

Appendix L

Summary of NYSERDA Groundwater Monitoring Data



An Aerial View of the New York State-Licensed Disposal Area

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Table L-1
2001 Contamination Indicator Results at SDA Monitoring Wells

Sample Location	Date	Conductivity (µmhos/cm@25°C)	pH (standard units)	Temperature (°C)	Turbidity (NTU)
WNW1101A	<i>June</i>	643	7.57	11.5	5.21
WNW1101A	<i>December</i>	615	7.68	10.8	2.94
WNW1101A	<i>December</i>	615	7.68	10.8	2.94
WNW1101B	<i>June</i>	651	7.73	12.5	25.30
WNW1101B	<i>December</i>	536	7.59	11.0	3.27
WNW1101C	<i>June</i>	370	7.90	11.2	179.00
WNW1101C	<i>December</i>	374	7.93	9.2	>1,000.00
WNW1102A	<i>June</i>	758	7.92	12.2	80.40
WNW1102A	<i>December</i>	699	7.58	11.8	6.70
WNW1102B	<i>June</i>	587	7.57	11.8	138.00
WNW1102B	<i>December</i>	578	7.59	10.4	9.35
WNW1103A	<i>June</i>	954	7.47	11.8	706.00
WNW1103A	<i>December</i>	924	7.74	10.9	152.00
WNW1103B	<i>June</i>	459	7.60	11.8	4.63
WNW1103B	<i>December</i>	679	7.87	9.8	21.70
WNW1104A	<i>June</i>	713	7.51	10.9	9.27
WNW1104A	<i>December</i>	647	7.62	12.0	8.75
WNW1104B	<i>June</i>	628	7.66	12.5	2.20
WNW1104B	<i>December</i>	609	7.79	9.9	0.96
WNW1105A	<i>June</i>	674	7.72	10.4	59.60
WNW1105A	<i>December</i>	670	7.38	10.0	19.20
WNW1105B	<i>June</i>	689	7.76	11.7	76.50
WNW1105B	<i>December</i>	701	7.80	8.3	27.30
WNW1106A	<i>June</i>	750	7.50	12.5	6.45
WNW1106A	<i>December</i>	729	7.69	12.2	43.90
WNW1106B	<i>June</i>	732	7.35	13.2	333.00
WNW1106B	<i>December</i>	749	7.49	11.2	189.00
WNW1107A	<i>June</i>	1,898	6.80	12.4	1.73
WNW1107A	<i>June</i>	1,898	6.80	12.4	1.73
WNW1107A	<i>December</i>	1,488	7.00	11.0	1.24

All data in Tables L-1 through L-3 have been provided by NYSERDA.

Table L-1 (concluded)
2001 Contamination Indicator Results at SDA Monitoring Wells

Sample Location	Date	Conductivity (µmhos/cm@25°C)	pH (standard units)	Temperature (°C)	Turbidity (NTU)
WNW1108A	<i>June</i>	898	7.65	10.7	386.00
WNW1108A	<i>December</i>	509	6.98	11.6	1.18
WNW1109A	<i>June</i>	592	7.67	11.7	7.46
WNW1109A	<i>December</i>	566	7.31	10.9	3.41
WNW1109B	<i>June</i>	440	7.00	11.4	42.90
WNW1109B	<i>December</i>	423	7.71	10.2	65.50
WNW1111A	<i>June</i>	1,038	7.31	11.5	2.67
WNW1111A	<i>December</i>	1,024	7.43	10.4	2.09

All data in Tables L-1 through L-3 have been provided by NYSERDA.

Table L-2
2001 Radiological Indicator Results at SDA Monitoring Wells ($\mu\text{Ci}/\text{mL}$)

Sample Location	Date	Gross Alpha	Gross Beta	H-3
WNW1101A	June	2.34±1.70E-09	2.46±1.30E-09	9.89±8.00E-08
WNW1101A	December	2.31±1.40E-09	2.71±1.20E-09	5.72±7.30E-08
WNW1101A	December	3.14±1.60E-09	3.53±1.40E-09	7.70±7.30E-08
WNW1101B	June	3.55±1.30E-09	2.87±1.20E-09	5.46±7.20E-08
WNW1101B	December	3.94±1.90E-09	4.62±1.50E-09	-3.63±6.90E-08
WNW1101C	June	1.64±1.30E-09	3.08±1.10E-09	-1.02±7.60E-08
WNW1101C	December	8.84±7.60E-10	2.44±0.88E-09	1.03±7.10E-08
WNW1102A	June	0.17±1.30E-09	4.66±1.60E-09	2.61±0.87E-07
WNW1102A	December	4.87±2.20E-09	3.19±1.30E-09	2.52±0.82E-07
WNW1102B	June	1.90±1.10E-09	2.87±1.10E-09	-1.50±6.90E-08
WNW1102B	December	7.46±7.60E-10	2.89±1.20E-09	-5.61±6.80E-08
WNW1103A	June	5.53±3.50E-09	4.79±2.00E-09	4.17±0.94E-07
WNW1103A	December	6.24±2.80E-09	5.20±2.00E-09	4.30±0.90E-07
WNW1103B	June	4.05±2.40E-09	3.92±1.50E-09	-1.43±7.50E-08
WNW1103B	December	3.68±1.70E-09	2.85±1.40E-09	-0.99±7.00E-08
WNW1103C	June	1.06±1.50E-09	NA	-4.14±7.50E-08
WNW1103C	December	1.23±1.10E-09	8.16±2.70E-09	0.00±7.10E-08
WNW1104A	June	2.63±1.80E-09	2.55±1.50E-09	1.73±0.83E-07
WNW1104A	December	3.16±1.70E-09	3.21±1.30E-09	1.37±0.76E-07
WNW1104B	June	2.80±2.20E-09	2.48±1.20E-09	-4.50±7.40E-08
WNW1104B	December	2.87±1.60E-09	2.64±1.20E-09	-2.96±6.90E-08
WNW1104C	June	2.46±4.30E-09	8.78±4.00E-09	-0.61±7.60E-08
WNW1104C	December	6.45±4.90E-09	2.01±0.51E-08	-2.29±6.90E-08
WNW1105A	June	3.40±1.80E-09	2.44±1.10E-09	1.25±0.75E-07
WNW1105A	December	2.41±1.50E-09	3.25±1.30E-09	1.10±0.75E-07
WNW1105B	June	3.81±1.80E-09	3.48±1.20E-09	-2.46±6.90E-08
WNW1105B	December	3.06±1.80E-09	2.54±1.20E-09	-3.94±6.90E-08
WNW1106A	June	2.92±2.30E-09	2.93±1.50E-09	4.89±0.96E-07
WNW1106A	December	3.49±1.80E-09	2.84±1.50E-09	4.77±0.91E-07
WNW1106B	June	1.36±1.10E-09	3.01±1.30E-09	5.00±7.20E-08
WNW1106B	December	1.90±1.30E-09	3.70±1.60E-09	-3.92±6.80E-08

All data in Tables L-1 through L-3 have been provided by NYSERDA.

NA - Not available. Some scheduled analyses could not be performed due to insufficient sample.

Table L-2 (concluded)
2001 Radiological Indicator Results at SDA Monitoring Wells ($\mu\text{Ci}/\text{mL}$)

Sample Location	Date	Gross Alpha	Gross Beta	H-3
WNW1107A	<i>June</i>	7.95±3.50E-09	3.34±0.68E-08	1.16±0.06E-05
WNW1107A	<i>June</i>	5.39±2.70E-09	2.10±0.51E-08	1.17±0.06E-05
WNW1107A	<i>December</i>	7.02±3.20E-09	1.98±0.43E-08	1.19±0.06E-05
WNW1108A	<i>June</i>	9.11±3.50E-09	4.60±1.80E-09	9.76±8.00E-08
WNW1108A	<i>December</i>	2.81±2.00E-09	6.23±2.10E-09	9.95±7.40E-08
WNW1109A	<i>June</i>	4.41±1.80E-09	4.65±1.30E-09	2.92±0.82E-07
WNW1109A	<i>December</i>	4.33±1.90E-09	2.37±1.20E-09	2.81±0.83E-07
WNW1109B	<i>June</i>	0.88±1.00E-09	2.23±1.10E-09	4.44±0.95E-07
WNW1109B	<i>December</i>	7.49±7.00E-10	1.18±0.84E-09	4.43±0.90E-07
WNW1111A	<i>June</i>	7.44±2.50E-09	2.81±1.40E-09	2.76±0.82E-07
WNW1111A	<i>December</i>	4.83±2.60E-09	5.82±2.40E-09	1.57±0.78E-07

All data in Tables L-1 through L-3 have been provided by NYSERDA.

Table L-3
2001 Radioisotopic Results at SDA Monitoring Wells ($\mu\text{Ci/mL}$)

Sample Location	Date	Actinium-228	Bismuth-214	Carbon-14	Cesium-134
WNW1101A	June	1.73±1.90E-08	7.71±9.50E-09	4.10±4.40E-09	-0.10±5.10E-09
WNW1101B	June	0.56±1.30E-08	-4.48±7.60E-09	-0.27±1.10E-08	-0.72±3.60E-09
WNW1101C	June	-1.84±2.00E-08	-0.86±1.20E-08	0.09±1.30E-08	-2.63±5.90E-09
WNW1102A	June	-1.27±1.80E-08	0.36±1.10E-08	1.50±3.60E-09	-1.27±5.10E-09
WNW1102B	June	0.66±1.20E-08	1.18±8.00E-09	5.09±5.00E-09	0.81±3.40E-09
WNW1103A	June	1.62±1.90E-08	1.20±9.20E-09	-0.20±3.30E-09	2.47±4.70E-09
WNW1103B	June	0.04±2.20E-08	0.91±1.30E-08	1.75±3.30E-09	3.75±6.50E-09
WNW1104A	June	0.46±2.10E-08	-0.19±1.10E-08	3.51±3.70E-09	5.30±6.00E-09
WNW1104B	June	0.30±1.50E-08	3.54±9.20E-09	-0.34±3.20E-09	-1.60±5.50E-09
WNW1105A	June	-0.12±1.60E-08	3.26±7.80E-09	-0.34±3.60E-09	-5.88±5.00E-09
WNW1105B	June	0.62±1.70E-08	1.87±9.40E-09	-0.18±3.80E-09	1.18±5.40E-09
WNW1106A	June	1.15±1.50E-08	-0.14±9.60E-09	3.15±4.00E-09	-0.99±3.90E-09
WNW1106B	June	0.61±1.90E-08	2.93±8.90E-09	0.74±2.70E-09	1.59±4.90E-09
WNW1107A	June	-0.01±1.70E-08	2.73±8.90E-09	0.58±4.20E-09	1.20±4.80E-09
WNW1107A	June	0.75±1.70E-08	4.29±9.90E-09	0.95±3.20E-09	0.45±5.40E-09
WNW1108A	June	1.44±2.00E-08	0.66±1.00E-08	-2.32±7.60E-09	7.42±5.80E-09
WNW1109A	June	0.63±2.20E-08	0.06±1.20E-08	-0.17±3.50E-09	-2.73±5.70E-09
WNW1109B	June	0.00±1.40E-08	-2.35±7.20E-09	1.72±3.10E-09	-3.25±4.40E-09
WNW1111A	June	1.24±1.60E-08	5.14±8.40E-09	1.03±3.90E-09	-4.77±5.70E-09

All data in Tables L-1 through L-3 have been provided by NYSERDA.

Table L-3 (continued)
2001 Radioisotopic Results at SDA Monitoring Wells ($\mu\text{Ci}/\text{mL}$)

Sample Location	Date	Cesium-137	Cobalt-57	Cobalt-60	Iodine-129
WNW1101A	June	3.27±4.40E-09	0.28±2.10E-08	4.33±6.50E-09	-0.18±1.40E-10
WNW1101B	June	0.75±3.40E-09	0.46±1.70E-08	-3.21±4.00E-09	0.04±1.90E-10
WNW1101C	June	-1.51±5.30E-09	-0.81±2.80E-08	0.35±6.50E-09	-2.44±4.00E-10
WNW1102A	June	1.85±4.80E-09	1.13±2.40E-08	-1.64±4.60E-09	0.49±1.40E-10
WNW1102B	June	5.71±4.30E-09	0.95±1.90E-08	-3.70±3.90E-09	1.13±1.40E-10
WNW1103A	June	-2.76±4.50E-09	-1.24±1.80E-08	0.58±3.80E-09	0.06±2.60E-10
WNW1103B	June	1.72±5.30E-09	-0.96±2.70E-08	2.68±6.60E-09	3.98±4.30E-10
WNW1104A	June	1.17±4.60E-09	0.63±2.00E-08	1.31±4.90E-09	-1.72±1.90E-10
WNW1104B	June	-2.34±4.50E-09	-1.36±2.00E-08	-1.86±4.20E-09	-0.44±1.30E-10
WNW1105A	June	0.65±4.30E-09	-0.89±1.70E-08	-1.92±5.70E-09	0.56±2.40E-10
WNW1105B	June	2.05±5.00E-09	1.03±1.90E-08	-1.19±5.10E-09	-0.87±1.60E-10
WNW1106A	June	-1.43±3.80E-09	0.58±1.80E-08	-1.93±5.00E-09	-1.98±2.90E-10
WNW1106B	June	-0.63±4.70E-09	-0.97±1.70E-08	2.12±5.40E-09	0.11±1.60E-10
WNW1107A	June	-0.19±4.30E-09	-1.04±1.80E-08	2.12±5.10E-09	0.48±2.10E-10
WNW1107A	June	0.25±4.40E-09	0.92±1.80E-08	-2.31±4.60E-09	-0.14±1.50E-10
WNW1108A	June	-1.22±4.80E-09	0.04±2.40E-08	1.83±5.60E-09	1.43±1.50E-10
WNW1109A	June	-0.29±4.70E-09	0.10±2.00E-08	3.72±4.70E-09	-0.88±1.90E-10
WNW1109B	June	-4.04±4.10E-09	0.91±1.70E-08	-2.66±4.20E-09	0.01±2.00E-10
WNW1111A	June	-0.55±4.30E-09	1.96±1.80E-08	0.58±5.00E-09	-0.03±1.50E-10

All data in Tables L-1 through L-3 have been provided by NYSERDA.

Table L-3 (continued)
2001 Radioisotopic Results at SDA Monitoring Wells ($\mu\text{Ci}/\text{mL}$)

Sample Location	Date	Lead-212	Lead-214	Potassium-40	Radium-224
WNW1101A	June	-6.02±7.30E-09	1.71±8.30E-09	1.44±9.70E-08	-6.19±7.50E-09
WNW1101B	June	-2.62±7.00E-09	-1.74±6.90E-09	-0.75±5.30E-08	-2.70±7.20E-09
WNW1101C	June	6.08±8.70E-09	1.50±1.00E-08	0.42±1.10E-07	6.26±9.00E-09
WNW1102A	June	3.81±8.20E-09	1.30±1.10E-08	0.36±1.10E-07	3.93±8.40E-09
WNW1102B	June	0.03±6.70E-09	0.85±7.30E-09	-2.37±5.20E-08	0.03±6.90E-09
WNW1103A	June	-2.34±6.50E-09	3.70±7.20E-09	-1.04±8.80E-08	-2.41±6.70E-09
WNW1103B	June	8.51±8.70E-09	0.88±1.00E-08	-1.50±1.00E-07	8.76±8.90E-09
WNW1104A	June	-5.04±7.90E-09	-1.15±0.94E-08	-1.02±1.10E-07	-5.19±8.20E-09
WNW1104B	June	-9.24±6.90E-09	3.63±8.90E-09	8.82±9.40E-08	-9.52±7.10E-09
WNW1105A	June	-0.82±6.80E-09	-2.33±7.80E-09	0.73±9.40E-08	-0.84±7.00E-09
WNW1105B	June	1.25±9.50E-09	2.80±8.10E-09	-1.64±9.10E-08	1.29±9.80E-09
WNW1106A	June	-1.99±7.10E-09	1.22±0.94E-08	6.87±9.70E-08	-2.04±7.30E-09
WNW1106B	June	2.24±8.10E-09	0.83±7.50E-09	-5.04±8.20E-08	2.30±8.30E-09
WNW1107A	June	4.20±8.80E-09	5.09±7.20E-09	-4.39±9.00E-08	4.32±9.00E-09
WNW1107A	June	1.20±6.50E-09	0.50±7.40E-09	-1.44±9.40E-08	1.23±6.70E-09
WNW1108A	June	-0.86±7.40E-09	-5.66±8.90E-09	-1.95±7.50E-08	-0.89±7.60E-09
WNW1109A	June	9.07±7.10E-09	-1.21±0.97E-08	0.50±1.20E-07	9.34±7.30E-09
WNW1109B	June	-4.78±6.90E-09	1.11±7.50E-09	0.10±5.40E-08	-4.91±7.10E-09
WNW1111A	June	5.56±7.10E-09	4.21±7.50E-09	7.50±9.50E-08	5.73±7.30E-09

All data in Tables L-1 through L-3 have been provided by NYSERDA.

Table L-3 (continued)
2001 Radioisotopic Results at SDA Monitoring Wells ($\mu\text{Ci/mL}$)

Sample Location	Date	Radium-226	Strontium-90	Technetium-99	Thallium-208
WNW1101A	June	7.71 \pm 9.50E-09	-0.37 \pm 3.30E-10	-1.56 \pm 9.90E-10	-1.82 \pm 5.20E-09
WNW1101B	June	-4.50 \pm 7.60E-09	3.00 \pm 7.10E-10	-0.16 \pm 1.10E-09	-1.12 \pm 4.00E-09
WNW1101C	June	-0.85 \pm 1.20E-08	1.73 \pm 3.00E-10	0.29 \pm 1.10E-09	-0.90 \pm 5.50E-09
WNW1102A	June	0.36 \pm 1.10E-08	1.72 \pm 2.90E-10	0.54 \pm 1.00E-09	7.06 \pm 5.50E-09
WNW1102B	June	1.14 \pm 8.00E-09	-0.20 \pm 1.90E-10	0.00 \pm 1.60E-09	4.24 \pm 4.00E-09
WNW1103A	June	1.20 \pm 9.20E-09	0.84 \pm 3.30E-10	0.26 \pm 1.10E-09	-0.53 \pm 4.90E-09
WNW1103B	June	0.91 \pm 1.30E-08	1.23 \pm 3.00E-10	0.70 \pm 1.00E-09	5.70 \pm 5.90E-09
WNW1104A	June	-0.18 \pm 1.10E-08	1.67 \pm 3.20E-10	0.38 \pm 1.00E-09	-1.96 \pm 6.00E-09
WNW1104B	June	3.46 \pm 9.20E-09	-0.09 \pm 3.40E-10	-0.03 \pm 1.00E-09	6.02 \pm 5.00E-09
WNW1105A	June	3.24 \pm 7.80E-09	-0.23 \pm 2.60E-10	0.00 \pm 1.20E-09	4.70 \pm 4.60E-09
WNW1105B	June	1.87 \pm 9.40E-09	1.78 \pm 2.50E-10	-0.39 \pm 1.20E-09	-2.50 \pm 5.10E-09
WNW1106A	June	-0.16 \pm 9.60E-09	1.18 \pm 4.80E-10	3.68 \pm 9.80E-10	-0.42 \pm 4.60E-09
WNW1106B	June	2.88 \pm 8.90E-09	0.56 \pm 3.20E-10	-0.17 \pm 1.00E-09	0.85 \pm 5.10E-09
WNW1107A	June	2.76 \pm 8.90E-09	9.46 \pm 2.40E-09	-3.40 \pm 9.30E-10	0.01 \pm 5.00E-09
WNW1107A	June	4.34 \pm 9.90E-09	4.95 \pm 1.30E-09	-1.77 \pm 9.40E-10	-4.80 \pm 5.50E-09
WNW1108A	June	0.66 \pm 1.00E-08	0.58 \pm 3.30E-10	0.28 \pm 1.10E-09	1.73 \pm 4.80E-09
WNW1109A	June	0.06 \pm 1.20E-08	-0.73 \pm 2.00E-10	-0.07 \pm 1.00E-09	-2.52 \pm 5.70E-09
WNW1109B	June	-2.33 \pm 7.20E-09	0.90 \pm 2.70E-10	4.37 \pm 9.70E-10	1.03 \pm 3.70E-09
WNW1111A	June	5.17 \pm 8.40E-09	-0.27 \pm 2.50E-10	0.04 \pm 1.10E-09	-1.29 \pm 4.60E-09

All data in Tables L-1 through L-3 have been provided by NYSERDA.

Table L-3 (continued)
2001 Radioisotopic Results at SDA Monitoring Wells ($\mu\text{Ci}/\text{mL}$)

Sample Location	Date	Thorium-234	Uranium-235
WNW1101A	June	2.54±9.00E-07	0.14±2.00E-08
WNW1101B	June	3.79±4.90E-07	1.37±1.70E-08
WNW1101C	June	3.93±7.40E-07	-1.22±2.80E-08
WNW1102A	June	0.53±7.60E-07	-0.98±2.50E-08
WNW1102B	June	-3.77±5.90E-07	0.72±1.80E-08
WNW1103A	June	1.40±7.00E-07	0.37±1.90E-08
WNW1103B	June	0.64±8.00E-07	1.34±2.60E-08
WNW1104A	June	0.09±7.40E-07	0.51±1.80E-08
WNW1104B	June	-0.12±6.30E-07	1.63±1.80E-08
WNW1105A	June	7.61±8.10E-07	0.66±1.70E-08
WNW1105B	June	4.64±7.50E-07	-1.55±1.90E-08
WNW1106A	June	0.59±5.90E-07	-0.09±1.80E-08
WNW1106B	June	3.19±7.30E-07	-0.17±1.80E-08
WNW1107A	June	4.46±7.80E-07	0.68±1.80E-08
WNW1107A	June	2.34±8.80E-07	2.46±2.00E-08
WNW1108A	June	4.31±7.20E-07	1.43±2.30E-08
WNW1109A	June	2.86±8.10E-07	1.12±1.90E-08
WNW1109B	June	-3.67±6.00E-07	0.59±1.70E-08
WNW1111A	June	4.49±7.60E-07	0.65±1.80E-08

All data in Tables L-1 through L-3 have been provided by NYSERDA.

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