ISLIP
RESOURCE
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AGENCY
ISLIP, NEW YORK

Sonia Road Landfill
Town of Islip, New York

Post Closure Groundwater Monitoring Program Quarterly Sampling Results First Quarter 2004 (Routine Sampling Event)

May 2004

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CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

RLA/PROPS/IRRA2023(11/06/03)

POST CLOSURE GROUNDWATER MONITORING PROGRAM
QUARTERLY SAMPLING RESULTS
FIRST QUARTER 2004

(ROUTINE SAMPLING EVENT)

SONIA ROAD LANDFILL
WEST BRENTWOOD, NEW YORK

PREPARED FOR

ISLIP RESOURCE RECOVERY AGENCY
TOWN OF ISLIP, NEW YORK

BY

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
QUARTERLY SAMPLING RESULTS
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Section 1

1.0 INTRODUCTION

This report presents the results of the Post Closure Groundwater Monitoring Program conducted during the first quarter 2004 for the Sonia Road Landfill. The sampling program was conducted for the Town of Islip and administered by the Islip Resource Recovery Agency (IRRA) in conformance with the Sampling and Analysis Plan (SAP) prepared by Dvirka and Bartilucci Consulting Engineers (D&B), dated December 2001. The Sampling and Analysis Plan is part of the Sonia Road Post Closure Monitoring and Maintenance Plan (Volume 3 of 4).

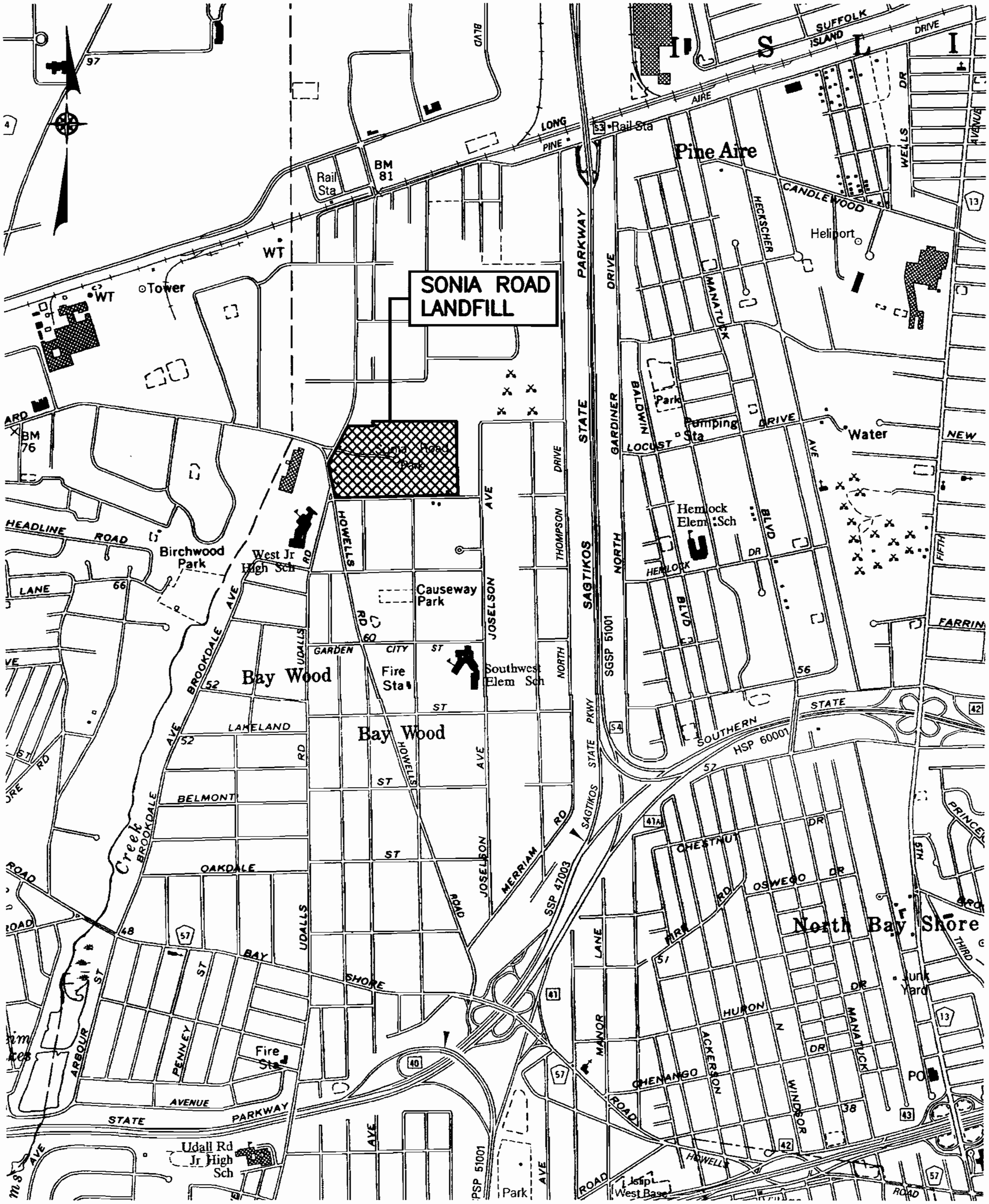
1.1 Purpose

The purpose of the Post Closure Groundwater Monitoring Program is to monitor groundwater quality and flow direction following 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 flow direction. In addition, this report includes a comparison of the analytical results of this sampling event (February 2004) to applicable New York State groundwater quality standards and guidance values, and groundwater sample results obtained during the previous sampling event (fourth quarter 2003).

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 between the Towns of Islip and Babylon. The location of the Sonia Road Landfill is shown on Figure 1-1.



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

SCALE: 1"=2000'

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

SITE LOCATION MAP

FIGURE No.1-1

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and
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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 site 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 headwaters of Sampawams Creek. Sampawams Creek is fed by groundwater discharge as well as storm water drainage systems for the surrounding areas. Sampawams Creek runs from north to south and discharges 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 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 all of the 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 dredging may have removed materials to a depth of 50 feet below the water table. Soil borings constructed as part of the remedial investigation 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 of the site occurred between 1965 and 1977. The most active period of landfilling occurred between 1965 and 1974. It has been estimated that between 1.5 and 2.0 million cubic yards of waste was disposed of at the site. There are no weigh records to substantiate this estimate.

The landfill reportedly accepted all municipal solid waste delivered to the site. This waste is reported to have included 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, surfaced with 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 associated with the northeast 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.

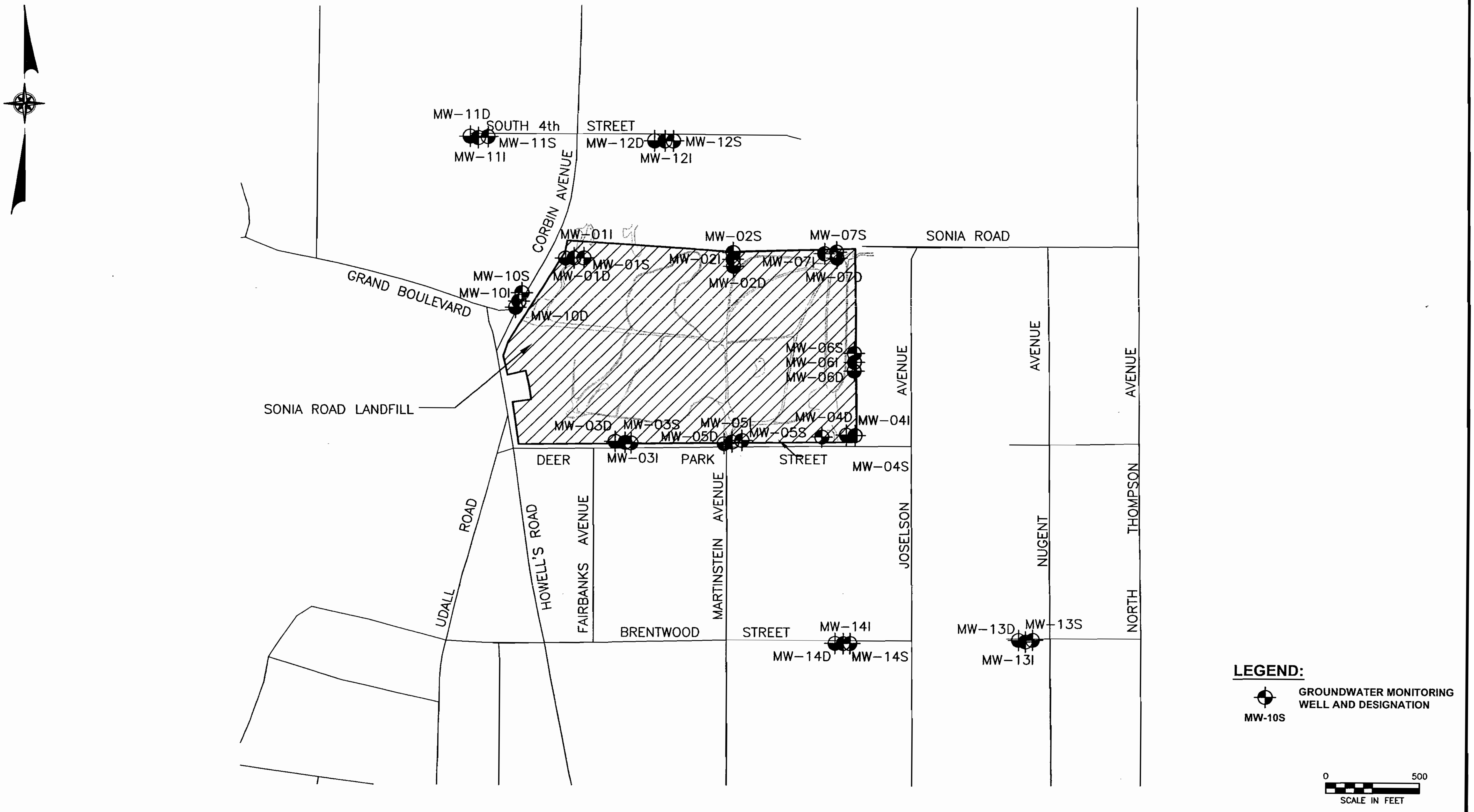
Section 2

2.0 MONITORING WELL NETWORK AND GROUNDWATER SAMPLE LOCATIONS

The monitoring well network for the Sonia Road Landfill consists of 36 wells. Well locations are shown on Figure 2-1. The monitoring wells were constructed in 12 well clusters, with each cluster comprising a shallow (S) well, intermediate (I) well and deep (D) well. All 36 wells were utilized for water level measurements. Well construction information for all wells is summarized in Table 2-1.

Twenty-three (23) wells are included as part of the Post Closure Monitoring Program. The sampled wells are listed in Table 2-2.

Twenty-two (22) of the 23 monitoring wells were sampled as part of the first quarter 2004 Post Closure Groundwater Sampling event. Monitoring well MW-02S could not be sampled due to a well casing obstruction at approximately 23 feet below ground surface.



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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

GROUNDWATER MONITORING WELL LOCATIONS

FIGURE 2-1

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Table 2-1

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

MONITORING WELLS

Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below ground surface)	Screen Setting		Measuring Point Elevation (feet above mean sea level)
					Elevation Below Measurement Point (feet)	Elevation Relative to Mean Sea Level (feet)	
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(1)	10/13/97	4	SS	116	106 - 116	(-27) - (-37)	79.01
MW-02I(1)	10/1/97	4	SS	72	62 - 72	16 - 7	78.75
MW-02S(1)	1/4/95	4	PVC	43	33 - 43	45 - 35	77.98
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

Table 2-1 (continued)

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

MONITORING WELLS

Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below ground surface)	Screen Setting		Measuring Point Elevation (feet above mean sea level)
					Elevation Below Measurement Point (feet)	Elevation Relative to Mean Sea Level (feet)	
MW-06D(1)	10/1/97	4	SS	117	107 - 117	(-32) - (-42)	75.03
MW-06I(1)	9/25/97	4	SS	76	66 - 76	9 - (-1)	74.53
MW-06S(1)	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(1)	9/26/97	4	SS	74	64 - 74	9 - (-1)	73.45
MW-07S(1)	9/28/97	4	SS	34	19 - 34	54 - 39	72.83
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

Table 2-1 (continued)

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

MONITORING WELLS

Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below ground surface)	Screen Setting		Measuring Point Elevation (feet above mean sea level)
					Elevation Below Measurement Point (feet)	Elevation Relative to Mean Sea Level (feet)	
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:

PVC	Polyvinyl chloride
SS	Stainless steel

(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.

Wells identified in **bold type** were modified during the construction of the landfill capping system to adjust the top of the well (reference point) to accommodate the thickness of the capping system. Wells MW-11S, MW-11I and MW-11D were modified to address changes in grade at well locations.

SOURCE: Dvirka and Bartilucci Remedial Investigation/Feasibility Study (RI/FS) dated April 1998 and surveys noted above.

Table 2-2

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

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

Section 3

3.0 SAMPLING AND ANALYTICAL PROCEDURES

Sampling procedures for the Sonia Road Landfill site are described in the Sampling and Analysis Plan (SAP). Dedicated and disposable sampling equipment was used whenever possible in accordance with the SAP. All nondisposable equipment was decontaminated before first use on-site and between uses in accordance with the procedures described in the SAP. The following sections provide brief discussions of the procedures used during groundwater level measurements, organic vapor and combustible gas monitoring, landfill gas condensate sampling, groundwater sampling and sample analysis.

3.1 Groundwater Level Measurement

Prior to collecting the groundwater samples, synoptic water level measurements were obtained from all 36 monitoring wells for determination of groundwater elevations and groundwater flow direction. Groundwater level measurements were obtained from a survey measuring point on each well using an electronic water level indicator to an accuracy of 0.01 foot. A discussion of the groundwater level measurement results and groundwater flow direction is provided in Section 6.0.

3.2 Groundwater Sampling

Prior to collection of each groundwater sample, a minimum of 3 to 5 well volumes was purged from 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 each well.

During the purging process, field parameters (pH, specific conductance, temperature, Eh, dissolved oxygen and turbidity) were monitored and recorded. When the values of the field parameters, except turbidity, 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.

Groundwater samples were collected using new, dedicated, disposable polyethylene bailers and polypropylene rope. Samples were collected immediately after purging. Filled sample bottles were stored in ice-filled coolers with the chain-of-custody forms and delivered on the day of collection to H2M Laboratories, Inc. for analysis. H2M Laboratories, Inc. is approved by the New York State Department of Health under the Environmental Laboratory Approval Program (ELAP) for the analyses performed.

Appropriate quality assurance/quality control (QA/QC) samples, which included field blanks, matrix spike and matrix spike duplicate (MS/MSD) sets and blind duplicates, were collected 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 a 3,000-gallon tank truck, transported to the landfill and discharged into the landfill's on-site Recharge Basin 1 in accordance with the SAP.

Analytical results are summarized in Appendix A and are discussed in Section 4.2. Field forms for the first quarter 2004 sampling event, including field observation logs and daily equipment calibration logs, are contained in Appendices B-1 and B-2, respectively, and the chain-of-custody forms are provided in Appendix C.

3.3 Landfill Gas Condensate Sampling

Landfill gas (LFG) condensate grab sample was collected at the tank withdrawal sampling port 001A, which is located on the south end of the below-grade LFG condensate storage tank located within the facility's LFG Management Compound. The grab sample was obtained through the use of a dedicated and disposable bailer. The Landfill Gas Condensate Sampling Report presents the analytical data from the LFG condensate sample and is provided in Appendix E.

3.4 Organic Vapor and Combustible Gas Monitoring

Total organic vapor and combustible gas measurements were collected in all 36 monitoring wells. Organic vapors were measured using a flame ionization detector (FID). Combustible gas was measured using a portable multi-gas meter. Gas monitoring results represent headspace measurements collected during the synoptic groundwater level measurements. The results of the organic vapor and combustible gas monitoring are provided in Section 4.3.

3.5 Analytical Parameters

Groundwater samples and the landfill gas (LFG) condensate sample collected during the first quarter 2004 sampling event were analyzed for 6 NYCRR Part 360 Routine Parameters, including leachate indicator and inorganic parameters. The leachate indicators include alkalinity, ammonia, biochemical oxygen demand, bromide, chemical oxygen demand, chloride, total hardness (as $CaCO_3$), nitrate, total phenols, sulfate, total organic carbon, total dissolved solids, total Kjeldahl nitrogen. Samples were analyzed in accordance with SW-846 methods as specified in the NYCRR Part 360 regulations. The analytical results for the groundwater samples are discussed in Section 4.2 and the analytical results for the LFG condensate sample are presented in Appendix E.

Section 4

4.0 ANALYTICAL RESULTS

4.1 Field Parameters

Table 4-1 provides a summary of the final field parameter values and field data measured for the first quarter 2004 sampling event.

4.2 Groundwater Samples

The first quarter 2004 analytical results for the groundwater samples, compared to NYSDEC Class GA groundwater standards and guidance values and to previous sample results, are provided in Appendices A-1 (leachate indicator parameters), A-2 (inorganic parameters). Appendix A-3 contains historic volatile organic compound (VOC) sample results. Appendix A-4 contains historic trend graphs for alkalinity, iron plus manganese, total dissolved solids and specific conductivity from selected upgradient and downgradient monitoring wells.

4.2.1 Leachate Indicators

The results of the leachate indicators for the groundwater samples are presented in Appendix A-1. As shown in the results table in Appendix A-1, 10 of the 22 wells sampled exhibited one or more leachate indicators exceeding the Class GA groundwater standards and guidance values, including ammonia, bromide and chloride. The leachate indicators that exceeded the Class GA standards/guidance values are discussed below.

Ammonia

The groundwater standard for ammonia (2 milligrams per liter [mg/l]) was exceeded in wells MW-04I and MW-06S. Ammonia concentrations in these wells ranged from 3.28 mg/l in well MW-06S to 4.77 mg/l well MW-04I.

Table 4-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF FINAL FIELD PARAMETER RESULTS AND FIELD DATA – FIRST QUARTER 2004

Monitoring Well	pH	Temperature (°C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/l)	Eh (mV)	Organic Vapor Screening and Combustible Gas Reading	
							FID (ppm)	% LEL
MW-01D	5.90	11.17	2.24	0.6	3.09	273	0	0
MW-01I	5.68	13.24	0.412	2.0	1.01	173	0	0
MW-01S	6.23	11.37	0.595	12.5	4.40	57	0	0
MW-02D	5.52	12.70	0.093	1.6	4.04	376	0	0
MW-02I	4.58	14.46	0.114	3.5	1.98	376	1	0
MW-02S	NS	NS	NS	NS	NS	NS	1	0
MW-03D	NS	NS	NS	NS	NS	NS	0	0
MW-03I	NS	NS	NS	NS	NS	NS	0	0
MW-03S	5.49	16.45	0.483	5.9	1.30	-40	0	0
MW-04D	6.09	13.36	0.413	13.4	0.87	-78	0	0
MW-04I	5.77	14.04	0.665	2.6	3.72	-27	0	0
MW-04S	5.87	12.50	0.735	13.7	3.61	-19	0	0
MW-05D	5.54	13.70	0.260	20.0	0.45	123	0	0
MW-05I	5.72	15.32	0.515	10.3	1.50	-34	0	0
MW-05S	5.56	17.66	0.650	3.8	1.05	-37	0	0
MW-06D	5.78	14.17	0.111	12.2	3.29	74	0	0
MW-06I	5.75	14.88	0.155	2.0	3.24	80	0	0
MW-06S	6.24	16.28	0.572	2.8	0.91	-32	0	0
MW-07D	NS	NS	NS	NS	NS	NS	0	0
MW-07I	5.46	13.84	0.142	.0.7	2.14	346	0	0
MW-07S	NS	NS	NS	NS	NS	NS	0	0
MW-10D	NS	NS	NS	NS	NS	NS	0	0
MW-10I	NS	NS	NS	NS	NS	NS	0	0
MW-10S	NS	NS	NS	NS	NS	NS	0	0
MW-11D	4.17	14.00	0.133	4.7	4.57	378	0	0
MW-11I	5.02	13.96	0.143	4.1	0.61	329	0	0
MW-11S	5.46	9.31	0.526	12.0	0.73	339	0	0
MW-12D	4.83	13.62	0.053	9.0	3.92	424	0	0
MW-12I	4.68	14.05	0.052	11.2	3.20	430	0	0
MW-12S	6.03	10.05	0.365	5.5	3.98	391	0	0
MW-13D	NS	NS	NS	NS	NS	NS	0	0
MW-13I	NS	NS	NS	NS	NS	NS	0	0
MW-13S	NS	NS	NS	NS	NS	NS	0	0
MW-14D	NS	NS	NS	NS	NS	NS	0	0
MW-14I	NS	NS	NS	NS	NS	NS	0	0
MW-14S	NS	NS	NS	NS	NS	NS	0	0

Notes:

ppm: parts per million
FID: Flame Ionization Detector
LEL: Lower Explosive Limit
mV: Millivolt
Eh: Redox potential

°C: Degrees Celsius
mS/cm: Millisiemens per centimeter
NTU: Nephelometric Turbidity Unit
DO: Dissolved oxygen
mg/l Milligrams per liter
NS: Not sampled

Final field parameter readings were measured upon completion of sample collection.

Bromide

The guidance value for bromide (2 mg/l) was exceeded in nine (9) wells (MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-05D, MW-06S and MW-06D). Bromide concentrations in these wells ranged from 2.1 mg/l in well MW-06S to 6.0 mg/l in well MW-05D.

Chloride

The groundwater standard for chloride (250 mg/l) was exceeded in well MW-01D, which contained a concentration of 656 mg/l.

4.2.2 Historic Leachate Indicators

A comparison of the first quarter 2004 results to fourth quarter 2003 results for each leachate indicator parameter in the 22 wells sampled is provided below. Since well MW-02S was not sampled during the first quarter (February 2004), it is not included in the comparison. Concentration trends and exceedances for each well are summarized in Table 4-2. Historic data for leachate indicator parameters are summarized in Appendix A-1.

Alkalinity

Three (3) of the 22 wells sampled showed an increase (defined as a change of at least 20% compared to the previous result) in alkalinity concentrations. The wells that showed an increase are MW-02I, MW-05D and MW-11I. Seven (7) wells (MW-01I, MW-05S, MW-05I, MW-06D, MW-11S, MW-11D and MW-12S) showed a decrease (defined as a change of at least 20% compared to the previous result) in alkalinity concentrations. The remaining 12 wells were consistent (within 20% of previous result).

Table 4-2

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF CONCENTRATION TRENDS FOR LEACHATE INDICATOR PARAMETERS – FIRST QUARTER 2004

Well	Location	Alkalinity	Ammonia	Biochemical Oxygen Demand	Bromide	Chemical Oxygen Demand	Chloride	Hardness	Nitrate	Total Phenols	Sulfate	Total Organic Carbon	Total Dissolved Solids	Total Kjeldahl Nitrogen
MW-01S	Upgradient	C	D	C	D	C	D	D	D	C	D	C	D	D
MW-01I	Upgradient	D	I	C	D	C	C	D	D	C	C	C	I	D
MW-01D	Upgradient	C	I	C	D	I	I	I	D	C	D	C	I	I
MW-02I	Upgradient	I	C	C	I	I	I	C	C	C	C	C	C	D
MW-02D	Upgradient	C	C	I	I	C	I	C	C	C	C	C	I	C
MW-03S	Downgradient	C	D	D	I	I	D	D	I	C	I	C	C	D
MW-04S	Downgradient	C	D	D	I	I	C	C	I	C	D	C	D	D
MW-04I	Downgradient	C	C	D	I	D	C	D	C	C	C	C	C	C
MW-04D	Downgradient	C	D	I	C	I	I	D	C	C	D	I	D	C
MW-05S	Downgradient	D	D	D	I	I	D	D	I	C	I	D	C	D
MW-05I	Downgradient	D	D	I	I	C	C	I	I	C	D	C	C	D
MW-05D	Downgradient	I	I	C	I	D	I	D	D	C	C	C	I	I
MW-06S	Sidegradient	C	D	D	D	I	C	D	I	C	D	I	C	C
MW-06I	Sidegradient	C	C	C	D	C	C	I	C	C	C	C	D	C
MW-06D	Sidegradient	D	C	D	D	D	I	D	D	C	D	D	I	D
MW-07I	Upgradient	C	I	I	D	C	I	C	D	C	C	C	I	I
MW-11S	Upgradient	D	I	C	I	D	C	D	C	C	D	C	C	C
MW-11I	Upgradient	I	I	C	I	I	I	I	D	C	D	C	I	I
MW-11D	Upgradient	D	I	C	C	C	I	D	C	C	D	C	I	C
MW-12S	Upgradient	D	C	C	C	I	I	D	D	C	D	C	C	D
MW-12I	Upgradient	C	I	C	C	I	C	C	D	C	D	C	D	I
MW-12D	Upgradient	C	C	C	C	C	C	D	I	C	D	C	D	C

Key: I = Increasing greater than 20%
D = Decreasing greater than 20%
C = Consistent within 20%`
▨ = Parameter exceeds standard/guidance value

Ammonia

Eight (8) wells (MW-01I, MW-01D, MW-05D, MW-07I, MW-11S, MW-11I, MW-11D and MW-12I) showed increasing concentrations of ammonia. Seven (7) wells (MW-01S, MW-03S, MW-04S, MW-04D, MW-05S, MW-05I and MW-06S) showed decreasing concentrations in ammonia. The remaining 7 wells were consistent.

Biochemical Oxygen Demand

Four (4) wells (MW-02D, MW-04D, MW-05I and MW-07I) showed increasing concentrations of biochemical oxygen demand. Six (6) wells (MW-03S, MW-04S, MW-04I, MW-05S, MW-06S and MW-06D) showed decreasing concentrations. The remaining 12 wells were consistent.

Bromide

Ten (10) wells (MW-02I, MW-02D, MW-03S, MW-04S, MW-04I, MW-05S, MW-05I, MW-05D, MW-11S and MW-11I) showed increasing bromide concentrations. Seven (7) wells (MW-01S, MW-01I, MW-01D, MW-06S, MW-06I, MW-06D and MW-07I) showed decreasing concentrations. The remaining 5 wells were consistent.

Chemical Oxygen Demand

Ten (10) wells (MW-01D, MW-02I, MW-03S, MW-04S, MW-04D, MW-05S, MW-06S, MW-11I, MW-12S and MW-12I) showed increasing concentrations of chemical oxygen demand. Four (4) wells (MW-04I, MW-05D, MW-06D and MW-11S) showed decreasing concentrations. The remaining 8 wells were consistent.

Chloride

Ten (10) wells (MW-01D, MW-02I, MW-02D, MW-04D, MW-05D, MW-06D, MW-07I, MW-11I, MW-11D and MW-12S) showed increasing chloride concentrations. Three (3) wells (MW-01S, MW-03S and MW-05S) showed decreasing concentrations. The remaining 9 wells were consistent.

Hardness

Four (4) wells (MW-01D, MW-05I, MW-06I and MW-11I) showed increasing hardness concentrations. Thirteen (13) wells (MW-01S, MW-01I, MW-03S, MW-04I, MW-04D, MW-05S, MW-05D, MW-06S, MW-06D, MW-11S, MW-11D, MW-12S and MW-12D) showed decreasing concentrations. The remaining 5 wells were consistent.

Nitrate

Six (6) wells (MW-03S, MW-04S, MW-05S, MW-05I, MW-06S and MW-12D) showed increasing nitrate concentrations. Nine (9) wells (MW-01S, MW-01I, MW-01D, MW-05D, MW-06D, MW-07I, MW-11I, MW-12S and MW-12I) showed decreasing concentrations. The remaining 7 wells were consistent.

Total Phenols

All sampled wells were consistent.

Sulfate

Wells MW-03S and MW-05S showed increasing sulfate concentrations. Thirteen (13) wells (MW-01S, MW-01D, MW-04S, MW-04D, MW-05I, MW-06S, MW-06D, MW-11S, MW-11I, MW-11D, MW-12S, MW-12I and MW-12D) showed decreasing concentrations. The remaining 7 wells were consistent.

Total Organic Carbon

Wells MW-04D and MW-06S showed increasing concentrations of total organic carbon. Wells MW-05S and MW-06D showed decreasing concentrations. The remaining 18 wells were consistent.

Total Dissolved Solids

Eight (8) wells (MW-01I, MW-01D, MW-02D, MW-05D, MW-06D, MW-07I, MW-11I and MW-11D) showed increasing concentrations of total dissolved solids. Six (6) wells (MW-01S, MW-04S, MW-04D, MW-06I, MW-12I and MW-12D) showed decreasing concentrations. The remaining 8 wells were consistent.

Total Kjeldahl Nitrogen

Five (5) wells (MW-01D, MW-05D, MW-07I, MW-11I and MW-12I) showed increasing concentrations of total kjeldahl nitrogen. Nine (9) wells (MW-01S, MW-01I, MW-02I, MW-03S, MW-04S, MW-05S, MW-05I, MW-06D and MW-12S) showed decreasing concentrations. The remaining 8 wells were consistent.

4.2.3 Inorganic Parameters

The results of the inorganic parameters for the groundwater samples are presented in Appendix A-2. As shown by the first quarter 2004 analytical results, iron, manganese and sodium were detected at concentrations above groundwater standards. The following provides a discussion of these exceedances.

Iron

Thirteen (13) wells (MW-01S, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-05D, MW-06S, MW-06I, MW-06D, MW-11S and MW-12S) exceeded the groundwater standard of 300 micrograms per liter (ug/l) for iron. Iron concentrations for those wells with exceedances ranged from 324 ug/l in well MW-12S to 62,600 ug/l in well MW-04S.

Manganese

Fourteen (14) wells (MW-01S, MW-02I, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-05D, MW-06S, MW-06I, MW-06D, MW-07I and MW-11I) exceeded the groundwater standard of 300 micrograms per liter (ug/l) for manganese. Manganese concentrations for those wells with exceedances ranged from 360 ug/l in well MW-02I to 10,000 ug/l in well MW-06D.

Sodium

Ten (10) wells (MW-01S, MW-01I, MW-01D, MW-03S, MW-04S, MW-04I, MW-05I, MW-05D, MW-11S and MW-12S) exceeded the groundwater standard of 20,000 ug/l for sodium. Sodium concentrations for those wells with exceedances ranged from 21,100 ug/l in well MW-05D to 416,000 ug/l in MW-01D.

4.2.4 Historic Inorganic Parameters

A comparison of the first quarter 2004 results to the fourth quarter 2003 results for each inorganic parameter in the 22 wells sampled is provided below. Well MW-02S was not sampled during the first quarter (February 2004) and, therefore, not included in the comparison. Concentration trends and exceedances for each well are summarized in Table 4-3. Historic data for inorganic parameters are summarized in Appendix A-2.

Table 4-3

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF CONCENTRATION TRENDS FOR INORGANIC PARAMETERS – FIRST QUARTER 2004

Well	Location	Cadmium	Calcium	Iron	Lead	Magnesium	Manganese	Potassium	Sodium
MW-01S	Upgradient	D	D	C	I	C	I	D	D
MW-01I	Upgradient	D	D	D	D	D	C	I	I
MW-01D	Upgradient	D	I	D	D	I	I	I	I
MW-02I	Upgradient	I	C	D	C	C	C	C	C
MW-02D	Upgradient	D	C	D	I	C	D	C	C
MW-03S	Downgradient	D	C	C	D	C	C	C	C
MW-04S	Downgradient	D	C	I	D	D	D	C	C
MW-04I	Downgradient	D	C	C	I	C	C	C	C
MW-04D	Downgradient	D	I	I	I	I	I	C	C
MW-05S	Downgradient	D	D	C	D	D	D	C	D
MW-05I	Downgradient	D	C	D	D	C	D	C	C
MW-05D	Downgradient	C	I	I	D	I	C	I	I
MW-06S	Sidegradient	D	C	I	I	I	I	I	C
MW-06I	Sidegradient	D	C	C	I	C	C	D	C
MW-06D	Sidegradient	D	C	C	D	C	C	D	C
MW-07I	Upgradient	C	I	D	I	I	I	I	I
MW-11S	Upgradient	D	I	I	I	I	C	C	D
MW-11I	Upgradient	C	I	D	C	I	I	C	C
MW-11D	Upgradient	D	C	D	I	C	I	C	I
MW-12S	Upgradient	D	C	I	C	C	I	D	I
MW-12I	Upgradient	D	C	I	C	C	C	C	C
MW-12D	Upgradient	I	C	I	I	C	I	C	C

Key: I = Increasing greater than 20%
D = Decreasing greater than 20%
C = Consistent within 20%`
▨ = Parameter exceeds standard/guidance value

Cadmium

Wells MW-02I and MW-12D showed increasing cadmium concentrations. Seventeen (17) wells (MW-01S, MW-01I, MW-01D, MW-02D, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-06S, MW-06I, MW-06D, MW-11S, MW-11D, MW-12S and MW-12I) showed decreasing concentrations. The remaining 3 wells were consistent.

Calcium

Six (6) wells (MW-01D, MW-04D, MW-05D, MW-07I, MW-11S and MW-11I) showed increasing calcium concentrations. Three (3) wells (MW-01S, MW-01I and MW-05S) showed decreasing concentrations. The remaining 13 wells were consistent.

Iron

Eight (8) wells (MW-04S, MW-04D, MW-05D, MW-06S, MW-11S, MW-12S, MW-12I and MW-12D) showed increasing iron concentrations. Eight (8) wells (MW-01I, MW-01D, MW-02I, MW-02D, MW-05I, MW-07I, MW-11I and MW-11D) showed decreasing concentrations. The remaining 6 wells were consistent.

Lead

Ten (10) wells (MW-01S, MW-02D, MW-04I, MW-04D, MW-06S, MW-06I, MW-07I, MW-11S, MW-11D and MW-12D) showed increasing lead concentrations. Eight (8) wells (MW-01I, MW-01D, MW-03S, MW-04S, MW-05S, MW-05I, MW-05D and MW-06D) showed decreasing concentrations. The remaining 4 wells were consistent.

Magnesium

Seven (7) wells (MW-01D, MW-04D, MW-05D, MW-06S, MW-07I, MW-11S and MW-11I) showed increasing magnesium concentrations. Three (3) wells (MW-01I, MW-04S, and MW-05S) showed decreasing concentrations. The remaining 12 wells were consistent.

Manganese

Nine (9) wells (MW-01S, MW-01D, MW-04D, MW-06S, MW-07I, MW-11I, MW-11D, MW-12S and MW-12D) showed increasing manganese concentrations. Four (4) wells (MW-02D, MW-04S, MW-05S and MW-05I) showed decreasing concentrations. The remaining 9 wells were consistent.

Potassium

Five (5) wells (MW-01I, MW-01D, MW-05D, MW-06S and MW-07I) showed increasing potassium concentrations. Four (4) wells (MW-01S, MW-06I, MW-06D and MW-12S) showed decreasing concentrations. The remaining 13 wells were consistent.

Sodium

Six (6) wells (MW-01I, MW-01D, MW-05D, MW-07I, MW-11D and MW-12S) showed increasing sodium concentrations. Three (3) wells (MW-01S, MW-05S and MW-11S) showed decreasing concentrations. The remaining 13 wells were consistent.

In order to evaluate changes in groundwater, historic results for alkalinity, iron plus manganese, total dissolved solids and specific conductivity were graphed for the shallow, intermediate and deep zones for upgradient well clusters 1 and 11, and downgradient well clusters 4 and 5. These parameters were selected as possible indicators of landfill impacts to groundwater. These graphs are included in Appendix A-4.

4.3 Landfill Gas Condensate Sample

The first quarter 2004 analytical results for the landfill gas condensate sample are presented within the Landfill Gas Condensate Sampling Report presented in Appendix E.

4.4 Organic vapor and Combustible Gas Monitoring

The results of the organic vapor and combustible gas monitoring are presented in Table 4-1. The results measured by the flame ionization detector (FID) show nondetectable readings in all wells except for wells MW-02S and MW-02I. The FID results for these wells were both 1 part per million (ppm). All 36 wells showed a combustible gas reading of 0% of the lower explosive limit (LEL). The LEL for methane is 5% by volume or 50,000 ppm.

Section 5

5.0 DATA VALIDATION

Twenty-two (22) groundwater samples and one landfill gas condensate sample were collected in February 2004, as part of the Post Closure Groundwater Monitoring Program sampling event at the Sonia Road Landfill. The samples were analyzed for Routine Parameters as listed in 6 NYCRR Part 360. Sample analysis was performed by H2M Laboratories, a contractor to the IRRA, in accordance with SW-846 methods as specified in the Part 360 regulations. H2M Laboratories is approved under the New York State Department of Health Environmental Laboratory Approval Program (ELAP) for the analyses performed.

The data package submitted by H2M Laboratories was reviewed for completeness and compliance with the analytical methods. All of the quality assurance/quality control (QA/QC) samples (calibrations, spikes, duplicates and blanks), as well as 20% of the analytical results, were reviewed yielding a "20% validation" in conformance with the Sampling and Analysis Plan. The samples that were reviewed for calculation and transcription errors were MW-02D, MW-04I, MW-05I, MW-07I and MW-12I. The findings of the review process are summarized below.

All samples were analyzed within the method specified holding times. All QA/AC requirements (calibrations, spikes, duplicates and blanks) were met.

Blind duplicates were collected from MW-12I (Blind Duplicate 1) and MW-05I (Blind Duplicate 2), and the results were comparable between the samples. Two samples (MW-05D and MW-12D) were collected and specified as the matrix spike and matrix spike duplicate. All spike recoveries were within QC limits.

No problems were found with the data package. All results are deemed valid and usable for environmental assessment purposes.

Completed data validation forms for the first quarter 2004 sampling event are provided in Appendix D.

Section 6

6.0 GROUNDWATER LEVEL MEASUREMENTS AND FLOW DIRECTION

Groundwater level measurements were obtained on February 26, 2004, from each of the 23 monitoring wells included in the Post Closure Groundwater Monitoring Program and the 13 additional wells not sampled as part of this program. The depth to water measurements, measuring point elevations and calculated groundwater elevations for the 36 monitoring wells are presented in Table 6-1.

Water level data from February 26, 2004 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 within the zones screened by the shallow, intermediate and deep wells is predominantly toward the southeast in the vicinity of the landfill. These maps are consistent with the maps previously prepared for the site.

Table 6-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
MONITORING WELL GROUNDWATER ELEVATION MEASUREMENTS – FIRST QUARTER 2004
FEBRUARY 26, 2004

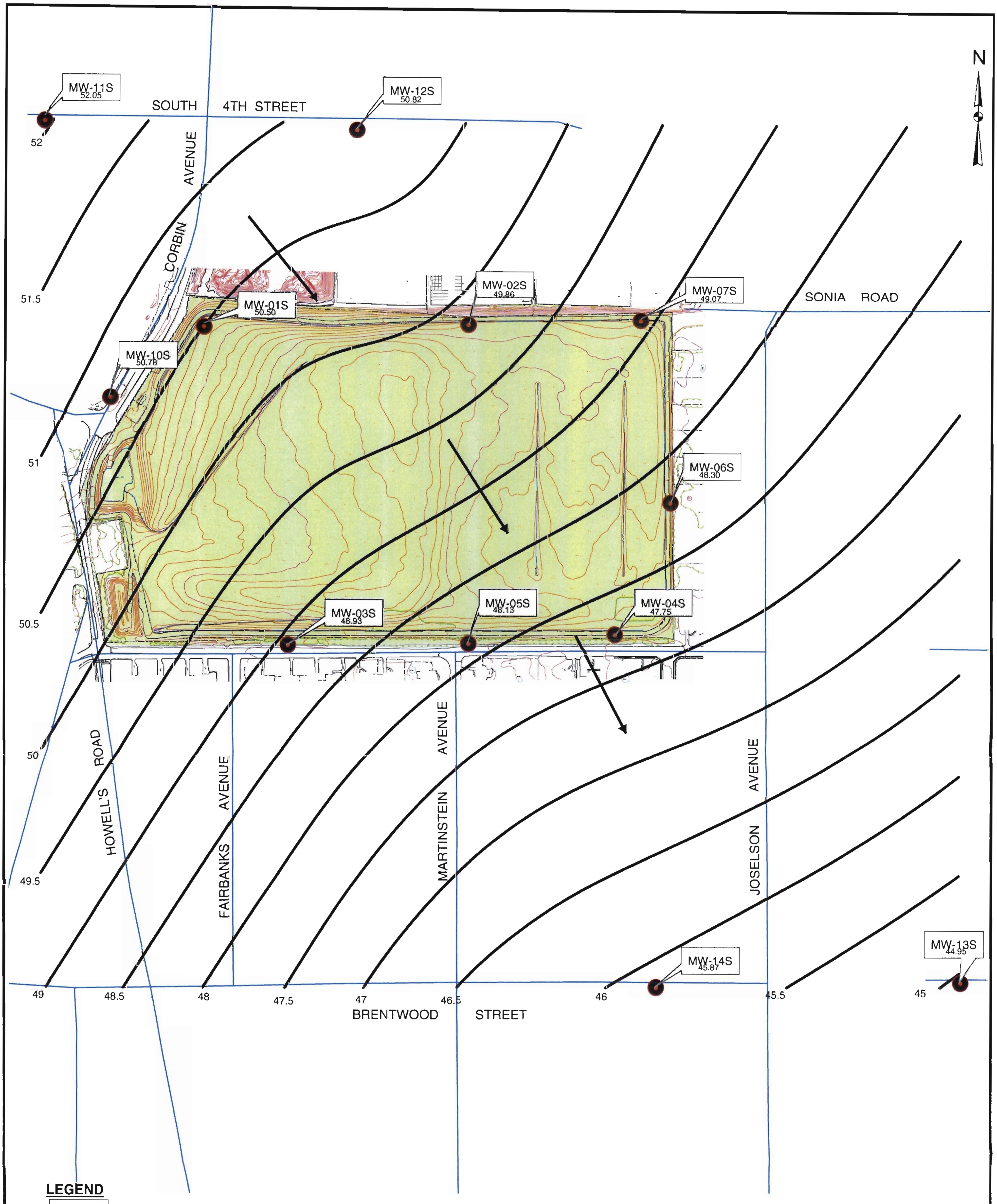
Monitoring Well No.	Measuring Point Elevation (feet amsl)	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet amsl)
MW-01D	64.53	14.01	50.52
MW-01I	65.36	14.64	50.72
MW-01S	66.01	15.51	50.50
MW-02D	79.01	29.20	49.81
MW-02I	78.75	29.07	49.68
MW-02S	77.98	28.12	49.86
MW-03D	70.50	21.79	48.71
MW-03I	70.77	21.82	48.95
MW-03S	70.76	21.83	48.93
MW-04D	69.03	21.28	47.75
MW-04I	69.31	21.66	47.65
MW-04S	71.10	23.35	47.75
MW-05D	70.96	22.57	48.39
MW-05I	70.26	22.11	48.15
MW-05S	70.28	22.15	48.13
MW-06D	75.03	26.72	48.31
MW-06I	74.53	26.31	48.22
MW-06S	74.45	26.15	48.30
MW-07D	75.04	25.97	49.07
MW-07I	73.45	24.40	49.05
MW-07S	72.83	23.76	49.07
MW-10D	56.34	5.85	50.49
MW-10I	56.16	5.66	50.50
MW-10S	56.65	5.87	50.78

Table 6-1 (continued)

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
MONITORING WELL GROUNDWATER ELEVATION MEASUREMENTS – FIRST QUARTER 2004
FEBRUARY 26, 2004

Monitoring Well No.	Measuring Point Elevation (feet amsl)	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet amsl)
MW-11D	60.19	8.08	52.11
MW-11I	60.38	8.32	52.06
MW-11S	59.87	7.82	52.05
MW-12D	58.61	7.78	50.83
MW-12I	58.92	8.08	50.84
MW-12S	58.79	7.97	50.82
MW-13D	70.37	25.34	45.03
MW-13I	70.30	25.31	44.99
MW-13S	70.51	25.56	44.95
MW-14D	64.58	18.68	45.90
MW-14I	64.57	18.70	45.87
MW-14S	64.55	18.68	45.87

amsl: above mean sea level



LEGEND

MW-01S 50.50 ● MONITORING WELL LOCATION, DESIGNATION AND GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

→ APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTE: CONTOUR INTERVAL EQUALS 0.50 FT.

SOURCE: BASE MAP PROVIDED BY ISLIP RESOURCE RECOVERY AGENCY

1 inch equals 300 feet

0 150 300 450 600 Feet

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

WATER TABLE ELEVATION CONTOUR MAP
FEBRUARY 26, 2004

FIGURE 6-1

GIS_Arcview Projects\2023 Sonia Rd\Updated Sonia\Maps\2004\Scon2-26-04.mxd

LEGEND

MW-01I 50.72

● MONITORING WELL LOCATION, DESIGNATION AND GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

→ APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTE: CONTOUR INTERVAL EQUALS 0.50 FT.

SOURCE: BASE MAP PROVIDED BY ISLIP RESOURCE RECOVERY AGENCY

1 inch equals 300 feet

0 150 300 450 600 Feet

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

INTERMEDIATE DEPTH POTENTIOMETRIC SURFACE ELEVATION CONTOUR MAP
FEBRUARY 26, 2004

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and
Bartilucci
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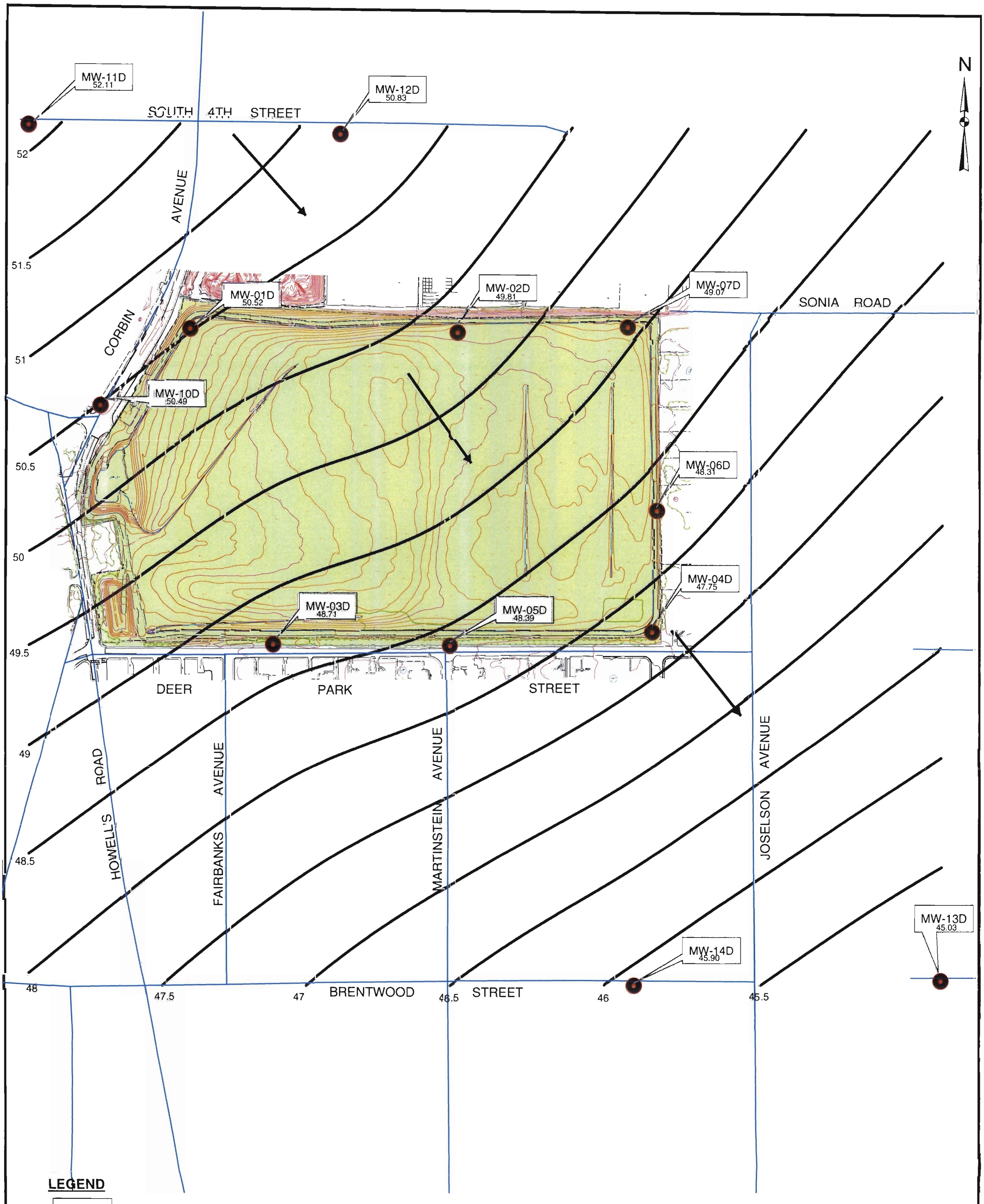
FIGURE 6-2

GIS_Arcview Projects\2023 Sonia Rd\Updated Sonia\Maps\2004\Icon2-26-04.mxd



LEGEND

● MW-01D 50.52 MONITORING WELL LOCATION, DESIGNATION AND GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

→ APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTE: CONTOUR INTERVAL EQUALS 0.50 FT.

SOURCE: BASE MAP PROVIDED BY ISLIP RESOURCE RECOVERY AGENCY

1 inch equals 300 feet

0 150 300 450 600 Feet

Dvirka
and
Bartilucci
CONSULTING ENGINEERS
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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

DEEP POTENTIOMETRIC SURFACE ELEVATION CONTOUR MAP
FEBRUARY 26, 2004

FIGURE 6-3

GIS_Arcview Projects\2023 Sonia Rd\Updated Sonia\Maps\2004\Dcon2-26-04.mxd

Section 7

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

Groundwater Flow

Based on groundwater level measurements collected during the first quarter 2004 and the shallow (water table), intermediate and deep potentiometric surface elevation contour maps constructed for the site, groundwater flow at and in the vicinity of the Sonia Road Landfill is predominantly toward the southeast. This groundwater flow direction is consistent with previous maps prepared for the site.

Groundwater Quality

Based on a comparison of the first quarter 2004 results to the fourth quarter 2003 results and review of the historical trend graphs in Appendix A-4, groundwater quality in the vicinity of the Sonia Road Landfill has not changed substantially.

The detected concentrations of iron, manganese and sodium are likely not indicative of landfill-influenced groundwater, since concentrations of these parameters above groundwater standards were detected in both upgradient and downgradient wells.

Concentrations of bromide up to 6 mg/l (above the guidance value of 2 mg/l) were detected in several downgradient wells during this sampling event. Historic results show sporadic bromide detections above the guidance value in upgradient and downgradient wells for the third quarter 2002 and fourth quarter 2003 sampling events (see Appendix A-1). As a result, it appears unlikely that the detected bromide is related to the landfill. The bromide concentrations from future sampling events will be monitored to evaluate this conclusion.

7.2 Recommendations

Based on the first quarter 2004 results and comparison of these results to historic data for the Sonia Road Landfill, it is recommended to continue to sample the groundwater monitoring wells in accordance with the SAP.

Due to the damaged well casing identified for well MW-02S, it is recommended that well MW-02S be abandoned and replaced with a new monitoring well. Since the landfill cap in this area extends to the northern property boundary, it is likely that the replacement well would need to be located on an adjacent property.

Appendix A

APPENDIX A-1

HISTORIC AND CURRENT GROUNDWATER SAMPLE RESULTS – LEACHATE INDICATORS

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-01S 10/24/1997 (mg/l)	MW-01S 11/30/2000 (mg/l)	MW-01S 01/29/2001 (mg/l)	MW-01S 08/21/2002 (mg/l)	MW-01S 11/20/2002 (mg/l)	MW-01S 03/05/2003 (mg/l)	MW-01S 06/03/2003 (mg/l)	MW-01S 08/21/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	80	50	50	NS	50	NS	NS	20
Alkalinity (as CaCO3)	-	-	(mg/l)	264	183	180	126	211	177	151	161
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1	2.1	2.2	1.46	2.03	1.04	0.93	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	6	2 U	2 U	2 U	4	8
Bromide	2 GV	24959-67-9	(mg/l)	0.7	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	46	29.6	10.7	22.5	29.8	83.2	10 U	21.6
Chloride	250 ST	16887-00-6	(mg/l)	69.7	28.4	42	36.6	40.9	60.7	131	65.8
Hardness (as CaCO3)	-	471-34-1	(mg/l)	310	140	200	240	520	200	270	320
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	0.080 J	0.1 U	0.1 U	0.1 U	0.12	0.55
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	36.3	50	42.5	78	89	117	108	188
Total Organic Carbon	-	-	(mg/l)	11.7	6	9.1	4.8	5.1	6.9	4.3	5.6
Total Dissolved Solids	-	-	(mg/l)	432	259	310	250	420	74	506	534
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	2.3	1.9	3.3	1.26	2.11	1.21	0.84	0.85

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-01S 11/10/2003 (mg/l)	MW-01S 02/26/2004 (mg/l)	MW-01S (mg/l)	MW-01S (mg/l)	MW-01S (mg/l)	MW-01S (mg/l)	MW-01S (mg/l)	MW-01S (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	165	192						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1.57	0.44						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	5.1	1 U						
Chemical Oxygen Demand	-	-	(mg/l)	38.6	33						
Chloride	250 ST	16887-00-6	(mg/l)	158	56.6						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	460	54						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.26						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	282	140						
Total Organic Carbon	-	-	(mg/l)	8.3	7.4						
Total Dissolved Solids	-	-	(mg/l)	690	498						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.72	0.77						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-01I 10/24/1997 (mg/l)	MW-01I 11/30/2000 (mg/l)	MW-01I 01/30/2001 (mg/l)	MW-01I 08/21/2002 (mg/l)	MW-01I 11/20/2002 (mg/l)	MW-01I 03/05/2003 (mg/l)	MW-01I 06/03/2003 (mg/l)	MW-01I 08/21/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	5 U	5 U	NS	5	NS	NS	10
Alkalinity (as CaCO3)	-	-	(mg/l)	20.7	65.6	50	14.8	23.4	65.8	58.7	63.8
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.9	0.24	0.63	0.15	0.1 U	0.45	0.25	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2	2 U	2 U	2 U	2 U	8	7
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	1.1	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	3 U	10 U	10 U	12.7	10 U	30	10 U	16.8
Chloride	250 ST	16887-00-6	(mg/l)	195	34.6	72	16.4	68.7	59.5	13.1	122
Hardness (as CaCO3)	-	471-34-1	(mg/l)	42	5	30	40	32	80	14	48
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.72	0.53	1.3	2.74	0.6	0.1 U	0.1 U	0.91
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	35.2	10.2	5 U	5 U	12.1	23.4	9.2	5 U
Total Organic Carbon	-	-	(mg/l)	2.8	1.7	0.99 J	1.4	1 U	1.4	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	356	179	310	86	310	201	87	307
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.2 U	0.35	1.16	0.21	0.45	0.7	0.23	0.84

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-01I 11/10/2003 (mg/l)	MW-01I 02/26/2004 (mg/l)	MW-01I (mg/l)	MW-01I (mg/l)	MW-01I (mg/l)	MW-01I (mg/l)	MW-01I (mg/l)	MW-01I (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	50	34.8						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.93	1.53						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	1.3	1 U						
Chemical Oxygen Demand	-	-	(mg/l)	11.9	13.1						
Chloride	250 ST	16887-00-6	(mg/l)	96.7	98.8						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	106	140						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.79	0.26						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	9.6	7.7						
Total Organic Carbon	-	-	(mg/l)	1 U	1 U						
Total Dissolved Solids	-	-	(mg/l)	214	2910						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.41	1.12						

NOTES:

NS: Not sampled

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

▨ : Concentration exceeds Standard/Guidance Value

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE :	MW-01D	MW-01D	MW-01D	MW-01D	MW-01D	MW-01D	MW-01D	MW-01D
			DATE :	10/24/1997	11/30/2000	01/30/2001	08/21/2002	11/20/2002	03/05/2003	06/03/2003	08/21/2003
			UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	30	NS	NS	20
Alkalinity (as CaCO3)	-	-	(mg/l)	11.4	37	43	41.6	51.3	44	66.2	66.1
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.36	0.46	0.49	0.21	0.33	2.31	0.49	0.10 U
Biochemical Oxygen Demand	-	-	(mg/l)	20	2 U	2 U	2 U	2 U	6	4	6
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	0.9	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	3 U	21.5	10.7	46.9	17.6	48.6	14.3	10 U
Chloride	250 ST	16887-00-6	(mg/l)	198	737	570	779	589	513	620	256
Hardness (as CaCO3)	-	471-34-1	(mg/l)	146	74	80	140	290	100	58	23
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.2	0.42	1	1.08	1.66	0.84	0.61	2.22
Phenols, total	0.001 ST	-	(mg/l)	0.0011	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	19.8	19.8	33.2	60.2	27.5	26.7	46.8	33
Total Organic Carbon	-	-	(mg/l)	2.3	2.3	2.4	1.5	5.7	6	1.4	3.8
Total Dissolved Solids	-	-	(mg/l)	452	1060	1500	1340	1160	950	1100	548
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.2 U	0.59	0.660	0.42	1.37	3.24	0.53	0.33

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE :	MW-01D	MW-01D	MW-01D	MW-01D	MW-01D	MW-01D	MW-01D	MW-01D
			DATE :	11/10/2003	02/26/2004						
			UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	63.4	60.5						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.10 U	0.60						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	3.2	0.5 U						
Chemical Oxygen Demand	-	-	(mg/l)	10 U	42.9						
Chloride	250 ST	16887-00-6	(mg/l)	111	656						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	15	160						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.69	0.41						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	27.5	17.8						
Total Organic Carbon	-	-	(mg/l)	1.1	1 U						
Total Dissolved Solids	-	-	(mg/l)	290	1040						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.34	0.52						

NOTES:

NS: Not sampled

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

▨ : Concentration exceeds Standard/Guidance Value

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-02S 10/27/1997 (mg/l)	MW-02S 11/30/2000 (mg/l)	MW-02S 01/31/2001 (mg/l)	MW-02S 08/21/2002 (mg/l)	MW-02S 11/20/2002 (mg/l)	MW-02S 03/05/2003 (mg/l)	MW-02S 06/03/2003 (mg/l)	MW-02S 08/21/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	NS	NS	NS	NS
Alkalinity (as CaCO3)	-	-	(mg/l)	86.6	86.2	85	NS	NS	NS	NS	NS
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.08	1.5	1.1	NS	NS	NS	NS	NS
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2	NS	NS	NS	NS	NS
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	NS	NS	NS	NS	NS
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	NS	NS	NS	NS	NS
Chloride	250 ST	16887-00-6	(mg/l)	21.2	9.5	10	NS	NS	NS	NS	NS
Hardness (as CaCO3)	-	471-34-1	(mg/l)	92	88	120	NS	NS	NS	NS	NS
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.82	2.4	1.8	NS	NS	NS	NS	NS
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	NS	NS	NS	NS	NS
Sulfate	250 ST	14808-79-8	(mg/l)	20.9	26.6	19.2	NS	NS	NS	NS	NS
Total Organic Carbon	-	-	(mg/l)	2.2	1.6	2.7	NS	NS	NS	NS	NS
Total Dissolved Solids	-	-	(mg/l)	171	138	170	NS	NS	NS	NS	NS
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.2	1.4	1.1	NS	NS	NS	NS	NS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-02S 11/11/2003 (mg/l)	MW-02S 02/26/2004 (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)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	NS	NS						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	NS	NS						
Biochemical Oxygen Demand	-	-	(mg/l)	NS	NS						
Bromide	2 GV	24959-67-9	(mg/l)	NS	NS						
Chemical Oxygen Demand	-	-	(mg/l)	NS	NS						
Chloride	250 ST	16887-00-6	(mg/l)	NS	NS						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	NS	NS						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	NS	NS						
Phenols, total	0.001 ST	-	(mg/l)	NS	NS						
Sulfate	250 ST	14808-79-8	(mg/l)	NS	NS						
Total Organic Carbon	-	-	(mg/l)	NS	NS						
Total Dissolved Solids	-	-	(mg/l)	NS	NS						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	NS	NS						

NOTES:

NS: Not sampled

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

▨ : Concentration exceeds Standard/Guidance Value

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-02I 10/27/1997 (mg/l)	MW-02I 12/01/2000 (mg/l)	MW-02I 01/30/2001 (mg/l)	MW-02I 08/21/2002 (mg/l)	MW-02I 11/20/2002 (mg/l)	MW-02I 03/07/2003 (mg/l)	MW-02I 06/03/2003 (mg/l)	MW-02I 08/21/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	10	NS	NS	10
Alkalinity (as CaCO3)	-	-	(mg/l)	12.3	9	9.3	4.5	9.6	16.2	17.2	7.4
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.65	9.1	0.64	0.10 U	0.1 U	0.29	0.19	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U	3	7
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
Chemical Oxygen Demand	-	-	(mg/l)	15 U	56.7	10 U	12.7	10 U	14	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	10	12.8	15	10.8	3.8	14	6.2	8.2
Hardness (as CaCO3)	-	471-34-1	(mg/l)	26	34	80	32	90	44	46	42
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.9	2.2	2.4	2.39	2.56	1.68	1.92	2.72
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	32.9	5.4	7.80	10.3	13.8	25.1	27.7	16.6
Total Organic Carbon	-	-	(mg/l)	1.5	1.5	1.1	1.3	1.3	3.2	2.3	1 U
Total Dissolved Solids	-	-	(mg/l)	103	88	99	58	97	83	82	112
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.8	9	1.20	0.1 U	0.28	1.45	0.66	0.26

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-02I 11/11/2003 (mg/l)	MW-02I 02/26/2004 (mg/l)	MW-02I (mg/l)	MW-02I (mg/l)	MW-02I (mg/l)	MW-02I (mg/l)	MW-02I (mg/l)	MW-02I (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	7.5	9.4						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U	0.1 U						
Biochemical Oxygen Demand	-	-	(mg/l)	3	3						
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	1 U						
Chemical Oxygen Demand	-	-	(mg/l)	10 U	28						
Chloride	250 ST	16887-00-6	(mg/l)	11.1	14.7						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	40	44						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.82	2.28						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	13.9	15						
Total Organic Carbon	-	-	(mg/l)	1 U	1 U						
Total Dissolved Solids	-	-	(mg/l)	74	69						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.46	0.36						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-02D 12/01/1997 (mg/l)	MW-02D 12/01/2000 (mg/l)	MW-02D 01/30/2001 (mg/l)	MW-02D 08/21/2002 (mg/l)	MW-02D 11/20/2002 (mg/l)	MW-02D 03/05/2003 (mg/l)	MW-02D 06/03/2003 (mg/l)	MW-02D 08/22/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	5	NS	NS	5 U
Alkalinity (as CaCO3)	-	-	(mg/l)	10.2	13.8	14	10.5	11.9	13.6	13.5	13.6
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.24	0.2	0.22	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	4	11
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	0.8
Chemical Oxygen Demand	-	-	(mg/l)	15 U	73	10 U	10 U	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	9.4	5.2	5.5	4.3	6.4	7.3	8.6	6.3
Hardness (as CaCO3)	-	471-34-1	(mg/l)	30	30	68	34	40	24	36	100
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.4	1.2	1	0.69	1.48	1.49	1.45	1.47
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	12.6	5 U	8.2	18.6	19.2	18.9	16.1	18.3
Total Organic Carbon	-	-	(mg/l)	0.7	1 U	0.88 J	1.2	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	76	96	80	60	110	80	73	91
Total Kjeldahl nitrogen (as N	-	7727-37-9	(mg/l)	0.23	0.19	0.340	0.1 U	0.1 U	0.18	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-02D 11/11/2003 (mg/l)	MW-02D 02/27/2004 (mg/l)	MW-02D (mg/l)	MW-02D (mg/l)	MW-02D (mg/l)	MW-02D (mg/l)	MW-02D (mg/l)	MW-02D (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	12.4	13						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U	0.1 U						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	8						
Bromide	2 GV	24959-67-9	(mg/l)	0.5	1 U						
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U						
Chloride	250 ST	16887-00-6	(mg/l)	5.4	8.5						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	42	48						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.62	1.51						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	19.8	17.9						
Total Organic Carbon	-	-	(mg/l)	1 U	1 U						
Total Dissolved Solids	-	-	(mg/l)	69	139						
Total Kjeldahl nitrogen (as N	-	7727-37-9	(mg/l)	0.1 U	0.1 U						

NOTES:

NS: Not sampled

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

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-03S 10/30/1997 (mg/l)	MW-03S 12/06/2000 (mg/l)	MW-03S 02/02/2001 (mg/l)	MW-03S 08/22/2002 (mg/l)	MW-03S 11/22/2002 (mg/l)	MW-03S 03/07/2003 (mg/l)	MW-03S 06/05/2003 (mg/l)	MW-03S 08/25/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	70	70	100	NS	50	NS	NS	60
Alkalinity (as CaCO3)	-	-	(mg/l)	187	183	160	169	146	5 U	175	297
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	2	2.3	1.66	2.07	2.7	5.78	1.66	2.08
Biochemical Oxygen Demand	-	-	(mg/l)	11	11	18	5	13	10	8	8
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	1.5	0.5 U	0.5 U	0.5 U	0.6
Chemical Oxygen Demand	-	-	(mg/l)	37	10 U	32.6	34.7	44.5	35.3	33.8	77.6
Chloride	250 ST	16887-00-6	(mg/l)	75.3	28.8	26.8	37.6	40.2	30.5	21.2	42.9
Hardness (as CaCO3)	-	471-34-1	(mg/l)	190	180	188	220	340	500	400	650
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	0.254	0.1 U	0.67	0.88	0.1 U	0.27
Phenols, total	0.001 ST	-	(mg/l)	0.0018	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	5 U	5.1	19	96	545	860	96.5	30.4
Total Organic Carbon	-	-	(mg/l)	7.7	4.3	4.67	4.9	3.9	5.8	5.7	8.1
Total Dissolved Solids	-	-	(mg/l)	246	237	248	290	695	876	452	528
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	3.1	2	1.7	3	2.48	8.69	1.46	2.92

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-03S 11/13/2003 (mg/l)	MW-03S 03/02/2004 (mg/l)	MW-03S (mg/l)	MW-03S (mg/l)	MW-03S (mg/l)	MW-03S (mg/l)	MW-03S (mg/l)	MW-03S (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	263	213						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	2.88	0.5 U						
Biochemical Oxygen Demand	-	-	(mg/l)	12	9						
Bromide	2 GV	24959-67-9	(mg/l)	2.1	3.1						
Chemical Oxygen Demand	-	-	(mg/l)	38.6	50.4						
Chloride	250 ST	16887-00-6	(mg/l)	52.3	32.7						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	440	300						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.5 U						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	5.7	11.2						
Total Organic Carbon	-	-	(mg/l)	7	6						
Total Dissolved Solids	-	-	(mg/l)	345	320						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	3.23	2.03						

NOTES:

NS: Not sampled

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

▨ : Concentration exceeds Standard/Guidance Value

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-04S 10/29/1997 (mg/l)	MW-04S 12/06/2000 (mg/l)	MW-04S 02/01/2001 (mg/l)	MW-04S 08/23/2002 (mg/l)	MW-04S 11/22/2002 (mg/l)	MW-04S 03/06/2003 (mg/l)	MW-04S 06/03/2003 (mg/l)	MW-04S 08/25/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	150	200	80	NS	70	NS	NS	60
Alkalinity (as CaCO3)	-	-	(mg/l)	618	364	400	405	543	489	452	374
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	9.3	7.8	7.2	7.63	7.18	9.21	9.6	8.64
Biochemical Oxygen Demand	-	-	(mg/l)	5	37	34	26	23	44	34	31
Bromide	2 GV	24959-67-9	(mg/l)	1	1.2	1	4	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	67	10 U	13.4	34.7	37.1	61.9	33.8	996
Chloride	250 ST	16887-00-6	(mg/l)	63.3	42.2	49	49.9	51.3	49.3	54.9	44.7
Hardness (as CaCO3)	-	471-34-1	(mg/l)	540	480	340	380	440	500	460	700
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.15	0.1 U	0.26	0.1 U
Phenols, total	0.001 ST	-	(mg/l)	0.0049	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0052	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	5 U	8.9	5.30	5 U	14	6.4	11.2	15.9
Total Organic Carbon	-	-	(mg/l)	17.3	8.1	11	9	8.8	9.6	8.4	8.9
Total Dissolved Solids	-	-	(mg/l)	624	426	460	430	465	595	547	546
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	23.3	8.9	10.7	7.24	8.65	12.6	10.4	9.9

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-04S 11/12/2003 (mg/l)	MW-04S 03/02/2004 (mg/l)	MW-04S (mg/l)	MW-04S (mg/l)	MW-04S (mg/l)	MW-04S (mg/l)	MW-04S (mg/l)	MW-04S (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	402	343						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	8.03	1.16						
Biochemical Oxygen Demand	-	-	(mg/l)	41	31						
Bromide	2 GV	24959-67-9	(mg/l)	1.1	3.6						
Chemical Oxygen Demand	-	-	(mg/l)	48.4	60.3						
Chloride	250 ST	16887-00-6	(mg/l)	37.9	40.3						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	660	560						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.21	0.5						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	125	28.2						
Total Organic Carbon	-	-	(mg/l)	9.5	8.4						
Total Dissolved Solids	-	-	(mg/l)	610	471						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	7.64	5.24						

NOTES:

NS: Not sampled

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

▨: Concentration exceeds Standard/Guidance Value

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-04I 10/29/1997 (mg/l)	MW-04I 12/06/2000 (mg/l)	MW-04I 02/01/2001 (mg/l)	MW-04I 08/23/2002 (mg/l)	MW-04I 11/22/2002 (mg/l)	MW-04I 03/06/2003 (mg/l)	MW-04I 06/03/2003 (mg/l)	MW-04I 08/22/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	30	200	60	NS	80	NS	NS	150
Alkalinity (as CaCO3)	-	-	(mg/l)	309	339	240	202	385	282	354	387
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1.8	9.2	8.2	5.48	5.38	6.01	6.53	5.49
Biochemical Oxygen Demand	-	-	(mg/l)	6	24	20	8	18	39	50	15
Bromide	2 GV	24959-67-9	(mg/l)	0.8	0.9	0.70	3.3	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	37	10 U	10 U	20	46.9	51.3	31.4	21.6
Chloride	250 ST	16887-00-6	(mg/l)	28.7	50.9	48	22.1	49.5	44.4	49.8	47
Hardness (as CaCO3)	-	471-34-1	(mg/l)	210	480	200	80	460	290	440	320
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.12	0.1 U	0.1 U	0.59	0.15	0.1 U	0.1 U	0.1 U
Phenols, total	0.001 ST	-	(mg/l)	0.0039	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	14.5	5 U	5 U	5 U	10.7	5.6	6.3	5 U
Total Organic Carbon	-	-	(mg/l)	5.2	7.5	7.5	5.5	6.4	6.4	7.2	7.4
Total Dissolved Solids	-	-	(mg/l)	424	410	310	195	402	400	422	504
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	4.3	11.4	10.1	6.38	7.29	7.93	6.21	6.88

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-04I 11/12/2003 (mg/l)	MW-04I 02/26/2004 (mg/l)	MW-04I (mg/l)	MW-04I (mg/l)	MW-04I (mg/l)	MW-04I (mg/l)	MW-04I (mg/l)	MW-04I (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	326	311						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	5.74	4.77						
Biochemical Oxygen Demand	-	-	(mg/l)	62	28						
Bromide	2 GV	24959-67-9	(mg/l)	0.5	3.4						
Chemical Oxygen Demand	-	-	(mg/l)	48.4	30.5						
Chloride	250 ST	16887-00-6	(mg/l)	46	40.2						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	390	270						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	5 U	5 U						
Total Organic Carbon	-	-	(mg/l)	6.5	6.6						
Total Dissolved Solids	-	-	(mg/l)	368	420						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	5.09	4.45						

NOTES:

NS: Not sampled

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-04D 10/28/1997 (mg/l)	MW-04D 12/06/2000 (mg/l)	MW-04D 02/01/2001 (mg/l)	MW-04D 08/23/2002 (mg/l)	MW-04D 11/21/2002 (mg/l)	MW-04D 03/07/2003 (mg/l)	MW-04D 06/03/2003 (mg/l)	MW-04D 08/25/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	150	150	50	NS	60	NS	NS	80
Alkalinity (as CaCO3)	-	-	(mg/l)	210	232	260	117	103	88.2	110	1430
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	2.8	5.3	5.4	3.91	2.65	3.68	4.33	4.31
Biochemical Oxygen Demand	-	-	(mg/l)	8	4	8	13	2 U	2	12	7
Bromide	2 GV	24959-67-9	(mg/l)	1.1	0.8	1.1	3	0.5 U	0.5 U	0.5 U	0.5
Chemical Oxygen Demand	-	-	(mg/l)	46	10 U	10.6	12.7	15.1	10 U	28.9	48.4
Chloride	250 ST	16887-00-6	(mg/l)	50.1	42.8	42	20	20.4	12.5	18.6	18.9
Hardness (as CaCO3)	-	471-34-1	(mg/l)	280	280	200	110	200	140	120	500
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	0.1 U	1.52	0.61	0.1 U	0.1 U	0.1 U
Phenols, total	0.001 ST	-	(mg/l)	0.0049	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	18.3	9.1	6.10	10	42.6	17.9	22.1	21.5
Total Organic Carbon	-	-	(mg/l)	4.7	6.5	6.2	3	1.7	2.9	2	1.8
Total Dissolved Solids	-	-	(mg/l)	318	304	310	170	241	40	162	214
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	5.6	6.6	7	4.47	3.06	4.85	4.14	4.69

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-04D 11/11/2003 (mg/l)	MW-04D 02/26/2004 (mg/l)	MW-04D (mg/l)	MW-04D (mg/l)	MW-04D (mg/l)	MW-04D (mg/l)	MW-04D (mg/l)	MW-04D (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	148	163						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	4.88	1.19						
Biochemical Oxygen Demand	-	-	(mg/l)	4	9						
Bromide	2 GV	24959-67-9	(mg/l)	2	2.3						
Chemical Oxygen Demand	-	-	(mg/l)	19.2	37.9						
Chloride	250 ST	16887-00-6	(mg/l)	17.8	25.1						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	320	132						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	14.8	8						
Total Organic Carbon	-	-	(mg/l)	1.7	2.3						
Total Dissolved Solids	-	-	(mg/l)	208	50						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	4.27	4.54						

NOTES:

NS: Not sampled

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-05S 10/29/1997 (mg/l)	MW-05S 12/08/2000 (mg/l)	MW-05S 02/02/2001 (mg/l)	MW-05S 08/23/2002 (mg/l)	MW-05S 11/22/2002 (mg/l)	MW-05S 03/07/2003 (mg/l)	MW-05S 06/05/2003 (mg/l)	MW-05S 08/25/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	60	400	100	NS	60	NS	NS	100
Alkalinity (as CaCO3)	-	-	(mg/l)	412	390	362	236	258	218	252	106
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	4.4	6.1	6.55	3.17	2.08	2.71	5.57	12.4
Biochemical Oxygen Demand	-	-	(mg/l)	8	25	33	32	23	21	28	10
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.6	0.9	1	1.4	0.5 U	0.5 U	0.5
Chemical Oxygen Demand	-	-	(mg/l)	46	10 U	21.8	22.5	15.1	38	31.4	63
Chloride	250 ST	16887-00-6	(mg/l)	82.1	36.4	36.6	39.4	46.1	36.3	29.5	37.5
Hardness (as CaCO3)	-	471-34-1	(mg/l)	400	290	276	240	210	250	600	650
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	0.29	0.1 U	0.28	0.83	0.17	1
Phenols, total	0.001 ST	-	(mg/l)	0.0049	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	5 U	5 U	5 U	8.9	25.1	27.5	36	78.5
Total Organic Carbon	-	-	(mg/l)	9.6	12	9.17	6.5	5.4	5.2	6.7	10.3
Total Dissolved Solids	-	-	(mg/l)	482	385	383	288	342	275	360	640
Total Kjeldahl nitrogen (as N	-	7727-37-9	(mg/l)	9.6	7.8	8.4	6.3	2.48	4.41	5.7	14.3

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-05S 11/12/2003 (mg/l)	MW-05S 03/02/2004 (mg/l)	MW-05S (mg/l)	MW-05S (mg/l)	MW-05S (mg/l)	MW-05S (mg/l)	MW-05S (mg/l)	MW-05S (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	386	160						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	9.09	0.97						
Biochemical Oxygen Demand	-	-	(mg/l)	21	4						
Bromide	2 GV	24959-67-9	(mg/l)	2.3	3.9						
Chemical Oxygen Demand	-	-	(mg/l)	50.8	65.3						
Chloride	250 ST	16887-00-6	(mg/l)	41.4	17.9						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	660	220						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.44	7.94						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	13.4	28.5						
Total Organic Carbon	-	-	(mg/l)	10.7	4.6						
Total Dissolved Solids	-	-	(mg/l)	457	396						
Total Kjeldahl nitrogen (as N	-	7727-37-9	(mg/l)	8.66	4.66						

NOTES:

NS: Not sampled

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

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-05I 10/29/1997 (mg/l)	MW-05I 12/08/2000 (mg/l)	MW-05I 02/02/2001 (mg/l)	MW-05I 08/23/2002 (mg/l)	MW-05I 11/22/2002 (mg/l)	MW-05I 03/07/2003 (mg/l)	MW-05I 06/05/2003 (mg/l)	MW-05I 08/25/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	40	300	100	NS	60	NS	NS	50
Alkalinity (as CaCO3)	-	-	(mg/l)	30.4	113	157	93	92.5	133	135	105
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.49	3.9	4.19	1.28	0.1	3.35	3.66	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	3	4 U	9	10	7	2 U	3	13
Bromide	2 GV	24959-67-9	(mg/l)	0.6	0.5 U	0.5 U	1.3	1	0.5 U	0.5 U	0.9
Chemical Oxygen Demand	-	-	(mg/l)	16	10 U	10 U	10 U	10 U	27.3	10 U	43.5
Chloride	250 ST	16887-00-6	(mg/l)	24.3	29.6	39.9	25.3	34.3	39.1	31.6	27.5
Hardness (as CaCO3)	-	471-34-1	(mg/l)	50	104	140	100	140	120	160	170
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	1.4	1.94	0.66	0.32	0.1 U	3.16
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	8.9	24.2	17	21.5	20.4	22.3	25.1	15.2
Total Organic Carbon	-	-	(mg/l)	1.8	4.7	5.12	3.4	2.5	3.2	2.5	3.7
Total Dissolved Solids	-	-	(mg/l)	100	216	250	432	207	280	218	257
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.7	4.4	5	2.44	1.43	4.77	3.46	0.7

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-05I 11/12/2003 (mg/l)	MW-05I 03/02/2004 (mg/l)	MW-05I (mg/l)	MW-05I (mg/l)	MW-05I (mg/l)	MW-05I (mg/l)	MW-05I (mg/l)	MW-05I (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	177	140						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	5.9	0.86						
Biochemical Oxygen Demand	-	-	(mg/l)	4	7						
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	3.4						
Chemical Oxygen Demand	-	-	(mg/l)	21.6	25.5						
Chloride	250 ST	16887-00-6	(mg/l)	49.1	46.4						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	240	400						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	4.52						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	27.9	17.1						
Total Organic Carbon	-	-	(mg/l)	4.5	4						
Total Dissolved Solids	-	-	(mg/l)	291	303						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	5.75	3.62						

NOTES:

NS: Not sampled

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-05D 10/29/1997 (mg/l)	MW-05D 12/08/2000 (mg/l)	MW-05D 02/02/2001 (mg/l)	MW-05D 08/23/2002 (mg/l)	MW-05D 11/22/2002 (mg/l)	MW-05D 03/07/2003 (mg/l)	MW-05D 06/05/2003 (mg/l)	MW-05D 08/25/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	50	10	NS	5	NS	NS	5 U
Alkalinity (as CaCO3)	-	-	(mg/l)	234	467	505	138	128	90	50.9	34.4
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	4.3	14.9	16.1	4.41	0.1 U	2.96	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2	5	12	8	10	2 U	13	6
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	3.2	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	43	40.5	32.6	17.6	22.5	10 U	10 U	36.2
Chloride	250 ST	16887-00-6	(mg/l)	51.5	65.4	51.6	27.9	32.8	34	38.5	27.1
Hardness (as CaCO3)	-	471-34-1	(mg/l)	260	410	360	148	130	136	160	110
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	1.5	4.46	5.73	11.4	0.68	15.1
Phenols, total	0.001 ST	-	(mg/l)	0.0015	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	27.5	25.5	17.8	33.5	32.7	15	9.8	7.6
Total Organic Carbon	-	-	(mg/l)	6	13.6	11.1	4.3	2.7	1.7	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	337	549	566	266	297	242	258	344
Total Kjeldahl nitrogen (as N	-	7727-37-9	(mg/l)	6	15.3	18	4.57	2.54	3.46	1.86	1.4

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-05D 11/12/2003 (mg/l)	MW-05D 03/02/2004 (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	29.6	41.5						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1	1.44						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2						
Bromide	2 GV	24959-67-9	(mg/l)	1.1	6						
Chemical Oxygen Demand	-	-	(mg/l)	21.6	15.6						
Chloride	250 ST	16887-00-6	(mg/l)	23.3	32.7						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	300	190						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	13.5	8.85						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	8.9	9						
Total Organic Carbon	-	-	(mg/l)	1.4	1.3						
Total Dissolved Solids	-	-	(mg/l)	190	284						
Total Kjeldahl nitrogen (as N	-	7727-37-9	(mg/l)	1.14	1.39						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-06S 10/27/1997 (mg/l)	MW-06S 12/05/2000 (mg/l)	MW-06S 02/01/2001 (mg/l)	MW-06S 08/21/2002 (mg/l)	MW-06S 11/20/2002 (mg/l)	MW-06S 03/05/2003 (mg/l)	MW-06S 06/04/2003 (mg/l)	MW-06S 08/22/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	150	100	70	NS	60	NS	NS	150
Alkalinity (as CaCO3)	-	-	(mg/l)	453	245	200	161	183	156	202	279
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	7.2	3.5	3.7	3.97	2.76	2.2	2.67	5.45
Biochemical Oxygen Demand	-	-	(mg/l)	5	17	10	2 U	6	3	55	16
Bromide	2 GV	24959-67-9	(mg/l)	0.6	0.7	0.5 U	1.2	0.5 U	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	46	10.7	10 U	24.9	10 U	27.3	10 U	41.1
Chloride	250 ST	16887-00-6	(mg/l)	39.8	14.8	20	15.8	19.6	10.7	20	22.3
Hardness (as CaCO3)	-	471-34-1	(mg/l)	440	280	140	220	280	80	200	420
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	0.1 U	0.21	1.97	0.32	0.17	0.29
Phenols, total	0.001 ST	-	(mg/l)	0.005	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	5 U	5 U	8.40	33.8	38.2	18.3	20.6	133
Total Organic Carbon	-	-	(mg/l)	11.4	4.4	5.8	4.6	2.9	5.1	4.2	13.1
Total Dissolved Solids	-	-	(mg/l)	480	270	220	213	391	230	239	564
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	17.3	3.9	4.9	4.68	3.24	3.53	3.3	7.64

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-06S 11/11/2003 (mg/l)	MW-06S 02/27/2004 (mg/l)	MW-06S (mg/l)	MW-06S (mg/l)	MW-06S (mg/l)	MW-06S (mg/l)	MW-06S (mg/l)	MW-06S (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	239	258						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	4.79	3.28						
Biochemical Oxygen Demand	-	-	(mg/l)	25	9						
Bromide	2 GV	24959-67-9	(mg/l)	4.3	2.1						
Chemical Oxygen Demand	-	-	(mg/l)	21.6	30.5						
Chloride	250 ST	16887-00-6	(mg/l)	17.4	19.9						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	280	36						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	1.15						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	39.8	12.2						
Total Organic Carbon	-	-	(mg/l)	5.7	9						
Total Dissolved Solids	-	-	(mg/l)	338	395						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	4.11	3.67						

NOTES:

NS: Not sampled

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-06I 10/28/1997 (mg/l)	MW-06I 12/05/2000 (mg/l)	MW-06I 02/01/2001 (mg/l)	MW-06I 08/21/2002 (mg/l)	MW-06I 11/21/2002 (mg/l)	MW-06I 03/05/2003 (mg/l)	MW-06I 06/05/2003 (mg/l)	MW-06I 08/22/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	10	30	30	NS	5	NS	NS	5 U
Alkalinity (as CaCO3)	-	-	(mg/l)	115	97.1	77	43.7	50.7	55.7	48.9	58.7
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.76	1.7	1.7	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	14	2	2 U	2 U	2 U	11	8
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.8 U	0.5 U	0.5 U	0.8
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	10.2	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	25.4	20.1	18	12.3	16.2	8.8	8.4	10.1
Hardness (as CaCO3)	-	471-34-1	(mg/l)	180	108	120	80	170	40	108	85
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	0.14	2.24	0.97	0.79	2.1	0.95
Phenols, total	0.001 ST	-	(mg/l)	0.002	0.005 U	0.005 U	0.005	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	21.2	47.8	50.4	12.7	12.7	16	17.4	25.9
Total Organic Carbon	-	-	(mg/l)	2.4	1.8	2.4	1.7	1.4	1	1.2	1 U
Total Dissolved Solids	-	-	(mg/l)	190	211	120	99	151	94	123	153
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.4	2	2.30	0.1 U	0.1 U	0.23	0.13	0.14

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-06I 11/11/2003 (mg/l)	MW-06I 02/27/2004 (mg/l)	MW-06I (mg/l)	MW-06I (mg/l)	MW-06I (mg/l)	MW-06I (mg/l)	MW-06I (mg/l)	MW-06I (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	45	37.2						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.17	0.17						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	2.5	0.5 U						
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U						
Chloride	250 ST	16887-00-6	(mg/l)	13.1	12.7						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	88	110						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.15	1.19						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	30.9	31						
Total Organic Carbon	-	-	(mg/l)	1 U	1 U						
Total Dissolved Solids	-	-	(mg/l)	119	60						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.19	0.18						

NOTES:

NS: Not sampled

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-06D 10/28/1997 (mg/l)	MW-06D 12/05/2000 (mg/l)	MW-06D 01/31/2001 (mg/l)	MW-06D 08/22/2002 (mg/l)	MW-06D 11/20/2002 (mg/l)	MW-06D 03/05/2003 (mg/l)	MW-06D 06/05/2003 (mg/l)	MW-06D 08/22/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	10	30	5 U	NS	20	NS	NS	5 U
Alkalinity (as CaCO3)	-	-	(mg/l)	31.3	40.6	38	40	31.2	35.5	27.3	34.3
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.32	0.1 U	0.24	0.1 U	0.1 U	0.14	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	3	37	2 U	2 U	2 U	2 U	2 U	8
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.60	0.5 U	0.5 U	0.5 U	0.5 U	0.7
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	22.5	22.5	19.3	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	7.3	12.6	9.3	14.7	16.2	10.5	5.6	5.1
Hardness (as CaCO3)	-	471-34-1	(mg/l)	120	44	68	72	62	80	80	80
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.2	0.14	0.67	0.4	0.36	1.47	0.2
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	20.3	23.3	17.2	14.5	23	26	25.5	24.4
Total Organic Carbon	-	-	(mg/l)	2	1.7	1.1	1.2	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	78	130	120	100	150	96	97	117
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.2 U	0.2	0.46	0.1 U	0.1 U	0.1	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-06D 11/11/2003 (mg/l)	MW-06D 02/27/2004 (mg/l)	MW-06D (mg/l)	MW-06D (mg/l)	MW-06D (mg/l)	MW-06D (mg/l)	MW-06D (mg/l)	MW-06D (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	36.8	24.7						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.24	0.2						
Biochemical Oxygen Demand	-	-	(mg/l)	16	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	5.1	2.9						
Chemical Oxygen Demand	-	-	(mg/l)	55.7	10.6						
Chloride	250 ST	16887-00-6	(mg/l)	5	7						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	80	40						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.04	0.33						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	26.8	17.8						
Total Organic Carbon	-	-	(mg/l)	1.7	1 U						
Total Dissolved Solids	-	-	(mg/l)	105	155						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	3.07	0.24						

NOTES:

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-07I 10/28/1997 (mg/l)	MW-07I 12/01/2000 (mg/l)	MW-07I 01/31/2001 (mg/l)	MW-07I 08/21/2002 (mg/l)	MW-07I 11/20/2002 (mg/l)	MW-07I 03/05/2003 (mg/l)	MW-07I 06/03/2003 (mg/l)	MW-07I 08/22/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	5	NS	NS	5 U
Alkalinity (as CaCO3)	-	-	(mg/l)	23.4	22.1	23	13.9	12.6	17.5	28.1	24.1
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1.3	0.89	1.2	0.1 U	0.1 U	0.54	0.99	0.51
Biochemical Oxygen Demand	-	-	(mg/l)	6	2 U	8	2 U	3	3	7	4
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.6	0.9	0.5 U	0.5 U	0.5 U	0.5 U	0.6
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	12.7	10 U	27.3	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	9.2	37.6	31	7.8	5.8	6.4	19.8	10.1
Hardness (as CaCO3)	-	471-34-1	(mg/l)	180	72	88	40	160	80	34	58
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.88	3.4	3.1	3.63	2.47	2.03	1.6	1.7
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	19.9	6	18.9	13.8	17.9	16.6	15.9	22.3
Total Organic Carbon	-	-	(mg/l)	1.9	1 U	1.2	1.6	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	65	164	140	74	54	84	89	99
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.7	0.84	1.6	0.1 U	0.1 U	0.92	1.03	0.62

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-07I 11/11/2003 (mg/l)	MW-07I 02/27/2004 (mg/l)	MW-07I (mg/l)	MW-07I (mg/l)	MW-07I (mg/l)	MW-07I (mg/l)	MW-07I (mg/l)	MW-07I (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	21.5	23.6						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.52	1.84						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	11						
Bromide	2 GV	24959-67-9	(mg/l)	3.4	1.2						
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U						
Chloride	250 ST	16887-00-6	(mg/l)	10.3	24						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	40	48						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.46	1.66						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	15.9	15.8						
Total Organic Carbon	-	-	(mg/l)	1 U	1 U						
Total Dissolved Solids	-	-	(mg/l)	74	90						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.02	1.5						

NOTES:

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Appendix A-1

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

	NYSDEC Class		SITE :	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S
	GA Groundwater	CAS #	DATE :	10/31/1997	12/13/2000	02/07/2001	08/22/2002	11/21/2002	03/06/2003	06/04/2003	08/21/2003
CONSTITUENT	Standards/Guidance Values		UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	100	5 U	5 U	NS	5	NS	NS	10
Alkalinity (as CaCO3)	-	-	(mg/l)	127	134	135	91.2	133	106	125	174
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1	1.3	1.51	1.16	0.1 U	0.58	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	6
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5	0.8	0.5 U	0.5	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	22	10 U	11	12.7	10 U	19.3	19.2	10 U
Chloride	250 ST	16887-00-6	(mg/l)	65.1	50.7	36.1	35.1	21.3	23	97.7	139
Hardness (as CaCO3)	-	471-34-1	(mg/l)	120	210	156	120	230	156	250	270
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.28	0.21	0.25	2.6	2.25	1.6	1.65	1.31
Phenols, total	0.001 ST	-	(mg/l)	0.002	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	42.1	28.6	49.6	29.2	41	64.8	80.5	68
Total Organic Carbon	-	-	(mg/l)	3.7	4.6	3.53	2.8	2.8	4	3.8	7.2
Total Dissolved Solids	-	-	(mg/l)	261	253	254	179	326	250	423	560
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.2	1.5	7.76	4.53	0.18	0.77	0.26	0.34

	NYSDEC Class		SITE :	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S
	GA Groundwater	CAS #	DATE :	11/13/2003	03/01/2004						
CONSTITUENT	Standards/Guidance Values		UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	206	160						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U	0.35						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	1.2						
Chemical Oxygen Demand	-	-	(mg/l)	21.6	20.5						
Chloride	250 ST	16887-00-6	(mg/l)	96.6	86.4						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	290	220						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.52	1.59						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	76.4	45.5						
Total Organic Carbon	-	-	(mg/l)	5	4						
Total Dissolved Solids	-	-	(mg/l)	465	392						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.31	0.32						

NOTES:

NS: Not sampled

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

▨ : Concentration exceeds Standard/Guidance Value

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-11I 10/31/1997 (mg/l)	MW-11I 12/13/2000 (mg/l)	MW-11I 02/07/2001 (mg/l)	MW-11I 08/22/2002 (mg/l)	MW-11I 11/21/2002 (mg/l)	MW-11I 03/06/2003 (mg/l)	MW-11I 06/04/2003 (mg/l)	MW-11I 08/21/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	5 U	NS	NS	5
Alkalinity (as CaCO3)	-	-	(mg/l)	27.6	34.2	27.4	14.4	28.2	58	57.6	32.9
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.99	1.1	0.91	0.1 U	0.1 U	1.15	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2	2 U	3	4
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.6	0.8	0.8	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	12.7	10 U	16.7	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	40.4	17.3	17.5	7	24.3	7.7	14.3	19.7
Hardness (as CaCO3)	-	471-34-1	(mg/l)	54	34	40	40	180	56	62	40
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.13	0.42	1.8	3.07	1.85	0.1 U	1.03	1.01
Phenols, total	0.001 ST	-	(mg/l)	0.001	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	14.9	6.8	7	5	7.9	10	5.8	10.7
Total Organic Carbon	-	-	(mg/l)	1.6	1.3	1 U	1.1	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	96	42	63	58	152	109	84	103
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.5	1.2	0.79	0.1	0.19	0.99	1.18	0.8

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-11I 11/13/2003 (mg/l)	MW-11I 03/01/2004 (mg/l)	MW-11I (mg/l)	MW-11I (mg/l)	MW-11I (mg/l)	MW-11I (mg/l)	MW-11I (mg/l)	MW-11I (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	28.6	48						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U	1.15						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.7						
Chemical Oxygen Demand	-	-	(mg/l)	10 U	15.6						
Chloride	250 ST	16887-00-6	(mg/l)	11.7	22.7						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	36	48						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.96	0.53						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	12.9	5 U						
Total Organic Carbon	-	-	(mg/l)	1 U	1 U						
Total Dissolved Solids	-	-	(mg/l)	78	110						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.36	1.11						

NOTES:

NS: Not sampled

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

▨ : Concentration exceeds Standard/Guidance Value

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE :	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D
			DATE :	10/31/1997	12/13/2000	02/07/2001	08/22/2002	11/21/2002	03/06/2003	06/04/2003	08/21/2003
CONSTITUENT			UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	80	5 U	5 U	NS	5	NS	NS	5
Alkalinity (as CaCO3)	-	-	(mg/l)	36.8	3.6	6.8	5.2	4.4	4	3.7	2.9
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.5	0.14	0.481	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	4	2	2 U	2 U	2 U	2 U	2 U	6
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.9	0.8	0.6	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	40	10 U	10 U	12.7	10 U	22	11.9	10 U
Chloride	250 ST	16887-00-6	(mg/l)	13.3	7.9	10.3	5.4	17.3	13.9	16.6	19
Hardness (as CaCO3)	-	471-34-1	(mg/l)	26	17	28	24	110	22	24	28
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.5	1.9	1.79	0.74	1.91	1.96	2.59	3.67
Phenols, total	0.001 ST	-	(mg/l)	0.0063	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	31.3	11.3	10.9	17.2	12	13.5	10.1	9.3
Total Organic Carbon	-	-	(mg/l)	5.6	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	124	61	84	60	109	69	88	126
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.58	0.1 U	0.46	0.1 U	0.1 U	0.2 U	0.2 U	0.1 U

	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE :	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D
			DATE :	11/13/2003	03/01/2004						
CONSTITUENT			UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	3.8	3.3						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U	0.23						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U						
Chemical Oxygen Demand	-	-	(mg/l)	10 U	10 U						
Chloride	250 ST	16887-00-6	(mg/l)	18.2	23.8						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	43	30						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	4.92	4.17						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	12.1	8.6						
Total Organic Carbon	-	-	(mg/l)	1 U	1 U						
Total Dissolved Solids	-	-	(mg/l)	103	194						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.11	0.1 U						

NOTES:

NS: Not sampled

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

▨ : Concentration exceeds Standard/Guidance Value

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-12S 10/31/1997 (mg/l)	MW-12S 12/07/2000 (mg/l)	MW-12S 02/05/2001 (mg/l)	MW-12S 08/22/2002 (mg/l)	MW-12S 11/21/2002 (mg/l)	MW-12S 03/06/2003 (mg/l)	MW-12S 06/04/2003 (mg/l)	MW-12S 08/21/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5	NS	5	NS	NS	5
Alkalinity (as CaCO3)	-	-	(mg/l)	102	104	98	113	111	77.8	74.3	141
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.11	0.02 U	0.07 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	3	2	2 U	2 U	2 U	2 U	2 U	4
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	1.4	0.5 U	0.8	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	16	10 U	10 U	10 U	10 U	16.7	21.6	10 U
Chloride	250 ST	16887-00-6	(mg/l)	21	16	24	15.7	17.7	113	25.6	11.2
Hardness (as CaCO3)	-	471-34-1	(mg/l)	90	96	100	140	108	108	82	110
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.75	0.67	0.4	2.21	1.14	0.89	0.58	1.54
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	32.8	36.4	13.4	37.5	27.6	32.1	23.3	32
Total Organic Carbon	-	-	(mg/l)	2.3	1.7	2.2	3.3	1.7	1.9	1.6	1.8
Total Dissolved Solids	-	-	(mg/l)	170	175	250	185	290	352	151	241
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.21	0.2 U	0.12	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-12S 11/13/2003 (mg/l)	MW-12S 03/01/2004 (mg/l)	MW-12S (mg/l)	MW-12S (mg/l)	MW-12S (mg/l)	MW-12S (mg/l)	MW-12S (mg/l)	MW-12S (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	150	118						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U	0.1 U						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	0.5	0.5 U						
Chemical Oxygen Demand	-	-	(mg/l)	10 U	13.1						
Chloride	250 ST	16887-00-6	(mg/l)	25.8	52.2						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	220	120						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.89	1.18						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	38.4	24.4						
Total Organic Carbon	-	-	(mg/l)	2	1.6						
Total Dissolved Solids	-	-	(mg/l)	265	296						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.22	0.13						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-12I 10/31/1997 (mg/l)	MW-12I 12/07/2000 (mg/l)	MW-12I 02/08/2001 (mg/l)	MW-12I 08/22/2002 (mg/l)	MW-12I 11/21/2002 (mg/l)	MW-12I 03/06/2003 (mg/l)	MW-12I 06/04/2003 (mg/l)	MW-12I 08/21/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	10	NS	NS	5
Alkalinity (as CaCO3)	-	-	(mg/l)	10.5	31.8	17.2	2.8	6.8	4.4	7.1	3.1
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.51	0.61	0.703	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	6
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.700	0.5 U	1.1	1	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	16	10 U	10 U	10 U	39.6	14	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	17.5	14.9	13.1	4.5	8.4	4.6	13.1	7.9
Hardness (as CaCO3)	-	471-34-1	(mg/l)	54	52	36.0	16	1900	32	32	20
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	4.7	0.73	1.1	0.93	1.54	0.33	0.53	0.21
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	43.1	48.3	24.2	10	10.4	11.6	11.3	8.6
Total Organic Carbon	-	-	(mg/l)	3.6	1.2	0.0010 U	1 U	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	106	143	90	39	79	55	62	49
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.46	0.84	8.30	0.1 U	0.1 U	0.2 U	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-12I 11/13/2003 (mg/l)	MW-12I 03/01/2004 (mg/l)	MW-12I (mg/l)	MW-12I (mg/l)	MW-12I (mg/l)	MW-12I (mg/l)	MW-12I (mg/l)	MW-12I (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	4.4	4.2						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U	0.14						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U						
Chemical Oxygen Demand	-	-	(mg/l)	10 U	15.6						
Chloride	250 ST	16887-00-6	(mg/l)	4.8	5.5						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	26	24						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.3	0.7						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	9.8	6.9						
Total Organic Carbon	-	-	(mg/l)	1 U	1 U						
Total Dissolved Solids	-	-	(mg/l)	40	14						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.1 U	0.13						

NOTES:

NS: Not sampled

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

▨ : Concentration exceeds Standard/Guidance Value

J: Reported value is estimated due to variance from quality control limits

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-12D 10/31/1997 (mg/l)	MW-12D 12/08/2000 (mg/l)	MW-12D 02/07/2001 (mg/l)	MW-12D 08/22/2002 (mg/l)	MW-12D 11/21/2002 (mg/l)	MW-12D 03/06/2003 (mg/l)	MW-12D 06/04/2003 (mg/l)	MW-12D 08/21/2003 (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	5	NS	NS	5
Alkalinity (as CaCO3)	-	-	(mg/l)	19.3	7.3	7.8	6.7	6.8	8.4	7.9	8.1
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.02 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Biochemical Oxygen Demand	-	-	(mg/l)	3	7	4	2 U	2 U	2 U	4	7
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.9	0.5 U	0.5 U	0.5 U
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	15.1	10 U	10 U	10 U	10 U
Chloride	250 ST	16887-00-6	(mg/l)	11.7	4.7	5.71	3.1	4.3	5.6	8.9	6.2
Hardness (as CaCO3)	-	471-34-1	(mg/l)	34	15	28	16	36	64	34	36
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.32	0.38	0.31	0.13	0.24	0.58	0.66	0.63
Phenols, total	0.001 ST	-	(mg/l)	0.002	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Sulfate	250 ST	14808-79-8	(mg/l)	19.5	20.1	12.8	6.9	11.9	17.1	15.6	16.6
Total Organic Carbon	-	-	(mg/l)	0.5 U	2.1	1 U	1 U	1 U	1 U	1 U	1 U
Total Dissolved Solids	-	-	(mg/l)	45	77	380	37	69	78	58	88
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.2 U	0.1 U	8.54	0.16	0.1 U	0.2 U	0.1 U	0.1 U

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-12D 11/03/2003 (mg/l)	MW-12D 03/01/2004 (mg/l)	MW-12D (mg/l)	MW-12D (mg/l)	MW-12D (mg/l)	MW-12D (mg/l)	MW-12D (mg/l)	MW-12D (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	NS						
Alkalinity (as CaCO3)	-	-	(mg/l)	7.4	6.7						
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U	0.1 U						
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U						
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U						
Chemical Oxygen Demand	-	-	(mg/l)	11.9	10 U						
Chloride	250 ST	16887-00-6	(mg/l)	4.2	4.8						
Hardness (as CaCO3)	-	471-34-1	(mg/l)	33	22						
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.54	0.75						
Phenols, total	0.001 ST	-	(mg/l)	0.005 U	0.005 U						
Sulfate	250 ST	14808-79-8	(mg/l)	13.5	8.3						
Total Organic Carbon	-	-	(mg/l)	1 U	1 U						
Total Dissolved Solids	-	-	(mg/l)	50	10 U						
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.1 U	0.1 U						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

J: Reported value is estimated due to variance from quality control limits

APPENDIX A-2

HISTORIC AND CURRENT GROUNDWATER 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-01S 10/24/1997 (ug/l)	MW-01S 11/30/2000 (ug/l)	MW-01S 01/29/2001 (ug/l)	MW-01S 08/21/2002 (ug/l)	MW-01S 11/20/2002 (ug/l)	MW-01S 03/05/2003 (ug/l)	MW-01S 06/03/2003 (ug/l)	MW-01S 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	378	21 B	32.1	NA	101 B	NA	NA	30.7 B
Antimony	3 GV	7440-36-0	ug/l	3.0 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.5	2.5 U	5.9	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	75.5	52.7 B	58	NA	67.4 B	NA	NA	66.9 B
Beryllium	3 GV	7440-41-7	ug/l	0.2	0.1 U	0.1 U	NA	0.40 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	622	553	NA	271	NA	NA	140
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.10 U	0.50 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	93000	53000	63900	65400	82400	87700	81200	92000
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	2.7	3.5 U	1.5	NA	1.1 B	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	2.5	2.8 B	4.8	NA	5.4 B	NA	NA	3.4 B
Copper	200 ST	7440-50-8	ug/l	3.2	1.5 U	2.4	NA	3.5 B	NA	NA	3.4 B
Iron	300 ST	7439-89-6	ug/l	6710	4360	4870	13300	14000	13100	7870	3040
Lead	25 ST	7439-92-1	ug/l	12.7	1.4 U	6.5	2.2 B	1.4 B	1.5 U	1.9 B	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	8940	6010	7240	7530	8980	10700	9690	9000
Manganese	300 ST	7439-96-5	ug/l	944	1220	2210	1850	2740	2670	925	814
Mercury	0.7 ST	7439-97-6	ug/l	0.12	0.1 U	0.1 U	NA	0.10 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	1.2 B	NA	NA	4.6 B
Potassium	-	7440-09-7	ug/l	10000	16200	15700	8380	11000	9900	13600	9910
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	5.5 N	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.58 B	1.6 U	NA	1 U	NA	NA	1.0 U
Sodium	20000 ST	7440-23-5	ug/l	51400	35400	33700	29400	38100	49600	82800	43500
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	3.0 B
Vanadium	-	7440-62-2	ug/l	1.2	0.7 U	1.7 U	NA	0.65 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	37	2.2 U	22.4	NA	40.6	NA	NA	66.9
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	7654	5580	7080	15150	16740	15770	8795	3854

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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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-01S 11/10/2003 (ug/l)	MW-01S 02/26/2004 (ug/l)	MW-01S (ug/l)	MW-01S (ug/l)	MW-01S (ug/l)	MW-01S (ug/l)	MW-01S (ug/l)	MW-01S (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.30 U	0.20 U						
Calcium	-	7440-70-2	ug/l	133000	93100						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	4890	5300						
Lead	25 ST	7439-92-1	ug/l	1.1 U	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	14000	13300						
Manganese	300 ST	7439-96-5	ug/l	969	1900						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	16600	8580						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	90400	62800						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	5859	7200						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/24/1997 (ug/l)	MW-01I 11/30/2000 (ug/l)	MW-01I 01/30/2001 (ug/l)	MW-01I 08/21/2002 (ug/l)	MW-01I 11/20/2002 (ug/l)	MW-01I 03/05/2003 (ug/l)	MW-01I 06/03/2003 (ug/l)	MW-01I 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	60.8	12.5 B	27.7	NA	19 B	NA	NA	13.9 U
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	93.2	4.3 B	7.8	NA	26.2 B	NA	NA	38.9 B
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.1 U	NA	0.40 U	NA	NA	0.2 U
Boron	1000 ST	7440-42-8	ug/l	NA	65.8 B	94.3	NA	68.1 B	NA	NA	176
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.21 B	0.50 U	0.16 B	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	7510	723 B	1350	4840 B	10200	5850	2520 B	13200
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.4 U	3.5 U	0.6 U	NA	0.80 U	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	2.7	2.2 B	1.7 U	NA	5.7 B	NA	NA	5.8 B
Copper	200 ST	7440-50-8	ug/l	0.93	2.1 B	1.7	NA	2.0 B	NA	NA	1.1 U
Iron	300 ST	7439-89-6	ug/l	80.1	13.3 B	22.8	242	78.8 B	105	45.2 B	23.6 U
Lead	25 ST	7439-92-1	ug/l	1	1.4 U	1.1 U	1.3 B	1.4 U	1.5 U	1.6 B	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	3720	154 B	266	904 B	1910 B	1160 B	439	2490 B
Manganese	300 ST	7439-96-5	ug/l	286	1.3 B	3.9	32.4	24	16.5	7.4 B	24.4
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.10 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	5.1	1.9 U	1.4 U	NA	8.2 B	NA	NA	6.1 B
Potassium	-	7440-09-7	ug/l	4250	951 B	1510	1370 B	1770 B	1970 B	1250 B	2700 B
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.5 U	2.6	NA	1 U	NA	NA	1.0 U
Sodium	20000 ST	7440-23-5	ug/l	120000	50600	68000	16100	43000	64400	37000	83500
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	3.4 B
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7	NA	0.60 U	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	29.5	2.2 U	8.6	NA	27.6	NA	NA	3.4 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	366.1	14.6	26.7	274.4	102.8	121.5	52.6	48

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/10/2003 (ug/l)	MW-01I 02/26/2004 (ug/l)	MW-01I (ug/l)	MW-01I (ug/l)	MW-01I (ug/l)	MW-01I (ug/l)	MW-01I (ug/l)	MW-01I (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.30 U	0.20 U						
Calcium	-	7440-70-2	ug/l	25100	17300						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	44.1 B	31.6 B						
Lead	25 ST	7439-92-1	ug/l	1.2 B	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	4750 B	3560 B						
Manganese	300 ST	7439-96-5	ug/l	71.2	70.6						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	3040 B	3860						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	49900	74100						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	115.3	102.2						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/24/1997 (ug/l)	MW-01D 11/30/2000 (ug/l)	MW-01D 01/30/2001 (ug/l)	MW-01D 08/21/2002 (ug/l)	MW-01D 11/20/2002 (ug/l)	MW-01D 03/05/2003 (ug/l)	MW-01D 06/03/2003 (ug/l)	MW-01D 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	105	59.6 B	79.6 B	NA	131 B	NA	NA	39.8 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	4.4 B	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	111	124 B	87.6	NA	93	NA	NA	22.4 B
Beryllium	3 GV	7440-41-7	ug/l	0.13	0.1 U	0.21	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	102	161	NA	113	NA	NA	139
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.11 B	0.5 U	0.81 B	0.10 B	0.30 U
Calcium	-	7440-70-2	ug/l	35300	19500	15200	26400	24400	21100	15800	5650
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.53	3.5 U	0.6 U	NA	3.6 B	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	1.3	2.1 B	1.7 U	NA	5 B	NA	NA	5.0 B
Copper	200 ST	7440-50-8	ug/l	1.9	2 B	2.1	NA	7 B	NA	NA	2.3 B
Iron	300 ST	7439-89-6	ug/l	110	32 B	34.2	205	301	301	120	63.1 B
Lead	25 ST	7439-92-1	ug/l	1.3	1.4 U	1.1 U	0.8 U	1.4 U	3.2	1.7 B	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	10700	6010	4800	9680	8130	7530	5740	1710 B
Manganese	300 ST	7439-96-5	ug/l	132	9.9 B	7.3	34.3	28.6	67.5	6.8 B	3.6 B
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.10 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	2.2	1.9 U	1.4 U	NA	7.5 B	NA	NA	6.0 B
Potassium	-	7440-09-7	ug/l	6780	10400	9240	7740	20500	10700	6830	2390 B
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.77 B	1.6 U	NA	1 U	NA	NA	1.0 U
Sodium	20000 ST	7440-23-5	ug/l	61000	490000	390000	445000	327000	346000	404000	156000
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	3.0 B
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	1.4 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	39	3.8 B	5.1	NA	190	NA	NA	33.2
Cyanide	200 ST	0057-12-5	ug/l	17	17	20.4	NA	30.4	NA	NA	29
Iron + Manganese	500 ST*	-	ug/l	242	41.9	41.5	239.3	329.6	368.5	126.8	66.7

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/10/2003 (ug/l)	MW-01D 02/26/2004 (ug/l)	MW-01D (ug/l)	MW-01D (ug/l)	MW-01D (ug/l)	MW-01D (ug/l)	MW-01D (ug/l)	MW-01D (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	1420 B	19500						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	119	79.6 B						
Lead	25 ST	7439-92-1	ug/l	2.5 B	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	504 B	6270						
Manganese	300 ST	7439-96-5	ug/l	3.6 B	9.3 B						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	1380 B	5480						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	103000	416000						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	122.6	88.9						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/27/1997 (ug/l)	MW-02S 11/30/2000 (ug/l)	MW-02S 01/31/2001 (ug/l)	MW-02S 08/21/2002 (ug/l)	MW-02S 11/20/2002 (ug/l)	MW-02S 03/05/2003 (ug/l)	MW-02S 06/03/2003 (ug/l)	MW-02S 08/25/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	146	15.8 B	11.8 U	NS	NS	NS	NS	NS
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NS	NS	NS	NS	NS
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NS	NS	NS	NS	NS
Barium	1000 ST	7440-39-3	ug/l	26.3	34.1 B	31.9	NS	NS	NS	NS	NS
Beryllium	3 GV	7440-41-7	ug/l	0.77	0.1 U	0.14	NS	NS	NS	NS	NS
Boron	1000 ST	7440-42-8	ug/l	NA	59.7 B	87.8	NS	NS	NS	NS	NS
Cadmium	5 ST	7440-43-9	ug/l	0.57	0.4 U	0.2 U	NS	NS	NS	NS	NS
Calcium	-	7440-70-2	ug/l	27000	30300	33100	NS	NS	NS	NS	NS
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NS	NS	NS	NS	NS
Chromium Total	50 ST	7440-47-3	ug/l	1.1	3.5 U	0.6 U	NS	NS	NS	NS	NS
Cobalt	-	7440-48-4	ug/l	1.5	0.9 U	1.7 U	NS	NS	NS	NS	NS
Copper	200 ST	7440-50-8	ug/l	4	2.6 B	1.5 U	NS	NS	NS	NS	NS
Iron	300 ST	7439-89-6	ug/l	312	18.7 B	13.8	NS	NS	NS	NS	NS
Lead	25 ST	7439-92-1	ug/l	2.1	1.4 U	1.1 U	NS	NS	NS	NS	NS
Magnesium	35000 GV	7439-95-4	ug/l	2890	2360 B	2750	NS	NS	NS	NS	NS
Manganese	300 ST	7439-96-5	ug/l	5.6	61.1	68.4	NS	NS	NS	NS	NS
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NS	NS	NS	NS	NS
Nickel	100 ST	7440-02-0	ug/l	1.3	1.9 U	1.4 U	NS	NS	NS	NS	NS
Potassium	-	7440-09-7	ug/l	4660	7850	7600	NS	NS	NS	NS	NS
Selenium	10 ST	7782-49-2	ug/l	2.8 U	4 B	1.5 U	NS	NS	NS	NS	NS
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.93 B	1.6 U	NS	NS	NS	NS	NS
Sodium	20000 ST	7440-23-5	ug/l	18900	12900	13100	NS	NS	NS	NS	NS
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 B	2.8 U	NS	NS	NS	NS	NS
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NS	NS	NS	NS	NS
Zinc	2000 ST	7440-66-6	ug/l	20.8	2.8 B	3.6 U	NS	NS	NS	NS	NS
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NS	NS	NS	NS	NS
Iron + Manganese	500 ST*	-	ug/l	317.6	79.8	82.2	NS	NS	NS	NS	NS

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/11/2003 (ug/l)	MW-02S 02/26/2004 (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	NS	NS						
Antimony	3 GV	7440-36-0	ug/l	NS	NS						
Arsenic	25 ST	7440-38-2	ug/l	NS	NS						
Barium	1000 ST	7440-39-3	ug/l	NS	NS						
Beryllium	3 GV	7440-41-7	ug/l	NS	NS						
Boron	1000 ST	7440-42-8	ug/l	NS	NS						
Cadmium	5 ST	7440-43-9	ug/l	NS	NS						
Calcium	-	7440-70-2	ug/l	NS	NS						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NS	NS						
Chromium Total	50 ST	7440-47-3	ug/l	NS	NS						
Cobalt	-	7440-48-4	ug/l	NS	NS						
Copper	200 ST	7440-50-8	ug/l	NS	NS						
Iron	300 ST	7439-89-6	ug/l	NS	NS						
Lead	25 ST	7439-92-1	ug/l	NS	NS						
Magnesium	35000 GV	7439-95-4	ug/l	NS	NS						
Manganese	300 ST	7439-96-5	ug/l	NS	NS						
Mercury	0.7 ST	7439-97-6	ug/l	NS	NS						
Nickel	100 ST	7440-02-0	ug/l	NS	NS						
Potassium	-	7440-09-7	ug/l	NS	NS						
Selenium	10 ST	7782-49-2	ug/l	NS	NS						
Silver	50 ST	7440-22-4	ug/l	NS	NS						
Sodium	20000 ST	7440-23-5	ug/l	NS	NS						
Thallium	0.5 GV	7440-28-0	ug/l	NS	NS						
Vanadium	-	7440-62-2	ug/l	NS	NS						
Zinc	2000 ST	7440-66-6	ug/l	NS	NS						
Cyanide	200 ST	0057-12-5	ug/l	NS	NS						
Iron + Manganese	500 ST*	-	ug/l	NS	NS						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/27/1997 (ug/l)	MW-02I 12/01/2000 (ug/l)	MW-02I 01/30/2001 (ug/l)	MW-02I 08/21/2002 (ug/l)	MW-02I 11/20/2002 (ug/l)	MW-02I 03/07/2003 (ug/l)	MW-02I 06/03/2003 (ug/l)	MW-02I 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	80.2	26.4 B	11.8 U	NA	70.4 B	NA	NA	48.0 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	47.9	39.9 B	36.9	NA	30.8 B	NA	NA	35.5 B
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.1 U	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	126	97.2	NA	105	NA	NA	103
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.43 B	0.5 U	0.19 B	0.11 B	0.30 U
Calcium	-	7440-70-2	ug/l	4990	10700	10500	7090	6060	11600	13200	9450
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.7	3.5 U	0.6 U	NA	0.8 U	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	1.1	0.9 U	1.7 U	NA	1 U	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	3.6	1.5 U	1.5 U	NA	5.9 B	NA	NA	1.4 B
Iron	300 ST	7439-89-6	ug/l	249	6.9 B	5.4	207	173	44.3 B	142	99.8 B
Lead	25 ST	7439-92-1	ug/l	3.5	1.4 U	1.1 U	1.2 B	1.7 B	1.5 U	1.5 U	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	685	2670 B	2600	1900 B	1780	3240 B	3320 B	2680 B
Manganese	300 ST	7439-96-5	ug/l	40.9	417	406	181	504	503	328	295
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	1.1	NA	NA	1.5 U
Potassium	-	7440-09-7	ug/l	3100	1630 B	1680	1740 B	3600	3070 B	4130 B	1480 B
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	1 B	1.6 U	NA	1 U	NA	NA	1.0 U
Sodium	20000 ST	7440-23-5	ug/l	15300	8700	7580	7370	7100	12300	8740	6460
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.60 U	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	37	2.2 U	3.6 U	NA	36	NA	NA	9.8 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	289.9	423.9	411.4	388	677	547.3	470	394.8

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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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-02I 11/11/2003 (ug/l)	MW-02I 02/26/2004 (ug/l)	MW-02I (ug/l)	MW-02I (ug/l)	MW-02I (ug/l)	MW-02I (ug/l)	MW-02I (ug/l)	MW-02I (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.41 B						
Calcium	-	7440-70-2	ug/l	9840	11200						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	121	94.5 B						
Lead	25 ST	7439-92-1	ug/l	1.9 B	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	2310 B	2400						
Manganese	300 ST	7439-96-5	ug/l	390	360						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	1670 B	1760 B						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	6510	9210						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	511	454.5						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/27/1997 (ug/l)	MW-02D 12/01/2000 (ug/l)	MW-02D 01/30/2001 (ug/l)	MW-02D 08/21/2002 (ug/l)	MW-02D 11/20/2002 (ug/l)	MW-02D 03/05/2003 (ug/l)	MW-02D 06/03/2003 (ug/l)	MW-02D 08/22/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	33.5	15.3 B	16	NA	21.9 B	NA	NA	22.3 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	6.9	5.2 B	5	NA	7.4 B	NA	NA	6.0 B
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.1 U	NA	0.40 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	5.1 B	32.9	NA	18 B	NA	NA	22.4 B
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.17 B	0.5 U	0.29 B	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	4750	6070	5720	6040	8290	8530	8370	7610
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.4 U	3.5 U	0.6 U	NA	1.6 B	NA	NA	1.2 B
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	1 U	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	0.7 U	1.5 U	1.5 U	NA	8.7 B	NA	NA	1.4 B
Iron	300 ST	7439-89-6	ug/l	33.2	4.2 B	12.3	139	89.1 B	119	52.6 B	96.2
Lead	25 ST	7439-92-1	ug/l	1 U	1.4 U	1.1 U	0.8 U	1.4 U	1.5 U	1.5 U	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	2220	2840 B	2680	2600 B	3530 B	3640 B	3610 B	3250 B
Manganese	300 ST	7439-96-5	ug/l	54.8	1.6 B	1.1 U	30.6	11 B	7.3 B	3.4 B	5.9 B
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	1.5 B	NA	NA	1.5 U
Potassium	-	7440-09-7	ug/l	636	740 B	806	741 B	710 B	768 B	895 B	736 B
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.5 U	1.6 U	NA	1 U	NA	NA	1.0 U
Sodium	20000 ST	7440-23-5	ug/l	8120	8460	7560	6780	8170	8210	8650	7640
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	3.0 B
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.6 U	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	27.5	3.6 B	5.3	NA	57.8	NA	NA	9.9 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	88	5.8	12.3	169.6	100.1	126.3	56	102.1

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/11/2003 (ug/l)	MW-02D 02/27/2004 (ug/l)	MW-02D (ug/l)	MW-02D (ug/l)	MW-02D (ug/l)	MW-02D (ug/l)	MW-02D (ug/l)	MW-02D (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	7640	7800						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	62.4 B	26.8 B						
Lead	25 ST	7439-92-1	ug/l	1.1 U	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	3340 B	3420 B						
Manganese	300 ST	7439-96-5	ug/l	3.7 B	1.2 B						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	697 B	674 B						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	7590	8450						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	66.1	28						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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:	MW-03S	MW-03S	MW-03S	MW-03S	MW-03S	MW-03S	MW-03S	MW-03S
			DATE:	10/30/1997	12/06/2000	02/02/2001	08/22/2002	11/22/2002	03/07/2003	06/03/2003	08/25/2003
			UNITS:	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Aluminum	-	7429-90-5	ug/l	1080	16.5 B	53.7	NA	803	NA	NA	46.0 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.4 B	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	3.2	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	136	125 B	125	NA	176 B	NA	NA	158 B
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.24	NA	0.80 B	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	128	153	NA	139	NA	NA	222
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.22	0.13 B	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	50800	51200	57700	67400	92400	112000	84900	91600
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	3.1	3.5 U	0.6	NA	2.9 B	NA	NA	1.2 B
Cobalt	-	7440-48-4	ug/l	1.1	0.9 U	1.7 U	NA	13.1 B	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	3.3	2.6 B	1.5 U	NA	11.5 B	NA	NA	5.2 B
Iron	300 ST	7439-89-6	ug/l	12700	10200	7390	30600	80600	85800	21100	16800
Lead	25 ST	7439-92-1	ug/l	1.4	1.4 U	1.1 U	0.8 U	2.1 B	1.5 U	1.8 B	0.84 B
Magnesium	35000 GV	7439-95-4	ug/l	7970	7620	8320	9840	16000	21700	14100	14600
Manganese	300 ST	7439-96-5	ug/l	7270	5840	5930	8430	11500	8190	2930	3770
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	2.6	1.9 U	1.4 U	NA	23.4 B	NA	NA	2.8 B
Potassium	-	7440-09-7	ug/l	7870	8310	9590	8680	7850	12200	19300	14100
Selenium	10 ST	7782-49-2	ug/l	2.8 U	2.8 B	2 N	NA	6	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	1.7 B	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	40400	20500	21500	27100	25200	22900	17600	22600
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	3.7	0.7 U	1.7 U	NA	2.9 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	34	3.5 B	3.6 U	NA	799	NA	NA	57.5
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	19970	16040	13320	39030	92100	93990	24030	20570

NOTES:

NS: Not sampled

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/13/2003 (ug/l)	MW-03S 03/02/2004 (ug/l)	MW-03S (ug/l)	MW-03S (ug/l)	MW-03S (ug/l)	MW-03S (ug/l)	MW-03S (ug/l)	MW-03S (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	76200	66200						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	34900	28300						
Lead	25 ST	7439-92-1	ug/l	1.1 U	0.70 U						
Magnesium	35000 GV	7439-95-4	ug/l	11800	9800						
Manganese	300 ST	7439-96-5	ug/l	5500	4860						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	15900	12900						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	30000	27400						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	40400	33160						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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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-04S 10/29/1997 (ug/l)	MW-04S 12/06/2000 (ug/l)	MW-04S 02/01/2001 (ug/l)	MW-04S 08/23/2002 (ug/l)	MW-04S 11/22/2002 (ug/l)	MW-04S 03/06/2003 (ug/l)	MW-04S 06/03/2003 (ug/l)	MW-04S 08/25/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	574	28.8 B	32.4	NA	102 B	NA	NA	27.2 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	11.4	3.7 B	7.8	NA	4.5 U	NA	NA	8.1 B
Barium	1000 ST	7440-39-3	ug/l	441	278	285	NA	316	NA	NA	240
Beryllium	3 GV	7440-41-7	ug/l	0.2	0.12 B	0.18	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	263	296	NA	320	NA	NA	273
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.10 U	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	152000	99400	109000	115000	123000	139000	138000	109000
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	1.6	3.5 U	0.6 U	NA	0.92 B	NA	NA	1.0 B
Cobalt	-	7440-48-4	ug/l	2.1	0.9 U	1.7 U	NA	1 U	NA	NA	2.8 B
Copper	200 ST	7440-50-8	ug/l	2.5	1.5 U	2.2	NA	6.7 B	NA	NA	2.7 B
Iron	300 ST	7439-89-6	ug/l	56800	44800	49600	56400	46900	54600	44300	43100
Lead	25 ST	7439-92-1	ug/l	1.0 U	1.4 U	2.8	2.8 B	1.4 U	1.5 U	1.6 B	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	22600	14400	15300	14000	13700	16300	16100	11900
Manganese	300 ST	7439-96-5	ug/l	1520	1770	2040	2140	1670	1960	3000	1690
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	4.3 B	NA	NA	4.7 B
Potassium	-	7440-09-7	ug/l	30800	19800	21800	17900	17500	20300	21800	14300
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	1.3 B	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	29900	32100	33300	32500	29700	31600	33900	26400
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	3.2	1.1 B	1.7 U	NA	2.6 B	NA	NA	2.1 B
Zinc	2000 ST	7440-66-6	ug/l	32.3	2.2 U	3.6 U	NA	10 B	NA	NA	14.9 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	58320	46570	51640	58540	48570	56560	47300	44790

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/12/2003 (ug/l)	MW-04S 03/02/2004 (ug/l)	MW-04S (ug/l)	MW-04S (ug/l)	MW-04S (ug/l)	MW-04S (ug/l)	MW-04S (ug/l)	MW-04S (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.30 U	0.20 U						
Calcium	-	7440-70-2	ug/l	139000	122000						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	48600	62600						
Lead	25 ST	7439-92-1	ug/l	1.1 U	0.70 U						
Magnesium	35000 GV	7439-95-4	ug/l	18100	13600						
Manganese	300 ST	7439-96-5	ug/l	3690	2360						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	20000	17200						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	28600	32000						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	52290	64960						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/29/1997 (ug/l)	MW-04I 12/06/2000 (ug/l)	MW-04I 02/01/2001 (ug/l)	MW-04I 08/23/2002 (ug/l)	MW-04I 11/22/2002 (ug/l)	MW-04I 03/06/2003 (ug/l)	MW-04I 06/03/2003 (ug/l)	MW-04I 08/22/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	365	19.9 B	18.7	NA	13.9 B	NA	NA	17.7 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 B	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	10.1	14.6	17.1	NA	11.5	NA	NA	17.5
Barium	1000 ST	7440-39-3	ug/l	128	175 B	107	NA	135 B	NA	NA	124 B
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.14	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	300	285	NA	231	NA	NA	211
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.25 B	0.50 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	53200	92000	62200	41700	85700	85500	101000	90100
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.3 U	3.5 U	0.6 U	NA	1 B	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	2.5	1.7 B	1.7 U	NA	1 U	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	5.2	1.5 U	1.5 U	NA	2.8 B	NA	NA	2.2 B
Iron	300 ST	7439-89-6	ug/l	31800	55200	38200	29000	56200	53000	62500	56900
Lead	25 ST	7439-92-1	ug/l	3.7	1.9 B	1.9	0.8 U	1.4 U	1.5 U	1.6 B	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	9580	15700	9960	5690	10700	11100	12800	10400
Manganese	300 ST	7439-96-5	ug/l	480	884	592	576	1410	1270	1640	1420
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.1 U
Nickel	100 ST	7440-02-0	ug/l	3.9	1.9 U	1.4 U	NA	3.5 B	NA	NA	5.0 B
Potassium	-	7440-09-7	ug/l	69400	21700	19400	10100	14800	15400	18900	13600
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	3.9 B	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.5 U	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	29200	32500	22700	13400	26800	25700	34000	27800
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	4.4	0.7 U	1.7 U	NA	1.8 B	NA	NA	2.0 B
Zinc	2000 ST	7440-66-6	ug/l	96.1	6.8 B	3.6 U	NA	19.3 B	NA	NA	7.1 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	32280	56084	38792	29576	57610	54270	64140	58320

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/12/2003 (ug/l)	MW-04I 03/01/2004 (ug/l)	MW-04I (ug/l)	MW-04I (ug/l)	MW-04I (ug/l)	MW-04I (ug/l)	MW-04I (ug/l)	MW-04I (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	91200	99100						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	56100	61600						
Lead	25 ST	7439-92-1	ug/l	1.1 U	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	10500	10600						
Manganese	300 ST	7439-96-5	ug/l	1510	1790						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	16000	14000						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	29500	30800						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	57610	63390						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/28/1997 (ug/l)	MW-04D 12/06/2000 (ug/l)	MW-04D 02/01/2001 (ug/l)	MW-04D 08/23/2002 (ug/l)	MW-04D 11/21/2002 (ug/l)	MW-04D 03/07/2003 (ug/l)	MW-04D 06/03/2003 (ug/l)	MW-04D 08/25/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	52.9	17.7 B	15.7	NA	29.4 B	NA	NA	27.3 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	7.6	11.9	14.4	NA	7.2 B	NA	NA	13.7
Barium	1000 ST	7440-39-3	ug/l	186	249	224	NA	90.8 B	NA	NA	108 B
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.16	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	291	326	NA	170	NA	NA	120
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.37	0.1 B	0.5 U	0.1 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	56100	60000	59100	30800	24700	24000	27500	30900
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.4 U	3.5 U	0.6 U	NA	1.3 B	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	14.9	17.7 B	14.4	NA	4.3 B	NA	NA	4.4 B
Copper	200 ST	7440-50-8	ug/l	0.7 U	1.5 U	1.5 U	NA	3.4 B	NA	NA	1.6 B
Iron	300 ST	7439-89-6	ug/l	66000	75500	69500	24500	20400	24800	28300	34500
Lead	25 ST	7439-92-1	ug/l	1 U	4	3.6	0.88 B	1.4 U	1.5 U	1.5 U	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	8830	11500	11100	5380	4060 B	4080 B	4550 B	4840 B
Manganese	300 ST	7439-96-5	ug/l	1700	2900	2470	589	690	725	764	829
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	7.4	7.1 B	5.4	NA	2.3 B	NA	NA	2.6 B
Potassium	-	7440-09-7	ug/l	14000	14900	16200	10700	8650	8970	10500	8800
Selenium	10 ST	7782-49-2	ug/l	2.8 U	2.2 B	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	1.3 B	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	21100	26500	27500	15300	13700	14000	14900	13300
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.82 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	85.9	5.9 B	3.6 U	NA	16.7 B	NA	NA	22.8
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	67700	78400	71970	25089	21090	25525	29064	35329

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/11/2003 (ug/l)	MW-04D 03/01/2004 (ug/l)	MW-04D (ug/l)	MW-04D (ug/l)	MW-04D (ug/l)	MW-04D (ug/l)	MW-04D (ug/l)	MW-04D (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	34000	43400						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	35300	45700						
Lead	25 ST	7439-92-1	ug/l	1.1 U	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	5720	7110						
Manganese	300 ST	7439-96-5	ug/l	972	1270						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	11000	10500						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	13900	16400						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	36272	46970						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/29/1997 (ug/l)	MW-05S 12/08/2000 (ug/l)	MW-05S 02/02/2001 (ug/l)	MW-05S 08/23/2002 (ug/l)	MW-05S 11/22/2002 (ug/l)	MW-05S 03/07/2003 (ug/l)	MW-05S 06/05/2003 (ug/l)	MW-05S 08/25/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	121	234	313	NA	540	NA	NA	534
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	4.5 B	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	6.0 B
Barium	1000 ST	7440-39-3	ug/l	296	214	206	NA	164 B	NA	NA	326
Beryllium	3 GV	7440-41-7	ug/l	0.13	0.23	0.3	NA	0.4 U	NA	NA	0.59 B
Boron	1000 ST	7440-42-8	ug/l	NA	254	226	NA	153	NA	NA	376
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.10 U	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	105000	93500	90500	71800	74500	74600	78100	102000
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	6.5	3.5 U	1.7	NA	6 U	NA	NA	1.5 B
Cobalt	-	7440-48-4	ug/l	1.3	0.9 U	1.7 U	NA	1 U	NA	NA	7.4 B
Copper	200 ST	7440-50-8	ug/l	0.7 U	1.5 U	1.5 U	NA	5.4 B	NA	NA	2.9 B
Iron	300 ST	7439-89-6	ug/l	32000	28300	29800	28300	26100	22700	28100	38000
Lead	25 ST	7439-92-1	ug/l	1.0 U	2.9	2.5	0.80 U	1.7 B	1.5 U	1.6 B	1.1 B
Magnesium	35000 GV	7439-95-4	ug/l	17900	13300	12900	8580	7910	9790	10100	14700
Manganese	300 ST	7439-96-5	ug/l	3370	3860	3940	5100	5260	5500	6320	3460
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	4.6	1.9 U	1.4 U	NA	8.0 B	NA	NA	5.3 B
Potassium	-	7440-09-7	ug/l	20600	14000	14300	10600	9940	11500	11900	13000
Selenium	10 ST	7782-49-2	ug/l	2.8 U	3.1	2.4	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	2.1	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	35000	28500	27300	28300	27700	25900	25500	24500
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.8	2.5	2.6	NA	3.6 B	NA	NA	1.9 B
Zinc	2000 ST	7440-66-6	ug/l	25	2.2 U	3.6 U	NA	33.9	NA	NA	112
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	35370	32160	33740	33400	31360	28200	34420	41460

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/12/2003 (ug/l)	MW-05S 03/02/2004 (ug/l)	MW-05S (ug/l)	MW-05S (ug/l)	MW-05S (ug/l)	MW-05S (ug/l)	MW-05S (ug/l)	MW-05S (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.30 U	0.20 U						
Calcium	-	7440-70-2	ug/l	102000	69500						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	23600	26000						
Lead	25 ST	7439-92-1	ug/l	1.1 U	0.70 U						
Magnesium	35000 GV	7439-95-4	ug/l	14200	9650						
Manganese	300 ST	7439-96-5	ug/l	6780	4570						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	14900	12500						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	22600	18600						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	30380	30570						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/29/1997 (ug/l)	MW-05I 12/08/2000 (ug/l)	MW-05I 02/02/2001 (ug/l)	MW-05I 08/23/2002 (ug/l)	MW-05I 11/22/2002 (ug/l)	MW-05I 03/07/2003 (ug/l)	MW-05I 06/03/2003 (ug/l)	MW-05I 08/25/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	330	12.2 U	15.8	NA	287	NA	NA	143 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	4.3	3.5	5.5	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	17.8	50.4	57.7	NA	43.2 B	NA	NA	50.5 B
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.1 U	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	176	138	NA	86 B	NA	NA	99.8 B
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.36	0.1 U	0.5 U	0.1 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	8280	39200	45300	28100	34500	36700	36000	34500
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	3.3	3.5 U	0.6 U	NA	2.1 B	NA	NA	1.4 B
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	1 U	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	2.5	1.5 U	1.5 U	NA	2.3 B	NA	NA	3.8 B
Iron	300 ST	7439-89-6	ug/l	7250	14600	15400	7070	9080	10300	10900	4990
Lead	25 ST	7439-92-1	ug/l	3	1.4 U	1.1 U	3.5	2.9 B	1.5 U	1.5 U	1.6 B
Magnesium	35000 GV	7439-95-4	ug/l	1260	6780	8460	5000 B	5940	6570	6110	5460
Manganese	300 ST	7439-96-5	ug/l	1080	1160	1380	1130	1150	1270	1370	1170
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	3.6	1.9 U	1.4 U	NA	1.8 B	NA	NA	1.6 B
Potassium	-	7440-09-7	ug/l	4820	14900	15300	9360	8270	14400	15400	12900
Selenium	10 ST	7782-49-2	ug/l	2.8 U	2.1	1.6	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	1.1	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	12500	20100	24100	17500	23600	27900	24000	20700
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.67 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	95.3	4.6	3.6 U	NA	57.4	NA	NA	149
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	8330	15760	16780	8200	10230	11570	12270	6160

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/12/2003 (ug/l)	MW-05I 03/02/2004 (ug/l)	MW-05I (ug/l)	MW-05I (ug/l)	MW-05I (ug/l)	MW-05I (ug/l)	MW-05I (ug/l)	MW-05I (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	43700	48100						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	14500	9820						
Lead	25 ST	7439-92-1	ug/l	1.1 U	0.70 U						
Magnesium	35000 GV	7439-95-4	ug/l	7340	8540						
Manganese	300 ST	7439-96-5	ug/l	1360	883						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	22300	25500						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	34400	36400						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	15860	10703						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/29/1997 (ug/l)	MW-05D 12/08/2000 (ug/l)	MW-05D 02/02/2001 (ug/l)	MW-05D 08/23/2002 (ug/l)	MW-05D 11/22/2002 (ug/l)	MW-05D 03/07/2003 (ug/l)	MW-05D 06/03/2003 (ug/l)	MW-05D 08/25/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	241	12.2 U	11.8 U	NA	365	NA	NA	20.8 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	117	206	190	NA	53.9 B	NA	NA	28.3 B
Beryllium	3 GV	7440-41-7	ug/l	0.17	0.1 U	0.17	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	324	292	NA	83.1 B	NA	NA	57.8 B
Cadmium	5 ST	7440-43-9	ug/l	0.3	0.77	0.69	0.30 B	0.5 U	0.10 U	0.25 B	0.30 U
Calcium	-	7440-70-2	ug/l	47300	107000	99900	39500	36900	33700	27800	21600
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	2.9	3.5 U	0.85	NA	2.3 B	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	4.6	5.3	4.6	NA	1.6 B	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	4.8	6.3	4.6	NA	4.9 B	NA	NA	1.2 B
Iron	300 ST	7439-89-6	ug/l	374	101	23.2	763	751	122	60.6 B	53.8 B
Lead	25 ST	7439-92-1	ug/l	1.2	2.1	1.1 U	0.80 U	8.1	1.5 U	1.5 U	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	12400	26200	23300	7740	7250	8000	6820	4800 B
Manganese	300 ST	7439-96-5	ug/l	17200	21300	17500	8380	8390	7900	7010	5130
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.1 U
Nickel	100 ST	7440-02-0	ug/l	5.1	7.7	6.7	NA	3.5 B	NA	NA	1.5 U
Potassium	-	7440-09-7	ug/l	20200	33100	33000	13500	11100	9080	8860	5700
Selenium	10 ST	7782-49-2	ug/l	2.8 U	9.3	7.4	NA	3.6 B	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	5.5	2.9	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	26500	62500	43400	30300	30100	24700	19400	13700
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	4.6 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	1.1 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	283	18.7	6	NA	193	NA	NA	12 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	17574	21401	17523.2	9143	9141	8022	7070.6	5183.8

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/12/2003 (ug/l)	MW-05D 03/02/2004 (ug/l)	MW-05D (ug/l)	MW-05D (ug/l)	MW-05D (ug/l)	MW-05D (ug/l)	MW-05D (ug/l)	MW-05D (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.25 B						
Calcium	-	7440-70-2	ug/l	20400	26000						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	257	893						
Lead	25 ST	7439-92-1	ug/l	2.5 B	1.5 B						
Magnesium	35000 GV	7439-95-4	ug/l	4110 B	5030						
Manganese	300 ST	7439-96-5	ug/l	3570	3750						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	6410	8980						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	12500	21100						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	3827	4643						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/28/1997 (ug/l)	MW-06S 12/05/2000 (ug/l)	MW-06S 02/01/2001 (ug/l)	MW-06S 08/21/2002 (ug/l)	MW-06S 11/20/2002 (ug/l)	MW-06S 03/05/2003 (ug/l)	MW-06S 06/05/2003 (ug/l)	MW-06S 08/22/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	96.2	45.5 B	12.1	NA	143 B	NA	NA	77.2 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.9 B	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	9.6	3.2 B	8	NA	5.2 B	NA	NA	6.0 B
Barium	1000 ST	7440-39-3	ug/l	306	121 B	101	NA	121 B	NA	NA	219
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.1 U	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	162	183	NA	167	NA	NA	362
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.17 B	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	131000	64500	53100	61000	59500	571000	62400	114000
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	1.3	3.5 U	0.6 U	NA	1.9 B	NA	NA	1.8 B
Cobalt	-	7440-48-4	ug/l	2.2	0.9 U	1.7 U	NA	2.9 B	NA	NA	5.0 B
Copper	200 ST	7440-50-8	ug/l	0.7 U	1.5 U	1.5 U	NA	2.9 B	NA	NA	2.9 B
Iron	300 ST	7439-89-6	ug/l	58700	48000	40000	37700	31900	25400	29000	46700
Lead	25 ST	7439-92-1	ug/l	1.0 U	1.4 B	1.9	1.3 B	1.4 U	1.5 U	1.5 U	0.86 B
Magnesium	35000 GV	7439-95-4	ug/l	16400	6280	4680	5550	5080	5480	6040	12300
Manganese	300 ST	7439-96-5	ug/l	837	543	430	804	1050	930	1790	2570
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.1 U
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	2.9 B	NA	NA	4.8 B
Potassium	-	7440-09-7	ug/l	18200	8250	8050	7460	6980	7490	8980	10900
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.63 B	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	18900	12800	13200	14900	13500	10300	13900	19100
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	2 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	14.2	2.2 U	3.6 U	NA	6.1 B	NA	NA	67.6
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	59537	48543	40430	38504	32950	26330	30790	49270

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/11/2003 (ug/l)	MW-06S 02/27/2004 (ug/l)	MW-06S (ug/l)	MW-06S (ug/l)	MW-06S (ug/l)	MW-06S (ug/l)	MW-06S (ug/l)	MW-06S (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	78800	96000						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	26500	43900						
Lead	25 ST	7439-92-1	ug/l	1.1 U	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	8330	10800						
Manganese	300 ST	7439-96-5	ug/l	2250	3190						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	9660	13400						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	20400	17700						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	28750	47090						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/28/1997 (ug/l)	MW-06I 12/05/2000 (ug/l)	MW-06I 02/01/2001 (ug/l)	MW-06I 08/21/2002 (ug/l)	MW-06I 11/21/2002 (ug/l)	MW-06I 03/05/2003 (ug/l)	MW-06I 06/05/2003 (ug/l)	MW-06I 08/22/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	140	17.6 B	16.4	NA	38.8 B	NA	NA	14.2 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	4.3	2.5 U	2.6	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	107	88.4 B	91.4	NA	39.9 B	NA	NA	51.5 B
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.14	NA	0.4 U	NA	NA	0.2 U
Boron	1000 ST	7440-42-8	ug/l	NA	149	186	NA	209	NA	NA	357
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.29 B	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	33300	36900	36000	19700	19100	20500	20300	22400
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.73	3.5 U	0.6 U	NA	1.5 B	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	6.4	3 B	2.3	NA	1.1 B	NA	NA	2.5 B
Copper	200 ST	7440-50-8	ug/l	3.9	2.6 B	1.5 U	NA	9.6 B	NA	NA	2.2 B
Iron	300 ST	7439-89-6	ug/l	6490	5150	3660	2660	1510	2320	1230	4740
Lead	25 ST	7439-92-1	ug/l	1	1.4 U	1.1 U	1.9 B	1.4 U	1.5 U	1.9 B	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	3810	4020 B	3680	1890 B	1980 B	1790 B	1970 B	2000 B
Manganese	300 ST	7439-96-5	ug/l	2100	805	807	383	277	392	278	843
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.1 U
Nickel	100 ST	7440-02-0	ug/l	2	1.9 U	1.4 U	NA	2.7 B	NA	NA	1.5 B
Potassium	-	7440-09-7	ug/l	7680	8540	9670	5500	4310 B	5080	5200	5290
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.75 B	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	14000	19600	17400	10700	9230	9870	10000	11400
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.62 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	61.4	5 B	3.6 U	NA	36.6	NA	NA	9.3 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	8590	5955	4467	3043	1787	2712	1508	5613

NOTES:

NS: Not sampled

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

Appendix A-2

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE: DATE: UNITS:	MW-06I 11/11/2003 (ug/l)	MW-06I 02/27/2004 (ug/l)	MW-06I (ug/l)	MW-06I (ug/l)	MW-06I (ug/l)	MW-06I (ug/l)	MW-06I (ug/l)	MW-06I (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	21600	19700						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	4570	4510						
Lead	25 ST	7439-92-1	ug/l	1.1 U	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	2100 B	1930 B						
Manganese	300 ST	7439-96-5	ug/l	861	807						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	5990	4200 B						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	9000	9820						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	5431	5317						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/28/1997 (ug/l)	MW-06D 12/05/2000 (ug/l)	MW-06D 01/31/2001 (ug/l)	MW-06D 08/22/2002 (ug/l)	MW-06D 11/20/2002 (ug/l)	MW-06D 03/05/2003 (ug/l)	MW-06D 06/05/2003 (ug/l)	MW-06D 08/22/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	320	12.2 U	14.9	NA	19.3 B	NA	NA	17.2 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	4.6 B	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	3.2	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	15.1	23.8 B	20.1	NA	19 B	NA	NA	20.4 B
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	44.7 B	63.6	NA	63.2 B	NA	NA	54.9 B
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.16 B	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	5070	4640 B	4290	7740	6460	7600	6200	5050
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	1.3	3.5 U	0.6 U	NA	1.5 B	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	6.6	5.7 B	5.3	NA	6.2 B	NA	NA	5.3 B
Copper	200 ST	7440-50-8	ug/l	2.5	2.1 B	1.5 U	NA	6.6 B	NA	NA	1.3 B
Iron	300 ST	7439-89-6	ug/l	5220	5040	4000	6820	4120	6150	5330	4360
Lead	25 ST	7439-92-1	ug/l	1.0 U	1.4 U	1.1 U	0.80 U	1.4 U	1.5 U	2.6 B	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	2040	1930 B	1800	4020 B	3300 B	3580 B	2740 B	2080 B
Manganese	300 ST	7439-96-5	ug/l	6800	8160	7680	12800	9440	11700	11200	8720
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.1 U
Nickel	100 ST	7440-02-0	ug/l	3.3	2.3 B	2	NA	5.2 B	NA	NA	2.8 B
Potassium	-	7440-09-7	ug/l	1140	1220 B	1260	1560 B	1180 B	1540 B	1680 B	1140 B
Selenium	10 ST	7782-49-2	ug/l	2.8 U	4.3 B	2.9	NA	5.2	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	2.4 B	1.8	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	11600	20400	17700	11800	11000	11400	10900	8960
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.63 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	75.1	3.8 B	3.6 U	NA	31.8	NA	NA	8.8 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	12020	13200	11680	19620	13560	17850	16530	13080

NOTES:

NS: Not sampled

ST*: Standard for the sum of iron and manganese is 500 ug/l

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

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 11/11/2003 (ug/l)	MW-06D 02/27/2004 (ug/l)	MW-06D (ug/l)	MW-06D (ug/l)	MW-06D (ug/l)	MW-06D (ug/l)	MW-06D (ug/l)	MW-06D (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	5600	5820						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	5030	5120						
Lead	25 ST	7439-92-1	ug/l	2.4 B	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	2390 B	2470 B						
Manganese	300 ST	7439-96-5	ug/l	12500	10000						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	1930 B	1340 B						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	8940	9980						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	17530	15120						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/28/1997 (ug/l)	MW-07I 12/01/2000 (ug/l)	MW-07I 01/31/2001 (ug/l)	MW-07I 08/21/2002 (ug/l)	MW-07I 11/20/2002 (ug/l)	MW-07I 03/05/2003 (ug/l)	MW-07I 06/03/2003 (ug/l)	MW-07I 08/22/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	90.1	16 B	23.6	NA	37.1 B	NA	NA	13.9
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	32.2	39.6 B	29.3	NA	15.4 B	NA	NA	21.6 B
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	33 B	45.4	NA	30.1 B	NA	NA	38.1 B
Cadmium	5 ST	7440-43-9	ug/l	0.47	0.4 U	0.2 U	0.29 B	0.5 U	0.12 B	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	8890	20000	14700	9820	7360	8670	8420	8160
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.8	3.5 U	0.6 U	NA	0.8 U	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	2.3	0.9 U	1.7 U	NA	1 U	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	1.6	1.5 U	1.5 U	NA	3.9 B	NA	NA	1.3 B
Iron	300 ST	7439-89-6	ug/l	396	26.2 B	35.2	350	172	53.9 B	41.4 B	45.0 B
Lead	25 ST	7439-92-1	ug/l	2.8	1.4 U	1.1 U	1.6 B	1.5 B	1.5 U	1.5 U	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	1300	4310 B	3080	1630 B	1150 B	1470	1410 B	1060 B
Manganese	300 ST	7439-96-5	ug/l	519	6510	5140	2620	1390	2340	3320	2210
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	1.8	1.9 U	1.4 U	NA	1.1 U	NA	NA	1.5 U
Potassium	-	7440-09-7	ug/l	3840	2590 B	2460	2330B	2000 B	2020 B	2580 B	2100 B
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.8	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	1 B	1.6 U	NA	1 U	NA	NA	1.0 U
Sodium	20000 ST	7440-23-5	ug/l	6950	22300	19600	10700	7960	9570	21100	10200
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.6 U	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	51.7	3.8 B	3.6 U	NA	27.9	NA	NA	8.4 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	915	6536.2	5175.2	2970	1562	2393.9	3361.4	2255

NOTES:

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NA: Not analyzed

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ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/11/2003 (ug/l)	MW-07I 02/27/2004 (ug/l)	MW-07I (ug/l)	MW-07I (ug/l)	MW-07I (ug/l)	MW-07I (ug/l)	MW-07I (ug/l)	MW-07I (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.36 B						
Calcium	-	7440-70-2	ug/l	7020	12400						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	172	55.0 B						
Lead	25 ST	7439-92-1	ug/l	1.1 U	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	1290 B	1960 B						
Manganese	300 ST	7439-96-5	ug/l	1210	4770						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	1730 B	2600 B						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	7950	13200						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	1382	4825						

NOTES:

NS: Not sampled

▨: Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/31/1997 (ug/l)	MW-11S 12/13/2000 (ug/l)	MW-11S 02/07/2001 (ug/l)	MW-11S 08/22/2002 (ug/l)	MW-11S 11/21/2002 (ug/l)	MW-11S 03/06/2003 (ug/l)	MW-11S 06/04/2003 (ug/l)	MW-11S 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	703	31.7	47.7	NA	127 B	NA	NA	17.4 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	30.5	27.3	24.1	NA	28.3 B	NA	NA	8.8 B
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	635	630	NA	206	NA	NA	160
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.10 U	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	39100	58600	53800	46600	51800	51500	78300	9900
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.73	3.5 U	9.8	NA	38.9	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	2.1	1.4	1.8	NA	1.8 B	NA	NA	18.2 B
Copper	200 ST	7440-50-8	ug/l	3.2	3.2	3	NA	2.9 B	NA	NA	1.8 B
Iron	300 ST	7439-89-6	ug/l	739	45.6	65.1	4820	575	271	193	107
Lead	25 ST	7439-92-1	ug/l	1 U	1.4 U	1.1 U	0.80 U	1.4 U	1.5 U	1.5 B	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	4000	6250	5770	4090 B	5250	5880	7590	1750 B
Manganese	300 ST	7439-96-5	ug/l	1820	5290	4340	1230	1270	843	541	624
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	2.6	3.1	3.3	NA	3.9 B	NA	NA	39.3 B
Potassium	-	7440-09-7	ug/l	8620	9070	7980	6970	6570	9540	15100	1390 B
Selenium	10 ST	7782-49-2	ug/l	2.8 U	3	3	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	3.6	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	43700	37900	26900	15000	16700	20300	54200	13800
Thallium	0.5 GV	7440-28-0	ug/l	3.2	2.3 U	2.8 U	NA	4.2 U	NA	NA	3.2 B
Vanadium	-	7440-62-2	ug/l	1.8	0.98	1.7 U	NA	0.97 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	12.7	2.2 U	3.6 U	NA	15.2 B	NA	NA	6.6 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	2559	5335.6	4405.1	6050	1845	1114	734	731

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/13/2003 (ug/l)	MW-11S 03/01/2004 (ug/l)	MW-11S (ug/l)	MW-11S (ug/l)	MW-11S (ug/l)	MW-11S (ug/l)	MW-11S (ug/l)	MW-11S (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U						
Calcium	-	7440-70-2	ug/l	66600	94900						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	636	1310						
Lead	25 ST	7439-92-1	ug/l	1.1 U	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	5100	7510						
Manganese	300 ST	7439-96-5	ug/l	207	172						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	15100	13700						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	70700	47700						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	843	1482						

NOTES:

NS: Not sampled

▨: Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/31/1997 (ug/l)	MW-11I 12/13/2000 (ug/l)	MW-11I 02/07/2001 (ug/l)	MW-11I 08/22/2002 (ug/l)	MW-11I 11/21/2002 (ug/l)	MW-11I 03/06/2003 (ug/l)	MW-11I 06/04/2003 (ug/l)	MW-11I 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	113	22.3	11.8 U	NA	32.8 B	NA	NA	23.8 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	22.2	13.1	10.3	NA	12.3 B	NA	NA	46.1 B
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	98.2	84	NA	207	NA	NA	124
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.23	0.20 B	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	10200	9570	9150	8810	15000	15400	16400	77300
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.4 U	3.5 U	0.6 U	NA	2.2 B	NA	NA	177
Cobalt	-	7440-48-4	ug/l	4.7	4	3.2	NA	5 B	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	3.1	2.4	1.5 U	NA	2.8 B	NA	NA	7.7 B
Iron	300 ST	7439-89-6	ug/l	191	24.1	10.2	313	130	63.3 B	58 B	908
Lead	25 ST	7439-92-1	ug/l	1.7 U	1.4 U	1.1 U	0.80 U	1.4 U	1.5 U	1.5 U	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	6510	2670	2670	2620 B	3740 B	3120 B	3180 B	6750
Manganese	300 ST	7439-96-5	ug/l	245	1590	1340	394	327	1000	1500	248
Mercury	0.7 ST	7439-97-6	ug/l	0.3 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	4.3	3.5	2.5	NA	8.4 B	NA	NA	14.7 B
Potassium	-	7440-09-7	ug/l	3870	2690	2270	1640 B	1740 B	1830 B	2050 B	14700
Selenium	10 ST	7782-49-2	ug/l	8.4 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	2.8 U	1.7	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	11100	13200	10400	6680	9510	11400	12600	78800
Thallium	0.5 GV	7440-28-0	ug/l	2.3 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	2.6 U	0.95	1.7 U	NA	0.6 U	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	100	5.4	4.1	NA	51.4	NA	NA	8.6
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	436	1614.1	1350.2	707	457	1063.3	1558	1156

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/13/2003 (ug/l)	MW-11I 03/01/2004 (ug/l)	MW-11I (ug/l)	MW-11I (ug/l)	MW-11I (ug/l)	MW-11I (ug/l)	MW-11I (ug/l)	MW-11I (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.29 B						
Calcium	-	7440-70-2	ug/l	7960	16400						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	56.5 B	31.2 B						
Lead	25 ST	7439-92-1	ug/l	1.2 B	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	1400 B	2840 B						
Manganese	300 ST	7439-96-5	ug/l	247	1630						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	1420 B	1690 B						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	13900	14400						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	303.5	1661.2						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/31/1997 (ug/l)	MW-11D 12/13/2000 (ug/l)	MW-11D 02/07/2001 (ug/l)	MW-11D 08/22/2002 (ug/l)	MW-11D 11/21/2002 (ug/l)	MW-11D 03/06/2003 (ug/l)	MW-11D 06/04/2003 (ug/l)	MW-11D 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	473	578	581	NA	717	NA	NA	629
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	27.8	34	31.9	NA	37.1 B	NA	NA	38.4 B
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.22	0.13	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	42.2	32.6	NA	311	NA	NA	144
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.22	0.28 B	0.5 U	0.10 U	0.11 B	0.30 U
Calcium	-	7440-70-2	ug/l	7300	4290	5130	7280	6940	5900	6120	6990
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.43	3.5 U	1.6	NA	1.6 B	NA	NA	1.3 B
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	1 U	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	0.7 U	2.3	1.5 U	NA	1.9 B	NA	NA	1.1 U
Iron	300 ST	7439-89-6	ug/l	153	16.7	30.6	566	261	155	59.9 B	43.5 B
Lead	25 ST	7439-92-1	ug/l	1 U	1.4 U	1.1 U	2.0 B	1.4 B	1.5 U	1.5 U	0.8 U
Magnesium	35000 GV	7439-95-4	ug/l	1330	1340	1440	1480 B	1810 B	1580 B	1650 B	1940 B
Manganese	300 ST	7439-96-5	ug/l	74.6	76.7	83.5	398	188	143	144	178
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	2.1	5.3	5.8	NA	12 B	NA	NA	12.4 B
Potassium	-	7440-09-7	ug/l	10000	6950	7120	2530 B	5190	5200	6460	5530
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	2	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	1.2	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	8050	7840	7610	6010	9640	9940	10900	10500
Thallium	0.5 GV	7440-28-0	ug/l	2.7	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.4	0.7 U	1.7 U	NA	0.6 U	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	19	2.8	13.6	NA	21	NA	NA	6.0 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	227.6	93.4	114.1	964	449	298	203.9	221.5

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

Appendix A-2

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
HISTORIC AND CURRENT SAMPLE RESULTS
INORGANIC PARAMETERS

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE: DATE: UNITS:	MW-11D 11/13/2003 (ug/l)	MW-11D 03/01/2004 (ug/l)	MW-11D (ug/l)	MW-11D (ug/l)	MW-11D (ug/l)	MW-11D (ug/l)	MW-11D (ug/l)	MW-11D (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.22 B						
Calcium	-	7440-70-2	ug/l	7920	8560						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	162	38.0 B						
Lead	25 ST	7439-92-1	ug/l	1.2 B	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	2140 B	2330 B						
Manganese	300 ST	7439-96-5	ug/l	171	227						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	7020	7170						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	11000	13300						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	333	265						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/31/1997 (ug/l)	MW-12S 12/07/2000 (ug/l)	MW-12S 02/05/2001 (ug/l)	MW-12S 08/22/2002 (ug/l)	MW-12S "F" 08/22/2002 (ug/l)	MW-12S 11/21/2002 (ug/l)	MW-12S 03/06/2003 (ug/l)	MW-12S 06/04/2003 (ug/l)	MW-12S 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	275	135 B	109	NA	NA	182 B	NA	NA	13.9 U
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	24.7	35.5 B	32.6	NA	NA	32.7 B	NA	NA	29.1 B
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	102	108	NA	NA	94.5 B	NA	NA	103
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.10 U	0.10 U	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	32500	33500	38700	45800	45600	42500	40400	28700	46600
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	8.3	8.7 B	3	NA	NA	52.9	NA	NA	9.5 B
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	NA	1 U	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	0.7 U	3.2 B	1.5 U	NA	NA	2.8 B	NA	NA	1.3 B
Iron	300 ST	7439-89-6	ug/l	326	170	88.4	23200	2390	504	231	81.8 B	63.5 B
Lead	25 ST	7439-92-1	ug/l	1.0 U	1.4 U	1.1 U	2.9 B	0.8 U	1.4 U	1.5 U	1.5 U	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	1730	1990 B	2280	2530 B	2430 B	2080 B	2070 B	1720 B	2470 B
Manganese	300 ST	7439-96-5	ug/l	29.2	45	14.1	247	36.2	20.3	45.8	4.8 B	3.4 B
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	NA	0.1 U	NA	NA	0.1 U
Nickel	100 ST	7440-02-0	ug/l	1.3 U	3.5 B	1.4 U	NA	NA	2.7 B	NA	NA	2.6 B
Potassium	-	7440-09-7	ug/l	14700	14900	15400	14400	14200	10700	13500	9400	10700
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.5 U	1.6 U	NA	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	17800	18000	21100	20200	20500	14300	75400	27000	16200
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.98 B	1.7 U	NA	NA	1.6 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	15	2.2 U	3.6 U	NA	NA	13.9 B	NA	NA	5.3 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	355.2	215	102.5	23447	2426.2	524.3	276.8	86.6	66.9

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

"F": Filterd by lab for dissolved metals

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/13/2003 (ug/l)	MW-12S 03/01/2004 (ug/l)	MW-12S (ug/l)	MW-12S (ug/l)	MW-12S "F" (ug/l)	MW-12S (ug/l)	MW-12S (ug/l)	MW-12S (ug/l)	MW-12S (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA							
Antimony	3 GV	7440-36-0	ug/l	NA	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA	NA							
Barium	1000 ST	7440-39-3	ug/l	NA	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA	NA							
Boron	1000 ST	7440-42-8	ug/l	NA	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.20 U							
Calcium	-	7440-70-2	ug/l	43000	46700							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA							
Cobalt	-	7440-48-4	ug/l	NA	NA							
Copper	200 ST	7440-50-8	ug/l	NA	NA							
Iron	300 ST	7439-89-6	ug/l	40.6 B	324							
Lead	25 ST	7439-92-1	ug/l	1.6 B	1.6 U							
Magnesium	35000 GV	7439-95-4	ug/l	2260 B	2580 B							
Manganese	300 ST	7439-96-5	ug/l	6.2 B	33.7							
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA							
Nickel	100 ST	7440-02-0	ug/l	NA	NA							
Potassium	-	7440-09-7	ug/l	26900	17500							
Selenium	10 ST	7782-49-2	ug/l	NA	NA							
Silver	50 ST	7440-22-4	ug/l	NA	NA							
Sodium	20000 ST	7440-23-5	ug/l	25900	38000							
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA							
Vanadium	-	7440-62-2	ug/l	NA	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA	NA							
Iron + Manganese	500 ST*	-	ug/l	46.8	357.7							

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

"F": Filterd by lab for dissolved metals

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 1031/1997 (ug/l)	MW-12I 12/07/2000 (ug/l)	MW-12I 02/08/2001 (ug/l)	MW-12I 08/22/2002 (ug/l)	MW-12I 11/21/2002 (ug/l)	MW-12I 03/06/2003 (ug/l)	MW-12I 06/04/2003 (ug/l)	MW-12I 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	281	38.1 B	13.5	NA	88.5 B	NA	NA	23.4 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	25.1	20.2 B	12.6	NA	16.8 B	NA	NA	4.9 B
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	865	423	NA	47.6 B	NA	NA	42.4 B
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.10 U	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	13000	13500	9680	4240 B	6480	4390 B	6470	4020 B
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.4 U	3.5 U	0.6 U	NA	2.7 B	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	1.2 B	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	1	2.4 B	1.5 U	NA	2.8 B	NA	NA	1.1 U
Iron	300 ST	7439-89-6	ug/l	213	20.9 B	12.4	257	312	37.3 B	48.5 B	25.8 B
Lead	25 ST	7439-92-1	ug/l	1 U	1.4 U	1.1 U	0.80 U	1.9 B	1.5 U	1.5 U	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	4930	3600 B	2400	1220 B	1680 B	1250 B	2120 B	1260 B
Manganese	300 ST	7439-96-5	ug/l	1290	1300	1070	345	289	153	233	132
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	NA	0.1 U	NA	0.1 U	NA	NA	0.1 U
Nickel	100 ST	7440-02-0	ug/l	1.5	1.9 U	1.4 U	NA	3 B	NA	NA	1.5 U
Potassium	-	7440-09-7	ug/l	1520	2110 B	1810	915 B	1330 B	796 B	1180 B	692 B
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.65 B	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	10800	22500	13900	5820	6080	5320	8590	5990
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	1.4 B	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	39.2	13.7 B	9	NA	44.9	NA	NA	8.2 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	1503	1320.9	1082.4	602	601	190.3	281.5	157.8

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/13/2003 (ug/l)	MW-12I 03/01/2004 (ug/l)	MW-12I (ug/l)	MW-12I (ug/l)	MW-12I (ug/l)	MW-12I (ug/l)	MW-12I (ug/l)	MW-12I (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.21 B						
Calcium	-	7440-70-2	ug/l	4040 B	3880 B						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	30.1 B	63.3 B						
Lead	25 ST	7439-92-1	ug/l	1.5 B	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	1280 B	1160 B						
Manganese	300 ST	7439-96-5	ug/l	125	127						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	688 B	757 I						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	5900	5350						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	155.1	190.3						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 10/31/1997 (ug/l)	MW-12D 12/08/2000 (ug/l)	MW-12D 02/07/2001 (ug/l)	MW-12D 08/22/2002 (ug/l)	MW-12D 11/21/2002 (ug/l)	MW-12D 03/06/2003 (ug/l)	MW-12D 06/04/2003 (ug/l)	MW-12D 08/21/2003 (ug/l)
Aluminum	-	7429-90-5	ug/l	288	14.9	18.6	NA	43.5 B	NA	NA	19.9 B
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA	NA	3.5 U
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA	NA	3.2 U
Barium	1000 ST	7440-39-3	ug/l	6.5	1.5	2.9 U	NA	3.4 B	NA	NA	2.2 B
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA	NA	0.20 U
Boron	1000 ST	7440-42-8	ug/l	NA	29.4	25.2	NA	16.1 B	NA	NA	24.8 B
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.10 U	0.5 U	0.10 U	0.10 U	0.30 U
Calcium	-	7440-70-2	ug/l	8460	3180	3660	2580 B	3860 B	5990	6940	6600
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA	NA	20 U
Chromium Total	50 ST	7440-47-3	ug/l	0.87	3.5 U	1	NA	2 B	NA	NA	0.70 U
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	1 U	NA	NA	2.1 U
Copper	200 ST	7440-50-8	ug/l	2.4	1.5 U	1.5 U	NA	1.8 B	NA	NA	1.1 U
Iron	300 ST	7439-89-6	ug/l	▨ 312	20.9	16.5	129	132	12.4 B	33.2 B	23.6 U
Lead	25 ST	7439-92-1	ug/l	1 U	1.4 U	1.1 U	0.80 U	1.4 U	1.5 U	1.5 U	0.80 U
Magnesium	35000 GV	7439-95-4	ug/l	2330	1520	1760	1000 B	1590 B	2630 B	3080 B	2900 B
Manganese	300 ST	7439-96-5	ug/l	82.5	1.8	1.4	11.6 B	4.7 B	3.9 B	1.9 B	1.3 B
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA	NA	0.10 U
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	1.5 B	NA	NA	1.5 U
Potassium	-	7440-09-7	ug/l	837	554	673	552 B	438 B	551 B	833 B	481 B
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA	NA	3.8 U
Silver	50 ST	7440-22-4	ug/l	0.9 U	1.4	1.6 U	NA	1 U	NA	NA	1 U
Sodium	20000 ST	7440-23-5	ug/l	8400	8610	9340	6450	6010	5770	6120	5490
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA	NA	2.5 U
Vanadium	-	7440-62-2	ug/l	1.2	0.7 U	1.7 U	NA	0.60 U	NA	NA	1.8 U
Zinc	2000 ST	7440-66-6	ug/l	311	2.2 U	3.6 U	NA	24.1	NA	NA	2.4 B
Cyanide	200 ST	0057-12-5	ug/l	10 U	10 U	5 U	NA	10 U	NA	NA	10 U
Iron + Manganese	500 ST*	-	ug/l	394.5	22.7	17.9	129	136.7	16.3	35.1	24.9

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection
limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

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 11/13/2003 (ug/l)	MW-12D 03/01/2004 (ug/l)	MW-12D (ug/l)	MW-12D (ug/l)	MW-12D (ug/l)	MW-12D (ug/l)	MW-12D (ug/l)	MW-12D (ug/l)
Aluminum	-	7429-90-5	ug/l	NA	NA						
Antimony	3 GV	7440-36-0	ug/l	NA	NA						
Arsenic	25 ST	7440-38-2	ug/l	NA	NA						
Barium	1000 ST	7440-39-3	ug/l	NA	NA						
Beryllium	3 GV	7440-41-7	ug/l	NA	NA						
Boron	1000 ST	7440-42-8	ug/l	NA	NA						
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.57 B						
Calcium	-	7440-70-2	ug/l	5460	4550 B						
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA	NA						
Chromium Total	50 ST	7440-47-3	ug/l	NA	NA						
Cobalt	-	7440-48-4	ug/l	NA	NA						
Copper	200 ST	7440-50-8	ug/l	NA	NA						
Iron	300 ST	7439-89-6	ug/l	21.9 B	58.3 B						
Lead	25 ST	7439-92-1	ug/l	1.3 B	1.6 U						
Magnesium	35000 GV	7439-95-4	ug/l	2340 B	1940 B						
Manganese	300 ST	7439-96-5	ug/l	1.8 B	3.1 B						
Mercury	0.7 ST	7439-97-6	ug/l	NA	NA						
Nickel	100 ST	7440-02-0	ug/l	NA	NA						
Potassium	-	7440-09-7	ug/l	440 B	474 B						
Selenium	10 ST	7782-49-2	ug/l	NA	NA						
Silver	50 ST	7440-22-4	ug/l	NA	NA						
Sodium	20000 ST	7440-23-5	ug/l	5090	5530						
Thallium	0.5 GV	7440-28-0	ug/l	NA	NA						
Vanadium	-	7440-62-2	ug/l	NA	NA						
Zinc	2000 ST	7440-66-6	ug/l	NA	NA						
Cyanide	200 ST	0057-12-5	ug/l	NA	NA						
Iron + Manganese	500 ST*	-	ug/l	23.7	61.4						

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

B : Compound detected above instrument detection limit but below contract required detection limit

ST*: Standard for the sum of iron and manganese is 500 ug/l

APPENDIX A-3

HISTORIC GROUNDWATER 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		MW-01S	MW-01S	MW-01S	MW-01S	MW-01S	MW-01S			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/24/1997	01/28/1998	11/30/2000	01/29/2001	11/20/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	7	8	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	8 J	12	3 J	2.2 J	2 J	3 J			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	2 J	3.3 J	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		8	12	12	13.5	2	3			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-01I	MW-01I	MW-01I	MW-01I	MW-01I	MW-01I			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/24/1997	01/28/1998	11/30/2000	01/30/2001	11/20/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	22	5.1 J	14	8.0 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	14	13	13	8.5 J	53	2 J			5 ST
1,1-Dichloroethene	000075-35-4	2 J	10.0 U	2 J	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		38	18.1	29	16.5	53	2			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-01D	MW-01D	MW-01D	MW-01D	MW-01D	MW-01D			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/24/1997	01/28/1998	11/30/2000	01/30/2001	11/20/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	8	5	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	20	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	66	170	5 U	1.1 J	5 U	3 J			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	13	22	3 J	3.3 J	3 J	23			5 ST
1,1-Dichloroethene	000075-35-4	5 J	15	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	4 J	3.7 J	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		84	227	15	13.1	3	26			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-02S	MW-02S	MW-02S	MW-02S	MW-02S	MW-02S			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/27/1997	01/28/1998	11/30/2000	01/31/2001	11/20/2003	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	NS	NS			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	NS	NS			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	NS	NS			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	NS	NS			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	NS	NS			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	NS	NS			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	NS	NS			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	NS	NS			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	NS	NS			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	NS	NS			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	NS	NS			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NS	NS			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	NS	NS			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	NS	NS			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	NS	NS			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	NS	NS			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	NS	NS			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	NS	NS			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	NS	NS			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	NS	NS			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	NS	NS			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	NS	NS			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	NS	NS			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	NS	NS			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	NS	NS			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	NS	NS			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	NS	NS			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	NS	NS			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	NS	NS			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	NS	NS			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	NS	NS			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	NS	NS			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	NS	NS			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	NS	NS			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	NS	NS			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	NS	NS			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	NS	NS			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	NS	NS			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NS	NS			5 ST
TOTAL VOCs		0	0	0	0	NS	NS			

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.

J: Compound was found at a concentration below the detection limit, value estimated

E: Concentration exceeds instrument calibration range; value estimated.

D: Result taken from analysis at a secondary dilution.

NOTES

GV: Guidance Value

ST: Standard

NA: Not Analyzed

NS: Not Sampled

▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-02I	MW-02I	MW-02I	MW-02I	MW-02I	MW-02I			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/27/1997	01/28/1998	12/01/2000	01/30/2001	11/20/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	1.8 J	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		0	0	0	1.8	0	0			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

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 10/27/1997 (ug/l)	MW-02D 01/28/1998 (ug/l)	MW-02D 12/01/2000 (ug/l)	MW-02D 01/30/2001 (ug/l)	MW-02D 11/20/2002 (ug/l)	MW-02D 08/22/2003 (ug/l)			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	1 J	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		0	0	0	0	1	0			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

NS: Not Sampled

APPENDIX A-3

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

Sample ID		MW-03S	MW-03S	MW-03S	MW-03S	MW-03S	MW-03S			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/30/1997	02/02/1998	12/06/2000	02/02/2001	11/22/2002	08/25/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	2.60 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	3.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	4 J	10.0 U	3 J	2.8 J	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	2.00 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	2.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		4	0	3	2.8	0	0			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-04S	MW-04S	MW-04S	MW-04S	MW-04S	MW-04S			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/29/1997	02/02/1998	12/06/2000	02/01/2001	11/22/2002	08/25/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	1 J			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	4 J	3.0 J	3 J	2.9 J	5.5	3 J			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	3.4 J	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	8 J	7.2 J	5 J	3.8 J	5 U	3 J			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5.7	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		12	13.6	8	6.7	11.2	7			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
ST: Standard
NA: Not Analyzed
NS: Not Sampled
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-04I	MW-04I	MW-04I	MW-04I	MW-04I	MW-04I			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/29/1997	01/28/1998	12/06/2000	02/01/2001	11/22/2002	08/22/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	3 J	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	1 J	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	2 J	1.4 J	2 J	3 J			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	5 J	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	20	8.6 J	63	29	11	5			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		29	8.6	65	30.4	13	8			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

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 10/28/1997 (ug/l)	MW-04D 01/28/1998 (ug/l)	MW-04D 12/06/2000 (ug/l)	MW-04D 02/01/2001 (ug/l)	MW-04D 11/21/2002 (ug/l)	MW-04D 08/25/2003 (ug/l)			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	1 J	5 U			5 ST
Chlorobenzene	000108-90-7	1 J	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	4 J	2.5 J	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	7 J	3.0 J	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	11	27	4 J	2.5 J	5 U	3 J			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		23	32.5	4	2.5	1	3			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-05S	MW-05S	MW-05S	MW-05S	MW-05S	MW-05S			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/29/1997	02/03/1998	12/08/2000	02/02/2001	11/22/2002	08/25/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	1.2 J	5 U	1 J			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	5 J	2.4 J	3 J	4.9 J	5 U	1 J			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	NA	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	NA	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	2 J	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	9 J	5.1 J	3 J	5.2 J	6.6	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		14	7.5	6	13.3	6.6	2			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

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 10/29/1997 (ug/l)	MW-05I 02/02/1998 (ug/l)	MW-05I 12/08/2000 (ug/l)	MW-05I 02/02/2001 (ug/l)	MW-05I 11/22/2002 (ug/l)	MW-05I 08/25/2003 (ug/l)			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	4 J	4.2 J	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	1 J	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	3.5 J	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	4 J	2.2 J	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		8	9.9	0	0	1	0			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-05D	MW-05D	MW-05D	MW-05D	MW-05D	MW-05D			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/29/1997	02/03/1998	12/08/2000	02/02/2001	11/22/2002	08/25/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	1 J	2.4 J	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	1 J	5 U			5 ST
Chlorobenzene	000108-90-7	2 J	3.9 J	2 J	3.4 J	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	3 J	10.0 U	5 U	1.2 J	1 J	2 J			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	1 J	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		6	3.9	3	7	2	2			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-06S	MW-06S	MW-06S	MW-06S	MW-06S	MW-06S			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/28/1997	01/28/1998	12/05/2000	02/01/2001	11/20/2002	08/22/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	1 J			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	4 J	6.2 J	5 U	1.1 J	2 J	2 J			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	1 J	6	1 J	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	4 J	4.1 J	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	1 J	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	2.6 J	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		9	10.3	1	9.7	3	3			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES

GV: Guidance Value
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

NS: Not Sampled

APPENDIX A-3

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

Sample ID		MW-06I	MW-06I	MW-06I	MW-06I	MW-06I	MW-06I			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/28/1997	01/28/1998	12/05/2000	02/01/2001	11/21/2002	08/22/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	3 J	10.0 U	2 J	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	4 J	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	4 J	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	5 J	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	23	3.1 J	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		12	0	29	3.1	0	0			

QUALIFIERS	NOTES
B: Compound was found in the method blank as well as the sample	GV: Guidance Value NS: Not Sampled
U: Compound was analyzed for but not detected at the detection limit shown.	ST: Standard
J: Compound was found at a concentration below the detection limit, value estimated	NA: Not Analyzed
E: Concentration exceeds instrument calibration range; value estimated.	▨ : Parameter exceeds Standard/Guidance Value
D: Result taken from analysis at a secondary dilution.	

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 10/28/1997 (ug/l)	MW-06D 01/28/1998 (ug/l)	MW-06D 12/05/2000 (ug/l)	MW-06D 01/31/2001 (ug/l)	MW-06D 11/20/2002 (ug/l)	MW-06D 08/22/2003 (ug/l)			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	1 J	10.0 U	5 U	10 U	2 J	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	1200 D	1600.0 E	15	11	5	2 J			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	480 D	360.0 E	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	1 J	1	1 J	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	23	17	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	19	19	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	4 J	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	4 J	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	45	36	2 J	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		1776	2032	18	12	8	2			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES

GV: Guidance Value
ST: Standard
NA: Not Analyzed
NS: Not Sampled
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-07I	MW-07I	MW-07I	MW-07I	MW-07I	MW-07I			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/28/1997	01/28/1998	12/01/2000	01/31/2001	11/20/2002	08/22/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	3 J	5 U			5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	0.6 U	10.0 U	6	2.6 J	5 U	5 U			5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	0.2 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		0	0	6	2.6	3	0			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/31/1997	01/28/1998	12/13/2000	02/07/2001	11/21/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	24	16	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	22	5 J	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	3.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	3 J	7.2 J	5 U	2.0 J	2 J	2 J			5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	2.00 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	12	6.5 J	9	2.2 J	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	2.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		39	29.7	31	9.2	2	2			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
ST: Standard
NA: Not Analyzed
NS: Not Sampled
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-11I	MW-11I	MW-11I	MW-11I	MW-11I	MW-11I			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/31/1997	01/28/1998	12/13/2000	02/07/2001	11/21/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	2.60 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	3.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	2 J	10.0 U	10	19	5 U	5 U			5 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	7 J	3.2 J	52	100	5 U	2 J			5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	1.6 J	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	2.00 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	2.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		9	3.2	62	120.6	0	2			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-11D	MW-11D	MW-11D	MW-11D	MW-11D	MW-11D			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/31/1997	01/28/1998	12/13/2000	02/07/2001	11/21/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	2.60 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	2 J	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	1.20 U	10.0 U	5 U	10 U	1 J	5 U			5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	2.00 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	2.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		2	0	0	0	1	0			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES

GV: Guidance Value
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

NS: Not Sampled

APPENDIX A-3

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

Sample ID		MW-12S	MW-12S	MW-12S	MW-12S	MW-12S	MW-12S			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/31/1997	01/30/1998	12/07/2000	02/05/2001	11/21/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	2 J	5 U			5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	2.60 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	3.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	2.00 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	2.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		0	0	0	0	2	0			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-12I	MW-12I	MW-12I	MW-12I	MW-12I	MW-12I			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/31/1997	01/30/1998	12/07/2000	02/08/2001	11/21/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	2.60 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	3.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U	2 J			7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	1 J	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	2.00 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	2.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		1	0	0	0	0	2			

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.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.
D: Result taken from analysis at a secondary dilution.

NOTES
GV: Guidance Value
NS: Not Sampled
ST: Standard
NA: Not Analyzed
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/31/1997	01/28/1998	12/08/2000	02/07/2001	11/21/2002	08/21/2003			
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			
Ethylbenzene	000100-41-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
trans-1,3-Dichloropropene	010061-02-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U	5 U			5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U	5 U			-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U	5 U			-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	2 J	5 U			5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloroethene (total)	000540-59-0	2.60 U	10.0 U	NA	10 U	NA	NA			5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U	5 U			5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U	5 U			5 ST
Acetone	000067-64-1	3.40 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
1,1,1-Trichloroethane	000071-55-6	1.80 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U	5 U			5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Chloroethane	000075-00-3	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U	5 U			60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethane	000075-34-3	1.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U	5 U			5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U	5 U			1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 U	5 U	5 U			50 GV
1,1,2-Trichloroethane	000079-00-5	2.00 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
Trichloroethene	000079-01-6	1.40 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,1,2,2-Tetrachloroethane	000079-34-5	2.20 U	10.0 U	5 U	10 U	5 U	5 U			5 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U	5 U			3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U	5 U			0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA	NA			5 ST
TOTAL VOCs		0	0	0	0	2	0			

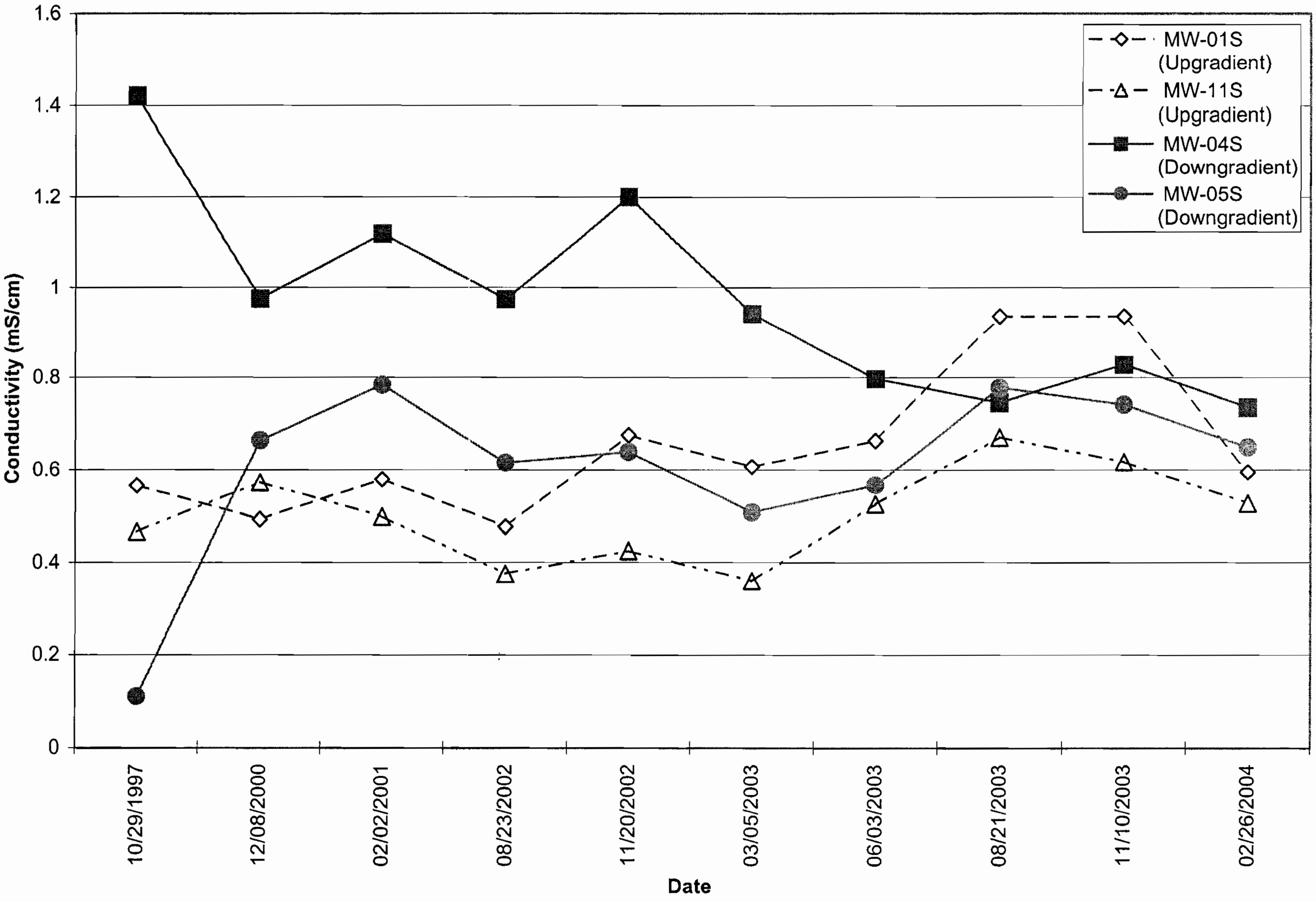
QUALIFIERS
B: Compound was found in the method blank as well as the sample
U: Compound was analyzed for but not detected at the detection limit shown.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.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

NOTES
GV: Guidance Value
ST: Standard
NA: Not Analyzed
NS: Not Sampled
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-4

HISTORIC TREND GRAPHS - ALKALINITY, IRON PLUS MANGANESE, TOTAL DISSOLVED SOLIDS AND SPECIFIC CONDUCTIVITY RESULTS FROM SELECTED MONITORING WELLS

HISTORIC SPECIFIC CONDUCTIVITY RESULTS IN SELECTED SHALLOW WELLS



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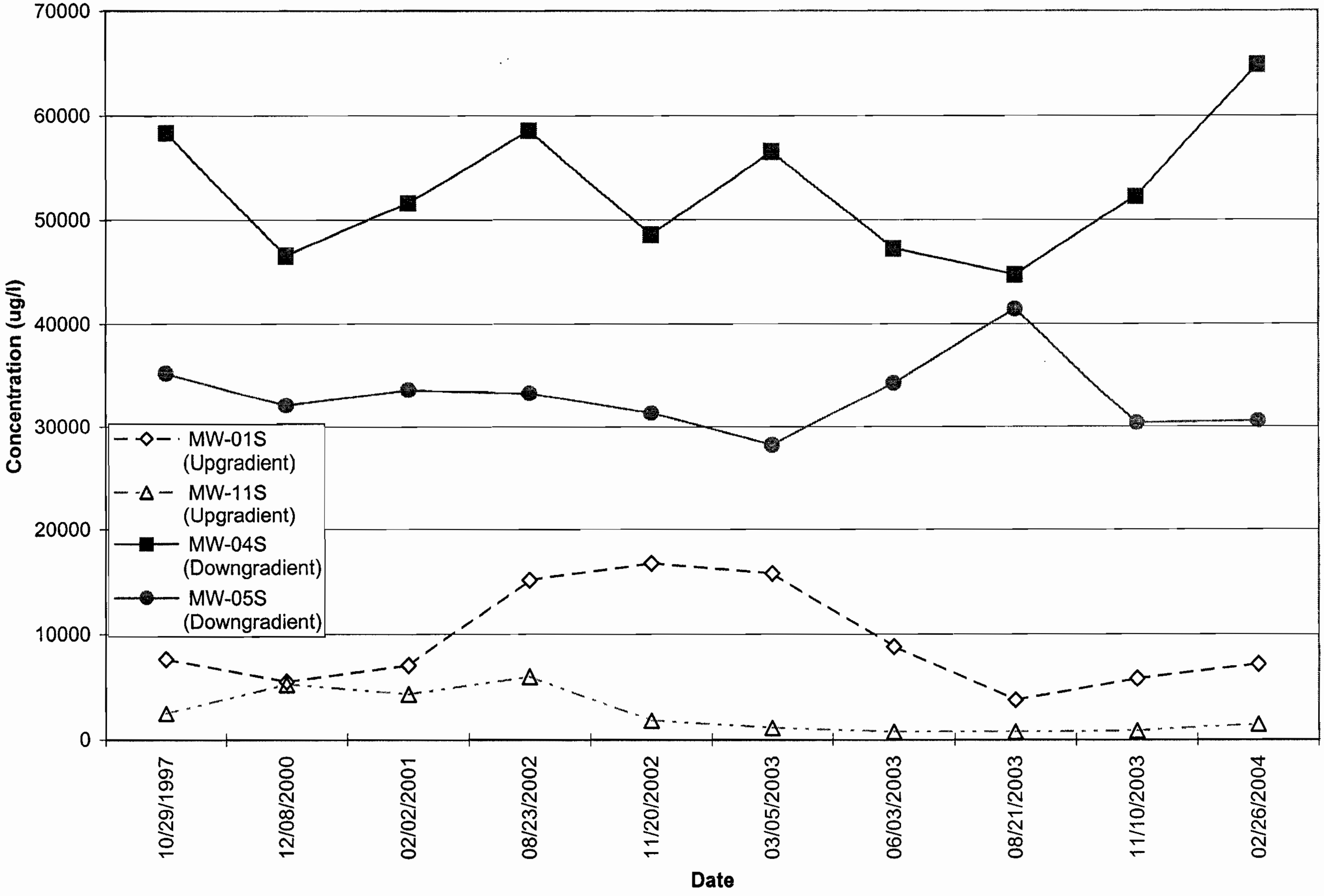
HISTORIC IRON + MANGANESE RESULTS IN SELECTED SHALLOW WELLS



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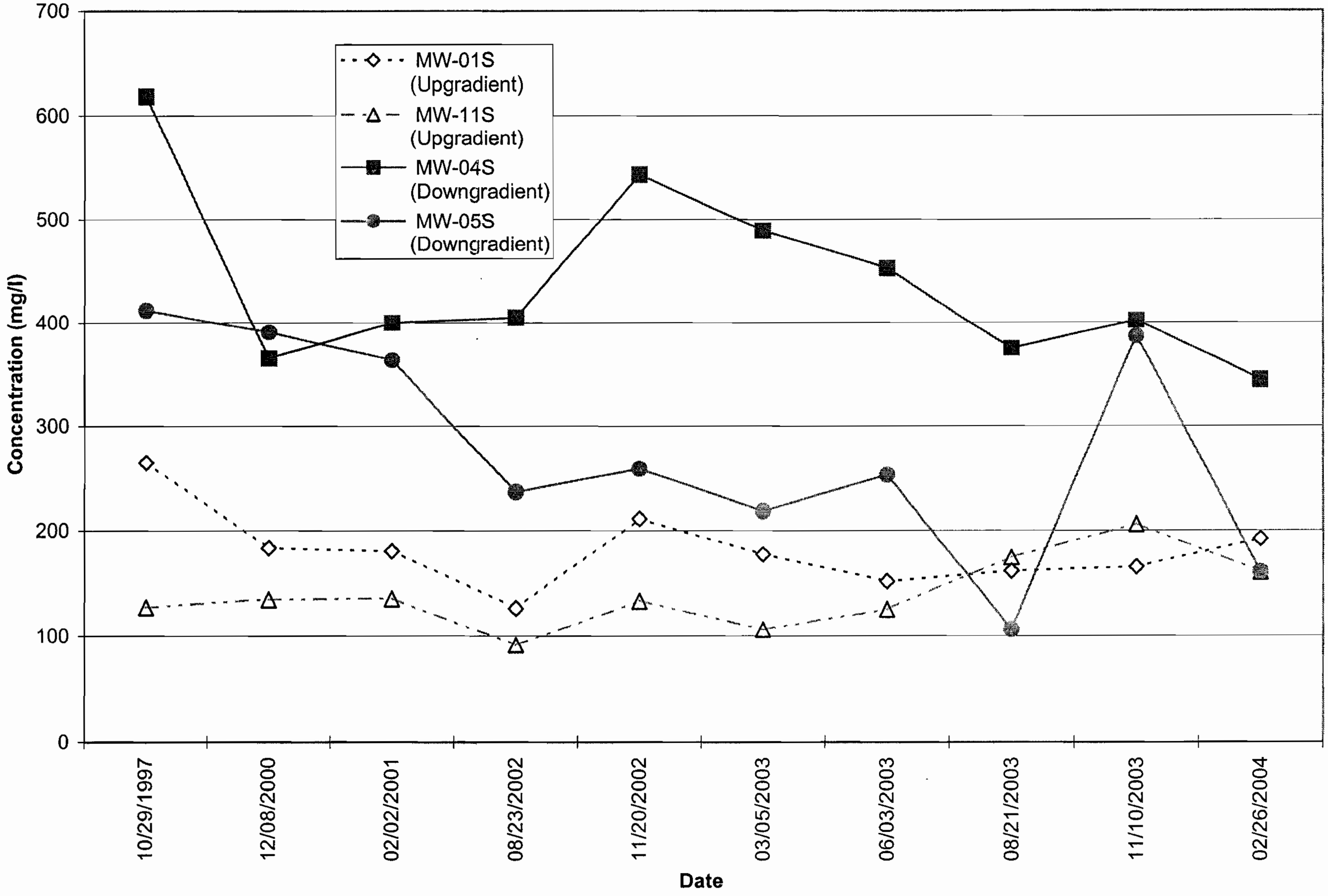
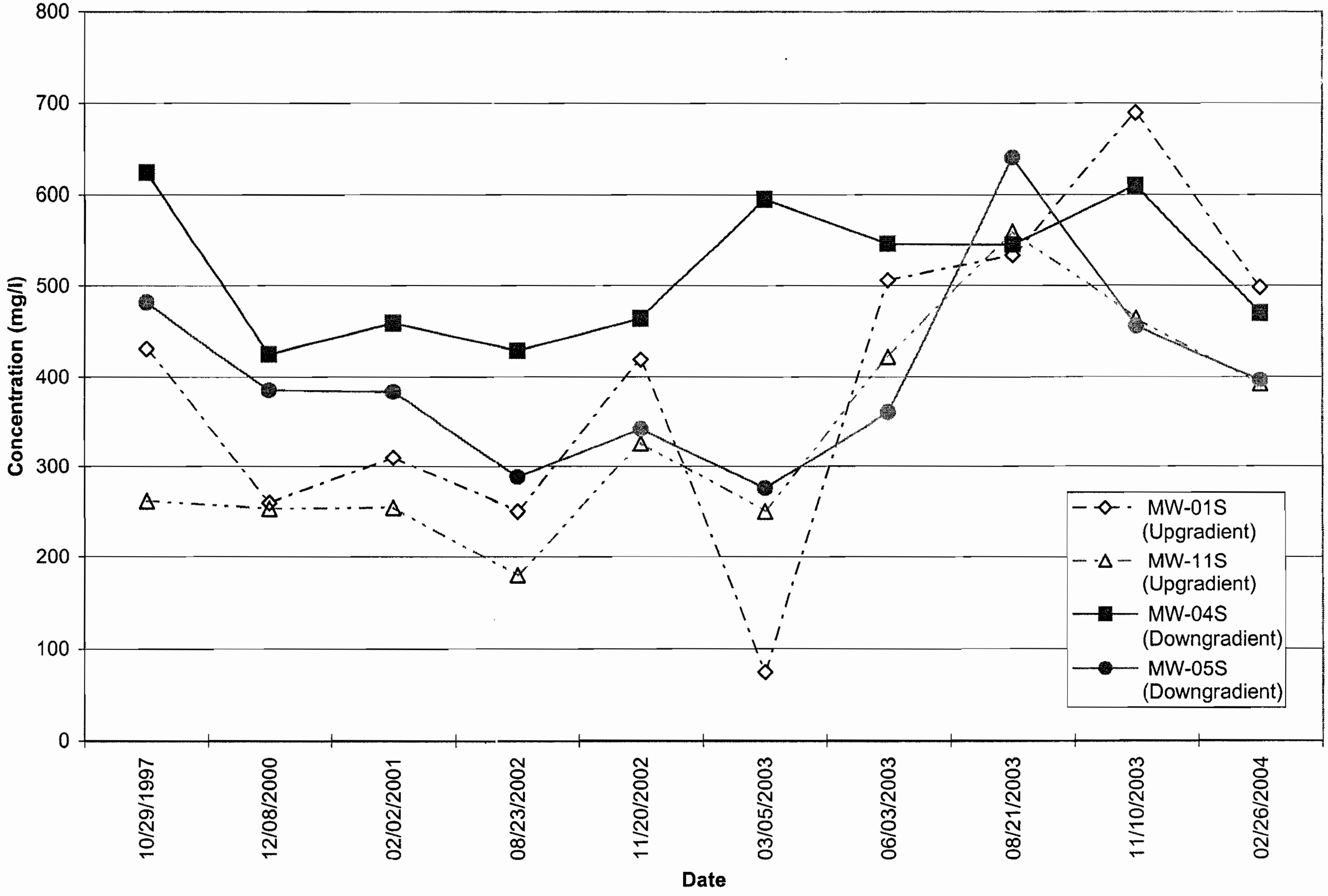
HISTORIC ALKALINITY RESULTS IN SELECTED SHALLOW WELLS



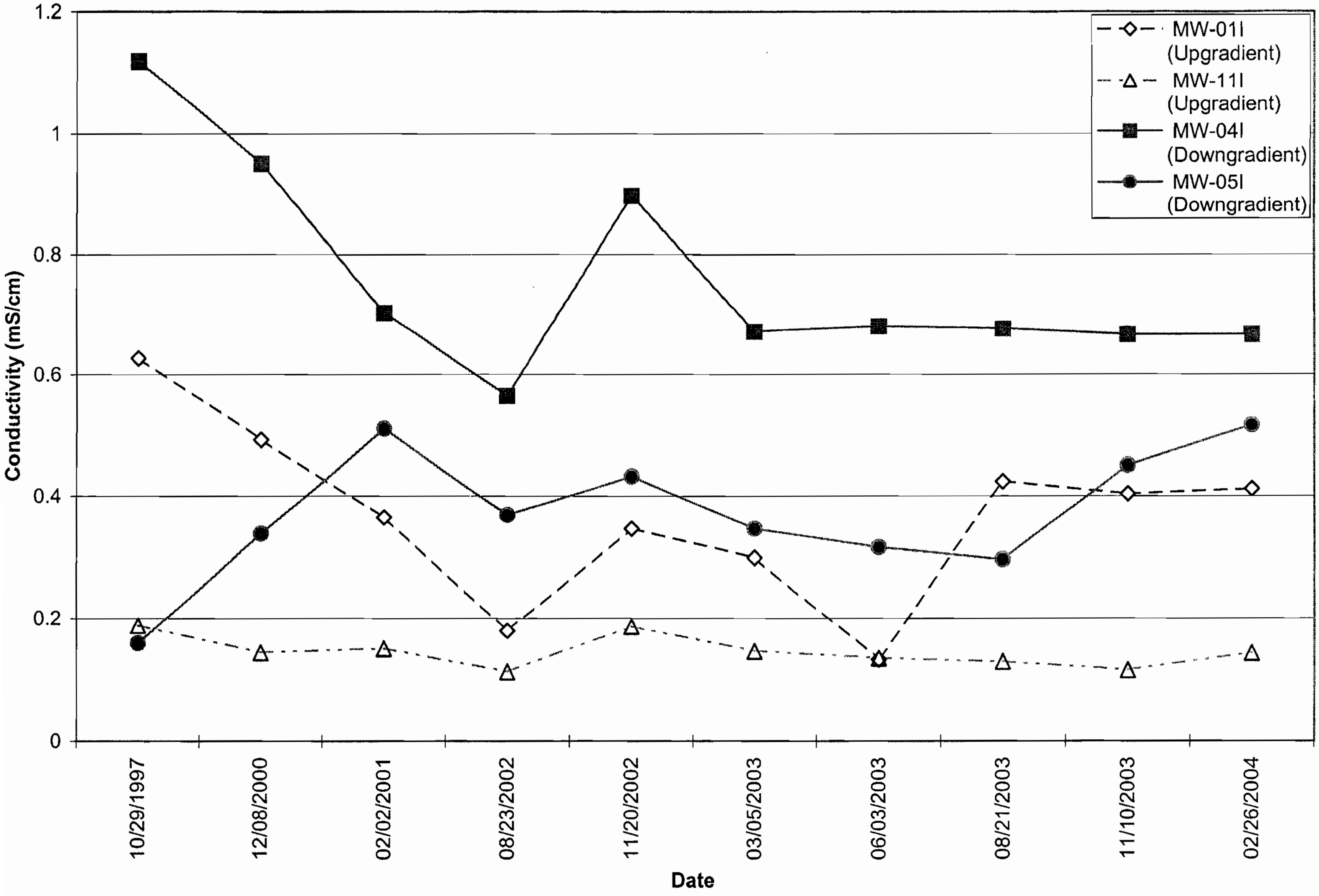
\public\JMilligan\Sonia 1stQ04\REPORT\GraphssAlkalinity Chart 1

HISTORIC TOTAL DISSOLVED SOLID RESULTS IN SELECTED SHALLOW WELLS



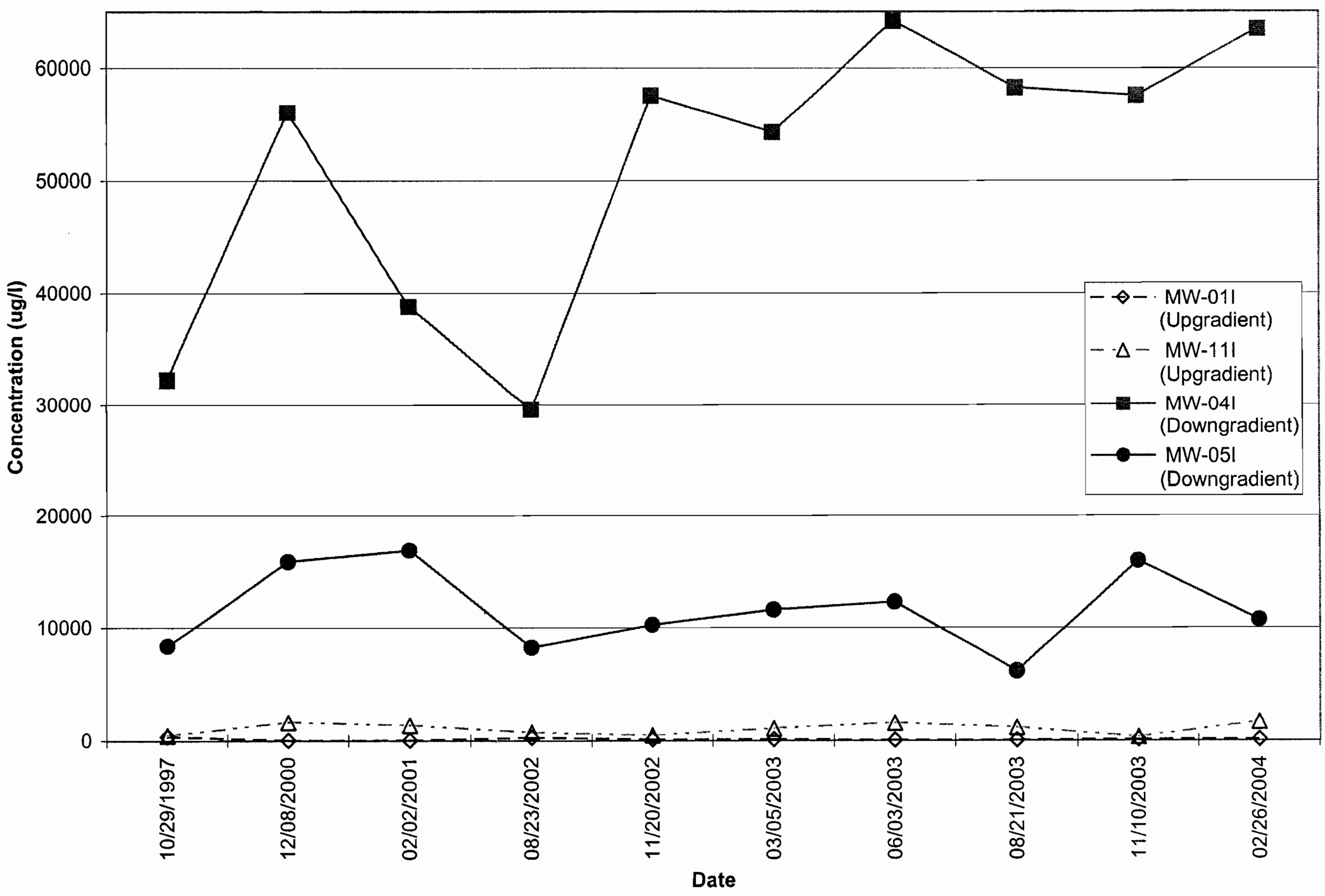
\public\JMilligan\Sonia 1stQ04\REPORT\GraphsTDS Chart 1

HISTORIC SPECIFIC CONDUCTIVITY RESULTS IN SELECTED INTERMEDIATE WELLS



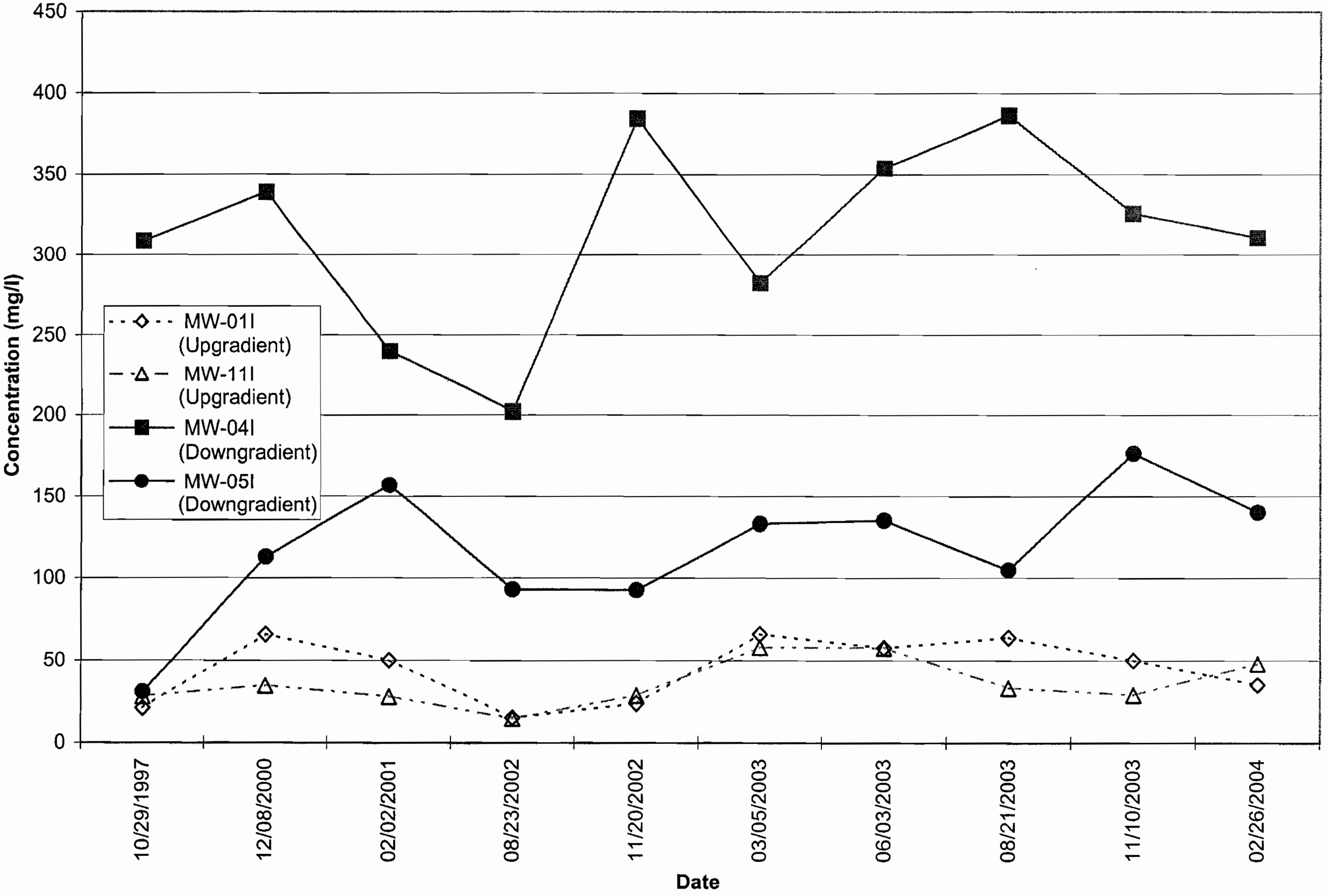
\public\JMilligan\Sonia 1stQ04\REPORT\GraphsICOND Chart 1

HISTORIC IRON + MANGANESE RESULTS IN SELECTED INTERMEDIATE WELLS



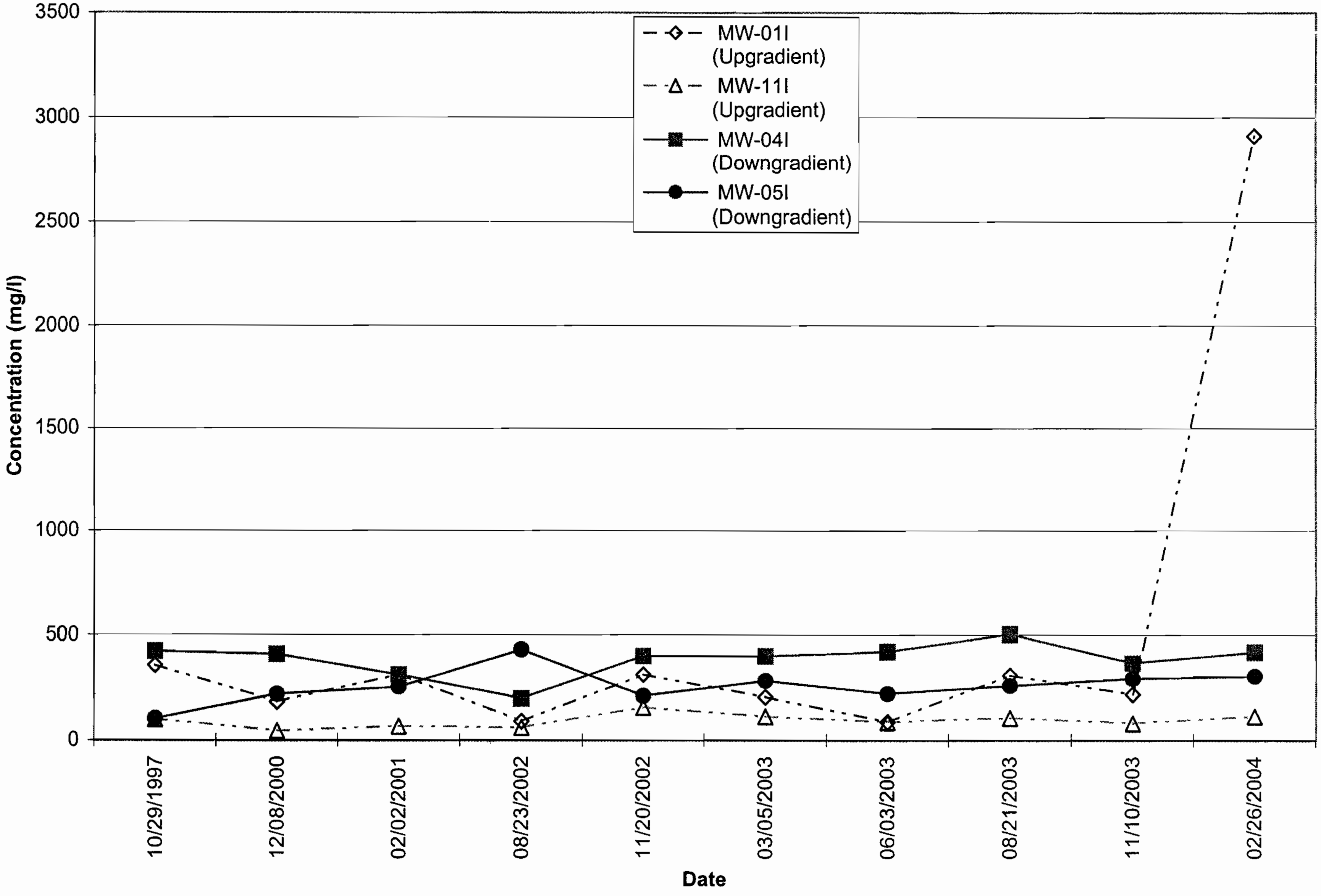
\public\JMilligan\Sonia 1stQ04\REPORT\GraphsiFE+MN Chart 1

HISTORIC ALKALINITY RESULTS IN SELECTED INTERMEDIATE WELLS



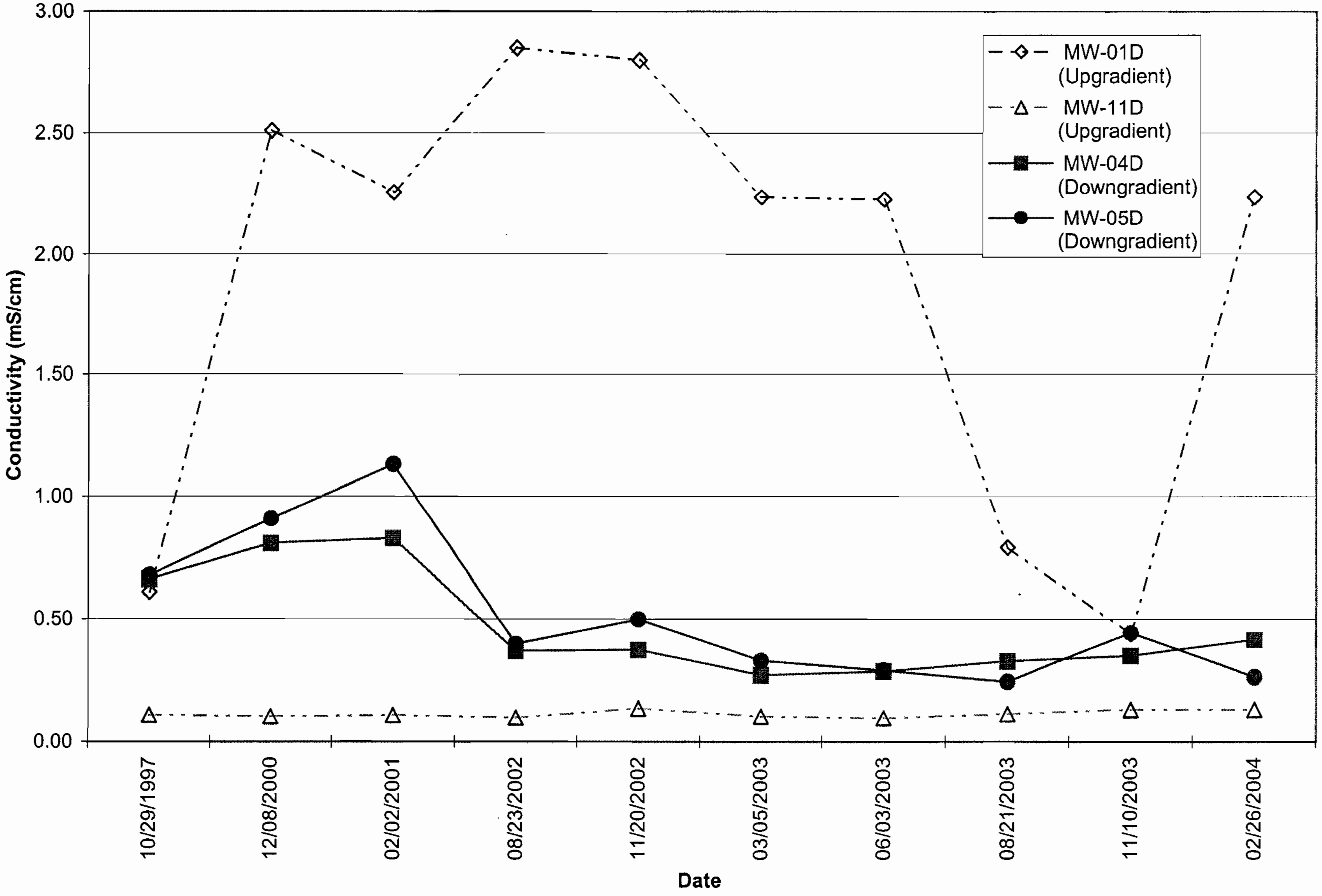
\public\JMilligan\Sonia 1stQ04\REPORT\GraphsiALKALINITY Chart 1

HISTORIC TOTAL DISSOLVED SOLID RESULTS IN SELECTED INTERMEDIATE WELLS



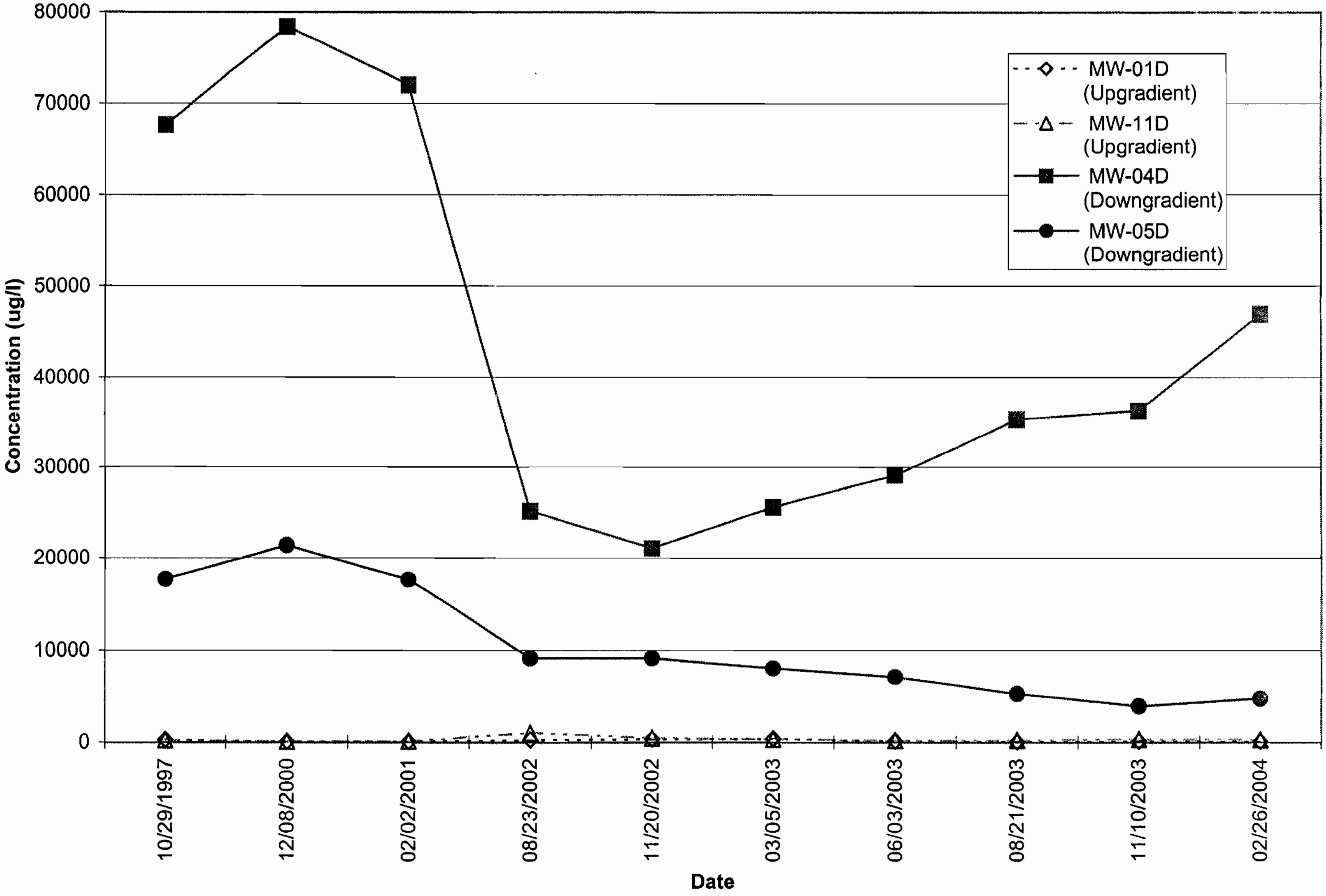
\public\JMilligan\Sonia 1stQ04\REPORT\GraphsiTDS Chart 1

HISTORIC SPECIFIC CONDUCTIVITY RESULTS IN SELECTED DEEP WELLS



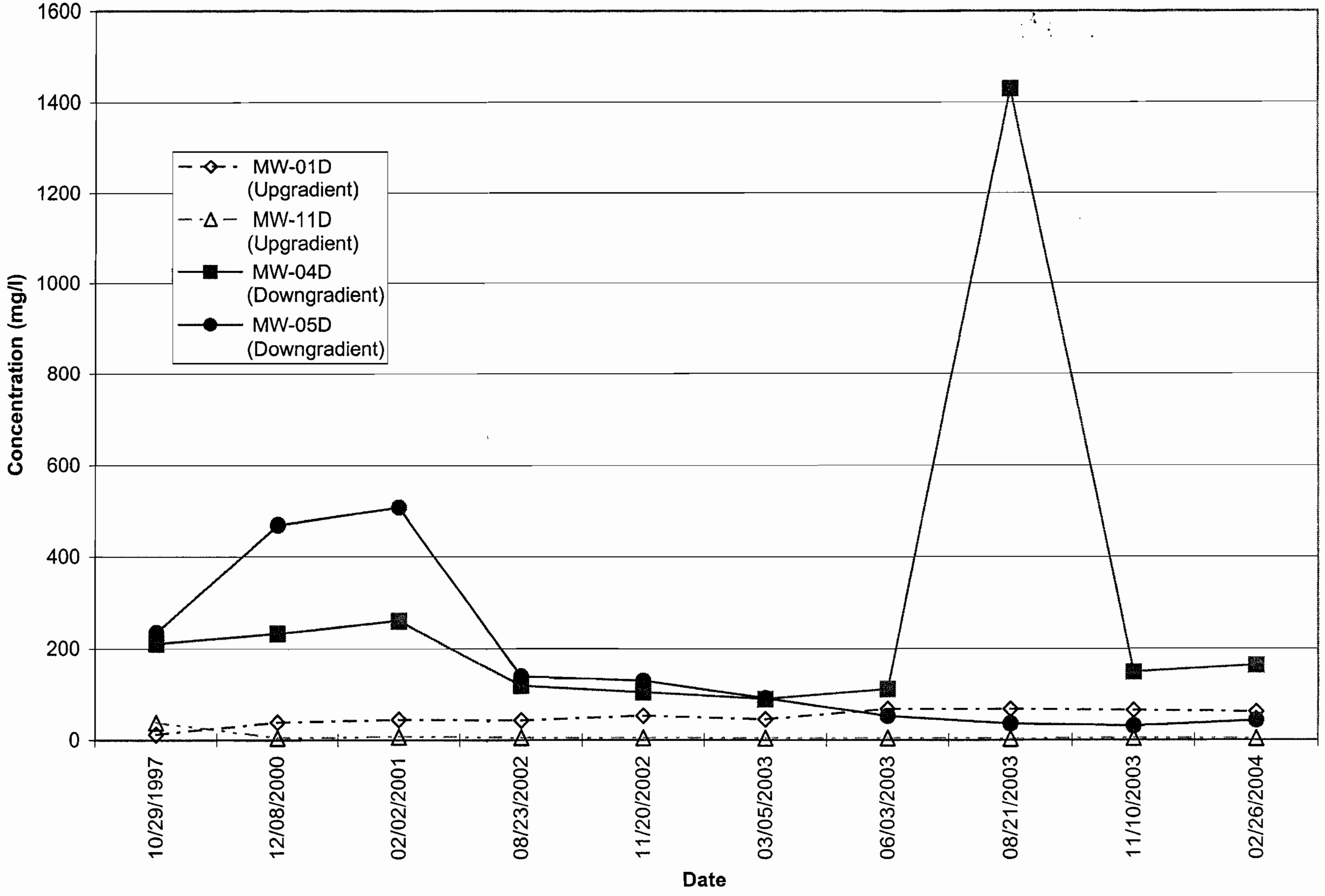
\public\JMilligan\Sonia 1stQ04\REPORT\GraphsdCOND Chart 1

HISTORIC IRON + MANGANESE RESULTS IN SELECTED DEEP WELLS

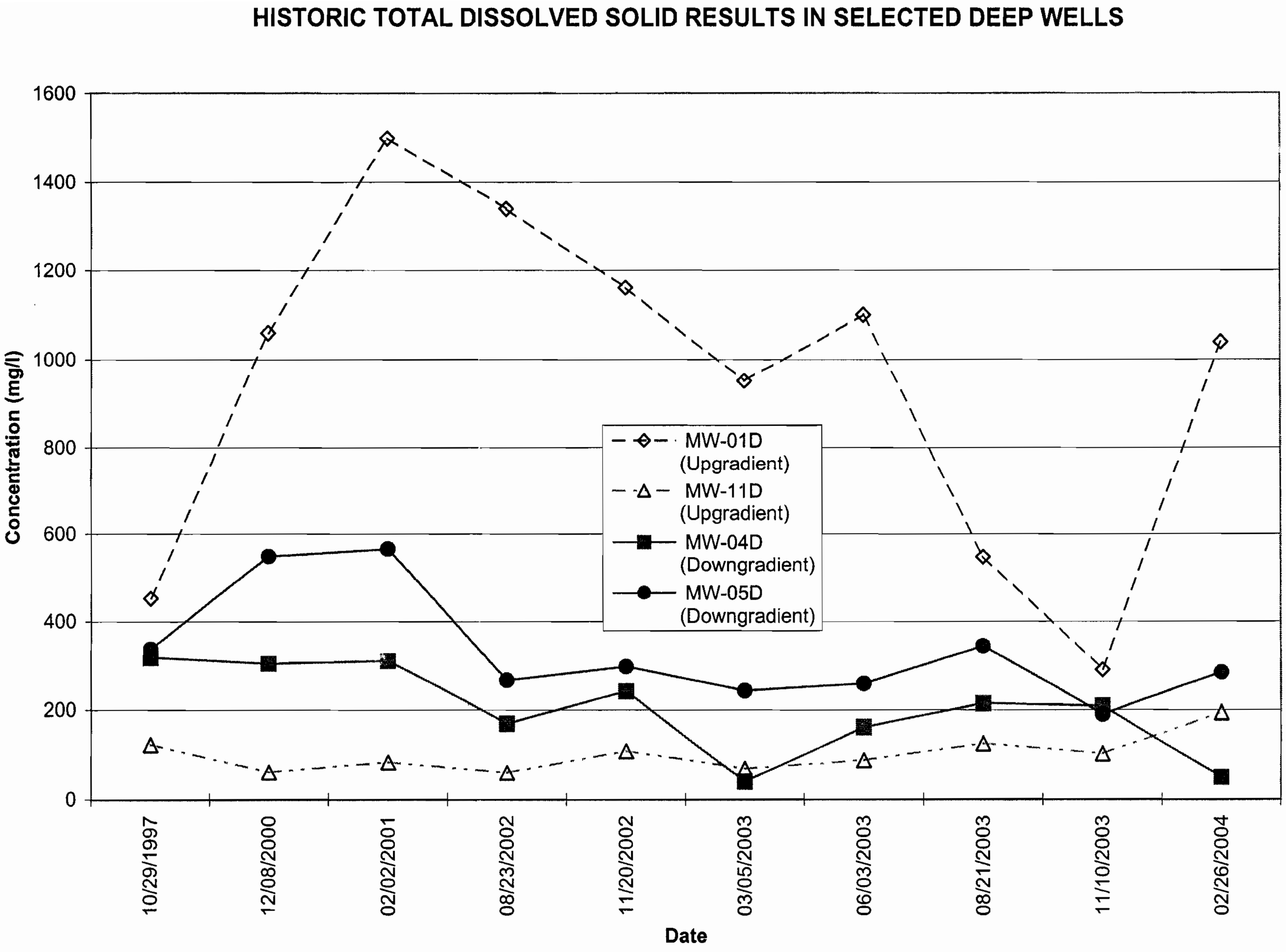


\public\JMilligan\Sonia 1stQ04\REPORT\GraphsdFE+MN Chart 1

HISTORIC ALKALINITY RESULTS IN SELECTED DEEP WELLS



\public\JMilligan\Sonia 1stQ04\REPORT\GraphsdAlkalinity Chart 1



\public\JMilligan\Sonia 1stQ04\REPORT\GraphsdTDS Chart 1

Appendix B

APPENDIX B-1

FIELD FORMS – FIELD OBSERVATION LOGS

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill
DATE 2/26/04

SAMPLE ID: 2023-MW-01S (29)
WELL ID: MW-01S

SAMPLERS:	Time On-site:	Time Off-site:
Supy Singh	1200	1310
James Milligan	1200	1310

Depth of well (from top of casing) .... 28.88 ft Time: ____
Initial static water level (from top of casing) .... 15.51 ft Time: ____

Purging Method

Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 13.37 ft. of water x 0.65 = 8.69 gallons

volume of water removed:
30 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.43	12.47	0.665	358.0	4.86	246
5	5.80	13.22	0.628	144.0	0.73	251
10	5.97	13.24	0.626	160.0	0.51	21
15	5.98	13.24	0.626	162.0	0.50	20
20	6.00	13.24	0.624	10.6	0.49	18
25	6.01	13.27	0.622	4.2	0.49	16
30	6.03	13.27	0.622	3.1	0.49	15
Sample	6.23	11.37	0.595	12.5	4.40	57

Sampling

Time of Sample Collection: 1305

Method:		Analyses:	
____	Stainless steel bailer	____	VOCs 602 ____ 503 ____ Other ____
____	Teflon bailer	____	SVOCs
____	Pos. Disp. Pump	X	Metals
X	Disposable bailer	____	PCB/Pest.
____	Dedicated pump	____	Physical
	Other:	X	Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 45 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
1 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 2/26/04

SAMPLE ID:	2023-MW-01I (78)		
WELL ID:	MW-01I	Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	1315	1400
	James Milligan	1315	1400

Depth of well (from top of casing) .... 78.63 ft Time: ______

Initial static water level (from top of casing) .... 14.64 ft Time: ______

Purging Method

Airlift ____ Centrifugal ____

Bailer ____ Pos. Displ. ____

Submersible X Ded. Pump ____

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons

3 in. casing: ____ ft. of water x 0.36 = ____ gallons

4 in. casing: 63.99 ft. of water x 0.65 = 41.59 gallons

volume of water removed:

150 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	6.21	12.07	0.243	46.4	2.42	64
25	5.64	13.76	0.395	8.5	0.69	143
50	5.59	13.76	0.412	8.9	0.53	149
75	5.54	13.74	0.416	4.2	0.49	158
100	5.48	13.75	0.415	4.7	0.47	161
125	5.49	13.75	0.414	3.8	0.47	164
150	5.49	13.75	0.414	4.4	0.47	169
Sample	5.68	13.24	0.412	2.0	1.01	173

Sampling

Time of Sample Collection: 1355

Method:

____ Stainless steel bailer

____ Teflon bailer

____ Pos. Disp. Pump

X Disposable bailer

____ Dedicated pump

Other: ____

Analyses:

____ VOCs 602 ____ 503 ____ Other ____

____ SVOCs

X Metals

____ PCB/Pest.

____ Physical

X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 45 degrees F

Sample description: clear colorless no odor

Free Product? yes ____ no X describe ____

Sheen? yes ____ no X describe ____

Odor? yes ____ no X describe ____

Comments:

5 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 2/26/04

SAMPLE ID: 2023-MW-01D (106)
WELL ID: MW-01D

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	1400	1425
	James Milligan	1400	1425

Depth of well (from top of casing) .... 105.86 ft Time:
Initial static water level (from top of casing) .... 14.01 ft Time:

Purging Method

Airlift	___	Centrifugal	___
Bailer	___	Pos. Displ.	___
Submersible	X	Ded. Pump	___

Well Volume Calculation:

2 in. casing:	___	ft. of water x 0.16 =	___	gallons
3 in. casing:	___	ft. of water x 0.36 =	___	gallons
4 in. casing:	91.85	ft. of water x 0.65 =	59.70	gallons

volume of water removed:
220 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.60	13.33	0.409	3.3	1.06	192
20	5.61	13.25	0.400	3.0	1.32	197
60	5.43	13.48	1.84	3.4	1.03	205
100	5.49	13.41	2.07	0.1	0.62	202
140	5.56	13.40	2.20	5.9	0.54	202
180	5.59	13.39	2.22	3.2	0.47	203
200	5.59	13.39	2.23	2.8	0.47	202
220	5.61	13.39	2.23	0.7	0.47	202
Sample	5.90	11.17	2.24	0.6	3.09	273

Sampling

Time of Sample Collection: 1420

Method:		Analyses:		
___	Stainless steel bailer	___	VOCs	602 ___ 503 ___ Other ___
___	Teflon bailer	___	SVOCs	
___	Pos. Disp. Pump	X	Metals	
X	Disposable bailer	___	PCB/Pest.	
___	Dedicated pump	___	Physical	
	Other:	X	Other	BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 45 degrees F
Sample description: clear colorless no odor
Free Product? yes ___ no X describe
Sheen? yes ___ no X describe
Odor? yes ___ no X describe

Comments:

5 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 2/26/04

SAMPLE ID: 2023-MW-02I (72)
WELL ID: MW-02I

SAMPLERS:	Time On-site:	Time Off-site:
Supy Singh	1400	1425
James Milligan	1400	1425

Depth of well (from top of casing) .... 72.13 ft Time: ____
Initial static water level (from top of casing) .... 29.07 ft Time: ____

Purging Method

Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 43.06 ft. of water x 0.65 = 27.98 gallons

volume of water removed:
120 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	4.68	15.73	0.101	21.	2.29	369
20	4.52	14.97	0.109	0.6	0.94	360
40	4.48	14.67	0.114	1.8	0.52	353
60	4.43	14.65	0.115	2.5	0.52	350
80	4.43	14.60	0.115	1.8	0.48	344
100	4.43	14.61	0.115	1.9	0.48	342
120	4.43	14.61	0.115	1.3	0.47	340
Sample	4.58	14.46	0.114	3.5	1.98	376

Sampling

Time of Sample Collection: 1515

Method:		Analyses:	
____	Stainless steel bailer	____	VOCs 602 ____ 503 ____ Other ____
____	Teflon bailer	____	SVOCs
____	Pos. Disp. Pump	X	Metals
X	Disposable bailer	____	PCB/Pest.
____	Dedicated pump	____	Physical
	Other:	X	Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 45 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
4 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 2/27/04

SAMPLE ID: 2023-MW-02D (116)
WELL ID: MW-02D

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	0830	0915
	James Milligan	0830	0915

Depth of well (from top of casing) .... 116 ft Time: ______
Initial static water level (from top of casing) .... 29.20 ft Time: ______

Purging Method

Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 86.8 ft. of water x 0.65 = 56.42 gallons

volume of water removed:
180 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.08	16.98	0.094	18.4	3.52	404
20	5.42	14.63	0.091	11.4	3.68	413
40	5.40	13.98	0.093	28.1	3.60	420
60	5.32	13.56	0.092	22.4	3.58	410
80	5.01	13.55	0.092	14.7	3.59	410
100	5.02	13.56	0.092	13.3	3.58	390
120	5.02	13.54	0.092	8.2	3.64	377
140	5.02	13.56	0.091	8.0	3.68	380
160	5.01	13.54	0.091	7.9	3.69	381
180	5.02	13.54	0.090	5.2	3.68	381
Sample	5.52	12.70	0.093	1.6	4.04	376

Sampling

Time of Sample Collection: 0910

Method:		Analyses:	
____	Stainless steel bailer	____	VOCs 602 ____ 503 ____ Other ____
____	Teflon bailer	____	SVOCs
____	Pos. Disp. Pump	X	Metals
X	Disposable bailer	____	PCB/Pest.
____	Dedicated pump	____	Physical
	Other:	X	Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 30 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
20 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/2/04

SAMPLE ID: 2023-MW-03S (32)
WELL ID: MW-03S

SAMPLERS:	Time On-site:	Time Off-site:
Supy Singh	0845	0930
James Milligan	0845	0930

Depth of well (from top of casing) .... 31.60 ft Time: ____
Initial static water level (from top of casing) .... 21.83 ft Time: ____

Purging Method
Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:
2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 9.77 ft. of water x 0.65 = 6.35 gallons

volume of water removed:
32 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.85	16.03	0.475	18.8	2.46	1
4	5.83	16.26	0.480	5.2	1.62	-5
8	5.82	16.34	0.482	1.8	1.00	-17
12	5.81	16.30	0.483	6.8	0.81	-25
16	5.79	16.39	0.483	5.7	0.65	-31
20	5.77	16.40	0.483	5.8	0.53	-35
24	5.76	16.44	0.482	6.4	0.52	-40
28	5.77	16.45	0.482	5.2	0.52	-40
32	5.78	16.47	0.482	5.1	0.52	-41
Sample	5.49	16.45	0.483	5.9	1.30	-40

Sampling
Time of Sample Collection: 0925

Method:
____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
Other: ____

Analyses:
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations
Weather/Temperature: overcast 50 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
4 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/2/04

SAMPLE ID: 2023-MW-04S (34)
WELL ID: MW-04S

SAMPLERS:		Time On-site:	Time Off-site:
	Supy Singh	0700	0830
	James Milligan	0700	0830

Depth of well (from top of casing) .... 33.70 ft Time: ______
Initial static water level (from top of casing) .... 23.35 ft Time: ______

Purging Method				Well Volume Calculation:				
Airlift	____	Centrifugal	____	2 in. casing:	____	ft. of water x 0.16 =	____	gallons
Bailer	____	Pos. Displ.	____	3 in. casing:	____	ft. of water x 0.36 =	____	gallons
Submersible	X	Ded. Pump	____	4 in. casing:	10.35	ft. of water x 0.65 =	20.19	gallons

volume of water removed:
32 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.26	13.85	0.517	256	2.53	124
4	5.57	14.16	0.749	60.2	0.96	33
8	5.57	14.15	0.753	54.8	0.69	10
12	5.56	14.15	0.753	55.1	0.62	-3
16	5.57	14.15	0.753	57.8	0.61	-6
20	5.55	14.18	0.753	51.7	0.59	-9
24	5.56	14.17	0.749	42.4	0.57	-13
28	5.56	14.17	0.749	36.3	0.56	-14
32	5.56	14.17	0.748	20.4	0.56	-15
Sample	5.87	12.50	0.735	13.7	0.56	-19

Sampling

Time of Sample Collection: 0820

Method:		Analyses:	
____	Stainless steel bailer	____	VOCs 602 ____ 503 ____ Other ____
____	Teflon bailer	____	SVOCs
____	Pos. Disp. Pump	X	Metals
X	Disposable bailer	____	PCB/Pest.
____	Dedicated pump	____	Physical
	Other:	X	Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: overcast 50 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
4 GPM

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FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/1/04

SAMPLE ID: 2023-MW-04I (71)
WELL ID: MW-04I

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	1350	1430
	James Milligan	1350	1430

Depth of well (from top of casing) .... 71.30 ft Time: ____
Initial static water level (from top of casing) .... 21.66 ft Time: ____

Purging Method

Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 49.64 ft. of water x 0.65 = 32.27 gallons

volume of water removed:
160 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.69	14.28	0.582	76.3	4.29	-2
20	5.65	14.56	0.668	5.6	0.97	-21
40	5.65	14.57	0.668	6.1	0.82	-23
60	5.65	14.57	0.668	5.5	0.72	-24
80	5.64	14.57	0.668	5.7	0.65	-26
100	5.65	14.57	0.668	4.6	0.62	-26
120	5.64	14.57	0.668	4.6	0.58	-27
140	5.63	14.57	0.668	5.7	0.57	-28
160	5.63	14.57	0.668	6.0	0.55	-29
Sample	5.77	14.04	0.665	2.6	3.72	-27

Sampling

Time of Sample Collection: 1415

Method:
- ____ Stainless steel bailer
- ____ Teflon bailer
- ____ Pos. Disp. Pump
- X Disposable bailer
- ____ Dedicated pump
- Other: ____

Analyses:
- ____ VOCs 602 ____ 503 ____ Other ____
- ____ SVOCs
- X Metals
- ____ PCB/Pest.
- ____ Physical
- X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 60 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
20 GPM

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FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/1/04

SAMPLE ID: 2023-MW-04D (114)
WELL ID: MW-04D

SAMPLERS:	Time On-site:	Time Off-site:
Supy Singh	1300	1350
James Milligan	1300	1350

Depth of well (from top of casing) .... 114.10 ft Time: ____
Initial static water level (from top of casing) .... 21.28 ft Time: ____

Purging Method

Airlift	____	Centrifugal	____
Bailer	____	Pos. Displ.	____
Submersible	X	Ded. Pump	____

Well Volume Calculation:

2 in. casing:	____	ft. of water x 0.16 =	____	gallons
3 in. casing:	____	ft. of water x 0.36 =	____	gallons
4 in. casing:	92.82	ft. of water x 0.65 =	60.33	gallons

volume of water removed:
300 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.29	14.42	0.235	82.0	4.85	243
40	4.98	14.57	0.282	15.9	2.79	205
80	5.25	14.27	0.313	1.4	1.37	-4
120	5.43	13.87	0.412	3.8	0.79	-49
160	5.59	13.85	0.418	5.7	0.54	-63
200	5.68	13.84	0.418	6.9	0.51	-68
240	5.73	13.85	0.418	7.2	0.49	-75
260	5.75	13.85	0.417	6.3	0.49	-77
280	5.80	13.85	0.418	5.6	0.48	-84
300	5.81	13.85	0.422	7.4	0.48	-83
Sample	6.09	13.36	0.413	13.4	0.87	-78

Sampling

Time of Sample Collection: 1340

Method:		Analyses:		
____	Stainless steel bailer	____	VOCs	602 ____ 503 ____ Other ____
____	Teflon bailer	____	SVOCs	
____	Pos. Disp. Pump	X	Metals	
X	Disposable bailer	____	PCB/Pest.	
____	Dedicated pump	____	Physical	
	Other: ____	X	Other	BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 60 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:

20 GPM

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FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/2/04

SAMPLE ID: 2023-MW-05S (34)
WELL ID: MW-05S

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	0950	1020
	James Milligan	0950	1020

Depth of well (from top of casing) .... 33.20 ft Time: ____
Initial static water level (from top of casing) .... 22.15 ft Time: ____

Purging Method

Airlift ____
Bailer ____
Submersible X
Centrifugal ____
Pos. Displ. ____
Ded. Pump ____

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 11.05 ft. of water x 0.65 = 7.18 gallons

volume of water removed:
32 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.56	17.61	0.641	3.8	1.91	-27
4	5.56	17.65	0.642	4.1	1.10	-29
8	5.56	17.64	0.646	4.5	0.79	-31
12	5.55	17.64	0.646	4.9	0.57	-34
16	5.55	17.64	0.646	4.8	0.54	-35
20	5.55	17.66	0.649	4.2	0.51	-35
24	5.56	17.66	0.647	4.8	0.50	-36
28	5.56	17.66	0.645	5.2	0.49	-37
32	5.56	17.67	0.649	5.4	0.48	-38
Sample	5.56	17.66	0.649	3.8	1.05	-37

Sampling

Time of Sample Collection: 1015

Method:
____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
Other: ____

Analyses:
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: overcast 50 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
4 GPM

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FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/2/04

SAMPLE ID: 2023-MW-5I (34)
WELL ID: MW-05I

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	1030	1110
	James Milligan	1030	1110

Depth of well (from top of casing) .... 70.20 ft Time: ______
Initial static water level (from top of casing) .... 22.11 ft Time: ______

Purging Method

Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:

2 in. casing: ______ ft. of water x 0.16 = ______ gallons
3 in. casing: ______ ft. of water x 0.36 = ______ gallons
4 in. casing: 48.09 ft. of water x 0.65 = 31.26 gallons

volume of water removed:
140 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.69	15.91	0.420	16.0	3.20	4
20	5.69	15.34	0.539	0.5	1.28	-13
40	5.71	15.33	0.521	4.4	0.67	-22
60	5.71	15.32	0.529	4.1	0.66	-26
80	5.72	15.33	0.526	5.8	0.56	-29
100	5.73	15.32	0.524	5.3	0.53	-31
120	5.73	15.32	0.521	5.5	0.49	-34
140	5.73	15.32	0.519	5.5	0.48	-34
Sample	5.72	15.33	0.515	10.3	1.50	-30

Sampling

Time of Sample Collection: 1105

Method:
____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
Other: ____

Analyses:
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: overcast 50 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
20 GPM Blind Duplicate #2

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/2/04

SAMPLE ID: 2023-MW-5D (116)
WELL ID: MW-05D

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	1030	1110
	James Milligan	1030	1110

Depth of well (from top of casing) .... 115.7 ft Time: ____
Initial static water level (from top of casing) .... 22.57 ft Time: ____

Purging Method
Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:
2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 93.13 ft. of water x 0.65 = 60.53 gallons

volume of water removed:
260 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (mS/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	6.23	14.24	0.185	1.3	1.93	136
40	5.96	13.70	0.247	1.5	0.69	129
80	5.81	13.71	0.247	4.9	0.50	128
120	5.70	13.70	0.251	0.6	0.46	125
160	5.63	13.70	0.254	10.3	0.45	123
200	5.59	13.70	0.256	18.0	0.45	122
220	5.59	13.70	0.257	17.5	0.45	121
240	5.56	13.70	0.258	17.3	0.44	122
260	5.54	17.70	0.259	16.5	0.44	122
Sample	5.54	13.70	0.260	20.0	0.45	123

Sampling
Time of Sample Collection: 1200

Method:
____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
Other: ____

Analyses:
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations
Weather/Temperature: overcast 50 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
20 GPM MS/MSD #2 taken

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 2/27/04

SAMPLE ID: 2023-MW-06S (37)
WELL ID: MW-06S

SAMPLERS:	Time On-site:	Time Off-site:
Supy Singh	1200	1300
James Milligan	1200	1300

Depth of well (from top of casing) .... 37.90 ft Time: ______
Initial static water level (from top of casing) .... 26.15 ft Time: ______

Purging Method

Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:

2 in. casing: ______ ft. of water x 0.16 = ______ gallons
3 in. casing: ______ ft. of water x 0.36 = ______ gallons
4 in. casing: 11.75 ft. of water x 0.65 = 7.64 gallons

volume of water removed:
24 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.88	16.93	0.427	167.0	6.93	136
4	5.95	17.32	0.590	25.1	0.86	-12
8	6.03	17.29	0.584	1.4	0.54	-21
12	6.03	17.30	0.582	2.0	0.53	-23
16	6.06	17.35	0.581	4.6	0.52	-26
20	6.09	17.35	0.588	3.0	0.51	-30
22	6.09	17.35	0.587	2.4	0.51	-30
24	6.09	17.33	0.588	4.6	0.50	-30
Sample	6.24	16.28	0.572	2.8	0.91	-32

Sampling

Time of Sample Collection: 1240

Method:
- ____ Stainless steel bailer
- ____ Teflon bailer
- ____ Pos. Disp. Pump
- X Disposable bailer
- ____ Dedicated pump
- Other: ____

Analyses:
- ____ VOCs 602 ____ 503 ____ Other ____
- ____ SVOCs
- X Metals
- ____ PCB/Pest.
- ____ Physical
- X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 30 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:

1 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 2/27/04

SAMPLE ID: 2023-MW-06I (76)
WELL ID: MW-06I

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	1100	1155
	James Milligan	1100	1155

Depth of well (from top of casing) .... 76.40 ft Time: ____
Initial static water level (from top of casing) .... 26.31 ft Time: ____

Purging Method
Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:
2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 50.09 ft. of water x 0.65 = 32.56 gallons

volume of water removed:
140 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.56	15.93	0.142	9.3	2.01	201
20	5.60	15.28	0.154	2.7	0.50	100
40	5.58	15.28	0.153	3.1	0.51	99
60	5.62	15.35	0.155	2.8	0.47	97
80	5.61	15.36	0.156	2.9	0.45	83
100	5.60	15.34	0.157	3.1	0.46	79
120	5.64	15.26	0.157	2.9	0.45	77
140	5.63	15.28	0.157	3.0	0.45	75
Sample	5.75	14.88	0.155	2.0	0.45	80

Sampling
Time of Sample Collection: 1155

Method:
____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
Other:

Analyses:
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations
Weather/Temperature: sunny clear. 30 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
20 GPM

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FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 2/27/04

SAMPLE ID: 2023-MW-06D (112)
WELL ID: MW-06D

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	1018	1040
	James Milligan	1018	1040

Depth of well (from top of casing) .... 112.1 ft Time:
Initial static water level (from top of casing) .... 26.72 ft Time:

Purging Method

Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 95.38 ft. of water x 0.65 = 55.50 gallons

volume of water removed:
220 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.69	16.10	0.112	101.0	2.86	68
40	5.80	14.75	0.113	103.0	1.35	43
80	5.69	14.15	0.110	48.3	0.72	50
120	5.65	14.11	0.110	2.4	0.62	53
160	5.65	14.13	0.110	1.0	0.57	56
180	5.65	14.13	0.110	0.6	0.56	56
200	5.65	14.13	0.109	0.5	0.54	56
220	5.65	14.13	0.109	0.3	0.53	55
Sample	5.78	14.17	0.111	12.2	3.29	74

Sampling

Time of Sample Collection: 1035

Method:		Analyses:		
____	Stainless steel bailer	____	VOCs	602 ____ 503 ____ Other ____
____	Teflon bailer	____	SVOCs	
____	Pos. Disp. Pump	X	Metals	
X	Disposable bailer	____	PCB/Pest.	
____	Dedicated pump	____	Physical	
	Other:	X	Other	BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 30 degrees F
Sample description: clear colorless sulfer odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes X no ____ describe Sulfer

Comments:

20 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 2/27/04

SAMPLE ID: 2023-MW-07I (74)
WELL ID: MW-07I

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	0930	1000
	James Milligan	0930	1000

Depth of well (from top of casing) .... 74.2 ft Time: ____
Initial static water level (from top of casing) .... 24.40 ft Time: ____

Purging Method
Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:
2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 49.80 ft. of water x 0.65 = 32.37 gallons

volume of water removed:
140 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.36	14.51	0.107	1.9	5.99	427
20	5.23	14.88	0.126	2.7	3.46	424
40	5.18	14.61	0.134	1.7	2.19	426
60	5.23	14.56	0.147	4.2	1.56	423
80	5.25	14.56	0.147	3.0	1.18	413
100	5.24	14.57	0.145	6.5	0.75	399
120	5.24	14.57	0.145	6.1	0.68	387
140	5.26	14.57	0.144	2.8	0.68	385
Sample	5.46	13.84	0.142	0.7	2.14	346

Sampling
Time of Sample Collection: 0955

Method:
____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
Other: ____

Analyses:
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations
Weather/Temperature: sunny clear. 30 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
20 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/1/04

SAMPLE ID: 2023-MW-11S (19)
WELL ID: MW-11S

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	1040	1110
	James Milligan	1040	1110

Depth of well (from top of casing) .... 19.60 ft Time: ____
Initial static water level (from top of casing) .... 7.82 ft Time: ____

Purging Method

Airlift	____	Centrifugal	____
Bailer	____	Pos. Displ.	____
Submersible	X	Ded. Pump	____

Well Volume Calculation:

2 in. casing:	____	ft. of water x 0.16 =	____	gallons
3 in. casing:	____	ft. of water x 0.36 =	____	gallons
4 in. casing:	11.78	ft. of water x 0.65 =	7.66	gallons

volume of water removed:
36 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	4.87	13.03	0.127	14.5	4.13	378
4	4.93	10.93	0.306	24.3	4.09	371
8	5.09	10.20	0.390	22.4	3.35	359
12	5.19	9.36	0.508	16.6	2.49	356
16	5.26	9.36	0.509	14.3	1.86	352
20	5.32	9.36	0.509	10.0	1.47	352
24	5.36	9.35	0.509	4.6	1.15	352
28	5.43	9.35	0.507	0.8	0.81	352
32	5.44	9.35	0.507	3.1	0.80	352
36	5.46	9.34	0.506	3.3	0.79	351
Sample	5.83	9.31	0.507	17.0	0.73	339

Sampling

Time of Sample Collection: 1100

Method:		Analyses:		
____	Stainless steel bailer	____	VOCs	602 ____ 503 ____ Other ____
____	Teflon bailer	____	SVOCs	
____	Pos. Disp. Pump	X	Metals	
X	Disposable bailer	____	PCB/Pest.	
____	Dedicated pump	____	Physical	
	Other:	X	Other	BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 60 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
4 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/1/04

SAMPLE ID:	2023-MW-11I (71)		
WELL ID:	MW-11I	Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	1040	1110
	James Milligan	1040	1110

Depth of well (from top of casing) .... 71.30 ft Time: ____
Initial static water level (from top of casing) .... 8.32 ft Time: ____

Purging Method

Airlift	____	Centrifugal	____
Bailer	____	Pos. Displ.	____
Submersible	X	Ded. Pump	____

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 62.98 ft. of water x 0.65 = 40.94 gallons

volume of water removed:
200 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.76	10.61	0.116	2.1	0.94	353
20	5.72	13.17	0.102	3.5	0.99	360
40	5.16	13.62	0.141	8.7	0.85	362
60	5.12	13.63	0.142	8.7	0.68	360
80	5.08	13.63	0.143	10.5	0.62	358
100	5.05	13.64	0.142	12.0	0.56	349
120	5.03	13.65	0.142	1.6	0.55	383
140	5.02	13.65	0.143	7.0	0.55	336
160	5.03	13.64	0.147	4.2	0.54	331
180	5.01	13.66	0.146	4.0	0.59	329
200	5.02	13.66	0.145	4.1	0.61	329
Sample	5.02	13.96	0.143	4.7	0.86	329

Sampling

Time of Sample Collection: 1135

Method:		Analyses:	
____	Stainless steel bailer	____	VOCs 602 ____ 503 ____ Other ____
____	Teflon bailer	____	SVOCs
____	Pos. Disp. Pump	X	Metals
X	Disposable bailer	____	PCB/Pest.
____	Dedicated pump	____	Physical
	Other:	X	Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 60 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
20 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/1/04

SAMPLE ID: 2023-MW-11D (94)
WELL ID: MW-11D
SAMPLERS: Supy Singh
James Milligan

Time On-site: ____
Time Off-site: ____

Depth of well (from top of casing) .... 94.20 ft Time: ____
Initial static water level (from top of casing) .... 8.08 ft Time: ____

Purging Method
Airlift ____
Bailer ____
Submersible X
Centrifugal ____
Pos. Displ. ____
Ded. Pump ____

Well Volume Calculation:
2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 86.12 ft. of water x 0.65 = 55.98 gallons

volume of water removed:
260 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	4.76	13.65	0.131	16.1	0.83	319
40	3.90	13.58	0.125	5.4	0.94	350
60	3.88	13.44	0.124	2.7	0.95	356
100	3.90	13.34	0.129	3.0	1.24	363
140	3.89	13.36	0.130	0.9	1.52	374
160	3.86	13.36	0.130	1.6	1.54	377
180	3.85	13.36	0.130	5.1	1.60	380
200	3.85	13.36	0.130	5.4	1.66	389
220	3.84	13.36	0.130	5.1	1.68	394
240	3.84	13.36	0.130	9.2	1.68	394
260	3.84	13.36	0.131	5.8	1.68	396
Sample	4.17	14.00	0.133	4.7	4.57	378

Sampling
Time of Sample Collection: 1210

Method:
____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
Other: ____

Analyses:
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations
Weather/Temperature: sunny clear. 60 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
20 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/1/04

SAMPLE ID: 2023-MW-12S (19)
WELL ID: MW-12S

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	0800	0845
	James Milligan	0800	0845

Depth of well (from top of casing) .... 18.40 ft Time: ____
Initial static water level (from top of casing) .... 7.97 ft Time: ____

Purging Method

Airlift ____ Centrifugal ____
Bailer ____ Pos. Displ. ____
Submersible X Ded. Pump ____

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 10.43 ft. of water x 0.65 = 6.78 gallons

volume of water removed:
32 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.49	10.22	0.419	74.6	3.88	344
4	5.72	10.26	0.409	42.2	3.28	346
8	5.76	10.39	0.401	22.8	2.82	351
12	5.77	10.41	0.398	11.2	2.51	356
16	5.79	10.44	0.393	5.9	2.18	360
20	5.81	10.48	0.388	4.5	2.10	363
24	5.82	10.50	0.388	1.2	2.01	367
28	5.83	10.52	0.385	0.2	1.84	368
32	5.84	10.54	0.381	0.5	1.81	371
Sample	6.03	10.05	0.365	5.5	3.98	391

Sampling

Time of Sample Collection: 0845

Method:
____ Stainless steel bailer
____ Teflon bailer
____ Pos. Disp. Pump
X Disposable bailer
____ Dedicated pump
Other: ____

Analyses:
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 60 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:

4 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/1/04

SAMPLE ID: 2023-MW-12I (70)
WELL ID: MW-12I

		Time On-site:	Time Off-site:
SAMPLERS:	Supy Singh	0900	0934
	James Milligan	0900	0934

Depth of well (from top of casing) .... 69.90 ft Time:
Initial static water level (from top of casing) .... 8.08 ft Time:

Purging Method

Airlift		Centrifugal	
Bailer		Pos. Displ.	
Submersible	X	Ded. Pump	

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 61.82 ft. of water x 0.65 = 40.18 gallons

volume of water removed:
200 gal. >3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	6.04	11.61	0.364	2.5	2.76	392
20	6.23	13.66	0.086	3.0	2.98	393
40	5.87	14.10	0.056	1.6	3.26	410
60	5.51	14.02	0.056	3.9	3.26	418
100	4.84	14.02	0.052	2.0	3.25	428
120	4.76	14.04	0.052	2.0	3.24	426
160	4.63	14.04	0.052	5.4	3.23	429
180	4.59	14.04	0.052	1.0	3.24	430
200	4.57	14.04	0.052	2.6	3.21	430
Sample	4.57	14.05	0.054	11.2	3.20	400

Sampling

Time of Sample Collection: 0930

Method:

	Stainless steel bailer
	Teflon bailer
	Pos. Disp. Pump
X	Disposable bailer
	Dedicated pump
	Other:

Analyses:

	VOCs 602 ____ 503 ____ Other ____
	SVOCs
X	Metals
	PCB/Pest.
	Physical
X	Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 60 degrees F
Sample description: clear colorless no odor
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

Comments:

20 GPM Blind duplicate #1 taken

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/1/04

SAMPLE ID: 2023-MW-12D (98)
WELL ID: MW-12D

SAMPLERS:	Time On-site:	Time Off-site:
Supy Singh	0940	1020
James Milligan	0940	1020

Depth of well (from top of casing) .... 98.00 ft Time: ___
Initial static water level (from top of casing) .... 7.78 ft Time: ___

Purging Method

Airlift ___
Bailer ___
Submersible X
Centrifugal ___
Pos. Displ. ___
Ded. Pump ___

Well Volume Calculation:

2 in. casing: ___ ft. of water x 0.16 = ___ gallons
3 in. casing: ___ ft. of water x 0.36 = ___ gallons
4 in. casing: 90.22 ft. of water x 0.65 = 58.60 gallons

volume of water removed:
280 gal. >3 volumes: yes X no ___ purged dry? yes ___ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	4.44	13.41	0.050	5.3	3.26	429
40	4.45	13.07	0.049	6.1	3.58	426
80	4.67	13.73	0.048	4.7	4.08	426
120	4.65	13.72	0.051	5.6	4.16	427
160	4.71	13.64	0.052	0.5	4.15	426
200	4.70	13.64	0.052	1.0	4.14	427
220	4.72	13.63	0.052	0.9	4.10	427
240	4.73	13.63	0.052	1.0	4.11	427
260	4.68	13.63	0.052	0.8	4.07	429
280	4.71	13.63	0.053	1.5	4.08	429
Sample	4.83	13.62	0.053	9.0	3.92	424

Sampling

Time of Sample Collection: 1010

Method:

___ Stainless steel bailer
___ Teflon bailer
___ Pos. Disp. Pump
X Disposable bailer
___ Dedicated pump
Other: ___

Analyses:

___ VOCs 602 ___ 503 ___ Other ___
___ SVOCs
X Metals
___ PCB/Pest.
___ Physical
X Other BOD5, BR, Ch, so4, total alkalinity, TDS, COD, NH3, NO3, phenols, TKN, TOC, total hardness

Observations

Weather/Temperature: sunny clear. 60 degrees F
Sample description: clear colorless no odor
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
20 GPM MS/MSD taken

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APPENDIX B-2

FIELD FORMS – DAILY EQUIPMENT CALIBRATION LOGS

Dvirka
and
Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Date: 2/25/04

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill

Project Number: 2023-07A

Calibrated by: Jim Milligan/Supy Singh

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Horiba water meter U-22	Buffer 4.0 solution	4 pm	Cal ok
Serial # 928021015	Autocal		
Solinist Water level Meter	Battery test	4:30 pm	Ok
Serial # 1355			
Neotronics multigas meter	factory calibrated 7/02	-	Ok
serial # 105703501			
Foxboro OVA-128	95 ppm methane	4:30 pm	Cal ok

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Date: 2/26/04

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill

Project Number: 2023-07A

Calibrated by: Jim Milligan/Supy Singh

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Horiba water meter U-22	Buffer 4.0 solution	7 am	Cal ok
Serial # 928021015	Autocal		
Solinist Water level Meter	Battery test	7 am	Ok
Serial # 1355			

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Date: 2/27/04

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill

Project Number: 2023-07A

Calibrated by: Jim Milligan/Supy Singh

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Horiba water meter U-22	Buffer 4.0 solution	7 am	Cal ok
Serial # 928021015	Autocal		
Solinist Water level Meter	Battery test	7 am	Ok
Serial # 1355			

H:\JMilligan\Sonia 1stQ04\Field Forms\equipment cal2.doc

Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Date: 3/1/04

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill

Project Number: 2023-07A

Calibrated by: Jim Milligan/Supy Singh

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Horiba water meter U-22	Buffer 4.0 solution	7 am	Cal ok
Serial # 928021015	Autocal		
Solinist Water level Meter	Battery test	7 am	Ok
Serial # 1355			

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Dvirka and Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Date: 3/2/04

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill

Project Number: 2023-07A

Calibrated by: Jim Milligan/Supy Singh

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Horiba water meter U-22	Buffer 4.0 solution	7 am	Cal ok
Serial # 928021015	Autocal		
Solinist Water level Meter	Battery test	7 am	Ok
Serial # 1355			

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Appendix C

APPENDIX C

CHAIN-OF-CUSTODY FORMS

H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (516) 694-3040 Fax: (516) 420-8436

11381

EXTERNAL CHAIN OF CUSTODY

CLIENT: FRI

H2M SDG NO:

PROJECT NAME/NUMBER: Sonia Road Landfill ISWD Resource Recovery Agency

DtB Job # 2023

SAMPLERS: (signature)/Client: Jim Milligan, S.M. Singh

DELIVERABLES: BS-70-D NYSDEC ASP Cat B

TURNAROUND TIME: 21 Days

NOTES: NYSDEC Part 360 Routine Parameters

Project Contact: Kelly Robert

Phone Number: (~~364~~ 516) 364-9890

Sample Container Description →

							40ml Vial H2SO4	1 250 HDPE HNO3	1 250ml Amber H2SO4	1L HDPE	1L HDPE HNO3			

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	VOA	BNA	Pest/PCB	ToC	T.L. Hardness			Metal	CN	LAB I.D. NO.	REMARKS:
					ORGANIC							INORG.			
2/26/04	1200	W	2023-Landfill Gas Condensate	8				3	1	1	2	1			
2/26/04	1305	GW	2023-MW-01S (29)	8				3	1	1	2	1			
2/26/04	1355	GW	2023-MW-01I (78)	8				3	1	1	2	1			
2/26/04	1420	GW	2023-MW-01D (106)	8				3	1	1	2	1			
2/26/04	1515	GW	2023-MW-2I (72)	8				3	1	1	2	1			
							2-26-04								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
S. Singh	2/26/04	1548	Angela	2/26/04	1548
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped ___ or Hand Delivered ___ Airbill# ________
2. Ambient or chilled
3. Received in good condition: Y or N
4. Properly preserved: Y or N
5. Samples returned to lab ___ Hrs from collection.

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

WHITE COPY - ORIGINAL YELLOW COPY - CLIENT PINK COPY - LABORATORY

H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (516) 694-3040 Fax: (516) 420-8436

11382

EXTERNAL CHAIN OF CUSTODY

CLIENT: IRS

H2M SDG NO:

PROJECT NAME/NUMBER Islip Resource Recovery Agency
Sonia Road Landfill

SAMPLERS: (signature)/Client
Milligan
Sudy Singh

DELIVERABLES:
BS-70-D NYSDec ASP Cat B

TURNAROUND TIME: 21 Days

NOTES:
NYSDEC
Part 360
Routine Parameters

Project Contact: Keith Robins

Phone Number: (516) 364 9890

					ANALYSIS REQUESTED										
				Sample Container Description →				40ml Vial H_2SO_4	250ml HDPE HNO3	250ml Amber H_2SO_4	1L HDPE	1L HDPE HNO3			
					ORGANIC							INORG.			
DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers ↓	VOA	BNA	Pest/ PCB	TOC	Total Hardness			Metal	CN	LAB I.D. NO.	REMARKS:
2/27/04	0910	GW	2023 - MW-02D (116)	8				3	1	1	2	1			
↓	0955	GW	2023 - MW-07I (74)	8				3	1	1	2	1			
	1035	GW	2023 - MW-06D (112)	8				3	1	1	2	1			
	1155	GW	2023 - MW-06I (76)	8				3	1	1	2	1			
↓	1240	GW	2023 - MW-06S (37)	8				3	1	1	2	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
S. Singh	2-27-04	1335		2/27/04	13:35

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _______
2. Ambient or chilled
3. Received in good condition: Y or N
4. Properly preserved: Y or N
5. Samples returned to lab ___ Hrs from collection.

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (516) 694-3040 Fax: (516) 420-8436

11375

EXTERNAL CHAIN OF CUSTODY

CLIENT: IRS

H2M SDG NO:

PROJECT NAME/NUMBER Sonia Road Landfill / Islip Resource Recovery Agency

SAMPLERS: (signature)/Client James Milligan / Supy Singh / DEB

DELIVERABLES: BS-72-D NYSDEC ASP Cat B

TURNAROUND TIME: 21 Days

NOTES: NYSDEC Part 360 Routine Parameters

Project Contact: Keith Robins

Phone Number: (516) 364 9890

					ANALYSIS REQUESTED										
				Sample Container Description →				40ml Vial H2SO4	250ml HDPE HNO3	250ml Amber H2SO4	1L HDPE	1L HDPE HNO3			
					ORGANIC							INORG.			
DATE	**TIME**	**MATRIX**	**FIELD I.D.**	**Total No. of Containers** ↓	**VOA**	**BNA**	**Pest/ PCB**	TOC	Total Hardness			**Metal**	**CN**	**LAB I.D. NO.**	**REMARKS:**
3/1/04	0845	GW	2023-MW-12S (19)	8				3	1	1	2	1			
	0930		2023-MW-12I (70)	8				3	1	1	2	1			
	1010		2023-MW-12D (98)	8				3	1	1	2	1			
	1010		2023-MW-12D (98) MS	8				3	1	1	2	1			
	1010		2023-MW-12D (98) MSD	8				3	1	1	2	1			
	1600		2023-MW-11S (19)	8				3	1	1	2	1			
	1135		2023-MW-11I (71)	8				3	1	1	2	1			
	1210		2023-MW-11D (94)	8				3	1	1	2	1			
	1340		2023-MW-04D (114)	8				3	1	1	2	1			
	1415		2023-MW-04I (71)	8				3	1	1	2	1			
↓	0000	↓	2023-Blind Duplicate #1	8				3	1	1	2	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
S. Singh	3/1/04	1520		3/1/04	1520

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _______
2. Ambient or chilled
3. Received in good condition: Y or N
4. Properly preserved: Y or N
5. Samples returned to lab ___ Hrs from collection.

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

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H2M LABS, INC.

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (516) 694-3040 Fax: (516) 420-8436

11376

EXTERNAL CHAIN OF CUSTODY

CLIENT: IRS

H2M SDG NO:

PROJECT NAME/NUMBER: Sonia Road Landfill — Islip Resource Recovery Agency

SAMPLERS: (signature)/Client
James Milliman
Sipy Singh

DELIVERABLES: B5-70-D NYSDEC ASP Cat B

TURNAROUND TIME: 21 Days

NOTES:
NYSDEC
Part 360
Routine Parameters

Project Contact: Keith Robins

Phone Number: (516) 304-9840

ANALYSIS REQUESTED

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC: VOA	BNA	Pest/PCB	TOC	Totals			INORG.: Metal	CN	LAB I.D. NO.	REMARKS:
			Sample Container Description →					40ml Vial H2SO4	250ml HDPE HNO3	25ml Amber H2SO4	1L HDPE	1L HDPE HNO3			
3/1/04	1435	AQ	2023-Field Blank #1	8				3	1	1	2	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
S. Singh	~~3/1/04~~ 3/1/04	1500		3/1/04	1500

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _______
2. Ambient or chilled
3. Received in good condition: Y or N
4. Properly preserved: Y or N
5. Samples returned to lab ___ Hrs from collection.

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

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H2M LABS, INC.

11377

EXTERNAL CHAIN OF CUSTODY

575 Broad Hollow Rd, Melville, NY 11747-5076
Tel: (516) 694-3040 Fax: (516) 420-8436

CLIENT: IRS

H2M SDG NO:

PROJECT NAME/NUMBER: Sonia Road Landfill Islip Resource Recovery Agency

SAMPLERS: (signature)/Client: James Milligan / Sofy Singh / D+B

DELIVERABLES: B5-70 D NYSDEC ASP Cat B

TURNAROUND TIME: 21 Days

NOTES: NYSDEC Part 360 Routine Parameters

Project Contact: Keith Robins

Phone Number: (516) 364-9890

Sample Container Description →							40 ml Vial H2SO4	250ml HDPE HNO3	250ml Amber H2SO4	1L HDPE	1L HDPE HNO3			
						ANALYSIS REQUESTED								
					ORGANIC						INORG.			
DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers ↓	VOA	BNA	Pest/PCB	TOC	Total Phenols			Metal	CN	LAB I.D. NO.	REMARKS:
3/2/04	0820	GW	2023-MW-04S (34)	8				3	1	1	2	1			
	0925	GW	2023-MW-03S (32)	8				3	1	1	2	1			
	1015	GW	2023-MW-05S (34)	8				3	1	1	2	1			
	1105	GW	2023-MW-05I (70)	8				3	1	1	2	1			
	0000	GW	2023-Blind Duplicate # 2	8				3	1	1	2	1			
	1200	GW	2023-MW-05D (116)	8				3	1	1	2	1			
	1200	GW	2023-MW-05D (116) MS	8				3	1	1	2	1			MS
	1210	GW	2023-MW-05D (116) MSD	8				3	1	1	2	1			MSD
↓	1300	AQ	2023-Field Blank #2	8				3	1	1	2	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
S Singh	3/2/04	1435		3/2/04	1435
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

LABORATORY USE ONLY

Discrepancies Between Sample Labels and COC Record? Y or N
Explain:

Samples were:
1. Shipped___ or Hand Delivered___ Airbill# _______
2. Ambient or chilled
3. Received in good condition: Y or N
4. Properly preserved: Y or N
5. Samples returned to lab ___ Hrs from collection.

COC Tape was:
1. Present on outer package: Y or N
2. Unbroken on outer package: Y or N
3. COC record present & complete upon sample receipt: Y or N

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Appendix D

APPENDIX D

DATA VALIDATION FORMS

DATA VALIDATION – ORGANICS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella RP 4/27/04

Date of Review: 4/23/04

I. Data Deliverable Requirements

A. Legible	Yes
B. Paginated	Yes
C. Arranged in order	Yes
D. Consistent dates	Yes
E. Case Narrative	Yes
F. Chain-of-Custody Record	Yes
G. Sample Data Complete	Yes
H. Standard Date Complete	Yes
I. Raw QC Data Complete	Yes

Comments: IRS027 & IRS028

22 wells,1 landfill gas condensate, 2 MS/MSD,2 field blanks and 2 blind duplicates were collected and analyzed for routine parameters

Nitrate for sample MW-03S was analyzed at a dilution but not re-analyzed more concentrated, therefore the detection limit was elevated.

Several QC parameters were not met in the initial analysis, samples were reanalyzed with compliant QC and the data from the reruns was used for reporting purposes.

Blind Dup #1 was a duplicate of MW-12I and Blind Dup #2 was a duplicate of MW-5I, both sets of data were comparable, no qualification of the data was required.

All data was deemed valid and usable

MS/MSD's were collected at MW-05D and MW-12D, no problems found

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 4/23/04

I. Holding times

Sample	Date Received	Date Digested	Date Analyzed	Holding Time Exceeded?
Landfill Gas Condensate	2/26		2/04-4/04	No
MW-10D(106)	2/26/04		2/04-4/04	No
MW-10I(78)	2/26/04		2/04-4/04	No
MW-10S(29)	2/26/04		2/04-4/04	No
MW-02I(72)	2/26/04		2/04-4/04	No
MW-02D(116)	2/27/04		2/04-4/04	No
MW-06D(112)	2/27/04		2/04-4/04	No
MW-06I(76)	2/27/04		2/04-4/04	No
MW-06S(37)	2/27/04		2/04-4/04	No
MW-07I(74)	2/27/04		2/04-4/04	No
BLIND DUP#1	3/1/04		2/04-4/04	No
MW-04D(114)	3/1/04		2/04-4/04	No
MW-04I(71)	3/1/04		2/04-4/04	No
MW-11D(94)	3/1/04		2/04-4/04	No
MW-11I(71)	3/1/04		2/04-4/04	No
MW-11S(19)	3/1/04		2/04-4/04	No
MW-12D(98)*	3/1/04		2/04-4/04	No
MW-12I(70)	3/1/04		2/04-4/04	No
MW-12S(19)	3/1/04		2/04-4/04	No
FB#1	3/1/04		2/04-4/04	No
Blind Dup #2	3/2/04		3/2/04-4/04	No
MW-03S(32)	3/2/04		3/2/04-4/04	No
MW-04S(34)	3/2/04		3/2/04-4/04	No
MW-05D(116)*	3/2/04		3/2/04-4/04	No
MW-05I(70)	3/2/04		3/2/04-4/04	No
MW-05S(34)	3/2/04		3/2/04-4/04	No
FB#2	3/2/04		3/2/04-4/04	No

* Sample run as MS/MSD

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 4/23/04

Associated Samples: All

II. Initial Calibration

1. Were all initial instrument calibrations performed?

    Yes

    Comments:

2. Were the initial calibration verification standards analyzed at the contract specified frequency?

    Yes

    Comments:

3. Were the initial calibration results within the control limits listed below?

    For tin and mercury: 80-120% of the true value
    For all other metals: 90-110% of the true value

    Yes

    If "No", note analytes

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 4/23/04

Associated Samples:

III. Continuing Calibration

1. Were the continuing calibration verification standards analyzed at the contract specified frequency?

   Yes

Comments:

2. Were the continuing calibration results within the control limits listed below?

   For tin and mercury: 80-120% of the true value
   For all other metals: 90-110% of the true value

   Yes

If “No”, note analytes

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 4/23/04

IV. Blank Summary

A. Method Blanks

1. Was a method blank prepared and analyzed at the contract specified frequency?

   Yes

2. Were all the analytes below the CRDL in the method blank?

   Yes

Comments:

B. Calibration Blanks

1. Were all initial and continuing calibration blanks analyzed at the contract specified frequency/

   Yes

2. Were all the analytes below the CRDL in all the calibration blanks?

   Yes

Comments:

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 4/23/04

MW-12D, MW-5D

V. Duplicate Analysis

1. Was a duplicate prepared and analyzed at the contract specified frequency?

   Yes

   Comments:

2. Were control limits for the relative percent differences (RPD) met for each analyte?

   Yes

   Comments:

No problems found

For sample values >5 times the CRDL, the RPD control limit is ±20%.

For sample values >5 times the CRDL, the RPD control limit is ±CRDL.

If sample results were outside of the control limits, all data associated with that duplicate sample should have been flagged with a "*".

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill
Laboratory Name: H2M

Reviewer: R.Petrella
Date of Review: 04/23/04

MW-12D, MW-5D

VI. Matrix Spike Analysis

1. Was a matrix spike prepared and analyzed at the contract specified frequency?

   Yes

Comments:

2. Were the matrix spike recoveries within the contract specified control limits (75-125%)?

   Yes

If "No", note analytes

Data should have been flagged with "N" for analytes out of control limits. If the sample concentration exceeds the spike concentration by a factor of four or more, no flag is required.

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill Laboratory Name: H2M

Reviewer: R.Petrella Date of Review: 4/23/04

VII. ICP Interference Check Sample Summary

1. Was the ICP serial dilution analyzed at the contract specified frequency?

   Yes

Comments:

2. Were the serial dilution differences within the contract specified limits of ±w 10%?

   Yes

Comments:

3. Was the ICP CRDL check standard analyzed at the contract specified frequency for the analytes required?

   Yes

Comments:

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 4/23/04

VII. ICP Interference Check Sample Summary (continued):

4. Was the ICP interference check sample analyzed at the contract specified frequency:

   Yes

Comments:

5. Were the ICP interference check sample results within the control limit of =w-20% of the mean value?

   Yes

If "No", not analytes

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 4/23/04

VIII. Laboratory Control Sample Analysis

1. Was a laboratory control sample analyzed at the contract required frequency?

   Yes

   Comments:

2. Were the percent recoveries within the control limits of 80-120% (except for Ag and Sb) for each analyte?

   Yes

   Comments:

Appendix E

APPENDIX E

LANDFILL GAS CONDENSATE SAMPLING REPORT

Dvirka
and
Bartilucci
CONSULTING ENGINEERS

330 Crossways Park Drive, Woodbury, New York, 11797-2015
516-364-9890 ▪ 718-460-3634 ▪ Fax: 516-364-9045
e-mail: db-eng@worldnet.att.net

May 17, 2004

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

Re: Analytical Data- Landfill Gas Condensate Sample Results
Sonia Road Landfill
SCDPW Discharge Certification No. 099-001-0057
D&B No. 2023

Dear Mr. DiMaria:

The purpose of this report is to provide landfill gas (LFG) condensate sampling analytical data for the Sonia Road Landfill as required by the Suffolk County Department of Public Works (SCDPW) Discharge Certification (D.C. No. 099-001-0057), dated December 1, 2003. The Discharge Certification is a requirement for LFG condensate disposal at SCDPW facilities.

One LFG condensate sample was collected on February 26, 2004, as part of the first quarter 2004 sampling event at the landfill. In accordance with SCDPW requirements, a grab sample was collected from the LFG condensate collection tank. The sample was collected using a dedicated disposable polyethylene bailer. The sampling point designation is shown in Table 1.

The analytical results for the LFG condensate sample are summarized in Table 2 (leachate indicator parameters) and Table 3 (inorganic parameters). The laboratory data sheets for this sample are enclosed.

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

Very truly yours,

Keith S. Robins for,

Kenneth P. Wenz, Jr., C.P.G.
Associate

KJP/JMt/jmy
cc: Francis Ribaudo, P.E., IRRA
Keith Robins, D&B
♦2023\KPW05124PJD-LTR.DOC(R02)

Table 1

Sampling Point Designation	Effluent Characteristic	Sampling Point Description
001A	LFG Condensate	Sampling Port at LFG Condensate below-grade Storage Tank

Table 2

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
LANDFILL GAS CONDENSATE
LEACHATE INDICATORS

CONSTITUENT	CAS #	SITE : DATE : UNITS:	LFG Condensate 001A 02/26/2004 (mg/l)	LFG Condensate 001A (mg/l)	LFG Condensate 001A (mg/l)	LFG Condensate 001A (mg/l)
Color (APHA Units)	-	mg/l	NS			
Alkalinity (as CaCO3)	-	mg/l	1 U			
Ammonia (as N)	7727-37-9	mg/l	2.72			
Biochemical Oxygen Demand	-	mg/l	2 U			
Bromide	24959-67-9	mg/l	2.6			
Chemical Oxygen Demand	-	mg/l	42.9			
Chloride	16887-00-6	mg/l	1.8			
Hardness (as CaCO3)	471-34-1	mg/l	48.0			
Nitrate (as N)	14797-55-8	mg/l	0.37			
Phenols, total	-	mg/l	0.0056			
Sulfate	14808-79-8	mg/l	189			
Total Organic Carbon	-	mg/l	8.0			
Total Dissolved Solids	-	mg/l	203			
Total Kjeldahl nitrogen (as N)	7727-37-9	mg/l	2.83			
pH (field measured)	-	*	2.90			

NOTES:

NS: Not sampled

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

*: Standard units.

Table 3

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
LANDFILL GAS CONDENSATE
INORGANIC PARAMETERS

CONSTITUENT	CAS #	SITE: DATE: UNITS:	LFG Condensate 001A 02/26/2004 (ug/l)	LFG Condensate 001A (ug/l)	LFG Condensate 001A (ug/l)	LFG Condensate 001A (ug/l)
Aluminum	7429-90-5	ug/l	NS			
Antimony	7440-36-0	ug/l	NS			
Arsenic	7440-38-2	ug/l	NS			
Barium	7440-39-3	ug/l	NS			
Beryllium	7440-41-7	ug/l	NS			
Boron	7440-42-8	ug/l	NS			
Cadmium	7440-43-9	ug/l	0.25 B			
Calcium	7440-70-2	ug/l	8870			
Chromium Hexavalent	18540-29-9	ug/l	NS			
Chromium Total	7440-47-3	ug/l	NS			
Cobalt	7440-48-4	ug/l	NS			
Copper	7440-50-8	ug/l	NS			
Iron	7439-89-6	ug/l	35000			
Lead	7439-92-1	ug/l	5.4			
Magnesium	7439-95-4	ug/l	2050 B			
Manganese	7439-96-5	ug/l	669			
Mercury	7439-97-6	ug/l	NS			
Nickel	7440-02-0	ug/l	NS			
Potassium	7440-09-7	ug/l	681			
Selenium	7782-49-2	ug/l	NS			
Silver	7440-22-4	ug/l	NS			
Sodium	7440-23-5	ug/l	2030 B			
Thallium	7440-28-0	ug/l	NS			
Vanadium	7440-62-2	ug/l	NS			
Zinc	7440-66-6	ug/l	NS			
Cyanide	0057-12-5	ug/l	NS			

NOTES:

NS: Not sampled

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

B : Compound detected above instrument detection
limit but below contract required detection limit

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Analytical Data Package For

ISLIP RESOURCE RECOVERY AGENCY
SONIA ROAD LANDFILL
SDG NO: IRS027

Water Samples
Received: 2/26/04, 2/27/04 & 3/1/04

ASP A DELIVERABLES

FEBRUARY/MARCH 2004

H2M LABS, INC.
Environmental Testing Laboratories
575 Broad Hollow Road, Melville, N.Y. 11747

H2M LABS, INC.

575 Broad Hollow Road, Melville NY 11747
(631) 694-3040. FAX: (631) 420-8436 NYSDOH ID# 10478

LABORATORY RESULTS

Lab No. : **0402729-001**

Sample Information...
Type : Groundwater
Origin:

Islip Resource Recovery (IRS)
401 Main Street
Islip, NY 11751
Attn To : Paul Dimaria

Client ID. : 2023-LANDFILL GAS CONDENSATE

Federal ID
Collected 2/26/2004 12:00:00 PM Point No
Received 2/26/2004 3:48:00 PM Location:
Collected By CLIENT
Copy : **Original**
CC

Parameter(s)	Results	Units	Limit	Method Number	Analyzed
Alkalinity, Total (As CaCO3)	< 1.0	mg/L		E310.1	03/04/2004 11:20 AM
Biochemical Oxygen Demand	< 2	mg/L		E405.1	02/26/2004 7:25 PM
Bromide	2.6	mg/L		E320.1	03/04/2004 7:32 AM
Chloride	1.8	mg/L		SW9250	03/18/2004 8:25 AM
Chemical Oxygen Demand	42.9	mg/L		E410.4	03/02/2004 12:02 PM
Hardness (As CaCO3)	48.0	mg/L		E130.2	03/12/2004 12:45 PM
Nitrogen, Ammonia (As N)	2.72	mg/L		E350.1	04/07/2004 7:31 AM
Nitrate as N	0.37	mg/L		E353.2	03/17/2004 10:54 AM
Phenolics, Total Recoverable	5.6	µg/L		E420.1	03/19/2004 2:00 PM
Sulfate	189	mg/L		SW9036	03/15/2004 9:02 AM
Total Dissolved Solids	203	mg/L		E160.1	03/02/2004 9:12 AM
Nitrogen, Kjeldahl, Total	2.83	mg/L		E351.2	04/06/2004 10:13 AM
Total Organic Carbon	8.0	mg/L		SW9060	03/23/2004 6:51 PM

Result(s) reported meet(s) Regulatory Limit(s).
Result(s) flagged with * Exceed Regulatory Limit(s). Limit noted.

Date Reported : 3/31/2004

Joann M. Slavin
Laboratory Manager

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO

2023-LANDFILL GAS CONDENSATE

Lab Name: H2M LABS, INC. Contract:

Lab Code: 10478 Case No. SAS No.: SDG No.: IRS027

Matrix (soil/water): WATER Lab Sample ID: 0402729-001

Level (low/med): LOW Date Received: 2/26/04

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-43-9	Cadmium	0.25	B		P
7440-70-2	Calcium	8870			P
7439-89-6	Iron	35000			P
7439-92-1	Lead	5.4			P
7439-95-4	Magnesium	2050	B		P
7439-96-5	Manganese	669			P
7440-09-7	Potassium	681	B		P
7440-23-5	Sodium	2030	B		P

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:
DATE REPORTED MARCH 8, 2004