ISLIP
RESOURCE
RECOVERY
AGENCY
ISLIP, NEW YORK

Sonia Road Landfill
Town of Islip, New York

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

May 2004

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

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

POST CLOSURE GROUNDWATER MONITORING PROGRAM
QUARTERLY SAMPLING RESULTS
FIRST QUARTER 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
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Section 1

1.0 INTRODUCTION

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

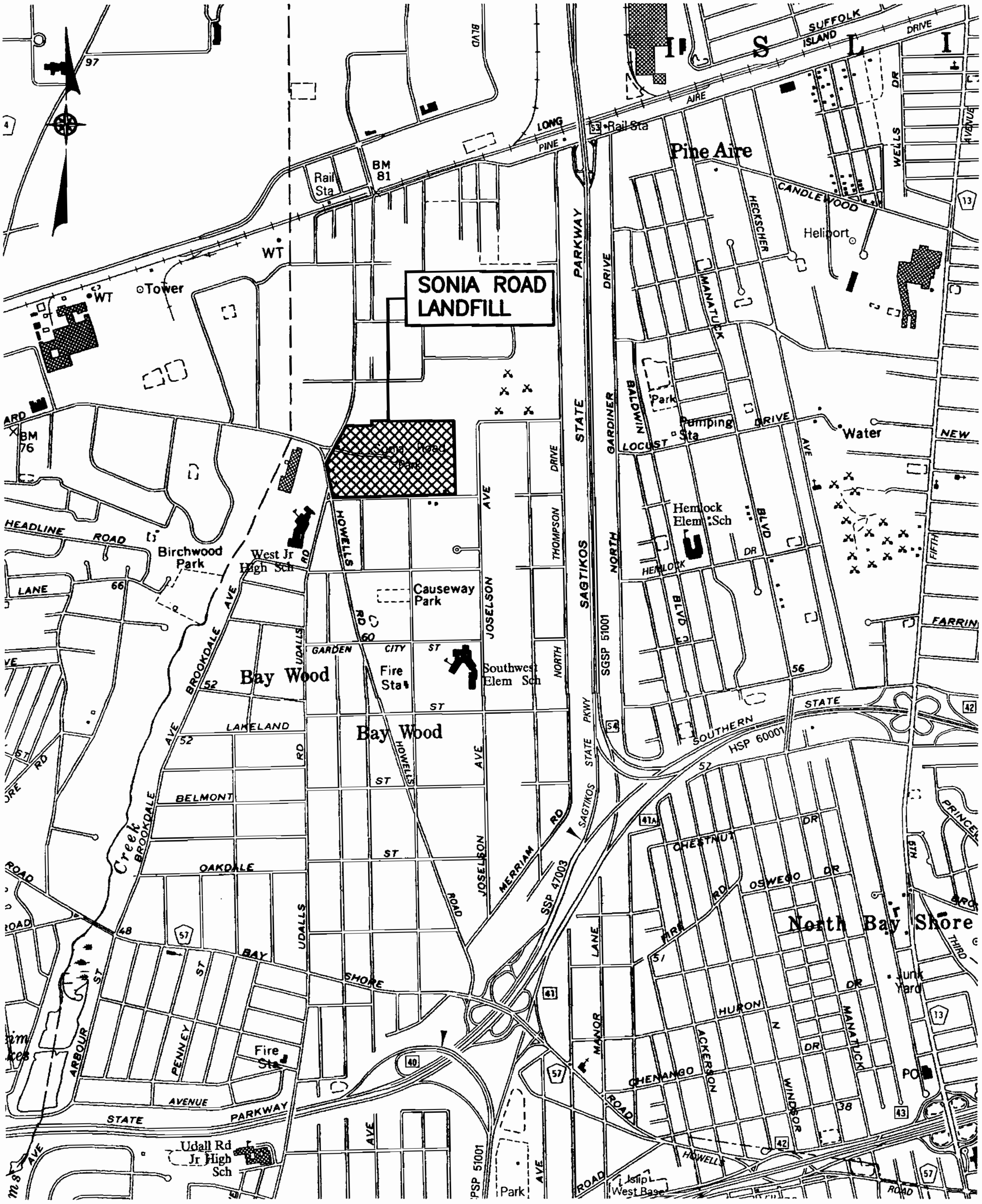
1.1 Purpose

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 (March 2003) to applicable New York State groundwater quality standards and guidance values, and groundwater sample results obtained during the previous sampling event (fourth quarter 2002).

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 site is one residential parcel (Tax Map No. 221-2-1), which is not part of landfill property described above. At the northwest corner of the property is a 0.5-acre parcel owned by the Town of Islip (Tax Map No. 198-5-7.3), which is identified as a paper street. Given that the waste mass extends onto this parcel, this parcel is considered as part of the landfill property, and as a result, the overall landfill property is considered to be 42.7 acres. At and abutting the northeast corner of the landfill property is the western extension of Sonia Road for which the facility is named.

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

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

The Sonia Road Landfill has been owned by the Town of Islip since 1965. Prior to 1965, the site was privately owned and used as a source of mined sand and gravel. As a result of this mining operation, virtually all of the site was disturbed, including the removal of vegetation, topsoil and underlying minerals. The mining operation was extensive with the removal of minerals progressing to and below the water table. Removal of minerals below the water table was accomplished through the use of dredging equipment. This activity resulted in the formation of a groundwater lake over a significant portion of the site (40% to 50%). It is reported that dredging may have removed materials to a depth 50 feet below the water table. Soil borings constructed as part of the remedial investigation confirmed that waste lies at least 36 feet below the water table.

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

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

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

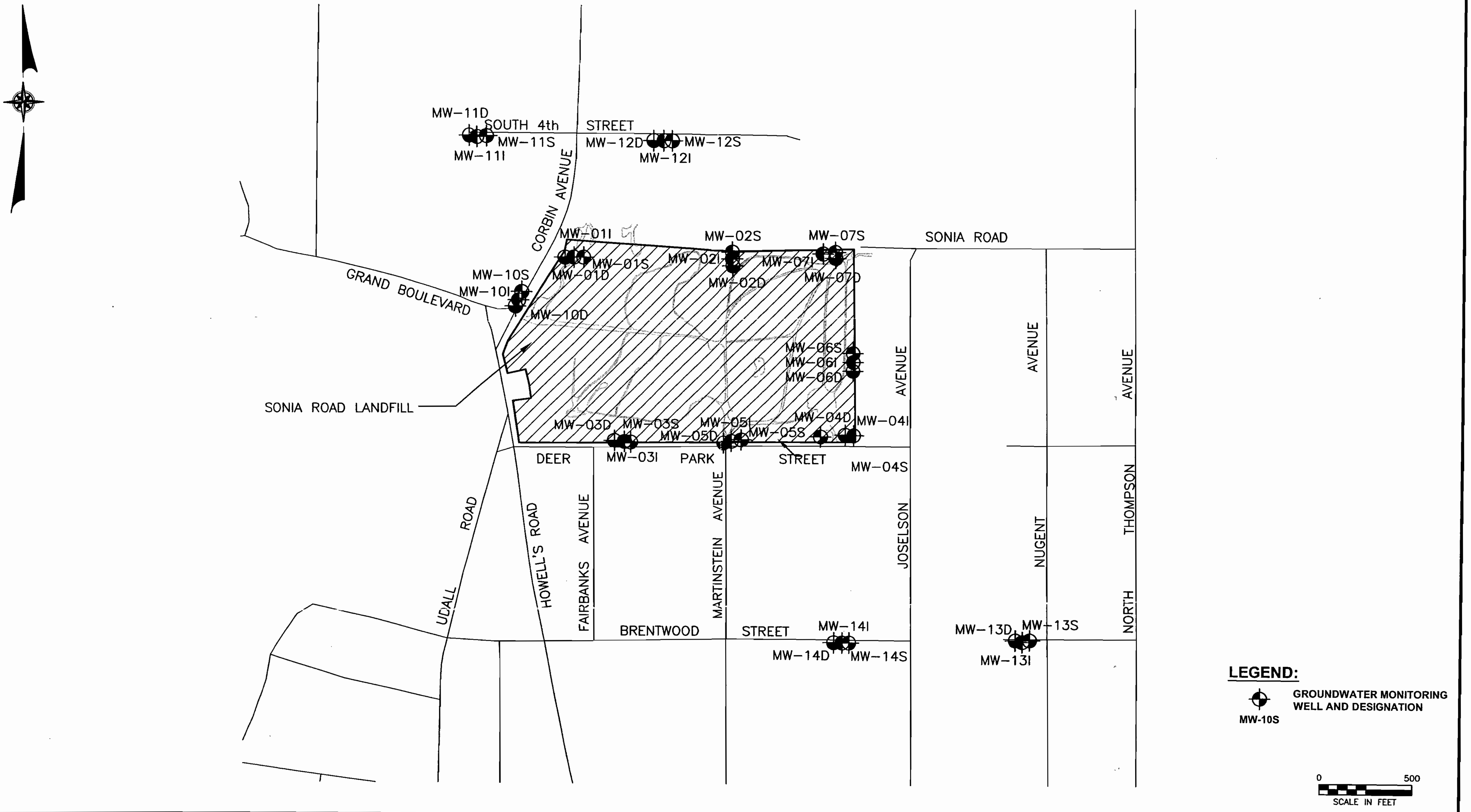
Section 2

2.0 MONITORING WELL NETWORK AND GROUNDWATER SAMPLE LOCATIONS

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

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

Twenty-two (22) of the 23 monitoring wells were sampled as part of the first quarter 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

Dvirka
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Table 2-1

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

MONITORING WELLS

Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below ground surface)	Screen Setting Elevation Below Measurement Point (feet)	Screen Setting 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

Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below ground surface)	Screen Setting Elevation Below Measurement Point (feet)	Screen Setting 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

Well Designation	Date Completed	Well Diameter (inches)	Screen Type	Total Depth (feet below ground surface)	Screen Setting Elevation Below Measurement Point (feet)	Screen Setting 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 GROUNDWATER MONITORING PROGRAM

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

Section 3

3.0 SAMPLING AND ANALYTICAL PROCEDURES

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

3.1 Groundwater Level Measurement

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

3.2 Groundwater Sampling

Prior to collection of each groundwater sample, a minimum of 3 to 5 well volumes was purged from the well. Well purging was accomplished by first measuring the static water level in the well and calculating the standing water volume. A decontaminated submersible pump was used to purge each well.

During the purging process, field parameters (pH, specific conductance, temperature, Eh, dissolved oxygen and turbidity) were monitored and recorded. When the values of the field parameters, except turbidity, equilibrated within 10% based on the last two readings, the turbidity of the groundwater was less than 50 Nephelometric Turbidity Units (NTUs) and at least three well volumes had been removed, well purging was considered complete.

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

Appropriate quality assurance/quality control (QA/QC) samples, which included field blanks, matrix spike and matrix spike duplicate (MS/MSD) sets and blind duplicates, were collected in accordance with the SAP.

Purge water from all on-site wells and all wells immediately adjacent to the landfill property was disposed directly into the nearest landfill capping system drainage swale. Purge water generated from off-site well clusters 11 and 12 was pumped into a 3,000-gallon tank truck, transported to the landfill and discharged into the landfill's on-site Recharge Basin 1 in accordance with the SAP.

Analytical results are summarized in Appendix A and discussed in Section 4.2. Field forms for the first 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 first quarter 2003 sampling event were analyzed for 6 NYCRR Part 360 Routine Parameters, including leachate indicator and inorganic parameters. The leachate indicators include total Kjeldahl nitrogen, ammonia, nitrate, chemical oxygen demand, biochemical oxygen demand, total organic carbon, total dissolved solids, sulfate, alkalinity, total phenols, chloride, bromide and total hardness (as $CaCO_3$). 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 first quarter 2003 sampling event.

4.2 Groundwater Samples

The first 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 monitoring wells.

4.2.1 Leachate Indicators

The results of the leachate indicators for the groundwater samples are presented in Appendix A-1. As shown in the results table in Appendix A-1, 9 of the 22 wells sampled exhibited one or more leachate indicators at concentrations exceeding the Class GA groundwater standards and guidance values, including ammonia, chloride, 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 nine (9) wells (MW-01D, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-05D and MW-06S). Ammonia concentrations in these wells ranged from 2.2 mg/l in well MW-06S to 9.21 mg/l well MW-04S.

Table 4-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF FINAL FIELD PARAMETER RESULTS AND FIELD DATA
FIRST 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	6.46	9.67	2.24	37.8	4.72	174	0	0
MW-01I	6.45	13.06	0.298	4.4	1.42	79	0	0
MW-01S	6.82	12.31	0.607	9	1.67	24	0	0
MW-02D	5.81	14.63	0.092	19.6	7.91	360	200	0
MW-02I	5.08	10.81	0.142	5.9	2.27	367	0	0
MW-02S	NS	NS	NS	NS	NS	NS	0	0
MW-03D	NS	NS	NS	NS	NS	NS	0	0
MW-03I	NS	NS	NS	NS	NS	NS	0	0
MW-03S	5.41	20.19	0.773	2.8	5.38	116	0	0
MW-04D	7.07	11.56	0.269	16.1	2.47	-80	0	0
MW-04I	6.71	10.31	0.670	22.6	2.86	-38	0	0
MW-04S	6.59	15.31	0.941	2.8	2.32	-30	0	0
MW-05D	6.41	13.70	0.326	0.3	1.32	91	0	0
MW-05I	6.88	15.30	0.345	3.2	1.30	-32	0	0
MW-05S	6.45	19.48	0.506	3.9	0.99	-17	0	0
MW-06D	6.41	13.59	0.151	6.5	0.96	21	0	0
MW-06I	6.36	13.88	0.165	11.6	2.89	20	0	0
MW-06S	6.51	15.88	0.355	31.3	1.97	-40	0	0
MW-07D	NS	NS	NS	NS	NS	NS	0	0
MW-07I	5.97	13.88	0.106	11.8	4.99	270	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	5.29	10.28	0.105	4.0	8.01	382	0	0
MW-11I	6.40	10.45	0.146	6.0	2.08	284	0	0
MW-11S	6.64	8.05	0.359	28.1	2.64	319	0	0
MW-12D	5.97	11.91	0.075	11.6	12.30	339	0	0
MW-12I	5.56	13.03	0.055	9.6	10.54	280	0	0
MW-12S	6.99	8.46	0.594	5.1	8.41	149	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

The groundwater standard for chloride (250 mg/l) was exceeded in MW-01D, which contained a concentration of 513 mg/l.

Nitrate

The groundwater standard for nitrate (10 mg/l) was exceeded in MW-05D, which contained a concentration of 11.4 mg/l.

Sulfate

The groundwater standard for sulfate (250 mg/l) was exceeded in MW-03S, which contained a concentration of 860 mg/l.

4.2.2 Historic Leachate Indicators

A comparison of the first quarter 2003 results to the fourth quarter 2002 results for each leachate indicator parameter in the 22 wells sampled is provided below. Since well MW-02S was not sampled during the first quarter (March 2003), it is not included in the comparison. Concentration trends and exceedances for each well are summarized in Table 4-2. Historic data for leachate indicator parameters are summarized in Appendix A-1.

Alkalinity

Six (6) of the 22 wells sampled showed an increase (defined as a change of at least 20% compared to the previous result) in alkalinity concentrations. The wells that showed an increase are MW-01I, MW-02I, MW-05I, MW-07I, MW-11I and MW-12I. Six (6) wells (MW-03S, MW-04I, MW-05D, MW-11S, MW-12S and MW-12I) showed a decrease (defined as a change of at least 20% compared to the previous result) in alkalinity concentrations. The remaining 10 wells were consistent (within 20% of previous result).

Table 4-2

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
SUMMARY OF CONCENTRATION TRENDS FOR LEACHATE INDICATOR PARAMETERS – FIRST QUARTER 2003

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

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

Ammonia

Thirteen (13) of the 22 wells sampled showed an increase in ammonia concentrations. The wells that showed an increase are MW-01I, MW-01D, MW-02I, MW-03S, MW-04S, MW-04D, MW-05S, MW-05I, MW-05D, MW-06D, MW-07I, MW-11S and MW-11I. Wells MW-01S and MW-06S showed a decrease in ammonia concentrations. The remaining 7 wells were consistent.

Biochemical Oxygen Demand

Three (3) wells (MW-01D, MW-04S and MW-04I) showed increasing concentrations of biochemical oxygen demand. Four (4) wells (MW-03S, MW-05I, MW-05D and MW-06S) showed decreasing concentrations. The remaining 15 wells were consistent.

Bromide

Well MW-11I showed an increasing bromide concentration. Six (6) wells (MW-05S, MW-05I, MW-06I, MW-11S, MW-12S and MW-12D) showed decreasing concentrations. The remaining 15 wells were consistent.

Chemical Oxygen Demand

Thirteen (13) wells (MW-01S, MW-01I, MW-01D, MW-02I, MW-04S, MW-05S, MW-05I, MW-06S, MW-07I, MW-11S, MW-11I, MW-11D and MW-12S) showed increasing concentrations of chemical oxygen demand. Four (4) wells (MW-03S, MW-04D, MW-05D and MW-12I) showed a decrease in chemical oxygen demand. The remaining 5 wells were consistent.

Chloride

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

Hardness

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

Nitrate

Three (3) wells (MW-03S, MW-05D and MW-12D) showed increasing nitrate concentrations. Thirteen (13) wells (MW-01I, MW-01D, MW-02I, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-06S, MW-11S, MW-11I, MW-12S and MW-12I) showed decreasing concentrations. The remaining 6 wells were consistent.

Total Phenols

All sampled wells were consistent.

Sulfate

Eight (8) wells (MW-01S, MW-01I, MW-02I, MW-03S, MW-06I, MW-11S, MW-11I and MW-12D) showed increasing sulfate concentrations. Five (5) wells (MW-04S, MW-04I, MW-4D, MW-05D and MW-06S) showed decreasing concentrations. The remaining 9 wells were consistent.

Total Organic Carbon

Seven (7) wells (MW-01S, MW-01I, MW-02I, MW-03S, MW-04D, MW-05I and MW-11S) showed increasing concentrations of total organic carbon. Three (3) wells (MW-05D, MW-06S and MW-06I) showed decreasing concentrations. The remaining 12 wells were consistent.

Total Dissolved Solids

Five (5) wells (MW-03S, MW-04S, MW-05I, MW-07I and MW-12S) showed increasing concentrations of total dissolved solids. Six (6) wells (MW-01D, MW-02I, MW-04I, MW-05S, MW-05D and MW-12D) were consistent. The remaining 11 wells showed decreasing concentrations.

Total Kjeldahl Nitrogen

Well MW-01S showed a decreasing concentration of total kjeldahl nitrogen. Three (3) wells (MW-04I, MW-06S and MW-06D) remained consistent. The remaining 18 wells showed increasing concentrations.

4.2.3 Inorganic Parameters

The results of the inorganic parameters for the groundwater samples are presented in Appendix A-2. As shown by the first quarter 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-01D, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-06S, MW-06I and MW-06D) exceeded the groundwater standard of

300 micrograms per liter (ug/l) for iron. Iron concentrations ranged from 301 ug/l in well MW-01D to 85,800 ug/l in well MW-03S for those wells exceeding the groundwater standard.

Manganese

Fifteen (15) wells (MW-01S, MW-02I, MW-03S, MW-04S, MW-04I, MW-04D, MW-05S, MW-05I, MW-05D, MW-06S, MW-06I, MW-06D, MW-07I, MW-11S and MW-11I) exceeded the groundwater standard of 300 micrograms per liter (ug/l) for manganese. Manganese concentrations ranged from 392 ug/l in well MW-06I to 11,700 ug/l in well MW-06D for those wells exceeding the standard.

Sodium

Eleven (11) wells (MW-01S, MW-01I, MW-01D, MW-03S, MW-04S, MW-04I, MW-05S, MW-05I, MW-05D, MW-11S and MW-12S) exceeded the groundwater standard of 20,000 ug/l for sodium. Sodium concentrations ranged from 20,300 ug/l in MW-11S to 346,000 ug/l in well MW-01D for those wells exceeding the standard.

4.2.4 Historic Inorganic Parameters

A comparison of the first quarter 2003 results to the fourth quarter 2002 results for each inorganic parameter in the 22 wells sampled is provided below. Well MW-02S was not sampled during the first quarter (March 2003) and is therefore not included in the comparison. Concentration trends and exceedances for each well are summarized in Table 4-3. Historic data for inorganic parameters are summarized in Appendix A-2.

Cadmium

Cadmium increased in well MW-01D. Cadmium concentrations decreased in the remaining 21 wells sampled during the first quarter 2003 event.

Table 4-3

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

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

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

Calcium

Four (4) of the 22 wells sampled showed increasing calcium concentrations. The wells that showed an increase are MW-02I, MW-03S, MW-06S and MW-12D. Wells MW-01I and MW-12I showed decreasing concentrations. The remaining 16 wells were consistent.

Iron

Five (5) wells (MW-01I, MW-02D, MW-04D, MW-06I and MW-06D) showed increasing iron concentrations. Ten (10) wells (MW-02I, MW-05D, MW-06S, MW-07I, MW-11S, MW-11I, MW-11D, MW-12S, MW-12I and MW-12D) showed decreasing concentrations. The remaining 7 wells were consistent.

Lead

Lead increased in well MW-01D. Four (4) wells (MW-03S, MW-05I, MW-05D and MW-12I) showed decreasing concentrations. The remaining 17 wells were consistent.

Magnesium

Five (5) wells (MW-02I, MW-03S, MW-05S, MW-07I and MW-12D) showed increasing magnesium concentrations. Wells MW-01I and MW-12I showed decreasing concentrations. The remaining 15 wells were consistent.

Manganese

Six (6) wells (MW-01D, MW-06I, MW-06D, MW-07I, MW-11I and MW-12S) showed increasing manganese concentrations. Six (6) wells (MW-01I, MW-02D, MW-03S, MW-11S, MW-11D and MW-12I) showed decreasing concentrations. The remaining 10 wells were consistent.

Potassium

Six (6) wells (MW-03S, MW-05I, MW-06D, MW-11S, MW-12S and MW-12D) showed increasing potassium concentrations. Wells MW-01D and MW-12I showed decreasing concentrations. The remaining 14 wells were consistent.

Sodium

Six (6) wells (MW-01S, MW-01I, MW-02I, MW-07I, MW-11S and MW-12S) showed increasing sodium concentrations. Well MW-06S showed decreasing concentrations. The remaining 15 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 well MW-02D. Well MW-02D showed a reading of 200 parts per million (ppm). All 36 wells showed a combustible gas reading of 0% of the lower explosive limit (LEL). The LEL for methane is 5% by volume, or 50,000 ppm.

Section 5

5.0 DATA VALIDATION

Twenty-two (22) groundwater samples were collected in March 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, spike 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-01S, MW-02D, MW-05S, MW-06D and MW-11S. 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.

A blind duplicate was collected from MW-04D and the results were comparable between the samples.

Sample MW-04I was utilized as the matrix spike and matrix spike duplicate.

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

Completed data validation forms for the first quarter 2003 sampling event are provided in Appendix D.

Section 6

6.0 GROUNDWATER LEVEL MEASUREMENTS AND FLOW DIRECTION

Groundwater level measurements were obtained on March 5, 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 March 5, 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 predominantly toward the southeast in the vicinity of the landfill. These maps are consistent with the maps previously prepared for the site.

Table 6-1

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
MONITORING WELL GROUNDWATER ELEVATION MEASUREMENTS
FIRST QUARTER 2003
MARCH 5, 2003

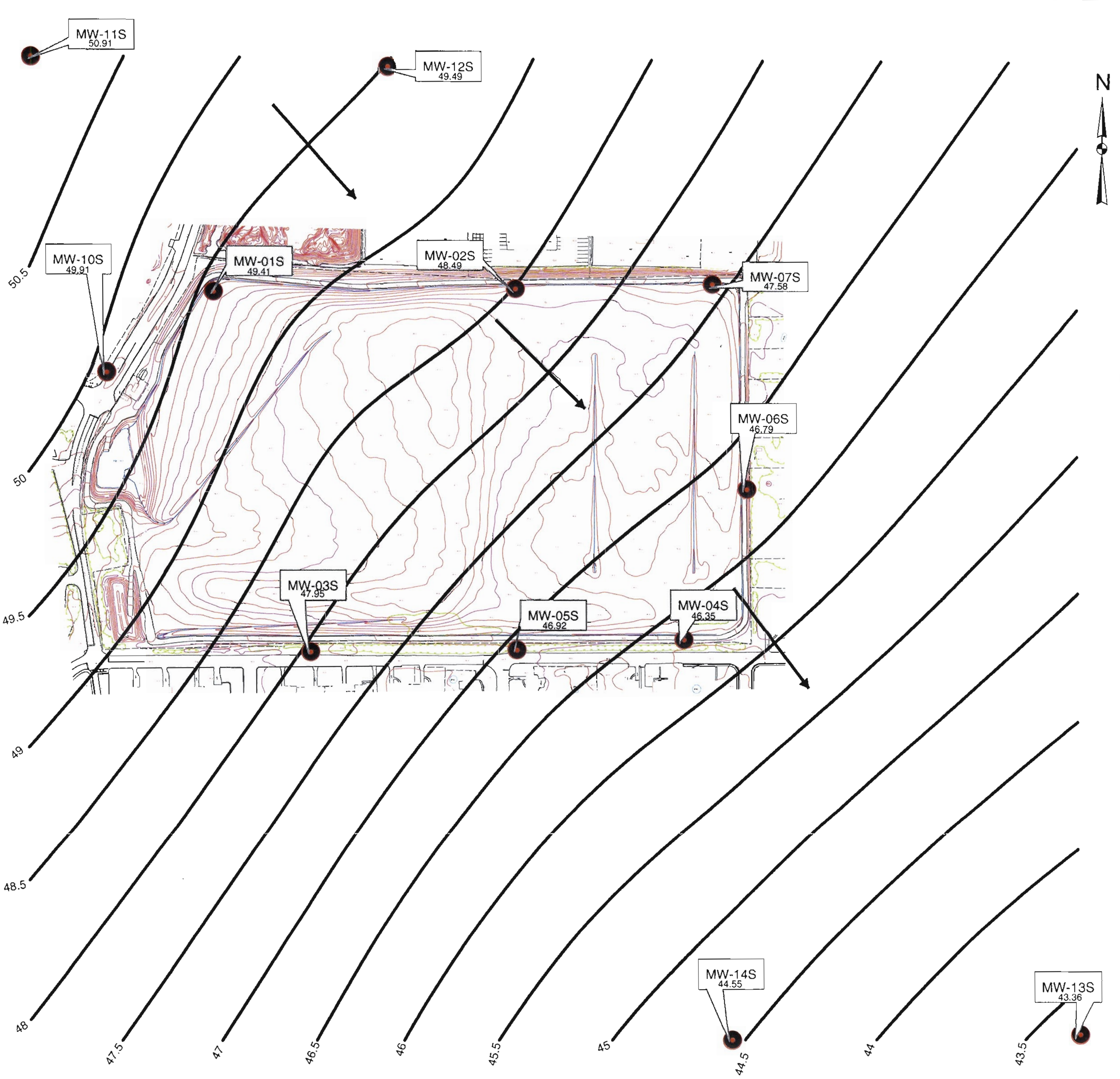
Monitoring Well No.	Measuring Point Elevation (feet amsl)	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet amsl)
MW-01D	64.53	15.08	49.45
MW-01I	65.36	15.92	49.44
MW-01S	66.01	16.60	49.41
MW-02D	79.01	30.55	48.46
MW-02I	78.75	30.40	48.35
MW-02S	77.98	29.49	48.49
MW-03D	70.50	22.76	47.74
MW-03I	70.77	22.80	47.97
MW-03S	70.76	22.81	47.95
MW-04D	69.03	22.76	46.27
MW-04I	69.31	23.12	46.19
MW-04S	71.10	24.75	46.35
MW-05D	70.96	23.80	47.16
MW-05I	70.26	23.33	46.93
MW-05S	70.28	23.36	46.92
MW-06D	75.03	28.29	46.74
MW-06I	74.53	27.85	46.68
MW-06S	74.45	27.66	46.79
MW-07D	75.04	27.48	47.56
MW-07I	73.45	25.90	47.55
MW-07S	72.83	25.25	47.58
MW-10D	56.34	6.76	49.58
MW-10I	56.16	6.59	49.57
MW-10S	56.65	6.74	49.91

Table 6-1 (continued)

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
MONITORING WELL GROUNDWATER ELEVATION MEASUREMENTS
FIRST QUARTER 2003
MARCH 5, 2003

Monitoring Well No.	Measuring Point Elevation (feet amsl)	Depth to Water from Measuring Point (feet)	Groundwater Elevation (feet amsl)
MW-11D	60.19	9.21	50.98
MW-11I	60.38	9.49	50.89
MW-11S	59.87	8.96	50.91
MW-12D	58.61	9.11	49.50
MW-12I	58.92	9.40	49.52
MW-12S	58.79	9.30	49.49
MW-13D	70.37	26.99	43.38
MW-13I	70.30	26.95	43.35
MW-13S	70.51	27.15	43.36
MW-14D	64.58	19.93	44.65
MW-14I	64.57	20.05	44.52
MW-14S	64.55	20.00	44.55

amsl: above mean sea level



LEGEND

MW-01S 49.41 ● 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

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and
Bartilucci
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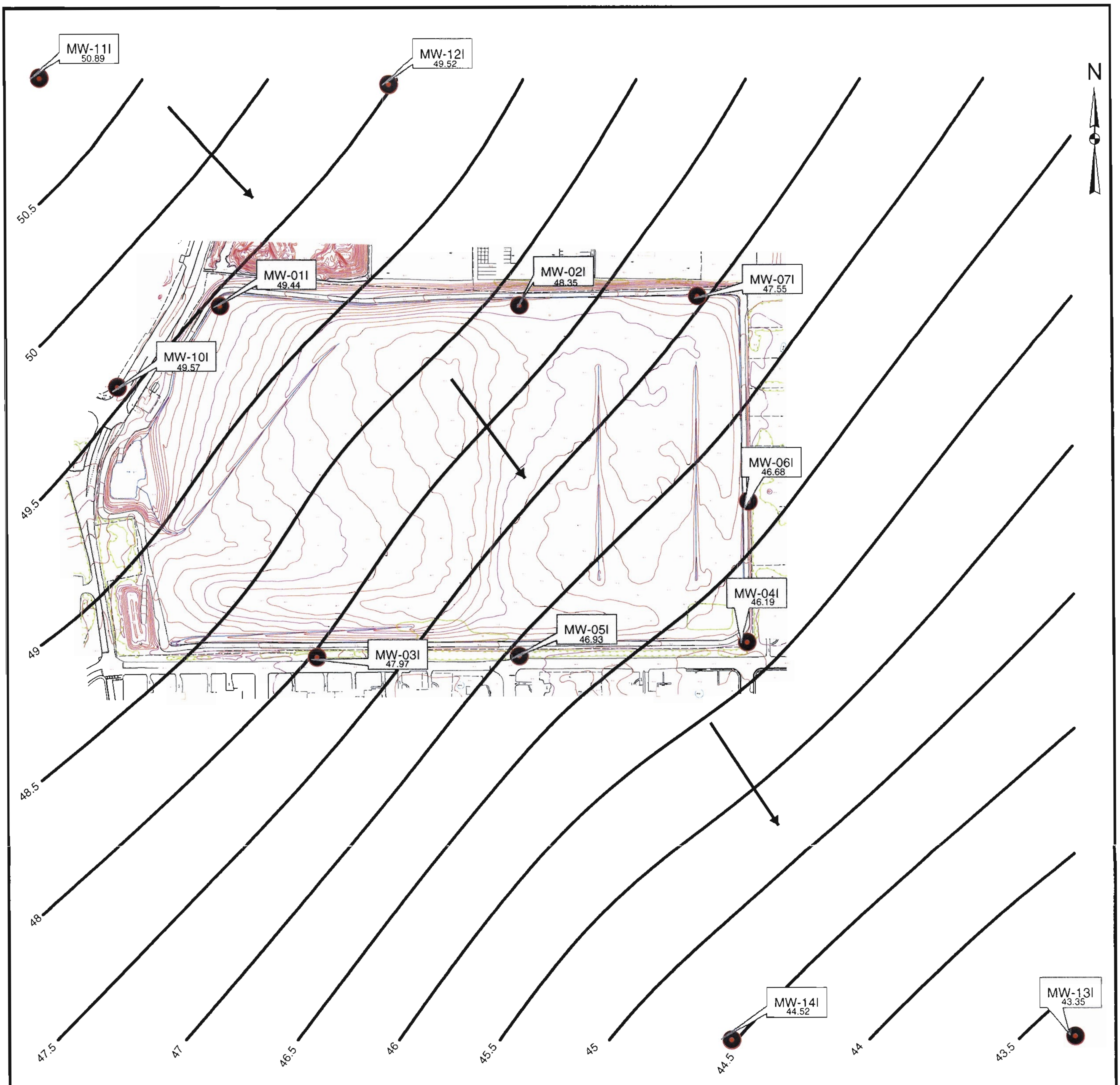
SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

WATER TABLE ELEVATION CONTOUR MAP
MARCH 5, 2003

FIGURE 6-1

GIS_Arcview Projects\2023 Sonia Rd\Updated Sonia\Maps\2003\1stQT\Scon3-5-03.mxd



LEGEND

MW-01I 49.57 ●	MONITORING WELL LOCATION, DESIGNATION AND GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
→	APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTE: CONTOUR INTERVAL EQUALS 0.50 FT.

SOURCE: BASE MAP PROVIDED BY ISLIP RESOURCE RECOVERY AGENCY

1 inch equals 300 feet

0 150 300 450 600 Feet

SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM

INTERMEDIATE DEPTH POTENTIOMETRIC SURFACE ELEVATION CONTOUR MAP
MARCH 5, 2003

Dvirka
and
Bartilucci
CONSULTING ENGINEERS
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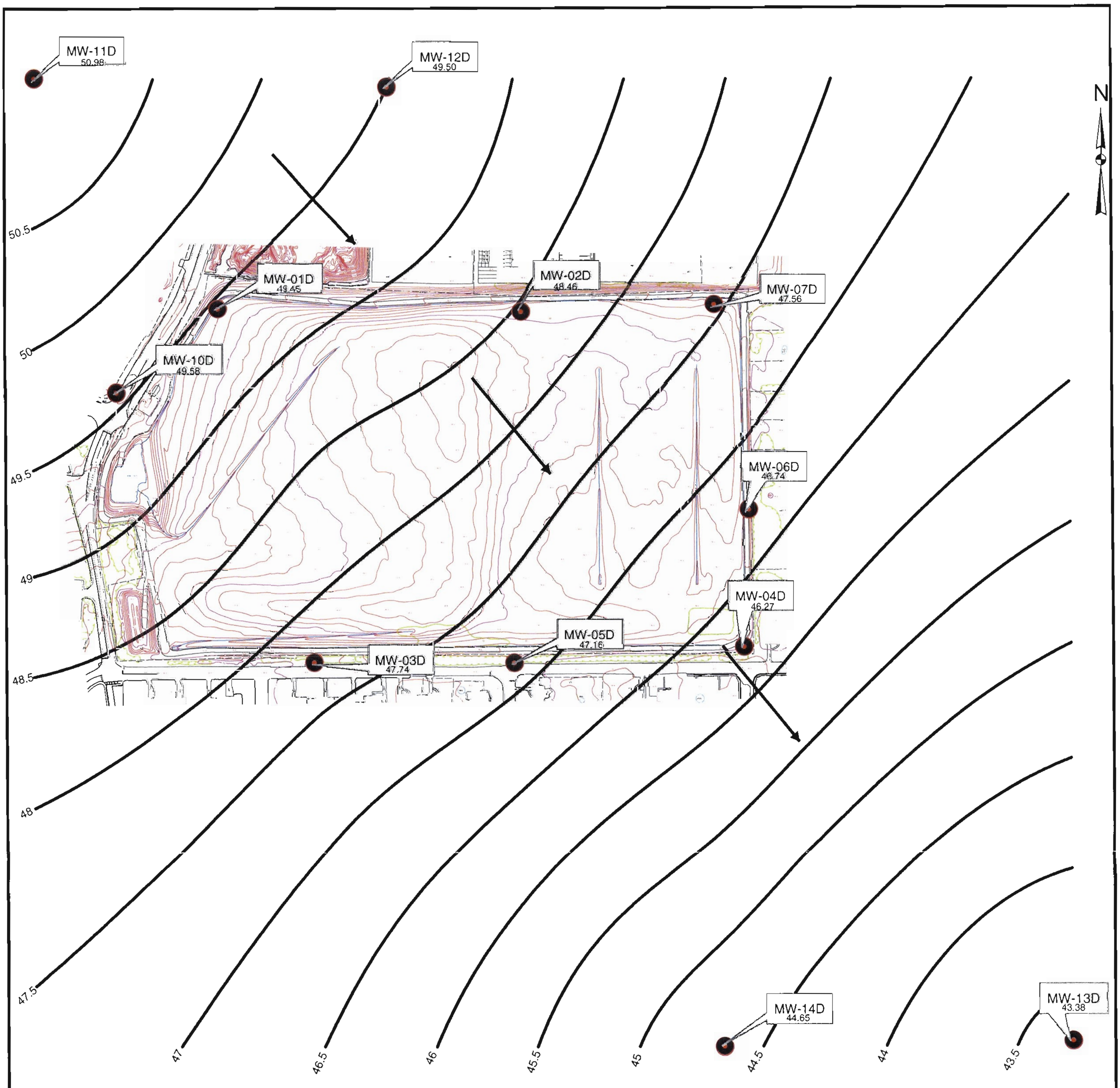
FIGURE 6-2

\GIS_Arcview Projects\2023 Sonia Rd\Updated Sonia\Maps\2003\1stQT\Icon3-5-03.mxd



LEGEND

MW-01D
49.45
● 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

DEEP POTENTIOMETRIC SURFACE ELEVATION CONTOUR MAP
MARCH 5, 2003

Dvirka
and
Bartilucci
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FIGURE 6-3

\GIS_Arcview Projects\2023 Sonia Rd\Updated Sonia\Maps\2003\1stQT\Dcon3-5-03.mxd

Section 7

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

Groundwater Flow

Based on groundwater level measurements collected during the first 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 first quarter 2003 results to the fourth quarter 2002 results and review of the historical trend graphs in Appendix A-4, groundwater quality in the vicinity of the Sonia Road Landfill has not substantially changed.

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

7.2 Recommendations

Based on the first 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 (mg/l)	MW-01S (mg/l)
Color (APHA Units)	-	-	(mg/l)	80	50	50	NS	50	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	264	183	180	126	211	177		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1	2.1	2.2	1.46	2.03	1.04		
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	6	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.7	0.5	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		
Chloride	250 ST	16887-00-6	(mg/l)	69.7	28.4	42	36.6	40.9	60.7		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	310	140	200	240	520	200		
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		
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		
Sulfate	250 ST	14808-79-8	(mg/l)	36.3	50	42.5	78	89	117		
Total Organic Carbon	-	-	(mg/l)	11.7	6	9.1	4.8	5.1	6.9		
Total Dissolved Solids	-	-	(mg/l)	432	259	310	250	420	74		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	2.3	1.9	3.3	1.26	2.11	1.21		

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

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

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

Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-01I 10/24/1997 (mg/l)	MW-01I 11/30/2000 (mg/l)	MW-01I 01/30/2001 (mg/l)	MW-01I 8/21/2002 (mg/l)	MW-01I 11/20/2002 (mg/l)	MW-01I 3/5/2003 (mg/l)	MW-01I (mg/l)	MW-01I (mg/l)
Color (APHA Units)	-	-	(mg/l)	NS	5 U	5 U	NS	5	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	20.7	65.6	50	14.8	23.4	65.8		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.9	0.24	0.63	0.15	0.1 U	0.45		
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2	2 U	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	3 U	10 U	10 U	12.7	10 U	30		
Chloride	250 ST	16887-00-6	(mg/l)	195	34.6	72	16.4	68.7	59.5		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	42	5	30	40	32	80		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.72	0.53	1.3	2.74	0.6	0.1 U		
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		
Sulfate	250 ST	14808-79-8	(mg/l)	35.2	10.2	5 U	5 U	12.1	23.4		
Total Organic Carbon	-	-	(mg/l)	2.8	1.7	0.99 J	1.4	1 U	1.4		
Total Dissolved Solids	-	-	(mg/l)	356	179	310	86	310	201		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.2 U	0.35	1.16	0.21	0.45	0.7		

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

NOTES:

NS: Not sampled

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

▨ : Concentration exceeds Standard/Guidance Value

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

Appendix A-1

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

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

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

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-02S	MW-02S	MW-02S	MW-02S	MW-02S	MW-02S	MW-02S	MW-02S
			DATE :	10/27/1997	11/30/2000	01/31/2001	8/21/2002	11/20/2002	3/5/2003		
			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	NS	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	86.6	86.2	85	NS	NS	NS		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.08	1.5	1.1	NS	NS	NS		
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2	NS	NS	NS		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	NS	NS	NS		
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	NS	NS	NS		
Chloride	250 ST	16887-00-6	(mg/l)	21.2	9.5	10	NS	NS	NS		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	92	88	120	NS	NS	NS		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.82	2.4	1.8	NS	NS	NS		
Phenols, total	0.001 ST	-	(mg/l)	0.0010 U	0.005 U	0.005 U	NS	NS	NS		
Sulfate	250 ST	14808-79-8	(mg/l)	20.9	26.6	19.2	NS	NS	NS		
Total Organic Carbon	-	-	(mg/l)	2.2	1.6	2.7	NS	NS	NS		
Total Dissolved Solids	-	-	(mg/l)	171	138	170	NS	NS	NS		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.2	1.4	1.1	NS	NS	NS		

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

NOTES:

NS: Not sampled

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

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-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 (mg/l)	MW-02I (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	10	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	12.3	9	9.3	4.5	9.6	16.2		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.65	9.1	0.64	0.10 U	0.1 U	0.29		
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	15 U	56.7	10 U	12.7	10 U	14		
Chloride	250 ST	16887-00-6	(mg/l)	10	12.8	15	10.8	3.8	14		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	26	34	80	32	90	44		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.9	2.2	2.4	2.39	2.56	1.68		
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		
Sulfate	250 ST	14808-79-8	(mg/l)	32.9	5.4	7.80	10.3	13.8	25.1		
Total Organic Carbon	-	-	(mg/l)	1.5	1.5	1.1	1.3	1.3	3.2		
Total Dissolved Solids	-	-	(mg/l)	103	88	99	58	97	83		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.8	9	1.20	0.1 U	0.28	1.45		

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

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

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/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 (mg/l)	MW-02D (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	5	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	10.2	13.8	14	10.5	11.9	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		
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	15 U	73	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		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	30	30	68	34	40	24		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.4	1.2	1	0.69	1.48	1.49		
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		
Sulfate	250 ST	14808-79-8	(mg/l)	12.6	5 U	8.2	18.6	19.2	18.9		
Total Organic Carbon	-	-	(mg/l)	0.7	1 U	0.88 J	1.2	1 U	1 U		
Total Dissolved Solids	-	-	(mg/l)	76	96	80	60	110	80		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.23	0.19	0.340	0.1 U	0.1 U	0.18		

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

NOTES:

NS: Not sampled

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/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 (mg/l)	MW-03S (mg/l)
Color (APHA Units)	-	-	(mg/l)	70	70	100	NS	50	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	187	183	160	169	146	5 U		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	2	2.3	1.66	2.07	2.7	5.78		
Biochemical Oxygen Demand	-	-	(mg/l)	11	11	18	5	13	10		
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		
Chemical Oxygen Demand	-	-	(mg/l)	37	10 U	32.6	34.7	44.5	35.3		
Chloride	250 ST	16887-00-6	(mg/l)	75.3	28.8	26.8	37.6	40.2	30.5		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	190	180	188	220	340	500		
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		
Phenols, total	0.001 ST	-	(mg/l)	0.0018	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		
Total Organic Carbon	-	-	(mg/l)	7.7	4.3	4.67	4.9	3.9	5.8		
Total Dissolved Solids	-	-	(mg/l)	246	237	248	290	695	876		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	3.1	2	1.7	3	2.48	8.69		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-03S (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

NOTES:

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
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 (mg/l)	MW-04S (mg/l)
Color (APHA Units)	-	-	(mg/l)	150	200	80	NS	70	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	618	364	400	405	543	489		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	9.3	7.8	7.2	7.63	7.88	9.21		
Biochemical Oxygen Demand	-	-	(mg/l)	5	37	34	26	23	44		
Bromide	2 GV	24959-67-9	(mg/l)	1	1.2	1	4	0.5 U	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	67	10 U	13.4	34.7	37.1	61.9		
Chloride	250 ST	16887-00-6	(mg/l)	63.3	42.2	49	49.9	51.3	49.3		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	540	480	340	380	440	500		
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		
Phenols, total	0.001 ST	-	(mg/l)	0.0049	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	8.9	5.30	5 U	14	6.4		
Total Organic Carbon	-	-	(mg/l)	17.3	8.1	11	9	8.8	9.6		
Total Dissolved Solids	-	-	(mg/l)	624	426	460	430	465	595		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	23.3	8.9	10.7	7.24	8.65	12.6		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-04S (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

NOTES:

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SONIA ROAD LANDFILL
POST CLOSURE GROUNDWATER MONITORING PROGRAM
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 (mg/l)	MW-04I (mg/l)
Color (APHA Units)	-	-	(mg/l)	30	200	60	NS	80	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	309	339	240	202	385	282		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1.8	9.2	8.2	5.48	5.38	6.01		
Biochemical Oxygen Demand	-	-	(mg/l)	6	24	20	8	18	39		
Bromide	2 GV	24959-67-9	(mg/l)	0.8	0.9	0.70	3.3	0.5 U	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	37	10 U	10 U	20	46.9	51.3		
Chloride	250 ST	16887-00-6	(mg/l)	28.7	50.9	48	22.1	49.5	44.4		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	210	480	200	80	460	290		
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		
Phenols, total	0.001 ST	-	(mg/l)	0.0039	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		
Total Organic Carbon	-	-	(mg/l)	5.2	7.5	7.5	5.5	6.4	6.4		
Total Dissolved Solids	-	-	(mg/l)	424	410	310	195	402	400		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	4.3	11.4	10.1	6.38	7.29	7.93		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-04I (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

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-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 (mg/l)	MW-04D (mg/l)
Color (APHA Units)	-	-	(mg/l)	150	150	50	NS	60	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	210	232	260	117	103	88.2		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	2.8	5.3	5.4	3.91	2.65	3.68		
Biochemical Oxygen Demand	-	-	(mg/l)	8	4	8	13	2 U	2		
Bromide	2 GV	24959-67-9	(mg/l)	1.1	0.8	1.1	3	0.5 U	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	46	10 U	10.6	12.7	15.1	10 U		
Chloride	250 ST	16887-00-6	(mg/l)	50.1	42.8	42	20	20.4	12.5		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	280	280	200	110	200	140		
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		
Phenols, total	0.001 ST	-	(mg/l)	0.0049	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		
Total Organic Carbon	-	-	(mg/l)	4.7	6.5	6.2	3	1.7	2.9		
Total Dissolved Solids	-	-	(mg/l)	318	304	310	170	241	40		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	5.6	6.6	7	4.47	3.06	4.85		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-04D (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

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-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 (mg/l)	MW-05S (mg/l)
Color (APHA Units)	-	-	(mg/l)	60	400	100	NS	60	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	412	390	362	236	258	218		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	4.48	6.1	6.55	3.17	2.08	2.71		
Biochemical Oxygen Demand	-	-	(mg/l)	8	25	33	32	23	21		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.6	0.9	1	1.4	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	46	10 U	21.8	22.5	15.1	38		
Chloride	250 ST	16887-00-6	(mg/l)	82.1	36.4	36.6	39.4	46.1	36.3		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	400	290	276	240	210	250		
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		
Phenols, total	0.001 ST	-	(mg/l)	0.0049	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		
Total Organic Carbon	-	-	(mg/l)	9.6	12	9.17	6.5	5.4	5.2		
Total Dissolved Solids	-	-	(mg/l)	482	385	383	288	342	275		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	9.6	7.8	8.4	6.3	2.48	4.41		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-05S (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

NOTES:

NS: Not sampled

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/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 (mg/l)	MW-05I (mg/l)
Color (APHA Units)	-	-	(mg/l)	40	300	100	NS	60	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	30.4	113	157	93	92.5	133		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.49	3.9	4.19	1.28	0.1	3.35		
Biochemical Oxygen Demand	-	-	(mg/l)	3	4 U	9	10	7	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.6	0.5 U	0.5 U	1.3	1	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	16	10 U	10 U	10 U	10 U	27.3		
Chloride	250 ST	16887-00-6	(mg/l)	24.3	29.6	39.9	25.3	34.3	39.1		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	50	104	140	100	140	120		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	1.4	1.94	0.66	0.32		
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		
Sulfate	250 ST	14808-79-8	(mg/l)	8.9	24.2	17	21.5	20.4	22.3		
Total Organic Carbon	-	-	(mg/l)	1.8	4.7	5.12	3.4	2.5	3.2		
Total Dissolved Solids	-	-	(mg/l)	100	216	250	432	207	280		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	0.7	4.4	5	2.44	1.43	4.77		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-05I (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

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

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-05D 10/29/1997 (mg/l)	MW-05D 12/08/2000 (mg/l)	MW-05D 02/02/2001 (mg/l)	MW-05D 8/23/2002 (mg/l)	MW-05D 11/22/2002 (mg/l)	MW-05D 3/7/2003 (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	50	10	NS	5	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	234	467	505	138	128	90		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	4.3	14.9	16.1	4.41	0.1 U	2.96		
Biochemical Oxygen Demand	-	-	(mg/l)	2	5	12	8	10	2 U		
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		
Chemical Oxygen Demand	-	-	(mg/l)	43	40.5	32.6	17.6	22.5	10 U		
Chloride	250 ST	16887-00-6	(mg/l)	51.5	65.4	51.6	27.9	32.8	34		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	260	410	360	148	130	136		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	1.5	4.46	5.73	11.4		
Phenols, total	0.001 ST	-	(mg/l)	0.0015	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		
Total Organic Carbon	-	-	(mg/l)	6	13.6	11.1	4.3	2.7	1.7		
Total Dissolved Solids	-	-	(mg/l)	337	549	566	266	297	242		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	6	15.3	18	4.57	2.54	3.46		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)	MW-05D (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

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Appendix A-1

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-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 (mg/l)	MW-06S (mg/l)
Color (APHA Units)	-	-	(mg/l)	150	100	70	NS	60	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	453	245	200	161	183	156		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	7.2	3.5	3.7	3.97	2.76	2.2		
Biochemical Oxygen Demand	-	-	(mg/l)	5	17	10	2 U	6	3		
Bromide	2 GV	24959-67-9	(mg/l)	0.6	0.7	0.5 U	1.2	0.5 U	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	46	10.7	10 U	24.9	10 U	27.3		
Chloride	250 ST	16887-00-6	(mg/l)	39.8	14.8	20	15.8	19.6	10.7		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	440	280	140	220	280	80		
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		
Phenols, total	0.001 ST	-	(mg/l)	0.005	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		
Total Organic Carbon	-	-	(mg/l)	11.4	4.4	5.8	4.6	2.9	5.1		
Total Dissolved Solids	-	-	(mg/l)	480	270	220	213	391	230		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	17.3	3.9	4.9	4.68	3.24	3.53		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-06S (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

NOTES:

NS: Not sampled

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

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/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 (mg/l)	MW-06I (mg/l)
Color (APHA Units)	-	-	(mg/l)	10	30	30	NS	5	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	115	97.1	77	43.7	50.7	55.7		
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		
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	14	2	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.8 U	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	10.2	10 U	10 U		
Chloride	250 ST	16887-00-6	(mg/l)	25.4	20.1	18	12.3	16.2	8.8		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	180	108	120	80	170	40		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.1 U	0.14	2.24	0.97	0.79		
Phenols, total	0.001 ST	-	(mg/l)	0.002	0.005 U	0.005 U	0.005	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		
Total Organic Carbon	-	-	(mg/l)	2.4	1.8	2.4	1.7	1.4	1		
Total Dissolved Solids	-	-	(mg/l)	190	211	120	99	151	94		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.4	2	2.30	0.1 U	0.1 U	0.23		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-06I (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

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-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 (mg/l)	MW-06D (mg/l)
Color (APHA Units)	-	-	(mg/l)	10	30	5 U	NS	20	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	31.3	40.6	38	40	31.2	35.5		
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		
Biochemical Oxygen Demand	-	-	(mg/l)	3	37	2 U	2 U	2 U	2 U		
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		
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	22.5	22.5	19.3		
Chloride	250 ST	16887-00-6	(mg/l)	7.3	12.6	9.3	14.7	16.2	10.5		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	120	44	68	72	62	80		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.1 U	0.2	0.14	0.67	0.4	0.36		
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		
Sulfate	250 ST	14808-79-8	(mg/l)	20.3	23.3	17.2	14.5	23	26		
Total Organic Carbon	-	-	(mg/l)	2	1.7	1.1	1.2	1 U	1 U		
Total Dissolved Solids	-	-	(mg/l)	78	130	120	100	150	96		
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		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-06D (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

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-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 (mg/l)	MW-07I (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	5	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	23.4	22.1	23	13.9	12.6	17.5		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1.3	0.89	1.2	0.1 U	0.1 U	0.54		
Biochemical Oxygen Demand	-	-	(mg/l)	6	2 U	8	2 U	3	3		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.6	0.9	0.5 U	0.5 U	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	12.7	10 U	27.3		
Chloride	250 ST	16887-00-6	(mg/l)	9.2	37.6	31	7.8	5.8	6.4		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	180	72	88	40	160	80		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.88	3.4	3.1	3.63	2.47	2.03		
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		
Sulfate	250 ST	14808-79-8	(mg/l)	19.9	6	18.9	13.8	17.9	16.6		
Total Organic Carbon	-	-	(mg/l)	1.9	1 U	1.2	1.6	1 U	1 U		
Total Dissolved Solids	-	-	(mg/l)	65	164	140	74	54	84		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.7	0.84	1.6	0.1 U	0.1 U	0.92		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-07I (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

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

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/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 (mg/l)	MW-11S (mg/l)
Color (APHA Units)	-	-	(mg/l)	100	5 U	5 U	NS	5	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	127	134	135	91.2	133	106		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	1	1.3	1.51	1.16	0.1 U	0.58		
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5	0.8	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	22	10 U	11	12.7	10 U	19.3		
Chloride	250 ST	16887-00-6	(mg/l)	65.1	50.7	36.1	35.1	21.3	23		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	120	210	156	120	230	156		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.28	0.21	0.25	2.6	2.25	1.6		
Phenols, total	0.001 ST	-	(mg/l)	0.002	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		
Total Organic Carbon	-	-	(mg/l)	3.7	4.6	3.53	2.8	2.8	4		
Total Dissolved Solids	-	-	(mg/l)	261	253	254	179	326	250		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.2	1.5	7.76	4.53	0.18	0.77		

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

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

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/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 (mg/l)	MW-11I (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	5 U	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	27.6	34.2	27.4	14.4	28.2	58		
Ammonia (as N)	2 ST	7727-37-9	(mg/l)	0.99	1.1	0.91	0.1 U	0.1 U	1.15		
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	2 U	2 U	2 U	2	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.6	0.8		
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	12.7	10 U	16.7		
Chloride	250 ST	16887-00-6	(mg/l)	40.4	17.3	17.5	7	24.3	7.7		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	54	34	40	40	180	56		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.13	0.42	1.8	3.07	1.85	0.1 U		
Phenols, total	0.001 ST	-	(mg/l)	0.001	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		
Total Organic Carbon	-	-	(mg/l)	1.6	1.3	1 U	1.1	1 U	1 U		
Total Dissolved Solids	-	-	(mg/l)	96	42	63	58	152	109		
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)	1.5	1.2	0.79	0.1	0.19	0.99		

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

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

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	MW-11D 10/31/1997 (mg/l)	MW-11D 12/13/2000 (mg/l)	MW-11D 02/07/2001 (mg/l)	MW-11D 8/22/2002 (mg/l)	MW-11D 11/21/2002 (mg/l)	MW-11D 3/6/2003 (mg/l)	MW-11D (mg/l)	MW-11D (mg/l)
Color (APHA Units)	-	-	(mg/l)	80	5 U	5 U	NS	5	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	36.8	3.6	6.8	5.2	4.4	4		
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		
Biochemical Oxygen Demand	-	-	(mg/l)	4	2	2 U	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.9	0.8		
Chemical Oxygen Demand	-	-	(mg/l)	40	10 U	10 U	12.7	10 U	22		
Chloride	250 ST	16887-00-6	(mg/l)	13.3	7.9	10.3	5.4	17.3	13.9		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	26	17	28	24	110	22		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	1.5	1.9	1.79	0.74	1.91	1.96		
Phenols, total	0.001 ST	-	(mg/l)	0.0063	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		
Total Organic Carbon	-	-	(mg/l)	5.6	1 U	1 U	1 U	1 U	1 U		
Total Dissolved Solids	-	-	(mg/l)	124	61	84	60	109	69		
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		

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

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 (mg/l)	MW-12S (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5	NS	5	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	102	104	98	113	111	77.8		
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		
Biochemical Oxygen Demand	-	-	(mg/l)	3	2	2 U	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	1.4	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	16	10 U	10 U	10 U	10 U	16.7		
Chloride	250 ST	16887-00-6	(mg/l)	21	16	24	15.7	17.7	113		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	90	96	100	140	108	108		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.75	0.67	0.4	2.21	1.14	0.89		
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		
Sulfate	250 ST	14808-79-8	(mg/l)	32.8	36.4	13.4	37.5	27.6	32.1		
Total Organic Carbon	-	-	(mg/l)	2.3	1.7	2.2	3.3	1.7	1.9		
Total Dissolved Solids	-	-	(mg/l)	170	175	250	185	290	352		
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		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-12S (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

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-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 (mg/l)	MW-12I (mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	10	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	10.5	31.8	17.2	2.8	6.8	4.4		
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		
Biochemical Oxygen Demand	-	-	(mg/l)	2 U	6	2 U	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.700	0.5 U	1.1	1		
Chemical Oxygen Demand	-	-	(mg/l)	16	10 U	10 U	10 U	39.6	14		
Chloride	250 ST	16887-00-6	(mg/l)	17.5	14.9	13.1	4.5	8.4	4.6		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	54	52	36.0	16	1900	32		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	4.7	0.73	1.1	0.93	1.54	0.33		
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		
Sulfate	250 ST	14808-79-8	(mg/l)	43.1	48.3	24.2	10	10.4	11.6		
Total Organic Carbon	-	-	(mg/l)	3.6	1.2	0.0010 U	1 U	1 U	1 U		
Total Dissolved Solids	-	-	(mg/l)	106	143	90	39	79	55		
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		

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE : DATE : UNITS:	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)	MW-12I (mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

NOTES:

NS: Not sampled

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

▨: Concentration exceeds Standard/Guidance Value

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

Appendix A-1

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

	NYSDEC Class		SITE :	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D
	GA Groundwater	CAS #	DATE :	10/31/1997	12/08/2000	02/07/2001	8/22/2002	11/21/2002	3/6/2003		
CONSTITUENT	Standards/Guidance Values		UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)	5 U	5 U	5 U	NS	5	NS		
Alkalinity (as CaCO3)	-	-	(mg/l)	19.3	7.3	7.8	6.7	6.8	8.4		
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		
Biochemical Oxygen Demand	-	-	(mg/l)	3	7	4	2 U	2 U	2 U		
Bromide	2 GV	24959-67-9	(mg/l)	0.5 U	0.5 U	0.5 U	0.5 U	0.9	0.5 U		
Chemical Oxygen Demand	-	-	(mg/l)	15 U	10 U	10 U	15.1	10 U	10 U		
Chloride	250 ST	16887-00-6	(mg/l)	11.7	4.7	5.71	3.1	4.3	5.6		
Hardness (as CaCO3)	-	471-34-1	(mg/l)	34	15	28	16	36	64		
Nitrate (as N)	10 ST	14797-55-8	(mg/l)	0.32	0.38	0.31	0.13	0.24	0.58		
Phenols, total	0.001 ST	-	(mg/l)	0.002	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		
Total Organic Carbon	-	-	(mg/l)	0.5 U	2.1	1 U	1 U	1 U	1 U		
Total Dissolved Solids	-	-	(mg/l)	45	77	380	37	69	78		
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		

	NYSDEC Class		SITE :	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D	MW-12D
	GA Groundwater	CAS #	DATE :								
CONSTITUENT	Standards/Guidance Values		UNITS:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Color (APHA Units)	-	-	(mg/l)								
Alkalinity (as CaCO3)	-	-	(mg/l)								
Ammonia (as N)	2 ST	7727-37-9	(mg/l)								
Biochemical Oxygen Demand	-	-	(mg/l)								
Bromide	2 GV	24959-67-9	(mg/l)								
Chemical Oxygen Demand	-	-	(mg/l)								
Chloride	250 ST	16887-00-6	(mg/l)								
Hardness (as CaCO3)	-	471-34-1	(mg/l)								
Nitrate (as N)	10 ST	14797-55-8	(mg/l)								
Phenols, total	0.001 ST	-	(mg/l)								
Sulfate	250 ST	14808-79-8	(mg/l)								
Total Organic Carbon	-	-	(mg/l)								
Total Dissolved Solids	-	-	(mg/l)								
Total Kjeldahl nitrogen (as N)	-	7727-37-9	(mg/l)								

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

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

APPENDIX A-2

HISTORIC AND CURRENT GROUNDWATER SAMPLE RESULTS – INORGANIC PARAMETERS

Appendix A-2

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE: DATE: UNITS:	MW-01S 10/24/1997 (ug/l)	MW-01S 11/30/2000 (ug/l)	MW-01S 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 (ug/l)	MW-01S (ug/l)
Aluminum	-	7429-90-5	ug/l	378	21 B	32.1	NA	101 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3.0 U	1.7 U	12.3 U	NA	3.1 U	NA		
Arsenic	25 ST	7440-38-2	ug/l	2.5	2.5 U	5.9	NA	4.5 U	NA		
Barium	1000 ST	7440-39-3	ug/l	75.5	52.7 B	58	NA	67.4 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.2	0.1 U	0.1 U	NA	0.40 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	622	553	NA	271	NA		
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		
Calcium	-	7440-70-2	ug/l	93000	53000	63900	65400	82400	87700		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	2.7	3.5 U	1.5	NA	1.1 B	NA		
Cobalt	-	7440-48-4	ug/l	2.5	2.8 B	4.8	NA	5.4 B	NA		
Copper	200 ST	7440-50-8	ug/l	3.2	1.5 U	2.4	NA	3.5 B	NA		
Iron	300 ST	7439-89-6	ug/l	6710	4360*	4870	13300	14000	13100		
Lead	25 ST	7439-92-1	ug/l	12.7	1.4 U	6.5	2.2 B	1.4 B	1.5 U		
Magnesium	35000 GV	7439-95-4	ug/l	8940	6010	7240	7530	8980	10700		
Manganese	300 ST	7439-96-5	ug/l	944	1220	2210	1850	2740	2670		
Mercury	0.7 ST	7439-97-6	ug/l	0.12	0.1 U	0.1 U	NA	0.10 U	NA		
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	1.2 B	NA		
Potassium	-	7440-09-7	ug/l	10000	16200	15700	8380	11000	9900		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	5.5 N	NA	2.4 U	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.58 B	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	51400	35400	33700	29400	38100	49600		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	1.2	0.7 U	1.7 U	NA	0.65 B	NA		
Zinc	2000 ST	7440-66-6	ug/l	37	2.2 U	22.4	NA	40.6	NA		
Cyanide	200 ST	--	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	--	ug/l	7654	5580	7080	15150	16740	15770		

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/sonia1Q03/INORGANIC1stq03

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 (ug/l)	MW-01I (ug/l)
Aluminum	-	7429-90-5	ug/l	60.8	12.5 B	27.7	NA	19 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA		
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA		
Barium	1000 ST	7440-39-3	ug/l	93.2	4.3 B	7.8	NA	26.2 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.1 U	NA	0.40 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	65.8 B	94.3	NA	68.1 B	NA		
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		
Calcium	-	7440-70-2	ug/l	7510	723 B	1350	4840 B	10200	5850		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	0.4 U	3.5 U	0.6 U	NA	0.80 U	NA		
Cobalt	-	7440-48-4	ug/l	2.7	2.2 B	1.7 U	NA	5.7 B	NA		
Copper	200 ST	7440-50-8	ug/l	0.93	2.1 B	1.7	NA	2.0 B	NA		
Iron	300 ST	7439-89-6	ug/l	80.1	13.3 B	22.8	242	78.8 B	105		
Lead	25 ST	7439-92-1	ug/l	1	1.4 U	1.1 U	1.3 B	1.4 U	1.5 U		
Magnesium	35000 GV	7439-95-4	ug/l	3720	154 B	266	904 B	1910 B	1160 B		
Manganese	300 ST	7439-96-5	ug/l	286	1.3 B	3.9	32.4	24	16.5		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.10 U	NA		
Nickel	100 ST	7440-02-0	ug/l	5.1	1.9 U	1.4 U	NA	8.2 B	NA		
Potassium	-	7440-09-7	ug/l	4250	951 B	1510	1370 B	1770 B	1970 B		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.5 U	2.6	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	120000	50600	68000	16100	43000	64400		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7	NA	0.60 U	NA		
Zinc	2000 ST	7440-66-6	ug/l	29.5	2.2 U	8.6	NA	27.6	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	366.1	14.6	26.7	274.4	102.8	121.5		

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

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

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

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

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

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

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

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 (ug/l)	MW-02I (ug/l)
Aluminum	-	7429-90-5	ug/l	80.2	26.4 B	11.8 U	NA	70.4 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA		
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA		
Barium	1000 ST	7440-39-3	ug/l	47.9	39.9 B	36.9	NA	30.8 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.1 U	NA	0.4 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	126	97.2	NA	105	NA		
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		
Calcium	-	7440-70-2	ug/l	4990	10700	10500	7090	6060	11600		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	0.7	3.5 U	0.6 U	NA	0.8 U	NA		
Cobalt	-	7440-48-4	ug/l	1.1	0.9 U	1.7 U	NA	1 U	NA		
Copper	200 ST	7440-50-8	ug/l	3.6	1.5 U	1.5 U	NA	5.9 B	NA		
Iron	300 ST	7439-89-6	ug/l	249	6.9 B	5.4	207	173	44.3 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		
Magnesium	35000 GV	7439-95-4	ug/l	685	2670 B	2600	1900 B	1780	3240 B		
Manganese	300 ST	7439-96-5	ug/l	40.9	417	406	181	504	503		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA		
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	1.1	NA		
Potassium	-	7440-09-7	ug/l	3100	1630 B	1680	1740 B	3600	3070 B		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	1 B	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	15300	8700	7580	7370	7100	12300		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.60 U	NA		
Zinc	2000 ST	7440-66-6	ug/l	37	2.2 U	3.6 U	NA	36	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	289.9	423.9	411.4	388	677	547.3		

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

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 (ug/l)	MW-02D (ug/l)
Aluminum	-	7429-90-5	ug/l	33.5	15.3 B	16	NA	21.9 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA		
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA		
Barium	1000 ST	7440-39-3	ug/l	6.9	5.2 B	5	NA	7.4 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.1 U	NA	0.40 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	5.1 B	32.9	NA	18 B	NA		
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		
Calcium	-	7440-70-2	ug/l	4750	6070	5720	6040	8290	8530		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	0.4 U	3.5 U	0.6 U	NA	1.6 B	NA		
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	1 U	NA		
Copper	200 ST	7440-50-8	ug/l	0.7 U	1.5 U	1.5 U	NA	8.7 B	NA		
Iron	300 ST	7439-89-6	ug/l	33.2	4.2 B	12.3	139	89.1 B	119		
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		
Magnesium	35000 GV	7439-95-4	ug/l	2220	2840 B	2680	2600 B	3530 B	3640 B		
Manganese	300 ST	7439-96-5	ug/l	54.8	1.6 B	1.1 U	30.6	11 B	7.3 B		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA		
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	1.5 B	NA		
Potassium	-	7440-09-7	ug/l	636	740 B	806	741 B	710 B	768 B		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.5 U	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	8120	8460	7560	6780	8170	8210		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.6 U	NA		
Zinc	2000 ST	7440-66-6	ug/l	27.5	3.6 B	5.3	NA	57.8	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	88	5.8	12.3	169.6	100.1	126.3		

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-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 (ug/l)	MW-03S (ug/l)
Aluminum	-	7429-90-5	ug/l	1080	16.5 B	53.7	NA	803	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.4 B	NA		
Arsenic	25 ST	7440-38-2	ug/l	3.2	2.5 U	1.9 U	NA	4.5 U	NA		
Barium	1000 ST	7440-39-3	ug/l	136	125 B	125	NA	176 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.24	NA	0.80 B	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	128	153	NA	139	NA		
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		
Calcium	-	7440-70-2	ug/l	50800	51200	57700	67400	92400	112000		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	3.1	3.5 U	0.6	NA	2.9 B	NA		
Cobalt	-	7440-48-4	ug/l	1.1	0.9 U	1.7 U	NA	13.1 B	NA		
Copper	200 ST	7440-50-8	ug/l	3.3	2.6 B	1.5 U	NA	11.5 B	NA		
Iron	300 ST	7439-89-6	ug/l	12700	10200	7390	30600	80600	85800		
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		
Magnesium	35000 GV	7439-95-4	ug/l	7970	7620	8320	9840	16000	21700		
Manganese	300 ST	7439-96-5	ug/l	7270	5840	5930	8430	11500	8190		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA		
Nickel	100 ST	7440-02-0	ug/l	2.6	1.9 U	1.4 U	NA	23.4 B	NA		
Potassium	-	7440-09-7	ug/l	7870	8310	9590	8680	7850	12200		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	2.8 B	2 N	NA	6	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	1.7 B	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	40400	20500	21500	27100	25200	22900		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	3.7	0.7 U	1.7 U	NA	2.9 B	NA		
Zinc	2000 ST	7440-66-6	ug/l	34	3.5 B	3.6 U	NA	799	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	19970	16040	13320	39030	92100	93990		

NOTES:

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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/sonia1Q03/INORGANIC1stq03

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

NOTES:

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

Appendix A-2

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE: DATE: UNITS:	MW-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 (ug/l)	MW-04I (ug/l)
Aluminum	-	7429-90-5	ug/l	365	19.9 B	18.7	NA	13.9 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 B	NA		
Arsenic	25 ST	7440-38-2	ug/l	10.1	14.6	17.1	NA	11.5	NA		
Barium	1000 ST	7440-39-3	ug/l	128	175 B	107	NA	135 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.14	NA	0.4 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	300	285	NA	231	NA		
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		
Calcium	-	7440-70-2	ug/l	53200	92000	62200	41700	85700	85500		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	0.3 U	3.5 U	0.6 U	NA	1 B	NA		
Cobalt	-	7440-48-4	ug/l	2.5	1.7 B	1.7 U	NA	1 U	NA		
Copper	200 ST	7440-50-8	ug/l	5.2	1.5 U	1.5 U	NA	2.8 B	NA		
Iron	300 ST	7439-89-6	ug/l	31800	55200	38200	29000	56200	53000		
Lead	25 ST	7439-92-1	ug/l	3.7	1.9 B	1.9	0.8 U	1.4 U	1.5 U		
Magnesium	35000 GV	7439-95-4	ug/l	9580	15700	9960	5690	10700	11100		
Manganese	300 ST	7439-96-5	ug/l	480	884	592	576	1410	1270		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA		
Nickel	100 ST	7440-02-0	ug/l	3.9	1.9 U	1.4 U	NA	3.5 B	NA		
Potassium	-	7440-09-7	ug/l	69400	21700	19400	10100	14800	15400		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	3.9 B	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.5 U	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	29200	32500	22700	13400	26800	25700		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	4.4	0.7 U	1.7 U	NA	1.8 B	NA		
Zinc	2000 ST	7440-66-6	ug/l	96.1	6.8 B	3.6 U	NA	19.3 B	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	32280	56084	38792	29576	57610	54270		

NOTES:

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

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

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

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/sonia1Q03/INORGANIC1stq03

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

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

NOTES:

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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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

Appendix A-2

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE: DATE: UNITS:	MW-06S 10/28/1997 (ug/l)	MW-06S 12/5/2000 (ug/l)	MW-06S 2/1/2001 (ug/l)	MW-06S 8/21/2002 (ug/l)	MW-06S 11/20/2002 (ug/l)	MW-06S 3/5/2003 (ug/l)	MW-06S (ug/l)	MW-06S (ug/l)
Aluminum	-	7429-90-5	ug/l	96.2	45.5 B	12.1	NA	143 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.9 B	NA		
Arsenic	25 ST	7440-38-2	ug/l	9.6	3.2 B	8	NA	5.2 B	NA		
Barium	1000 ST	7440-39-3	ug/l	306	121 B	101	NA	121 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1	0.1 U	0.1 U	NA	0.4 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	162	183	NA	167	NA		
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		
Calcium	-	7440-70-2	ug/l	131000	64500	53100	61000	59500	571000		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	1.3	3.5 U	0.6 U	NA	1.9 B	NA		
Cobalt	-	7440-48-4	ug/l	2.2	0.9 U	1.7 U	NA	2.9 B	NA		
Copper	200 ST	7440-50-8	ug/l	0.7 U	1.5 U	1.5 U	NA	2.9 B	NA		
Iron	300 ST	7439-89-6	ug/l	58700	48000	40000	37700	31900	25400		
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		
Magnesium	35000 GV	7439-95-4	ug/l	16400	6280	4680	5550	5080	5480		
Manganese	300 ST	7439-96-5	ug/l	837	543	430	804	1050	930		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA		
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	2.9 B	NA		
Potassium	-	7440-09-7	ug/l	18200	8250	8050	7460	6980	7490		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.63 B	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	18900	12800	13200	14900	13500	10300		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	2 B	NA		
Zinc	2000 ST	7440-66-6	ug/l	14.2	2.2 U	3.6 U	NA	6.1 B	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	59537	48543	40430	38504	32950	26330		

NOTES:

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

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

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

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 (ug/l)	MW-07I (ug/l)
Aluminum	-	7429-90-5	ug/l	90.1	16 B	23.6	NA	37.1 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA		
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA		
Barium	1000 ST	7440-39-3	ug/l	32.2	39.6 B	29.3	NA	15.4 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	33 B	45.4	NA	30.1 B	NA		
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		
Calcium	-	7440-70-2	ug/l	8890	20000	14700	9820	7360	8670		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	0.8	3.5 U	0.6 U	NA	0.8 U	NA		
Cobalt	-	7440-48-4	ug/l	2.3	0.9 U	1.7 U	NA	1 U	NA		
Copper	200 ST	7440-50-8	ug/l	1.6	1.5 U	1.5 U	NA	3.9 B	NA		
Iron	300 ST	7439-89-6	ug/l	396	26.2 B	35.2	350	172	53.9 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		
Magnesium	35000 GV	7439-95-4	ug/l	1300	4310 B	3080	1630 B	1150 B	1470		
Manganese	300 ST	7439-96-5	ug/l	519	6510	5140	2620	1390	2340		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA		
Nickel	100 ST	7440-02-0	ug/l	1.8	1.9 U	1.4 U	NA	1.1 U	NA		
Potassium	-	7440-09-7	ug/l	3840	2590 B	2460	2330B	2000 B	2020 B		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.8	NA	2.4 U	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	1 B	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	6950	22300	19600	10700	7960	9570		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	0.6 U	NA		
Zinc	2000 ST	7440-66-6	ug/l	51.7	3.8 B	3.6 U	NA	27.9	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	915	6536.2	5175.2	2970	1562	2393.9		

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

Appendix A-2

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE: DATE: UNITS:	MW-11S 10/31/1997 (ug/l)	MW-11S 12/13/2000 (ug/l)	MW-11S 2/7/2001 (ug/l)	MW-11S 8/22/2002 (ug/l)	MW-11S 11/21/2002 (ug/l)	MW-11S 3/6/2003 (ug/l)	MW-11S (ug/l)	MW-11S (ug/l)
Aluminum	-	7429-90-5	ug/l	703	31.7	47.7	NA	127 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA		
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA		
Barium	1000 ST	7440-39-3	ug/l	30.5	27.3	24.1	NA	28.3 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	635	630	NA	206	NA		
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		
Calcium	-	7440-70-2	ug/l	39100	58600	53800	46600	51800	51500		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	0.73	3.5 U	9.8	NA	38.9	NA		
Cobalt	-	7440-48-4	ug/l	2.1	1.4	1.8	NA	1.8 B	NA		
Copper	200 ST	7440-50-8	ug/l	3.2	3.2	3	NA	2.9 B	NA		
Iron	300 ST	7439-89-6	ug/l	739	45.6	65.1	4820	575	271		
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		
Magnesium	35000 GV	7439-95-4	ug/l	4000	6250	5770	4090 B	5250	5880		
Manganese	300 ST	7439-96-5	ug/l	1820	5290	4340	1230	1270	843		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA		
Nickel	100 ST	7440-02-0	ug/l	2.6	3.1	3.3	NA	3.9 B	NA		
Potassium	-	7440-09-7	ug/l	8620	9070	7980	6970	6570	9540		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	3	3	NA	2.4 U	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	3.6	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	43700	37900	26900	15000	16700	20300		
Thallium	0.5 GV	7440-28-0	ug/l	3.2	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	1.8	0.98	1.7 U	NA	0.97 B	NA		
Zinc	2000 ST	7440-66-6	ug/l	12.7	2.2 U	3.6 U	NA	15.2 B	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	2559	5335.6	4405.1	6050	1845	1114		

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/sonia1Q03/INORGANIC1stq03

Appendix A-2

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

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

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

Appendix A-2

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

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

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

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

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

Appendix A-2

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE: DATE: UNITS:	MW-12S 10/31/1997 (ug/l)	MW-12S 12/7/2000 (ug/l)	MW-12S 2/5/2001 (ug/l)	MW-12S 8/22/2002 (ug/l)	MW-12S "F" 8/22/2002 (ug/l)	MW-12S 11/21/2002 (ug/l)	MW-12S 3/6/2003 (ug/l)	MW-12S (ug/l)
Aluminum	-	7429-90-5	ug/l	275	135 B	109	NA	NA	182 B	NA	
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	NA	3.1 U	NA	
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	NA	4.5 U	NA	
Barium	1000 ST	7440-39-3	ug/l	24.7	35.5 B	32.6	NA	NA	32.7 B	NA	
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	NA	0.4 U	NA	
Boron	1000 ST	7440-42-8	ug/l	NA	102	108	NA	NA	94.5 B	NA	
Cadmium	5 ST	7440-43-9	ug/l	0.3 U	0.4 U	0.2 U	0.10 U	0.10 U	0.5 U	0.10 U	
Calcium	-	7440-70-2	ug/l	32500	33500	38700	45800	45600	42500	40400	
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	NA	20 U	NA	
Chromium Total	50 ST	7440-47-3	ug/l	8.3	8.7 B	3	NA	NA	52.5	NA	
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	NA	1 U	NA	
Copper	200 ST	7440-50-8	ug/l	0.7 U	3.2 B	1.5 U	NA	NA	2.8 B	NA	
Iron	300 ST	7439-89-6	ug/l	326	170	88.4	23200	2390	504	231	
Lead	25 ST	7439-92-1	ug/l	1.0 U	1.4 U	1.1 U	2.9 B	0.8 U	1.4 U	1.5 U	
Magnesium	35000 GV	7439-95-4	ug/l	1730	1990 B	2280	2530 B	2430 B	2080 B	2070 B	
Manganese	300 ST	7439-96-5	ug/l	29.2	45	14.1	247	36.2	20.3	45.8	
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	NA	0.1 U	NA	
Nickel	100 ST	7440-02-0	ug/l	1.3 U	3.5 B	1.4 U	NA	NA	2.7 B	NA	
Potassium	-	7440-09-7	ug/l	14700	14900	15400	14400	14200	10700	13500	
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	NA	2.4 U	NA	
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.5 U	1.6 U	NA	NA	1 U	NA	
Sodium	20000 ST	7440-23-5	ug/l	17800	18000	21100	20200	20500	14300	75400	
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	NA	4.2 U	NA	
Vanadium	-	7440-62-2	ug/l	1.2 U	0.98 B	1.7 U	NA	NA	1.6 B	NA	
Zinc	2000 ST	7440-66-6	ug/l	15	2.2 U	3.6 U	NA	NA	13.9 B	NA	
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	NA	10 U	NA	
Iron + Manganese	500 ST*	-	ug/l	355.2	215	102.5	23447	2426.2	524.3	276.8	

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

"F": Filterd by lab for dissolved metals

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

Appendix A-2

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE: DATE: UNITS:	MW-12I 1031/1997 (ug/l)	MW-12I 12/7/2000 (ug/l)	MW-12I 2/8/2001 (ug/l)	MW-12I 8/22/2002 (ug/l)	MW-12I 11/21/2002 (ug/l)	MW-12I 3/6/2003 (ug/l)	MW-12I (ug/l)	MW-12I (ug/l)
Aluminum	-	7429-90-5	ug/l	281	38.1 B	13.5	NA	88.5 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA		
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA		
Barium	1000 ST	7440-39-3	ug/l	25.1	20.2 B	12.6	NA	16.8 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	865	423	NA	47.6 B	NA		
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		
Calcium	-	7440-70-2	ug/l	13000	13500	9680	4240 B	6480	4390 B		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	0.4 U	3.5 U	0.6 U	NA	2.7 B	NA		
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	1.2 B	NA		
Copper	200 ST	7440-50-8	ug/l	1	2.4 B	1.5 U	NA	2.8 B	NA		
Iron	300 ST	7439-89-6	ug/l	213	20.9 B	12.4	257	312	37.3 B		
Lead	25 ST	7439-92-1	ug/l	1 U	1.4 U	1.1 U	0.80 U	1.9 B	1.5 U		
Magnesium	35000 GV	7439-95-4	ug/l	4930	3600 B	2400	1220 B	1680 B	1250 B		
Manganese	300 ST	7439-96-5	ug/l	1290	1300	1070	345	289	153		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	NA	0.1 U	NA	0.1 U	NA		
Nickel	100 ST	7440-02-0	ug/l	1.5	1.9 U	1.4 U	NA	3 B	NA		
Potassium	-	7440-09-7	ug/l	1520	2110 B	1810	915 B	1330 B	796 B		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	0.65 B	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	10800	22500	13900	5820	6080	5320		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	1.2 U	0.7 U	1.7 U	NA	1.4 B	NA		
Zinc	2000 ST	7440-66-6	ug/l	39.2	13.7 B	9	NA	44.9	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	1503	1320.9	1082.4	602	601	190.3		

NOTES:

NS: Not sampled

▨ : Concentration exceeds Standard/Guidance Value

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

NA: Not analyzed

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

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

Appendix A-2

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

CONSTITUENT	NYSDEC Class GA Groundwater Standards/Guidance Values	CAS #	SITE: DATE: UNITS:	MW-12D 10/31/1997 (ug/l)	MW-12D 12/8/2000 (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 (ug/l)	MW-12D (ug/l)
Aluminum	-	7429-90-5	ug/l	288	14.9	18.6	NA	43.5 B	NA		
Antimony	3 GV	7440-36-0	ug/l	3 U	1.7 U	12.3 U	NA	3.1 U	NA		
Arsenic	25 ST	7440-38-2	ug/l	2.4 U	2.5 U	1.9 U	NA	4.5 U	NA		
Barium	1000 ST	7440-39-3	ug/l	6.5	1.5	2.9 U	NA	3.4 B	NA		
Beryllium	3 GV	7440-41-7	ug/l	0.1 U	0.1 U	0.1 U	NA	0.4 U	NA		
Boron	1000 ST	7440-42-8	ug/l	NA	29.4	25.2	NA	16.1 B	NA		
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		
Calcium	-	7440-70-2	ug/l	8460	3180	3660	2580 B	3860 B	5990		
Chromium Hexavalent	50 ST	18540-29-9	ug/l	20 U	20 U	20 U	NA	20 U	NA		
Chromium Total	50 ST	7440-47-3	ug/l	0.87	3.5 U	1	NA	2 B	NA		
Cobalt	-	7440-48-4	ug/l	1.1 U	0.9 U	1.7 U	NA	1 U	NA		
Copper	200 ST	7440-50-8	ug/l	2.4	1.5 U	1.5 U	NA	1.8 B	NA		
Iron	300 ST	7439-89-6	ug/l	312	20.9	16.5	129	132	12.4 B		
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		
Magnesium	35000 GV	7439-95-4	ug/l	2330	1520	1760	1000 B	1590 B	2630 B		
Manganese	300 ST	7439-96-5	ug/l	82.5	1.8	1.4	11.6 B	4.7 B	3.9 B		
Mercury	0.7 ST	7439-97-6	ug/l	0.1 U	0.1 U	0.1 U	NA	0.1 U	NA		
Nickel	100 ST	7440-02-0	ug/l	1.3 U	1.9 U	1.4 U	NA	1.5 B	NA		
Potassium	-	7440-09-7	ug/l	837	554	673	552 B	438 B	551 B		
Selenium	10 ST	7782-49-2	ug/l	2.8 U	1.7 U	1.5 U	NA	2.4 U	NA		
Silver	50 ST	7440-22-4	ug/l	0.9 U	1.4	1.6 U	NA	1 U	NA		
Sodium	20000 ST	7440-23-5	ug/l	8400	8610	9340	6450	6010	5770		
Thallium	0.5 GV	7440-28-0	ug/l	2.6 U	2.3 U	2.8 U	NA	4.2 U	NA		
Vanadium	-	7440-62-2	ug/l	1.2	0.7 U	1.7 U	NA	0.60 U	NA		
Zinc	2000 ST	7440-66-6	ug/l	311	2.2 U	3.6 U	NA	24.1	NA		
Cyanide	200 ST	-	ug/l	10 U	10 U	5 U	NA	10 U	NA		
Iron + Manganese	500 ST*	-	ug/l	394.5	22.7	17.9	129	136.7	16.3		

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

Public/Jmilligan/sonia1Q03/INORGANIC1stq03

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				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				
Volatile Organic Compounds	CAS #	(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 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	7	8	5 U				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 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 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U				2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	8 J	12	3 J	2.2 J	2 J				5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	2 J	3.3 J	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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		8	12	12	13.5	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-01I	MW-01I	MW-01I	MW-01I	MW-01I				NYSDEC Class GA
Date of Collection		10/24/1997	01/28/1998	11/30/2000	01/30/2001	11/20/2002				GROUNDWATER
Volatile Organic Compounds	CAS #	(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 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
1,1,1-Trichloroethane	000071-55-6	22	5.1 J	14	8.0 J	5 U				5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U				2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	14	13	13	8.5 J	53				5 ST
1,1-Dichloroethene	000075-35-4	2 J	10.0 U	2 J	10 U	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		38	18.1	29	16.5	53				

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

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

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

APPENDIX A-3

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

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

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

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

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

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

APPENDIX A-3

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

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

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

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				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				
Volatile Organic Compounds	CAS #	(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 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	1 J				5 ST
Chlorobenzene	000108-90-7	1 J	10.0 U	5 U	10 U	5 U				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	4 J	2.5 J	5 U	10 U	5 U				5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	7 J	3.0 J	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 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 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	[illegible]	[illegible]	4 J	2.5 J	5 U				5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U				2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		23	32.5	4	2.5	1				

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

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

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

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

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

APPENDIX A-3

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

Sample ID		MW-06S	MW-06S	MW-06S	MW-06S	MW-06S				NYSDEC Class GA
Date of Collection		10/28/1997	01/28/1998	12/05/2000	02/01/2001	11/20/2002				GROUNDWATER
Volatile Organic Compounds	CAS #	(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 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chlorobenzene	000108-90-7	4 J	6.2 J	5 U	1.1 J	2 J				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	1 J	6 J	1 J				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	4 J	4.1 J	5 U	10 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 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	1 J	10.0 U	5 U	10 U	5 U				5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	2.6 J	5 U				2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		9	10.3	1	9.7	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				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				
Volatile Organic Compounds	CAS #	(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 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	3 J	10.0 U	2 J	10 U	5 U				5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	4 J	10 U	5 U				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
1,1,1-Trichloroethane	000071-55-6	4 J	10.0 U	5 U	10 U	5 U				5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U				2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	5 J	10.0 U	5 U	10 U	5 U				5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	23	3.1 J	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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		12	0	29	3.1	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 Date of Collection Volatile Organic Compounds	CAS #	MW-06D 10/28/1997 (ug/l)	MW-06D 01/28/1998 (ug/l)	MW-06D 12/05/2000 (ug/l)	MW-06D 01/31/2001 (ug/l)	MW-06D 11/20/2002 (ug/l)				NYSDEC Class GA GROUNDWATER STANDARD/GUIDANCE VALUE
Ethylbenzene	000100-41-4	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	1 J	10.0 U	5 U	10 U	2 J				5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	[illegible]	[illegible]	15	11	5				5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	480 D	515 D	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	1 J	1	1 J				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
1,1,1-Trichloroethane	000071-55-6	23	17	5 U	10 U	5 U				5 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Vinyl chloride	000075-01-4	[illegible]	[illegible]	5 U	10 U	5 U				2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	4 J	10.0 U	5 U	10 U	5 U				5 ST
1,1-Dichloroethene	000075-35-4	4 J	10.0 U	5 U	10 U	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	45	36	2 J	10 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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		1776	2032	18	12	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
ST: Standard
NA: Not Analyzed
NS: Not Sampled
▨ : Parameter exceeds Standard/Guidance Value

APPENDIX A-3

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

Sample ID		MW-07I	MW-07I	MW-07I	MW-07I	MW-07I				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				
Volatile Organic Compounds	CAS #	(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 ST
Styrene	000100-42-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	0.2 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	0.2 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	0.2 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	0.4 U	10.0 U	5 U	10 U	3 J				5 ST
Chlorobenzene	000108-90-7	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Xylene (total)	001330-20-7	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	0.4 U	10.0 U	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	0.4 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	0.2 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	0.4 U	10.0 U	5 U	10 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 ST
Bromomethane	000074-83-9	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	0.2 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Vinyl chloride	000075-01-4	0.6 U	10.0 U	5 U	10 U	5 U				2 ST
Methylene chloride	000075-09-2	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	0.4 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	0.6 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	0.4 U	10.0 U	5 U	10 U	5 U				5 ST
1,1-Dichloroethene	000075-35-4	0.6 U	10.0 U	5 U	10 U	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	0.4 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	0.2 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	0.4 U	10.0 U	5 U	10 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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		0	0	6	2.6	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-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				
Volatile Organic Compounds	CAS #	(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 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	5 U				5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	24	16	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	22	5 J	5 U				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	3.40 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 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 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U				2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	3 J	7.2 J	5 U	2.0 J	2 J				5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	12	6.5	9	2.2 J	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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		39	29.7	31	9.2	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				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				
Volatile Organic Compounds	CAS #	(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 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	5 U				5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	2.60 U	10.0 U	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	3.40 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 U	5 U				1 ST
1,1,1-Trichloroethane	000071-55-6	2 J	10.0 U	10	19	5 U				5 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U				2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	7 J	3.2 J	62	100	5 U				5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	1.6 J	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	1.40 U	10.0 U	5 U	10 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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		9	3.2	62	120.6	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-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				
Volatile Organic Compounds	CAS #	(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 ST
Styrene	000100-42-5	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
cis-1,3-Dichloropropene	010061-01-5	1.40 U	10.0 U	5 U	10 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				0.4 ST
1,4-Dichlorobenzene	000106-46-7	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromoethane	000106-93-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloroethane	000107-06-2	1.40 U	10.0 U	5 U	10 U	5 U				0.6 ST
Acrylonitrile	000107-13-1	NA	NA	5 U	50 U	5 U				5 ST
Vinyl Acetate	000108-05-4	NA	NA	5 U	10 U	5 U				-
4-Methyl-2-pentanone	000108-10-1	1.40 U	10.0 U	5 U	10 U	5 U				-
Toluene	000108-88-3	1.20 U	10.0 U	5 U	10 U	5 U				5 ST
Chlorobenzene	000108-90-7	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
trans-1,4-Dichloro-2-butene	000110-57-6	NA	NA	5 U	10 U	5 U				5 ST
Dibromochloromethane	000124-48-1	2.20 U	10.0 U	5 U	10 U	5 U				50 GV
Tetrachloroethene	000127-18-4	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Xylene (total)	001330-20-7	1.60 U	10.0 U	5 U	10 U	5 U				5 ST
1,2-Dichloroethene (total)	000540-59-0	2.60 U	10.0 U	NA	10 U	NA				5 ST
cis-1,2-Dichloroethene	000156-59-2	NA	NA	5 U	10 U	5 U				5 ST
trans-1,2-Dichloroethene	000156-60-5	NA	NA	5 U	10 U	5 U				5 ST
Carbon tetrachloride	000056-23-5	1.80 U	10.0 U	5 U	10 U	5 U				5 ST
2-Hexanone	000591-78-6	1.40 U	10.0 U	5 U	10 U	5 U				50 GV
1,1,1,2-Tetrachloroethane	000630-20-6	NA	NA	5 U	10 U	5 U				5 ST
Acetone	000067-64-1	2 J	10.0 U	5 U	10 U	5 U				50 GV
Chloroform	000067-66-3	1.40 U	10.0 U	5 U	10 U	5 U				7 ST
Benzene	000071-43-2	1.40 U	10.0 U	5 U	10 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 ST
Bromomethane	000074-83-9	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Chloromethane	000074-87-3	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Iodomethane	000074-88-4	NA	NA	5 U	10 U	5 U				5 ST
Dibromomethane	000074-95-3	NA	NA	5 U	10 U	5 U				5 ST
Bromodichloromethane	000075-27-4	1.80 U	10.0 U	5 U	10 U	5 U				50 GV
Chloroethane	000075-00-3	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Vinyl chloride	000075-01-4	1.40 U	10.0 U	5 U	10 U	5 U				2 ST
Methylene chloride	000075-09-2	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Carbon disulfide	000075-15-0	1.20 U	10.0 U	5 U	10 U	5 U				60 GV
Bromoform	000074-25-2	1.80 U	10.0 U	5 U	10 U	5 U				50 GV
Bromochloromethane	000074-97-5	NA	NA	5 U	10 U	5 U				5 ST
1,1-Dichloroethane	000075-34-3	1.20 U	10.0 U	5 U	10 U	1 J				5 ST
1,1-Dichloroethene	000075-35-4	1.40 U	10.0 U	5 U	10 U	5 U				5 ST
Trichlorofluoromethane	000075-69-4	NA	NA	5 U	10 U	5 U				5 ST
1,2-Dichloropropane	000078-87-5	1.40 U	10.0 U	5 U	10 U	5 U				1 ST
2-Butanone	000078-93-3	2.20 U	10.0 U	5 U	10 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 ST
Trichloroethene	000079-01-6	1.40 U	10.0 U	5 U	10 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 ST
1,2-Dichlorobenzene	000095-50-1	NA	NA	5 U	10 U	5 U				3 ST
1,2-Dibromo-3-chloropropane	000096-12-8	NA	NA	5 U	10 U	5 U				0.04 ST
1,2,3-Trichloropropane	000096-18-4	NA	NA	5 U	10 U	5 U				0.04 ST
1,1-Dichloropropene	000563-58-6	NA	NA	NA	10 U	NA				5 ST
TOTAL VOCs		2	0	0	0	1				

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

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

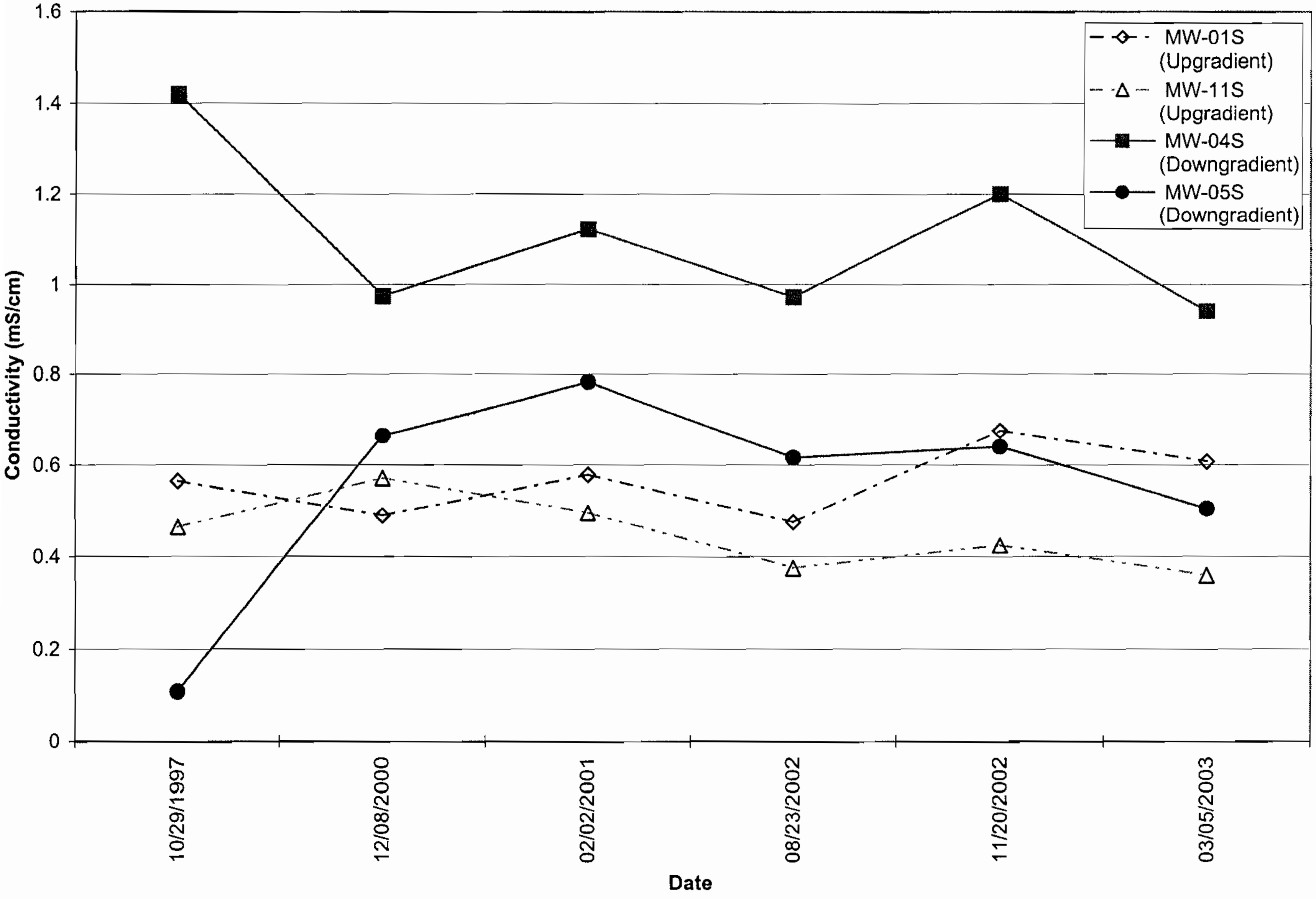
QUALIFIERS
B: Compound was found in the method blank as well as the sample
U: Compound was analyzed for but not detected at the detection limit shown.
J: Compound was found at a concentration below the detection limit, value estimated
E: Concentration exceeds instrument calibration range; value estimated.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

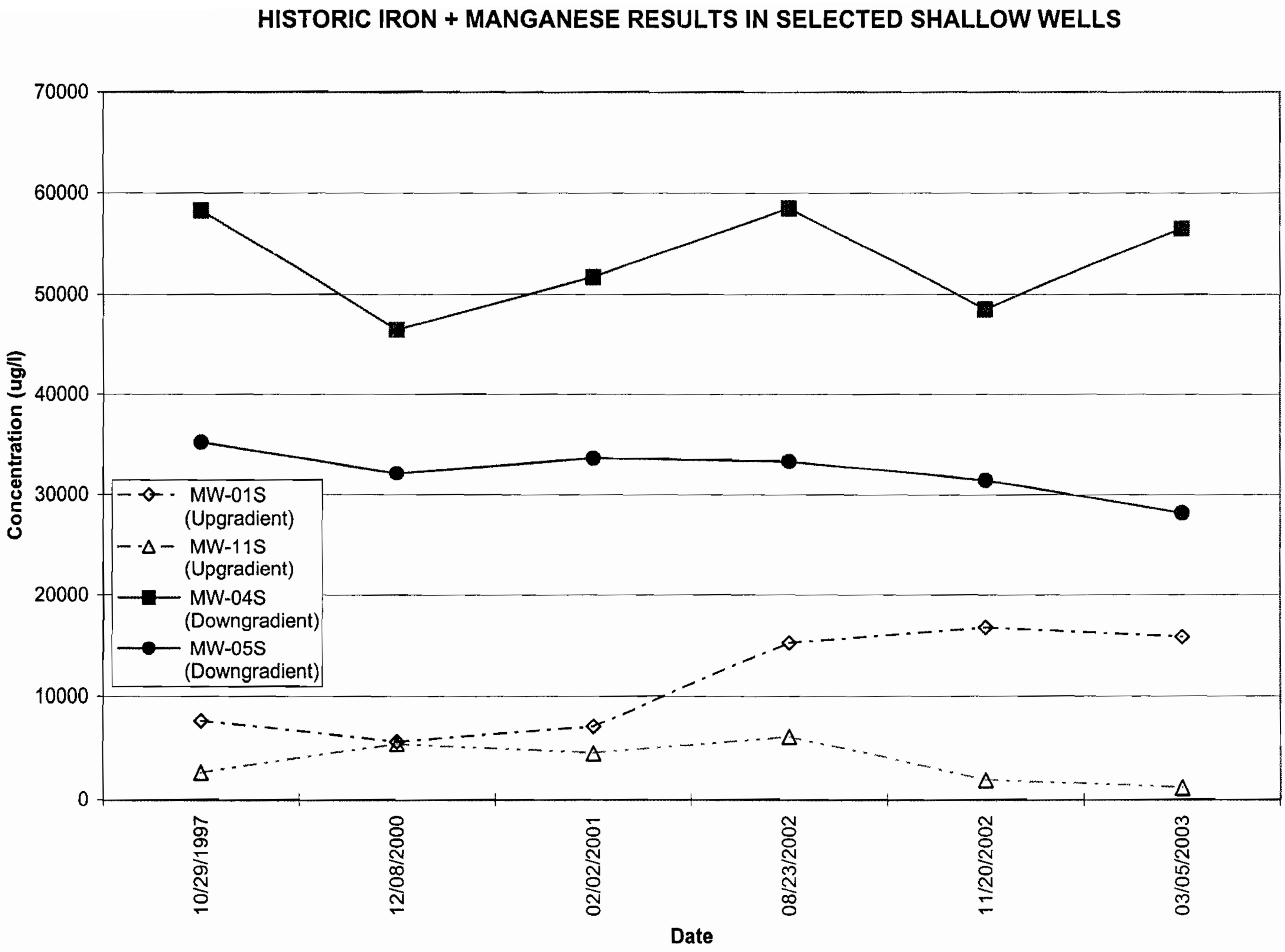
APPENDIX A-4

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

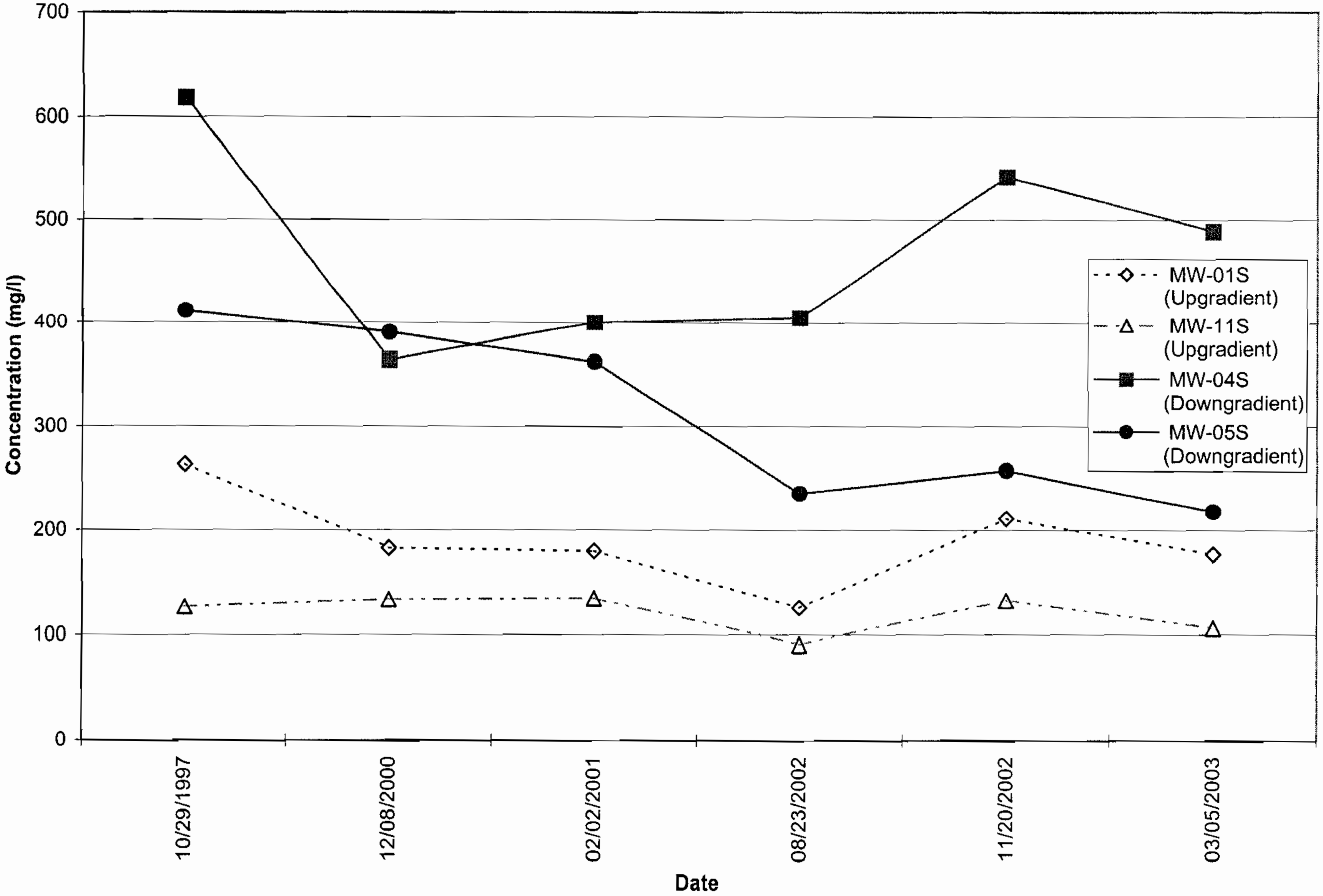


\public\JMilligan\sonia 1st qtr 03\GraphsCOND



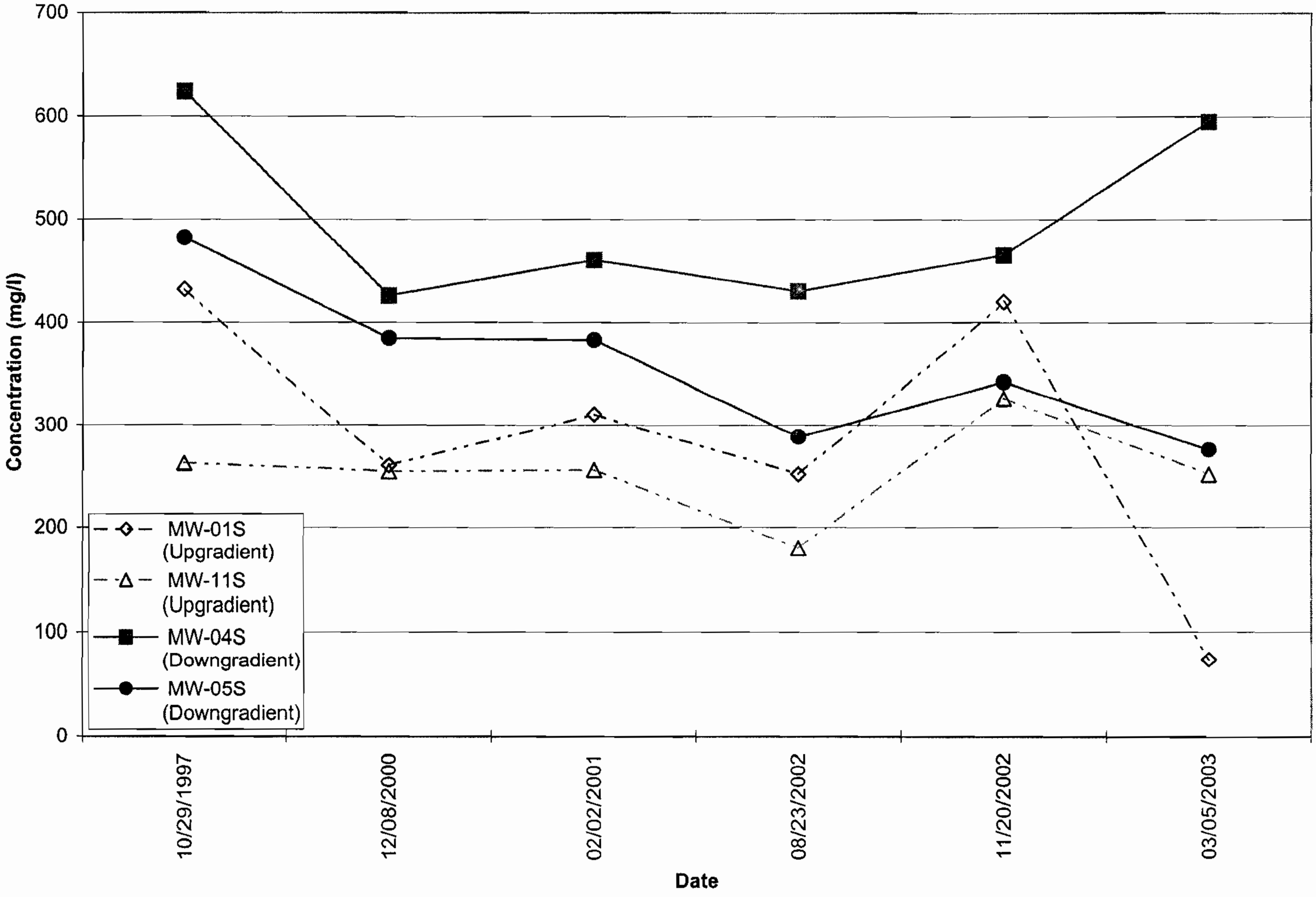
\public\JMilligan\sonia 1st qtr 03\GraphsFE+MN

HISTORIC ALKALINITY RESULTS IN SELECTED SHALLOW WELLS



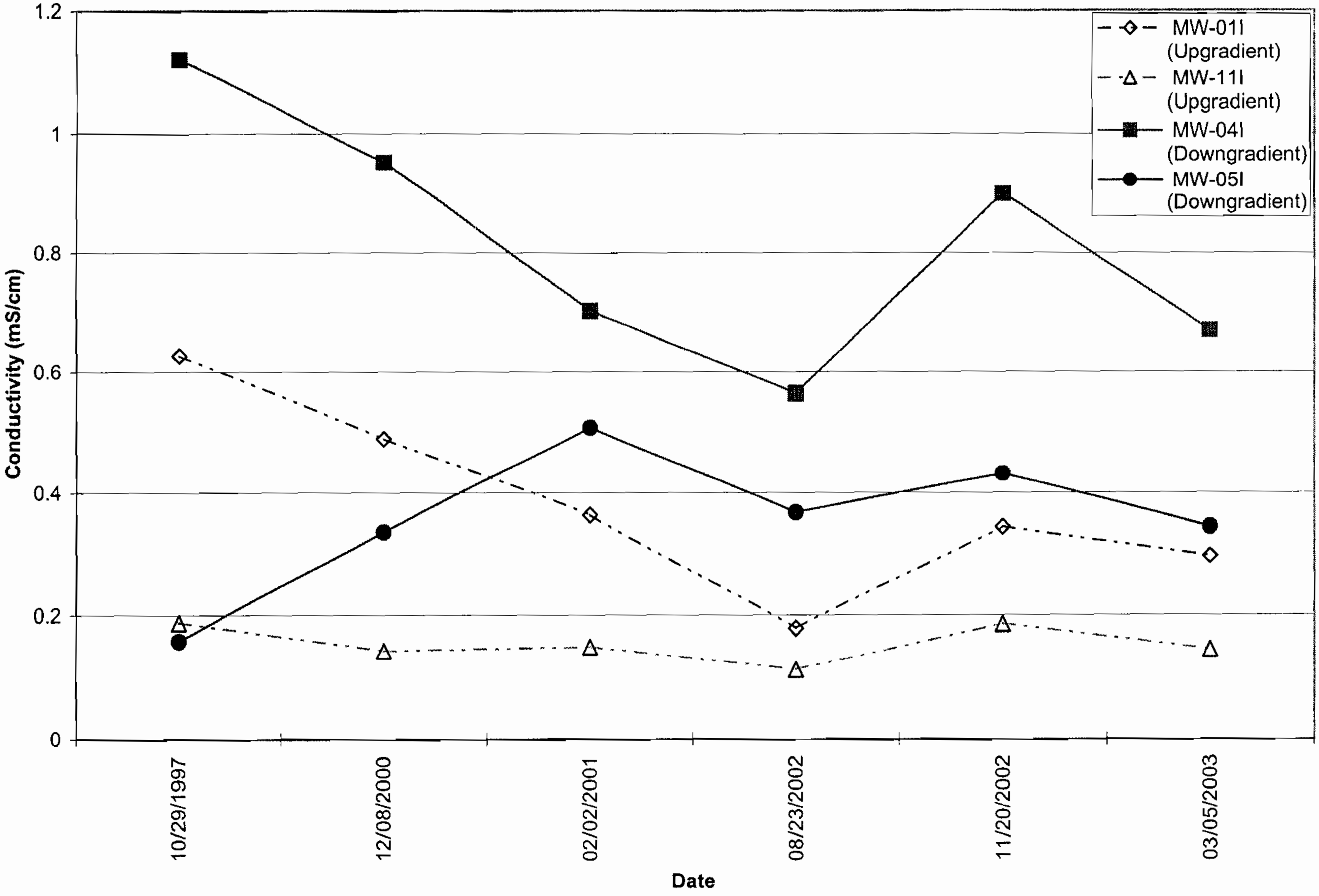
\public\JMilligan\sonia 1st qtr 03\GraphsAlkalinity Chart 1

HISTORIC TOTAL DISSOLVED SOLID RESULTS IN SELECTED SHALLOW WELLS



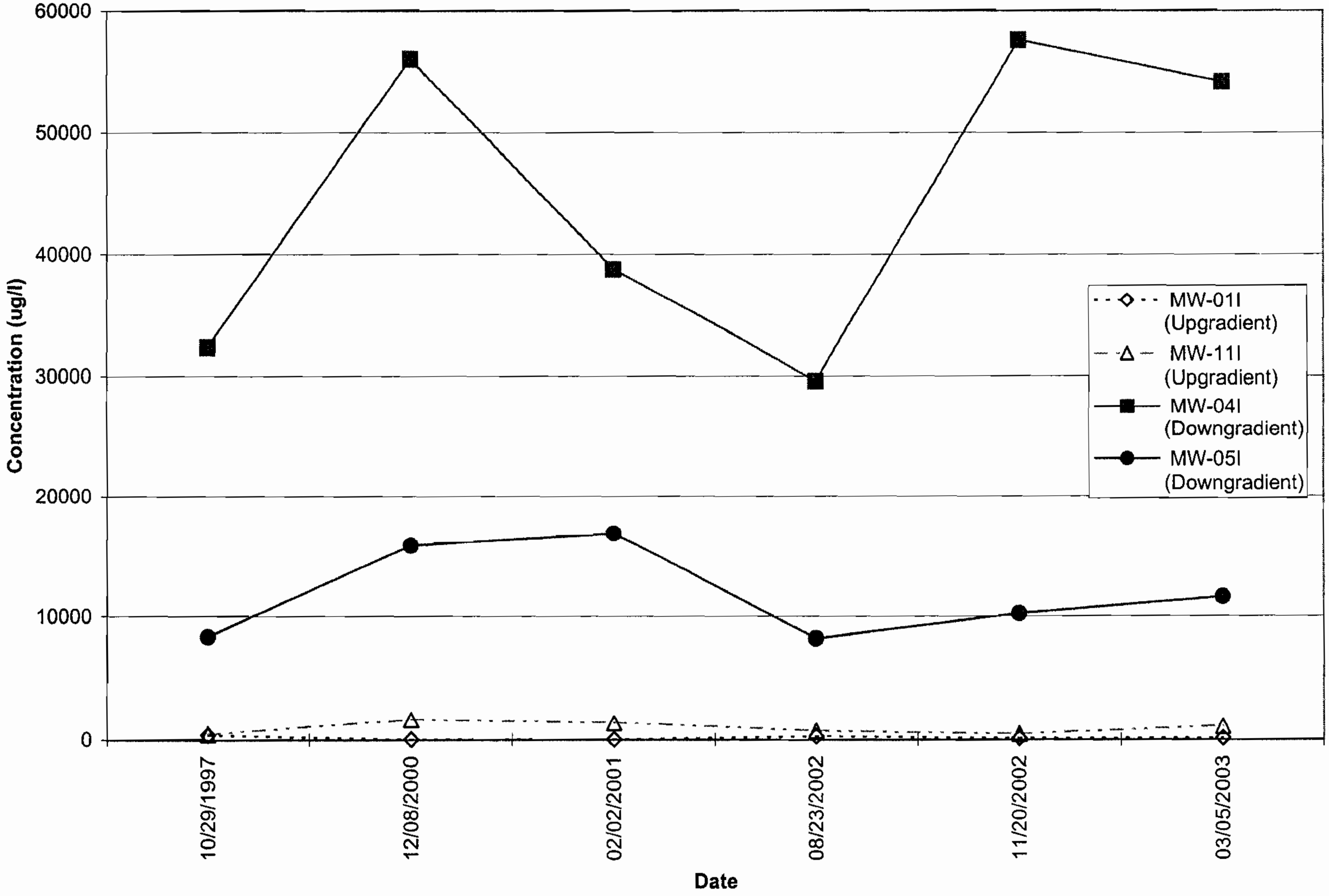
\public\JMilligan\sonia 1st qtr 03\GraphsTDS Chart 1

HISTORIC SPECIFIC CONDUCTIVITY RESULTS IN SELECTED INTERMEDIATE WELLS



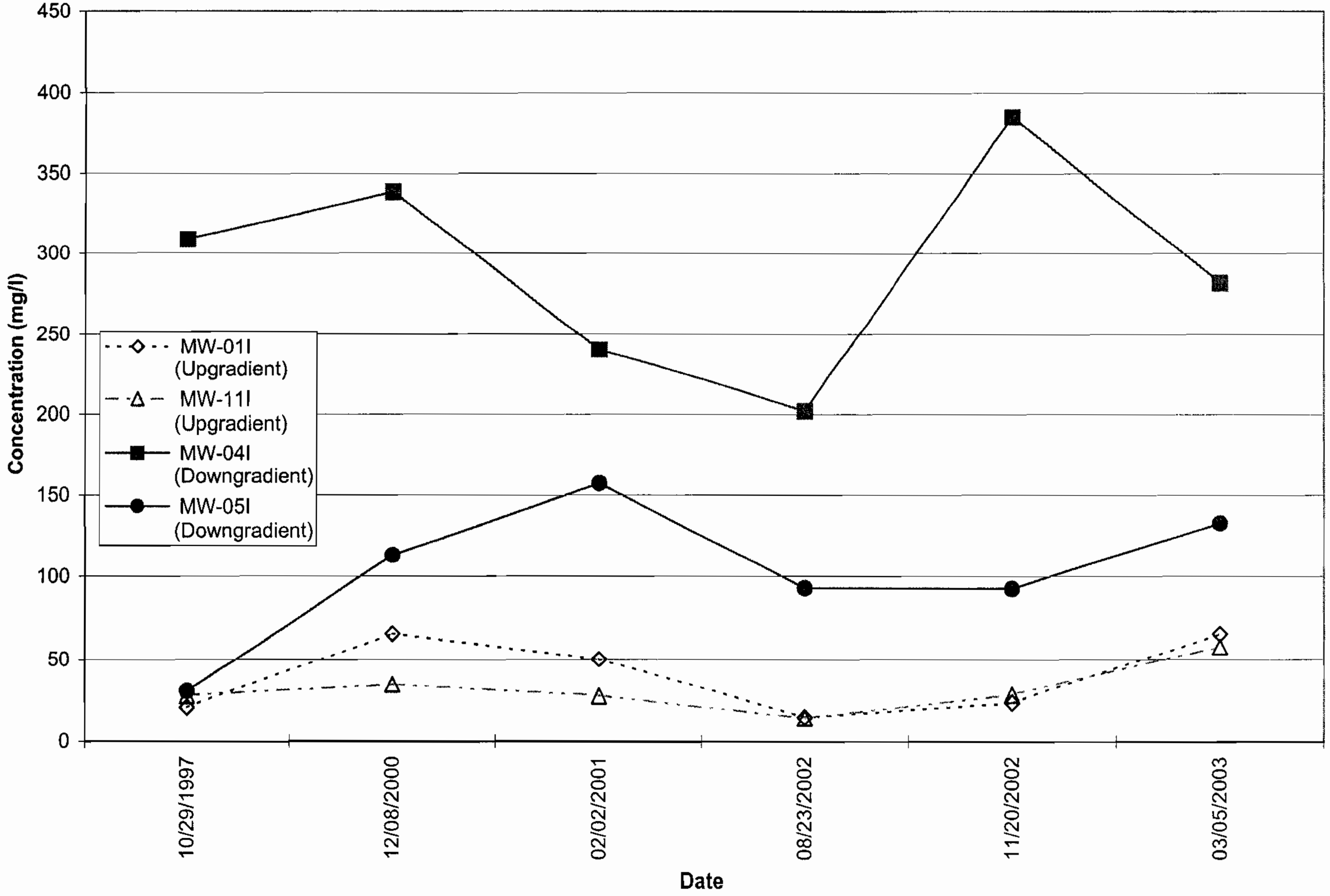
\public\JMilligan\sonia 1st qtr 03\GraphsICOND Chart 1

HISTORIC IRON + MANGANESE RESULTS IN SELECTED INTERMEDIATE WELLS



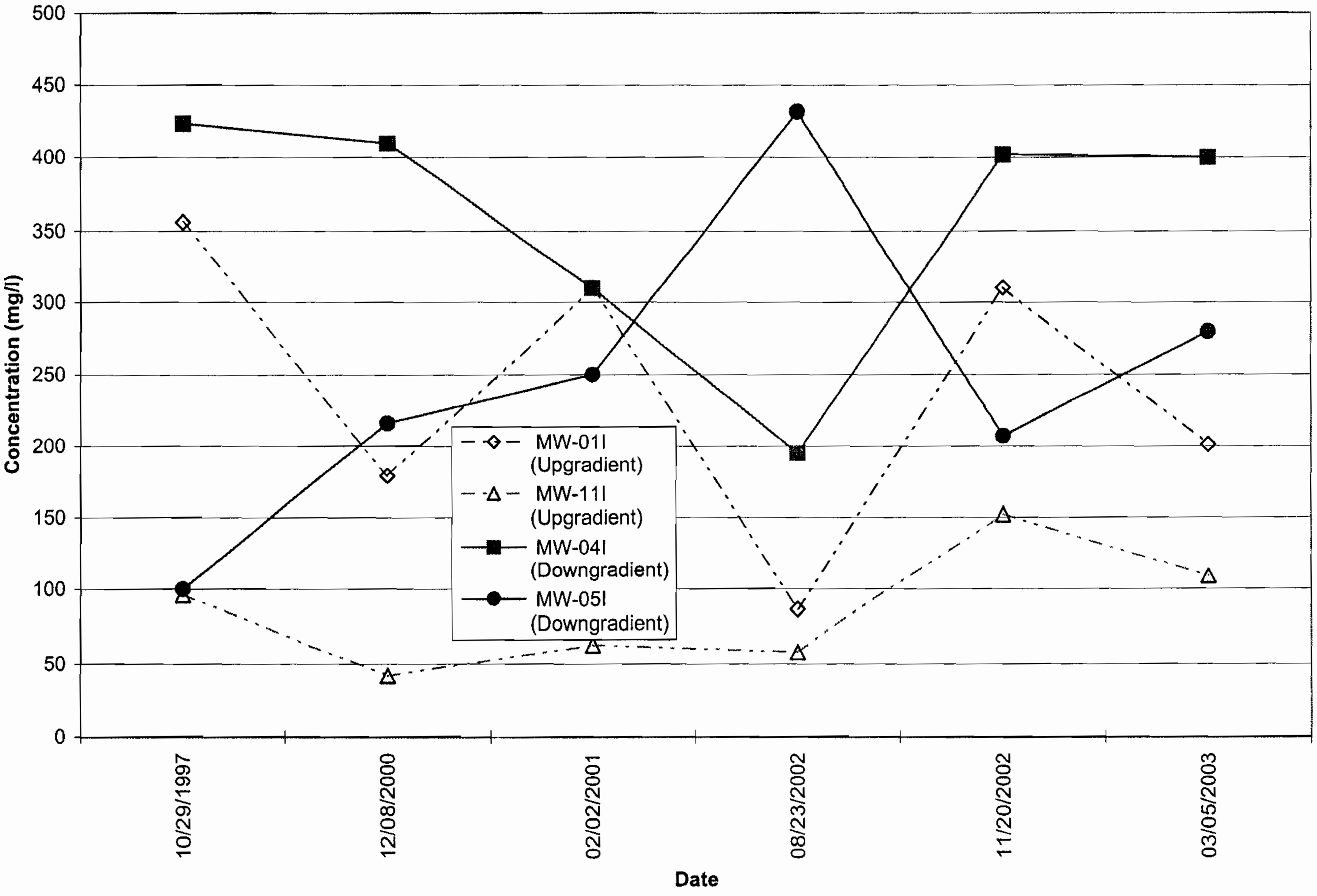
\public\JMilligan\sonia 1st qtr 03\GraphsiFE+MN Chart 1

HISTORIC ALKALINITY RESULTS IN SELECTED INTERMEDIATE WELLS



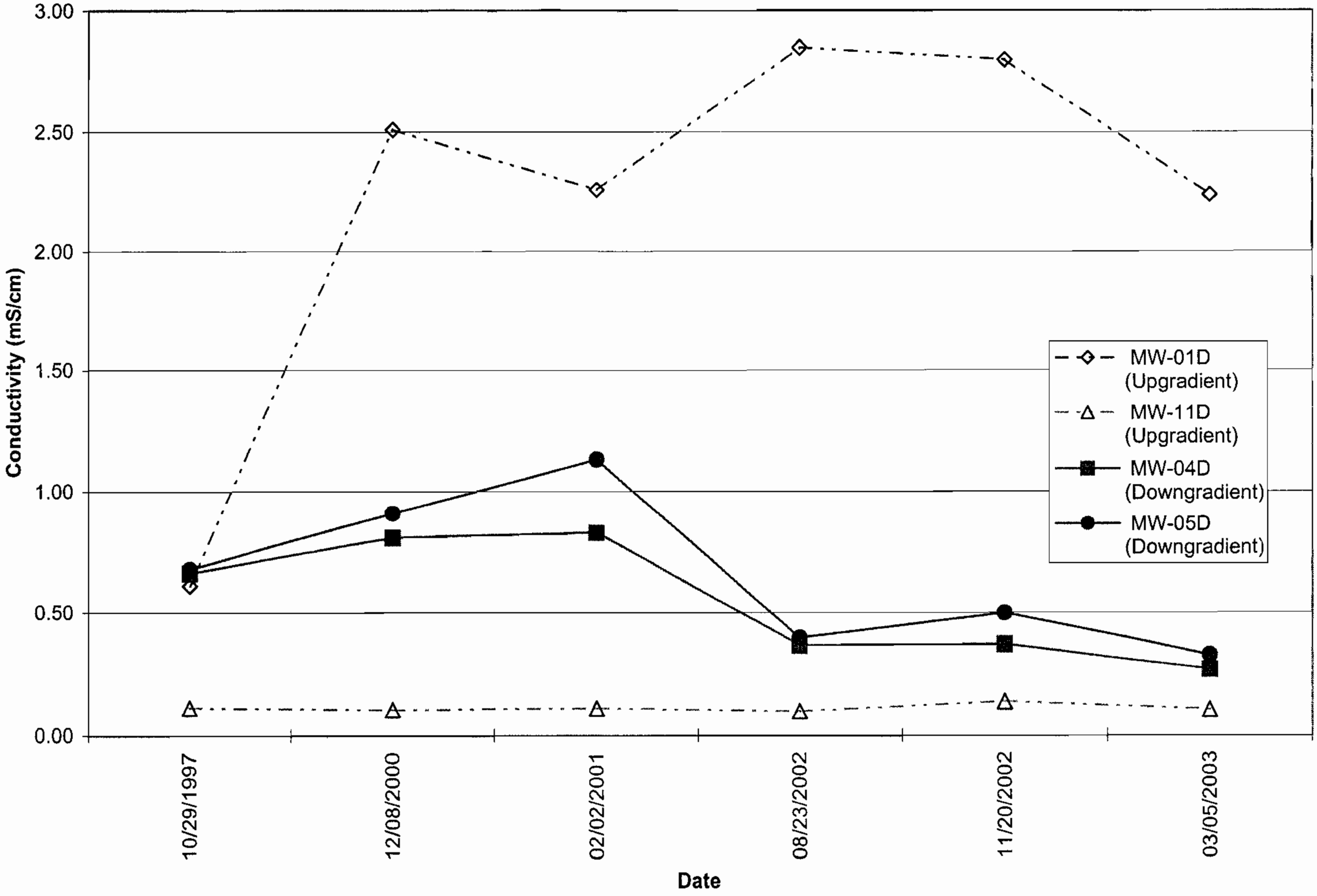
\public\JMilligan\sonia 1st qtr 03\GraphsiALKALINITY Chart 1

HISTORIC TOTAL DISSOLVED SOLID RESULTS IN SELECTED INTERMEDIATE WELLS



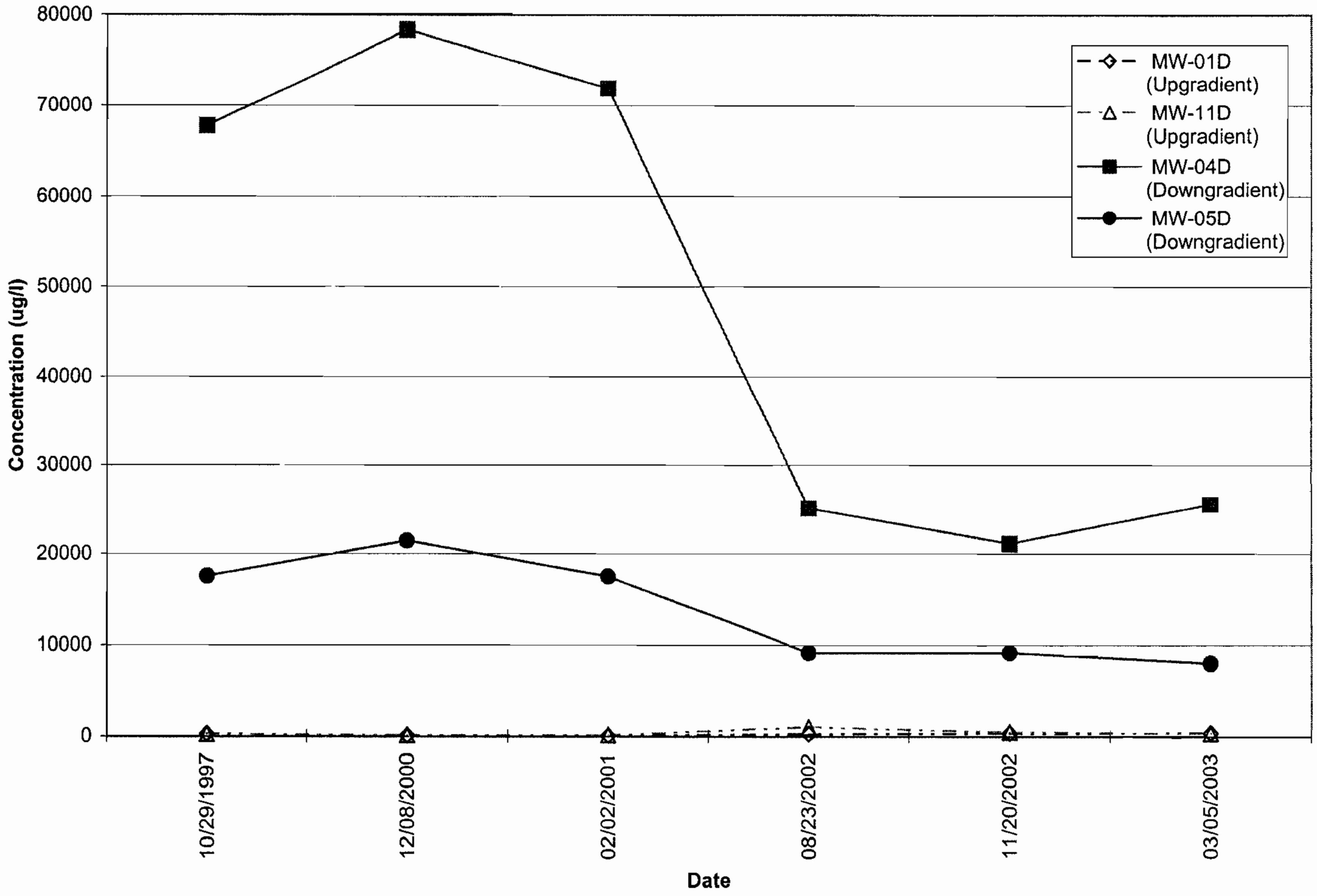
\public\JMilligan\sonia 1st qtr 03\GraphsiTDS Chart 1

HISTORIC SPECIFIC CONDUCTIVITY RESULTS IN SELECTED DEEP WELLS



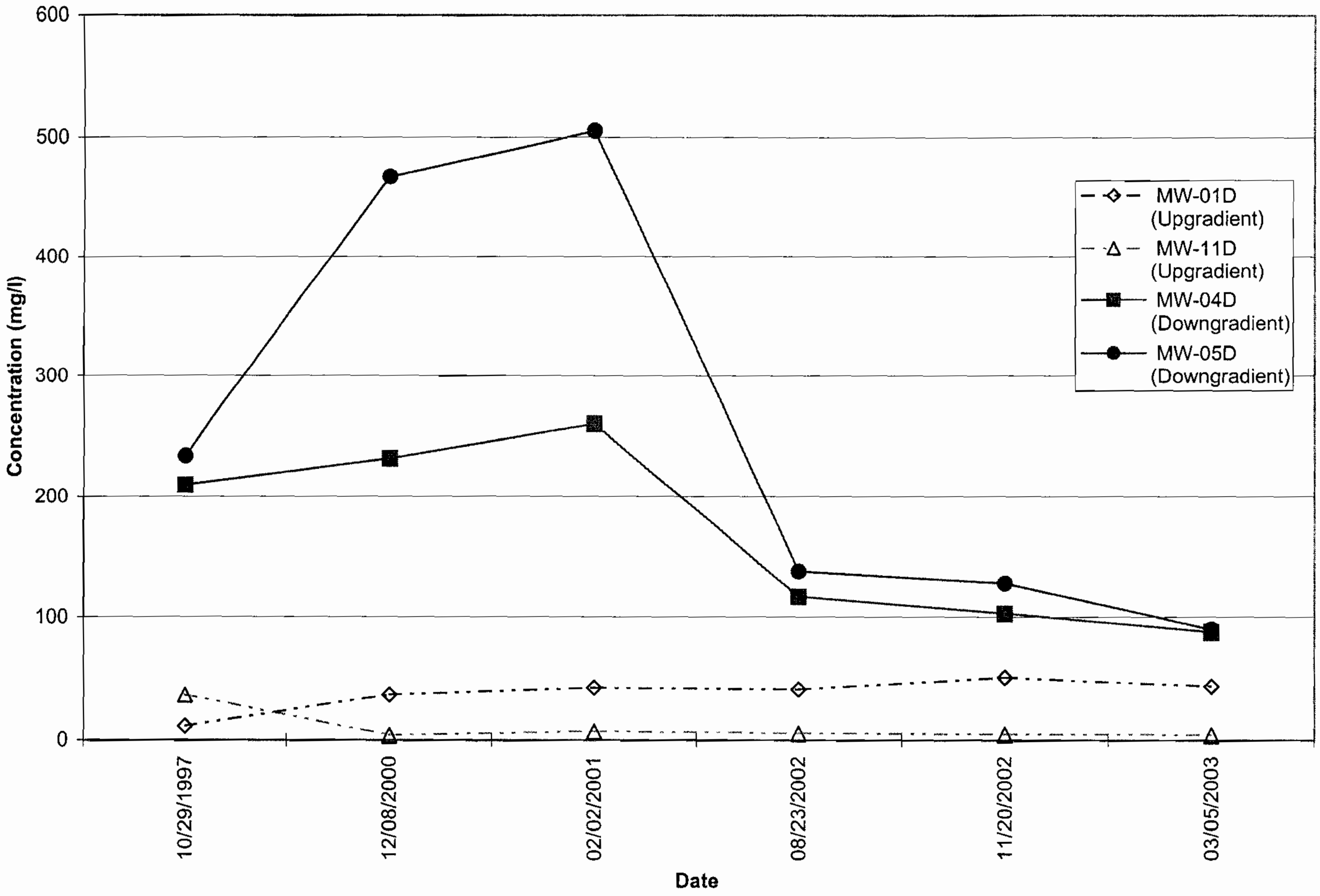
\public\JMilligan\sonia 1st qtr 03\GraphsdCOND Chart 1

HISTORIC IRON + MANGANESE RESULTS IN SELECTED DEEP WELLS



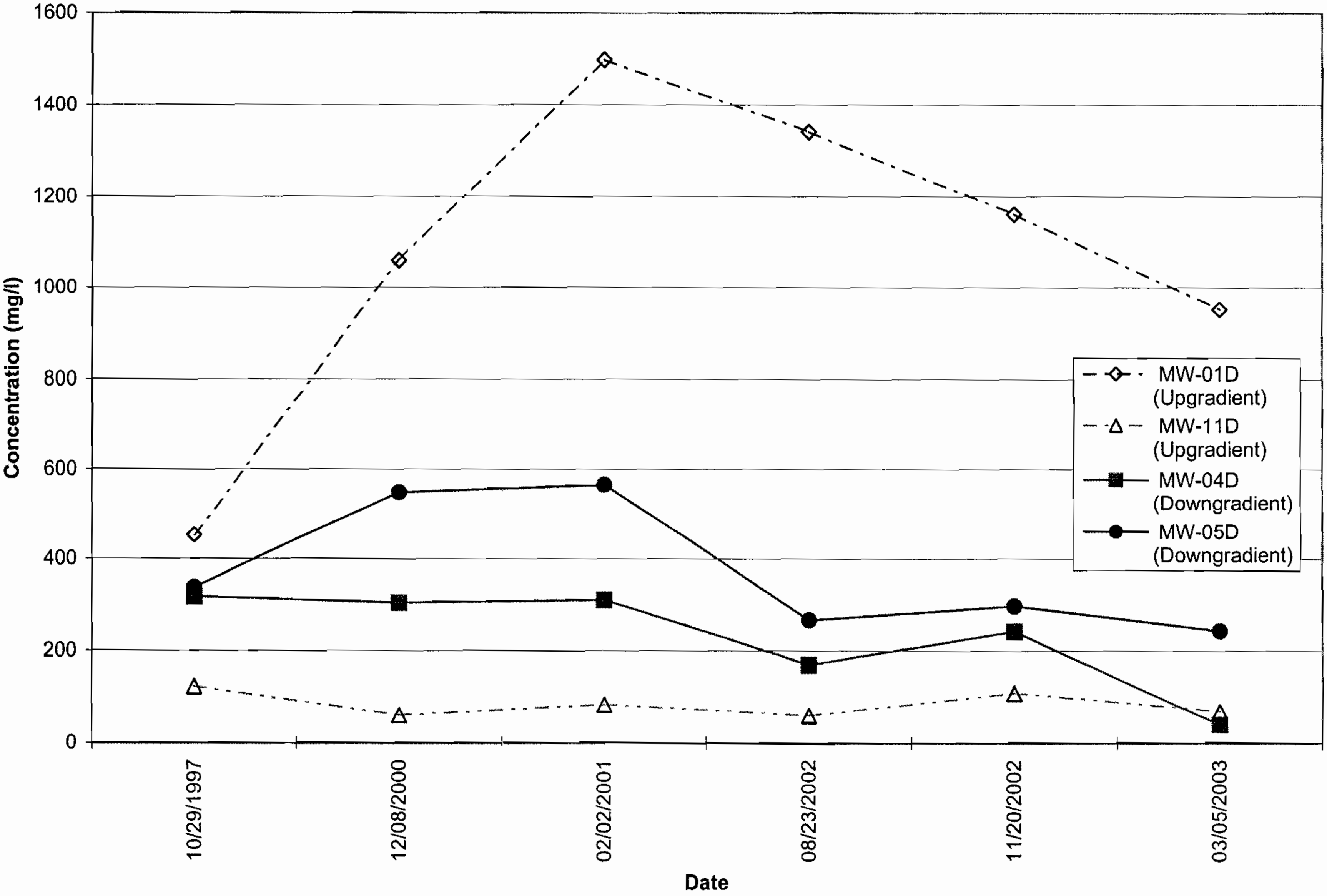
\public\JMilligan\sonia 1st qtr 03\GraphsdFE+MN Chart 1

HISTORIC ALKALINITY RESULTS IN SELECTED DEEP WELLS



\public\JMilligan\sonia 1st qtr 03\GraphsdAlkalinity Chart 1

HISTORIC TOTAL DISSOLVED SOLID RESULTS IN SELECTED DEEP WELLS



\public\JMilligan\sonia 1st qtr 03\GraphsdTDS Chart 1

Appendix B

APPENDIX B-1

FIELD FORMS – FIELD OBSERVATION LOGS

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/5/03

SAMPLE ID: 2023-MW-01S(25)
WELL ID: MW-01S
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 0715 / 0715
Time Off-site: 0805 / 0805

Depth of well (from top of casing) 28.88 Ft
Initial static water level (from top of casing) 16.60
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: 12.28 ft. of water x 0.65 = 7.98 gallons

volume of water removed: 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)
Initial	6.16	13.43	0.624	44.9	3.77	151
15	6.32	13.64	0.615	17.6	1.87	111
30	6.44	13.69	0.613	18.9	1.01	60
45	6.47	13.74	0.610	18.3	0.68	17
60	6.63	13.74	0.609	14.0	0.63	16
75	6.58	13.72	0.608	16.8	0.62	14
Sample	6.82	12.71	0.607	9.0	1.57	24

Sampling

Time of Sample Collection: 0800

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: 40° Rain overcast No wind
Sample description: Clear, Colorless, No odor
Free Product? yes ______ no X describe ______
Sheen? yes ______ no X describe ______
Odor? yes ______ no X describe ______

Comments:
Flow Rate = 15 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/5/03

SAMPLE ID: 2023-MW-01I (08)
WELL ID: MW-01I
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 0810 0810
Time Off-site: 0850 0850

Depth of well (from top of casing) 78.63 ft Time:
Initial static water level (from top of casing) 15.92 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: 62.71 ft. of water x 0.65 = 40.76 gallons

volume of water removed: 210 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	6.89	10.26	0.608	8.4	2.57	-21
30	6.88	12.64	0.569	7.6	1.91	-10
75	6.75	13.99	0.362	2.7	0.84	17
105	6.66	14.05	0.330	2.4	0.65	27
165	6.57	14.11	0.309	2.2	0.55	45
180	6.55	14.12	0.309	2.2	0.55	47
195	6.53	14.12	0.306	1.8	0.54	48
212	6.52	14.13	0.306	1.6	0.53	50
Sample Sampling	6.48	13.06	0.258	4.4	1.42	79

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, T Total Hardness, TOC

Observations
Weather/Temperature: 40° Rain overcast, No wind
Sample description: Clear, Colorless, No odor
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
Flow Rate = 1.5 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/5/03

SAMPLE ID: 2023-MW-01D(60)
WELL ID: MW-01D
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 0905
0905

Time Off-site: 0950
0950

Depth of well (from top of casing)........ 105.86 Ft
Initial static water level (from top of casing)........ 15.08 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: 90.78 ft. of water x 0.65 = 59.01 gallons

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

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	6.40	10.08	0.133	112.6	11.40	193
30	6.24	13.89	0.538	31.0	6.09	193
90	6.17	13.37	2.85	0.9	1.60	179
150	6.19	13.33	2.94	6.1	0.85	169
210	6.19	13.31	2.96	9.6	0.71	165
240	6.18	13.33	2.93	9.3	0.70	163
270	6.18	13.32	2.96	8.7	0.69	163
300	6.18	13.33	2.96	8.5	0.71	163
Sampling Sample	6.46	9.67	2.24	37.8	4.72	174

Time of Sample Collection: 0940

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, TK. Total Hardness, TOC

Observations
Weather/Temperature: 40° overcast. No wind
Sample description: Slightly Brown, Low turb, no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 15GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/7/03

SAMPLE ID: 2023-MW-02I (72)
WELL ID: MW-02I
SAMPLERS: James Milligan / Ryan Fowler

	Time On-site:	Time Off-site:
James Milligan	0700	0810
Ryan Fowler	0700	0810

Depth of well (from top of casing)........ 72.13 Ft Time: ____
Initial static water level (from top of casing)........ 30.40 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: 41.73 ft. of water x 0.65 = 27.12 gallons

volume of water removed: 150 gal.
>3 volumes: yes X no ____
purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.46	16.16	0.104	36.5	1.86	427
50	5.15	15.00	0.135	0.4	0.49	415
100	5.06	14.96	0.135	0.4	0.41	389
125	5.06	14.96	0.136	0.4	0.39	389
150	5.04	14.97	0.135	0.6	0.40	386
Sample	5.08	10.61	0.142	5.9	2.27	367

Sampling

Time of Sample Collection: 0800

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, Total Hardness, TOC

Observations

Weather/Temperature: 30° Snow, giving way to sunshine
Sample description: Clear, Colorless, No odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Gallons Per minute 5 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/5/03

SAMPLE ID: 2023-MW-02D(116)
WELL ID: MW-02D
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 1030
1030

Time Off-site: 1120
1120

Depth of well (from top of casing)........ 116 Ft Time:
Initial static water level (from top of casing)........ 30.55 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: 85.45 ft. of water x 0.65 = 55.54 gallons

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

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	6.50	18.25	0.094	5.9	8.91	322
30	5.55	13.94	0.092	7.3	8.39	327
90	5.57	13.68	0.092	3.9	7.28	326
180	5.45	13.70	0.090	8.3	7.41	343
240	5.44	13.70	0.088	11.5	7.45	355
270	5.47	13.71	0.088	10.3	7.46	336
300	5.58	13.69	0.088	9.6	7.46	363
Sample	5.81	14.63	0.092	19.6	7.57	360

Sampling
Time of Sample Collection: 1105

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, TK
Total Hardness, TOC

Observations
Weather/Temperature: 40° overcast, No wind
Sample description: Clear, Colorless, No Odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate :15GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/7/03

SAMPLE ID: 2023-MW-035 (32)
WELL ID: MW-035
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 1210
1210

Time Off-site: 1230
1230

Depth of well (from top of casing).. 31.60 Ft Time: ______
Initial static water level (from top of casing)......................... 22.81 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: 8.79 ft. of water x 0.65 = 5.71 gallons

volume of water removed: 45 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	5.47	20.35	0.773	4.8	3.60	117
15	5.42	20.36	0.773	3.0	2.10	116
30	5.42	20.35	0.771	3.1	2.09	115
45	5.43	20.35	0.771	3.2	2.08	114
Sample	5.41	20.19	0.773	2.8	5.35	116

Sampling

Time of Sample Collection: 1225

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, T
Total Hardness, TOC

Observations

Weather/Temperature: 30° Sunny
Sample description: Clr, Colorless, Sulfer odor
Free Product? yes ___ no x describe ______
Sheen? yes ___ no X describe ______
Odor? yes X no ___ describe Sulfer

Comments:
Flow Rate = 15GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/6/03

SAMPLE ID: 2023-MW-04S (34)
WELL ID: MW-04S
SAMPLERS: James Milligan / Ryan Fowler

	Time On-site:	Time Off-site:
James Milligan	0840	0910
Ryan Fowler	0840	0910

Depth of well (from top of casing)........................ 33.70 ft Time: ______
Initial static water level (from top of casing)........................ 24.75 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: 8.95 ft. of water x 0.65 = 5.81 gallons

volume of water removed: 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)
Initial	6.45	15.92	0.943	18.1	3.70	-6
15	6.41	15.96	0.942	14.4	2.41	-8
30	6.42	16.00	0.939	5.3	1.28	-13
45	6.42	16.00	0.938	4.6	1.10	-14
60	6.43	16.01	0.937	4.2	1.09	-15
75	6.43	16.01	0.935	3.8	1.02	-16
Sample	6.59	15.31	0.941	2.8	2.32	-20

Sampling
Time of Sample Collection: 0900

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, TK[illegible] Total Hardness, TOC

Observations
Weather/Temperature: 30° Snow
Sample description: Clear, Colorless, No odor
Free Product? yes ____ no X describe ______
Sheen? yes ____ no X describe ______
Odor? yes ____ no X describe ______

Comments:
Flow Rate = 15GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/6/03

SAMPLE ID: 2023-MW-04I (01)
WELL ID: MW-04I
SAMPLERS: James Milligan / Ryan Fowler

	Time On-site:	Time Off-site:
James Milligan	0700	0820
Ryan Fowler	0700	0820

Depth of well (from top of casing)........ 71.30 Ft Time: ____
Initial static water level (from top of casing)........ 27.12 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: 48.18 ft. of water x 0.65 = 31.31 gallons

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

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.78	14.23	0.668	48.7	9.67	139
30	5.79	14.20	0.667	2.8	1.54	123
90	6.28	14.34	0.664	7.5	1.53	10
120	6.47	14.37	0.663	6.7	0.52	-27
150	6.48	14.31	0.662	7.1	0.49	-30
180	6.50	14.35	0.662	7.0	0.48	-31
Sample	6.71	10.37	0.670	22.6	2.86	-38

Sampling

Time of Sample Collection: 0800

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, Total Hardness, TOC

Observations

Weather/Temperature: 30° overcast, Snow
Sample description: Clear, Colorless, Sulfuric odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes X no ____ describe Sulfuric

Comments:
Flow Rate = 15GPM MS/MSD Location

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/7/03

SAMPLE ID: 2023-MW-04D (114)
WELL ID: MW-04D
SAMPLERS: James Milligan, Ryan Fowler

Time On-site: 0830, 0830
Time Off-site: 0930, 0930

Depth of well (from top of casing)........ 114.10 Ft Time: ____
Initial static water level (from top of casing)........ 22.76 Ft Time: ____

Purging Method

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

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 91.34 ft. of water x 0.65 = 59.37 gallons

volume of water removed: 330 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	5.73	14.44	0.231	33.0	2.54	102
30	6.14	14.01	0.250	10.9	1.72	31
120	6.72	13.60	0.269	0.7	0.50	-57
210	6.84	13.66	0.268	1.4	0.40	-80
270	6.86	13.66	0.269	2.6	0.40	-84
300	6.88	13.67	0.266	2.6	0.38	-86
330	6.88	13.68	0.272	2.4	0.39	-87
Sample	7.07	11.56	0.269	16.1	2.47	-80

Sampling

Time of Sample Collection: 0905

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, TK
Total Hardness, TOC

Observations

Weather/Temperature: 30° Sunny
Sample description: Clear, Colorless, No odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 15 gal/min Blind Duplicate taken @ MW-04D

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/7/03

SAMPLE ID: 2023-MW-05S(34)
WELL ID: MW-05S
SAMPLERS: James Milligan Time On-site: 1330 Time Off-site: 1350
Ryan Fowler 1330 1350

Depth of well (from top of casing).. 34 Time: 1330
Initial static water level (from top of casing)......................... 23.36 Time: 1330

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: 10.64 ft. of water x 0.65 = 6.91 gallons

volume of water removed: 60 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	6.71	18.81	0.499	1.3	1.30	-22
15	6.49	19.49	0.505	2.3	0.85	-19
30	6.44	19.50	0.508	3.5	0.73	-18
45	6.45	19.50	0.507	3.4	0.72	-19
60	6.46	19.50	0.507	3.5	0.71	-18
Sample	6.48	19.48	0.506	3.9	0.78	-17

Sampling

Time of Sample Collection: 1350

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,
Total Hardness, TOC

Observations

Weather/Temperature: Sunny 30's
Sample description: Clear Colorless No odor
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
Flow Rate = 5 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/7/03

SAMPLE ID: 2023-MW-05I(70)
WELL ID: MW-05I
SAMPLERS: James Milligan
Ryan Fowler

	Time On-site:	Time Off-site:
James Milligan	1230	1300
Ryan Fowler	1230	1300

Depth of well (from top of casing).. 70 Time: 1230
Initial static water level (from top of casing)........................ 23.33 Time: 1230

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: 46.67 ft. of water x 0.65 = 30.33 gallons

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

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	6.40	15.49	0.329	9.6	1.24	-34
30	6.62	15.52	0.333	5.8	0.72	-31
60	6.85	15.26	0.342	2.3	0.43	-31
90	6.87	15.50	0.344	0.4	0.40	-39
120	6.87	15.54	0.344	0.8	0.39	-34
Sample	6.88	15.30	0.345	3.2	1.30	-32

Sampling
Time of Sample Collection: 1300

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, TK.
Total Hardness, TOC

Observations
Weather/Temperature: Sunny 30's
Sample description: Clear colorless No odor
Free Product? yes ___ no X describe ______
Sheen? yes ___ no X describe ______
Odor? yes ___ no X describe ______

Comments:
Flow Rate = 5 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/7/03

SAMPLE ID: 2023-MW-05D(116)
WELL ID: MW-05D
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 1115
1115

Time Off-site: 1140
1140

Depth of well (from top of casing)........ 116 Time: 1115
Initial static water level (from top of casing)........ 23.80 Time: 1115

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: 92.20 ft. of water x 0.65 = 59.93 gallons

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

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	6.41	16.73	0.282	0.4	1.98	99
120	6.51	13.80	0.302	0.3	0.55	85
240	6.41	13.71	0.323	0.3	0.43	90
270	6.40	13.68	0.326	0.8	0.41	91
300	6.40	13.69	0.327	0.6	0.40	90
Sample	6.41	13.70	0.326	0.3	1.32	91

Sampling

Time of Sample Collection: 1140

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, Total Hardness, TOC

Observations

Weather/Temperature: 30's Sunny
Sample description: Clear Colorless No odor
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
15 GPM = Flow Rate

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/5/03

SAMPLE ID: 2023-MW-06S(37)
WELL ID: MW-06S
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 1240 / 1240
Time Off-site: 1315 / 1315

Depth of well (from top of casing) 37.60 Ft Time:
Initial static water level (from top of casing) 27.66 Ft Time:

Purging Method

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

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 9.94 ft. of water x 0.65 = 6.461 gallons

volume of water removed: 105 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	6.30	18.49	0.377	27.3	3.2	0
15	6.34	18.50	0.374	8.3	2.16	-4
60	6.34	18.54	0.370	2.2	1.18	-11
75	6.39	18.56	0.368	1.2	0.72	-18
90	6.38	18.57	0.367	1.3	0.73	-19
105	6.40	18.57	0.365	1.6	0.70	-20
Sample	6.51	15.88	0.355	31.3	1.57	-40

Sampling

Time of Sample Collection: 1300

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, TK Total Hardness, TOC

Observations

Weather/Temperature: 40° overcast, No wind
Sample description: Clear, Colorless, Sulfuric odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes X no ____ describe Sulfuric

Comments:
Flow Rate = 1.5 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/5/03

SAMPLE ID: 2023-MW-06I (76)
WELL ID: MW-06I
SAMPLERS: James Milligan Time On-site: 1330 Time Off-site: 1430
Ryan Fowler 1330 1430

Depth of well (from top of casing)........ 76.40 ft Time:
Initial static water level (from top of casing)........ 27.85 ft Time:

Purging Method

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

Well Volume Calculation:

2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 48.55 ft. of water x 0.65 = 31.55 gallons

volume of water removed: 210 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	6.41	16.31	0.153	1.7	5.75	25
30	6.33	15.19	0.165	11.1	1.65	24
90	6.34	15.15	0.168	5.6	0.59	16
150	6.36	15.17	0.167	3.7	0.42	14
180	6.35	15.17	0.168	2.6	0.41	14
210	6.35	15.16	0.164	1.8	0.41	11
Sample	6.31	13.88	0.165	11.6	2.89	20

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

Observations

Weather/Temperature: 40° Overcast Drizzle
Sample description: Clear, Colorless, No odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 15GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/5/03

SAMPLE ID: 2023-MW-06D (117)
WELL ID: MW-06D
SAMPLERS: James Milligan
Ryan Fowler

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

Depth of well (from top of casing)........ 117.10 ft Time: ____
Initial static water level (from top of casing)........ 28.21 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: 88.8' ft. of water x 0.65 = 57.72 gallons

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

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	6.02	15.76	0.152	78.1	2.41	115
30	5.99	14.64	0.151	57.3	1.18	105
90	6.21	14.04	0.156	7.7	0.49	41
180	6.21	14.03	0.154	6.3	0.43	33
240	6.25	14.02	0.153	5.6	0.41	29
270	6.23	14.02	0.152	6.0	0.41	30
300	6.22	14.02	0.152	6.7	0.41	29
Sample	6.41	13.59	0.151	6.5	0.76	21

Sampling
Time of Sample Collection: 1510

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, TK
Total Hardness, TOC

Observations
Weather/Temperature: 40° overcast
Sample description: Clear, Colorless, No odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 1.56 gpm

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/5/03

SAMPLE ID: 2023-MW-07I (74)
WELL ID: MW-07I
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 1145
1145

Time Off-site: 1226
1226

Depth of well (from top of casing).. 74.23 Ft Time: ____
Initial static water level (from top of casing)........................ 26.16 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: 48.07 ft. of water x 0.65 = 31.24 gallons

volume of water removed:
180 gal.

>3 volumes: yes X no ____ purged dry? yes ____ no X

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.37	15.28	0.099	17.9	3.16	402
30	5.37	14.84	0.114	0.1	3.71	408
90	5.45	14.80	0.113	1.1	0.66	385
120	5.49	14.80	0.113	2.6	0.56	352
150	5.51	14.79	0.113	0.2	0.52	315
180	5.51	14.78	0.112	1.1	0.51	308
Sample	5.97	14.78	0.106	11.8	4.49	270

Sampling
Time of Sample Collection: 1215

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, Total Hardness, TOC

Observations
Weather/Temperature: 40° overcast
Sample description: Clear, Colorless, no odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 15 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonik Road Landfill DATE 3/6/03

SAMPLE ID: 2023-MW-11S (19)
WELL ID: MW-11S
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 1130
1130

Time Off-site: 1155
1130

Depth of well (from top of casing)........ 19.60 ft Time:
Initial static water level (from top of casing)........ 8.96 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: 10.64 ft. of water x 0.65 = 6.916 gallons

volume of water removed: 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)
Initial	6.08	10.37	0.343	60.6	3.04	345
15	6.15	10.39	0.344	37.6	2.20	344
30	6.21	10.39	0.346	21.1	1.71	342
45	6.25	10.38	0.348	13.4	1.40	347
60	6.28	10.37	0.349	10.2	1.35	378
75	6.31	10.37	0.349	8.3	1.31	338
Sample	6.64	805	0.359	28.1	2.64	319

Sampling
Time of Sample Collection: 1150

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, TK
Total Hardness, TOC

Observations
Weather/Temperature: 30° Snow
Sample description:
Free Product? yes ___ no X describe
Sheen? yes ___ no X describe
Odor? yes ___ no X describe

Comments: Flow Rate 15GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/6/03

SAMPLE ID: 2023-MW-11I (71)
WELL ID: MW-11I
SAMPLERS: James Milligan Time On-site: 1200 Time Off-site: 1235
Ryan Fowler 1200 1235

Depth of well (from top of casing)........ 71.30 Ft Time:
Initial static water level (from top of casing)........ 9.49 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: 61.81 ft. of water x 0.65 = 40.17 gallons

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

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	6.21	6.21	0.127	1.8	3.09	333
30	6.04	6.04	0.136	1.4	1.44	336
90	6.01	6.01	0.136	2.0	0.59	325
120	6.01	6.01	0.138	1.2	0.51	313
150	6.03	6.03	0.140	1.4	0.50	307
180	6.00	6.00	0.138	0.7	0.49	293
Sample	6.40	6.40	0.146	6.0	2.08	284

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, Total Hardness, TOC

Observations
Weather/Temperature: 30° Snow
Sample description: Clear, Colorless, No Odor
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
Flow Rate = 15GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/6/03

SAMPLE ID: 2023-MW-11D (94')
WELL ID: MW-11 D
SAMPLERS: James Milligan
Ryan Fowler

	Time On-site:	Time Off-site:
James Milligan	12 40	1335
Ryan Fowler	12 40	1335

Depth of well (from top of casing).. 94.20 Ft Time: ______
Initial static water level (from top of casing)........................ 9.49 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: 84.71 ft. of water x 0.65 = 55.06 gallons

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

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.24	12.32	0.109	2.4	6.22	333
30	4.88	13.61	0.110	6.2	5.92	359
90	4.88	13.17	0.103	6.2	6.18	359
150	4.89	13.17	0.103	1.2	6.41	371
210	4.88	13.19	0.103	1.1	6.54	370
240	4.91	13.17	0.103	1.0	6.53	371
270	4.92	13.18	0.104	0.9	6.56	372
300	4.92	13.18	0.105	1.2	6.57	372
Sampling Sample	5.29	10.28	0.105	4.0	8.01	382

Time of Sample Collection: 1330

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: 30° Snow
Sample description: Clear, Colorless, No odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 15GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/6/03

SAMPLE ID: 2023-MW-12S (14)
WELL ID: MW12S
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 0930 / 0930
Time Off-site: 1000 / 1000

Depth of well (from top of casing).. 18.90 Ft Time: ______
Initial static water level (from top of casing)........................ 9.30 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: 9.60 ft. of water x 0.65 = 6.24 gallons

volume of water removed: 60 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	7.11	10.50	0.566	60.6	9.63	56
15	6.97	10.50	0.582	26.4	9.19	64
30	6.92	10.57	0.578	4.5	8.95	88
45	6.91	10.60	0.575	3.5	8.75	94
60	6.90	10.60	0.572	3.7	8.66	99
Sample	6.99	8.46	0.594	3.9	8.46	149

Sampling

Time of Sample Collection: 0950

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, Total Hardness, TOC

Observations

Weather/Temperature: 30° Snow
Sample description: Clear, Colorless, no odor
Free Product? yes ____ no X describe ______
Sheen? yes ____ no X describe ______
Odor? yes ____ no X describe ______

Comments:
Flow Rate = 15GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/6/03

SAMPLE ID: 2023-MW-12I (70)
WELL ID: MW-12I
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 1005 / 1005
Time Off-site: 1035 / 1035

Depth of well (from top of casing)........ 69.90 Ft Time:
Initial static water level (from top of casing)........ 9.40 Ft Time:

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

Well Volume Calculation:
2 in. casing: ____ ft. of water x 0.16 = ____ gallons
3 in. casing: ____ ft. of water x 0.36 = ____ gallons
4 in. casing: 60.50 ft. of water x 0.65 = 39.33 gallons

volume of water removed: 210 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	6.68	14.52	0.058	9.2	10.56	1010
30	6.62	14.31	0.056	6.3	10.95	1012
90	5.14	14.14	0.054	4.7	11.37	1014
120	5.09	14.16	0.053	4.5	11.29	1016
150	5.08	14.16	0.054	3.7	11.26	1020
180	5.07	14.16	0.053	3.6	11.24	1022
210	5.07	14.16	0.054	3.0	11.70	1024
Sample	5.56	13.03	0.055	4.6	10.54	1030

Sampling
Time of Sample Collection: 1030

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, TK
Total Hardness, TOC

Observations
Weather/Temperature: 30° Snow
Sample description: Clear, Glacial, No odor
Free Product? yes ____ no X describe ____
Sheen? yes ____ no X describe ____
Odor? yes ____ no X describe ____

Comments:
Flow Rate = 1 GPM

FIELD OBSERVATION LOG
GROUNDWATER SAMPLING RECORD

SITE Sonia Road Landfill DATE 3/6/03

SAMPLE ID: 2023-MW-12D(98)
WELL ID: MW-12D
SAMPLERS: James Milligan
Ryan Fowler

Time On-site: 1040
1040

Time Off-site: 1129
1120

Depth of well (from top of casing)........ 98.00 FT Time:
Initial static water level (from top of casing)........ 9.11 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: 88.89 ft. of water x 0.65 = 57.78 gallons

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

Field Tests

Volume of Purge Water (in gallons)	pH	Temp (c°)	Spec. Cond. (ms/cm)	Turbidity (NTUs)	Dissolved Oxygen (mg/l)	Eh (mv)
Initial	5.28	14.53	0.043	5.3	11.77	320
30	5.26	13.67	0.071	5.1	13.02	321
90	5.42	13.62	0.072	4.2	13.02	318
180	5.43	13.62	0.075	7.9	12.97	337
210	5.41	13.63	0.074	1.5	13.00	340
240	5.40	13.64	0.074	1.9	13.01	343
270	5.43	13.64	0.074	1.2	13.02	344
300	5.39	13.64	0.073	1.6	12.97	347
Sam Sampling	5.97	11.91	0.075	11.6	12.30	339

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, Total Hardness, TOC

Observations
Weather/Temperature: 30° Snow
Sample description:
Free Product? yes ___ no X describe ___
Sheen? yes ___ no X describe ___
Odor? yes ___ no X describe ___

Comments:
Flow Rate = 15GPM

APPENDIX B-2

FIELD FORMS – DAILY EQUIPMENT CALIBRATION LOGS

**DVIRKA
AND
BARTILUCCI**

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill
Date: 3/5/03
Project Number: 2023 - 03A
Calibrated By: Jim Alligan, Ryan Foster, Keith Robins

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
FOXBoro OVA - FID	95PPM methane	3/4/03 - in office	OK
Multigas meter - LEL	Factory Calibrated	-	OK
Serial # 029 mao694A			
Solinst water Level meter	Battery check	-	OK
Serial # 26179			
Horiba - u22 water Quality	Buffer Solution	6 Am	OK, Calibrated Ph, DO, Specific Cond,
meter	4.0		and turbidity
Serial # 9282015			

DVIRKA
AND
BARTILUCCI

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill
Date: 3/6/03
Project Number: 2023 - 03A
Calibrated By: Jim Milligan, Ryan Foster

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Solinst water level meter	Battery check	630 Am	OK
Serial #26179			
Horiba -U22 water Quality	Buffer Solution	6:3 Am	OK, calibrated Ph, Do, Specific Cond,
meter	4.0		and turbidity
Serial # 9282015			

DECL

**DVIRKA
AND
BARTILUCCI**

DAILY EQUIPMENT CALIBRATION LOG

Project Name: Sonia Road Landfill
Date: 3/7/03
Project Number: 2023 - 03A
Calibrated By: Jim Milligan, Ken Fowler

Instrument Name and Model Number	Calibration Method	Time	Readings and Observations
Solinist water Level meter	Battery check	6:30 Am	oK
Serial # 26179			
Horiba U22 water Quality	Buffer Solution		oK, Calibrated, Ph, Do, Spec Cond
meter	4.0		and Turbidity
Serial # 9282015			

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

No. 6174 EXTERNAL CHAIN OF CUSTODY

CLIENT: I[illegible]

H2M SDG NO:

PROJECT NAME/NUMBER [illegible] 2013-034
Sand Rd Landfill
[illegible] Post-Closure Parameters

SAMPLERS: (signature)/Client [illegible] DB Town of Islip Resource Recovery Agency

DELIVERABLES: B-7.0 (CJB)

TURNAROUND TIME: 21 Days

NOTES: * BOD, Cl, SO4, Alk, TDS

Project Contact: Keith Robins

Phone Number: (516) 364-[illegible]

Sample Container Description →

								1 Liter HDPE	250ml glass - H2SO4	250ml HDPE - HNO3	40ml Vial - H2SO4	1 Liter HDPE - HNO3		
					ANALYSIS REQUESTED									
					ORGANIC							INORG.		
DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers ↓	VOA	BNA	Pest/PCB	+	[illegible]	[illegible]	TOC	Metal	CN	LAB I.D. NO.	REMARKS:
3/6/23	0800	GW	2023-MW-04I (71)	24				6	3	3	9	3			MS/MSD Included
3/6/23	0900	GW	2023-MW-04S (34)	8				2	1	1	3	1			
3/6/23	0945	GW	2023-MW-12S (14)	8				2	1	1	3	1			
3/6/23	1030	GW	2023-MW-12I (70)	8				2	1	1	3	1			
3/6/23	1115	GW	2023-MW-12D (98)	8				2	1	1	3	1			
3/6/23	1150	GW	2023-MW-11S (14)	8				2	1	1	3	1			
3/6/23	1230	GW	2023-MW-11I (71)	8				2	1	1	3	1			
3/6/23	1330	GW	2023-MW-11D (94)	8				2	1	1	3	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	3/6/23	17[illegible]	[illegible]	[illegible]	[illegible]

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

No. 6173 **EXTERNAL CHAIN OF CUSTODY**

CLIENT: [illegible]

H2M SDG NO:

PROJECT NAME/NUMBER DHB [illegible] 2023 [illegible] 023A [illegible]

SAMPLERS: (signature)/Client DHB Town of [illegible] [illegible] Agency

DELIVERABLES: [illegible]

TURNAROUND TIME: [illegible]

NOTES: * [illegible] AIF, TDS

Project Contact: Keith Robins

Phone Number: (516) 364 4890

					ANALYSIS REQUESTED										
				Sample Container Description →				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
					ORGANIC							INORG.			
DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers ↓	VOA	BNA	Pest/ PCB	*	[illegible]	[illegible]	TOC	Metal	CN	LAB I.D. NO.	REMARKS:
3/5/23	0800	GW	2023-MW 01S (79)	8				2	1	1	3	1			
[illegible]	0840	GW	2023-MW-01I (78)	8				2	1	1	3	1			
[illegible]	0940	GW	2023-MW-01D (106)	8				2	1	1	3	1			
3/5/23	1105	GW	2023-MW-02D (110)	8				2	1	1	3	1			
[illegible]	1215	GW	2023-MW-07I (74)	8				2	1	1	3	1			
[illegible]	1240	W	2023-Field Blank	8				2	1	1	3	1			
3/5/23	1300	GW	2023-MW-06S (37)	8				2	1	1	3	1			
3/5/23	1420	GW	2023-MW-06I (70)	8				2	1	1	3	1			
[illegible]	1510	GW	2023-MW-06D (117)	8				2	1	1	3	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	3/5/23	1110		3/5/23	16:08
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

No. 6175 **EXTERNAL CHAIN OF CUSTODY**

CLIENT: IRS

H2M SDG NO: 032

PROJECT NAME/NUMBER [illegible] 5A
[illegible]
[illegible]

SAMPLERS: (signature)/Client Town of Islip
[illegible]

DELIVERABLES: B5-70-[illegible] [illegible] B

TURNAROUND TIME: [illegible]

Sample Container Description →

	*	[illegible]	[illegible]	Tox	Metal	CN
Sample Container Description		250 ml glass [illegible]	250ml HDPE [illegible]	40 ml [illegible]	1 Liter HDPE - [illegible]	

ANALYSIS REQUESTED

DATE	TIME	MATRIX	FIELD I.D.	Total No. of Containers	ORGANIC VOA	BNA	Pest/PCB	*	[illegible]	[illegible]	Tox	INORG. Metal	CN	LAB I.D. NO.	REMARKS:
3/7/23	0800	GW	2023-MW-02I (74)	8				2	1	1	3	1			
3/7/23	0905	GW	2023-MW-04D (141)	8				2	1	1	3	1			
3/7/23	0000	GW	2023-Blind Duplicate	8				2	1	1	3	1			Blind Duplicate
3/7/23	[illegible]	GW	2023-MW-03S (32)	8				2	1	1	3	1			
3/7/23	1140	GW	2023-MW-05D (116)	8				2	1	1	3	1			
3/7/23	1300	GW	2023-MW-05I (70)	8				2	1	1	3	1			
3/7/23	1330	GW	2023-MW-05S (34)	8				2	1	1	3	1			

NOTES:
* BOD, Br, [illegible],
Alk TDS

Project Contact: K[illegible] Robins

Phone Number: (631) 304-[illegible]

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[illegible]	3/7/23	1540	[illegible]	3/7/23	1540

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 RP

Date of Review: 4/4/03

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: IRS022

22 wells analyzed for routine parameters

1 MS/MSD,1 field blank and 1 blind duplicate

Blind duplicate was taken at well 4D, metal and wetchem results were comparable

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

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella RP

Date of Review: 4/04/03

I. Holding times

Sample	Date Received	Date Digested	Date Analyzed	Holding Time Exceeded?
MW-01D (106)	3/5-3/7		3/03	No
MW-01I (78)				
MW-01S (29)				
MW-02D (116)				
MW-02I (72)				
MW-03S (32)				
MW-04S (114)				
MW-04I (71)*				
MW-04S (34)				
MW-05D (116)				
MW-5I (70)				
MW-5S (34)				
MW-6D (117)				
MW-6I (76)				
MW-6S (37)				
MW-7I (74)				
MW-11D (94)				
MW-11I (71)				
MW-11S (19)				
MW-12D (98)				
MW-12I (70)				
MW-12S (19)				
BLIND DUP				
FIELD BLANK				

*MS/MSD

RP

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 4/4/03

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: 4/4/03

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: 4/4/03

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: 4/4/03

MW-04I

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 RP Date of Review: 4/4/03

MW-04I

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 **Spike recovery of iron was above limits but since the sample concentration was > 4 times the spike concentration no action was required**

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

DATA VALIDATION – METALS

Site Name: Sonia Rd Landfill

Laboratory Name: H2M

Reviewer: R.Petrella

Date of Review: 4/4/03

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: 4/4/03

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 RP

Date of Review: 4/4/03

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: