ISLIP
RESOURCE
RECOVERY
AGENCY
ISLIP, NEW YORK

Sonia Road Landfill
Town of Islip, New York

Post Closure Groundwater Monitoring Program Quarterly Sampling Results Fourth Quarter 2003 (Routine Sampling Event)

May 2004

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

POST CLOSURE GROUNDWATER MONITORING PROGRAM
QUARTERLY SAMPLING RESULTS
FOURTH QUARTER 2003

(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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WOODBURY, NEW YORK

MAY 2004

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
QUARTERLY SAMPLING RESULTS
FOURTH QUARTER 2003
(ROUTINE SAMPLING EVENT)

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Section 1

1.0 INTRODUCTION

This report presents the results of the Post Closure Groundwater Monitoring Program conducted during the fourth quarter 2003 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).

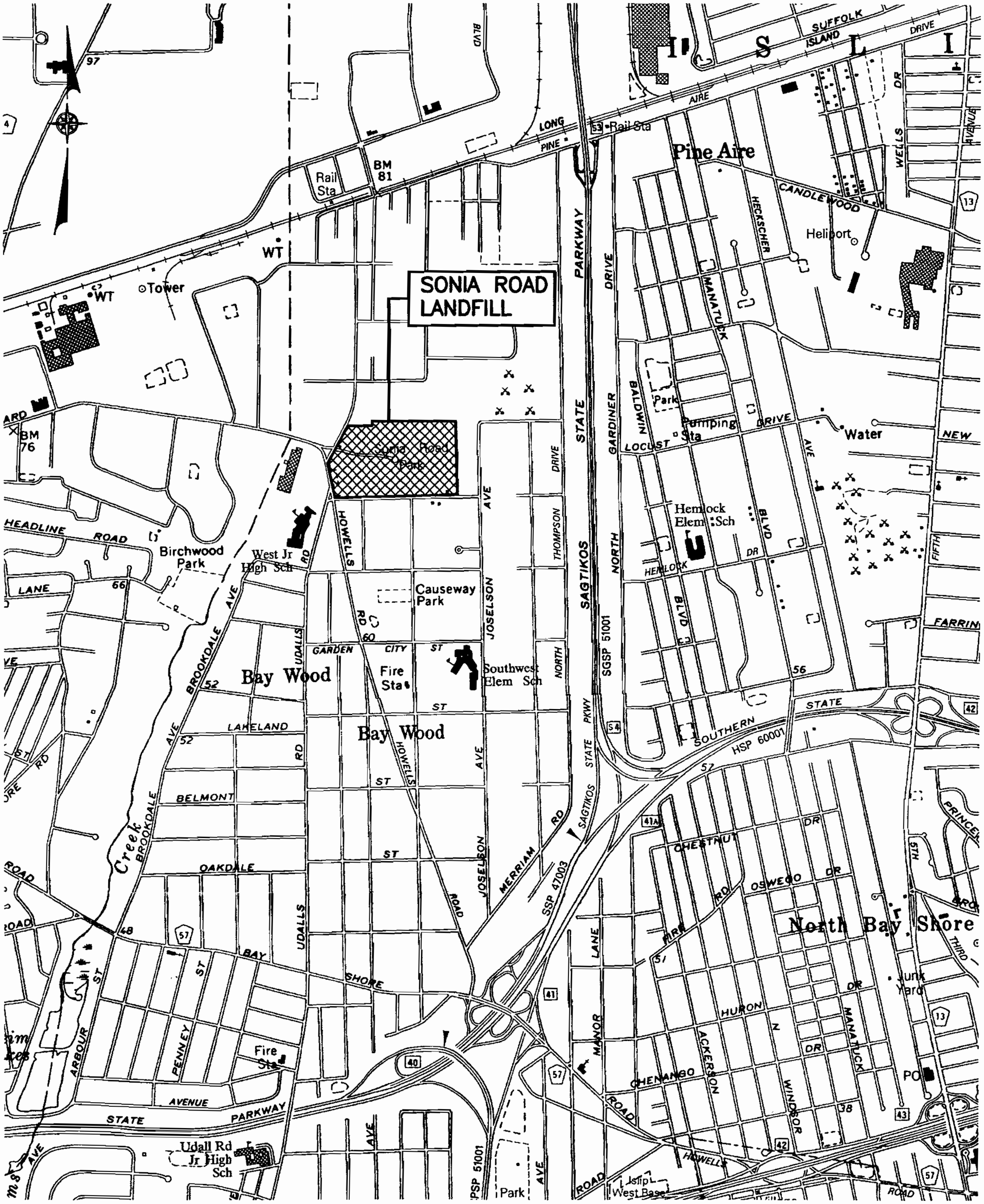
1.1 Purpose

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 (November 2003) to applicable New York State groundwater quality standards and guidance values, and groundwater sample results obtained during the previous sampling event (Third 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

Dvirka and Bartilucci
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FIGURE No.1-1

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

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

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

The Sonia Road Landfill 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 approaching 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 of 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 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.

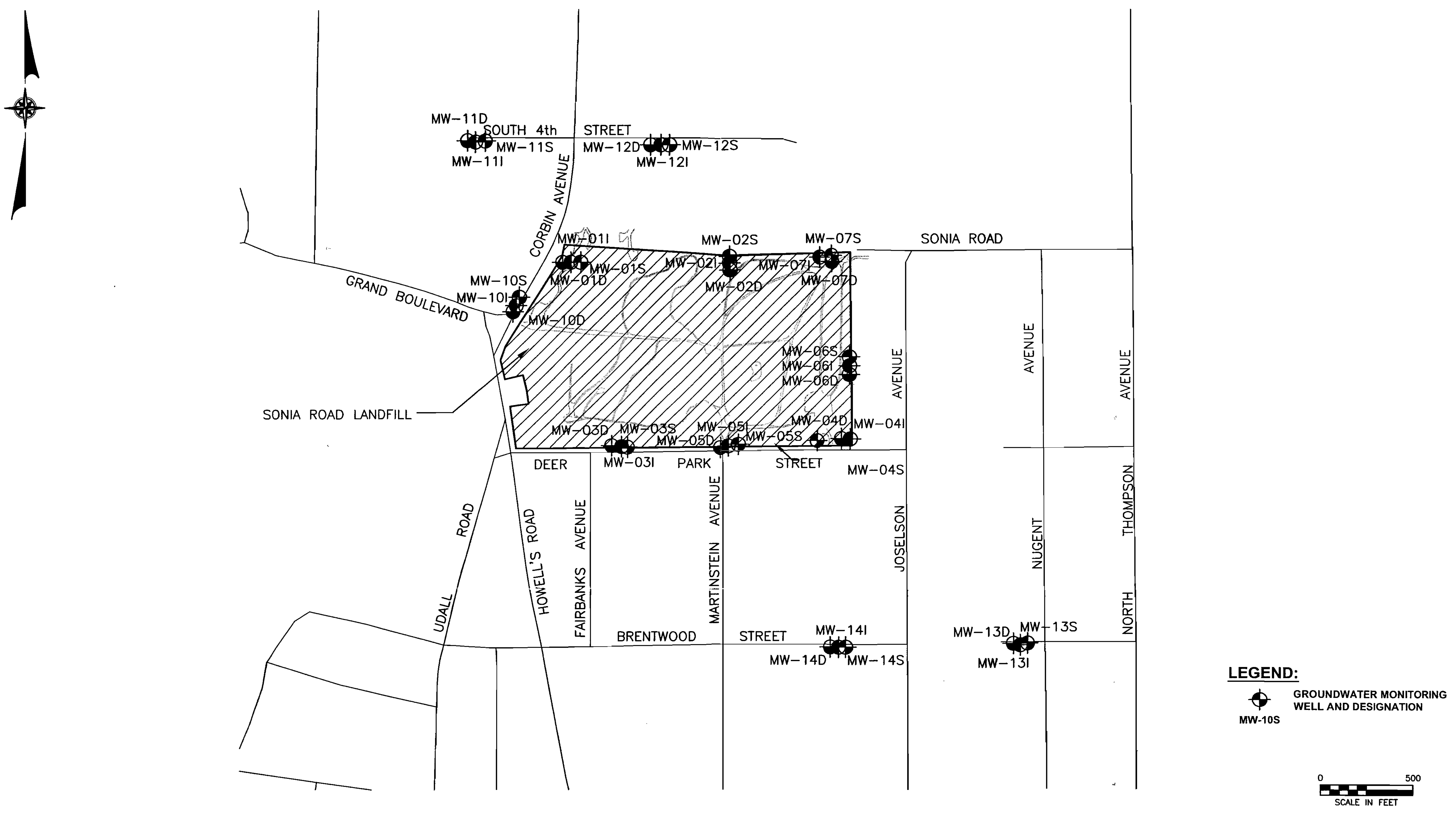
Section 2

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 fourth quarter 2003 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.



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

					Screen Setting		
Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below ground surface)	Elevation Below Measurement Point (feet)	Elevation Relative to Mean Sea Level (feet)	Measuring Point Elevation (feet above mean sea level)
MW-01D(1)	10/14/97	4	SS	106	96-106	(-32) - (-42)	64.53
MW-01I(1)	10/6/97	4	SS	78	68 – 78	(-2) - (-12)	65.36
MW-01S(1)	1/5/95	4	PVC	29	19-29	47 – 37	66.01
MW-02D(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

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

					Screen Setting		
Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below ground surface)	Elevation Below Measurement Point (feet)	Elevation Relative to Mean Sea Level (feet)	Measuring Point Elevation (feet above mean sea level)
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 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, 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 Approved 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 discussed in Section 4.2. Field forms for the fourth quarter 2003 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 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.

3.4 Analytical Parameters

Groundwater samples collected during the fourth quarter 2003 sampling event were analyzed for NYCRR Part 360 Routine parameters, including leachate indicators and inorganics. The leachate indicators that were analyzed included: 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 and total kjeldahl nitrogen. Samples were analyzed in accordance with SW-846 Methods as specified in the NYCRR Part 360 regulations. The analytical results are discussed in Section 4.2.

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 fourth quarter 2003 sampling event.

4.2 Groundwater Samples

The fourth quarter 2003 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) and 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 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, 13 of the 22 wells sampled exhibited one or more leachate indicators at concentrations exceeding the Class GA groundwater standards and guidance values, including ammonia, bromide, nitrate and sulfate. 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 seven (7) wells (MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I and MW-06S). Ammonia concentrations in these wells ranged from 2.88 mg/l in well MW-03S to 9.09 mg/l well MW-05S.

Table 4-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF FINAL FIELD PARAMETER RESULTS AND FIELD DATA - FOURTH QUARTER 2003

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	6.67	13.38	0.437	9.5	9.04	301	0	0
MW-01I	5.96	13.81	0.404	10.0	4.98	316	0	0
MW-01S	6.46	14.86	0.936	2.9	9.90	36	0	0
MW-02D	5.77	12.82	0.093	2.2	10.12	370	0	0
MW-02I	5.12	14.71	0.099	4.0	9.73	352	>1,000	61
MW-02S	NS	NS	NS	NS	NS	NS	>1,000	48
MW-03D	NS	NS	NS	NS	NS	NS	0	0
MW-03I	NS	NS	NS	NS	NS	NS	0	0
MW-03S	6.53	13.46	0.555	40.2	6.82	-51	0	0
MW-04D	6.58	13.85	0.346	17.6	5.86	-46	0	0
MW-04I	6.14	14.57	0.665	18.3	1.73	-3	0	0
MW-04S	6.12	15.45	0.829	13.7	1.46	-42	>1,000	12
MW-05D	6.45	13.70	0.442	5.6	1.52	75	0	0
MW-05I	6.30	15.60	0.450	10.5	1.59	-45	0	0
MW-05S	6.12	20.00	0.741	45.0	0.47	-59	0	0
MW-06D	5.86	15.15	3.53	34.8	8.65	66	0	0
MW-06I	6.27	15.73	0.171	7.1	4.14	40	0	0
MW-06S	6.55	17.17	0.485	11.0	7.17	-15	0	0
MW-07D	NS	NS	NS	NS	NS	NS	0	0
MW-07I	5.56	14.54	0.112	5.0	9.71	340	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	4.71	12.94	0.133	35.2	4.77	391	0	0
MW-11I	5.73	11.36	0.116	17.6	2.30	346	0	0
MW-11S	6.55	13.25	0.618	30.7	4.42	315	0	0
MW-12D	5.20	13.58	0.067	17.1	10.09	384	0	0
MW-12I	4.96	12.82	0.062	12.1	6.15	361	0	0
MW-12S	6.30	16.27	0.358	36.1	5.37	330	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.

Chloride

Six (6) wells (MW-01S, MW-02I, MW-03S, MW-05I, MW-06I and MW-12S) showed increasing chloride concentrations. Seven (7) wells (MW-01I, MW-01D, MW-06S, MW-11S, MW-011I, MW-12I and MW-12D) showed decreasing concentrations. The remaining 9 wells were consistent.

Hardness

Seven (7) wells (MW-01S, MW-01I, MW-04I, MW-05I, MW-05D, MW-11D and MW-12S) showed increasing hardness concentrations. Seven (7) wells (MW-01D, MW-02D, MW-03S, MW-04D, MW-06S, MW-07I and MW-12I) showed decreasing concentrations. The remaining 8 wells were consistent.

Nitrate

Nine (9) wells (MW-01D, MW-04S, MW-05S, MW-06I, MW-06D, MW-07I, MW-11D, MW-12S and MW-12I) showed increasing nitrate concentrations. Four (4) wells (MW-01S, MW-03S, MW-05I and MW-06S) showed decreasing concentrations. The remaining 9 wells were consistent.

Total Phenols

All sampled wells were consistent.

Sulfate

Six (6) wells (MW-01S, MW-01I, MW-04S, MW-05I, MW-11I and MW-11D) showed increasing sulfate concentrations. Five (5) wells (MW-03S, MW-04D, MW-05S, MW-06S and MW-07I) showed decreasing concentrations. The remaining 11 wells were consistent.

Total Organic Carbon

Four (4) wells (MW-01S, MW-05I, MW-05D and MW-06D) showed increasing total organic carbon concentrations. Three (3) wells (MW-01D, MW-06S and MW-11S) showed decreasing concentrations. The remaining 15 wells were consistent.

Total Dissolved Solids

Well MW-01S showed an increase in total dissolved solids. Thirteen (13) wells (MW-01I, MW-01D, MW-02I, MW-02D, MW-03S, MW-04I, MW-05S, MW-05D, MW-06S, MW-06I, MW-07I, MW-11I and MW-12D) showed decreasing concentrations. The remaining 8 wells were consistent.

Total Kjeldahl Nitrogen

Eight (8) wells (MW-01S, MW-01I, MW-02I, MW-05I, MW-06I, MW-06D, MW-07I and MW-12S) showed increasing total kjeldahl nitrogen concentrations. Five (5) wells (MW-04S, MW-04I, MW-05S, MW-06S and MW-11I) showed decreasing concentrations. The remaining 9 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 fourth quarter 2003 analytical results, iron, manganese and sodium were detected at concentrations above groundwater standards and guidance values. The following provides a discussion of these exceedances.

Iron

Eleven (11) wells (MW-01S, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-06S, MW-06I, MW-06D and MW-11S) exceeded the groundwater standard of

300 micrograms per liter (ug/l) for iron. Iron concentrations for those wells with exceedances ranged from 636 ug/l in well MW-11S to 56,100 ug/l in well MW-04I.

Manganese

Thirteen (13) 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 and MW-07I) exceeded the groundwater standard of 300 micrograms per liter (ug/l) for manganese. Manganese concentrations for those wells with exceedances ranged from 390 ug/l in well MW-02I to 12,500 ug/l in well MW-06D.

Sodium

Eleven (11) wells (MW-01S, MW-01I, MW-01D, MW-03S, MW-04S, MW-04I, MW-05S, MW-05I, MW-06S, 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 20,400 ug/l in well MW-06S to 103,000 ug/l in MW-01D.

4.2.4 Historic Inorganic Parameters

A comparison of the fourth quarter 2003 results to the third quarter 2003 results for each inorganic parameter in the 22 wells sampled is provided below. Well MW-02S was not sampled during the fourth quarter 2003 and is 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.

Cadmium

All sampled wells were consistent.

Table 4-3

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF CONCENTRATION TRENDS FOR INORGANIC PARAMETERS - FOURTH QUARTER 2003

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

Calcium

Five (5) wells (MW-01I, MW-01D, MW-04S, MW-05I and MW-11S) showed increasing calcium concentrations. Three (3) wells (MW-01S, MW-06S and MW-11I) showed decreasing concentrations. The remaining 14 wells were consistent.

Iron

Ten (10) wells (MW-01S, MW-01I, MW-01D, MW-02I, MW-03S MW-05I, MW-05D, MW-07I, MW-11S and MW-11D) showed increasing iron concentrations. Five (5) wells (MW-02D, MW-05S, MW-06S, MW-11I, and MW-12S) showed decreasing concentrations. The remaining 7 wells were consistent.

Lead

Well MW-05S remained consistent for lead. Well MW-05I showed a decrease in lead concentration. The remaining 20 wells showed increasing concentrations.

Magnesium

Six (6) wells (MW-01I, MW-01D, MW-04S, MW-05I, MW-07I and MW-11S) showed increasing magnesium concentrations. Four (4) wells (MW-01S, MW-06S, MW-11I and MW-12S) showed decreasing concentrations. The remaining 12 wells were consistent.

Manganese

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

Potassium

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

Sodium

Six (6) wells (MW-01D, MW-03S, MW-05I, MW-06I, MW-11S and MW-12S) showed increasing sodium concentrations. Four (4) wells (MW-01S, MW-01I, MW-07I and MW-11I) showed decreasing concentrations. The remaining 12 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 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 wells MW-02S, MW-02I and MW-04S. The FID results for these wells are greater than 1,000 parts per million (ppm). Combustible gas readings for wells MW-02S, MW-02I and MW-04S are 48%, 61% and 12%, respectively. The remaining wells showed combustible gas readings 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 were collected in November 2003, 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, Inc., 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-02I, MW-03S, MW-04D, MW-11S 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 duplicate samples Blind Duplicate No. 1 and Blind Duplicate No. 2 were collected from MW-04D and MW-03S, respectively. The results were comparable between the samples and the duplicates. These samples were also specified as the matrix spike (MS) and matrix spike duplicate (MSD) samples. All MS/MSD recoveries were within QC limits.

The metals portion of sample MW-07I required reanalysis due to instrumental interferences. The results from the reanalysis have been included on the data summary tables.

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 fourth quarter 2003 sampling event are provided in Appendix D.

Section 6

6.0 GROUNDWATER LEVEL MEASUREMENTS AND FLOW DIRECTION

Groundwater level measurements were obtained on November 10, 2003, 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 November 10, 2003, 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 predominately 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-
FOURTH QUARTER 2003
NOVEMBER 10, 2003

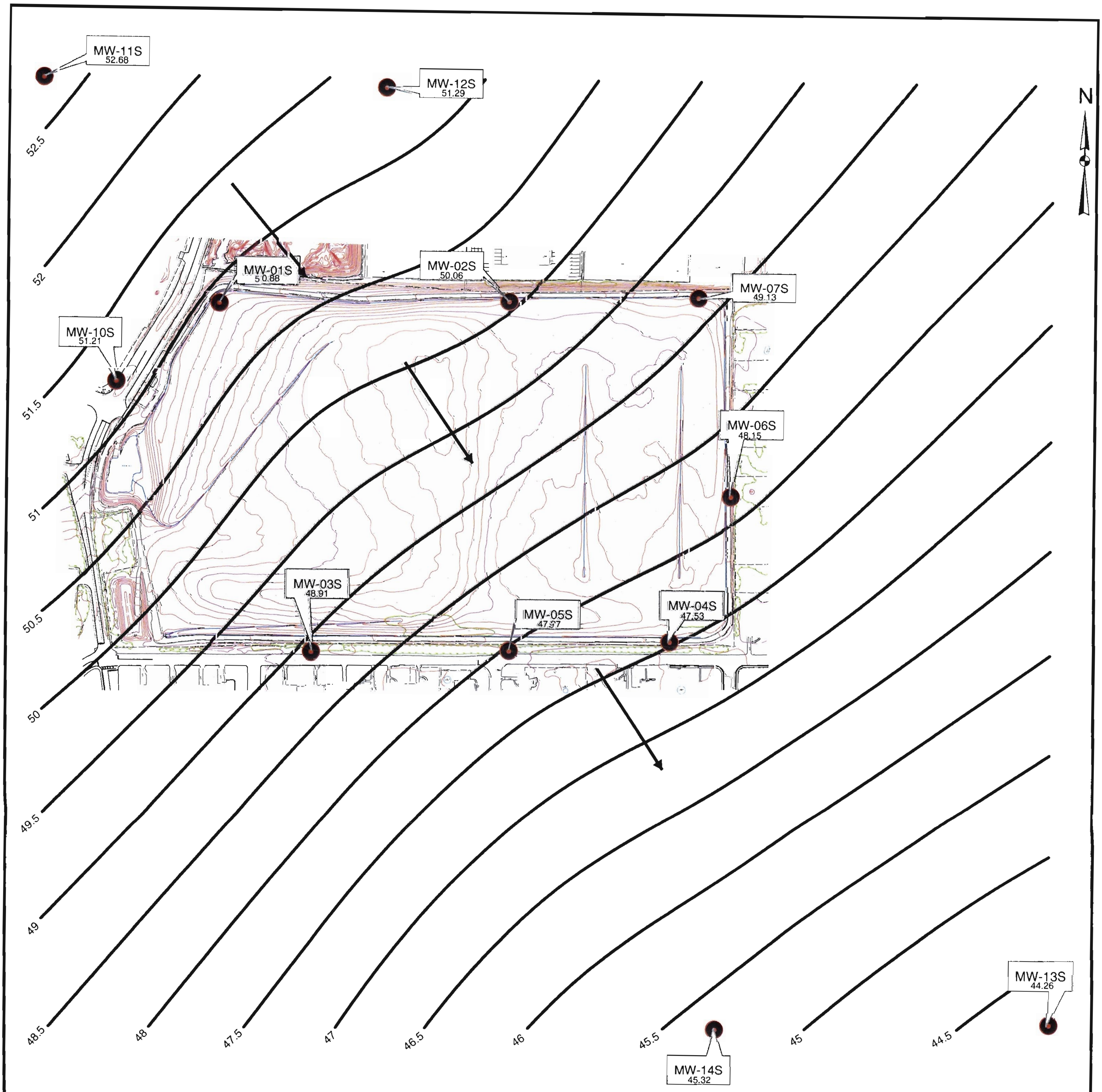
Monitoring Well No.	Measuring Point Elevation (feet amsl)	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet amsl)
MW-01D	64.53	13.62	50.91
MW-01I	65.36	14.45	50.91
MW-01S	66.01	15.13	50.88
MW-02D	79.01	29.05	49.96
MW-02I	78.75	28.91	49.84
MW-02S	77.98	27.92	50.06
MW-03D	70.50	21.80	48.70
MW-03I	70.77	21.82	48.95
MW-03S	70.76	21.85	48.91
MW-04D	69.03	21.58	47.45
MW-04I	69.31	21.93	47.38
MW-04S	71.10	23.57	47.53
MW-05D	70.96	22.74	48.22
MW-05I	70.26	22.28	47.98
MW-05S	70.28	22.31	47.97
MW-06D	75.03	26.92	48.11
MW-06I	74.53	26.47	48.06
MW-06S	74.45	26.30	48.15
MW-07D	75.04	25.92	49.12
MW-07I	73.45	24.33	49.12
MW-07S	72.83	23.70	49.13
MW-10D	56.34	5.46	50.88
MW-10I	56.16	5.25	50.91
MW-10S	56.65	5.44	51.21

Table 6-1 (continued)

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
MONITORING WELL GROUNDWATER ELEVATION MEASUREMENTS - FOURTH QUARTER 2003
NOVEMBER 10, 2003

Monitoring Well No.	Measuring Point Elevation (feet amsl)	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet amsl)
MW-11D	60.19	7.45	52.74
MW-11I	60.38	7.70	52.68
MW-11S	59.87	7.19	52.68
MW-12D	58.61	7.35	51.26
MW-12I	58.92	7.62	51.30
MW-12S	58.79	7.50	51.29
MW-13D	70.37	26.07	44.30
MW-13I	70.30	26.06	44.24
MW-13S	70.51	26.25	44.26
MW-14D	64.58	19.20	45.38
MW-14I	64.57	19.27	45.30
MW-14S	64.55	19.23	45.32

amsl: above mean sea level



LEGEND

MW-01S
50.88

● 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

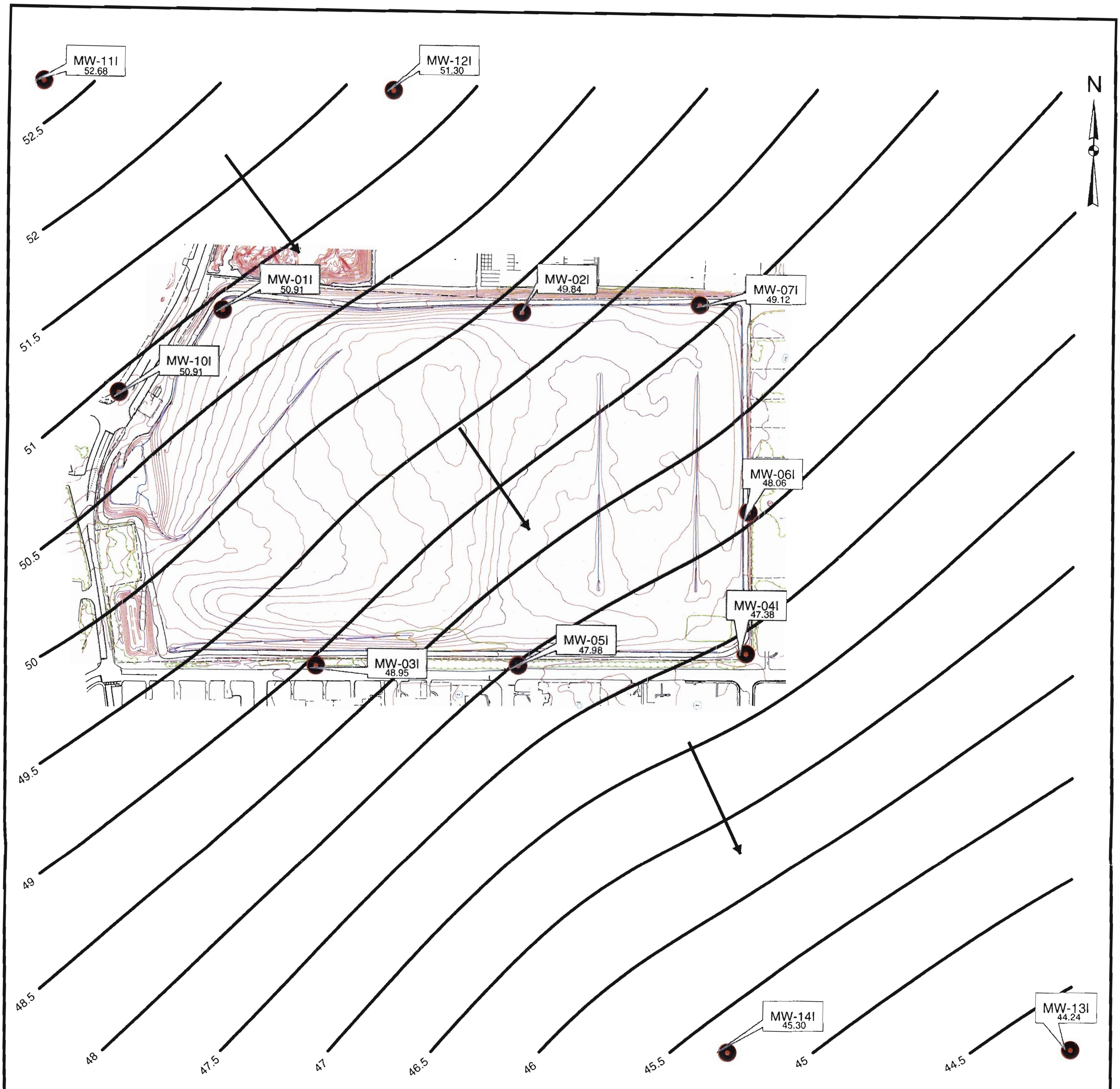
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

WATER TABLE ELEVATION CONTOUR MAP
NOVEMBER 10, 2003

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

FIGURE 6-1

GIS_Arcview Projects\2023 Sonia Rd\Updated Sonia\Maps\2003\4thQT\Scon11-10-03.mxd



LEGEND

MW-01I 50.91 ● 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

Feet

0 150 300 450 600

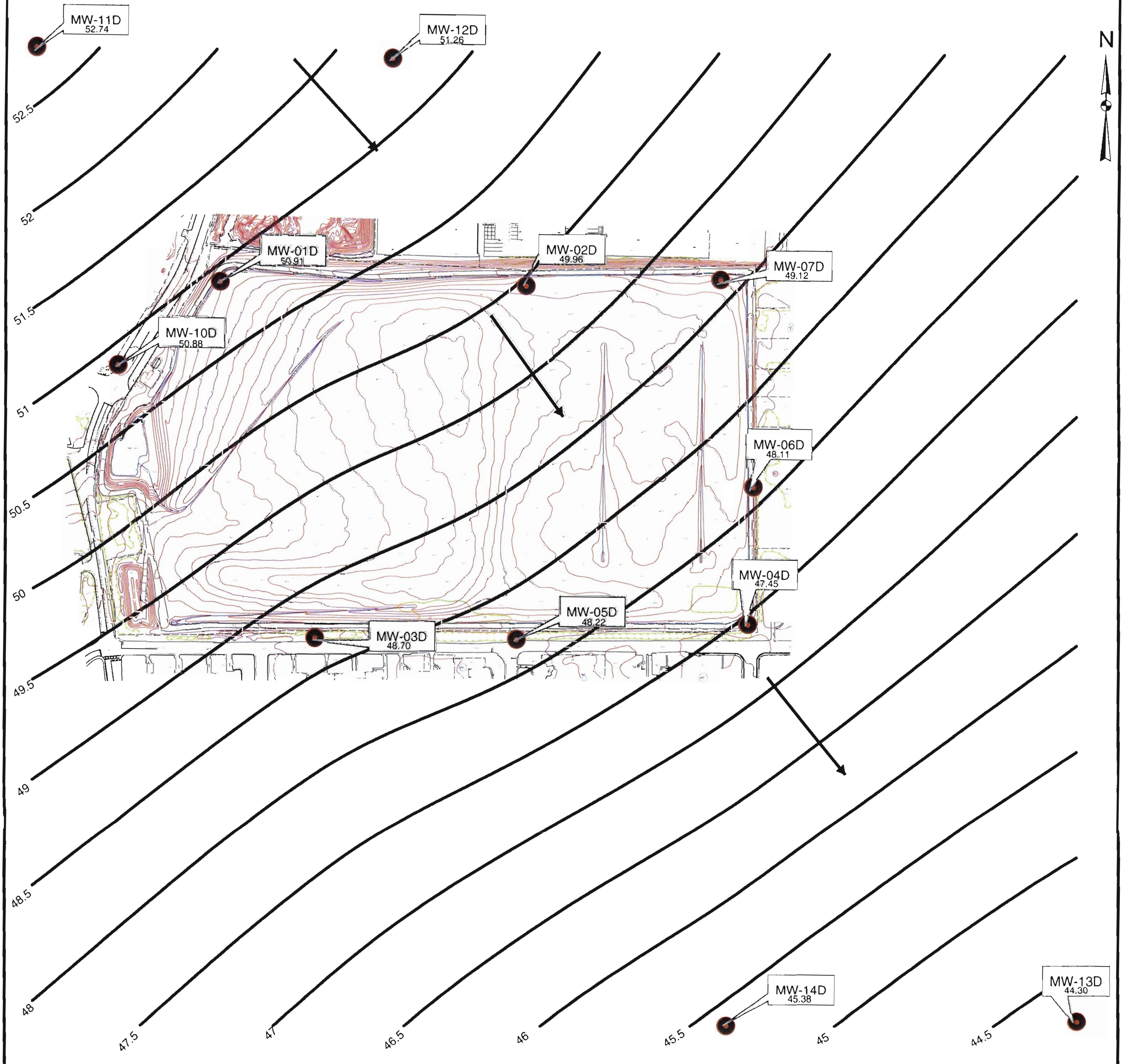
Dvirka
and
Bartilucci
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

INTERMEDIATE DEPTH POTENTIOMETRIC SURFACE ELEVATION CONTOUR MAP
NOVEMBER 10, 2003

FIGURE 6-2

GIS_Arcview Projects\2023 Sonia Rd\Updated Sonia\Maps\2003\4thQT\Icon11-10-03.mxd



LEGEND

● MW-01D 51.62 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

DEEP POTENTIOMETRIC SURFACE ELEVATION CONTOUR MAP NOVEMBER 10, 2003

FIGURE 6-3

GIS_Arcview Projects\2023 Sonia Rd\Updated Sonia\Maps\2003\4thQT\Dcon11-10-03.mxd

Section 7

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

Groundwater Flow

Based on groundwater level measurements collected during the fourth quarter 2003 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 fourth quarter 2003 results to the third quarter 2003 results and review of the historical graphs in Appendix A-4, groundwater quality in the vicinity of the Sonia Road Landfill has not changed substantially.

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

7.2 Recommendations

Based on the fourth quarter 2003 results and comparison of these results to historical data for the Sonia Road Landfill, it is recommended to continue to sample the groundwater monitoring wells in accordance with the SAP.

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 8/21/2002 (mg/l)	MW-01S 11/20/2002 (mg/l)	MW-01S 3/5/2003 (mg/l)	MW-01S 6/3/2003 (mg/l)	MW-01S 8/21/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	165							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1.57							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	5.1							
Chemical Oxygen Demand	-	-	(mg/l)	38.6							
Chloride	250 ST	16887-00-6	(mg/l)	158							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	460							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	282							
Total Organic Carbon	-	-	(mg/l)	8.3							
Total Dissolved Solids	-	-	(mg/l)	690							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.72							

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

	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE :	MW-01I	MW-01I	MW-01I	MW-01I	MW-01I	MW-01I	MW-01I	MW-01I
			DATE :	10/24/1997	11/30/2000	01/30/2001	8/21/2002	11/20/2002	3/5/2003	6/3/2003	8/21/2003
CONSTITUENT			UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	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

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

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-01D 10/24/1997 (mg/l)	MW-01D 11/30/2000 (mg/l)	MW-01D 01/30/2001 (mg/l)	MW-01D 8/21/2002 (mg/l)	MW-01D 11/20/2002 (mg/l)	MW-01D 3/5/2003 (mg/l)	MW-01D 6/3/2003 (mg/l)	MW-01D 8/21/2003 (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 : DATE : UNITS:	MW-01D 11/10/2003 (mg/l)	MW-01D (mg/l)	MW-01D (mg/l)	MW-01D (mg/l)	MW-01D (mg/l)	MW-01D (mg/l)	MW-01D (mg/l)	MW-01D (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS							
Alkalinity (as CaCO3)	-	-	(mg/l)	63.4							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.10 U							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	3.2							
Chemical Oxygen Demand	-	-	(mg/l)	10 U							
Chloride	250 ST	16887-00-6	(mg/l)	111							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	15							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.69							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	27.5							
Total Organic Carbon	-	-	(mg/l)	1.1							
Total Dissolved Solids	-	-	(mg/l)	290							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.34							

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-02S 10/27/1997 (mg/l)	MW-02S 11/30/2000 (mg/l)	MW-02S 01/31/2001 (mg/l)	MW-02S 8/21/2002 (mg/l)	MW-02S 11/20/2002 (mg/l)	MW-02S 3/5/2003 (mg/l)	MW-02S 6/3/2003 (mg/l)	MW-02S 8/21/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	NS							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	NS							
Biochemical Oxygen Demand	-	-	(mg/l)	NS							
Bromide	2 GV	24959-67-9	(mg/l)	NS							
Chemical Oxygen Demand	-	-	(mg/l)	NS							
Chloride	250 ST	16887-00-6	(mg/l)	NS							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	NS							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	NS							
Phenols, total	0.001 ST	-	(mg/l)	NS							
Sulfate	250 ST	14808-79-8	(mg/l)	NS							
Total Organic Carbon	-	-	(mg/l)	NS							
Total Dissolved Solids	-	-	(mg/l)	NS							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	NS							

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-02I 10/27/1997 (mg/l)	MW-02I 12/01/2000 (mg/l)	MW-02I 01/30/2001 (mg/l)	MW-02I 8/21/2002 (mg/l)	MW-02I 11/20/2002 (mg/l)	MW-02I 3/7/2003 (mg/l)	MW-02I 6/3/2003 (mg/l)	MW-02I 8/21/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	7.5							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U							
Biochemical Oxygen Demand	-	-	(mg/l)	3							
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U							
Chemical Oxygen Demand	-	-	(mg/l)	10 U							
Chloride	250 ST	16887-00-6	(mg/l)	11.1							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	40							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.82							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	13.9							
Total Organic Carbon	-	-	(mg/l)	1 U							
Total Dissolved Solids	-	-	(mg/l)	74							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.46							

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-02D 12/1/1997 (mg/l)	MW-02D 12/01/2000 (mg/l)	MW-02D 01/30/2001 (mg/l)	MW-02D 8/21/2002 (mg/l)	MW-02D 11/20/2002 (mg/l)	MW-02D 3/5/2003 (mg/l)	MW-02D 6/3/2003 (mg/l)	MW-02D 8/22/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	12.4							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	0.5							
Chemical Oxygen Demand	-	-	(mg/l)	10 U							
Chloride	250 ST	16887-00-6	(mg/l)	5.4							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	42							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.62							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	19.8							
Total Organic Carbon	-	-	(mg/l)	1 U							
Total Dissolved Solids	-	-	(mg/l)	69							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.1 U							

<u>NOTES:</u>

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/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 8/22/2002 (mg/l)	MW-03S 11/22/2002 (mg/l)	MW-03S 3/7/2003 (mg/l)	MW-03S 6/5/2003 (mg/l)	MW-03S 8/25/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	263							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	2.88							
Biochemical Oxygen Demand	-	-	(mg/l)	12							
Bromide	2 GV	24959-67-9	(mg/l)	2.1							
Chemical Oxygen Demand	-	-	(mg/l)	38.6							
Chloride	250 ST	16887-00-6	(mg/l)	52.3							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	440							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	5.7							
Total Organic Carbon	-	-	(mg/l)	7							
Total Dissolved Solids	-	-	(mg/l)	345							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	3.23							

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-04S 10/29/1997 (mg/l)	MW-04S 12/06/2000 (mg/l)	MW-04S 02/01/2001 (mg/l)	MW-04S 8/23/2002 (mg/l)	MW-04S 11/22/2002 (mg/l)	MW-04S 3/6/2003 (mg/l)	MW-04S 6/3/2003 (mg/l)	MW-04S 8/25/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	402							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	8.03							
Biochemical Oxygen Demand	-	-	(mg/l)	41							
Bromide	2 GV	24959-67-9	(mg/l)	1.1							
Chemical Oxygen Demand	-	-	(mg/l)	48.4							
Chloride	250 ST	16887-00-6	(mg/l)	37.9							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	660							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.21							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	125							
Total Organic Carbon	-	-	(mg/l)	9.5							
Total Dissolved Solids	-	-	(mg/l)	610							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	7.64							

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-04I 10/29/1997 (mg/l)	MW-04I 12/06/2000 (mg/l)	MW-04I 02/01/2001 (mg/l)	MW-04I 8/23/2002 (mg/l)	MW-04I 11/22/2002 (mg/l)	MW-04I 3/6/2003 (mg/l)	MW-04I 6/3/2003 (mg/l)	MW-04I 8/22/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	326							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	5.74							
Biochemical Oxygen Demand	-	-	(mg/l)	62							
Bromide	2 GV	24959-67-9	(mg/l)	0.5							
Chemical Oxygen Demand	-	-	(mg/l)	48.4							
Chloride	250 ST	16887-00-6	(mg/l)	46							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	390							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	5 U							
Total Organic Carbon	-	-	(mg/l)	6.5							
Total Dissolved Solids	-	-	(mg/l)	368							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	5.09							

<u>NOTES:</u>

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

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 8/23/2002 (mg/l)	MW-04D 11/21/2002 (mg/l)	MW-04D 3/7/2003 (mg/l)	MW-04D 6/3/2003 (mg/l)	MW-04D 8/25/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	148							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	4.83							
Biochemical Oxygen Demand	-	-	(mg/l)	4							
Bromide	2 GV	24959-67-9	(mg/l)	2							
Chemical Oxygen Demand	-	-	(mg/l)	19.2							
Chloride	250 ST	16887-00-6	(mg/l)	17.8							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	320							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	14.8							
Total Organic Carbon	-	-	(mg/l)	1.7							
Total Dissolved Solids	-	-	(mg/l)	208							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	4.27							

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-05S 10/29/1997 (mg/l)	MW-05S 12/08/2000 (mg/l)	MW-05S 02/02/2001 (mg/l)	MW-05S 8/23/2002 (mg/l)	MW-05S 11/22/2002 (mg/l)	MW-05S 3/7/2003 (mg/l)	MW-05S 6/5/2003 (mg/l)	MW-05S 8/25/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	386							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	9.09							
Biochemical Oxygen Demand	-	-	(mg/l)	21							
Bromide	2 GV	24959-67-9	(mg/l)	2.3							
Chemical Oxygen Demand	-	-	(mg/l)	50.8							
Chloride	250 ST	16887-00-6	(mg/l)	41.4							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	660							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.44							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	13.4							
Total Organic Carbon	-	-	(mg/l)	10.7							
Total Dissolved Solids	-	-	(mg/l)	457							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	8.66							

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-05I 10/29/1997 (mg/l)	MW-05I 12/08/2000 (mg/l)	MW-05I 02/02/2001 (mg/l)	MW-05I 8/23/2002 (mg/l)	MW-05I 11/22/2002 (mg/l)	MW-05I 3/7/2003 (mg/l)	MW-05I 6/5/2003 (mg/l)	MW-05I 8/25/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	177							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	5.9							
Biochemical Oxygen Demand	-	-	(mg/l)	4							
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U							
Chemical Oxygen Demand	-	-	(mg/l)	21.6							
Chloride	250 ST	16887-00-6	(mg/l)	49.1							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	240							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	27.9							
Total Organic Carbon	-	-	(mg/l)	4.5							
Total Dissolved Solids	-	-	(mg/l)	291							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	5.75							

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 :	MW-05D	MW-05D	MW-05D	MW-05D	MW-05D	MW-05D	MW-05D	MW-05D
			DATE :	10/29/1997	12/08/2000	02/02/2001	8/23/2002	11/22/2002	3/7/2003	6/5/2003	8/25/2003
			UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	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 :	MW-05D	MW-05D	MW-05D	MW-05D	MW-05D	MW-05D	MW-05D	MW-05D
			DATE :	11/12/2003							
			UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	NS							
Alkalinity (as CaCO3)	-	-	(mg/l)	29.6							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	1.1							
Chemical Oxygen Demand	-	-	(mg/l)	21.6							
Chloride	250 ST	16887-00-6	(mg/l)	23.3							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	300							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	13.5							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	8.9							
Total Organic Carbon	-	-	(mg/l)	1.4							
Total Dissolved Solids	-	-	(mg/l)	190							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.14							

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-06S 10/27/1997 (mg/l)	MW-06S 12/5/2000 (mg/l)	MW-06S 02/01/2001 (mg/l)	MW-06S 8/21/2002 (mg/l)	MW-06S 11/20/2002 (mg/l)	MW-06S 3/5/2003 (mg/l)	MW-06S 6/4/2003 (mg/l)	MW-06S 8/22/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	239							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	4.79							
Biochemical Oxygen Demand	-	-	(mg/l)	25							
Bromide	2 GV	24959-67-9	(mg/l)	4.3							
Chemical Oxygen Demand	-	-	(mg/l)	21.6							
Chloride	250 ST	16887-00-6	(mg/l)	17.4							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	280							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	39.8							
Total Organic Carbon	-	-	(mg/l)	5.7							
Total Dissolved Solids	-	-	(mg/l)	338							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	4.11							

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-06I 10/28/1997 (mg/l)	MW-06I 12/05/2000 (mg/l)	MW-06I 02/01/2001 (mg/l)	MW-06I 8/21/2002 (mg/l)	MW-06I 11/21/2002 (mg/l)	MW-06I 3/5/2003 (mg/l)	MW-06I 6/5/2003 (mg/l)	MW-06I 8/22/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	45							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.17							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	2.5							
Chemical Oxygen Demand	-	-	(mg/l)	10 U							
Chloride	250 ST	16887-00-6	(mg/l)	13.1							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	88							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.15							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	30.9							
Total Organic Carbon	-	-	(mg/l)	1 U							
Total Dissolved Solids	-	-	(mg/l)	119							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.19							

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-06D 10/28/1997 (mg/l)	MW-06D 12/05/2000 (mg/l)	MW-06D 01/31/2001 (mg/l)	MW-06D 8/22/2002 (mg/l)	MW-06D 11/20/2002 (mg/l)	MW-06D 3/5/2003 (mg/l)	MW-06D 6/5/2003 (mg/l)	MW-06D 8/22/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	36.8							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.24							
Biochemical Oxygen Demand	-	-	(mg/l)	16							
Bromide	2 GV	24959-67-9	(mg/l)	5.1							
Chemical Oxygen Demand	-	-	(mg/l)	55.7							
Chloride	250 ST	16887-00-6	(mg/l)	5							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	80							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.04							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	26.8							
Total Organic Carbon	-	-	(mg/l)	1.7							
Total Dissolved Solids	-	-	(mg/l)	105							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	3.07							

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-07I 10/28/1997 (mg/l)	MW-07I 12/01/2000 (mg/l)	MW-07I 01/31/2001 (mg/l)	MW-07I 8/21/2002 (mg/l)	MW-07I 11/20/2002 (mg/l)	MW-07I 3/5/2003 (mg/l)	MW-07I 6/3/2003 (mg/l)	MW-07I 8/22/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	21.5							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.52							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	3.4							
Chemical Oxygen Demand	-	-	(mg/l)	10 U							
Chloride	250 ST	16887-00-6	(mg/l)	10.3							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	40							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	2.46							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	15.9							
Total Organic Carbon	-	-	(mg/l)	1 U							
Total Dissolved Solids	-	-	(mg/l)	74							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.02							

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-11S 10/31/1997 (mg/l)	MW-11S 12/13/2000 (mg/l)	MW-11S 02/07/2001 (mg/l)	MW-11S 8/22/2002 (mg/l)	MW-11S 11/21/2002 (mg/l)	MW-11S 3/6/2003 (mg/l)	MW-11S 6/4/2003 (mg/l)	MW-11S 8/21/2003 (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

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

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 8/22/2002 (mg/l)	MW-11I 11/21/2002 (mg/l)	MW-11I 3/6/2003 (mg/l)	MW-11I 6/4/2003 (mg/l)	MW-11I 8/21/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	28.6							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U							
Chemical Oxygen Demand	-	-	(mg/l)	10 U							
Chloride	250 ST	16887-00-6	(mg/l)	11.7							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	36							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.96							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	12.9							
Total Organic Carbon	-	-	(mg/l)	1 U							
Total Dissolved Solids	-	-	(mg/l)	78							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.36							

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

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	8/22/2002	11/21/2002	3/6/2003	6/4/2003	8/21/2003
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							
CONSTITUENT			UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	NS							
Alkalinity (as CaCO3)	-	-	(mg/l)	3.8							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U							
Chemical Oxygen Demand	-	-	(mg/l)	10 U							
Chloride	250 ST	16887-00-6	(mg/l)	18.2							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	43							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	4.92							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	12.1							
Total Organic Carbon	-	-	(mg/l)	1 U							
Total Dissolved Solids	-	-	(mg/l)	103							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.11							

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

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 8/22/2002 (mg/l)	MW-12S 11/21/2002 (mg/l)	MW-12S 3/6/2003 (mg/l)	MW-12S 6/4/2003 (mg/l)	MW-12S 8/21/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	150							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	0.5							
Chemical Oxygen Demand	-	-	(mg/l)	10 U							
Chloride	250 ST	16887-00-6	(mg/l)	25.8							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	220							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.89							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	38.4							
Total Organic Carbon	-	-	(mg/l)	2							
Total Dissolved Solids	-	-	(mg/l)	265							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.22							

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 8/22/2002 (mg/l)	MW-12I 11/21/2002 (mg/l)	MW-12I 3/6/2003 (mg/l)	MW-12I 6/4/2003 (mg/l)	MW-12I 8/21/2003 (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 (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							
Alkalinity (as CaCO3)	-	-	(mg/l)	4.4							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U							
Chemical Oxygen Demand	-	-	(mg/l)	10 U							
Chloride	250 ST	16887-00-6	(mg/l)	4.8							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	26							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.3							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	9.8							
Total Organic Carbon	-	-	(mg/l)	1 U							
Total Dissolved Solids	-	-	(mg/l)	40							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	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 :	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D
			DATE :	10/31/1997	12/08/2000	02/07/2001	8/22/2002	11/21/2002	3/6/2003	6/4/2003	8/21/2003
			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	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 :	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D
			DATE :	11/3/2003							
			UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	NS							
Alkalinity (as CaCO3)	-	-	(mg/l)	7.4							
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.1 U							
Biochemical Oxygen Demand	-	-	(mg/l)	2 U							
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U							
Chemical Oxygen Demand	-	-	(mg/l)	11.9							
Chloride	250 ST	16887-00-6	(mg/l)	4.2							
Hardness (as CaCO3)	-	471-34-1	(mg/l)	33							
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.54							
Phenols, total	0.001 ST	-	(mg/l)	0.005 U							
Sulfate	250 ST	14808-79-8	(mg/l)	13.5							
Total Organic Carbon	-	-	(mg/l)	1 U							
Total Dissolved Solids	-	-	(mg/l)	50							
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	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-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 1/29/2001 (ug/l)	MW-01S 8/21/2002 (ug/l)	MW-01S 11/20/2002 (ug/l)	MW-01S 3/5/2003 (ug/l)	MW-01S 6/3/2003 (ug/l)	MW-01S 8/21/2003 (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	38700	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

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

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 1/30/2001 (ug/l)	MW-01I 8/21/2002 (ug/l)	MW-01I 11/20/2002 (ug/l)	MW-01I 3/5/2003 (ug/l)	MW-01I 6/3/2003 (ug/l)	MW-01I 8/21/2003 (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 (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							
Antimony	3 GV	7440-36-0	ug/l	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA							
Barium	1000 ST	7440-39-3	ug/l	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA							
Boron	1000 ST	7440-42-8	ug/l	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.30 U							
Calcium	-	7440-70-2	ug/l	25100							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA							
Cobalt	-	7440-48-4	ug/l	NA							
Copper	200 ST	7440-50-8	ug/l	NA							
Iron	300 ST	7439-89-6	ug/l	44.1 B							
Lead	25 ST	7439-92-1	ug/l	1.2 B							
Magnesium	35000 GV	7439-95-4	ug/l	4750 B							
Manganese	300 ST	7439-96-5	ug/l	71.2							
Mercury	0.7 ST	7439-97-6	ug/l	NA							
Nickel	100 ST	7440-02-0	ug/l	NA							
Potassium	-	7440-09-7	ug/l	3040 B							
Selenium	10 ST	7782-49-2	ug/l	NA							
Silver	50 ST	7440-22-4	ug/l	NA							
Sodium	20000 ST	7440-23-5	ug/l	49900							
Thallium	0.5 GV	7440-28-0	ug/l	NA							
Vanadium	-	7440-62-2	ug/l	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA							
Iron + Manganese	500 ST*	-	ug/l	115.3							

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-01D 10/24/1997 (ug/l)	MW-01D 11/30/2000 (ug/l)	MW-01D 1/30/2001 (ug/l)	MW-01D 8/21/2002 (ug/l)	MW-01D 11/20/2002 (ug/l)	MW-01D 3/5/2003 (ug/l)	MW-01D 6/3/2003 (ug/l)	MW-01D 8/21/2003 (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 (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							
Antimony	3 GV	7440-36-0	ug/l	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA							
Barium	1000 ST	7440-39-3	ug/l	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA							
Boron	1000 ST	7440-42-8	ug/l	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.3 U							
Calcium	-	7440-70-2	ug/l	1420 B							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA							
Cobalt	-	7440-48-4	ug/l	NA							
Copper	200 ST	7440-50-8	ug/l	NA							
Iron	300 ST	7439-89-6	ug/l	119							
Lead	25 ST	7439-92-1	ug/l	2.5 B							
Magnesium	35000 GV	7439-95-4	ug/l	504 B							
Manganese	300 ST	7439-96-5	ug/l	3.6 B							
Mercury	0.7 ST	7439-97-6	ug/l	NA							
Nickel	100 ST	7440-02-0	ug/l	NA							
Potassium	-	7440-09-7	ug/l	1380 B							
Selenium	10 ST	7782-49-2	ug/l	NA							
Silver	50 ST	7440-22-4	ug/l	NA							
Sodium	20000 ST	7440-23-5	ug/l	103000							
Thallium	0.5 GV	7440-28-0	ug/l	NA							
Vanadium	-	7440-62-2	ug/l	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA							
Iron + Manganese	500 ST*	-	ug/l	122.6							

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 1/31/2001 (ug/l)	MW-02S 8/21/2002 (ug/l)	MW-02S 11/20/2002 (ug/l)	MW-02S 3/5/2003 (ug/l)	MW-02S 6/3/2003 (ug/l)	MW-02S 8/25/2003 (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 (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							
Antimony	3 GV	7440-36-0	ug/l	NS							
Arsenic	25 ST	7440-38-2	ug/l	NS							
Barium	1000 ST	7440-39-3	ug/l	NS							
Beryllium	3 GV	7440-41-7	ug/l	NS							
Boron	1000 ST	7440-42-8	ug/l	NS							
Cadmium	5 ST	7440-43-9	ug/l	NS							
Calcium	-	7440-70-2	ug/l	NS							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NS							
Chromium Total	50 ST	7440-47-3	ug/l	NS							
Cobalt	-	7440-48-4	ug/l	NS							
Copper	200 ST	7440-50-8	ug/l	NS							
Iron	300 ST	7439-89-6	ug/l	NS							
Lead	25 ST	7439-92-1	ug/l	NS							
Magnesium	35000 GV	7439-95-4	ug/l	NS							
Manganese	300 ST	7439-96-5	ug/l	NS							
Mercury	0.7 ST	7439-97-6	ug/l	NS							
Nickel	100 ST	7440-02-0	ug/l	NS							
Potassium	-	7440-09-7	ug/l	NS							
Selenium	10 ST	7782-49-2	ug/l	NS							
Silver	50 ST	7440-22-4	ug/l	NS							
Sodium	20000 ST	7440-23-5	ug/l	NS							
Thallium	0.5 GV	7440-28-0	ug/l	NS							
Vanadium	-	7440-62-2	ug/l	NS							
Zinc	2000 ST	7440-66-6	ug/l	NS							
Cyanide	200 ST	0057-12-5	ug/l	NS							
Iron + Manganese	500 ST*	-	ug/l	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 12/1/2000 (ug/l)	MW-02I 1/30/2001 (ug/l)	MW-02I 8/21/2002 (ug/l)	MW-02I 11/20/2002 (ug/l)	MW-02I 3/7/2003 (ug/l)	MW-02I 6/3/2003 (ug/l)	MW-02I 8/21/2003 (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

Public/Jmilligan/sonia4Q03/INORGANIC4THq03

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

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 12/1/2000 (ug/l)	MW-02D 1/30/2001 (ug/l)	MW-02D 8/21/2002 (ug/l)	MW-02D 11/20/2002 (ug/l)	MW-02D 3/5/2003 (ug/l)	MW-02D 6/3/2003 (ug/l)	MW-02D 8/22/2003 (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 (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							
Antimony	3 GV	7440-36-0	ug/l	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA							
Barium	1000 ST	7440-39-3	ug/l	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA							
Boron	1000 ST	7440-42-8	ug/l	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.3 U							
Calcium	-	7440-70-2	ug/l	7640							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA							
Cobalt	-	7440-48-4	ug/l	NA							
Copper	200 ST	7440-50-8	ug/l	NA							
Iron	300 ST	7439-89-6	ug/l	62.4 B							
Lead	25 ST	7439-92-1	ug/l	1.1 U							
Magnesium	35000 GV	7439-95-4	ug/l	3340 B							
Manganese	300 ST	7439-96-5	ug/l	3.7 B							
Mercury	0.7 ST	7439-97-6	ug/l	NA							
Nickel	100 ST	7440-02-0	ug/l	NA							
Potassium	-	7440-09-7	ug/l	697 B							
Selenium	10 ST	7782-49-2	ug/l	NA							
Silver	50 ST	7440-22-4	ug/l	NA							
Sodium	20000 ST	7440-23-5	ug/l	7590							
Thallium	0.5 GV	7440-28-0	ug/l	NA							
Vanadium	-	7440-62-2	ug/l	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA							
Iron + Manganese	500 ST*	-	ug/l	66.1							

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

Public/Jmilligan/sonia4Q03/INORGANIC4THq03

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 10/30/1997 (ug/l)	MW-03S 12/6/2000 (ug/l)	MW-03S 2/2/2001 (ug/l)	MW-03S 8/22/2002 (ug/l)	MW-03S 11/22/2002 (ug/l)	MW-03S 3/7/2003 (ug/l)	MW-03S 6/3/2003 (ug/l)	MW-03S 8/25/2003 (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

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

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 10/29/1997 (ug/l)	MW-04S 12/6/2000 (ug/l)	MW-04S 2/1/2001 (ug/l)	MW-04S 8/23/2002 (ug/l)	MW-04S 11/22/2002 (ug/l)	MW-04S 3/6/2003 (ug/l)	MW-04S 6/3/2003 (ug/l)	MW-04S 8/25/2003 (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 (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							
Antimony	3 GV	7440-36-0	ug/l	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA							
Barium	1000 ST	7440-39-3	ug/l	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA							
Boron	1000 ST	7440-42-8	ug/l	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.30 U							
Calcium	-	7440-70-2	ug/l	139000							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA							
Cobalt	-	7440-48-4	ug/l	NA							
Copper	200 ST	7440-50-8	ug/l	NA							
Iron	300 ST	7439-89-6	ug/l	48600							
Lead	25 ST	7439-92-1	ug/l	1.1 U							
Magnesium	35000 GV	7439-95-4	ug/l	18100							
Manganese	300 ST	7439-96-5	ug/l	3690							
Mercury	0.7 ST	7439-97-6	ug/l	NA							
Nickel	100 ST	7440-02-0	ug/l	NA							
Potassium	-	7440-09-7	ug/l	20000							
Selenium	10 ST	7782-49-2	ug/l	NA							
Silver	50 ST	7440-22-4	ug/l	NA							
Sodium	20000 ST	7440-23-5	ug/l	28600							
Thallium	0.5 GV	7440-28-0	ug/l	NA							
Vanadium	-	7440-62-2	ug/l	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA							
Iron + Manganese	500 ST*	-	ug/l	52290							

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 12/6/2000 (ug/l)	MW-04I 2/1/2001 (ug/l)	MW-04I 8/23/2002 (ug/l)	MW-04I 11/22/2002 (ug/l)	MW-04I 3/6/2003 (ug/l)	MW-04I 6/3/2003 (ug/l)	MW-04I 8/22/2003 (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 (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							
Antimony	3 GV	7440-36-0	ug/l	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA							
Barium	1000 ST	7440-39-3	ug/l	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA							
Boron	1000 ST	7440-42-8	ug/l	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.3 U							
Calcium	-	7440-70-2	ug/l	91200							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA							
Cobalt	-	7440-48-4	ug/l	NA							
Copper	200 ST	7440-50-8	ug/l	NA							
Iron	300 ST	7439-89-6	ug/l	56100							
Lead	25 ST	7439-92-1	ug/l	1.1 U							
Magnesium	35000 GV	7439-95-4	ug/l	10500							
Manganese	300 ST	7439-96-5	ug/l	1510							
Mercury	0.7 ST	7439-97-6	ug/l	NA							
Nickel	100 ST	7440-02-0	ug/l	NA							
Potassium	-	7440-09-7	ug/l	16000							
Selenium	10 ST	7782-49-2	ug/l	NA							
Silver	50 ST	7440-22-4	ug/l	NA							
Sodium	20000 ST	7440-23-5	ug/l	29500							
Thallium	0.5 GV	7440-28-0	ug/l	NA							
Vanadium	-	7440-62-2	ug/l	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA							
Iron + Manganese	500 ST*	-	ug/l	57610							

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 12/6/2000 (ug/l)	MW-04D 2/1/2001 (ug/l)	MW-04D 8/23/2002 (ug/l)	MW-04D 11/21/2002 (ug/l)	MW-04D 3/7/2003 (ug/l)	MW-04D 6/3/2003 (ug/l)	MW-04D 8/25/2003 (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 (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							
Antimony	3 GV	7440-36-0	ug/l	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA							
Barium	1000 ST	7440-39-3	ug/l	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA							
Boron	1000 ST	7440-42-8	ug/l	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.3 U							
Calcium	-	7440-70-2	ug/l	34000							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA							
Cobalt	-	7440-48-4	ug/l	NA							
Copper	200 ST	7440-50-8	ug/l	NA							
Iron	300 ST	7439-89-6	ug/l	35300							
Lead	25 ST	7439-92-1	ug/l	1.1 U							
Magnesium	35000 GV	7439-95-4	ug/l	5720							
Manganese	300 ST	7439-96-5	ug/l	972							
Mercury	0.7 ST	7439-97-6	ug/l	NA							
Nickel	100 ST	7440-02-0	ug/l	NA							
Potassium	-	7440-09-7	ug/l	11000							
Selenium	10 ST	7782-49-2	ug/l	NA							
Silver	50 ST	7440-22-4	ug/l	NA							
Sodium	20000 ST	7440-23-5	ug/l	13900							
Thallium	0.5 GV	7440-28-0	ug/l	NA							
Vanadium	-	7440-62-2	ug/l	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA							
Iron + Manganese	500 ST*	-	ug/l	36272							

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-05S 10/29/1997 (ug/l)	MW-05S 12/8/2000 (ug/l)	MW-05S 2/2/2001 (ug/l)	MW-05S 8/23/2002 (ug/l)	MW-05S 11/22/2002 (ug/l)	MW-05S 3/7/2003 (ug/l)	MW-05S 6/5/2003 (ug/l)	MW-05S 8/25/2003 (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

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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-05S 11/12/2003 (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)	MW-05S (ug/l)
Aluminum	-	7429-90-5	ug/l	NA							
Antimony	3 GV	7440-36-0	ug/l	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA							
Barium	1000 ST	7440-39-3	ug/l	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA							
Boron	1000 ST	7440-42-8	ug/l	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.30 U							
Calcium	-	7440-70-2	ug/l	102000							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA							
Cobalt	-	7440-48-4	ug/l	NA							
Copper	200 ST	7440-50-8	ug/l	NA							
Iron	300 ST	7439-89-6	ug/l	23600							
Lead	25 ST	7439-92-1	ug/l	1.1 U							
Magnesium	35000 GV	7439-95-4	ug/l	14200							
Manganese	300 ST	7439-96-5	ug/l	6780							
Mercury	0.7 ST	7439-97-6	ug/l	NA							
Nickel	100 ST	7440-02-0	ug/l	NA							
Potassium	-	7440-09-7	ug/l	14900							
Selenium	10 ST	7782-49-2	ug/l	NA							
Silver	50 ST	7440-22-4	ug/l	NA							
Sodium	20000 ST	7440-23-5	ug/l	27600							
Thallium	0.5 GV	7440-28-0	ug/l	NA							
Vanadium	-	7440-62-2	ug/l	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA							
Iron + Manganese	500 ST*	-	ug/l	30380							

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 12/8/2000 (ug/l)	MW-05I 2/2/2001 (ug/l)	MW-05I 8/23/2002 (ug/l)	MW-05I 11/22/2002 (ug/l)	MW-05I 3/7/2003 (ug/l)	MW-05I 6/3/2003 (ug/l)	MW-05I 8/25/2003 (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

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

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 10/29/1997 (ug/l)	MW-05D 12/8/2000 (ug/l)	MW-05D 2/2/2001 (ug/l)	MW-05D 8/23/2002 (ug/l)	MW-05D 11/22/2002 (ug/l)	MW-05D 3/7/2003 (ug/l)	MW-05D 6/3/2003 (ug/l)	MW-05D 8/25/2003 (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

Public/Jmilligan/sonia4Q03/INORGANIC4THq03

Appendix A-2

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

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

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

	NYSDEC Class GA		SITE:	MW-06S	MW-06S	MW-06S	MW-06S	MW-06S	MW-06S	MW-06S	MW-06S
	Groundwater	CAS #	DATE:	10/28/1997	12/5/2000	2/1/2001	8/21/2002	11/20/2002	3/5/2003	6/5/2003	8/22/2003
CONSTITUENT	Standards/Guidance Values		UNITS:	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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

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limit but below contract required detection limit

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

Public/Jmilligan/sonia4Q03/INORGANIC4THq03

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

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-06I 10/28/1997 (ug/l)	MW-06I 12/5/2000 (ug/l)	MW-06I 2/1/2001 (ug/l)	MW-06I 8/21/2002 (ug/l)	MW-06I 11/21/2002 (ug/l)	MW-06I 3/5/2003 (ug/l)	MW-06I 6/5/2003 (ug/l)	MW-06I 8/22/2003 (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:

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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 (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							
Antimony	3 GV	7440-36-0	ug/l	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA							
Barium	1000 ST	7440-39-3	ug/l	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA							
Boron	1000 ST	7440-42-8	ug/l	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.3 U							
Calcium	-	7440-70-2	ug/l	21600							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA							
Cobalt	-	7440-48-4	ug/l	NA							
Copper	200 ST	7440-50-8	ug/l	NA							
Iron	300 ST	7439-89-6	ug/l	4570							
Lead	25 ST	7439-92-1	ug/l	1.1 U							
Magnesium	35000 GV	7439-95-4	ug/l	2100 B							
Manganese	300 ST	7439-96-5	ug/l	861							
Mercury	0.7 ST	7439-97-6	ug/l	NA							
Nickel	100 ST	7440-02-0	ug/l	NA							
Potassium	-	7440-09-7	ug/l	5990							
Selenium	10 ST	7782-49-2	ug/l	NA							
Silver	50 ST	7440-22-4	ug/l	NA							
Sodium	20000 ST	7440-23-5	ug/l	9000							
Thallium	0.5 GV	7440-28-0	ug/l	NA							
Vanadium	-	7440-62-2	ug/l	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA							
Iron + Manganese	500 ST*	-	ug/l	5431							

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 12/5/2000 (ug/l)	MW-06D 1/31/2001 (ug/l)	MW-06D 8/22/2002 (ug/l)	MW-06D 11/20/2002 (ug/l)	MW-06D 3/5/2003 (ug/l)	MW-06D 6/5/2003 (ug/l)	MW-06D 8/22/2003 (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

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

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 12/1/2000 (ug/l)	MW-07I 1/31/2001 (ug/l)	MW-07I 8/21/2002 (ug/l)	MW-07I 11/20/2002 (ug/l)	MW-07I 3/5/2003 (ug/l)	MW-07I 6/3/2003 (ug/l)	MW-07I 8/22/2003 (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:

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

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

Public/Jmilligan/sonia4Q03/INORGANIC4THq03

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 12/8/2000 (ug/l)	MW-12D 2/7/2001 (ug/l)	MW-12D 8/22/2002 (ug/l)	MW-12D 11/21/2002 (ug/l)	MW-12D 3/6/2003 (ug/l)	MW-12D 6/4/2003 (ug/l)	MW-12D 8/21/2003 (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 (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							
Antimony	3 GV	7440-36-0	ug/l	NA							
Arsenic	25 ST	7440-38-2	ug/l	NA							
Barium	1000 ST	7440-39-3	ug/l	NA							
Beryllium	3 GV	7440-41-7	ug/l	NA							
Boron	1000 ST	7440-42-8	ug/l	NA							
Cadmium	5 ST	7440-43-9	ug/l	0.3 U							
Calcium	-	7440-70-2	ug/l	5460							
Chromium Hexavalent	50 ST	18540-29-9	ug/l	NA							
Chromium Total	50 ST	7440-47-3	ug/l	NA							
Cobalt	-	7440-48-4	ug/l	NA							
Copper	200 ST	7440-50-8	ug/l	NA							
Iron	300 ST	7439-89-6	ug/l	21.9 B							
Lead	25 ST	7439-92-1	ug/l	1.3 B							
Magnesium	35000 GV	7439-95-4	ug/l	2340 B							
Manganese	300 ST	7439-96-5	ug/l	1.8 B							
Mercury	0.7 ST	7439-97-6	ug/l	NA							
Nickel	100 ST	7440-02-0	ug/l	NA							
Potassium	-	7440-09-7	ug/l	440 B							
Selenium	10 ST	7782-49-2	ug/l	NA							
Silver	50 ST	7440-22-4	ug/l	NA							
Sodium	20000 ST	7440-23-5	ug/l	5090							
Thallium	0.5 GV	7440-28-0	ug/l	NA							
Vanadium	-	7440-62-2	ug/l	NA							
Zinc	2000 ST	7440-66-6	ug/l	NA							
Cyanide	200 ST	0057-12-5	ug/l	NA							
Iron + Manganese	500 ST*	-	ug/l	23.7							

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-3

HISTORIC AND CURRENT 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 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	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

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
▨: 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-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		MW-02D	MW-02D	MW-02D	MW-02D	MW-02D	MW-02D			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	08/22/2003			
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	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

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		MW-04D	MW-04D	MW-04D	MW-04D	MW-04D	MW-04D			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/28/1997	01/28/1998	12/06/2000	02/01/2001	11/21/2002	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	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
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-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		MW-05I	MW-05I	MW-05I	MW-05I	MW-05I	MW-05I			NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Date of Collection		10/29/1997	02/02/1998	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	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
Date of Collection		10/29/1997	02/03/1998	12/08/2000	02/02/2001	11/22/2002	08/25/2003			GROUNDWATER
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			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	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

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
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-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
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-06D	MW-06D	MW-06D	MW-06D	MW-06D	MW-06D			NYSDEC Class GA
Date of Collection		10/28/1997	01/28/1998	12/05/2000	01/31/2001	11/20/2002	08/22/2003			GROUNDWATER
Volatile Organic Compounds	CAS #	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)			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
▨ : 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-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	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		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
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-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

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-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			

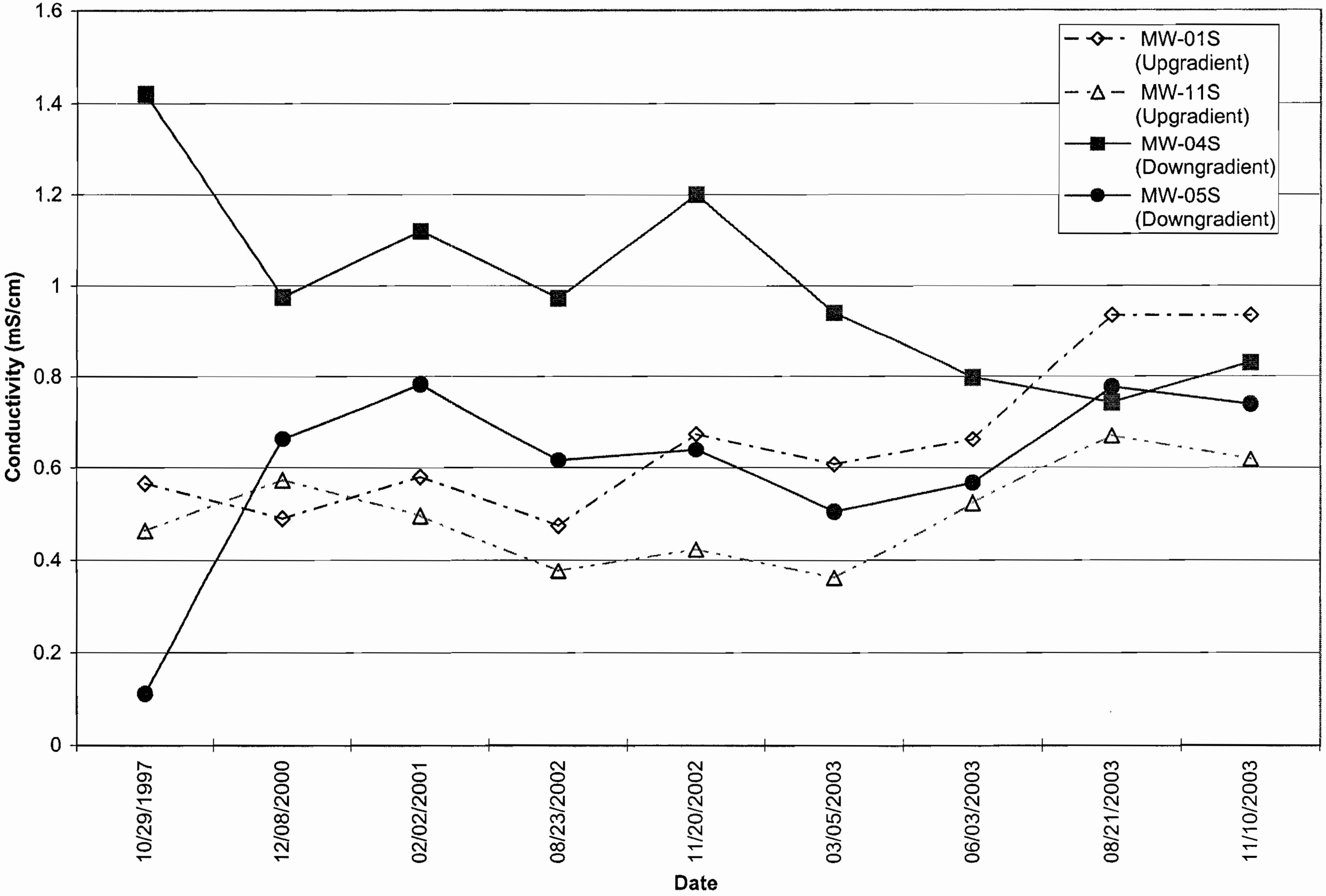
QUALIFIERS
B: Compound was found in the method blank as well as the sample
U: Compound was analyzed for but not detected at the detection limit shown.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.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

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

APPENDIX A-4

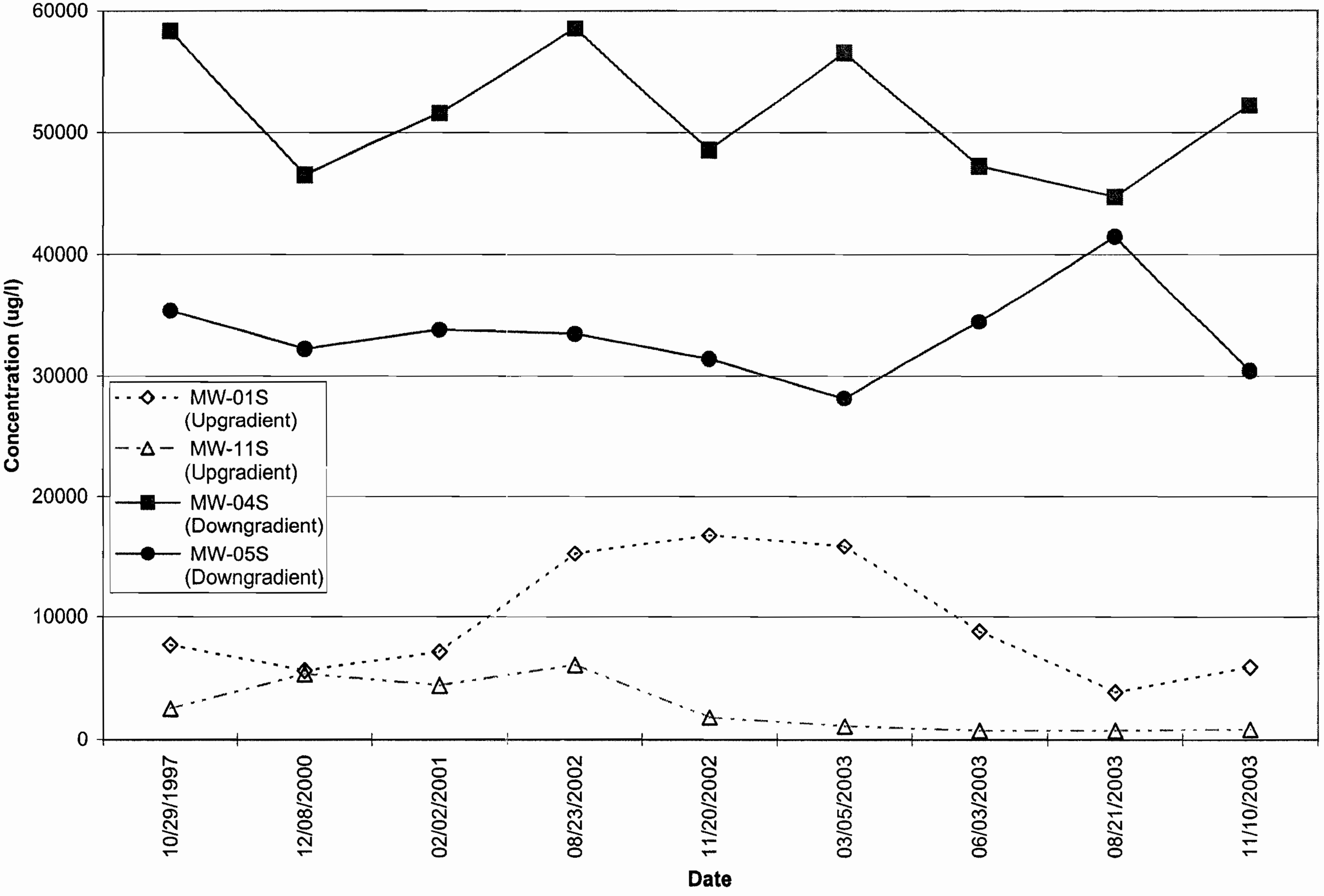
HISTORIC TREND GRAPHS –
ALKALINITY, IRON PLUS MANGANESE,
TOTAL DISSOLVED SOLIDS AND SPECIFIC CONDUCTIVITY
RESULTS FROM SELECTED MONITORING WELLS

HISTORIC SPECIFIC CONDUCTIVITY RESULTS IN SELECTED SHALLOW WELLS



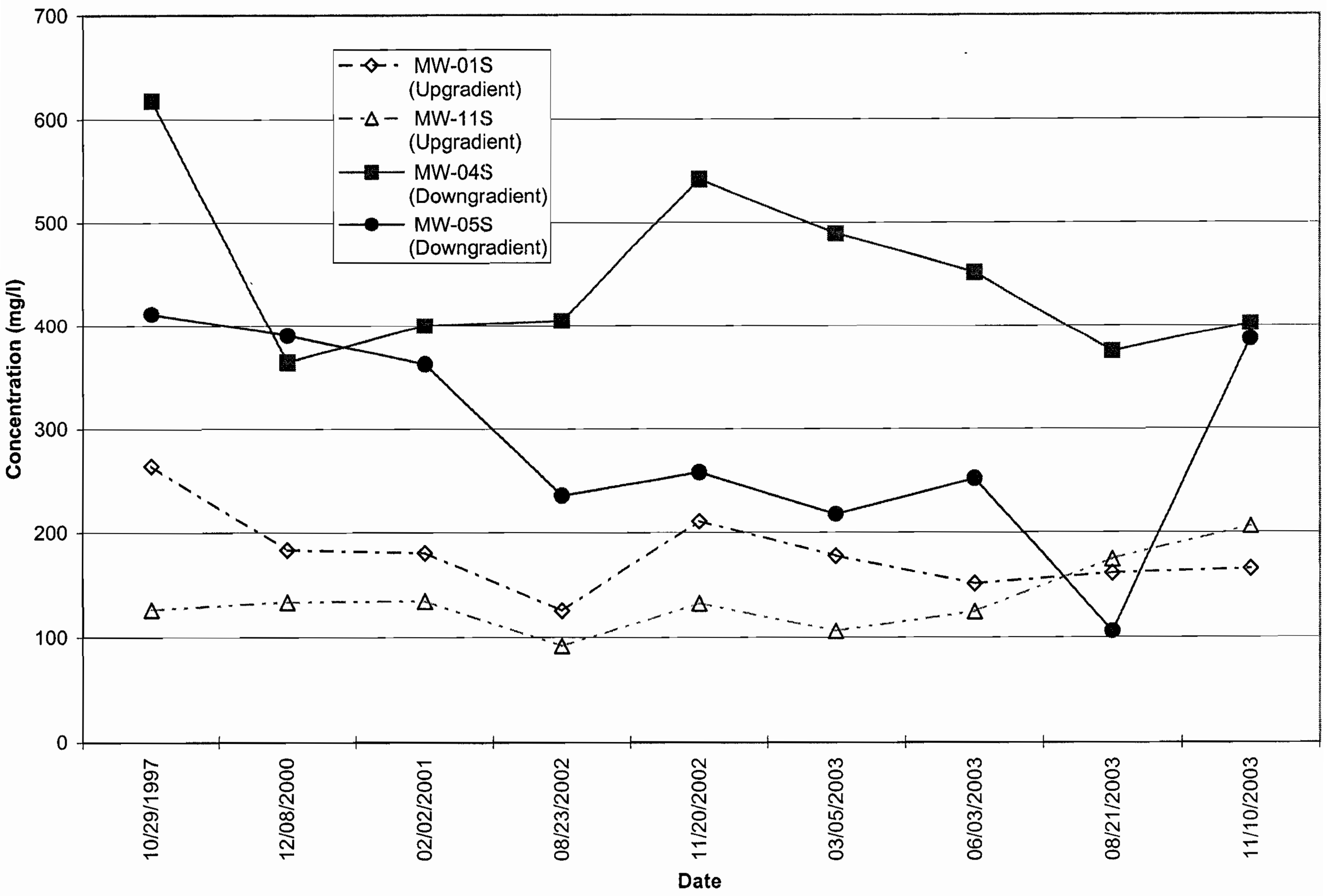
\public\JMilligan\Sonia4thQ03\GraphsCOND

HISTORIC IRON + MANGANESE RESULTS IN SELECTED SHALLOW WELLS



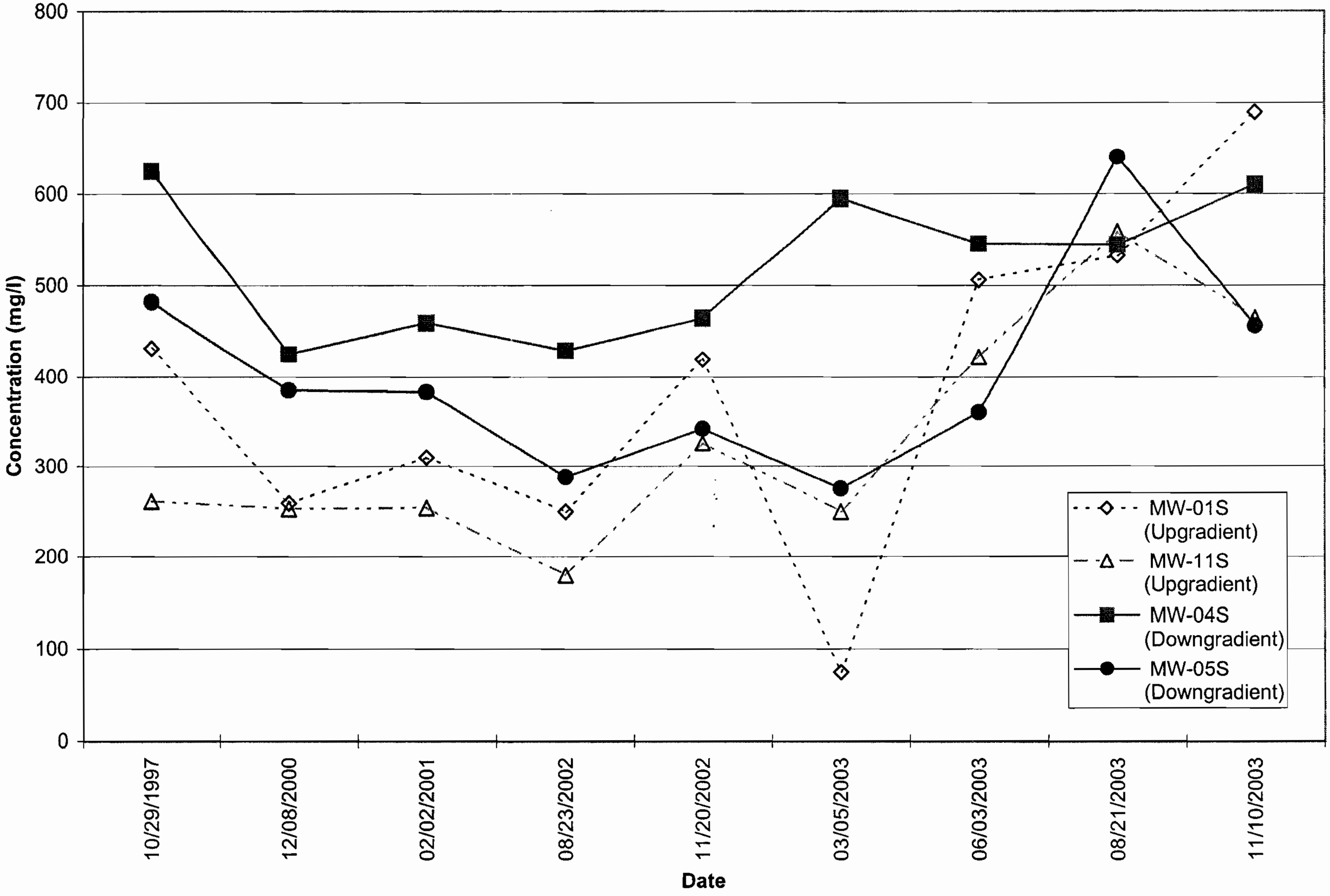
\public\JMilligan\Sonia4thQ03\GraphsFE+MN

HISTORIC ALKALINITY RESULTS IN SELECTED SHALLOW WELLS



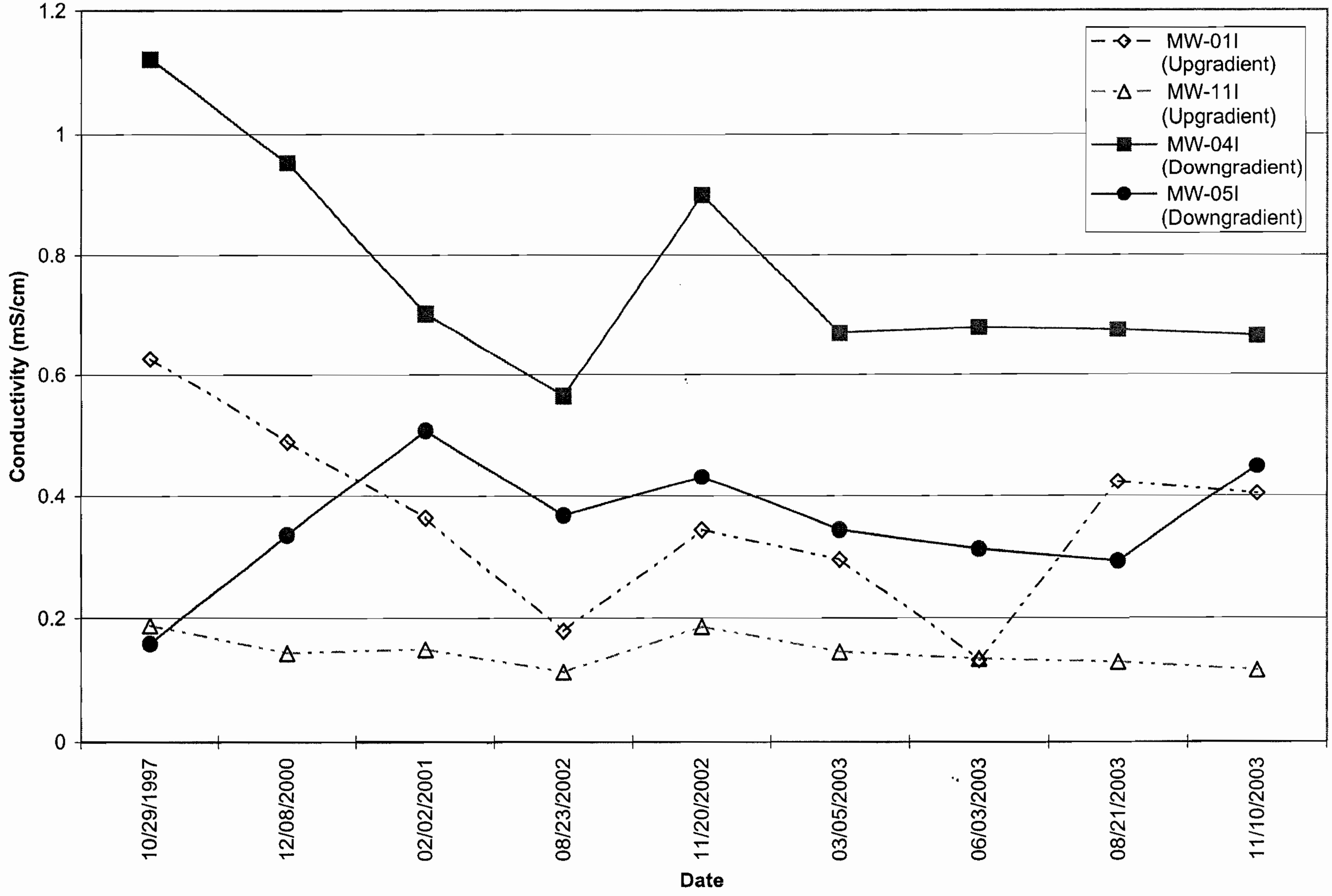
\public\JMilligan\Sonia4thQ03\GraphsAlkalinity Chart 1

HISTORIC TOTAL DISSOLVED SOLID RESULTS IN SELECTED SHALLOW WELLS



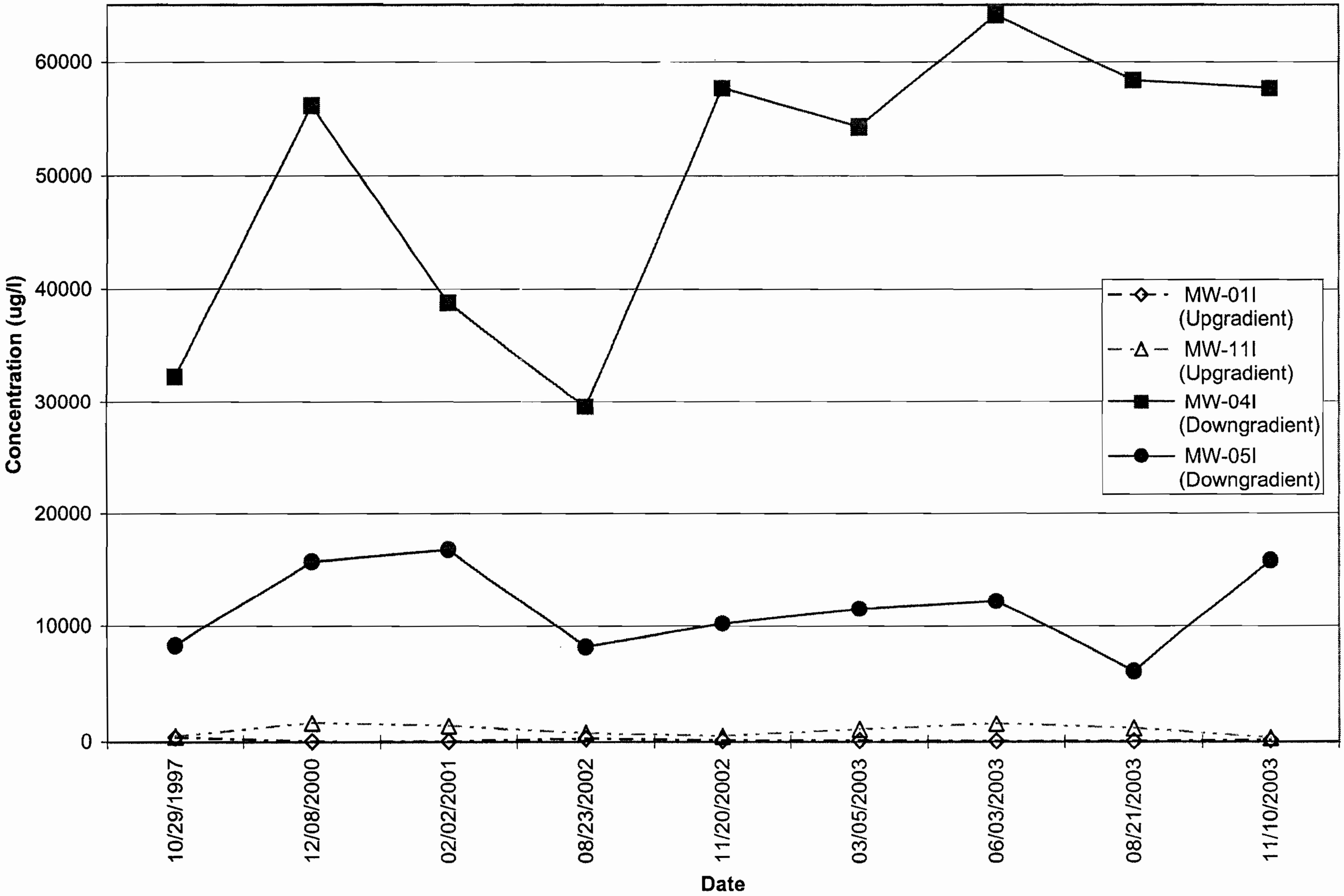
\public\JMilligan\Sonia4thQ03\GraphsTDS Chart 1

HISTORIC SPECIFIC CONDUCTIVITY RESULTS IN SELECTED INTERMEDIATE WELLS



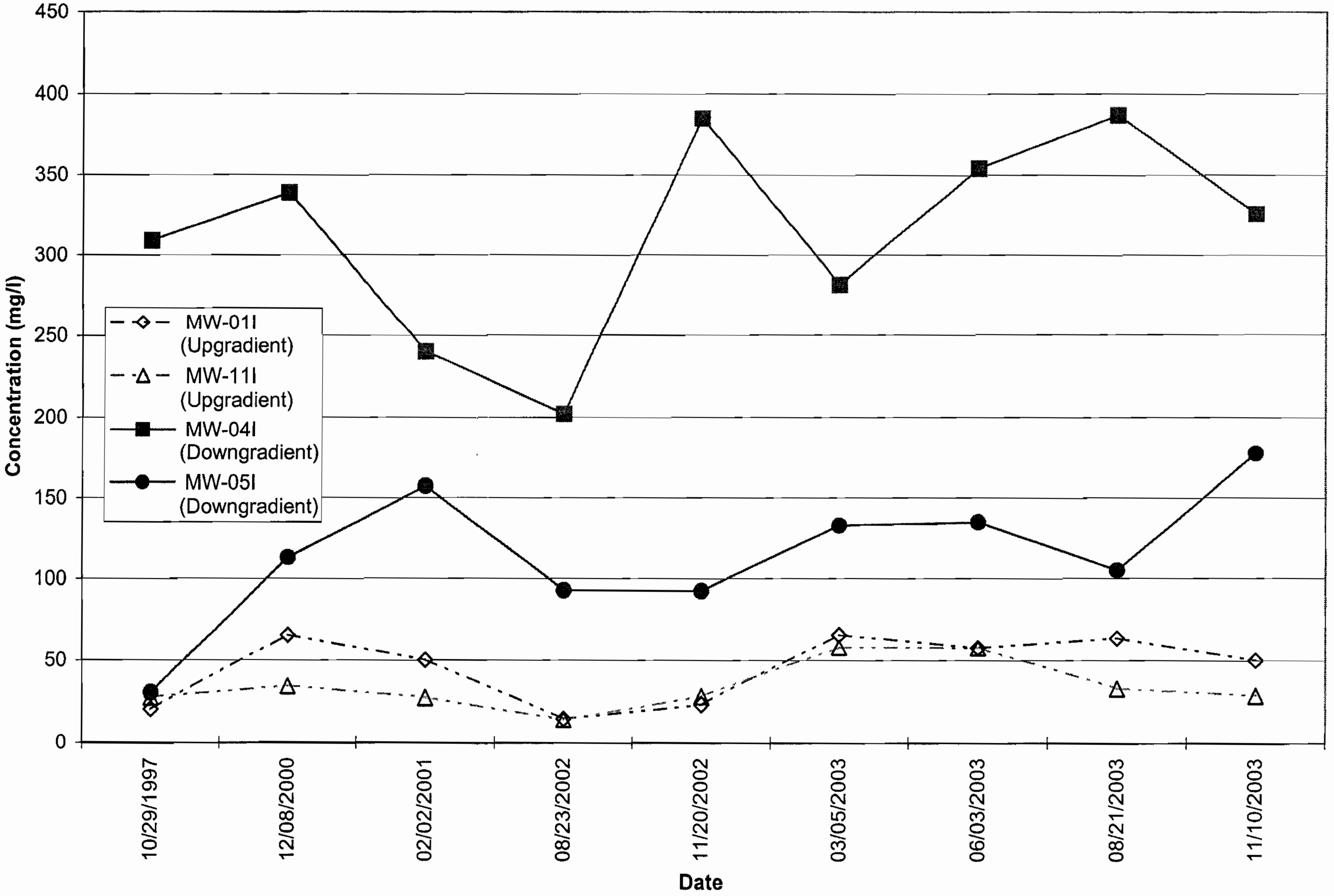
\public\JMilligan\Sonia4thQ03\GraphsICOND Chart 1

HISTORIC IRON + MANGANESE RESULTS IN SELECTED INTERMEDIATE WELLS



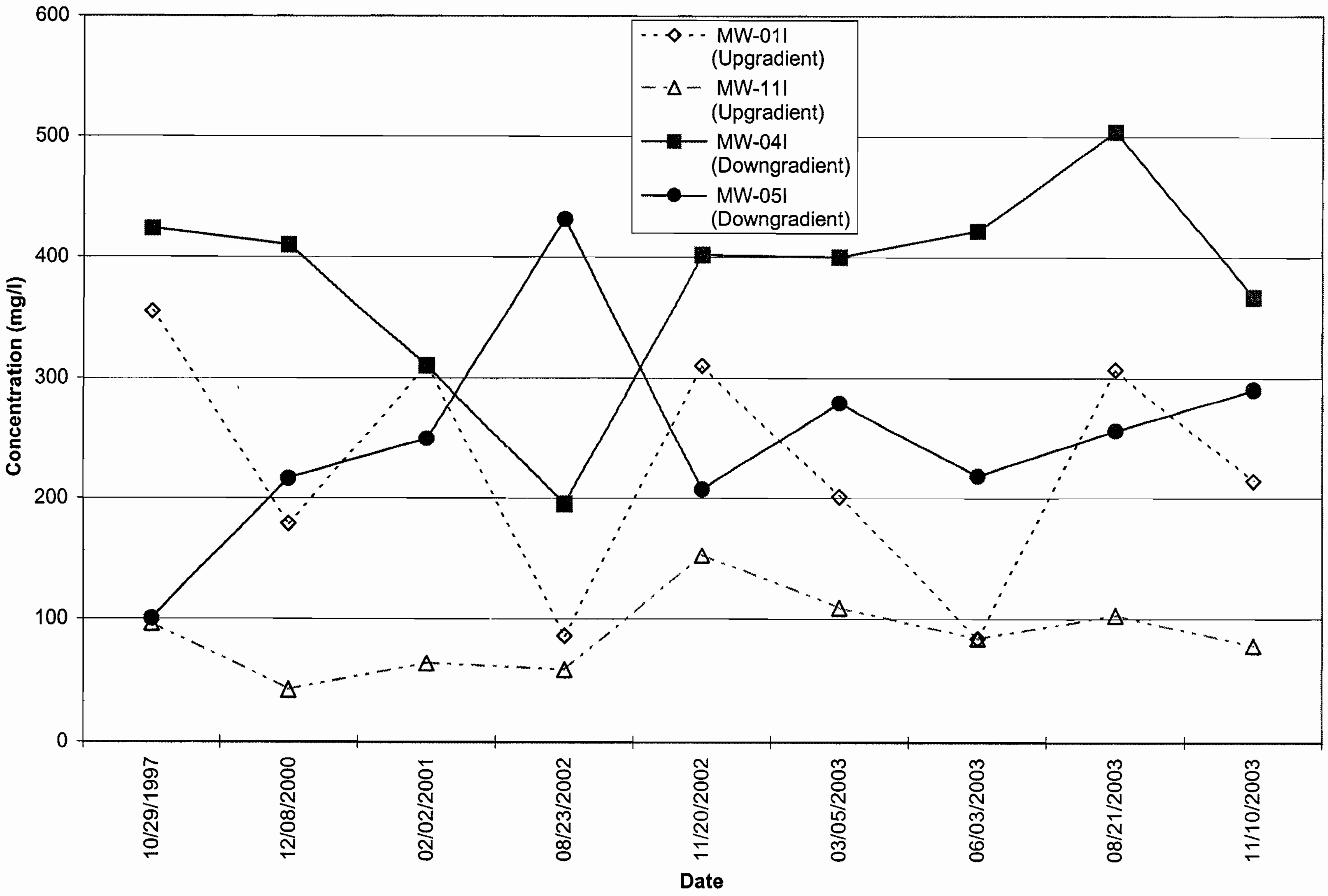
\public\JMilligan\Sonia4thQ03\GraphsiFE+MN Chart 1

HISTORIC ALKALINITY RESULTS IN SELECTED INTERMEDIATE WELLS



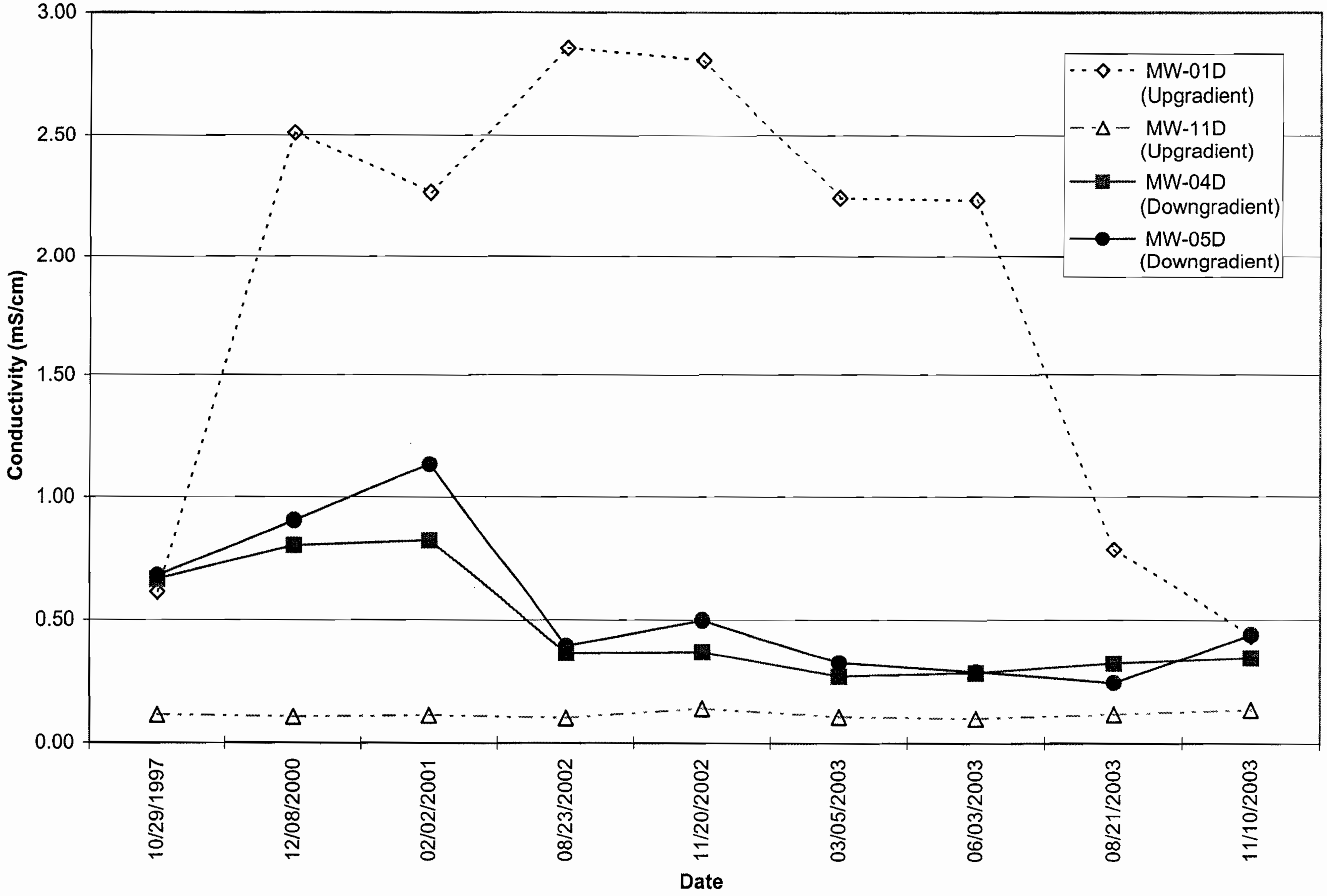
\public\JMilligan\Sonia4thQ03\GraphsiALKALINITY Chart 1

HISTORIC TOTAL DISSOLVED SOLID RESULTS IN SELECTED INTERMEDIATE WELLS



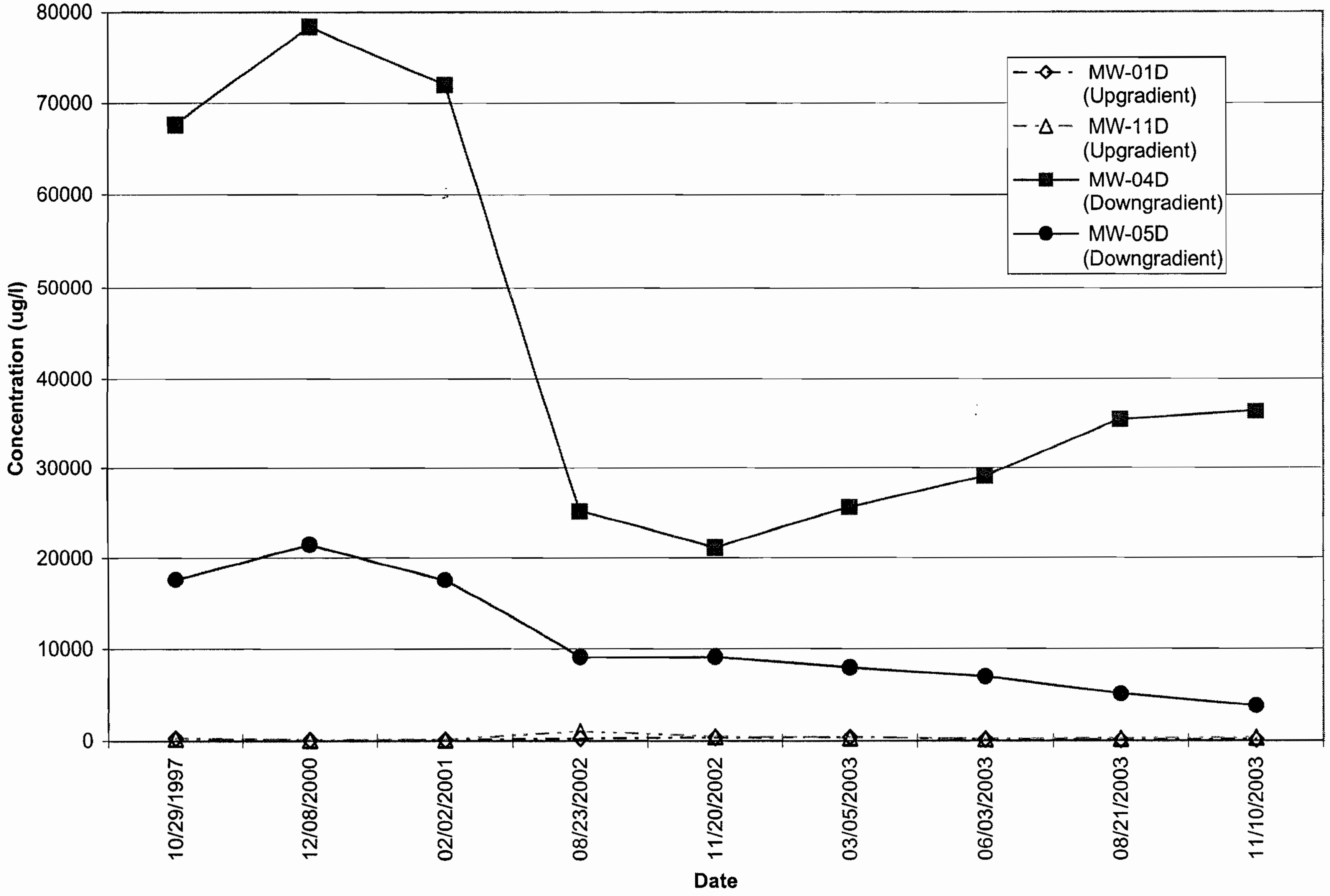
\public\JMilligan\Sonia4thQ03\GraphsiTDS Chart 1

HISTORIC SPECIFIC CONDUCTIVITY RESULTS IN SELECTED DEEP WELLS



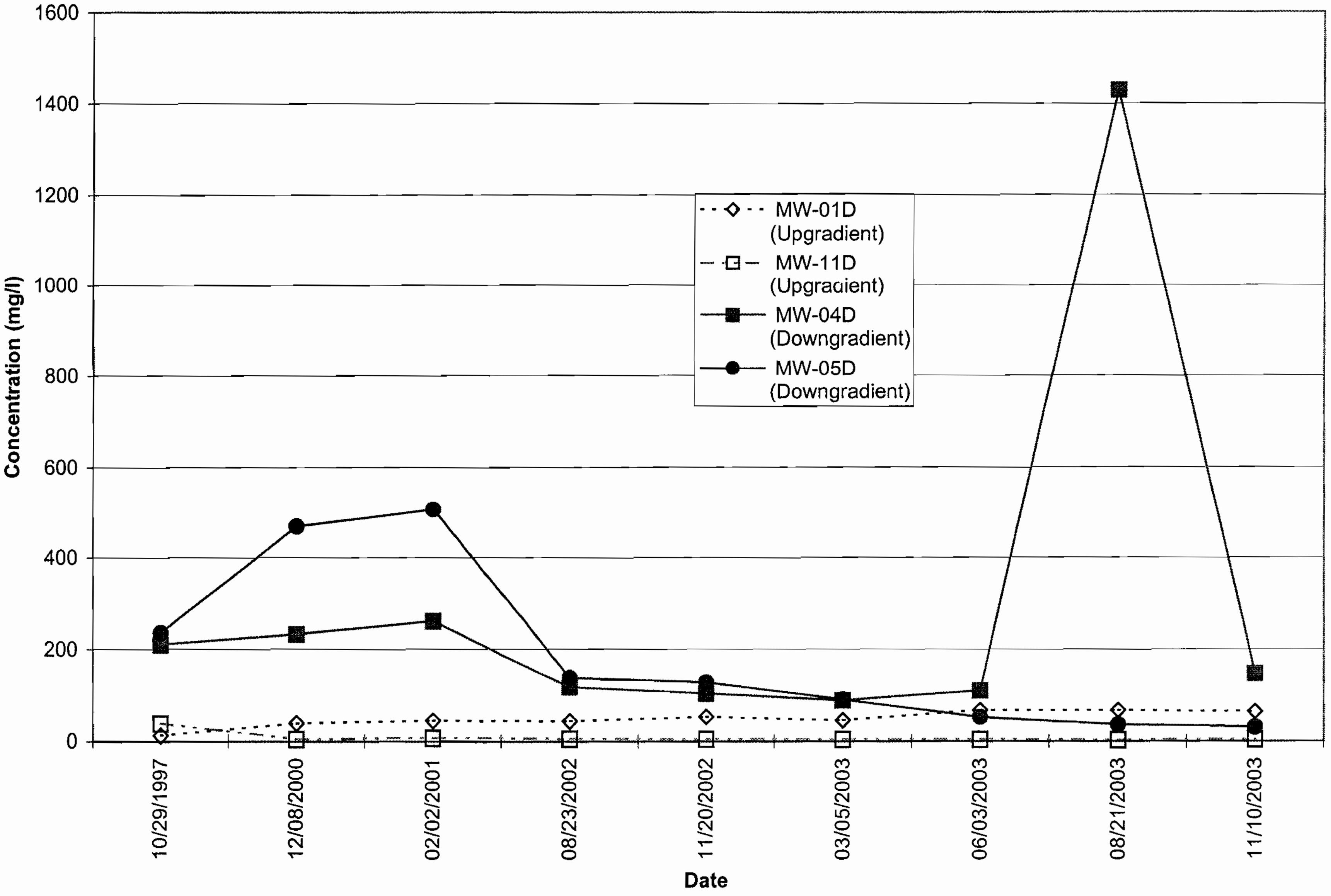
\public\JMilligan\Sonia4thQ03\GraphsdCOND Chart 1

HISTORIC IRON + MANGANESE RESULTS IN SELECTED DEEP WELLS



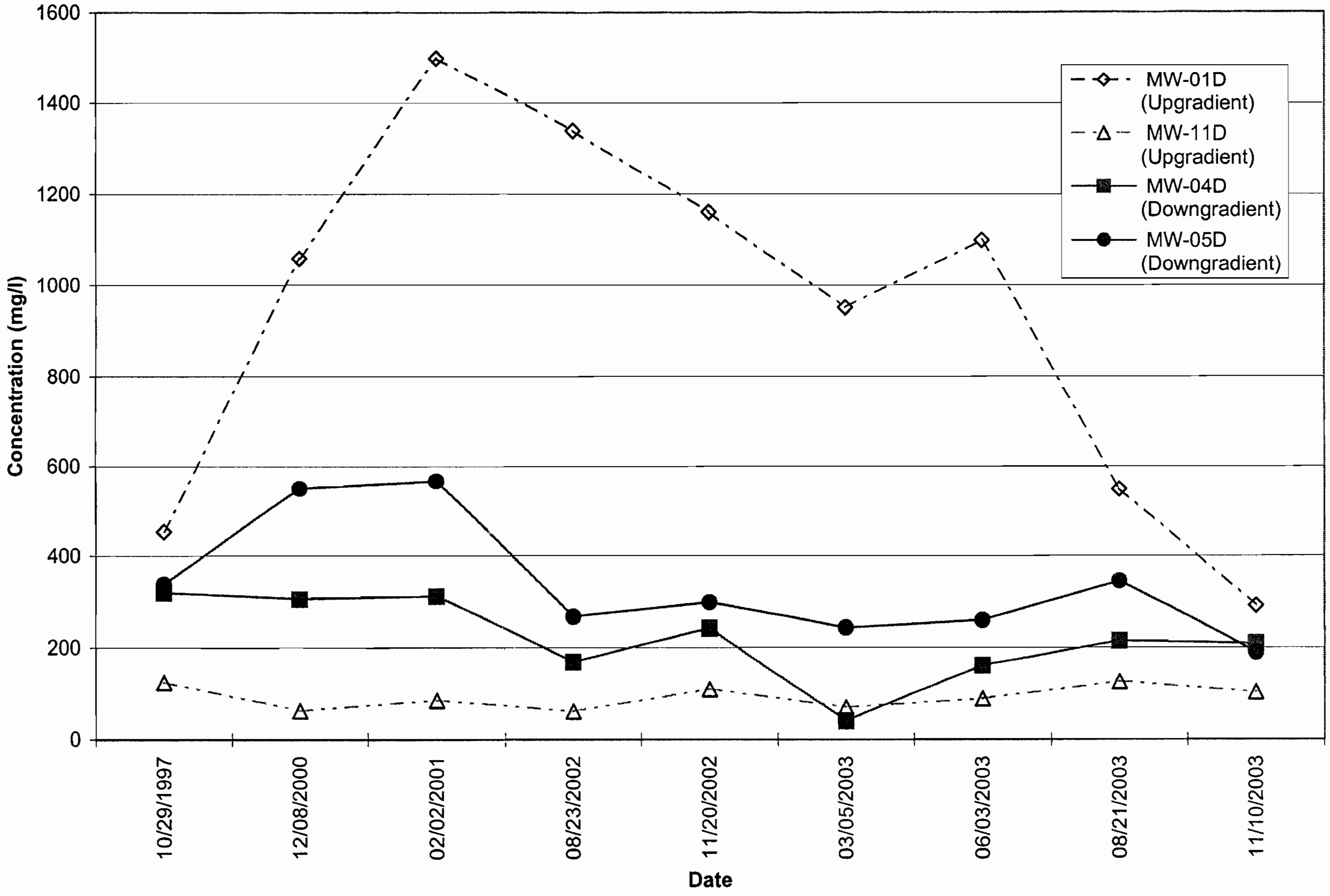
\public\JMilligan\Sonia4thQ03\GraphsdFE+MN Chart 1

HISTORIC ALKALINITY RESULTS IN SELECTED DEEP WELLS



\public\JMilligan\Sonia4thQ03\GraphsdAlkalinity Chart 1

HISTORIC TOTAL DISSOLVED SOLID RESULTS IN SELECTED DEEP WELLS



\public\JMilligan\Sonia4thQ03\GraphsdTDS Chart 1

Appendix B

APPENDIX B-1

FIELD FORMS - FIELD OBSERVATION LOGS

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/10/03

SAMPLE ID: 2023- MW-01S (29)
WELL ID: MW-01S
SAMPLERS: James Milligan
S.Py Singh

Time On-site: 1525
1525

Time Off-site: 1610
1610

Depth of well (from top of casing).. 28.88 Ft
Initial static water level (from top of casing).......................... 15.13 Ft
Time:
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: 13.75 ft. of water x 0.65 = 8.93 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)
Initl	5.85	11.78	0.443	10.0	2.24	301
5	6.29	15.91	0.827	10.0	0.89	76
10	6.37	15.99	0.973	0.2	0.49	50
15	6.39	15.98	0.972	0.7	0.47	44
20	6.40	15.96	0.960	0.6	0.44	40
25	6.42	15.96	0.952	0.1	0.44	36
30	6.43	15.94	0.945	0.0	0.44	33
sample	6.44	14.86	0.936	2.0	9.90	36

Sampling

Time of Sample Collection: 1605

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

Analyses: Part 360 Routine Parm
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations

Weather/Temperature: Clear, Cold and Sunny 50°F
Sample description: Clear, colorless, odorless
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 1gal/minute
Pump De-Contaminated

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/10/03

SAMPLE ID: 2023- MW-01I (78)
WELL ID: MW-0I
SAMPLERS: James Milligan
S.Py Singh

Time On-site: 1440
1440

Time Off-site: 1525
1525

Depth of well (from top of casing)........ 78.63 Ft Time:
Initial static water level (from top of casing)........ 14.45 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: 64.18 ft. of water x 0.65 = 41.71 gallons

volume of water removed: 125.15 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)
Intl	6.34	14.02	0.378	3.7	1.75	302
25	6.23	14.46	0.382	9.6	1.54	300
50	6.19	14.40	0.381	8.8	1.37	300
75	6.11	14.29	0.389	10.0	0.95	297
100	6.08	14.24	0.395	9.6	0.90	289
125	6.05	14.23	0.406	10.0	0.85	285
sample	5.96	13.81	0.406	10.0	4.98	316

Sampling

Time of Sample Collection: 1520

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

Analyses: Part 360 Routine Param
- ___ VOCs 602 ___ 503 ___ Other ___
- ___ SVOCs
- X Metals
- ___ PCB/Pest.
- ___ Physical
- X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols TKN, Total Hardness, TOC

Observations

Weather/Temperature: Cold, Sunny 50°F
Sample description: clear, Colorless, odorless
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
Flow Rate = 5gal /minute
Pump - De-contaminated

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/10/03

SAMPLE ID: 2023-MW-01D (w6)
WELL ID: MW-01D
SAMPLERS: James Milligan
S. Py Singh

Time On-site: 1340
1340

Time Off-site: 1435
1435

Depth of well (from top of casing)........ 105.80 Ft
Initial static water level (from top of casing)........ 13.62 Ft

Time: ______
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: 92.18 ft. of water x 0.65 = 59.91 gallons

volume of water removed: 179.95 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)
Initl	5.69	14.15	0.430	5.0	2.10	359
50	6.20	13.62	0.0341	8.0	0.42	
75	6.20	13.62	0.0342	10.0	0.42	
125	6.22	13.49	0.639	10.0	0.46	280
150	6.23	13.48	0.639	10.0	0.43	268
175	6.24	13.49	0.637	10.0	0.43	259
180	6.24	13.49	0.638	10.0	0.44	259
Sample	6.67	13.38	0.437	9.5	9.04	301

Sampling
Time of Sample Collection: @ 1430

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

Analyses: Part 360 Route Parameters
______ VOCs 602 ______ 503 ______ Other ______
______ SVOCs
X Metals
______ PCB/Pest.
______ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations
Weather/Temperature: Sunny, Cold 50°F
Sample description: clear, colorless, odorless
Free Product? yes ______ no X describe ______
Sheen? yes ______ no X describe ______
Odor? yes ______ no X describe ______

Comments: Flow Rate = 5 gallons /minute
Pump- De-contaminated

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/11/03

SAMPLE ID: 2023-MW_023 (72)
WELL ID: MW-02I
SAMPLERS: James Milligan
Sapy Singh

	Time On-site:	Time Off-site:
	0915	0950
	0915	0956
Depth of well (from top of casing)……………………………	72.13 FT	Time:
Initial static water level (from top of casing)……………………	28.91 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: 43.22 ft. of water x 0.65 = 28.09 gallons

volume of water removed: 88 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)
Initl	5.72	12.77	0.93	3.4	8.55	363
20	5.68	13.74	0.94	7.6	3.52	360
40	5.46	13.94	0.96	3.7	1.05	367
60	5.24	13.97	0.96	1.0	0.81	362
80	5.23	13.96	.101	0.1	0.76	355
88	5.21	13.96	.102	0.3	0.74	355
sample	5.12	14.71	.099	4.0	9.73	352

Sampling

Time of Sample Collection: 0945

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

Analyses: Part 360 Routine Param
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations

Weather/Temperature: Sunny and Cold 45°F
Sample description: Clear, Colorless, odorless
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 4 gal / minute

De-Contaminate pump

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/11/03

SAMPLE ID: 2023-MW-02D(116)
WELL ID: MW-02D
SAMPLERS: James Milligan
S. Py Singh

Time On-site: 0850
0850

Time Off-site: 0925
0915

Depth of well (from top of casing) 116 FT
Initial static water level (from top of casing) 29.05 FT

Time: ______
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: 86.45 ft. of water x 0.65 = 56.51 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)
Initl	5.69	13.59	.101	4.7	9.65	349
20	5.75	13.59	.093	0.1	7.98	369
60	5.74	13.60	0.92	1.0	7.98	365
100	5.73	13.58	0.92	2.7	7.94	366
140	5.73	13.58	0.92	3.4	7.91	365
160	5.71	13.57	0.92	4.4	7.90	365
180	5.72	13.58	0.92	4.9	7.89	363
sample	5.77	12.82	0.93	3.2	10.12	370

Sampling

Time of Sample Collection: 0910

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

Analyses: Part 360 Routine Parm
____ VOCs 602 ______ 503 ______ Other ______
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Tot Alkalinity, TDS, COD, NH3, NO3, Phenols TKN, Total Hardness, TOC

Observations

Weather/Temperature: Sunny and Cold 45°F
Sample description: Clear, colorless, odorless
Free Product? yes ____ no X describe ______
Sheen? yes ____ no X describe ______
Odor? yes ____ no X describe ______

Comments:
Flow Rate = 20 gal /minute

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/13/03

SAMPLE ID: 2023-MW-035(32)
WELL ID: MW-035 (32)
SAMPLERS: James Milligan
S.Py Singh

	Time On-site:	Time Off-site:
James Milligan	1330	1430
S.Py Singh	1330	1430

Depth of well (from top of casing).. 31.6Ft Time: ____
Initial static water level (from top of casing)........................ 21.85Ft Time: ____

Purging Method			
Airlift	____	Centrifugal	____
Bailer	____	Pos. Displ.	____
Submersible	✓	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: 9.75 ft. of water x 0.65 = 6.34 gallons

volume of water removed: 26 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)
Initl	6.36	17.57	0.616	144.0	2.77	-44
4	6.28	18.57	0.606	111.0	0.67	-67
8	6.26	18.73	0.606	45.3	0.51	-71
12	6.26	18.70	0.604	10.5	0.53	-70
16	6.27	18.68	0.604	8.9	0.49	-72
18	6.27	18.67	0.604	7.6	0.48	-72
20	6.27	18.69	0.604	7.18	0.47	-73
sample	6.53	13.49	0.555	40.2	6.82	-51

Sampling
Time of Sample Collection: 1420

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

Analyses: Part 360 Routine
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols TKN, Total Hardness, TOC

Observations
Weather/Temperature: cold, Sunny and windy 60mph ; 50°F
Sample description: Initially Brown and very Turbid with Sulfur odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes X no ____ describe Sulfur odor.

Comments:
Flow Rate = 2gal/min
De-Contaminate Pump.
2023-MW-035 (MS #2)
2023-MW-035 (MSD #2)
2023 MW-035 (Blind Duplicate #2)
2023 MW-035 (Field Blank #2)

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/12/03

SAMPLE ID: 2023-MW-04S(34)
WELL ID: MW-04S
SAMPLERS: James Milligan
Sudip Singh

Time On-site: 0900 / 0900
Time Off-site: 0950 / 0950

Depth of well (from top of casing)........ 33.70 Ft
Initial static water level (from top of casing)........ 23.57 Ft
Time: ______
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: 10.13 ft. of water x 0.65 = 6.58 gallons

volume of water removed: 19.75 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)
Initl	6.11	15.50	1.53	12.5	9.76	14
4	6.05	15.66	1.35	2.5	2.17	-11
8	6.07	15.72	1.30	6.4	0.65	-28
12	6.06	15.72	1.26	4.7	0.57	-33
16	6.06	15.72	1.23	8.9	0.55	-35
18	6.05	15.72	1.27	7.6	0.55	-36
20	6.06	15.72	1.26	12.6	0.56	-37
Sample	6.12	15.45	0.829	13.7	1.46	-42

Sampling
Time of Sample Collection: 0940

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

Analyses: Part 360 Routine Parm
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations
Weather/Temperature: Cloudy, Raining; Ground Saturated 60°F
Sample description: Clear, Colorless; Sulfur odor
Free Product? yes ____ no X describe ______
Sheen? yes ____ no X describe ______
Odor? yes X no ____ describe Sulfur odor

Comments:
Flow Rate = 2gal/minute
De-Contaminate Pump

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/4/03

SAMPLE ID: 2023-MW-04I (71)
WELL ID: MW-04I
SAMPLERS: James Milligan
S.Py Singh

Time On-site: 0820
0826

Time Off-site: 0845
0845

Depth of well (from top of casing).. 71.30 FT
Initial static water level (from top of casing)........................ 21.93 FT

Time: ______
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: 49.37 ft. of water x 0.65 = 32.09 gallons

volume of water removed:
100 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)
Initl	5.65	15.32	0.972	12.3	4.11	160
20	5.68	14.66	0.661	7.8	3.97	152
40	5.77	14.64	0.659	5.6	2.46	60
60	5.89	14.59	0.663	5.9	0.73	-2
80	5.94	14.58	0.664	5.4	0.77	-3
100	5.98	14.58	0.664	8.4	0.71	-4
sample	6.14	14.57	0.665	18.3	1.73	-3

Sampling

Time of Sample Collection: 0840

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

Analyses: Part 360 Routine Param
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations

Weather/Temperature: Cloudy and Raining; Ground Saturated 60°F
Sample description: Clear, Colorless, odorless
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 20 gal / minute
De-Contaminate pump

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/11/03

SAMPLE ID: 2023-MW-04D (114)
WELL ID: MW-04(D)
SAMPLERS: James Milligan
S.Py Singh

Time On-site: 1405
1405

Time Off-site: 1435
1435

Depth of well (from top of casing)........ 114.1 ft
Initial static water level (from top of casing)........ 21.58 ft

Time: ______
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: 92.52 ft. of water x 0.65 = 60.32 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)
Initl	6.16	15.25	0.271	59.9	10.40	13
20	6.26	14.48	0.275	34.6	6.83	-9
60	6.37	13.78	0.338	50.6	5.57	-28
100	6.53	13.77	0.350	15.3	4.87	-47
140	6.54	13.77	0.350	20.2	4.44	-48
160	6.54	13.77	0.349	22.1	4.40	-49
180	6.54	13.77	0.347	22.5	4.39	-48
sample	6.56	13.85	0.346	17.6	5.86	-46

Sampling
Time of Sample Collection: 1425

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

Analyses: Part 360 Routine
______ VOCs 602 ______ 503 ______ Other ______
______ SVOCs
X Metals
______ PCB/Pest.
______ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations
Weather/Temperature: Sunny and cold 45°F
Sample description: Clear, colorless, odorless
Free Product? yes ______ no X describe ______
Sheen? yes ______ no X describe ______
Odor? yes ______ no X describe ______

Comments:
Flow Rate = 4 gal / minute ; 2023-MW-04D (MS) @ 1425
De-contaminate Pump ; 2023-MW-04D (MSD) @ 1425
; 2023-MW-04(D) Blind Duplicate #1 @ 00

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/12/03

SAMPLE ID: 2023 - MW -05 S (34)
WELL ID: MW -05S
SAMPLERS: James Milligan
S.Py Singh

	Time On-site:	Time Off-site:
	1140	1230
	1140	1230
Depth of well (from top of casing)........	33.20 ft	Time:
Initial static water level (from top of casing)........	22.31 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: 10.89 ft. of water x 0.65 = 7.08 gallons

volume of water removed: 22 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)
Initl	6.30	18.55	0.720	160.0	2.10	-49
4	6.22	18.53	0.735	126.0	1.16	-51
8	6.11	19.99	0.743	1.1	0.48	-54
12	6.11	20.00	0.743	5.4	0.47	-56
18	6.11	20.00	0.743	5.6	0.47	-58
20	6.12	20.00	0.741	5.1	0.47	-59
22	6.12	20.00	0.741	5.0	0.47	-59
sample	6.12	20.00	0.741	45.0	0.47	-59

Sampling

Time of Sample Collection: 1220

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

Analyses: Part 360 Routine Param
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations

Weather/Temperature: Cloudy and Raining ; Ground Saturated 60 °F
Sample description: Clear, colorless, Sulfur odor
Free Product? yes ____ no X describe ____
Sheen? yes X no ____ describe Thin layer - initially
Odor? yes X no ____ describe Brown yellow color / with Sulfur odo
Initally

Comments:
Flow Rate = 2gal / min
De - Contaminate pump

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/12/03

SAMPLE ID: 2023-MW 05I(70)
WELL ID: MW-05I
SAMPLERS: James Milligan
S.Py Singh

Time On-site: 1055
1055

Time Off-site: 1125
1125

Depth of well (from top of casing)........ 70.20 Ft
Initial static water level (from top of casing)........ 22.28 Ft

Time:
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: 47.92 ft. of water x 0.65 = 31.15 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)
Initl	6.19	15.64	0.416	3.5	0.48	-17
20	6.20	15.68	0.431	5.6	0.41	-27
40	6.29	15.67	0.437	3.5	0.40	-39
60	6.29	15.67	0.440	3.5	0.39	-42
80	6.29	15.67	0.442	5.3	0.38	-44
100	6.31	15.66	0.448	5.2	0.39	-46
120	6.31	15.66	0.448	5.6	0.39	-48
sample	6.30	15.60	0.450	10.5	1.59	-45

Sampling

Time of Sample Collection: 1115

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

Analyses: Part 360 Routine Param
___ VOCs 602 ___ 503 ___ Other ___
___ SVOCs
X Metals
___ PCB/Pest.
___ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations

Weather/Temperature: Cloudy ; Ground Saturated 60°F
Sample description: yellow, Sulfur odor
Free Product? yes X no X describe
Sheen? yes X no ___ describe Silty layer
Odor? yes X no ___ describe Sulfur odor ; yellow

Comments:
Flow Rate = 20 gal/min
De-Contaminate pump

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/12/03

SAMPLE ID: 2023-MW-05D(116)
WELL ID: MW-05D
SAMPLERS: James Milligan
Sipy Singh

	Time On-site:	Time Off-site:
James Milligan	1020	1055
Sipy Singh	1020	1055

Depth of well (from top of casing).. 115.70 ft Time:
Initial static water level (from top of casing)......................... 22.74 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: 92.26 ft. of water x 0.65 = 59.47 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)
Initl	6.93	13.60	0.255	0.2	7.28	79
20	6.87	13.66	0.249	4.1	3.48	80
60	6.69	13.70	0.241	9.1	1.17	76
100	6.56	13.72	0.239	9.1	0.79	74
140	6.49	13.72	0.240	3.6	0.64	74
160	6.45	13.72	0.241	3.5	0.63	74
180	6.44	13.73	0.241	3.4	0.62	74
sample	6.45	13.70	0.442	3.6	1.52	73

Sampling

Time of Sample Collection: 1050

	Method:		Analyses: Part 360 Routine Param
___	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, CL, So4, Total Alkalinity, TDS, CoD, NH3, No3, Phenols TKN, Total Hardness, ToC

Observations

Weather/Temperature: Cloudy, Ground Saturated 60°F
Sample description: Clear, colorless, odorless
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
Flow Rate = 20 gal/min
De-contaminate pump

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/11/03

SAMPLE ID: 2023-MW-06S (37)
WELL ID: MW-06S
SAMPLERS: James Milligan
Sanjay Singh

	Time On-site:	Time Off-site:
	1150	1230
	1150	1230

Depth of well (from top of casing).. 37.9 Ft Time:
Initial static water level (from top of casing)........................ 26.30 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: 11.6 ft. of water x 0.65 = 7.56 gallons

volume of water removed: 22.69 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	6.13	16.84	0.471	201	4.44	30
8	6.24	18.51	0.598	81.5	0.65	-24
12	6.27	18.53	0.591	12.2	0.52	-8
16	6.28	18.55	0.578	0.4	0.49	-32
20	6.30	18.56	0.579	51	0.49	-34
22	6.30	18.56	0.579	5.2	0.46	-35
24	6.30	18.56	0.577	5.6	0.44	-35
sample	6.55	19.1	0.485	11.0	7.17	-15

Sampling

Time of Sample Collection: 1220

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

Analyses: Part 360 Routine Param
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations

Weather/Temperature: Sunny and Cold 45°F
Sample description: Initially was Brown and Silty then became clear and colorless
Free Product? yes ____ no X describe after Purging
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

Comments:
Flow Rate = 2gal/min ; ~~[illegible]~~
De-Contaminate Pump

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/11/03

SAMPLE ID: 2023 - MW-06I (76)
WELL ID: MW-06I
SAMPLERS: James Milligan
Sipy Singh

Time On-site:	1235	Time Off-site:	1315
	1235		1315

Depth of well (from top of casing).. 76.40 FT Time: ____
Initial static water level (from top of casing)........................ 26.47 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: 49.53 ft. of water x 0.65 = 32.55 gallons

volume of water removed: 100 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)
Intl	6.48	16.11	0.256	16.0	2.07	-22
20	6.45	16.31	0.208	15.7	1.68	-12
40	6.36	15.90	0.197	15.5	0.57	-2
60	6.37	16.60	0.185	12.6	0.45	18
80	6.32	15.55	0.185	11.7	0.44	19
100	6.30	15.51	0.182	10.4	0.44	20
sample	6.27	15.73	0.171	7.1	4.14	40

Sampling
Time of Sample Collection: 1310

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

Analyses: Part 360 Routine Param
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations
Weather/Temperature: Sunny and Cold 45°F
Sample description: Clear, Colorless, odorless
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 4gal / minute
De-Contaminate pump
Field Blank #1 @ 1330

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/11/03

SAMPLE ID: 2023-MW-06D (117)
WELL ID: MW-06D
SAMPLERS: James Milligan
Sapy Singh

Time On-site: 1100
1100

Time Off-site: 1140
1140

Depth of well (from top of casing).. 117.1 ft
Initial static water level (from top of casing)........................ 26.92 ft

Time: ______
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: 90.18 ft. of water x 0.65 = 58.61 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)
Initl	5.27	15.87	0.134	49.7	10.05	197
20	5.83	16.07	0.129	54.7	4.00	167
60	5.98	14.24	0.119	18.7	1.08	117
100	5.98	14.12	0.116	1.6	0.98	95
140	6.07	14.10	0.115	4.8	0.95	79
160	6.03	14.10	0.115	5.9	0.94	80
180	6.01	14.10	0.115	5.6	0.94	81
sample	5.86	14.09		34.8	8.65	66

Sampling

Time of Sample Collection: 1125

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

Analyses: Part 360 Routine Param
____ VOCs 602 ______ 503 ______ Other ______
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations

Weather/Temperature: Sunny and cold 45°F
Sample description: Clear, colorless
Free Product? yes ____ no X describe ______
Sheen? yes ____ no X describe ______
Odor? yes X no ____ describe Sulfur odor

Comments:
Flow Rate = 20gal/minute
Pump - De-Contaminated

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/11/03

SAMPLE ID: 2023-MW-07I(74)
WELL ID: MW-07I
SAMPLERS: James Milligan
Sufy Singh

Time On-site: 1030 / 1030
Time Off-site: 1050 / 1050

Depth of well (from top of casing)........ 74.2 Ft
Initial static water level (from top of casing)........ 24.33 Ft
Time: ______
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: 49.87 ft. of water x 0.65 = 32.41 gallons

volume of water removed: 100 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)
Initl	5.28	14.52	.111	5.4	1.34	375
20	5.26	14.51	.111	6.8	1.04	372
40	5.31	14.51	.111	6.4	0.94	366
60	5.34	14.51	.111	6.7	0.90	346
80	5.35	14.50	.111	6.6	0.85	339
100	5.35	14.50	.111	5.1	0.81	336
sample	5.36	14.54	.112	5.0	9.71	340

Sampling
Time of Sample Collection: 1045

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

Analyses: Part 360 Routine Parm
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols TKN, Total Hardness, TOC

Observations
Weather/Temperature: Sunny and Cold 45°F
Sample description: Clear, colorless, odorless
Free Product? yes ____ no X describe ______
Sheen? yes ____ no X describe ______
Odor? yes ____ no X describe ______

Comments:
Flow Rate = 20 gal/minute
De-contaminate Pump

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/13/03

SAMPLE ID: 2023-MW-115(19)
WELL ID: MW-115
SAMPLERS: James Milligan
S.Py Singh

Time On-site: ~~1960~~ ~~749~~
Time Off-site: 1235 1233

Depth of well (from top of casing).. ~~1140~~ 19.60 Ft Time: 1235
Initial static water level (from top of casing)........................ ~~1140~~ 7.19 Ft Time: 1235

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: 12.41 ft. of water x 0.65 = 8.07 gallons

volume of water removed: 26 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	14.13	0.115	65.1	2.18	361
4	5.86	16.65	0.550	57.1	1.06	333
8	6.07	16.68	0.557	38.5	0.98	323
12	6.13	16.67	0.568	37.8	0.98	378
22	6.20	16.65	0.574	31.3	1.00	303
24	6.20	16.67	0.574	30.4	1.00	303
26	6.20	16.67	0.575	31.7	0.99	303
sample	6.55	13.25	0.618	30.7	0.98	315

Sampling
Time of Sample Collection: 1230

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

Analyses: Part 360 Routine Param
___ VOCs 602 ___ 503 ___ Other ___
___ SVOCs
X Metals
___ PCB/Pest.
___ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations
Weather/Temperature: Sunny, cold, windy 60 mph; 50°F
Sample description: clear, colorless, odorless
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
Flow Rate = 2 gal/min
De-contaminate - Pumps
- water discharge to vac - Truck ⇒ From Action Environmental
- later water was discharged to drainage basin #1 on Sonia Rd landfill

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/13/03

SAMPLE ID: 2023-MW #I (71)
WELL ID:
SAMPLERS: James Milligan / S.Py Singh

	Time On-site:	Time Off-site:
	1110	1140
	1110	1140
Depth of well (from top of casing)..	71.30 Ft	Time:
Initial static water level (from top of casing)........................	7.70 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: 63.6 ft. of water x 0.65 = 41.34 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	6.44	15.80	0.116	17.8	6.21	377
40	5.51	13.99	0.108	14.9	0.73	372
60	5.54	13.99	0.108	13.7	0.71	371
80	5.53	13.99	0.108	12.8	0.72	372
100	5.53	13.99	0.108	11.3	0.66	366
120	5.58	13.99	0.108	11.1	0.66	365
140	5.53	13.99	0.108	10.9	0.66	365
sample	5.73	11.36	0.116	17.6	0.36	346

Sampling

Time of Sample Collection: 1135

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

Analyses: Part 360 Routine Param
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols TKN, Total Hardness, TOC

Observations

Weather/Temperature:
Sample description: Clear, Colorless, odorless
Free Product? yes ____ no X describe
Sheen? yes ____ no X describe
Odor? yes ____ no X describe

Comments:
Flow Rate = 20gal/min
De-Contaminate Pump)
- Water discharge to VAC Truck => From Action Environmental
- Water was then discharged to drainage basin #1 on Sonia Rd Land Fill

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/13/03

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

Time On-site: 1025
1025

Time Off-site: 1110
1110

Depth of well (from top of casing)........ 94.20 Ft
Initial static water level (from top of casing)........ 94.20 Ft

Time: ____
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: 86.75 ft. of water x 0.65 = 56.39 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)
Intl	5.05	14.86	0.121	172.1	8.87	398
20	4.39	13.31	0.132	160.1	3.94	407
60	4.41	13.31	0.132	135.1	3.97	405
100	4.41	13.31	0.132	100.2	3.92	402
140	4.28	13.30	0.134	46.2	4.30	410
180	4.29	13.30	0.134	40.1	4.13	411
180	4.28	13.29	0.134	34.3	4.10	412
Sample	4.11	12.94	0.133	33.2	4.77	391

Sampling

Time of Sample Collection: 1100

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

Analyses: Part 360 Routine Param
____ VOCs 602 ____ 503 ____ Other ____
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols
TKN, Total Hardness, TOC

Observations

Weather/Temperature: Sunny and Cold; windy 6 mph; 50°F
Sample description: Clear, Colorless, odorless
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 20 gal/min
De-Contaminate pump
Water Discharge to Vac Truck - From Action Environmental
which was discharged to drainage basin #1 on Landfill
of Sonia Rd.

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/13/03

SAMPLE ID: 2023-MW-125(29)
WELL ID: MW - 125
SAMPLERS: James Milligan
S.Py Singh

Time On-site: 0815
0815

Time Off-site: 0845
0845

Depth of well (from top of casing)........ 18.40 Ft Time: ______
Initial static water level (from top of casing)........ 7.56 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: 10.9 ft. of water x 0.65 = 7.08 gallons

volume of water removed: 22 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)
Initl	6.76	15.84	0.313	27.3	8.55	317
4	6.43	16.26	0.359	29.5	5.61	324
8	6.29	16.25	0.359	43.1	5.49	322
12	6.16	16.26	0.359	50.6	5.44	324
18	6.11	16.27	0.359	40.2	5.39	328
20	6.13	16.28	0.359	40.0	5.39	329
22	6.12	16.28	0.359	38.2	5.39	330
sample	6.30	16.27	0.358	36.1	5.37	330

Sampling

Time of Sample Collection: 0835

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

Analyses: Part 360 Routine Param
____ VOCs 602 ______ 503 ______ Other ______
____ SVOCs
X Metals
____ PCB/Pest.
____ Physical
X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols TKN, Total Hardness, TOC

Observations

Weather/Temperature: Sunny and extremely windy 60mph; 50°F
Sample description: Clear, colorless, odorless
Free Product? yes ____ no X describe ______
Sheen? yes ____ no X describe ______
Odor? yes ____ no X describe ______

Comments:
Flow Rate = 2gal/min
De-contaminate Pump
-water discharge to VAC truck from Action Environmental
-water was later on discharge to drainage basin #1 on Sonia Rd land Fill

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/13/03

SAMPLE ID: 2023-MW-12I(70)
WELL ID: MW-12I
SAMPLERS: James Milligan
S.P. Singh

Time On-site: 0850
0850

Time Off-site: 0935
0935

Depth of well (from top of casing)........ 69.9 Ft Time:
Initial static water level (from top of casing)........ 7.62 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: 62.28 ft. of water x 0.65 = 40.48 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	6.00	13.80	0.059	12.2	9.12	390
20	4.90	13.75	0.061	8.4	6.20	396
60	4.73	13.76	0.061	7.0	5.75	395
80	4.60	13.76	0.060	6.7	5.76	389
100	4.46	13.76	0.060	6.5	5.66	392
120	4.39	13.77	0.060	8.5	5.63	396
140	4.38	13.76	0.061	8.2	5.62	396
sample	4.96	13.82	0.062	12.1	6.15	361

Sampling

Time of Sample Collection: 0920

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

Analyses: Part 360 Routine Param
- ____ VOCs 602 ____ 503 ____ Other ____
- ____ SVOCs
- X Metals
- ____ PCB/Pest.
- ____ Physical
- X Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols TKN, Total Hardness, TOC

Observations

Weather/Temperature: Cold, Sunny, wind 60 mph => 50°F
Sample description:
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 20 gal/min
De-contaminate Pump
Water Discharge to VAC Truck => From Action Environmental that was then discharge to drainage basin #1 on landfill of Sonia Rd.

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 11/13/03

SAMPLE ID: 2023-MW-12D(98)
WELL ID: MW-12D
SAMPLERS: James Milligan
Sapy Singh

Time On-site: 0935
0935

Time Off-site: 1015
1015

Depth of well (from top of casing).................................... 98.0 Ft
Initial static water level (from top of casing)...................... 7.35 Ft

Time:
Time:

Purging Method

Airlift ___
Bailer ___
Submersible ☒
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: 90.38 ft. of water x 0.65 = 58.92 gallons

volume of water removed: 180 gal.

>3 volumes: yes ☒ no ☐

purged dry? yes ☐ no ☒

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initl	5.02	13.89	0.059	15.4	9.45	385
20	4.69	13.63	0.068	12.1	11.03	401
60	4.68	13.64	0.068	9.7	11.09	405
100	4.68	13.61	0.068	9.1	11.11	410
140	4.69	13.62	0.068	8.1	11.01	418
160	4.69	13.62	0.068	7.1	11.17	418
180	4.67	13.63	0.067	7.0	11.13	417
sample	5.20	13.58	0.061	17.1	10.09	384

Sampling

Time of Sample Collection: 1000

Method:
- ☐ Stainless steel bailer
- ☐ Teflon bailer
- ☐ Pos. Disp. Pump
- ☒ Disposable bailer
- ☐ Dedicated pump
- ☐ Other:

Analyses: Part 360 Routine Param
- ☐ VOCs 602 ___ 503 ___ Other ___
- ☐ SVOCs
- ☒ Metals
- ☐ PCB/Pest.
- ☐ Physical
- ☒ Other BOD5, BR, CL, SO4, Total Alkalinity, TDS, COD, NH3, NO3, Phenols, TKN, Total Hardness, TOC

Observations

Weather/Temperature:
Sample description: Clear, Colorless, odorless
Free Product? yes ☐ no ☒ describe
Sheen? yes ☐ no ☒ describe
Odor? yes ☐ no ☒ describe

Comments:
Flow Rate = 20 gal/min
De-Contaminate Pump
water discharge to VAC Truck From Action Environmental
that was discharge to drainage basin #1 onto landfill of
Sonia Rd.

APPENDIX B-2

FIELD FORMS - DAILY EQUIPMENT CALIBRATION LOGS

DVIRKA
AND
BARTILUCCI

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill
Date: 11/10/03
Project Number: 2023 - 06A
Calibrated By: Jim Milligan / SAJ Singh

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Foxboro OVA	95PPM Methane	400Pm 11/4/3	In office Calibrated
Solinist water Level Meter	Battery test	600 Am	OK
Serial # 21682			
HoriBA U-22 Water Meter	Buffer 4.0 Auto Cal	6Am	Cal Ph, Temp, DO, Turb, Cond
Serial # 9282015	Solution		
Exotox multi gas Meter	Factory Cal	-	OK
Serial # 105703501			

DVIRKA
AND
BARTILUCCI

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill
Date: 11/11/03
Project Number: 2023 - 06A
Calibrated By: Jim Millian / Spy Singh

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Solinist Water level Meter	Battery Test	6AM	OK
Seral # 21682			
Horiba U-22 Water Meter	4.0 Auto Cal	6AM	Cl, Ph Temp, Do, TuB, Cond
Seral # 928 2015	Solution		

DECL

DVIRKA
AND
BARTILUCCI

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill
Date: 11/12/03
Project Number: 2023 - 06A
Calibrated By: [illegible] / [illegible]

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Solinist water level meter	Battery test	6Am	ok
Serial # 21682			
Horiba U-22 water Meter	4.0 AutoCal	6Am	Cal. Ph, Turb, DO, [illegible]. cond
Serial #428 2015	Solution		

DECL

DVIRKA
AND
BARTILUCCI

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sona Road Landfill
Date: 11/13/03
Project Number: 2023-06A
Calibrated By: Jim Mullen / Sepy Smith

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Solinst water level meter	Battery test	6Am	OK
Serial # 21682			
Horiba U-22 water meter	4.0 Auto cal	6Am	pH, Turb, DO, TDS, Cond
Serial # 928205	Solution		

DECL

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

11626

EXTERNAL CHAIN OF CUSTODY

CLIENT: IRS / D+B

H2M SDG NO:

PROJECT NAME/NUMBER 2023-064
Sonia Road Landfill
Part 360 Routine Param.

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

DELIVERABLES: BS-79-D

TURNAROUND TIME: 21 Days

NOTES:
NYSDEC
Part 360
Routine Parameters

Project Contact:
Keith Robins
James Milligan

Phone Number:
(516) 364-9890

					ANALYSIS REQUESTED										
					ORGANIC							INORG.			
				Sample Container Description →				40ml Vial-H2SO4	1 Liter HDPE	250ml Glass-H2SO4	250ml HDPE-HNO3	1 Liter HDPE-HNO3			
DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers ↓	VOA	BNA	Pest/ PCB	TOC	Wet Chem	Wet Chem	Hardness	Metal	CN	LAB I.D. NO.	REMARKS:
11/10/03	1430	GW	2023-MW-01D (106)	8				3	2	1	1	1			
11/10/03	1520	GW	2023-MW-01I (78)	8				3	2	1	1	1			
11/10/03	1605	GW	2023-MW-01S (29)	8				3	2	1	1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	11/11/03	1756		11/11/03	1756
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

11631

EXTERNAL CHAIN OF CUSTODY

CLIENT:

H2M SDG NO:

PROJECT NAME/NUMBER 2023-06A
Sona Road Landfill
Part 360 Routine Param

SAMPLERS: (signature)/Client
S. Singh / DHB

DELIVERABLES: B5-70-D

TURNAROUND TIME: 21 Days

NOTES: NYSDEC Part 360 Routine Parameters

Project Contact: Jim/[illegible] Keith [illegible]

Phone Number: (516) 364-9890

					ANALYSIS REQUESTED										
				Sample Container Description →				40ml Vial - H_2SO_4	1Liter HDPE	250ml glass - H_2SO_4	250ml HDPE - HNO_3	1Liter HDPE - HNO_3			
					ORGANIC							INORG.			
DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers ↓	VOA	BNA	Pest/ PCB	TOC	Wet Chem	Wet Chem	Hardness	Metal	CN	LAB I.D. NO.	REMARKS:
11/11/03	0910	GW	2023-MW-02D (116)	8				3	2	1	1	1			
11/11/03	0945	GW	2023-MW-02I (72)	8				3	2	1	1	1			
11/11/03	1045	GW	2023-MW-07I (74)	8				3	2	1	1	1			
11/11/03	1125	GW	2023-MW-06D (117)	8				3	2	1	1	1			
11/11/03	1220	GW	2023-MW-06S (37)	8				3	2	1	1	1			
11/11/03	1310	GW	2023-MW-06I (76)	8				3	2	1	1	1			
11/11/03	1330	W	2023-Field Blank #1	8				3	2	1	1	1			Field Blank
11/11/03	1425	GW	2023-MW-04D (114)	8				3	2	1	1	1			
11/11/03	1425	GW	2023-MW-04D (MS)	8				3	2	1	1	1			MS/
11/11/03	1425	GW	2023-MW-04D (MSD)	8				3	2	1	1	1			MSD
11/11/03	0000	GW	2023-Blind Duplicate #1	8				3	2	1	1	1			Blind Duplicate

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
S. Singh	11/11/03	1610	Angela [illegible]	11/11/03	1610

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

11627

EXTERNAL CHAIN OF CUSTODY

CLIENT:

H2M SDG NO:

PROJECT NAME/NUMBER 2023-06A
Sona Road Landfill
Part 360 Routine Parameters

SAMPLERS: (signature)/Client
James Milligan
S. Singh / DHB

DELIVERABLES: B5-70-D

TURNAROUND TIME: 21 Days

NOTES:
NYSDEC
Part 360
Routine
Parameters

Project Contact:
Jim Milligan
Keith Robins

Phone Number:
(516) 361-9890

Sample Container Description →	VOA	BNA	Pest/ PCB	TOC	Wet Chem	Wet Chem	Hardness	Metal	CN
				40ml Vial - H_2SO_4	1 Liter HDPE	250ml glass - H_2SO_4	250ml HDPE - Hno3	1 Liter HDPE - Hno3	

ANALYSIS REQUESTED: ORGANIC / INORG.

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	VOA	BNA	Pest/ PCB	TOC	Wet Chem	Wet Chem	Hardness	Metal	CN	LAB I.D. NO.	REMARKS:
11/12/03	0840	GW	2023-MW-04I (71)	8				3	2	1	1	1			
11/12/03	0940	GW	2023-MW-04S (34)	8				3	2	1	1	1			
11/12/03	1050	GW	2023-MW-05D (116)	8				3	2	1	1	1			
11/12/03	1115	GW	2023-MW-05I (70)	8				3	2	1	1	1			
11/12/03	1220	GW	2023-MW-05S (34)	8				3	2	1	1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
S. Singh	11/12/03	1310	Angela Nee	11/12/03	1310
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

H2M LABS, INC.

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

11628

EXTERNAL CHAIN OF CUSTODY

CLIENT: IRS / DtB

H2M SDG NO:

PROJECT NAME/NUMBER: 2023-06A
Sonia Road Landfill
Part 360 Routine Param.

SAMPLERS: (signature)/Client: / DtB

DELIVERABLES: B5-70-D

TURNAROUND TIME: 21 Days

NOTES: NYSDEC Routine Param Part 360

Project Contact: James Milligan

Phone Number: (516) 364-9890

					ANALYSIS REQUESTED										
				Sample Container Description →				40ml Vial - H_2SO_4	1 Liter HDPE	250ml glass - H_2SO_4	250ml HDPE - HNO_3	1 Liter HDPE - HNO_3			
					ORGANIC							INORG.			
DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	VOA	BNA	Pest/ PCB	TOC	Wet Chem	Wet Chem	Hardness	Metal	CN	LAB I.D. NO.	REMARKS:
11/13/03	0835	GW	2023-MW-12S (19)	8				3	2	1	1	1			
11/13/03	0920	GW	2023-MW-12I (70)	8				3	2	1	1	1			
11/13/03	1000	GW	2023-MW-12D (98)	8				3	2	1	1	1			
11/13/03	1100	GW	2023-MW-11D (94)	8				3	2	1	1	1			
11/13/03	1135	GW	2023-MW-11I (71)	8				3	2	1	1	1			
11/13/03	1230	GW	2023-MW-11S (19)	8				3	2	1	1	1			ST: 1230
11/13/03	1420	GW	2023-MW-03S (32)	8				3	2	1	1	1			
11/13/23	1500	W	2023-Field Blank #2	8				3	2	1	1	1			Field Blank #2
11/13/03	1420	GW	2023-MW-03S (MS)	8				3	2	1	1	1			MS/
11/13/03	1420	GW	2023-MW-03S (MSD)	8				3	2	1	1	1			/MSD
11/13/03	0000	GW	2023-Blind Duplicate #2	8				3	2	1	1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	11-13-03	1700		11/13/03	17:00

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

Appendix D

APPENDIX D

DATA VALIDATION FORMS

DATA VALIDATION – ORGANICS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 12/15/03

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: IRS025 & IRS026

22 wells analyzed for routine parameters

2 MS/MSD,2 field blanks and 2 blind duplicates

blind duplicate# 1 was collected from well: MW-4D results were comparable

Blind dup#2 was collected from MW-3S sulfate results were <5 mg/l in blind dup but 5.7 in sample. All other results were comparable

All samples were analyzed within the method specified holding times, no problems were found with the sample results

All wet chem. QC recoveries were within limits

Sample MW-07I was rerun due to interferences

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill Laboratory Name: H2M

Reviewer: R.Petrella Date of Review: 12/15/03

I Holding times

Sample	Date Received	Date Digested	Date Analyzed	Holding Time Exceeded?
MW-01D (106)	11/10 –11/13/03		11/03 & 12/03	No
MW-01I (78)	11/10 – 11/13/03		11/03 &12/03	No
MW-01S (29)	11/10 – 11/13/03		11/03 &12/03	No
MW-02D (116)	11/10 – 11/13/03		11/03 &12/03	No
MW-02I (72)	11/10 – 11/13/03		11/03 &12/03	No
BLIND DUP#1	11/10 – 11/13/03		11/03 &12/03	No
MW-04D (114)*	11/10 – 11/13/03		11/03 &12/03	No
MW-06D (117)	11/10 – 11/13/03		11/03 &12/03	No
MW-06I (76)	11/10 – 11/13/03		11/03 &12/03	No
MW-06S (37)	11/10 – 11/13/03		11/03 &12/03	No
MW-07I (74)	11/10 – 11/13/03		11/03 &12/03	No
FIELD BLANK 1	11/10 – 11/13/03		11/03 &12/03	No
MW-04I (71)	11/10 – 11/13/03		11/03 &12/03	No
MW-04S (34)	11/10 – 11/13/03		11/03 & 12/03	No
MW-05D (116)	11/10 – 11/13/03		11/03 &12/03	No
MW-05I (70)	11/10 – 11/13/03		11/03 &12/03	No
MW-05S (34)	11/10 – 11/13/03		11/03 &12/03	No
BLIND DUP#2	11/10 – 11/13/03		11/03 &12/03	No
FIELD BLANK 2	11/10 – 11/13/03		11/03 &12/03	No
MW-03S (32)*	11/10 – 11/13/03		11/03 &12/03	No
MW-11I (71)	11/10 – 11/13/03		11/03 &12/03	No
MW-11S (19)	11/10 – 11/13/03		11/03 &12/03	No
MW-12D (98)	11/10 – 11/13/03		11/03 &12/03	No
			11/03 &12/03	No
MW-12I (70)	11/10 – 11/13/03		11/03 &12/03	No
MW-12S (19)	11/10 – 11/13/03		11/03 &12/03	No
MW-11D (94)	11/10 – 11/13/03		11/03 &12/03	No

*Sample run as MS/MSD

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 12/15/03

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: 12/15/03

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: 12/15/03

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: 12/15/03

MW-04D, MW-03S

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: 12/15/03

MW-04D, MW-03S

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: 12/15/03

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: 12/15/03

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: 12/15/03

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: