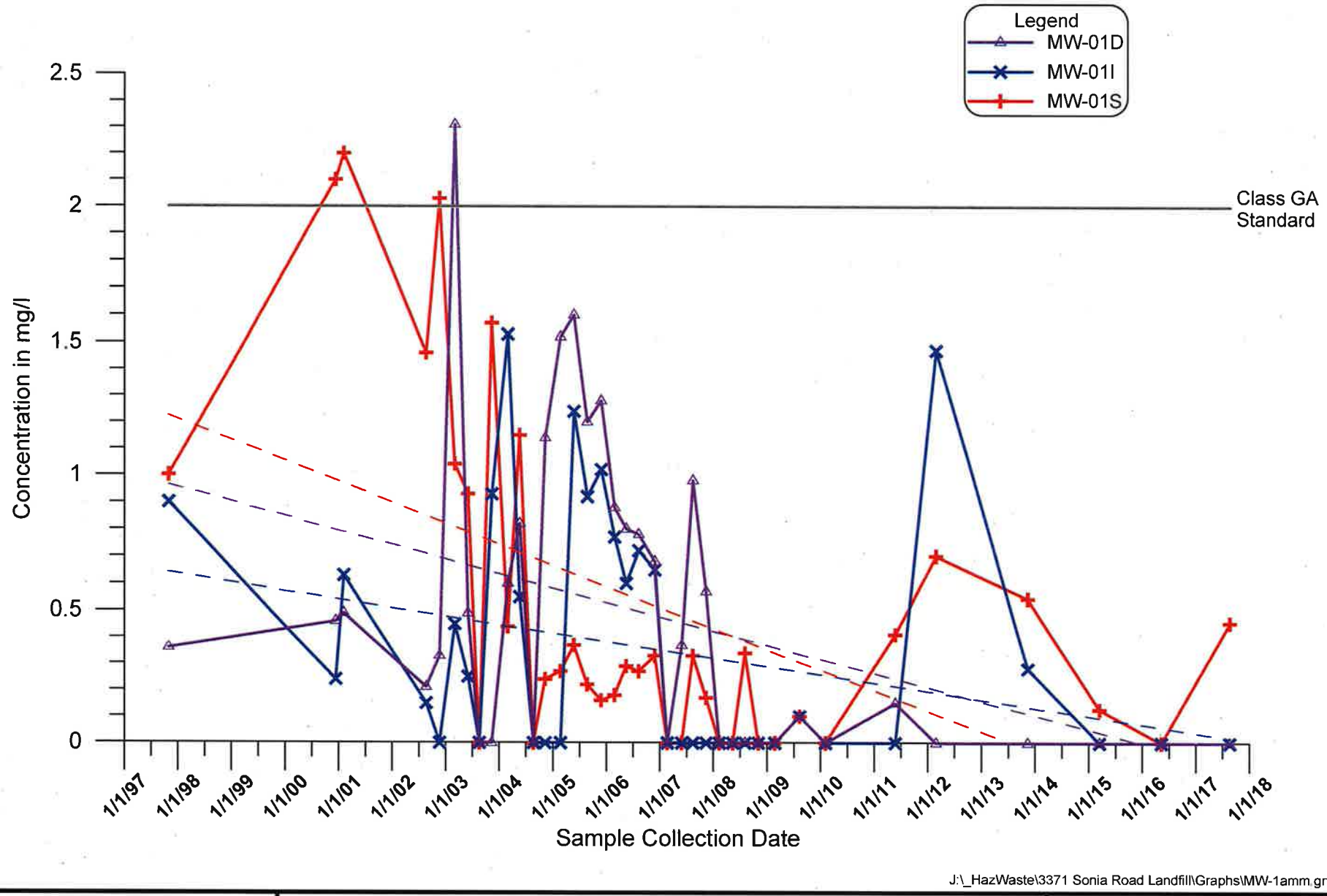
QUALIFIERS
B: Compound was found in the method blank as well as the sample
U: Compound was analyzed for but not detected at the detection limit shown.
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.
U* or UB: Result qualified 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

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

Parameter exceeds Standard/Guidance Value

APPENDIX B

Water Quality Graphs

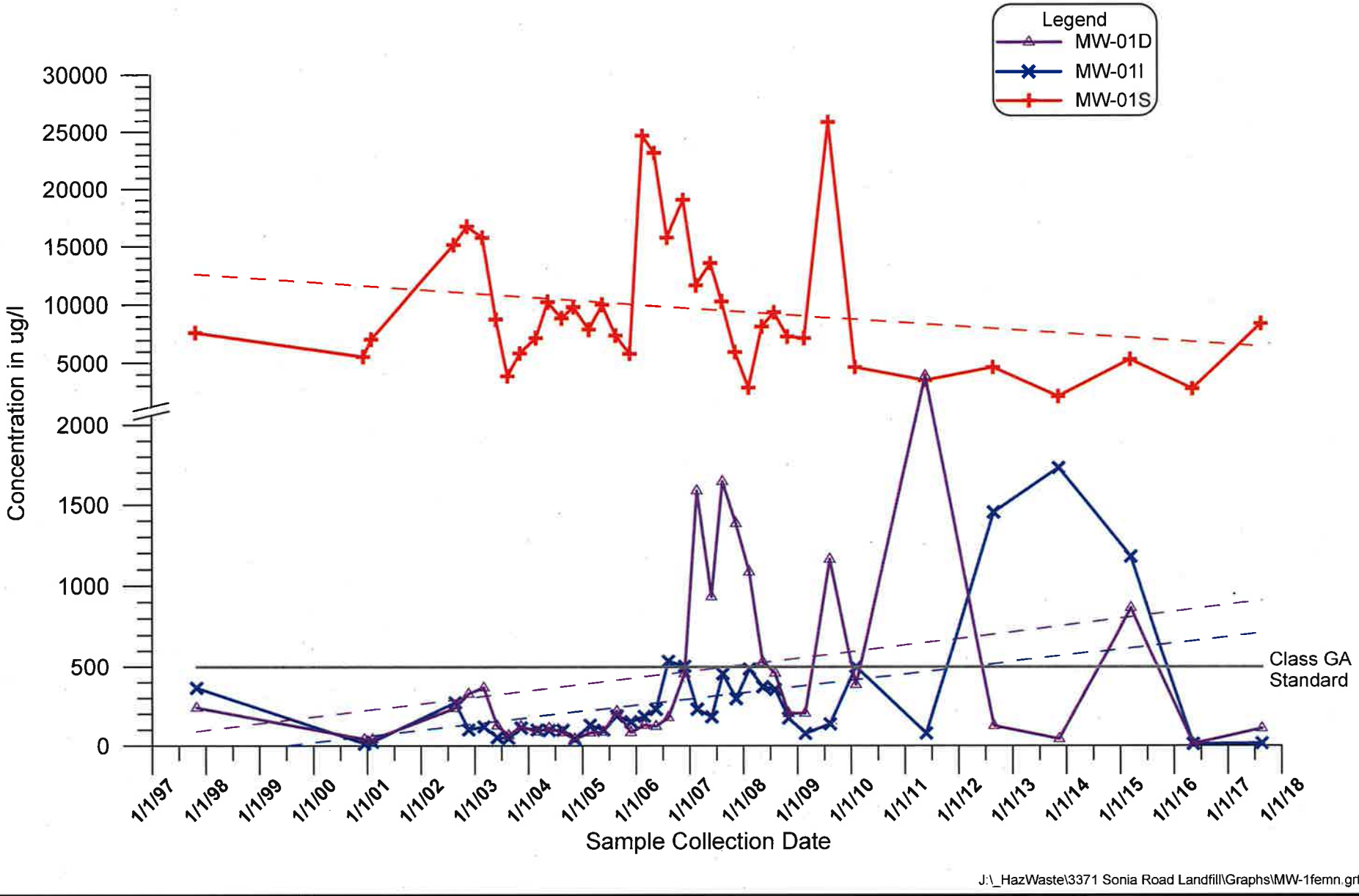


J:_HazWaste\3371 Sonia Road Landfill\Graphs\MW-1amm.grf

D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 1

Appendix B

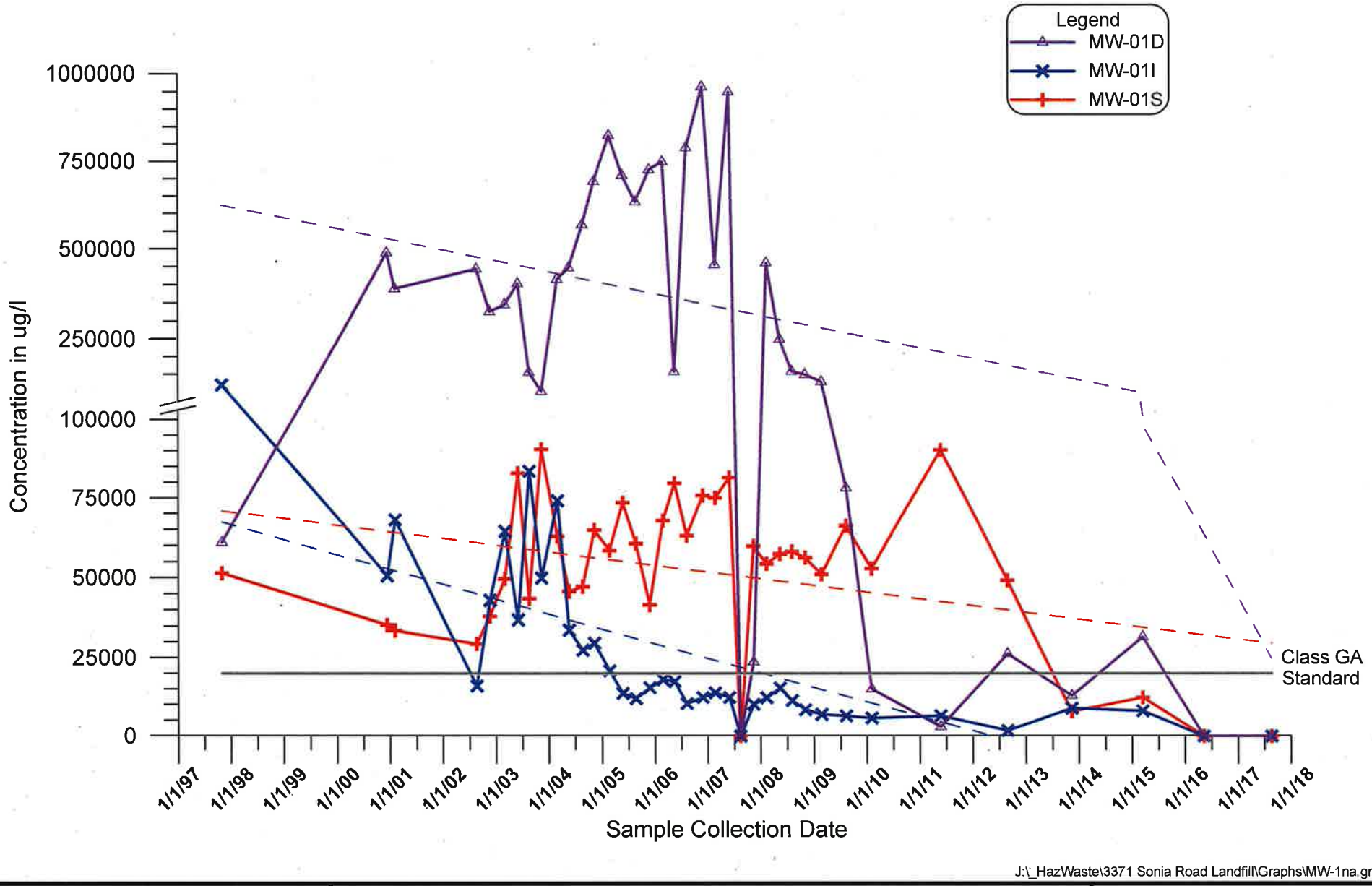


J:_HazWaste\3371 Sonia Road Landfill\Graphs\MW-1femn.grf

D&B ENGINEERS AND ARCHITECTS, P.C.

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

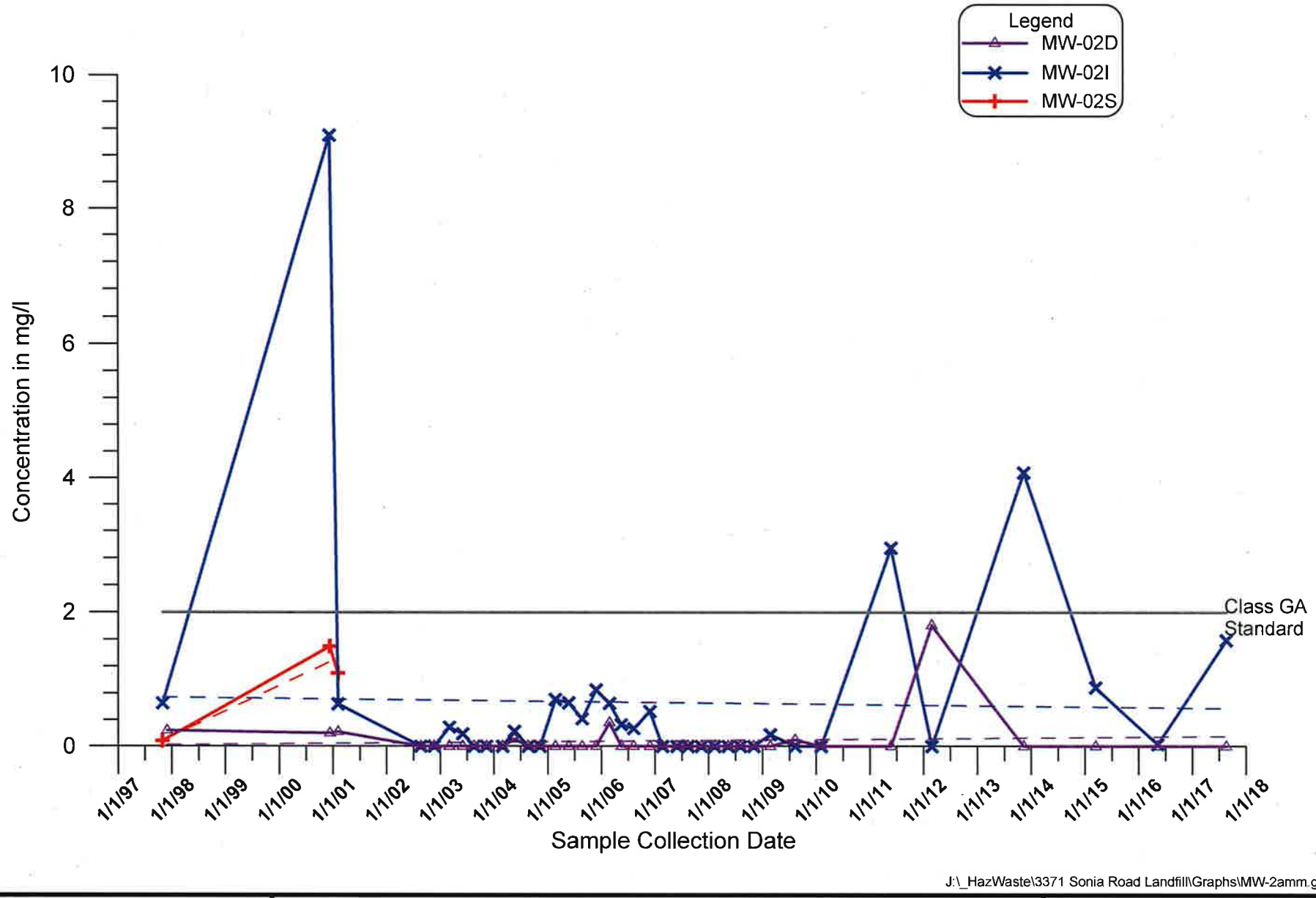
Appendix B



D&B Engineers and Architects, P.C.

Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 1

Appendix B



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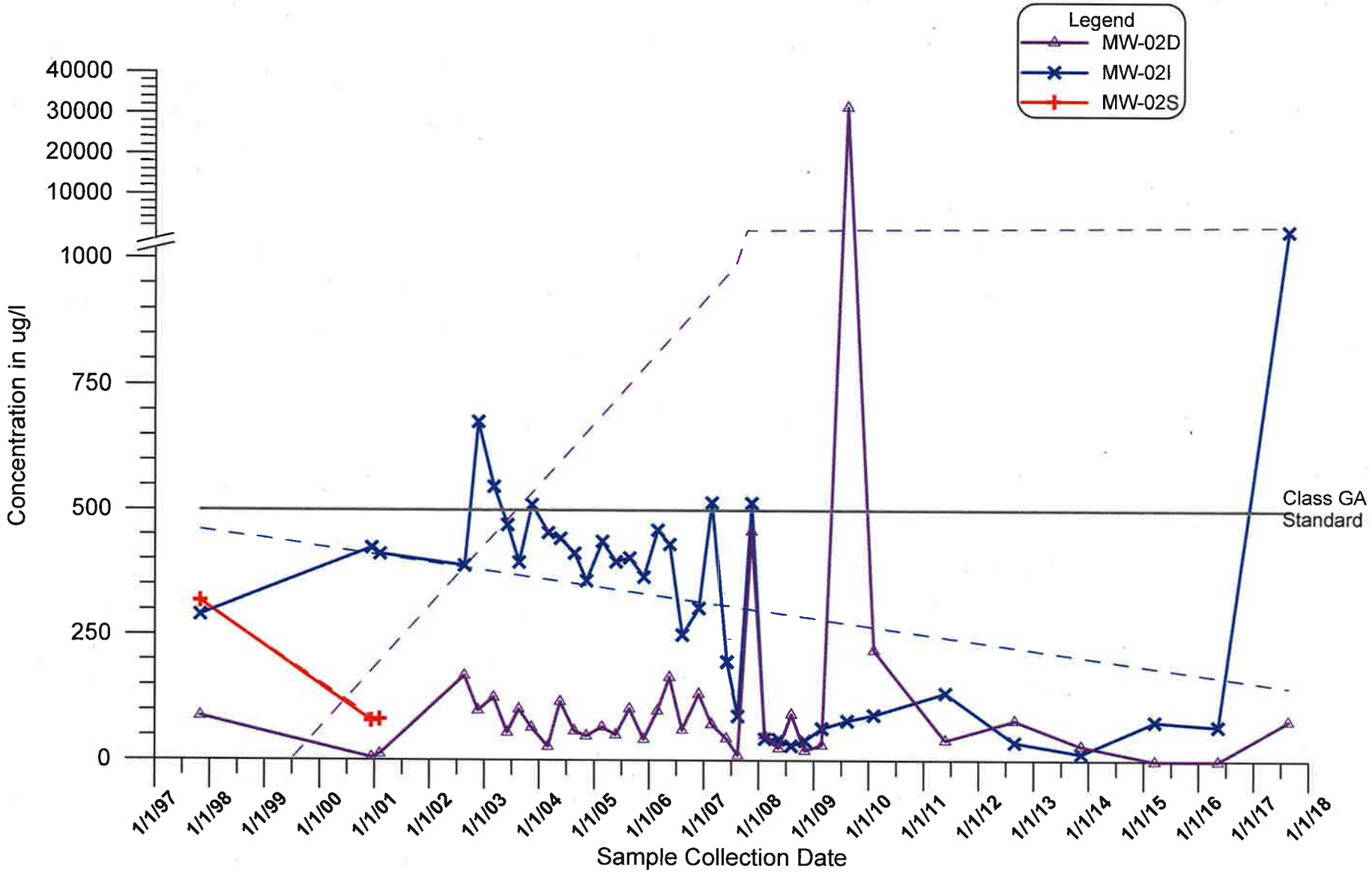
D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 2

Appendix B



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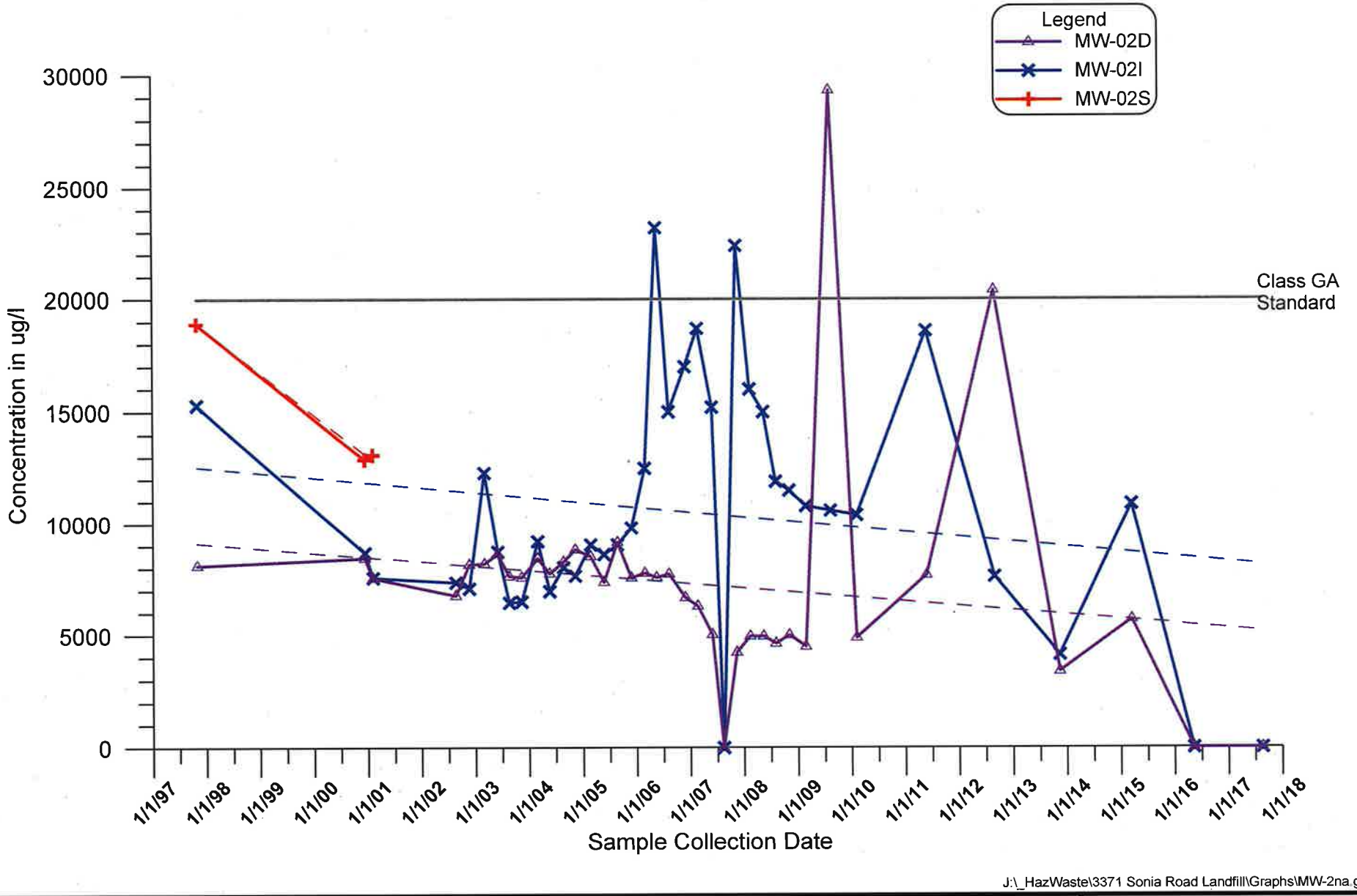
D&B ENGINEERS AND ARCHITECTS, P.C.

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

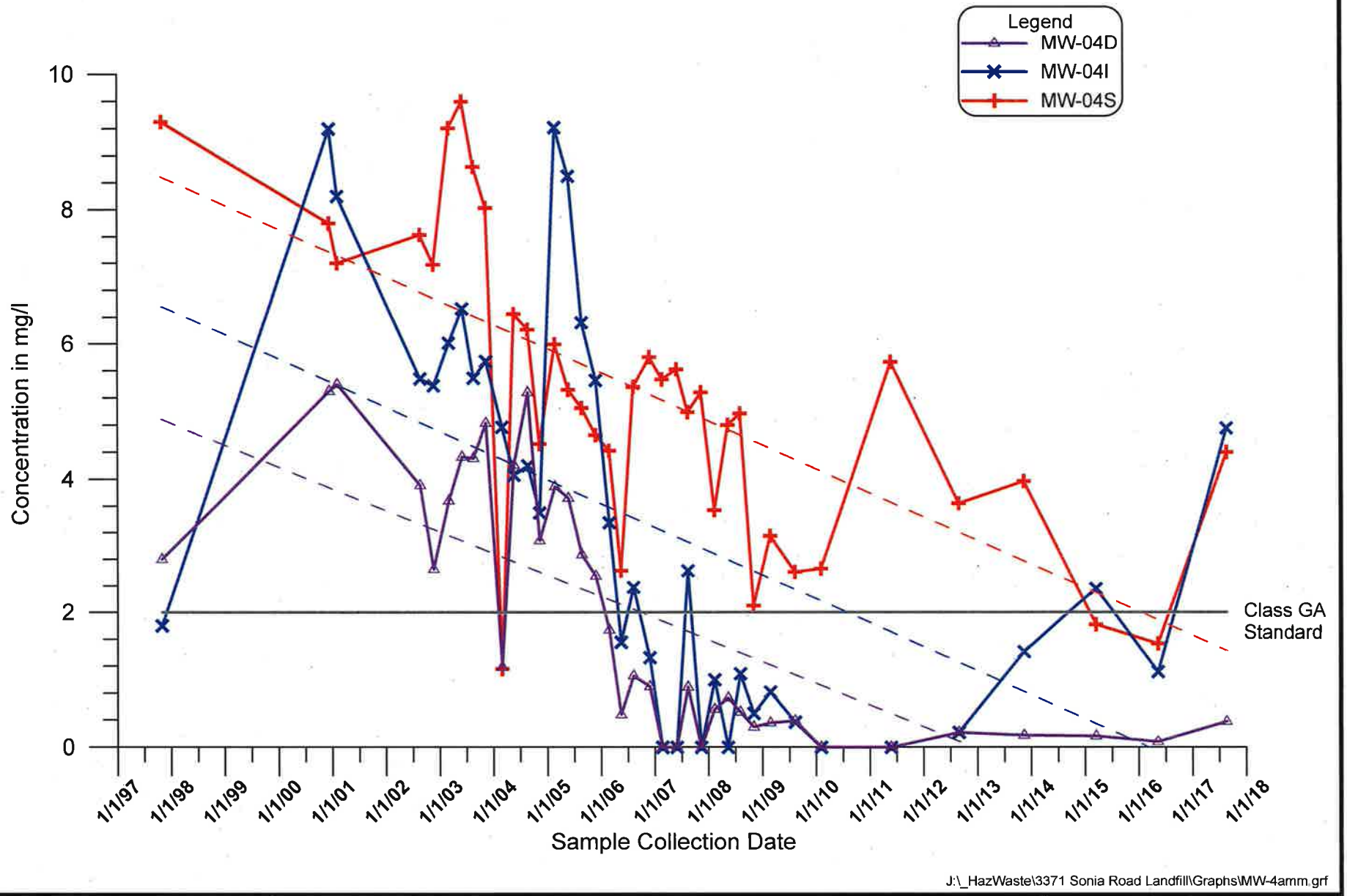
Appendix B



D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 2

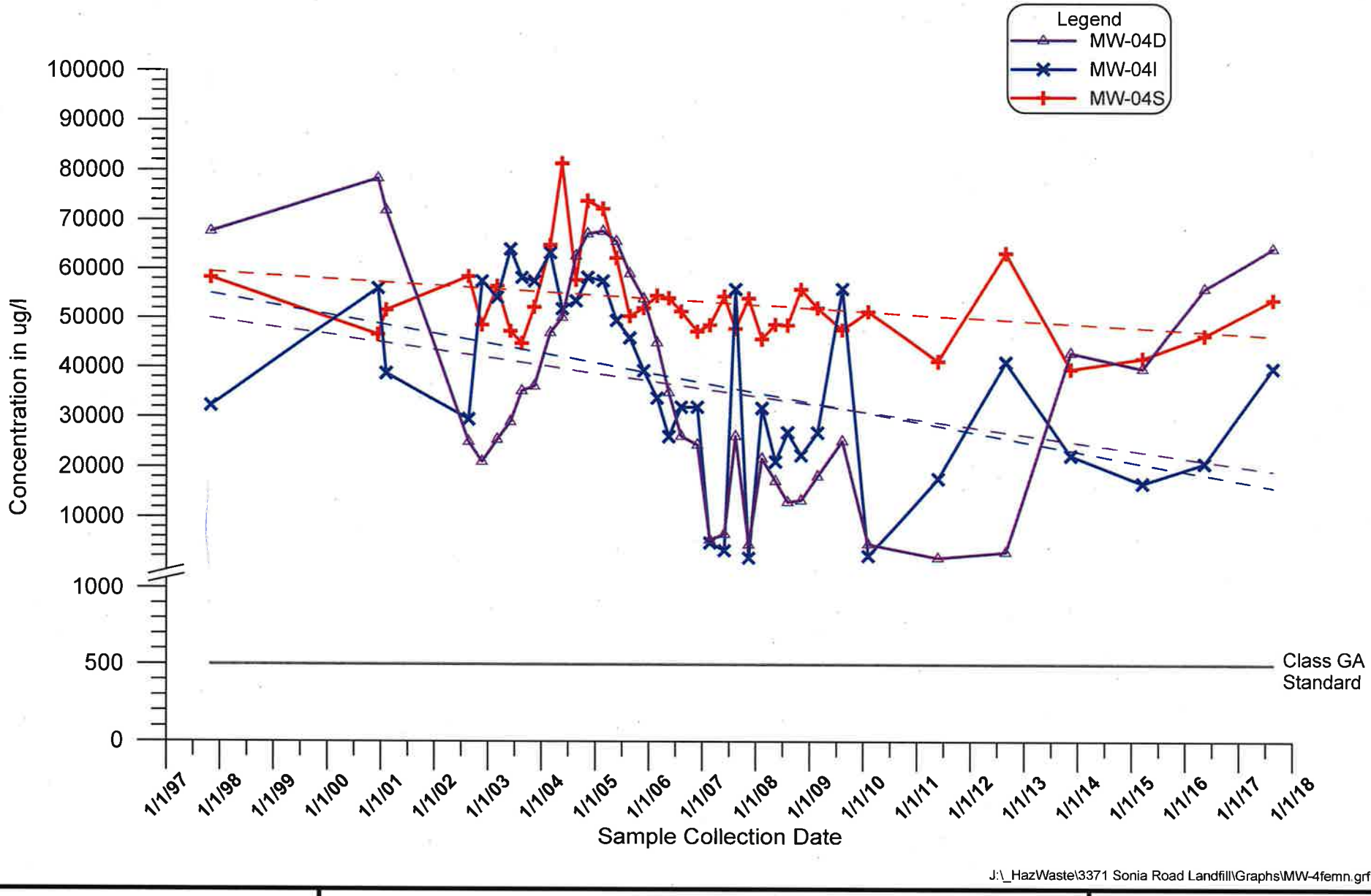
Appendix B



D&B Engineers and Architects, P.C.

Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 4

Appendix B



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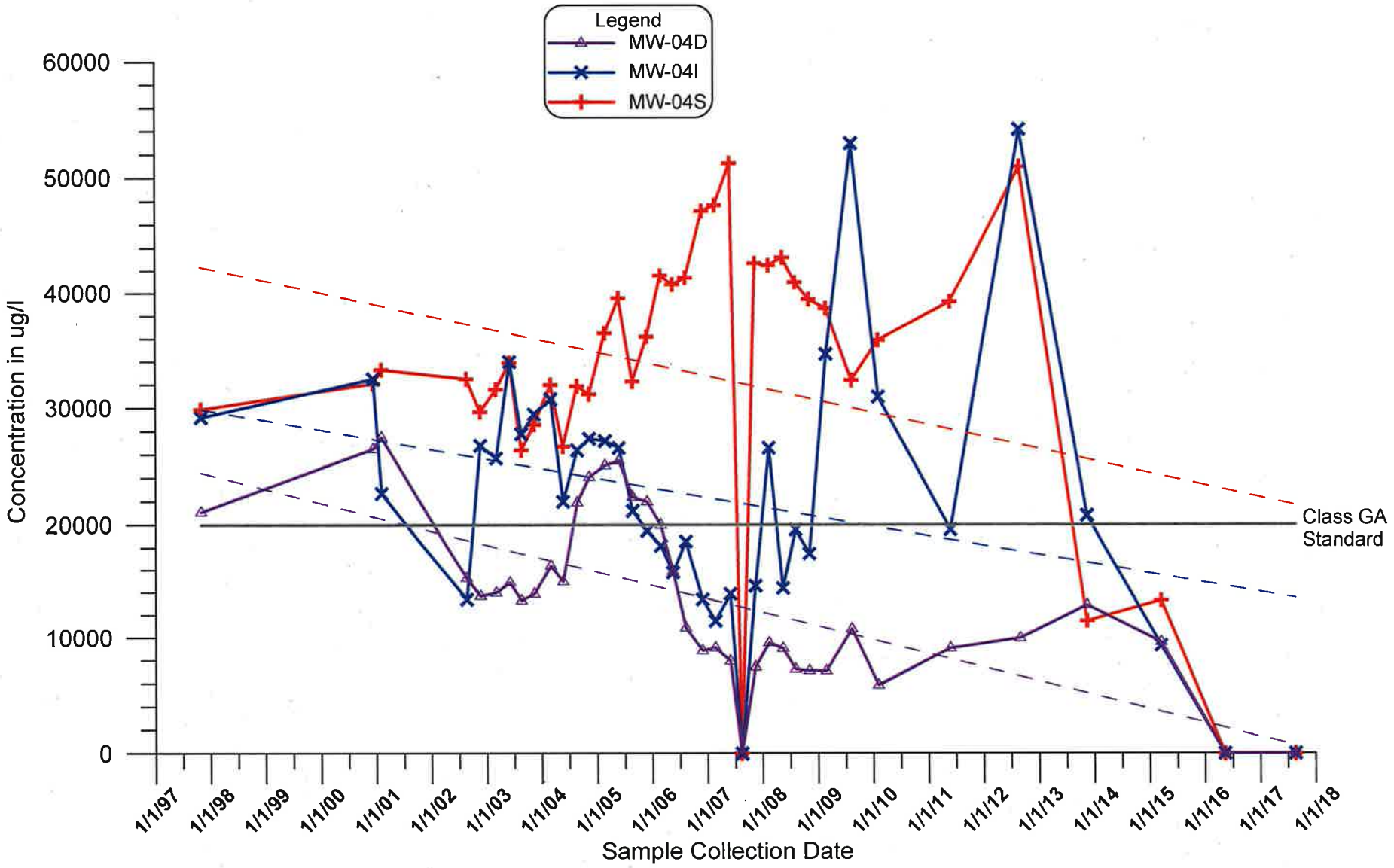
D&B ENGINEERS AND ARCHITECTS, P.C.

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

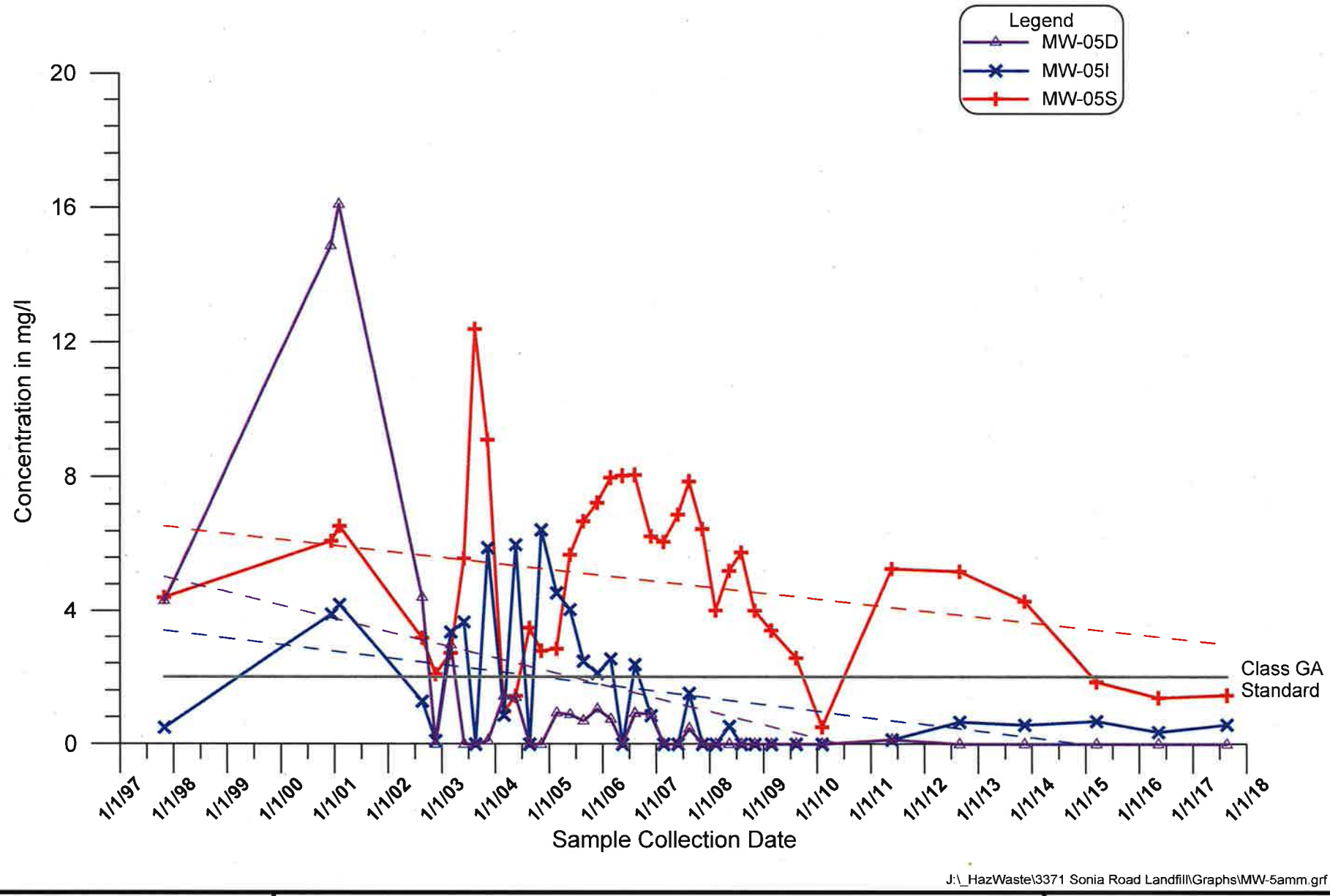
Appendix B



D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 4

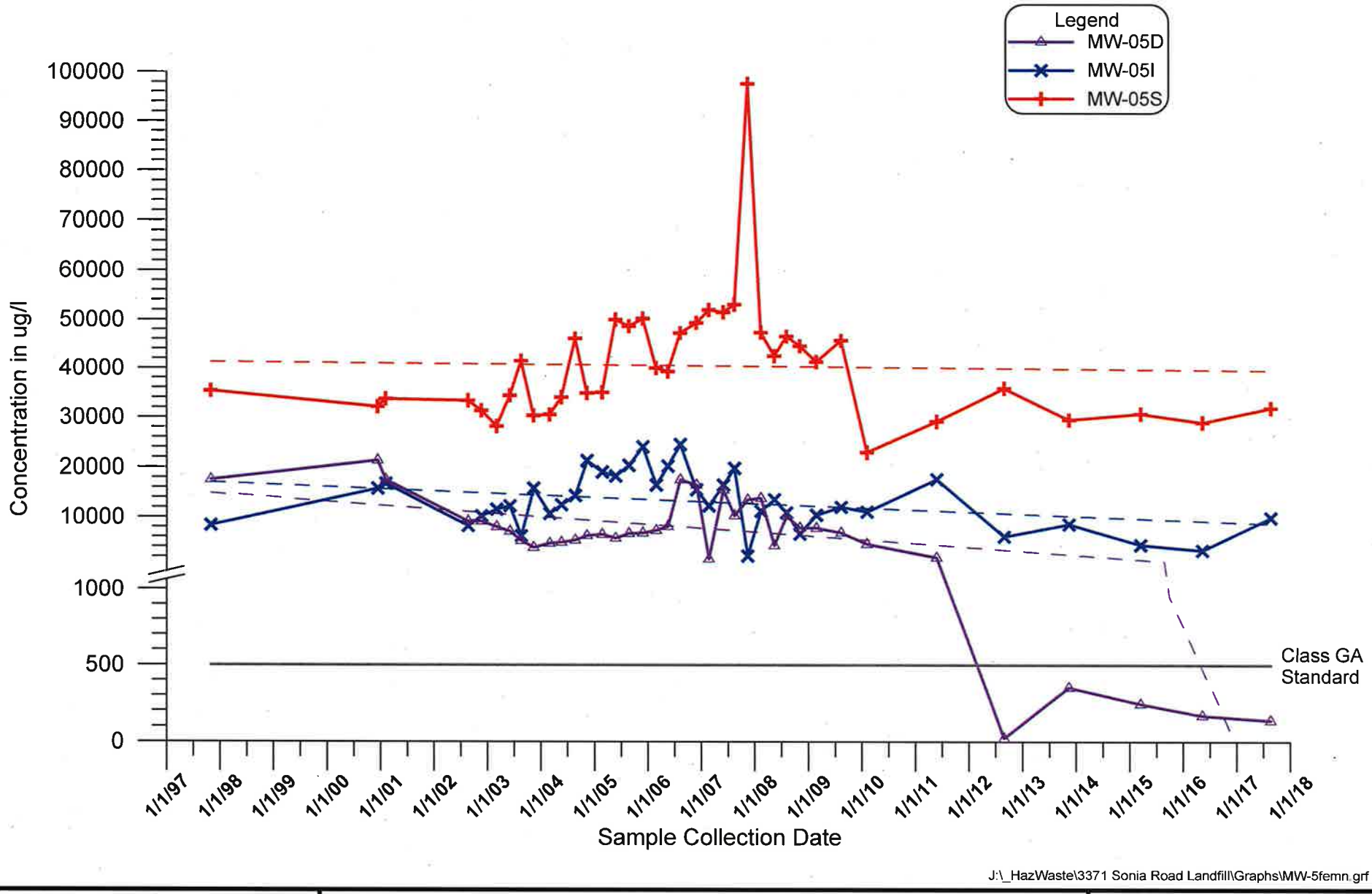
Appendix
B



D&B Engineers and Architects, P.C.

Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 5

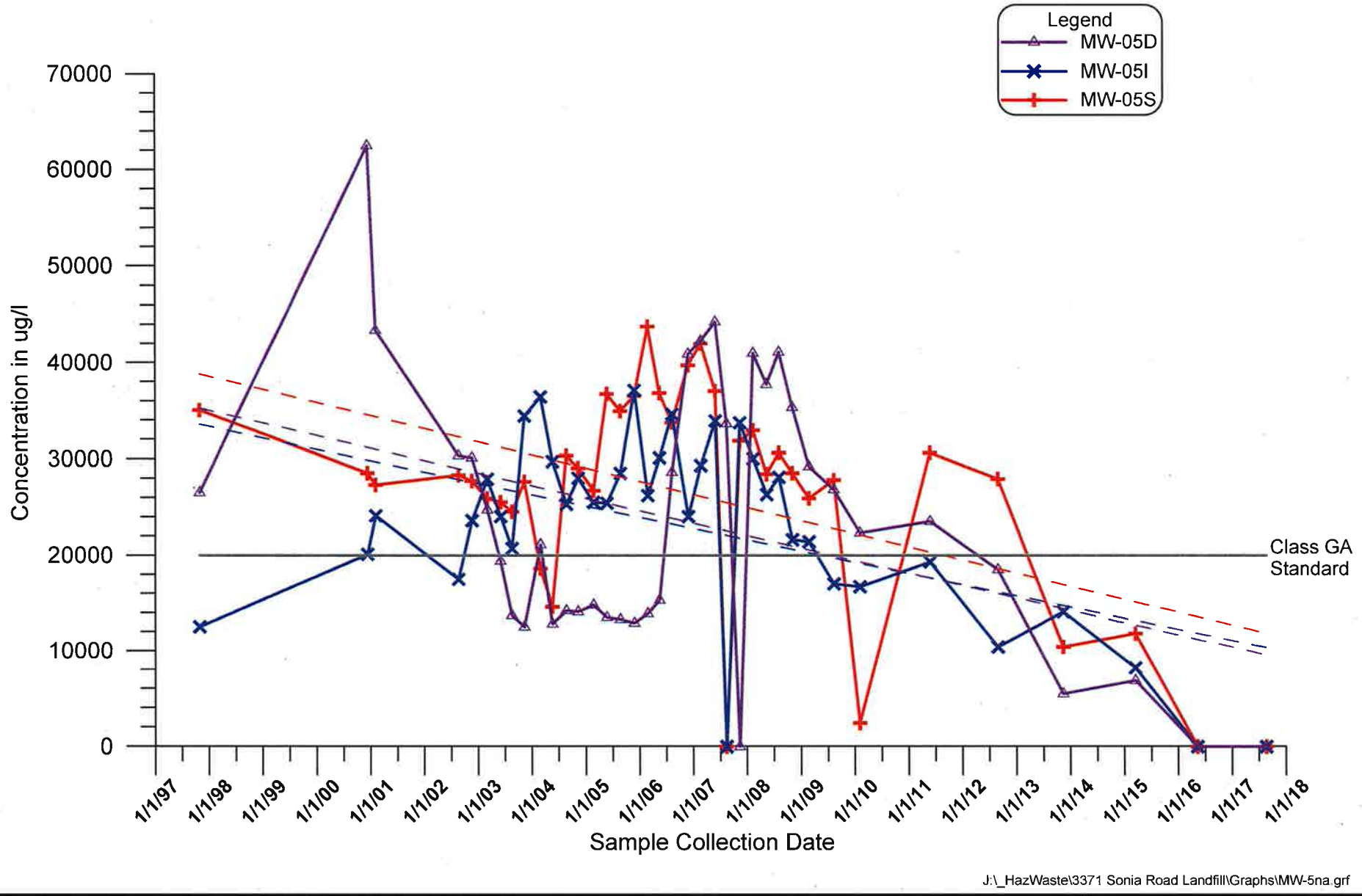
Appendix
B



D&B ENGINEERS AND ARCHITECTS, P.C.

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

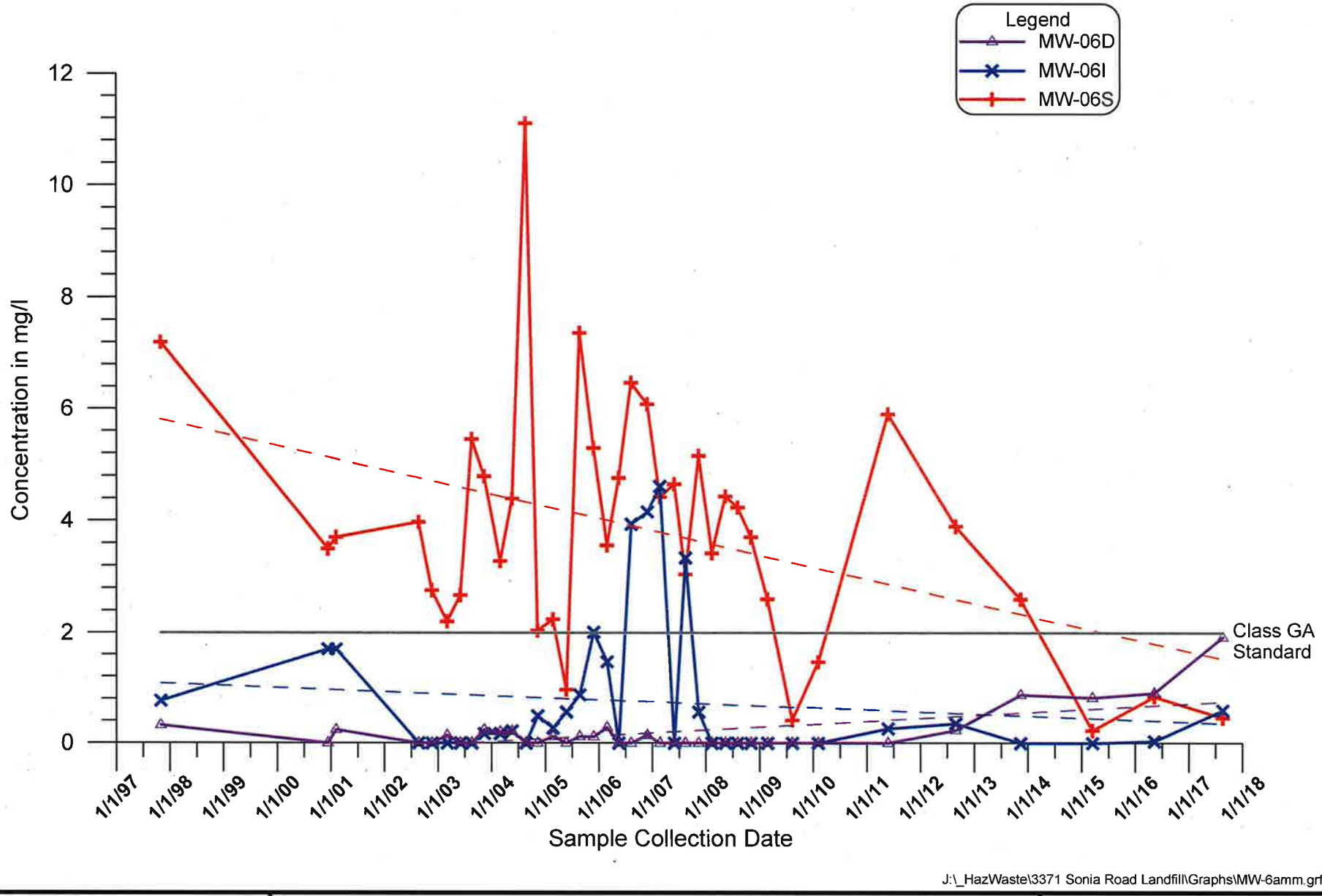
Appendix
B



D&B Engineers and Architects, P.C.

Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 5

Appendix
B



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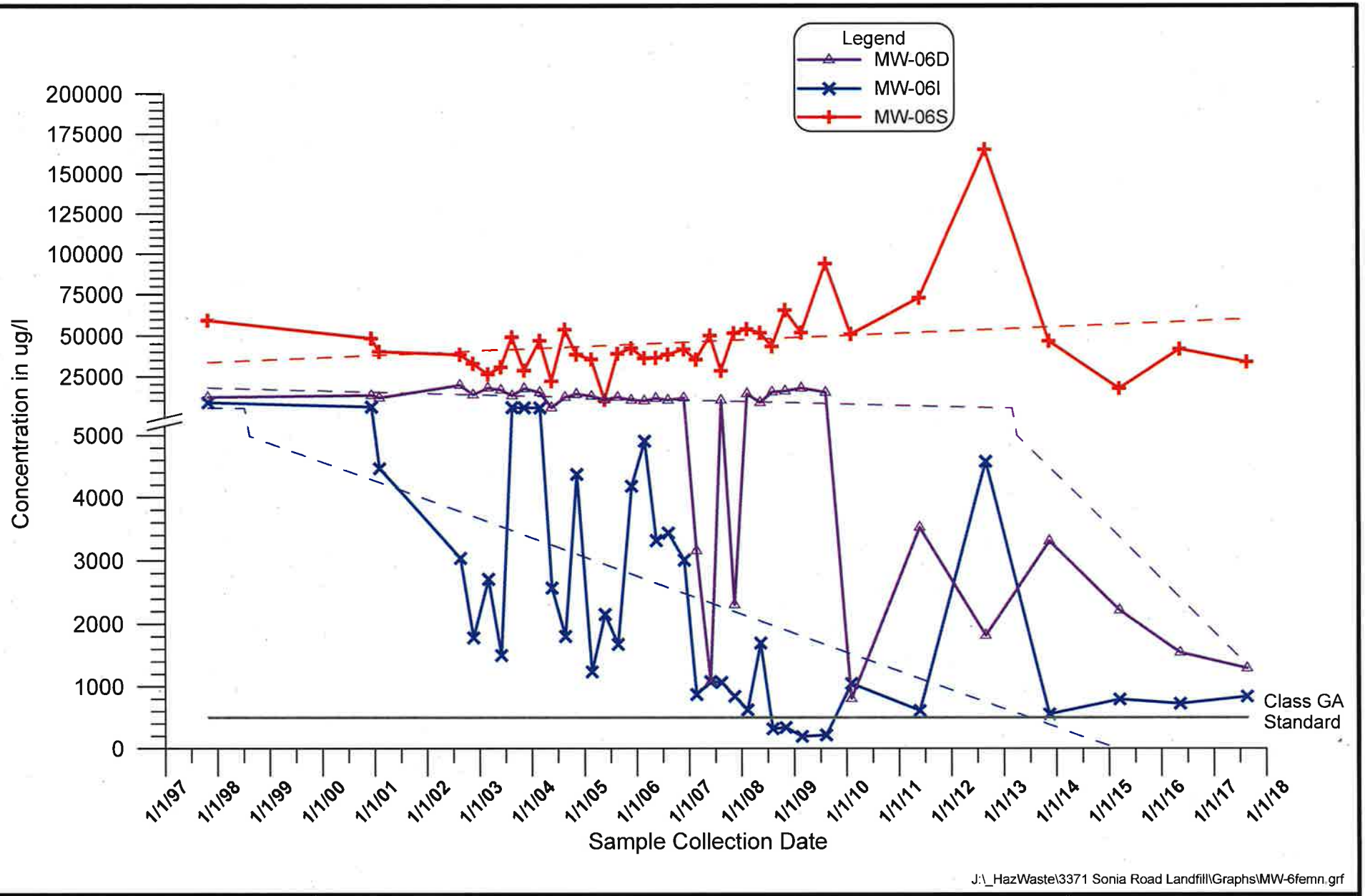
D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 6

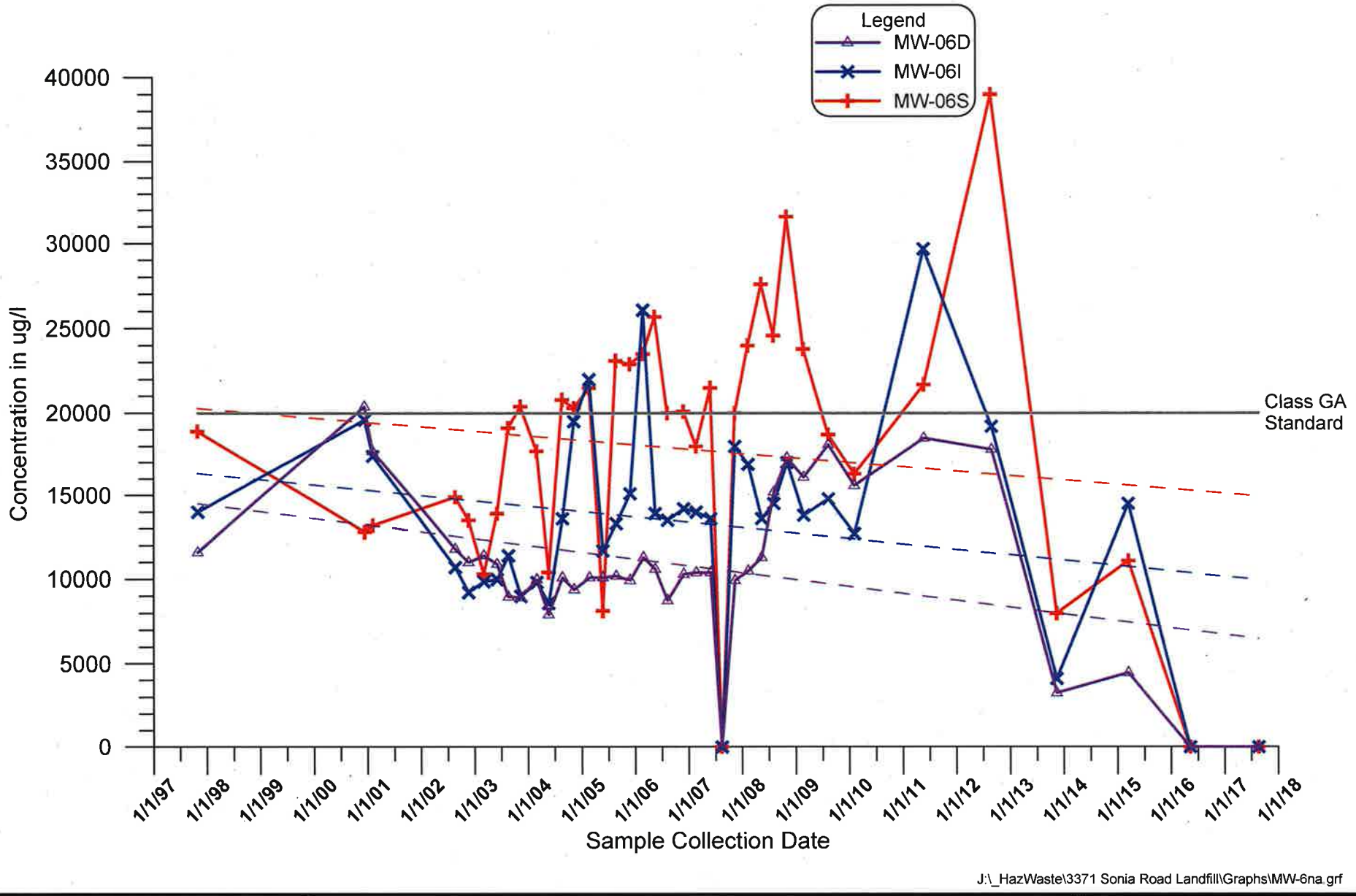
Appendix B



D&B ENGINEERS AND ARCHITECTS, P.C.

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

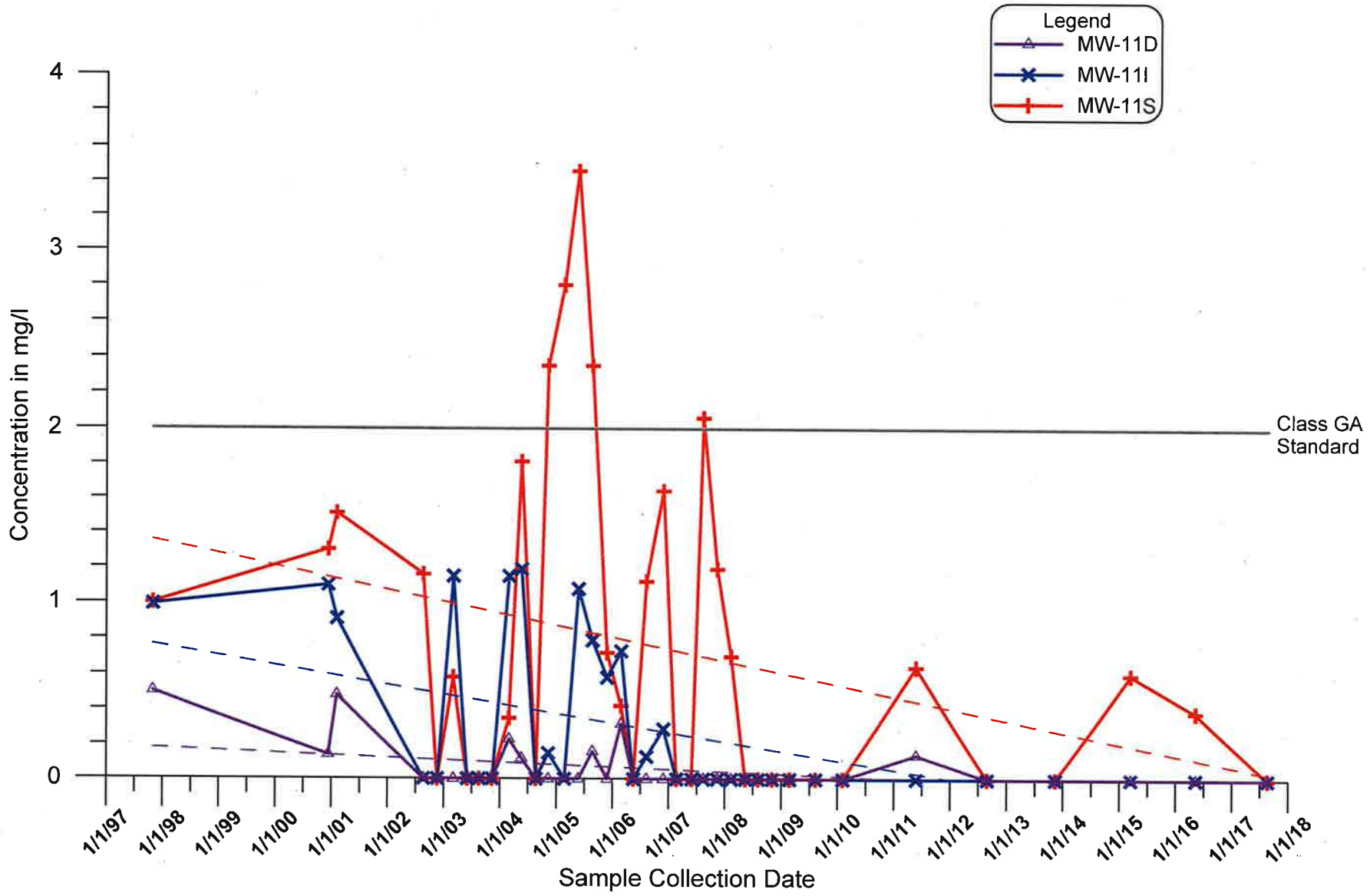
Appendix B



D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 6

Appendix B



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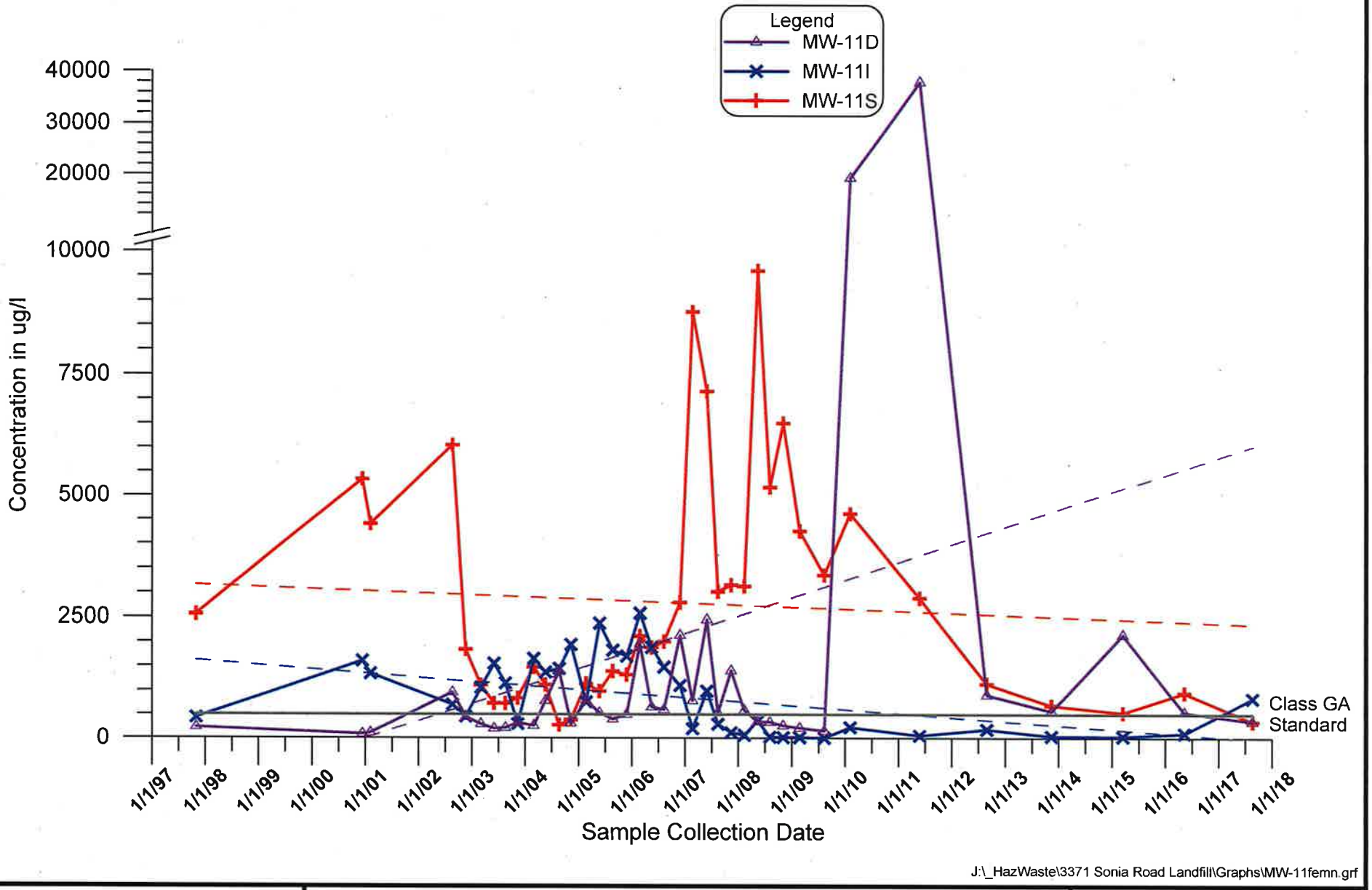
D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 11

Appendix B



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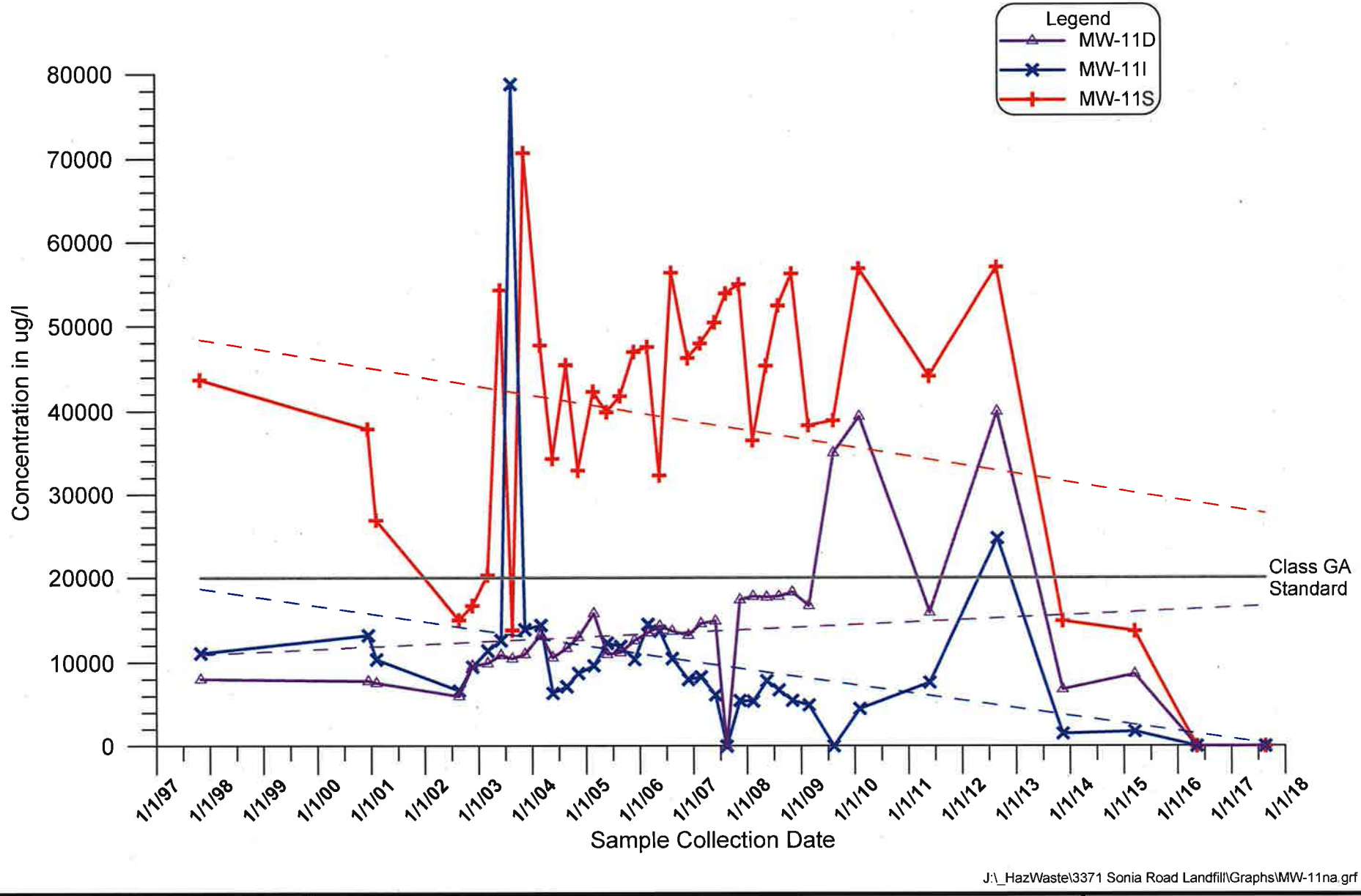
D&B ENGINEERS AND ARCHITECTS, P.C.

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

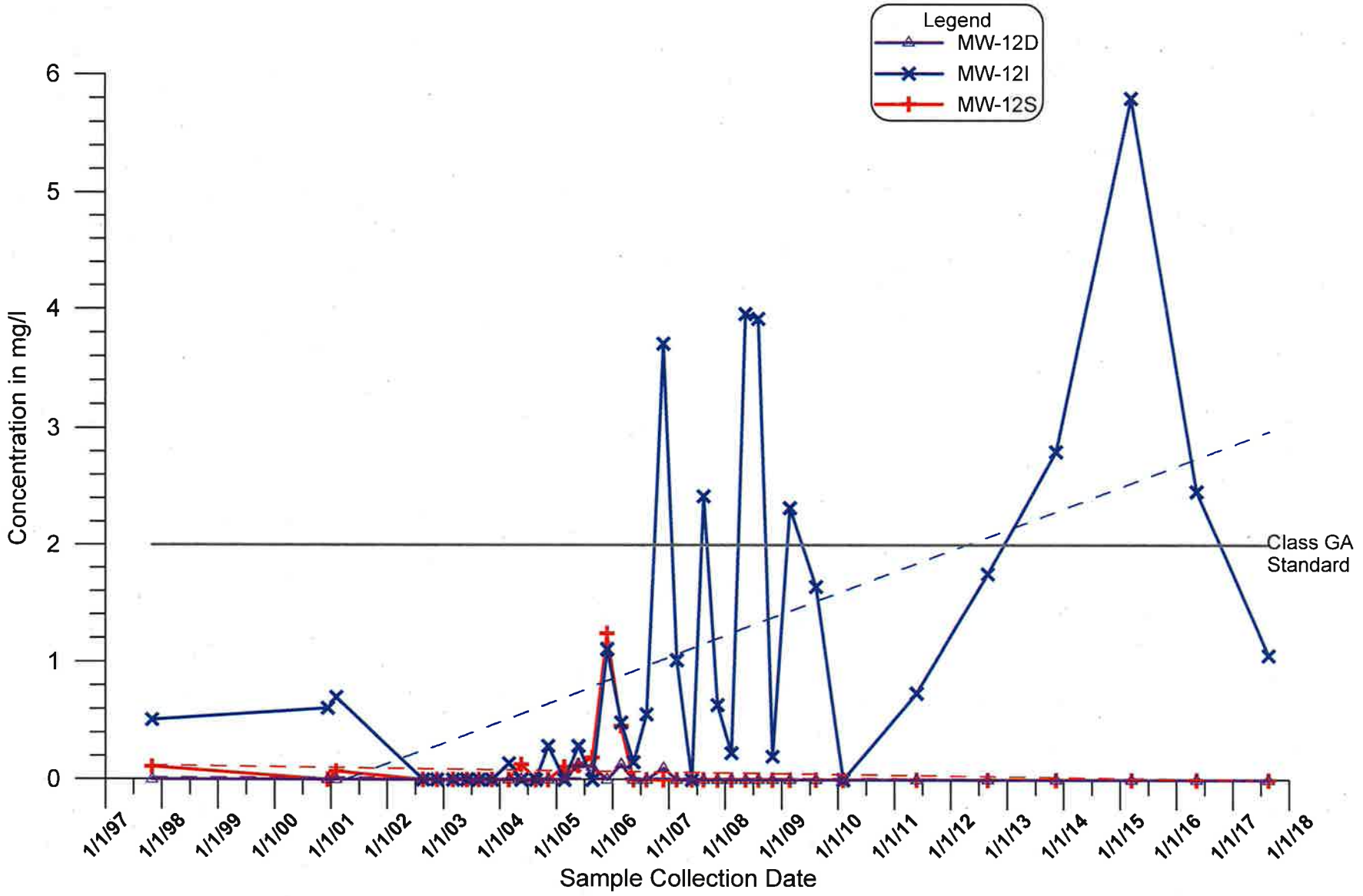
Appendix B



D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 11

Appendix B



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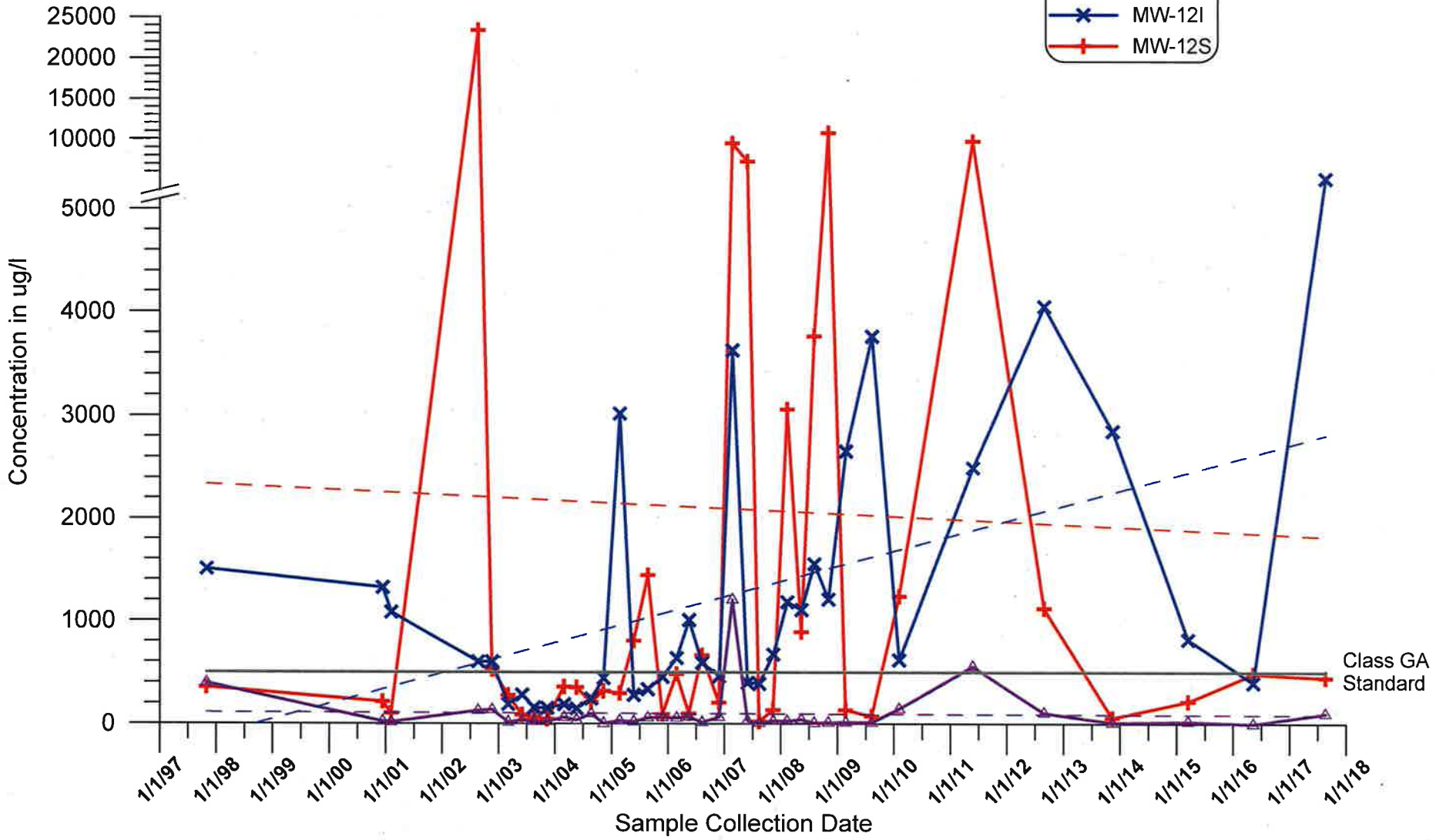
D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Ammonia Data for Monitoring Well Cluster 12

Appendix B



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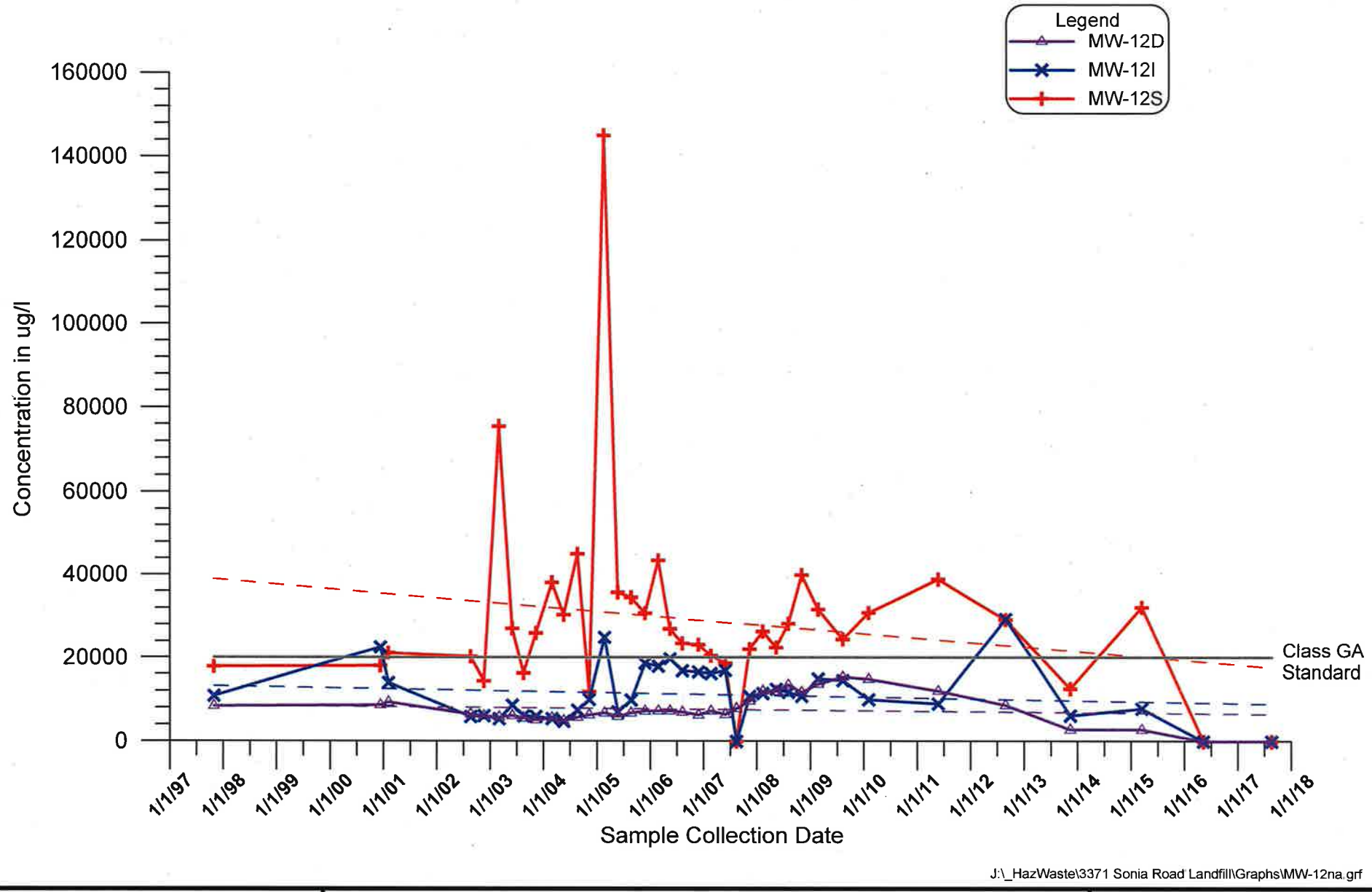
D&B ENGINEERS AND ARCHITECTS, P.C.

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

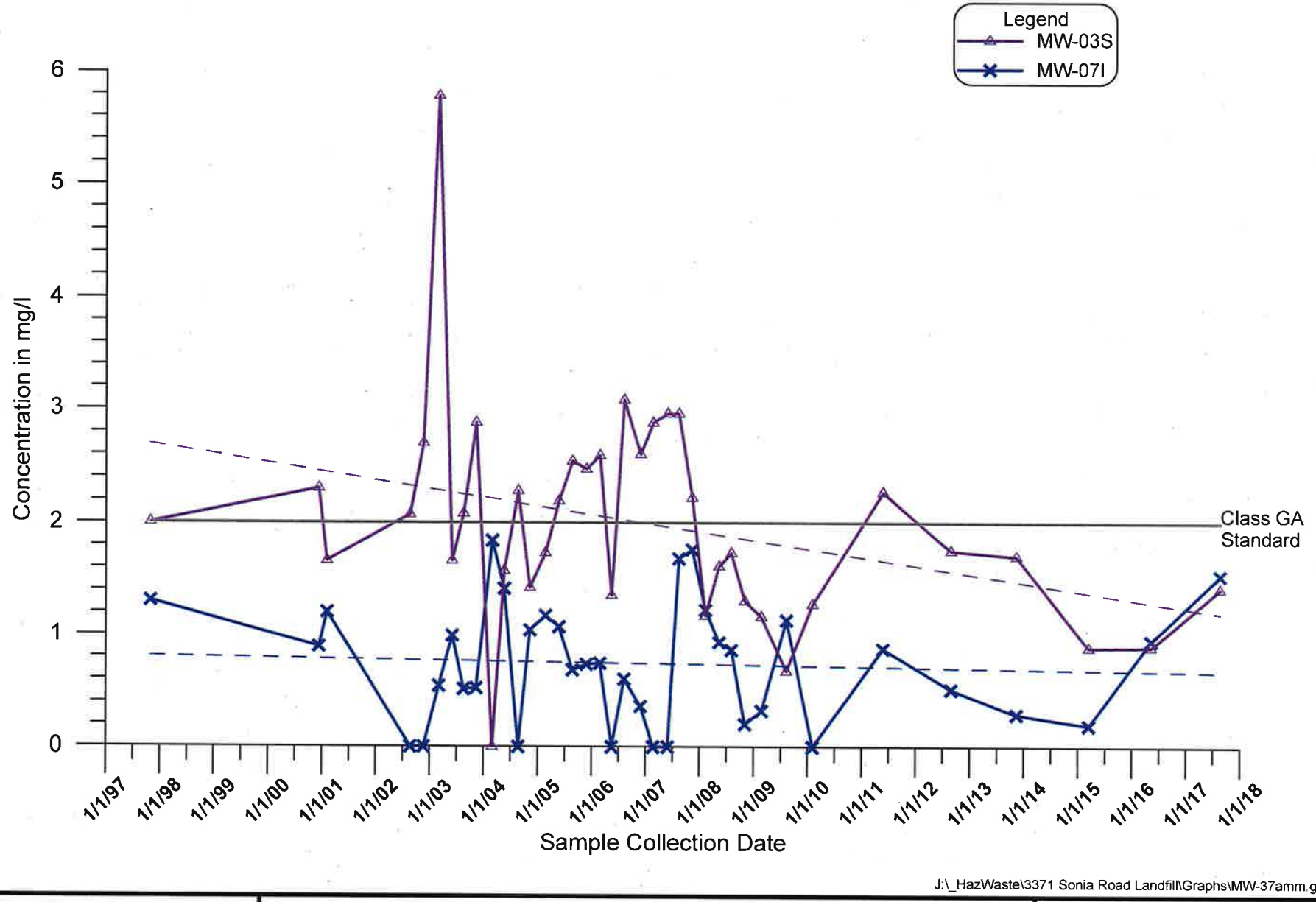
Appendix B



D&B ENGINEERS AND ARCHITECTS, P.C.

Sonia Road Landfill
Historical Sodium Data for Monitoring Well Cluster 12

Appendix
B



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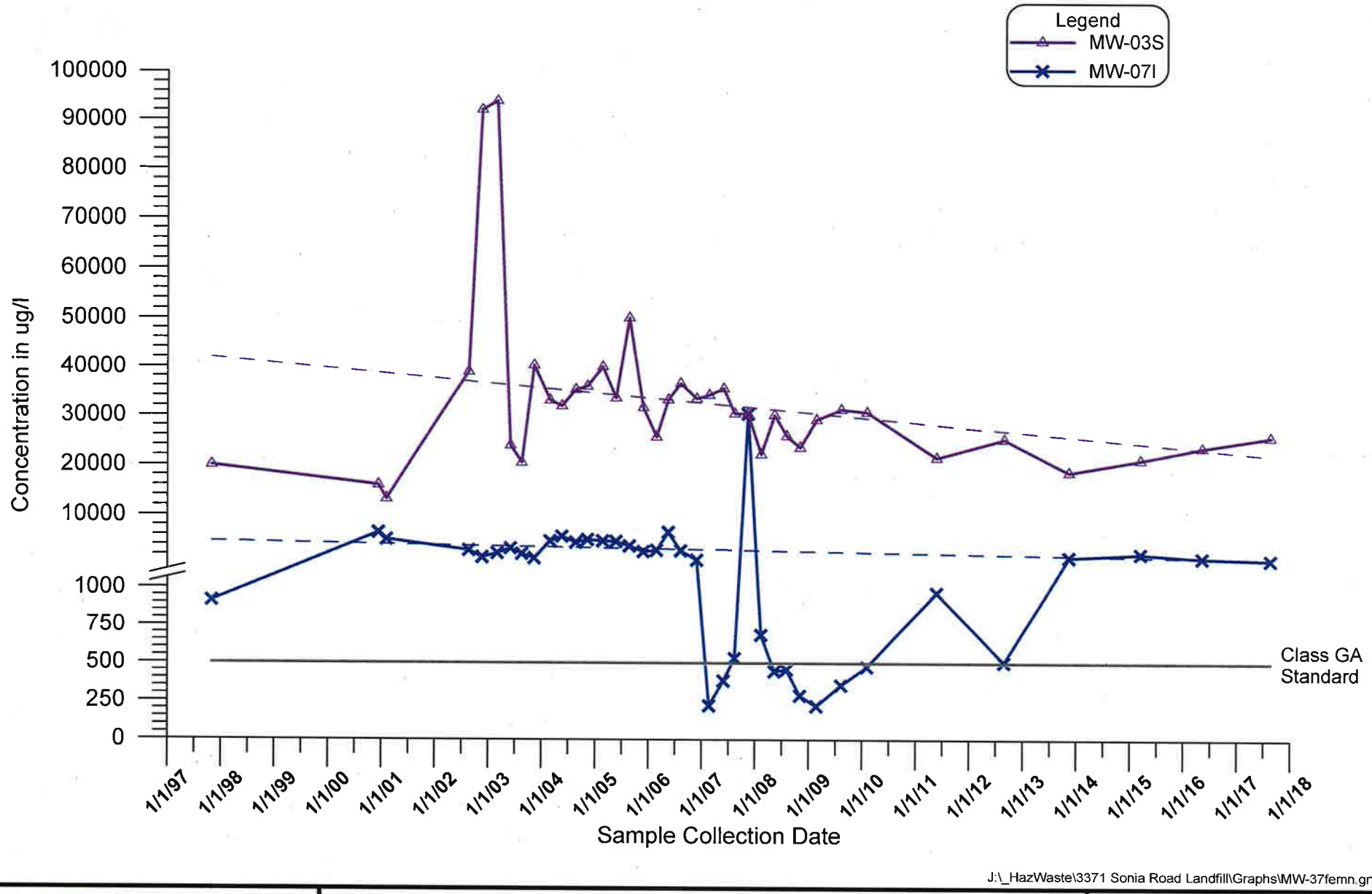
D&B ENGINEERS AND ARCHITECTS, P.C.

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

Appendix B



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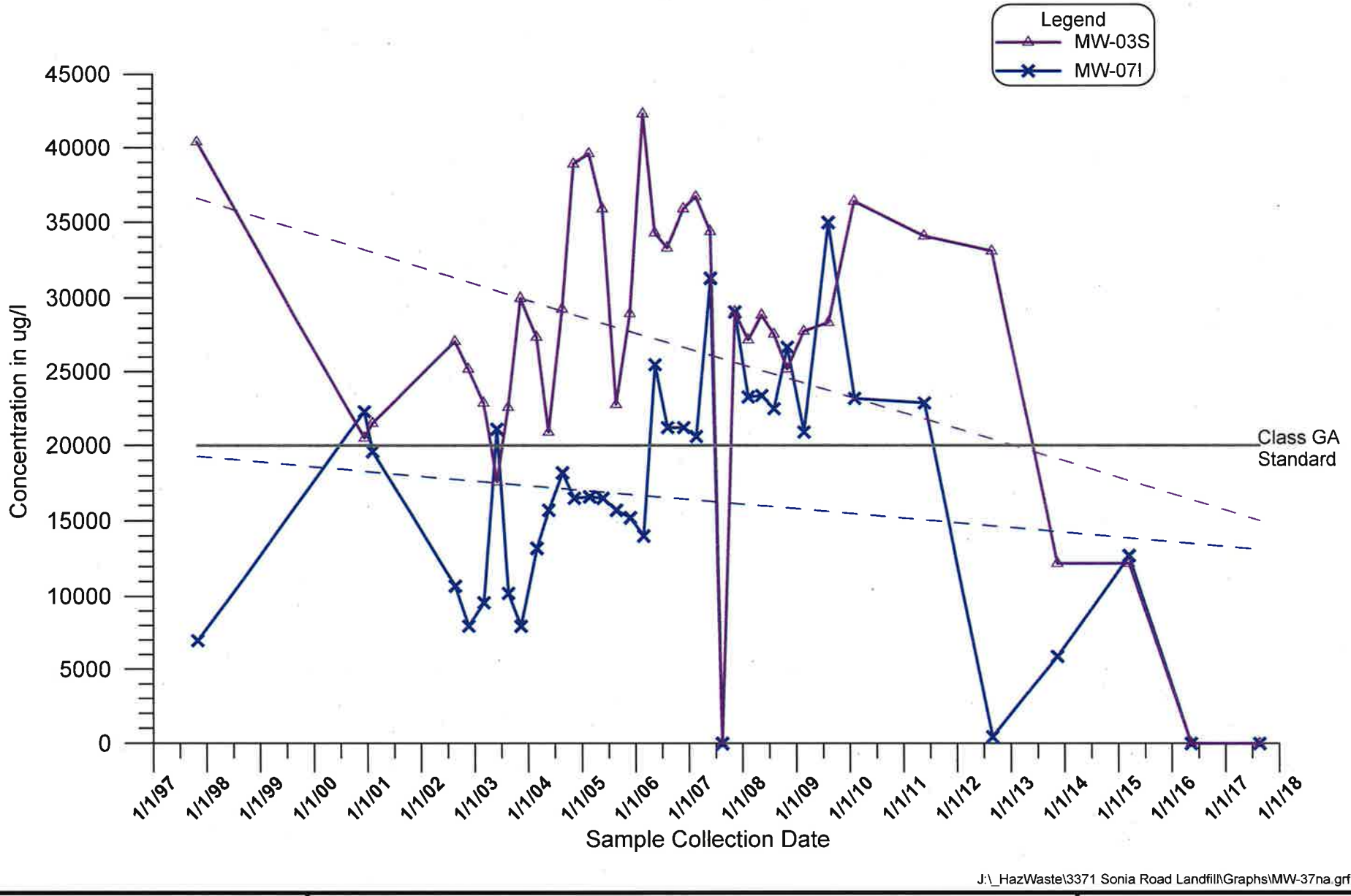
D&B ENGINEERS AND ARCHITECTS, P.C.

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

Appendix
B



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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:	3371-8B
Sample Date(s):	August 22,2017
Sample Team:	Keith Robins
Matrix/Number of Samples:	Water/10 Field Duplicates/ 1 Trip Blanks / 1 Field Blanks/ 0
Analyzing Laboratory:	American Analytical Laboratories, Farmingdale, NY; subcontracted BOD, color and TOC by Pace Analytical, Melville, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C Metals: by SW846 Method E200.7, mercury by Method E245.1, Cyanide by Method E335.4 and Hexavalent Chromium (SM3500) General Chemistry: Hardness (E200.7), Bromide (MP. S44), Chloride (SM4500), Sulfate (SM4500), Alkalinity (SM2320B), Total Dissolved Solids (SM2540C), Ammonia (E350.1), Nitrate-Nitrite (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:	1708112 Date: 9/8/2017

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:1708112
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-07I-8/22/17	1708112-001	08/22/2017		X			X	X
MW-06D-8/22/17	1708112-002	08/22/2017		X			X	X
MW-06I-8/22/17	1708112-003	08/22/2017		X			X	X
MW-06S-8/22/17	1708112-004	08/22/2017		X			X	X
MW-04D-8/22/17	1708112-005	08/22/2017		X			X	X
MW-04I-8/22/17	1708112-006	08/22/2017		X			X	X
MW-04S-8/22/17	1708112-007	08/22/2017		X			X	X
Blind Dup 1-8/22/17	1708112-008	08/22/2017	MW-04S	X			X	X
MW-05S-8/22/17	1708112-009	08/22/2017		X			X	X
MW-05D-8/22/17	1708112-010	08/22/2017		X			X	X
MW-05I-8/22/17	1708112-011	08/22/2017		X			X	X
Trip Blank-8/22/17	1708112-012	08/22/2017		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
3. Matrix spike (MS) %R					X
4. Matrix spike duplicate (MSD) %R					X
5. MS/MSD precision (RPD)					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		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, except the following:

2A-B. Methylene chloride and acetone were detected in the trip and method blanks. Methylene chloride and acetone were qualified as non-detect (UB), if detected, in all samples.

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. Total verse dissolved results					X
13. Field duplicates RPD		X		X	

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

Comments:
Performance was acceptable, except the following:

2A&B. Aluminum, barium, calcium, iron, magnesium, nickel, potassium, sodium and zinc were detected in the Field Blank analyzed in package 1708123. Aluminum was detected in the method blank. The following metals were qualified as non-detect (UB): aluminum in all samples; barium in sample MW-05D; calcium in samples MW-06D, Blind Dup; MW-04S, MW-07I, MW-6I and MW-04D; iron in samples MW-06I, MW-06D and MW-07I; potassium in samples MW-6D, MW-5D and MW-07I; and nickel, magnesium, sodium and zinc in all samples.

11. Barium, potassium and sodium %D were above the QC limits in the serial dilution. Barium, potassium and sodium were qualified as estimated (J/UJ) 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. Total verse dissolved results					X
8. 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. MW-06D, MW-06I, MW-06S and MW-07I exceeded the holding time of 24 hours for hexavalent chromium by a few hours. Hexavalent chromium was qualified as an estimated detection limit (UJ) in samples MW-06D, MW-06I, MW-06S and MW-07I.

2B. Hardness, alkanlinity, chloride and total dissolved solids were detected in the Field Blank analyzed in package 1708123. The following general chemistry parameters were qualified as non-detect (UB): hardness in samples MW-05D, MW-06D, MW-07I, MW-06I and MW-04D; alkalinity in samples MW-05D, MW-06D, MW-07I, MW-04D, MW-06I, MW-05I and MW-06S; and chloride in all samples.

4. The %R was below the QC limit in the LCS for BOD. BOD was qualified as estimated (UJ/J) in samples MW-07I, MW-06D, MW-06I, MW-06S and Blind Dup1.

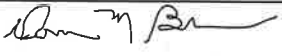
6. The %R was below the QC limit in the MSD for chemical oxygen demand. Chemical oxygen demand was qualified as estimated (UJ/J) in all samples.

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers:1708112

Sample ID	Analyte(s)	Qualifier	Reason(s)
VOCs			
All samples	Methylene chloride and acetone	UB	Detected in the trip and method blanks
Metals			
All samples	Aluminum	UB	Detected in the Field Blank
MW-05D	Barium		
MW-06D, Blind Dup; MW-04S, MW-07I, MW-6I and MW-04D	Calcium		
MW-06I, MW-06D and MW-07I	Iron		
MW-6D, MW-5D and MW-07I	Potassium		
All samples	Nickel, magnesium, sodium and zinc		
All samples	Barium, potassium and sodium	J/UJ	%D were above the QC limits in the serial dilution
General Chemistry			
MW-06D, MW-06I, MW-06S and MW-07I	Hexavalent chromium	UJ	Exceeded the holding time of 24 hours by a few hours
MW-05D, MW-06D, MW-07I, MW-06I and MW-04D	Hardness	UB	Detected in the Field Blank analyzed in package 1708123
MW-05D, MW-06D, MW-07I, MW-04D, MW-06I, MW-05I and MW-06S	Alkalinity		
All samples	Chloride		
MW-07I, MW-06D, MW-06I, MW-06S and Blind Dup1	BOD	UJ/J	The %R was below the QC limit in the LCS
All samples	Chemical oxygen demand	UJ/J	The %R was below the QC limit in the MSD

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 9/18/2017
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Sonia Road Landfill
Project Number:	3371-8B
Sample Date(s):	August 23, 2017
Sample Team:	Keith Robins
Matrix/Number of Samples:	Water/ 7 Field Duplicates/ 0 Trip Blanks / 1 Field Blanks/ 1
Analyzing Laboratory:	American Analytical Laboratories, Farmingdale, NY; subcontracted BOD, color and TOC by Pace Analytical, Melville, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C Metals: by SW846 Method E200.7, mercury by Method E245.1 and Cyanide by Method E335.4 General Chemistry: Hardness (E200.7), Bromide (MP. S44), Chloride (SM4500), Sulfate (SM4500), Alkalinity (SM2320B), Total Dissolved Solids (SM2540C), Ammonia (E350.1), Nitrate-Nitrite (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:	1708123 Date: 9/8/2017

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:1708123
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-11D-8/23/2017	1708123-001	08/23/2017		X			X	X
MW-11S-8/23/2017	1708123-002	08/23/2017		X			X	X
MW-11I-8/23/2017	1708123-003	08/23/2017		X			X	X
MW-12D-8/23/2017	1708123-004	08/23/2017		X			X	X
MW-12S-8/23/2017	1708123-005	08/23/2017		X			X	X
MW-12I-8/23/2017	1708123-006	08/23/2017		X			X	X
MW-03S-8/23/17	1708123-007	08/23/2017		X			X	X
Field Blank-8/23/17	1708123-008	08/23/2017		X			X	X
Trip Blank - 8/23/2017	1708123-009	08/23/2017		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; except the following:

2A-C. Methylene chloride, acetone and toluene were detected in the trip, field and method blank. Methylene chloride and acetone were qualified as non-detect (UB), if detected, in all samples.

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. Total verse dissolved results					X
13. Field duplicates RPD					X

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

Comments:
Performance was acceptable, except the following:

2B. Aluminum, barium, calcium, iron, magnesium, nickel, potassium, sodium and zinc were detected in the Field Blank analyzed in package 1708123. Aluminum was detected in the in the method blank. The following metals were qualified as non-detect (UB): aluminum in all samples except MW-03S, MW-11I and MW-11D; barium in sample MW-12D; calcium in samples MW-12D, MW-11I, MW-11D and MW-12I; iron in sample MW-12I; nickel in all samples except MW-11D; potassium in samples MW-12I, MW-12D and MW-11I; and magnesium, sodium and zinc in all samples.

11. The %Ds were above QC limits in the serial dilution for potassium and sodium associated with samples MW-11S and MW-11D and boron, potassium and sodium associated with MW-11I, MW-12D, MW-12S and MW-03S. The following metals were qualified as estimated (J/UJ): potassium and sodium in samples MW-11S and MW-11D and boron, potassium and sodium in samples MW-11I, MW-12D, MW-12S and MW-03S.

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. Total verse dissolved results					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. MW-11D and MW-11S exceeded the holding time of 24 hours for hexavalent chromium by a few hours. Hexavalent chromium was qualified as an estimated detection limit (UJ) in samples MW-11D and MW-11S.

2B. Hardness, alkalinity, chloride and total dissolved solids were detected in the field blank. The following general chemistry parameters were qualified as non-detect (UB): hardness in samples MW-11I, MW-12D, MW-11D and MW-12I; and alkalinity and chloride in all samples.

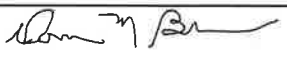
6. The %R was below the QC limit in the MSD for chemical oxygen demand. Chemical oxygen demand was qualified as estimated (UJ/J) in all samples.

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers:1708123

Sample ID	Analyte(s)	Qualifier	Reason(s)
VOCs			
All samples	Methylene chloride and acetone	UB	Detected in the method blank, Trip Blanks and Field Blank
Metals			
All samples except MW-03S, MW-11I and MW-11D	Aluminum	UB	Detected in the Field Blank analyzed in package 1708123
MW-12D	Barium		
MW-12D, MW-11I, MW-11D and MW-12I	Calcium		
MW-12I	Iron		
All samples except MW-11D	Nickel		
MW-12I, MW-12D and MW-11I	Potassium		
All samples	Magnesium, sodium and zinc		
MW-11S and MW-11D	Potassium and sodium	J/UJ	%D was above QC limits in the serial dilution
MW-11I, MW-12D, MW-12S and MW-03S	Boron, potassium and sodium		
General Chemistry			
MW-11D and MW-11S	Hexavalent chromium	UJ	Exceeded the holding time of 24 hours by a few hours
MW-11I, MW-12D, MW-11D and MW-12I	Hardness	UB	Detected in the Field Blank analyzed in package 1708123
All samples	Alkalinity and chloride		
All samples	Chemical oxygen demand	UJ/J	The %R was below the QC limit in the MSD

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 9/18/2017
VALIDATION PERFORMED BY SIGNATURE:	

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION CHECKLIST

Project Name:	Sonia Road Landfill
Project Number:	3371-8B
Sample Date(s):	August 21, 2017
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; subcontracted BOD, color and TOC by Pace Analytical, Melville, NY
Analyses:	Volatile Organic Compounds (VOCs): by SW846 8260C Metals: by SW846 Method E200.7, mercury by Method E245.1, Cyanide by Method E335.4 and Hexavalent Chromium (SM3500) General Chemistry: Hardness (E200.7), Bromide (MP. S44), Chloride (SM4500), Sulfate (SM4500), Alkalinity (SM2320B), Total Dissolved Solids (SM2540C), Ammonia (E350.1), Nitrate-Nitrite (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:	1708106 Date: 9/8/2017

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:1708106
SAMPLE AND ANALYSIS LIST

Sample ID	Lab ID	Sample Collection Date	Parent Sample	Analysis				
				VOC	SVOC	PCB	MET	MISC
MW-01D-8/21/17	1708106-001	08/21/2017		X			X	X
MW-01I-8/21/17	1708106-002	08/21/2017		X			X	X
MW-01S-8/21/17	1708106-003	08/21/2017		X			X	X
MW-02D-8/21/17	1708106-004	08/21/2017		X			X	X
MW-02I-8/21/17	1708106-005	08/21/2017		X			X	X
Trip Blank-8/21/17	1708106-006	08/21/2017		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
3. Matrix spike (MS) %R					X
4. Matrix spike duplicate (MSD) %R					X
5. MS/MSD precision (RPD)					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, except the following:

2A-B. Methylene chloride and acetone were detected in the trip and method blanks. Methylene chloride and acetone were qualified as non-detect (UB), if detected, in all samples.

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
12. Total verse dissolved results					X
13. Field duplicates RPD					X

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

Comments:
Performance was acceptable, except the following:

2B. Aluminum, barium, calcium, iron, magnesium, nickel, potassium, sodium and zinc were detected in the Field Blank analyzed in package 1708123. Aluminum was detected in the method blank. The following metals were qualified as non-detect (UB): aluminum in all samples; barium in sample MW-02D; calcium in samples MW-01I, MW-02D and MW-02I; iron in samples MW-01D, MW-02I and MW-01I; nickel in all samples; potassium in samples MW-02D and MW-01I; and magnesium, sodium 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. Total verse dissolved results					X
8. Field duplicates RPD					X

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

Comments:
Performance was acceptable.

2B. Hardness, alkalinity, chloride and total dissolved solids were detected in the Field Blank analyzed in package 1708123. The following general chemistry parameters were qualified as non-detect (UB): hardness in samples MW-01D, MW-01I, MW-02D and MW-02I; and alkalinity and chloride in all samples.

D&B ENGINEERS AND ARCHITECTS, P.C.

DATA VALIDATION AND QUALIFICATION SUMMARY

Laboratory Numbers:1708106

Sample ID	Analyte(s)	Qualifier	Reason(s)
VOCs			
All samples	Acetone	UB	Detected in the trip and method blanks
Metals			
All samples	Aluminum	UB	Detected in the Field Blank analyzed in package 1708123
MW-02D	Barium		
MW-01I, MW-02D and MW-02I	Calcium		
MW-01D, MW-02I and MW-01I	Iron		
All samples	Nickel		
MW-02D and MW-01I	Potassium		
All samples	Magnesium, sodium and zinc		
General Chemistry			
MW-01D, MW-01I, MW-02D and MW-02I	Hardness	UB	Detected in the Field Blank analyzed in package 1708123
All samples	Alkalinity and chloride		

VALIDATION PERFORMED BY & DATE:	Donna M. Brown 9/18/2017
VALIDATION PERFORMED BY SIGNATURE: