TABLE 1

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING
FIELD PARAMETERS AND WATER LEVELS
October 2001

Well I.D.	Date	Static Water Level [1] (feet)	pH [2] (pH units)	Specific Conductance (μmhos)	Temperature (degrees C)	Eh (mV)
1-OS	10/16/01	17.91	6.61	692	13.2	32
1-I	10/16/01	---	---	---	---	---
1-R	10/16/01	19.88	7.08	673	12.1	-8
2-OS	10/16/01	19.24	7.02	586	10.8	-5
2-I	10/16/01	20.91	---	---	---	---
2-R	10/16/01	21.90	7.35	501	10.2	-21
3-OS/I	10/16/01	12.77	6.86	668	12.2	18
3-R	10/16/01	13.52	6.55	817	13.1	39
4-OS	10/16/01	8.30	6.53	262	11.7	46
4-I	10/16/01	10.60	---	---	---	---
4-R	10/16/01	15.45	6.67	473	10.9	37
5-OS	10/16/01	18.35	---	---	---	---
5-I	10/16/01	19.77	6.98	103.0	11.0	-5
5-R	10/16/01	31.08	6.74	123.7	11.5	5
6-I	10/16/01	20.85	---	---	---	---
6-R	10/16/01	30.69	---	---	---	---
7-OS	10/16/01	15.49	6.44	653	10.9	35
7-I	10/16/01	16.02	---	---	---	---
7-R	10/16/01	14.90	7.01	565	9.9	-11
8-OS	10/16/01	14.13	6.62	78.1	9.7	42
8-I	10/16/01	15.17	7.19	315	9.7	-16
8-R	10/16/01	14.70	7.25	1342	9.5	-18
9-OS	10/16/01	10.06	6.45	96.2	12.8	42
9-I	10/16/01	12.72	6.91	72.3	12.1	13
9-R	10/16/01	13.94	6.97	552	12.9	8
PW-1	10/16/01	---	6.65	122.5	11.5	22
PW-2	10/16/01	---	7.26	256	14.2	-14
SVWC-93	10/16/01	---	---	---	---	---
SVWC-94	10/16/01	---	---	---	---	---
SVWC-95	10/16/01	---	---	---	---	---
SVWC-96	10/16/01	---	---	---	---	---

NOTES: [1] Depth to water surface from top of PVC well riser, prior to purging and sampling.

[2] pH values in **BOLD** indicate an exceedance of the NYSDEC Water Quality Standard for pH: minimum 6.5 pH units, maximum 8.5 pH units (from T.O.G.S. 1.1.1, June 1998).

--- Indicates Not Measured

2/5/02

TABLE 2

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING
ANALYTICAL RESULTS

Parameter	ARARs [1]	UNITS	WELL 1-OS				WELL 1-R					ARARs [1]
			Dec-00 [4]	Mar-01 [3]	Jul-01	Oct-01 [4]	Dec-00 [4]	Mar-01 [3]	Jul-01	Oct-01 [4]		
Leachate Indicator Parameters:											Leachate Indicator Parameters:	
Alkalinity	---	mg/L	153	182	NA	264	229	244	NA	251	Alkalinity	---
Chemical Oxygen Demand	---	mg/L	10	10..0 U	NA	<10	<10.0	<10.0	NA	<10	Chemical Oxygen Demand	---
Total Hardness	---	mg/L	216	283	NA	306	265	265	NA	325	Total Hardness	---
Total Kjeldhal Nitrogen	---	mg/L	<1.0	<1.0	NA	<1.0	<1.0	<1.0	NA	<1.0	Total Kjeldhal Nitrogen	---
TAL Metals:											TAL Metals:	
Aluminum	---	ug/L	NA	20200	NA	NA	NA	4990	NA	NA	Aluminum	---
Antimony	3	ug/L	<5.5 N	<4.7 N	NA	<4.7	<5.5 N	<4.7	NA	<4.7	Antimony	3
Arsenic	25	ug/L	11.8	13.5	NA	5.9 B	<1.8	3.7 B	NA	2.6 B	Arsenic	25
Barium	1000	ug/L	NA	226	NA	NA	NA	67.4 B	NA	NA	Barium	1000
Beryllium	3	ug/L	NA	1.1 B	NA	NA	NA	0.26 B	NA	NA	Beryllium	3
Cadmium	5	ug/L	<3.1	1.2 B	NA	<0.3	<3.1	<0.30	NA	<0.3	Cadmium	5
Calcium	---	ug/L	NA	73700	NA	NA	NA	79500	NA	NA	Calcium	---
Chromium	50	ug/L	**405**	**253**	NA	20.6	9.8 B	**119**	NA	47.1	Chromium	50
Cobalt	---	ug/L	NA	32.4 B	NA	NA	NA	13.6 B	NA	NA	Cobalt	---
Copper	200	ug/L	49.3	75	NA	22.2 B	5.0 B	36.9	NA	15.4 B	Copper	200
Iron	300 [2]	ug/L	**43800 E**	**54100**	NA	**16400 E**	**990 E**	**15700**	NA	**6260 E**	Iron	300 [1]
Lead	25	ug/L	6.6	14.3	NA	5 B	<1.7	5.1	NA	2.2 B	Lead	25
Magnesium	35000 GV	ug/L	NA	24100	NA	NA	NA	16200	NA	NA	Magnesium	35000 GV
Manganese	300 [2]	ug/L	**5810**	**4940**	NA	**5310**	158	**2070**	NA	**909**	Manganese	300 [1]
Mercury	0.7	ug/L	<0.20	<0.20	NA	<0.2 N	<0.20	<0.20	NA	<0.2 N	Mercury	0.7
Nickel	100	ug/L	NA	82.4	NA	NA	NA	27.7 B	NA	NA	Nickel	100
Potassium	---	ug/L	NA	10700 E	NA	NA	NA	4650 B E	NA	NA	Potassium	---
Selenium	10	ug/L	NA	<2.2 W	NA	NA	NA	<2.2 W	NA	NA	Selenium	10
Silver	50	ug/L	NA	11.1	NA	NA	NA	3.5 B	NA	NA	Silver	50
Sodium	20000	ug/L	NA	**42100**	NA	NA	NA	19100	NA	NA	Sodium	20000
Thallium	0.5 GV	ug/L	NA	<2.7	NA	NA	NA	<2.7	NA	NA	Thallium	0.5 GV
Vanadium	---	ug/L	NA	49.9 B	NA	NA	NA	14.2 B	NA	NA	Vanadium	---
Zinc	2000 GV	ug/L	55.5	77.9	NA	37.9	11.2 B	23.5	NA	16.2 B	Zinc	2000 GV
VOCs by EPA Method 601:											VOCs by EPA Method 601:	
Chlorobenzene	5	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chlorobenzene	5
Chloroethane	5	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroethane	5
Chloroform	7	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroform	7
Dichlorodifluoromethane	5	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Dichlorodifluoromethane	5
1,1-Dichloroethane	5	ug/L	<1	<1	NA	<1	<1	1	NA	1.1	1,1-Dichloroethane	5
1,4-Dichlorobenzene	3	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3
1,1,1-Trichloroethane	5	ug/L	NA	<1	NA	NA	NA	0.6 J	NA	NA	1,1,1-Trichloroethane	5
VOCs by EPA Method 602:											VOCs by EPA Method 602:	
Benzene	1	µg/L	<1	<1	NA	<1	<1	<1	NA	<1	Benzene	1
Chlorobenzene	5	µg/L	<1	<1	NA	<1	<1	<1	NA	<1	Chlorobenzene	5
1,4-Dichlorobenzene	3	µg/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3

NOTES:

[1] NYSDEC Water Quality Standards and Guidance Values, T.O.G.S. 1.1.1 (June 1998).
[2] The groundwater standard for the sum of Iron and Manganese concentrations is 500 µg/L.
[3] Sample analyzed for "Baseline Parameters".
[4] Sample analyzed for "Routine" and "Site-Related Parameters".

ND Denotes Not Detected
NA Denotes Not Analyzed
< Denotes that the compound was analyzed for but not detected at the detection limit listed.
* Indicates that the duplicate analysis was not within laboratory control limits.
J Indicates an estimated value for tentatively identified compounds.
B The reported value is less than the Contract Required Detection Limit (CRDL), but greater than the Instrument Detection Limit.
E Indicates an estimated value because of the possible presence of interference.
W Indicates an estimated value because of the possible presence of interference.
N Spiked sample recovery not within control limits

Values in **BOLD** indicate an exceedance of applicable water quality standards or guidance values.
No other VOCs other than those listed were detected.

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Values in BOL
No other VOCs

TABLE 2 (Continued)

TABLE 2 (C

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING RESULTS
ANALYTICAL RESULTS

TOWN OF RAMA
POST-CLOSURE GROUNDWATER C
ANALYTICAL

UNITS	WELL 2-OS Dec-00 [4]	WELL 2-OS Mar-01 [3]	WELL 2-OS Jul-01	WELL 2-OS Oct-01 [4]	WELL 2-R Dec-00 [4]	WELL 2-R Mar-01 [3]	WELL 2-R Jul-01	WELL 2-R Oct-01 [4]		ARARs [1]	UNITS	WELL Dec-00 [4]	WELL Mar-01 [3]
									Leachate Indicator Parameters:				
mg/L	349	306	NA	295	184	202	NA	179	Alkalinity	---	mg/L	318	321
mg/L	10	<10.0	NA	<10	<10.0	<10.0	NA	<10	Chemical Oxygen Demand	---	mg/L	<10.0	15.4
mg/L	444	439	NA	368	208	195	NA	188	Total Hardness	---	mg/L	272	290
mg/L	<1.0	1.4	NA	<1.0	<1.0	<1.0	NA	<1.0	Total Kjeldhal Nitrogen	---	mg/L	<1.0	<1.0
									TAL Metals:				
ug/L	NA	20300	NA	NA	NA	65.7 B	NA	NA	Aluminum	---	ug/L	NA	2030
ug/L	<5.5 N	<4.7	NA	<4.7	<5.5 N	<4.7	NA	<4.7	Antimony	3	ug/L	**8.2 B, N**	**9.5 B N**
ug/L	9.4 B	10.5	NA	8.4 B	<1.8	<2.2	NA	<2.2	Arsenic	25	ug/L	<1.8	<2.2
ug/L	NA	181 B	NA	NA	NA	15.3 B	NA	NA	Barium	1000	ug/L	NA	80.2 B
ug/L	NA	0.88 B	NA	NA	NA	<0.20	NA	NA	Beryllium	3	ug/L	NA	<0.20
ug/L	<3.1	1.3 B	NA	1.1 B	<3.1	<0.30	NA	0.36 B	Cadmium	5	ug/L	<3.1	<0.30
ug/L	NA	127000	NA	NA	NA	57900	NA	NA	Calcium	---	ug/L	NA	91800
ug/L	**120**	**128**	NA	**87.1**	4.7 B	<0.90	NA	3.9 B	Chromium	50	ug/L	**453**	**522**
ug/L	NA	58	NA	NA	NA	<1.6	NA	NA	Cobalt	---	ug/L	NA	3.5 B
ug/L	45.1	57.3	NA	39	15.4 B	<1.6	NA	1.9 B	Copper	200	ug/L	10.0 B	10.2 B
ug/L	**32800 E**	**37700**	NA	**24500 E**	**1440 E**	**337**	NA	299 E	Iron	300 [1]	ug/L	**3620 E**	**5810**
ug/L	**32.2**	**45.9**	NA	**25.2**	<1.7	2.5 B	NA	<2.0	Lead	25	ug/L	<1.7	5.3
ug/L	NA	29500	NA	NA	NA	12100	NA	NA	Magnesium	35000 GV	ug/L	NA	14800
ug/L	**3370**	**3450**	NA	**3830**	247	142	NA	106	Manganese	300 [1]	ug/L	**5070**	**3750**
ug/L	<0.20	<0.20	NA	<0.2 N	<0.20	<0.20	NA	<0.2 N	Mercury	0.7	ug/L	<0.20	<0.20
ug/L	NA	**116**	NA	NA	NA	<1.7	NA	NA	Nickel	100	ug/L	NA	68.7
ug/L	NA	8230 E	NA	NA	NA	1630 B E	NA	NA	Potassium	---	ug/L	NA	4530 B E
ug/L	NA	<2.2 W	NA	NA	NA	<2.2	NA	NA	Selenium	10	ug/L	NA	<2.2 W
ug/L	NA	9.9 B	NA	NA	NA	<1.8	NA	NA	Silver	50	ug/L	NA	7.0 B
ug/L	NA	9460	NA	NA	NA	7760	NA	NA	Sodium	20000	ug/L	NA	**38700**
ug/L	NA	<2.7	NA	NA	NA	<2.7	NA	NA	Thallium	0.5 GV	ug/L	NA	<2.7
ug/L	NA	37.1 B	NA	NA	NA	<1.5	NA	NA	Vanadium	---	ug/L	NA	4.5 B
ug/L	99	107	NA	70.4	338	2.8 B	NA	<0.8	Zinc	2000 GV	ug/L	24.6	28.5
									VOC's by EPA Method 601:				
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chlorobenzene	5	ug/L	NA	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroethane	5	ug/L	NA	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroform	7	ug/L	NA	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Dichlorodifluoromethane	5	ug/L	NA	<1
ug/L	<1	<1	NA	<1	<1	<1	NA	<1	1,1-Dichloroethane	5	ug/L	<1	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	ug/L	NA	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	1,1,1-Trichloroethane	5	ug/L	NA	<1
									VOC's by EPA Method 602:				
µg/L	<1	<1	NA	<1	<1	<1	NA	<1	Benzene	1	µg/L	<1	<1
µg/L	<1	<1	NA	<1	<1	<1	NA	<1	Chlorobenzene	5	µg/L	<1	<1
µg/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	µg/L	NA	<1

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Detected
Analyzed
the compound was analyzed for but not detected at the detection limit listed.
: the duplicate analysis was not within laboratory control limits.
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TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING RESULTS
ANALYTICAL RESULTS

3-OS/I		WELL 3-R							WELL 4-OS				
Jul-01	Oct-01 [4]	Dec-00 [4]	Mar-01 [3]	Jul-01	Oct-01 [4]		ARARs [1]	UNITS	Dec-00 [4]	Mar-01 [3]	Jul-01	Oct-01 [4]	Dec-00 [4]
						Leachate Indicator Parameters:							
NA	297	210	218	NA	229	Alkalinity	---	mg/L	52.9	38	NA	98.9	157
NA	<10	<10.0	<10.0	NA	<10	Chemical Oxygen Demand	---	mg/L	<10.0	<10.0	NA	<10	<10.0
NA	286	219	218	NA	222	Total Hardness	---	mg/L	105	56.9	NA	140	202
NA	<1.0	<1.0	<1.0	NA	<1.0	Total Kjeldhal Nitrogen	---	mg/L	<1.0	<1.0	NA	<1.0	<1.0
						TAL Metals:							
NA	NA	NA	829	NA	NA	Aluminum	---	ug/L	NA	2680	NA	NA	NA
NA	**9.4 B**	<5.5 N	<4.7	NA	<4.7	Antimony	3	ug/L	<5.5 N	<4.7	NA	<4.7	<5.5 N
NA	<2.2	<1.8	<2.2	NA	<2.2	Arsenic	25	ug/L	<1.8	2.6 B	NA	<2.2	3.3 B
NA	NA	NA	38.4 B	NA	NA	Barium	1000	ug/L	NA	33.9 B	NA	NA	NA
NA	NA	NA	<0.20	NA	NA	Beryllium	3	ug/L	NA	<0.20	NA	NA	NA
NA	<0.3	<3.1	<0.30	NA	<0.3	Cadmium	5	ug/L	<3.1	<0.30	NA	<0.3	<3.1
NA	NA	NA	57500	NA	NA	Calcium	---	ug/L	NA	12500	NA	NA	NA
NA	**467**	**213**	**124**	NA	12.7	Chromium	50	ug/L	17.9	13.2	NA	4 B	<0.90
NA	NA	NA	3.9 B	NA	NA	Cobalt	---	ug/L	NA	4.5 B	NA	NA	NA
NA	8 B	8.2 B	4.6 B	NA	2.4 B	Copper	200	ug/L	15.8 B	8.3 B	NA	5.2 B	3.5 B
NA	**4090 E**	**3020 E**	**4400**	NA	**1140 E**	Iron	300 [1]	ug/L	**11300 E**	**7690**	NA	**1760 E**	**7240 E**
NA	<2.0	2.0 B	4.7	NA	<2.0	Lead	25	ug/L	<1.7	3.2	NA	<2.0	2.4 B
NA	NA	NA	18200	NA	NA	Magnesium	35000 GV	ug/L	NA	6240	NA	NA	NA
NA	**2040**	**13100**	**10400**	NA	**12700**	Manganese	300 [1]	ug/L	**1930**	**440**	NA	**839**	**1240**
NA	<0.2 N	<0.20	<0.20	NA	<0.2 N	Mercury	0.7	ug/L	<0.20	<0.20	NA	<0.2 N	<0.20
NA	NA	NA	28.2 B	NA	NA	Nickel	100	ug/L	NA	8.8 B	NA	NA	NA
NA	NA	NA	2290 B E	NA	NA	Potassium	---	ug/L	NA	1890 B E	NA	NA	NA
NA	NA	NA	<2.2 W	NA	NA	Selenium	10	ug/L	NA	<2.2	NA	NA	NA
NA	NA	NA	3.1 B	NA	NA	Silver	50	ug/L	NA	<1.8	NA	NA	NA
NA	NA	NA	**34900**	NA	NA	Sodium	20000	ug/L	NA	**24100**	NA	NA	NA
NA	NA	NA	<2.7	NA	NA	Thallium	0.5 GV	ug/L	NA	<2.7	NA	NA	NA
NA	NA	NA	1.7 B	NA	NA	Vanadium	---	ug/L	NA	6.6 B	NA	NA	NA
NA	<0.8	8.6 B	16.9 B	NA	<0.8	Zinc	2000 GV	ug/L	25.4	34.2	NA	<0.8	<6.1
						VOCs by EPA Method 601:							
NA	NA	NA	<1	NA	NA	Chlorobenzene	5	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	Chloroethane	5	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	Chloroform	7	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	Dichlorodifluoromethane	5	ug/L	NA	<1	NA	NA	NA
NA	<1	<1	<1	NA	<1	1,1-Dichloroethane	5	ug/L	<1	<1	NA	<1	<1
NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	1,1,1-Trichloroethane	5	ug/L	NA	<1	NA	NA	NA
						VOCs by EPA Method 602:							
NA	<1	<1	<1	NA	<1	Benzene	1	µg/L	<1	<1	NA	<1	<1
NA	<1	<1	<1	NA	<1	Chlorobenzene	5	µg/L	<1	<1	NA	<1	<1
NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	µg/L	NA	<1	NA	NA	NA

).G.S. 1.1.1 (June 1998).
: concentrations is 500 µg/L.

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TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING RESULTS
ANALYTICAL RESULTS

WELL 4-R						WELL 5-OS				WELL 5-I				
Mar-01 [3]	Jul-01	Oct-01 [4]		ARARs [1]	UNITS	Dec-00 [4]	Mar-01 [3]	Jul-01	Oct-01	Dec-00	Mar-01	Jul-01	Oct-01 [4]	
			Leachate Indicator Parameters:											Leach
178	NA	146	Alkalinity	—	mg/L	29.4	220	NA	NA	NA	NA	NA	41.2	
<10.0	NA	<10	Chemical Oxygen Demand	—	mg/L	40	<10.0	NA	NA	NA	NA	NA	<10	
176	NA	181	Total Hardness	—	mg/L	141	47.4	NA	NA	NA	NA	NA	43.4	
<1.0	NA	2.1	Total Kjeldhal Nitrogen	—	mg/L	2.3	<1.0	NA	NA	NA	NA	NA	<1.0	
			TAL Metals:											TAL M
31.7 B	NA	NA	Aluminum	—	ug/L	NA	15400	NA	NA	NA	NA	NA	NA	
<4.7	NA	<4.7	Antimony	3	ug/L	<5.5 N	<4.7	NA	NA	NA	NA	NA	<4.7	
<2.2	NA	<2.2	Arsenic	25	ug/L	16.8	3.9 B	NA	NA	NA	NA	NA	2.7 B	
10.0 B	NA	NA	Barium	1000	ug/L	NA	102 B	NA	NA	NA	NA	NA	NA	
<0.20	NA	NA	Beryllium	3	ug/L	NA	0.97 B	NA	NA	NA	NA	NA	NA	
<0.30	NA	<0.3	Cadmium	5	ug/L	3.4 B	0.31 B	NA	NA	NA	NA	NA	0.84 B	
44700	NA	NA	Calcium	—	ug/L	NA	8190	NA	NA	NA	NA	NA	NA	
<0.90	NA	2.2 B	Chromium	50	ug/L	**165**	38.6	NA	NA	NA	NA	NA	3.3 B	
<1.6	NA	NA	Cobalt	—	ug/L	NA	11.8 B	NA	NA	NA	NA	NA	NA	
<1.6	NA	3.4 B	Copper	200	ug/L	142	26.2	NA	NA	NA	NA	NA	21.8 B	
4220	NA	**3850 E**	Iron	300 [1]	ug/L	**101000 E**	**22800**	NA	NA	NA	NA	NA	186 E	
2.6 B	NA	<2.0	Lead	25	ug/L	17.6	5.9	NA	NA	NA	NA	NA	<2.0	
15800	NA	NA	Magnesium	35000 GV	ug/L	NA	6570	NA	NA	NA	NA	NA	NA	
1040	NA	**1070**	Manganese	300 [1]	ug/L	**1080**	**323**	NA	NA	NA	NA	NA	2.7 B	
<0.20	NA	<0.2 N	Mercury	0.7	ug/L	<0.20	<0.20	NA	NA	NA	NA	NA	<0.2 N	
1.9 B	NA	NA	Nickel	100	ug/L	NA	19.5 B	NA	NA	NA	NA	NA	NA	
1710 B E	NA	NA	Potassium	—	ug/L	NA	4390 B E	NA	NA	NA	NA	NA	NA	
<2.2 W	NA	NA	Selenium	10	ug/L	NA	<2.2 W	NA	NA	NA	NA	NA	NA	
1.8 U	NA	NA	Silver	50	ug/L	NA	6.7 B	NA	NA	NA	NA	NA	NA	
13700	NA	NA	Sodium	20000	ug/L	NA	4770 B	NA	NA	NA	NA	NA	NA	
<2.7	NA	NA	Thallium	0.5 GV	ug/L	NA	**4.8 B**	NA	NA	NA	NA	NA	NA	
<1.5	NA	NA	Vanadium	—	ug/L	NA	33.0 B	NA	NA	NA	NA	NA	NA	
4.0 B	NA	<0.8	Zinc	2000 GV	ug/L	165	33.9	NA	NA	NA	NA	NA	<0.8	
			VOCs by EPA Method 601:											VOCs
<1	NA	NA	Chlorobenzene	5	ug/L	NA	<1	NA	NA	NA	NA	NA	NA	
<1	NA	NA	Chloroethane	5	ug/L	NA	<1	NA	NA	NA	NA	NA	NA	
<1	NA	NA	Chloroform	7	ug/L	NA	<1	NA	NA	NA	NA	NA	NA	
<1	NA	NA	Dichlorodifluoromethane	5	ug/L	NA	<1	NA	NA	NA	NA	NA	NA	
<1	NA	<1	1,1-Dichloroethane	5	ug/L	<1	<1	NA	NA	NA	NA	NA	<1	
<1	NA	NA	1,4-Dichlorobenzene	3	ug/L	NA	<1	NA	NA	NA	NA	NA	NA	
<1	NA	NA	1,1,1-Trichloroethane	5	ug/L	NA	<1	NA	NA	NA	NA	NA	NA	
			VOCs by EPA Method 602:											VOCs
<1	NA	<1	Benzene	1	µg/L	<1	<1	NA	NA	NA	NA	NA	<1	
<1	NA	<1	Chlorobenzene	5	µg/L	<1	<1	NA	NA	NA	NA	NA	<1	
<1	NA	NA	1,4-Dichlorobenzene	3	µg/L	NA	<1	NA	NA	NA	NA	NA	NA	

NOTES:

[1] NYSDEC Water Quality Standards and Guidance Values, T.O.G.S. 1.1.1 (June 1998).
[2] The groundwater standard for the sum of Iron and Manganese concentrations is 500 µg/L.
[3] Sample analyzed for "Baseline Parameters".
[4] Sample analyzed for "Routine" and "Site-Related Parameters".

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W Indicates an estimated value because of the possible presence of interference.
N Spiked sample recovery not within control limits

Values in **BOLD** indicate an exceedance of applicable water quality standards or guidance values.
No other VOCs other than those listed were detected.

l Detection Limit.

TABLE 2 (Continued)

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING RESULTS
ANALYTICAL RESULTS

	ARARs [1]	UNITS	WELL 5-R Dec-00 [4]	WELL 5-R Mar-01 [3]	WELL 5-R Jul-01	WELL 5-R Oct-01 [4]	WELL 7-OS Dec-00 [4]	WELL 7-OS Mar-01 [3]	WELL 7-OS Jul-01	WELL 7-OS Oct-01 [4]		ARARs [1]
hate Indicator Parameters:											Leachate Indicator Parameters:	
Alkalinity	---	mg/L	49	48	NA	45.3	149	99	NA	124	Alkalinity	---
Chemical Oxygen Demand	---	mg/L	<10.0	<10.0	NA	<10	<10.0	<10.0	NA	<10	Chemical Oxygen Demand	---
Total Hardness	---	mg/L	54.6	47.2	NA	48.6	223	219	NA	194	Total Hardness	---
Total Kjeldhal Nitrogen	---	mg/L	<1.0	<1.0	NA	<1.0	<1.0	<1.0	NA	<1.0	Total Kjeldhal Nitrogen	---
Metals:											TAL Metals:	
Aluminum	---	ug/L	NA	483	NA	NA	NA	2790 N	NA	NA	Aluminum	---
Antimony	3	ug/L	<5.5 N	<4.7	NA	<4.7	<5.5 N	<4.7	NA	<4.7	Antimony	3
Arsenic	25	ug/L	<1.8	<2.2	NA	<2.2	3.4 B	<2.2	NA	2.6 B	Arsenic	25
Barium	1000	ug/L	NA	9.8 B	NA	NA	NA	83.3 B	NA	NA	Barium	1000
Beryllium	3	ug/L	NA	0.52 B	NA	NA	NA	0.24 B	NA	NA	Beryllium	3
Cadmium	5	ug/L	<3.1	0.42 B	NA	<0.3	<3.1	<0.30	NA	0.37 B	Cadmium	5
Calcium	---	ug/L	NA	11500	NA	NA	NA	65000	NA	NA	Calcium	---
Chromium	50	ug/L	7.2 B	3.9 B	NA	3.3 B	34.7	**51.9**	NA	48.4	Chromium	50
Cobalt	---	ug/L	NA	<1.6	NA	NA	NA	8.9 B	NA	NA	Cobalt	---
Copper	200	ug/L	6.6 B	3.2 B	NA	5.6 B	24.5 B	8.0 B	NA	25.9	Copper	200
Iron	300 [1]	ug/L	**2370 E**	**826**	NA	96.4 E	**12400 E**	**4170 N**	NA	**10400 E**	Iron	300 [1]
Lead	25	ug/L	<1.7	3.9	NA	<2.0	5.7	<2.0	NA	7.1	Lead	25
Magnesium	35000 GV	ug/L	NA	4500 B	NA	NA	NA	13600	NA	NA	Magnesium	35000 GV
Manganese	300 [1]	ug/L	33	13.1 B	NA	<2.2	**1270**	**638 N**	NA	**668**	Manganese	300 [1]
Mercury	0.7	ug/L	<0.20	<0.20	NA	<0.2 N	<0.20	<0.20	NA	<0.2 N	Mercury	0.7
Nickel	100	ug/L	NA	2.3 B	NA	NA	NA	10.3 B	NA	NA	Nickel	100
Potassium	---	ug/L	NA	895 B E	NA	NA	NA	9580 B E	NA	NA	Potassium	---
Selenium	10	ug/L	NA	<2.2	NA	NA	NA	<2.2 W	NA	NA	Selenium	10
Silver	50	ug/L	NA	<1.8	NA	NA	NA	3.9 B	NA	NA	Silver	50
Sodium	20000	ug/L	NA	3740 B	NA	NA	NA	16900	NA	NA	Sodium	20000
Thallium	0.5 GV	ug/L	NA	**22.8**	NA	NA	NA	<2.7	NA	NA	Thallium	0.5 GV
Vanadium	---	ug/L	NA	4.4	NA	NA	NA	6.1 B	NA	NA	Vanadium	---
Zinc	2000 GV	ug/L	9.7 B	9.6	NA	<0.8	45.8	12.4 B	NA	31	Zinc	2000 GV
s by EPA Method 601:											VOCs by EPA Method 601:	
Chlorobenzene	5	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chlorobenzene	5
Chloroethane	5	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroethane	5
Chloroform	7	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroform	7
Dichlorodifluoromethane	5	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Dichlorodifluoromethane	5
1,1-Dichloroethane	5	ug/L	<1	<1	NA	<1	<1	<1	NA	<1	1,1-Dichloroethane	5
1,4-Dichlorobenzene	3	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3
1,1,1-Trichloroethane	5	ug/L	NA	<1	NA	NA	NA	<1	NA	NA	1,1,1-Trichloroethane	5
s by EPA Method 602:											VOCs by EPA Method 602:	
Benzene	1	µg/L	<1	<1	NA	<1	<1	<1	NA	<1	Benzene	1
Chlorobenzene	5	µg/L	<1	<1	NA	<1	<1	<1	NA	<1	Chlorobenzene	5
1,4-Dichlorobenzene	3	µg/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3

NOTES:

[1] NYSDEC Water Quality Standards and Guidance Values, T.O.G.S. 1.1.1 (June 1998).
[2] The groundwater standard for the sum of Iron and Manganese concentrations is 500 µg/L.
[3] Sample analyzed for "Baseline Parameters".
[4] Sample analyzed for "Routine" and "Site-Related Parameters".

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Values in **BOLD** indicate an exceedance of applicable water quality standards or guidance values.
No other VOCs other than those listed were detected.

NOTES:

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NA Denotes Not
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* Indicates that
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N Spiked sampl
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W Indicates an e

Values in **BOL**
No other VOCs

TABLE 2 (Continued)

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING RESULTS
ANALYTICAL RESULTS

UNITS	WELL 7-R Dec-00 [4]	WELL 7-R Mar-01 [3]	WELL 7-R Jul-01	WELL 7-R Oct-01 [4]	WELL 8-OS Dec-00 [4]	WELL 8-OS Mar-01 [3]	WELL 8-OS Jul-01 [4]	WELL 8-OS Oct-01 [4]		ARARs [1]	UNITS	WEL Dec-00 [4]	WEL Mar-01 [3]
									Leachate Indicator Parameters:				
mg/L	280	289	NA	276	92.1	43.6	72	96.8	Alkalinity	---	mg/L	282	388
mg/L	10	<10.0	NA	<10	<10.0	<10.0	<10.0	<10	Chemical Oxygen Demand	---	mg/L	45	51.3
mg/L	282	282	NA	292	59.9	75.8	95.9	136	Total Hardness	---	mg/L	215	348
mg/L	<1.0	<1.0	NA	<1.0	23.9	8.8	3.7	3.4	Total Kjeldhal Nitrogen	---	mg/L	29.5	34.4
									TAL Metals:				
ug/L	NA	61.5 B N	NA	NA	NA	591 N	NA	NA	Aluminum	---	ug/L	NA	17600 N
ug/L	<5.5 N	<4.7	NA	<4.7	<5.5 N	<4.7	<4.7	<4.7	Antimony	3	ug/L	<5.5 N	<4.7
ug/L	<1.8	<2.2	NA	<2.2	2.6 B	2.6 B	<2.2	2.4 B	Arsenic	25	ug/L	10.0 B	13.4
ug/L	NA	6.0 B	NA	NA	NA	43.4 B	NA	NA	Barium	1000	ug/L	NA	187 B
ug/L	NA	<0.20	NA	NA	NA	0.32 B	NA	NA	Beryllium	3	ug/L	NA	1.1 B
ug/L	<3.1	<0.30	NA	<0.3	<3.1	0.40 B	0.91 B	<0.3	Cadmium	5	ug/L	<3.1	1.2 B
ug/L	NA	83400	NA	NA	NA	21700	NA	NA	Calcium	---	ug/L	NA	89600
ug/L	<0.90	<0.90	NA	2.3 B	8.8 B	25.8	6.55 B	20.6	Chromium	50	ug/L	22.9	49.9
ug/L	NA	<1.6	NA	NA	NA	16.3 B	NA	NA	Cobalt	---	ug/L	NA	34.4 B
ug/L	4.9 B	<1.6	NA	7.1 B	11.7 B	5.3 B	3.3 B	5.9 B	Copper	200	ug/L	30.4	53.8
ug/L	**310 E**	213 N	NA	22.2 BE	**4450 E**	**6020 N**	**2460**	**4600 E**	Iron	300 [1]	ug/L	**26400 E**	**47600 N**
ug/L	<1.7	<2.0	NA	<2.0	<1.7	<2.0	<2.0	<2.0	Lead	25	ug/L	3.6	6.8
ug/L	NA	17800	NA	NA	NA	5250	NA	NA	Magnesium	35000 GV	ug/L	NA	30300
ug/L	**360**	**379 N**	NA	**375**	**2410**	**6760 N**	**5800**	**6340**	Manganese	300 [1]	ug/L	**2560**	**3430 N**
ug/L	<0.20	<0.20	NA	<0.2 N	<0.20	<0.20	<0.2	<0.2 N	Mercury	0.7	ug/L	<0.20	<0.20
ug/L	NA	2.2 B	NA	NA	NA	19.4 B	NA	NA	Nickel	100	ug/L	NA	40.4
ug/L	NA	2750 B E	NA	NA	NA	3300 B E	NA	NA	Potassium	---	ug/L	NA	<42000
ug/L	NA	<2.2 W	NA	NA	NA	<2.2	NA	NA	Selenium	10	ug/L	NA	<1.0 W
ug/L	NA	2.5 B	NA	NA	NA	4.1 B	NA	NA	Silver	50	ug/L	NA	10.5
ug/L	NA	11300	NA	NA	NA	14200	NA	NA	Sodium	20000	ug/L	NA	**90500**
ug/L	NA	<2.7	NA	NA	NA	<2.7	NA	NA	Thallium	0.5 GV	ug/L	NA	<2.7
ug/L	NA	<1.5	NA	NA	NA	1.8 B	NA	NA	Vanadium	---	ug/L	NA	38.1 B
ug/L	<6.1	2.0 B	NA	<0.8	12.4 B	16.1 B	27.1	5.4 B	Zinc	2000 GV	ug/L	37.4	67.6
									VOCs by EPA Method 601:				
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chlorobenzene	5	ug/L	NA	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroethane	5	ug/L	NA	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroform	7	ug/L	NA	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Dichlorodifluoromethane	5	ug/L	NA	<1
ug/L	<1	<1	NA	<1	<1	<1	<1	<1	1,1-Dichloroethane	5	ug/L	<1	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	ug/L	NA	<1
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	1,1,1-Trichloroethane	5	ug/L	NA	<1
									VOCs by EPA Method 602:				
µg/L	<1	<1	NA	<1	<1	<1	<1	<1	Benzene	1	µg/L	<1	<1
µg/L	<1	<1	NA	<1	<1	<1	<1	<1	Chlorobenzene	5	µg/L	1.2	1
µg/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	µg/L	NA	<1

ter Quality Standards and Guidance Values, T.O.G.S. 1.1.1 (June 1998).
ater standard for the sum of Iron and Manganese concentrations is 500 µg/L.
zed for "Baseline Parameters".
zed for "Routine" and "Site-Related Parameters".
000 - A blind field duplicate sample was collected from sample location 8-OS, and labeled "10-OS".
esults of sample 10-OS are included in the laboratory report, and the highest values reported
atory for samples 8-OS and 10-OS are reported for sample location 8-OS in this Table.

Detected
Analyzed
the compound was analyzed for but not detected at the detection limit listed.
the duplicate analysis was not within laboratory control limits.
estimated value for tentatively identified compounds.
le recovery not within control limits
value is less than the Contract Required Detection Limit (CRDL),
than the Instrument Detection Limit.
estimated value because of the possible presence of interference.
estimated value because of the possible presence of interference.

D indicate an exceedance of applicable water quality standards or guidance values.
other than those listed were detected.

NOTES:

[1] NYSDEC Water Quality Standards and Guidance Values, T.O
[2] The groundwater standard for the sum of Iron and Manganese
[3] Sample analyzed for "Baseline Parameters".
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TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING RESULTS
ANALYTICAL RESULTS

.L 8-I		WELL 8-R							WELL 9-OS				
Jul-01 [4]	Oct-01 [4]	Dec-00 [4]	Mar-01 [3]	Jul-01 [4]	Oct-01 [4]		ARARs [1]	UNITS	Jan-01 [4]	Mar-01 [3] [5]	Jul-01 [4]	Oct-01 [4]	Jan-01 [4]
						Leachate Indicator Parameters:							
264	216	537	455	496	527	Alkalinity	---	mg/L	19.6	13.9	11	196	13.7
19.6	<10	30	30.8	19.6	24.4	Chemical Oxygen Demand	---	mg/L	10	<10.0	<10.0	<10	<10.0
199	140	540	530	578	634	Total Hardness	---	mg/L	24.4	22.4	<2.5	36.2	25.9
29.8	26.3	11.6	5.7	5.7	10.7	Total Kjeldhal Nitrogen	---	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0
						TAL Metals:							
NA	NA	NA	483 N	NA	NA	Aluminum	---	ug/L	NA	2310 N	NA	NA	NA
<4.7	<4.7	<5.5 N	<4.7	<4.7	<4.7	Antimony	3	ug/L	<4.7	<4.7	<4.7	<4.7	<4.7
10.5	6.9 B	<1.8	<2.2	<2.2	<2.2	Arsenic	25	ug/L	<2.2	<2.2	<2.2	<2.2	<2.2
NA	NA	NA	35.3 B	NA	NA	Barium	1000	ug/L	NA	25.2 B	NA	NA	NA
NA	NA	NA	<0.20	NA	NA	Beryllium	3	ug/L	NA	0.42 B	NA	NA	NA
0.68 B	<0.3	<3.1	0.35 B	<0.30	<0.3	Cadmium	5	ug/L	0.81 B	0.42 B	<0.30	<0.3	<0.30
NA	NA	NA	148000	NA	NA	Calcium	---	ug/L	NA	5620	NA	NA	NA
19.9	2.3 B	3.6 B	7.7 B	5.56 B	3.9 B	Chromium	50	ug/L	20.1	17	<0.90	17.4	4.1 B
NA	NA	NA	16.0 B	NA	NA	Cobalt	---	ug/L	NA	2.0 B	NA	NA	NA
20.3 B	<1.6	26.2	29.9	9.5 B	4.6 B	Copper	200	ug/L	6.3 B	4.3 B	2.4 B	8.9 B	3.4 B
27600	**6560 E**	**2580 E**	**2500 N**	**1680**	**1770 E**	Iron	300 [1]	ug/L	**2640**	**3660 N**	<2.8	**3780 E**	**2570**
3.3	<2.0	<1.7	<2.0	<2.0	2.2 B	Lead	25	ug/L	4.3	<2.0	6	<2.0	<2.0
NA	NA	NA	**39300**	NA	NA	Magnesium	35000 GV	ug/L	NA	2090 B	NA	NA	NA
2990	**1760**	**2120**	**2250 N**	**2640**	**2060**	Manganese	300 [1]	ug/L	58.9	93.2 N	<0.60	77.6	49.2
<0.2	<0.2 N	<0.20	<0.20	<0.2	<0.2 N	Mercury	0.7	ug/L	<0.20	<0.20	<0.2	<0.2 N	<0.20
NA	NA	NA	22.6 B	NA	NA	Nickel	100	ug/L	NA	4.7 B	NA	NA	NA
NA	NA	NA	13600 E	NA	NA	Potassium	---	ug/L	NA	1360 B E	NA	NA	NA
NA	NA	NA	<2.2 W	NA	NA	Selenium	10	ug/L	NA	<2.2	NA	NA	NA
NA	NA	NA	4.2 B	NA	NA	Silver	50	ug/L	NA	2.4 B	NA	NA	NA
NA	NA	NA	**52400**	NA	NA	Sodium	20000	ug/L	NA	3670 B	NA	NA	NA
NA	NA	NA	<2.7	NA	NA	Thallium	0.5 GV	ug/L	NA	<2.7	NA	NA	NA
NA	NA	NA	1.8 B	NA	NA	Vanadium	---	ug/L	NA	4.9 B	NA	NA	NA
21.1	<0.8	<6.1	2.6 B	<0.80	<0.8	Zinc	2000 GV	ug/L	7.7 B	64	<0.80	15.6 B	3.7 B
						VOCs by EPA Method 601:							
NA	NA	NA	<1	NA	NA	Chlorobenzene	5	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	1.9	NA	NA	Chloroethane	5	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	Chloroform	7	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	Dichlorodifluoromethane	5	ug/L	NA	<1	NA	NA	NA
<1	<1	<1	0.5 J	<1	<1	1,1-Dichloroethane	5	ug/L	<1	<1	<1	<1	<1
NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	1,1,1-Trichloroethane	5	ug/L	NA	<1	NA	NA	NA
						VOCs by EPA Method 602:							
<1	<1	<1	<1	<1	<1	Benzene	1	µg/L	<1	<1	<1	<1	<1
<1	1.2	<1	<1	<1	0.59 J	Chlorobenzene	5	µg/L	<1	<1	<1	<1	<1
NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	µg/L	NA	<1	NA	NA	NA

).G.S. 1.1.1 (June 1998).
: concentrations is 500 µg/L.

d at the detection limit listed.
control limits.
nds.
on Limit (CRDL), but greater than the Instrument Detection Limit.
ference.
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uality standards or guidance values.

NOTES:

[1] NYSDEC Water Quality Standards and Guidance Values, T.O.G.S. 1.1.1 (June 1998).
[2] The groundwater standard for the sum of Iron and Manganese concentrations is 500 µg/L.
[3] Sample analyzed for "Baseline Parameters".
[4] Sample analyzed for "Routine" and "Site-Related Parameters".
[5] March 2001 - A blind field duplicate sample was collected from sample location 9-OS, and labeled "10-OS". Analytical results of sample 10-OS are included in the laboratory report, and the highest values reported by the laboratory for samples 9-OS and 10-OS are reported for sample location 9-OS in this Table.

ND Denotes Not Detected
NA Denotes Not Analyzed
< Denotes that the compound was analyzed for but not detected at the detection limit listed.
* Indicates that the duplicate analysis was not within laboratory control limits.
J Indicates an estimated value for tentatively identified compounds.
B The reported value is less than the Contract Required Detection Limit (CRDL), but greater than the Instrument
E Indicates an estimated value because of the possible presence of interference.
W Indicates an estimated value because of the possible presence of interference.
N Spiked sample recovery not within control limits

Values in **BOLD** indicate an exceedance of applicable water quality standards or guidance values.
No other VOCs other than those listed were detected.

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING RESULTS
ANALYTICAL RESULTS

WELL 9-I						WELL 9-R			
Mar-01 [3]	Jul-01 [4]	Oct-01 [4]		ARARs [1]	UNITS	Jan-01 [4]	Mar-01 [3]	Jul-01 [4] [5]	Oct-01 [4]
			Leachate Indicator Parameters:						
9.9	20	20.6	Alkalinity	---	mg/L	182	139	143	126
<10.0	<10.0	<10	Chemical Oxygen Demand	---	mg/L	25	10.3	14.7	<10
47.7	28.6	34.5	Total Hardness	---	mg/L	124	110	117	123
<1.0	<1.0	<1.0	Total Kjeldhal Nitrogen	---	mg/L	12.4	9.9	11	9.1
			TAL Metals:						
12700 N	NA	NA	Aluminum	---	ug/L	NA	368 N	NA	NA
<4.7	<4.7	<4.7	Antimony	3	ug/L	<4.7	<4.7	<4.7	<4.7
5.8 B	<2.2	<2.2	Arsenic	25	ug/L	3.0 B	6.3 B	3.7 B	4 B
158 B	NA	NA	Barium	1000	ug/L	NA	34.2 B	NA	NA
1.2 B	NA	NA	Beryllium	3	ug/L	NA	0.87 B	NA	NA
0.90 B	<0.30	<0.3	Cadmium	5	ug/L	0.88 B	1.7 B	0.37 B	<0.3
9840	NA	NA	Calcium	---	ug/L	NA	27900	NA	NA
28.8	2.35 B	1.2 B	Chromium	50	ug/L	2.4 B	4.1 B	1.12 B	1.9 B
29.0 B	NA	NA	Cobalt	---	ug/L	NA	4.9 B	NA	NA
29.5	3.4 B	4 B	Copper	200	ug/L	2.7 B	3.1 B	4.3 B	<1.6
24000 N	**2350**	145 E	Iron	300 [1]	ug/L	**8280**	**8080 N**	**8320**	**8150 E**
4.6	<2.0	<2.0	Lead	25	ug/L	<2.0	2.2 B	<2.0	<2.0
5640	NA	NA	Magnesium	35000 GV	ug/L	NA	9850	NA	NA
561 N	38	4.9 B	Manganese	300 [1]	ug/L	**3100**	**2860 N**	**2960**	**3080**
<0.20	<0.2	<0.2 N	Mercury	0.7	ug/L	<0.20	<0.20	<0.2	<0.2
18.2 B	NA	NA	Nickel	100	ug/L	NA	5.7 B	NA	NA
4580 B E	NA	NA	Potassium	---	ug/L	NA	18000 E	NA	NA
<2.2 W	NA	NA	Selenium	10	ug/L	NA	<2.2 W	NA	NA
7.0 B	NA	NA	Silver	50	ug/L	NA	2.3 B	NA	NA
4950 B	NA	NA	Sodium	20000	ug/L	NA	**27500**	NA	NA
<2.7	NA	NA	Thallium	0.5 GV	ug/L	NA	<2.7	NA	NA
23.2 B	NA	NA	Vanadium	---	ug/L	NA	2.2 B	NA	NA
39.5	10.6 B	<0.8	Zinc	2000 GV	ug/L	5.8 B	14.4 B	<0.80	<0.8
			VOCs by EPA Method 601:						
<1	NA	NA	Chlorobenzene	5	ug/L	NA	<1	NA	NA
<1	NA	NA	Chloroethane	5	ug/L	NA	<1	NA	NA
<1	NA	NA	Chloroform	7	ug/L	NA	<1	NA	NA
<1	NA	NA	Dichlorodifluoromethane	5	ug/L	NA	<1	NA	NA
<1	<1	<1	1,1-Dichloroethane	5	ug/L	<1	<1	<1	<1
<1	NA	NA	1,4-Dichlorobenzene	3	ug/L	NA	<1	NA	NA
<1	NA	NA	1,1,1-Trichloroethane	5	ug/L	NA	<1	NA	NA
			VOCs by EPA Method 602:						
<1	<1	<1	Benzene	1	µg/L	<1	<1	<1	<1
<1	<1	<1	Chlorobenzene	5	µg/L	<1	<1	<1	0.54 J
<1	NA	NA	1,4-Dichlorobenzene	3	µg/L	NA	<1	NA	NA

NOTES:

[1] NYSDEC Water Quality Standards and Guidance Values, T.O.G.S. 1.1.1 (June 1998).
[2] The groundwater standard for the sum of Iron and Manganese concentrations is 500 µg/L.
[3] Sample analyzed for "Baseline Parameters".
[4] Sample analyzed for "Routine" and "Site-Related Parameters".
[5] July 2001 - A blind field duplicate sample was collected from sample location 9-R, and labeled "10-R". Analytical results of sample 10-R are included in the laboratory report, and the highest values reported by the laboratory for samples 9-R and 10-R are reported for sample location 9-R in this Table.

ND Denotes Not Detected
NA Denotes Not Analyzed
< Denotes that the compound was analyzed for but not detected at the detection limit listed.
* Indicates that the duplicate analysis was not within laboratory control limits.
J Indicates an estimated value for tentatively identified compounds.
B The reported value is less than the Contract Required Detection Limit (CRDL), but greater than the Instrument Detection Limit.
E Indicates an estimated value because of the possible presence of interference.
N Spiked sample recovery not within control limits
W Indicates an estimated value because of the possible presence of interference.

Values in **BOLD** indicate an exceedance of applicable water quality standards or guidance values.
No other VOCs other than those listed were detected.

t Detection Limit.

	ARARs [1]
Leachate Indicator Parameters:	
Alkalinity	---
Chemical Oxygen Demand	---
Total Hardness	---
Total Kjeldhal Nitrogen	---
TAL Metals:	
Aluminum	---
Antimony	3
Arsenic	25
Barium	1000
Beryllium	3
Cadmium	5
Calcium	---
Chromium	50
Cobalt	---
Copper	200
Iron	300 [1]
Lead	25
Magnesium	35000 GV
Manganese	300 [1]
Mercury	0.7
Nickel	100
Potassium	---
Selenium	10
Silver	50
Sodium	20000
Thallium	0.5 GV
Vanadium	---
Zinc	2000 GV
VOCs by EPA Method 601:	
Chlorobenzene	5
Chloroethane	5
Chloroform	7
Dichlorodifluoromethane	5
1,1-Dichloroethane	5
1,4-Dichlorobenzene	3
1,1,1-Trichloroethane	5
VOCs by EPA Method 602:	
Benzene	1
Chlorobenzene	5
1,4-Dichlorobenzene	3

NOTES:
[1] NYSDEC Wat
[2] The groundwa
[3] Sample analy
[4] Sample analy
[5] October 2001
Analytical re
by the labor

ND Denotes Not
NA Denotes Not
< Denotes that
* Indicates that
J Indicates an e
B The reported
E Indicates an e
W Indicates an e
N Spiked sampl

Values in **BOL**
No other VOCs

TABLE 2 (Continued)

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING RESULTS
ANALYTICAL RESULTS

UNITS	WELL PW-1 Jan-01 [4]	WELL PW-1 Mar-01 [4]	WELL PW-1 Jul-01 [4]	WELL PW-1 Oct-01 [4] [5]	WELL PW-2 Dec-00 [4]	WELL PW-2 Mar-01 [4]	WELL PW-2 Jul-01 [4]	WELL PW-2 Oct-01 [4]		ARARs [1]
									Leachate Indicator Parameters:	
mg/L	17.6	15.8	33	43.3	68.6	69.3	60	80.3	Alkalinity	---
mg/L	15	<10.0	<10.0	<10	<10.0	<10.0	<10.0	<10	Chemical Oxygen Demand	---
mg/L	32.1	35.2	39.5	39.7	104	106	111	127	Total Hardness	---
mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	Total Kjeldhal Nitrogen	---
									TAL Metals:	
ug/L	NA	<10.4	NA	NA	NA	<10.4	NA	NA	Aluminum	---
ug/L	<4.7	<4.7	<4.7	<4.7	<5.5 N	<4.7	<4.7	<4.7	Antimony	3
ug/L	<2.2	<2.2	<2.2	<2.2	<1.8	<2.2	<2.2	<2.2	Arsenic	25
ug/L	NA	5.6 B	NA	NA	NA	1.5 B	NA	NA	Barium	1000
ug/L	NA	<0.20	NA	NA	NA	<0.20	NA	NA	Beryllium	3
ug/L	<3.0	<0.30	<0.30	<0.3	<3.1	<0.30	<0.30	<0.3	Cadmium	5
ug/L	NA	9530	NA	NA	NA	35600	NA	NA	Calcium	---
ug/L	<0.90	<0.90	<0.90	1.2 B	<0.90	<0.90	<0.90	1.8 B	Chromium	50
ug/L	NA	<1.6	NA	NA	NA	<1.6	NA	NA	Cobalt	---
ug/L	52.7	59.1	53.6	64.9	19.4 B	7.2 B	21.3 B	80.6	Copper	200
ug/L	4.5 B	15.3 B	**561**	15.8 BE	62.0 B, E	10.8 B	25.7 B	59.1 BE	Iron	300 [1]
ug/L	4.1	2.3 B	<2.0	2.9 B	<1.7	<2.0	<2.0	4 B	Lead	25
ug/L	NA	2780 B	NA	NA	NA	4190 B	NA	NA	Magnesium	35000 GV
ug/L	1.4 B	13.6 B	4.35 B	<2.2	3.9 B	6.0 B	1.96 B	4.7 B	Manganese	300 [1]
ug/L	<0.20	<0.20	<0.2	<0.2	<0.20	<0.20	<0.2	<0.2	Mercury	0.7
ug/L	NA	<1.7	NA	NA	NA	<1.7	NA	NA	Nickel	100
ug/L	NA	972 B E	NA	NA	NA	1300 B E	NA	NA	Potassium	---
ug/L	NA	<2.2	NA	NA	NA	<2.2	NA	NA	Selenium	10
ug/L	NA	<1.8	NA	NA	NA	2.8 B	NA	NA	Silver	50
ug/L	NA	6130	NA	NA	NA	9330	NA	NA	Sodium	20000
ug/L	NA	<2.7	NA	NA	NA	<2.7	NA	NA	Thallium	0.5 GV
ug/L	NA	<1.5	NA	NA	NA	<1.5	NA	NA	Vanadium	---
ug/L	74.6	54.8	15 B	9 B	148	63.1	7.28 B	27	Zinc	2000 GV
									VOCs by EPA Method 601:	
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chlorobenzene	5
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroethane	5
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Chloroform	7
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	Dichlorodifluoromethane	5
ug/L	<1	<1	<1	<1	<1	<1	<1	<1	1,1-Dichloroethane	5
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3
ug/L	NA	<1	NA	NA	NA	<1	NA	NA	1,1,1-Trichloroethane	5
									VOCs by EPA Method 602:	
µg/L	<1	<1	<1	<1	<1	<1	<1	<1	Benzene	1
µg/L	<1	<1	<1	<1	<1	<1	<1	<1	Chlorobenzene	5
µg/L	NA	<1	NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3

ter Quality Standards and Guidance Values, T.O.G.S. 1.1.1 (June 1998).
ater standard for the sum of Iron and Manganese concentrations is 500 µg/L.
rzed for "Baseline Parameters".
rzed for "Routine" and "Site-Related Parameters".
- A blind field duplicate sample was collected from sample location PW-1, and labeled "10-OS".
esults of sample 10-OS are included in the laboratory report, and the highest values reported
atory for samples PW-1 and 10-OS are reported for sample location PW-1 in this Table.

Detected
Analyzed
the compound was analyzed for but not detected at the detection limit listed.
: the duplicate analysis was not within laboratory control limits.
estimated value for tentatively identified compounds.
value is less than the Contract Required Detection Limit (CRDL), but greater than the Instrument Detection Limit.
estimated value because of the possible presence of interference.
estimated value because of the possible presence of interference.
le recovery not within control limits

D indicate an exceedance of applicable water quality standards or guidance values.
other than those listed were detected.

TABLE 2 (C

TOWN OF RAMA
POST-CLOSURE GROUNDWATER C
ANALYTICAL

UNITS	SVW Dec-00 [4]	SVW Apr-01 [3]
mg/L	45.1	31.7
mg/L	<10.0	15.4
mg/L	74.2	82.9
mg/L	<1.0	<1.0
ug/L	NA	<10.4
ug/L	<5.5 N	<4.7
ug/L	<1.8	<2.2
ug/L	NA	6.9 B
ug/L	NA	<0.20
ug/L	<3.1	<0.30
ug/L	NA	231000
ug/L	1.4 B	<0.90
ug/L	NA	<1.6
ug/L	10.3 B	1.7 B
ug/L	36.5 B, E	62.4 B
ug/L	<1.7	<2.0
ug/L	NA	6120
ug/L	<0.70	2.2 B
ug/L	<0.20	<0.20
ug/L	NA	<1.7
ug/L	NA	1780 B E
ug/L	NA	<2.2
ug/L	NA	2.5 B
ug/L	NA	**36000**
ug/L	NA	<2.7
ug/L	NA	<1.5
ug/L	8.4 B	7.2 B
ug/L	NA	<1
ug/L	NA	<1
ug/L	NA	<1
ug/L	NA	<1
ug/L	<1	<1
ug/L	NA	<1
ug/L	NA	<1
µg/L	<1	<1
µg/L	<1	<1
µg/L	NA	<1

NOTES:

[1] NYSDEC Water Quality Standards and Guidance Values, T.O
[2] The groundwater standard for the sum of Iron and Manganese
[3] Sample analyzed for "Baseline Parameters".
[4] Sample analyzed for "Routine" and "Site-Related Parameters"
[5] December 2000 - A blind field duplicate sample was collected
Analytical results of sample SVWC-99 are included in the lal
by the laboratory for samples SVWC-94 and SVWC-99 are r

ND Denotes Not Detected
NA Denotes Not Analyzed
< Denotes that the compound was analyzed for but not detected
* Indicates that the duplicate analysis was not within laboratory
J Indicates an estimated value for tentatively identified compour
B The reported value is less than the Contract Required Detectic
E Indicates an estimated value because of the possible presenc
W Indicates an estimated value because of the possible presenc
N Spiked sample recovery not within control limits

Values in **BOLD** indicate an exceedance of applicable water q
No other VOCs other than those listed were detected.

\PO LANDFILL
:UALITY MONITORING RESULTS
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TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER QUALITY MONITORING RESULTS
ANALYTICAL RESULTS

/C-93		SVWC-94							SVWC-95				
Jul-01 [4]	Oct-01	Dec-00 [4] [5]	Apr-01 [3]	Jul-01 [4]	Oct-01		ARARs [1]	UNITS	Dec-00 [4]	Apr-01 [3]	Jul-01 [4]	Oct-01	Dec-00 [4]
						Leachate Indicator Parameters:							
40	NA	51	41.6	44	NA	Alkalinity	---	mg/L	47	43.6	56	NA	43.1
<10.0	NA	20	15.4	<10.0	NA	Chemical Oxygen Demand	---	mg/L	<10.0	10.3	<10.0	NA	15
70.7	NA	76	85.8	80.6	NA	Total Hardness	---	mg/L	70	88.2	71.2	NA	61.2
<1.0	NA	<1.0	<1.0	<1.0	NA	Total Kjeldhal Nitrogen	---	mg/L	<1.0	<1.0	<1.0	NA	<1.0
						TAL Metals:							
NA	NA	NA	113 B	NA	NA	Aluminum	---	ug/L	NA	237	NA	NA	NA
<4.7	NA	<5.5 N	<4.7	<4.7	NA	Antimony	3	ug/L	<5.5 N	<4.7	<4.7	NA	<5.5 N
<2.2	NA	<1.8	<2.2	<2.2	NA	Arsenic	25	ug/L	<1.8	<2.2	<2.2	NA	<1.8
NA	NA	NA	109 B	NA	NA	Barium	1000	ug/L	NA	7.4 B	NA	NA	NA
NA	NA	NA	<0.20	NA	NA	Beryllium	3	ug/L	NA	<0.20	NA	NA	NA
<0.30	NA	<3.1	<0.30	<0.30	NA	Cadmium	5	ug/L	<3.1	<0.30	<0.30	NA	<3.1
NA	NA	NA	23900	NA	NA	Calcium	---	ug/L	NA	24100	NA	NA	NA
<0.90	NA	<0.90	<0.90	<0.90	NA	Chromium	50	ug/L	<0.90	<0.90	<0.90	NA	<0.90
NA	NA	NA	<1.6	NA	NA	Cobalt	---	ug/L	NA	<1.6	NA	NA	NA
3.9 B	NA	7.1 B	7.0 B	4.1 B	NA	Copper	200	ug/L	7.0 B	4.2 B	2.7 B	NA	17.8 B
29.1 B	NA	20.5 B, E	22.2 B	6.5 B	NA	Iron	300 [1]	ug/L	14.4 B, E	24.9 B	103	NA	52.9 B, E
<2.0	NA	<1.7	<2.0	<2.0	NA	Lead	25	ug/L	<1.7	<2.0	<2.0	NA	<1.7
NA	NA	NA	6360	NA	NA	Magnesium	35000 GV	ug/L	NA	6830	NA	NA	NA
<0.60	NA	9.6 B	4.7 B	2.67 B	NA	Manganese	300 [1]	ug/L	47.5	49.8	143	NA	<0.70
<0.2	NA	<0.20	<0.20	<0.2	NA	Mercury	0.7	ug/L	<0.20	<0.20	<0.2	NA	<0.20
NA	NA	NA	<1.7	NA	NA	Nickel	100	ug/L	NA	<1.7	NA	NA	NA
NA	NA	NA	1720 B E	NA	NA	Potassium	---	ug/L	NA	1800 B E	NA	NA	NA
NA	NA	NA	<2.2	NA	NA	Selenium	10	ug/L	NA	<2.2	NA	NA	NA
NA	NA	NA	2.9 B	NA	NA	Silver	50	ug/L	NA	2.3 B	NA	NA	NA
NA	NA	NA	**38700**	NA	NA	Sodium	20000	ug/L	NA	**38500**	NA	NA	NA
NA	NA	NA	<2.7	NA	NA	Thallium	0.5 GV	ug/L	NA	<2.7	NA	NA	NA
NA	NA	NA	<1.5	NA	NA	Vanadium	---	ug/L	NA	<1.5	NA	NA	NA
<0.80	NA	11.7 B	5.2 B	<0.80	NA	Zinc	2000 GV	ug/L	<6.1	6.5 B	<0.80	NA	19.3 B
						VOCs by EPA Method 601:							
NA	NA	NA	<1	NA	NA	Chlorobenzene	5	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	Chloroethane	5	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	Chloroform	7	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	Dichlorodifluoromethane	5	ug/L	NA	<1	NA	NA	NA
<1	NA	<1	<1	<1	NA	1,1-Dichloroethane	5	ug/L	<1	<1	<1	NA	<1
NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	ug/L	NA	<1	NA	NA	NA
NA	NA	NA	<1	NA	NA	1,1,1-Trichloroethane	5	ug/L	NA	<1	NA	NA	NA
						VOCs by EPA Method 602:							
<1	NA	<1	<1	<1	NA	Benzene	1	µg/L	<1	<1	<1	NA	<1
<1	NA	<1	<1	<1	NA	Chlorobenzene	5	µg/L	<1	<1	<1	NA	<1
NA	NA	NA	<1	NA	NA	1,4-Dichlorobenzene	3	µg/L	NA	<1	NA	NA	NA

).G.S. 1.1.1 (June 1998).
: concentrations is 500 µg/L.

.
l from sample location SVWC-94, and labeled "SVWC-99".
boratory report, and the highest values reported
reported for sample location SVWC-94 in this Table.

d at the detection limit listed.
control limits.
nds.
on Limit (CRDL), but greater than the Instrument Detection Limit.
:e of interference.
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uality standards or guidance values.

NOTES:

[1] NYSDEC Water Quality Standards and Guidance Values, T.O.G.S. 1.1.1 (June 1998).
[2] The groundwater standard for the sum of Iron and Manganese concentrations is 500 µg/L.
[3] Sample analyzed for "Baseline Parameters".
[4] Sample analyzed for "Routine" and "Site-Related Parameters".
[5] April 2001 - A blind field duplicate sample was collected from sample location SVWC-96 and labeled "SVWC-9
Analytical results of sample SVWC-97 are included in the laboratory report, and the highest values reported by the laboratory for samples SVWC-96 and SVWC-97 are reported for sample location SVWC-96 in this Tal

ND Denotes Not Detected
NA Denotes Not Analyzed
< Denotes that the compound was analyzed for but not detected at the detection limit listed.
* Indicates that the duplicate analysis was not within laboratory control limits.
J Indicates an estimated value for tentatively identified compounds.
B The reported value is less than the Contract Required Detection Limit (CRDL), but greater than the Instrument
E Indicates an estimated value because of the possible presence of interference.
W Indicates an estimated value because of the possible presence of interference.
N Spiked sample recovery not within control limits

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No other VOCs other than those listed were detected.

SVWC-96		
Apr-01 [3] [5]	Jul-01 [4]	Oct-01
37.6	42	NA
25.6	<10.0	NA
68.9	77	NA
<1.0	<1.0	NA
150 B	NA	NA
<4.7	<4.7	NA
<2.2	<2.2	NA
6.3 B	NA	NA
<0.20	NA	NA
<0.30	<0.30	NA
18500	NA	NA
<0.90	<0.90	NA
<1.6	NA	NA
2.8 B	4 B	NA
27.8 B	19.3 B	NA
<2.0	<2.0	NA
5550	NA	NA
<0.60	<0.60	NA
<0.20	<0.2	NA
<1.7	NA	NA
1380 B E	NA	NA
<2.2	NA	NA
2.6 B	NA	NA
35200	NA	NA
<2.7	NA	NA
<1.5	NA	NA
4.1 B	<0.80	NA
<1	NA	NA
<1	NA	NA
<1	NA	NA
<1	NA	NA
<1	<1	NA
<1	NA	NA
<1	NA	NA
<1	<1	NA
<1	<1	NA
<1	NA	NA

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)le.

Detection Limit.

2/5/02

TABLE 3A

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER MONITORING DATA
COMPOUND: Benzene

Sample ID	Sample Date																
	Jan-90	Sep-90	Jan-93	Apr-93	Sep-93	Dec-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Mar-96	Jun-96	Sep-96
1-OS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND
1-R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
2-OS	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	NA
2-R	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND
3-OS/I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND
3-R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND
4-OS	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND
4-R	1.0	1.0	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
5-OS	**2.0**	ND	ND	ND	NA	NA	NA	ND	NA	NA	NA	ND	NA	NA	ND	NA	NA
5-I	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	NA	ND	NA	NA	ND
5-R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND
7-OS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	NA	ND
7-R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND
8-OS	**2.0**	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8-I	**2.0**	**2.9**	NA	ND	ND	ND	ND	ND	ND	**2.0**	ND	ND	ND	**1.2**	1.0	**2.0**	**2.0**
8-R	**3.0**	0.4	ND	0.9	ND	ND	ND	ND	ND	ND	**2.0**	0.9	ND	0.65	ND	ND	ND
9-OS	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND
9-I	NA	0.2	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9-R	NA	0.9	ND	ND	ND	NA	ND	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND
PW-1	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PW-2	NA	NA	ND	ND	ND	NA	NA	NA	ND	ND	NA	0.5	ND	ND	ND	ND	ND
SVWC-93	NA	NA	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVWC-94	NA	NA	ND	ND	NA	NA	ND	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND
SVWC-95	NA	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVWC-96	NA	NA	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES: Concentrations reported in µg/L (ppb).
ND = Not Detected
NA = Not Analyzed
Values in **BOLD** indicate an exceedance of groundwater quality standard for Benzene, 1.0 µg/L.

TABLE 3A (Continued)

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER MONITORING DATA
COMPOUND: Benzene

Sample ID	Sample Date																
	Dec-96	Mar-97	Jun-97	Sep-97	Dec-97	Mar-98	Jun-98	Sep-98	Mar-99	Jun-99	Sep-99	May-00	Sep-00	Dec-00	Mar-01	Jul-01	Oct-01
1-OS	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
1-R	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
2-OS	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
2-R	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
3-OS/I	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
3-R	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
4-OS	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
4-R	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
5-OS	NA	ND	NA	NA	NA	NA	NA	NA	ND	NA	ND	ND	NA	ND	ND	NA	NA
5-I	NA	NA	NA	ND	NA	ND	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	ND
5-R	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
7-OS	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
7-R	NA	ND	NA	ND	NA	ND	NA	ND	ND	NA	ND	ND	NA	ND	ND	NA	ND
8-OS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8-I	**3.0**	ND	ND	**2.0**	ND	ND	ND	ND	NA	ND	ND	0.5 J	ND	ND	ND	ND	ND
8-R	ND	ND	ND	ND	**2.0**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9-OS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9-I	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9-R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PW-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PW-2	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SVWC-93	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	NA
SVWC-94	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	NA
SVWC-95	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	NA
SVWC-96	NA	NA	ND	ND	ND	ND	NA	ND	NA	ND	NA	ND	ND	ND	ND	ND	NA

NOTES: Concentrations reported in µg/L (ppb).
ND = Not Detected
NA = Not Analyzed
Values in **BOLD** indicate an exceedance of groundwater quality standard for Benzene, 1.0 µg/L.

2/25/02

TABLE 3B

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER MONITORING DATA
COMPOUND: Chromium

Sample ID	Sample Date																
	Jan-90	Sep-90	Jan-93	Apr-93	Sep-93	Dec-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Mar-96	Jun-96	Sep-96
1-OS	**153**	**57.3**	8	ND	**60**	**257**	**65.5**	7.2	**284**	**134**	**727**	17	**102**	**70.5**	**127**	NA	**102**
1-R	39.7	17.5	ND	ND	**84.9**	46.8	10.3	ND	39.3	**58.3**	**146**	49.5	**136**	42.8	**133**	NA	**176**
2-OS	**180**	**141**	NA	ND	**50.2**	**95.9**	11.8	**89.3**	45.9	25.1	39.7	34.1	**137**	**50.3**	**83.6**	NA	NA
2-R	16.1	5.5	NA	ND	14.8	6.1	ND	5.1	8.3	4.9	4.4	ND	5	5.7	ND	NA	20.7
3-OS/I	**587**	**1290**	**807**	40.4	**1350**	**1100**	**784**	**304**	**561**	**1020**	**144**	**406**	**589**	**253**	**372**	NA	29.7
3-R	28	11.4	ND	ND	ND	14.7	10.5	17.8	4.8	4.9	3.6	2	10.3	7	ND	NA	24.2
4-OS	**139**	40.1	5.8	ND	10.8	11.2	15.1	25.4	23.1	**53.1**	21.1	ND	38.8	12.2	11	NA	6.2
4-R	35.5	13.1	ND	8.8	ND	5.9	4.4	ND	13.3	2	2.5	ND	9	5.8	ND	NA	1.8
5-OS	**90**	35.6	48.8	ND	NA	NA	NA	NA	NA	NA	NA	39	NA	NA	**216**	NA	NA
5-I	NA	NA	NA	NA	NA	**80**	30.2	7.2	40	**63.1**	**109**	NA	17.4	22.4	NA	NA	8
5-R	27.4	29.3	6.8	ND	ND	8.6	13.8	6.3	**52.3**	**105**	19.9	7.9	22.9	27.9	10.1	NA	7.2
7-OS	33.5	40.1	24.2	13	**1890**	**218**	31	**210**	**571**	**258**	**324**	NA	NA	37	**125**	NA	4.4
7-R	16.2	16.8	ND	ND	ND	ND	ND	5.3	8.6	3.4	2.8	12.4	13.4	9.2	ND	NA	3.4
8-OS	34.8	16.7	ND	ND	ND	7.6	**86.6**	28.7	13.2	4.2	**129**	40.4	13.9	7.2	**62.2**	35.8	15.9
8-I	**215**	32.5	NA	ND	ND	ND	29	17	12.8	8.4	8	3.4	24.1	29.2	12.3	26.2	17.4
8-R	20	23.1	9.9	ND	17.7	18.2	7.5	17	10.4	6.8	6.3	10.1	13.4	8.5	6.7	23.8	20.4
9-OS	NA	6.8	ND	ND	ND	ND	22.9	27.1	14.8	2.9	6.6	7.6	NA	NA	9.8	11.2	5.2
9-I	NA	8.1	NA	NA	NA	NA	28	ND	2.4	5.8	3.9	8	34.6	25.3	8.1	11.4	4.8
9-R	NA	8.8	3.9	16.4	16.7	11.6	35.4	48.2	29.9	10.5	16.9	26.5	**66.7**	45.4	43.8	12.8	23.8
PW-1	NA	ND	ND	ND	ND	ND	ND	ND	0.6	ND	0.8	ND	ND	ND	ND	ND	0.43
PW-2	NA	ND	ND	ND	ND	4.9	NA	ND	ND	ND	NA	ND	ND	ND	ND	0.94	ND
SVWC-93	NA	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	0.89
SVWC-94	NA	NA	ND	ND	NA	NA	ND	ND	ND	0.97	ND	ND	NA	ND	ND	ND	ND
SVWC-95	NA	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND
SVWC-96	NA	NA	ND	ND	NA	ND	ND	ND	ND	0.87	ND	1.7	NA	ND	ND	ND	1.3

NOTES: Concentrations reported in µg/L (ppb).
ND = Not Detected
NA = Not Analyzed
Values in **BOLD** indicate an exceedance of groundwater quality standard for Chromium, 50 µg/L.

TABLE 3B (Continued)

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER MONITORING DATA
COMPOUND: Chromium

Sample ID	Sample Date																
	Dec-96	Mar-97	Jun-97	Sep-97	Dec-97	Mar-98	Jun-98	Sep-98	Mar-99	Jun-99	Sep-99	May-00	Sep-00	Dec-00	Mar-01	Jul-01	Oct-01
1-OS	NA	**88**	NA	**220**	NA	**1180**	NA	**52.1**	**496**	NA	**1850**	**2100**	NA	**405**	**253**	NA	20.6
1-R	NA	**200**	NA	ND	NA	37.1	NA	41.7	39.8	NA	**73.4**	**58.6**	NA	9.8	**119**	NA	47.1
2-OS	NA	ND	NA	ND	NA	**241**	NA	**121**	13.6	NA	**285**	**415**	NA	**120**	**128**	NA	**87.1**
2-R	NA	**160**	NA	**50**	NA	**53.5**	NA	**59.6**	**75.6**	NA	ND	4	NA	4.7	ND	NA	3.9
3-OS/I	NA	25	NA	**190**	NA	**433**	NA	**804**	**270**	NA	**321**	**687**	NA	453	**522**	NA	**467**
3-R	NA	27	NA	ND	NA	20.7	NA	12.8	**73**	NA	**75.7**	**51.2**	NA	**213**	**124**	NA	12.7
4-OS	NA	ND	NA	ND	NA	34.7	NA	8.6	2.2	NA	**87.7**	36.8	NA	17.9	13.2	NA	4
4-R	NA	ND	NA	ND	NA	2.7	NA	7.7	0.78	NA	ND	ND	NA	ND	ND	NA	2.2
5-OS	NA	19	NA	NA	NA	NA	NA	NA	15.3	NA	NA	**69.3**	NA	**165**	38.6	NA	NA
5-I	NA	NA	NA	ND	NA	2.3	NA	9.6	NA	NA	10.6	NA	NA	NA	NA	NA	3.3
5-R	NA	10	NA	ND	NA	ND	NA	2.5	4.4	NA	2.7	14.7	NA	7.2	3.9	NA	3.3
7-OS	NA	41	NA	**60**	NA	**188**	NA	**96.2**	48.1	NA	**59.2**	**200**	NA	34.7	**51.9**	NA	48.4
7-R	NA	ND	NA	ND	NA	ND	NA	3.4	1.6	NA	ND	ND	NA	ND	ND	NA	2.3
8-OS	20	ND	ND	ND	ND	4	9.6	4.5	**79.4**	20.2	31	30.1	16.9	8.8	25.8	6.55	20.6
8-I	**110**	17	10	ND	20	4.6	4.8	**55.6**	NA	**56.8**	ND	10	17.3	22.9	49.9	19.9	2.3
8-R	ND	ND	20	20	ND	ND	5.2	6.3	3.4	2	ND	1.1	2.2	3.6	7.7	5.56	3.9
9-OS	ND	ND	10	ND	ND	ND	2.3	0.64	9.8	1.1	ND	34.5	7.4	20.1	17	ND	17.4
9-I	ND	ND	ND	ND	ND	1.7	8	2.8	1.7	6.8	ND	10.8	5.0	4.1	28.8	2.35	1.2
9-R	**90**	ND	20	ND	ND	15.2	1.9	23.4	8.5	15	47.3	3	1.6	2.4	4.1	1.12	1.9
PW-1	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.75	ND	ND	ND	ND	1.2
PW-2	ND	ND	ND	ND	ND	ND	ND	ND	0.69	ND	ND	ND	ND	ND	ND	ND	1.8
SVWC-93	ND	ND	ND	ND	ND	ND	ND	0.78	NA	ND	NA	ND	ND	1.4	ND	ND	NA
SVWC-94	ND	ND	ND	ND	NA	ND	ND	ND	NA	ND	NA	0.53	ND	ND	ND	ND	NA
SVWC-95	ND	ND	ND	ND	NA	ND	ND	0.96	NA	ND	NA	ND	ND	ND	ND	ND	NA
SVWC-96	NA	NA	ND	ND	ND	ND	NA	ND	NA	ND	NA	ND	ND	ND	ND	ND	NA

NOTES: Concentrations reported in µg/L (ppb).
ND = Not Detected
NA = Not Analyzed
Values in **BOLD** indicate an exceedance of groundwater quality standard for Chromium, 50 µg/L.

TABLE 3C

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER MONITORING DATA
COMPOUND: Iron

Sample ID	Sample Date																
	Jan-90	Sep-90	Jan-93	Apr-93	Sep-93	Dec-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Mar-96	Jun-96	Sep-96
1-OS	**45000**	**17500**	**1870**	**884**	**32300**	**162000**	**12200**	69.6	**4950**	**47700**	**5970**	**2820**	**27900**	**23400**	**21700**	NA	**48000**
1-R	**1180**	**2650**	**395**	197	**1940**	**1210**	186	**70600**	**830**	**1710**	**1430**	**1080**	**2750**	**1050**	**3240**	NA	**1910**
2-OS	**912**	**41800**	NA	186	**11800**	**9800**	**946**	**5080**	**14700**	**4120**	**1310**	**1730**	**24300**	**5660**	**1770**	NA	NA
2-R	**409**	**602**	NA	**674**	**1120**	**1450**	187	83.1	248	**363**	259	**369**	**541**	**822**	189	NA	**6920**
3-OS/I	**6830**	**9750**	**5110**	**333**	**21300**	**37900**	**19400**	**29900**	**14400**	**37500**	**54600**	**16600**	**31400**	**3710**	**7750**	NA	**303**
3-R	**1930**	**1370**	**11500**	**2940**	**3280**	**4800**	**1970**	**2090**	**2440**	**1730**	**1260**	**1450**	**3100**	**1330**	**1060**	NA	**4200**
4-OS	**15600**	**12400**	**529**	**520**	**5560**	**10600**	**5720**	**17600**	**16900**	**15200**	**6110**	**3010**	**28600**	**7460**	**7470**	NA	**1300**
4-R	**8230**	**5290**	**3520**	**4920**	**3100**	**5290**	**4790**	**4020**	**6850**	**5100**	**5650**	**5590**	**6320**	**4880**	**4910**	NA	**3970**
5-OS	**27000**	**11200**	**11100**	**4700**	NA	NA	NA	NA	NA	NA	NA	**17100**	NA	NA	**60000**	NA	NA
5-I	NA	NA	NA	NA	NA	**2030**	**2080**	**2380**	**8990**	**30700**	**56200**	NA	**2200**	**1870**	NA	NA	**2170**
5-R	**658**	**368**	**620**	**2310**	**751**	243	**742**	71.2	**21400**	**64000**	**11300**	**2260**	**1620**	**1120**	**434**	NA	197
7-OS	**981**	**24500**	**1250**	**521**	**619000**	**2200**	**2340**	**15600**	**14500**	**14400**	**12200**	NA	NA	**1870**	**11400**	NA	**305**
7-R	ND	**1940**	31.5	56.6	**989**	**600**	**762**	226	**681**	270	**485**	**886**	**717**	**794**	**363**	NA	54.2
8-OS	**229000**	**43800**	**3230**	**2080**	**6180**	**12000**	**20300**	**6240**	**7490**	**6740**	**13500**	**5760**	**46900**	0.116	**4870**	**4370**	**997**
8-I	**15700**	**30500**	NA	ND	ND	ND	**22300**	**41200**	**24200**	**18200**	**24300**	**21100**	**32300**	**28500**	**27300**	**38700**	**26400**
8-R	**1360**	**2940**	**11600**	**2590**	**9160**	**4710**	**2510**	**11100**	**22000**	**10200**	**24900**	**25700**	**26600**	**124000**	**18400**	**14300**	**11700**
9-OS	NA	249	50.7	**1200**	**383**	**393**	**2210**	**1040**	**1020**	**1490**	**1340**	294	NA	NA	**2330**	**1350**	**1030**
9-I	NA	145	NA	NA	NA	NA	**2040**	62.3	84	260	**788**	**468**	**4530**	**762**	232	**443**	80.5
9-R	NA	**20200**	**2680**	**8250**	**11500**	**10800**	**8850**	**19400**	**9110**	**2700**	**1080**	**2230**	**4080**	**1370**	**2060**	**2270**	**1640**
PW-1	NA	64	186	130	**1260**	**916**	85.3	11.2	**561**	39.7	283	**400**	238	252	53.9	38.1	40.2
PW-2	NA	11	41.8	49.5	ND	22.7	NA	ND	53.5	13.6	NA	253	276	225	ND	ND	ND
SVWC-93	NA	NA	32.6	10.6	NA	**553**	179	ND	17.2	20.7	19	154	NA	**585**	ND	ND	ND
SVWC-94	NA	NA	40.3	19.1	NA	NA	49.4	ND	6.1	13.8	ND	143	NA	124	ND	ND	ND
SVWC-95	NA	NA	51.7	74.4	ND	NA	45.5	ND	274	40.3	279	161	NA	148	ND	ND	98.8
SVWC-96	NA	NA	22.3	17.3	NA	22.6	14.9	ND	61.5	66.8	ND	173	NA	136	ND	ND	147

NOTES: Concentrations reported in µg/L (ppb).
ND = Not Detected
NA = Not Analyzed
Values in **BOLD** indicate an exceedance of groundwater quality standard for Iron, 300 µg/L.

TABLE 3C (Continued)

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER MONITORING DATA
COMPOUND: Iron

Sample ID	Sample Date																
	Dec-96	Mar-97	Jun-97	Sep-97	Dec-97	Mar-98	Jun-98	Sep-98	Mar-99	Jun-99	Sep-99	May-00	Sep-00	Dec-00	Mar-01	Jul-01	Oct-01
1-OS	NA	**19000**	NA	**49000**	NA	**62100**	NA	**3150**	**74400**	NA	**76200**	**40500**	NA	**43800**	**54100**	NA	**16400**
1-R	NA	**1800**	NA	ND	NA	**1020**	NA	**561**	**897**	NA	**1420**	**867**	NA	**990**	**15700**	NA	**6260**
2-OS	NA	140	NA	**900**	NA	**15100**	NA	**24900**	**536**	NA	**6910**	**32900**	NA	**32800**	**37700**	NA	**24500**
2-R	NA	**1600**	NA	**800**	NA	**1700**	NA	**718**	**2110**	NA	**2640**	**1790**	NA	**1440**	**337**	NA	299
3-OS/I	NA	**1500**	NA	**5400**	NA	**29800**	NA	**23600**	**1620**	NA	**1990**	**3310**	NA	**3620**	**5810**	NA	**4090**
3-R	NA	**1500**	NA	**700**	NA	**1420**	NA	**1260**	**680**	NA	**8770**	**1610**	NA	**3020**	**4400**	NA	**1140**
4-OS	NA	**2700**	NA	**600**	NA	**8490**	NA	**6840**	**1100**	NA	**50200**	**16300**	NA	**11300**	**7690**	NA	**1760**
4-R	NA	**6800**	NA	**3300**	NA	**5310**	NA	**1850**	**5250**	NA	**7500**	**5900**	NA	**7240**	**4220**	NA	**3850**
5-OS	NA	**8100**	NA	NA	NA	NA	NA	NA	**8180**	NA	NA	**41500**	NA	**101000**	**22800**	NA	NA
5-I	NA	NA	NA	**600**	NA	**3150**	NA	**851**	NA	NA	**700**	NA	NA	NA	NA	NA	186
5-R	NA	ND	NA	100	NA	210	NA	94.5	105	NA	40.4	**5000**	NA	**2370**	**826**	NA	96.4
7-OS	NA	**9700**	NA	**9700**	NA	**36300**	NA	**21900**	**1950**	NA	**11300**	**4300**	NA	**12400**	**4170**	NA	**10400**
7-R	NA	ND	NA	ND	NA	112	NA	145	93.8	NA	ND	128	NA	**310**	213	NA	22.2
8-OS	**2100**	ND	**1500**	**1800**	**2800**	**795**	**1820**	153	**1000**	**473**	**747**	**1200**	**8900**	**4450**	**6020**	**2460**	**4600**
8-I	**80000**	**18000**	**26000**	**14000**	**15000**	**15700**	**6000**	**37200**	NA	**19100**	**4270**	**9870**	**22900**	**26400**	**47600**	**27600**	**6560**
8-R	**2700**	**1400**	**5400**	**9200**	**12000**	**4880**	**4150**	**1940**	**2440**	**1140**	**5260**	**1180**	**2230**	**2580**	**2500**	**1680**	**1770**
9-OS	**460**	**1400**	**6500**	200	**300**	0.105	**392**	126	**912**	**515**	198	**1880**	**2230**	**2640**	**3660**	ND	**3780**
9-I	100	ND	ND	ND	ND	113	**400**	91.3	86.4	**949**	ND	**2820**	**3920**	**2570**	**24000**	**2350**	145
9-R	**3200**	**13000**	**4700**	**7800**	**4600**	**5040**	**3660**	**3900**	**670**	**4360**	**3110**	**1340**	**9110**	**8280**	**8080**	**8320**	**8150**
PW-1	**30000**	ND	ND	ND	ND	ND	94.4	38.8	42.2	163	ND	18	ND	4.5	15.3	**561**	15.8
PW-2	ND	ND	ND	ND	ND	27.7	36.9	22.2	35.3	114	ND	59.4	36.8	62	10.8	25.7	59.1
SVWC-93	ND	ND	ND	ND	ND	26.4	253	50.2	NA	169	NA	8.8	4.2	36.5	62.4	29.1	NA
SVWC-94	ND	ND	ND	ND	NA	ND	90.9	ND	NA	83.1	NA	3.9	ND	20.5	22.2	6.5	NA
SVWC-95	ND	ND	ND	ND	NA	ND	61	27	NA	90.1	NA	23.2	ND	14.4	24.9	103	NA
SVWC-96	NA	NA	ND	ND	ND	ND	NA	289	NA	67.8	NA	4.6	ND	52.9	27.8	19.3	NA

NOTES: Concentrations reported in µg/L (ppb).
ND = Not Detected
NA = Not Analyzed
Values in **BOLD** indicate an exceedance of groundwater quality standard for Iron, 300 µg/L.

2/5/02

TABLE 3D

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER MONITORING DATA
COMPOUND: Manganese

Sample ID	Sample Date																
	Jan-90	Sep-90	Jan-93	Apr-93	Sep-93	Dec-93	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Mar-96	Jun-96	Sep-96
1-OS	**3790**	**3700**	**809**	**1410**	**4010**	**5590**	**3510**	26.8	**5150**	**4770**	**2950**	**2010**	**4930**	**3130**	**2020**	NA	**4710**
1-R	144	98.5	61.4	38.7	143	62	29.3	**6020**	67	97.6	96.9	153	219	137	120	NA	188
2-OS	298	**4770**	NA	27	**4850**	**1580**	92.5	**985**	**2450**	**827**	221	**982**	**5570**	**883**	280	NA	NA
2-R	197	135	NA	118	126	116	99.5	91.1	92.9	88.8	94.8	70.2	143	85.5	93.8	NA	**653**
3-OS/I	**8700**	**18100**	**3450**	**1690**	**9590**	**8780**	**5640**	**10300**	**2240**	**5540**	**3590**	**3270**	**3860**	**6090**	**11900**	NA	**4880**
3-R	**7230**	**12400**	**10700**	**12900**	**11000**	**12000**	**11800**	**112800**	**10600**	**11300**	**11900**	**10900**	**12400**	**9710**	**11100**	NA	**13900**
4-OS	**4210**	**5020**	**547**	**506**	**2080**	**995**	**598**	**2850**	**3050**	**1130**	**602**	**2860**	**7080**	**682**	**636**	NA	59.6
4-R	**1730**	**1520**	**1660**	**1890**	**1160**	**1230**	**1460**	**1350**	**1210**	**1190**	**1430**	**1120**	**1120**	**1140**	**1536**	NA	**1300**
5-OS	**981**	**530**	192	43.2	NA	NA	NA	NA	NA	NA	**1410**	NA	49.5	NA	**616**	NA	NA
5-I	NA	NA	NA	NA	NA	52.8	40.6	215	221	**474**	NA	248	NA	53.6	NA	NA	77.7
5-R	22.3	9.3	9.6	21.9	11.4	8.2	9.6	2.5	232	**624**	116	21.6	28.6	11.9	7.1	NA	7.8
7-OS	**1240**	**3260**	48.3	46.1	**45100**	122	67.4	**1580**	**9820**	**992**	**1180**	NA	NA	56.8	**390**	NA	43.1
7-R	51.9	102	46.1	51.8	114	81.6	99.8	186	126	80.9	69.1	48.8	62.2	34.8	46.4	NA	66.7
8-OS	**2830**	**2750**	**1680**	**1640**	**3330**	**1910**	**4090**	**1790**	**3230**	**1840**	**2050**	**2690**	**1420**	**903**	**2460**	**3120**	**679**
8-I	**4230**	**1110**	NA	ND	ND	ND	**877**	**1180**	**692**	**862**	**1480**	**1110**	**2430**	**945**	**1860**	**3200**	**2100**
8-R	**872**	181	**1660**	**2600**	**2440**	**2650**	**2220**	**1890**	**1740**	**1980**	**3290**	**1300**	**2500**	**2610**	**4040**	**3230**	**4310**
9-OS	NA	14.6	ND	21.1	9.6	8.7	74.8	34.7	26.2	40.8	32.9	3.9	NA	NA	75.7	70.9	43.3
9-I	NA	**377**	NA	NA	NA	NA	40.6	3.2	21.7	9.8	40.5	10.9	129	15.9	5.2	13.1	5.6
9-R	NA	**3270**	**2320**	**2280**	**2540**	**1890**	**1660**	**1830**	**1650**	**1460**	**1590**	**1790**	**1810**	**1070**	**738**	**1840**	**1930**
PW-1	NA	ND	1.2	1.8	ND	3.6	5.4	ND	5.1	15.3	18.1	5.2	83.1	57.7	83.7	25.7	4.4
PW-2	NA	ND	4.7	7.5	6.3	6.6	NA	2.4	8.7	6.1	NA	6.1	11.6	7.7	2.6	5	3.8
SVWC-93	NA	NA	ND	1.7	NA	72.2	ND	ND	2	0.37	9.6	0.95	NA	11.9	ND	3.4	2
SVWC-94	NA	NA	7.3	ND	NA	NA	6.3	ND	10.4	11.9	6.7	11.4	NA	ND	3.1	ND	5.3
SVWC-95	NA	NA	56.4	1.8	ND	NA	91.6	108	273	85.9	29	49.7	NA	22.1	47.4	67.4	26.4
SVWC-96	NA	NA	ND	ND	NA	ND	ND	ND	2.1	11.9	1.3	ND	NA	48	ND	ND	10.1

NOTES: Concentrations reported in µg/L (ppb).
ND = Not Detected
NA = Not Analyzed
Values in **BOLD** indicate an exceedance of groundwater quality standard for Manganese, 300 µg/L.

TABLE 3D (Continued)

TOWN OF RAMAPO LANDFILL
POST-CLOSURE GROUNDWATER MONITORING DATA
COMPOUND: Manganese

Sample ID	Sample Date																
	Dec-96	Mar-97	Jun-97	Sep-97	Dec-97	Mar-98	Jun-98	Sep-98	Mar-99	Jun-99	Sep-99	May-00	Sep-00	Dec-00	Mar-01	Jul-01	Oct-01
1-OS	NA	**2200**	NA	**5500**	NA	**4530**	NA	**1600**	**5600**	NA	**9830**	**5740**	NA	**5810**	**4940**	NA	**5310**
1-R	NA	200	NA	200	NA	**405**	NA	289	**332**	NA	**599**	236	NA	158	**2070**	NA	**909**
2-OS	NA	18	NA	**650**	NA	**1060**	NA	**3320**	69.6	NA	**936**	**4110**	NA	**3370**	**3450**	NA	**3830**
2-R	NA	150	NA	180	NA	248	NA	214	**356**	NA	**744**	**497**	NA	247	142	NA	106
3-OS/I	NA	**3000**	NA	**4500**	NA	**12100**	NA	**8880**	**948**	NA	**577**	**5720**	NA	**5070**	**3750**	NA	**2040**
3-R	NA	**12000**	NA	**11000**	NA	**10400**	NA	**10900**	**12500**	NA	**15100**	**14200**	NA	**13100**	**10400**	NA	**12700**
4-OS	NA	140	NA	**940**	NA	**430**	NA	**1600**	220	NA	**1720**	**1340**	NA	**1930**	**440**	NA	**839**
4-R	NA	**1500**	NA	**810**	NA	**1410**	NA	**319**	**1100**	NA	**1180**	**1320**	NA	**1240**	**1040**	NA	**1070**
5-OS	NA	NA	NA	20	NA	57.8	NA	18.7	NA	NA	27.2	**533**	NA	**1080**	**323**	NA	NA
5-I	NA	160	NA	NA	NA	NA	NA	NA	88.6	NA	NA	NA	NA	NA	NA	NA	2.7
5-R	NA	ND	NA	ND	NA	5	NA	2.6	2.6	NA	1.2	69.3	NA	33	13.1 B	NA	ND
7-OS	NA	**1400**	NA	**550**	NA	**2480**	NA	**2190**	211	NA	**755**	**305**	NA	**1270**	**638**	NA	**668**
7-R	NA	35	NA	110	NA	90.1	NA	168	157	NA	98.5	257	NA	**360**	**379**	NA	**375**
8-OS	**2200**	**570**	**670**	**830**	**570**	124	**466**	**2640**	119	**1400**	**860**	**525**	**3820**	**2410**	**6760**	**5800**	**6340**
8-I	**3100**	**1200**	**1800**	**910**	**840**	**937**	**692**	**1500**	NA	**1050**	**1570**	**789**	**2810**	**2560**	**3430**	**2990**	**1760**
8-R	**3400**	**3500**	**3100**	**2000**	**1500**	**2130**	**2340**	**952**	NA	**1900**	**2780**	**2640**	**2390**	**2120**	**2250**	**2640**	**2060**
9-OS	20	49	170	ND	20	28	14.7	3.5	28.6	15.1	11.7	40.1	54.6	58.9	93.2	ND	77.6
9-I	6	ND	ND	ND	ND	4.8	11.8	3.6	2.8	18	5.4	109	66.7	49.2	**561**	38	4.9
9-R	**2200**	**2600**	**2400**	**2000**	**1500**	**1650**	**1150**	**1810**	**771**	**1620**	**1320**	**1500**	**3020**	**3100**	**2860**	**2960**	**3080**
PW-1	80	ND	ND	ND	ND	9.4	0.99	7	1.4	1.9	ND	0.81	0.74	1.4	13.6	4.35	ND
PW-2	ND	ND	ND	ND	ND	9.1	5.1	0.61	6.6	6.6	ND	1.8	2.5	3.9	6	1.96	4.7
SVWC-93	ND	ND	ND	ND	ND	12.8	0.79	3.6	NA	2.5	NA	0.49	2.1	ND	2.2	ND	NA
SVWC-94	6	ND	ND	10	NA	8.1	5.8	7.6	NA	4.3	NA	3.6	7.1	9.6	4.7	2.67	NA
SVWC-95	70	82	80	130	NA	58.6	64.4	21	NA	40.6	NA	40.4	49.7	47.5	49.8	143	NA
SVWC-96	NA	NA	ND	ND	ND	ND	NA	22	NA	1.6	NA	ND	<0.70	ND	ND	ND	NA

NOTES: Concentrations reported in µg/L (ppb).
ND = Not Detected
NA = Not Analyzed
Values in **BOLD** indicate an exceedance of groundwater quality standard for Manganese, 300 µg/L.