APPENDIX D

Summary of Groundwater Monitoring Data

Groundwater Sampling Methodology

Groundwater samples are collected from monitoring wells using either dedicated Teflon® well bailers or bladder pumps. Bailers are used in low-yield wells; bladder pumps are used in wells with good water-yielding characteristics. This sampling equipment is dedicated to an individual well to reduce the likelihood of sample contamination from external materials or cross contamination.

To ensure that only representative groundwater is sampled, three well volumes are removed (purged) from the well before the actual samples are collected. In low-yield wells, pumping or bailing to dryness provides sufficient purging. Conductivity and pH are measured before and after sampling to confirm the geochemical stability of the groundwater during sampling.

The bailer, a tube with a check valve at the bottom, is lowered slowly into the well to minimize agitation of the water column. The bailer containing the groundwater is then withdrawn from the well and emptied into a sample container. Bladder pumps use compressed air to gently squeeze a Teflon® bladder that prevents contact with the groundwater as it is pumped into a sample container with a minimum of agitation and mixing. A check valve ensures that the water flows in only one direction.

Groundwater samples are cooled and preserved, with chemicals if required, to minimize chemical and/ or biological changes after sample collection. A strict chain-of-custody protocol is followed for all samples collected by the WVDP.

Key to bolding convention:

Tables D-1 through D-7 contain a bolding convention devised to help the reader, when viewing the data, to quickly see the range of detectable measurements within a data series. A data series is a set of chemical or radionuclide measurements (e.g., gross alpha, gross beta, tritium) from a single location or from similar locations. Note that some tables contain data that should not be technically evaluated under this convention.

Results for each analyte constitute a single data series. If a radiological result is larger than the uncertainty term, the measurement is considered positive. Otherwise, a result is considered nondetectable. Chemical results preceded by “less than” (<) are considered nondetectable. The bolding convention is not applied to data series consisting of less than three values.

If all results in a data series are positive, the lowest and highest values are bolded.
If a data series contains some positive results, the highest value is bolded.
If all values in a data series are nondetectable, no values are bolded.

TABLE D-1
2007 Indicator Results From the Sand and Gravel Unit

Location Code	Hydraulic Position	p H (SU)	Conductivity (µmhos/cm@25^{0}C)	Gross Alpha (µCi/mL)	Gross Beta (µCi/mL)	Tritium (µCi/mL)
301	UP(1)	6.40	1,210	-0.95±4.51E-09	**1.50±0.71E-08**	0.03±9.92E-08
301	UP(2)	6.63	**1,155**	**3.76±2.41E-09**	8.64±5.51E-09	2.80±9.64E-08
301	UP(3)	**7.05**	2,706	0.83±1.34E-08	3.77±5.16E-09	0.55±4.59E-08
301	UP(4)	**5.89**	**3,318**	0.75±1.37E-08	0.16±1.06E-08	-3.61±4.47E-08
401	UP(1)	6.95	**4,156**	1.06±6.91E-09	1.29±1.31E-08	-2.06±0.70E-07
401	UP(2)	6.91	**3,265**	4.61±4.78E-09	1.86±4.88E-09	9.31±9.66E-08
401	UP(3)	**7.00**	3,598	-0.21±2.05E-08	0.94±1.38E-08	-0.79±4.52E-08
401	UP(4)	**6.68**	3,772	**1.46±1.43E-08**	0.23±1.50E-08	**5.86±4.46E-08**
403	UP(1)	7.04	592	5.94±2.22E-09	3.21±2.24E-09	-3.57±9.90E-08
403	UP(3)	7.12	1,312	-0.44±6.30E-09	4.50±5.76E-09	-9.18±4.41E-08
706	UP(1)	**6.73**	816	0.24±1.58E-09	6.09±5.06E-09	-0.81±1.00E-07
706	UP(2)	**6.73**	**795**	**1.45±1.34E-09**	8.08±3.85E-09	3.87±9.76E-08
706	UP(3)	6.77	1,183	-0.95±6.71E-09	**1.06±0.89E-08**	-2.91±3.26E-08
706	UP(4)	**6.82**	**1,318**	3.02±5.53E-09	1.25±8.25E-09	3.17±4.50E-08
1304	UP(1)	**6.80**	2,203	**6.92±5.42E-09**	-1.32±8.46E-09	0.03±1.01E-07
1304	UP(2)	7.10	2,855	6.14±5.67E-09	1.03±1.30E-08	3.49±9.78E-08
1304	UP(3)	7.02	**3,861**	-1.53±1.86E-08	-0.05±1.41E-08	-0.84±3.21E-08
1304	UP(4)	**7.23**	**2,017**	1.07±3.17E-09	4.23±6.16E-09	4.03±4.43E-08
NB1S	UP(1)	6.73	309	5.80±7.55E-10	-0.32±3.39E-09	-3.51±6.75E-08
NB1S	UP(3)	6.88	671	3.72±4.60E-09	0.67±3.57E-09	2.88±4.59E-08
201	DOWN(1)	6.38	3,045	5.09±8.01E-09	4.81±1.12E-08	-3.58±9.84E-08
201	DOWN(3)	6.57	3,468	-0.26±1.23E-08	4.28±1.64E-08	-7.89±4.43E-08
1302	DOWN(1)	7.08	1,355	1.90±2.48E-09	-2.05±9.38E-09	-1.53±0.99E-07
1302	DOWN(2)	7.07	**1,082**	**2.85±2.40E-09**	-1.19±2.15E-09	-0.15±9.64E-08
1302	DOWN(3)	**7.00**	2,136	-1.29±4.38E-09	-0.56±4.73E-09	-2.21±4.52E-08
1302	DOWN(4)	**7.64**	**2,338**	-1.67±3.93E-09	2.48±6.85E-09	4.04±4.44E-08
103	DOWN(1)	**8.13**	**3,444**	-0.44±1.77E-08	**5.04±1.46E-08**	7.53±9.32E-08
103	DOWN(2)	8.12	11,607	1.22±1.26E-08	3.27±0.44E-07	1.47±4.60E-08
103	DOWN(3)	7.71	**13,192**	1.30±2.21E-08	**3.56±0.37E-07**	**3.63±3.24E-08**
103	DOWN(4)	**7.64**	9,913	-0.21±2.83E-08	1.83±0.49E-07	0.18±4.53E-08
104	DOWN(1)	7.07	2,336	0.00±4.73E-09	8.30±0.21E-05	**3.77±0.69E-07**
104	DOWN(2)	7.06	**2,045**	5.77±7.54E-09	**7.56±0.39E-05**	2.24±0.49E-07
104	DOWN(3)	**7.08**	2,204	1.63±8.58E-09	9.03±0.60E-05	2.48±0.49E-07
104	DOWN(4)	**6.95**	**2,598**	-0.67±1.43E-08	**1.01±0.07E-04**	**1.57±0.34E-07**

Note: Bolding convention applied to these data. (See p. D-1[illegible].)
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-1 *(continued)*
2007 Indicator Results From the Sand and Gravel Unit

Location Code	Hydraulic Position	pH (SU)	Conductivity (µmhos/cm@25^{0}C)	Gross Alpha (µCi/mL)	Gross Beta (µCi/mL)	Tritium (µCi/mL)
111	DOWN(1)	**6.35**	**543**	**9.37±2.98E-09**	**3.12±0.08E-06**	7.39±9.39E-08
111	DOWN(2)	6.54	678	4.48±3.89E-09	5.52±0.26E-06	**1.44±0.48E-07**
111	DOWN(3)	**6.84**	1,181	4.75±7.90E-09	8.08±0.48E-06	1.24±0.47E-07
111	DOWN(4)	6.61	**1,837**	-1.10±0.82E-08	**8.81±0.54E-06**	9.46±4.75E-08
205	DOWN(1)	7.00	2,800	0.00±1.42E-08	1.87±1.01E-08	0.19±9.91E-08
205	DOWN(3)	6.93	6,218	0.91±2.73E-08	2.35±2.47E-08	-6.43±4.46E-08
406	DOWN(1)	**6.75**	1,219	-1.15±1.98E-09	4.14±6.35E-09	5.88±9.38E-08
406	DOWN(2)	**6.75**	**1,260**	1.36±2.96E-09	5.90±1.59E-09	**4.38±0.52E-07**
406	DOWN(3)	**7.02**	858	-4.36±6.20E-09	**7.81±7.39E-09**	3.53±4.60E-08
406	DOWN(4)	6.92	**780**	-0.45±1.65E-09	3.96±3.60E-09	7.78±4.66E-08
408	DOWN(1)	**7.09**	**2,870**	-6.09±6.93E-09	3.22±0.01E-04	1.61±1.20E-07
408	DOWN(2)	7.17	3,130	0.87±3.77E-09	**3.09±0.01E-04**	9.34±8.46E-08
408	DOWN(3)	7.13	3,433	0.00±4.06E-09	3.30±0.04E-04	**1.73±1.21E-07**
408	DOWN(4)	**7.27**	**3,670**	-5.44±0.58E-08	**3.85±0.07E-04**	0.81±1.06E-07
501	DOWN(1)	7.36	**2,206**	1.69±4.80E-09	1.45±0.04E-04	**2.45±0.96E-07**
501	DOWN(2)	**7.38**	2,416	6.16±9.51E-09	**1.53±0.08E-04**	4.42±4.65E-08
501	DOWN(3)	**7.28**	2,532	1.30±1.49E-08	**1.39±0.10E-04**	5.14±4.63E-08
501	DOWN(4)	7.36	**2,852**	-0.18±1.61E-08	1.48±0.08E-04	4.35±4.62E-08
502	DOWN(1)	7.35	2,432	-3.69±3.82E-09	**1.75±0.04E-04**	**1.88±0.96E-07**
502	DOWN(2)	**7.44**	**2,405**	**1.46±1.21E-08**	1.62±0.09E-04	5.16±4.66E-08
502	DOWN(3)	**7.26**	2,442	0.77±1.42E-08	1.58±0.12E-04	5.43±4.56E-08
502	DOWN(4)	7.29	**2,673**	0.21±1.27E-08	**1.55±0.08E-04**	1.37±4.57E-08
602A	DOWN(1)	6.91	657	0.85±1.56E-09	**1.26±0.41E-08**	**2.99±0.97E-07**
602A	DOWN(2)	**7.02**	**632**	**1.93±1.31E-09**	1.12±0.32E-08	1.84±0.99E-07
602A	DOWN(3)	6.79	686	0.81±4.00E-09	**8.13±4.02E-09**	**1.13±0.47E-07**
602A	DOWN(4)	**6.62**	**736**	-0.36±1.32E-09	1.24±0.34E-08	2.01±0.49E-07
604	DOWN(1)	**6.30**	1,262	0.67±7.00E-09	5.84±5.13E-09	4.31±9.45E-08
604	DOWN(2)	**6.30**	**898**	-0.87±1.27E-09	**3.38±2.05E-09**	-1.29±4.55E-08
604	DOWN(3)	**6.01**	1,182	-0.69±2.34E-09	4.80±4.33E-09	1.66±4.55E-08
604	DOWN(4)	6.15	**1,386**	0.00±2.58E-09	**8.44±4.28E-09**	0.06±4.52E-08
8605	DOWN(1)	**6.82**	1,402	8.88±3.34E-09	9.86±0.18E-06	1.22±0.96E-07
8605	DOWN(2)	6.72	1,885	**1.08±1.03E-08**	9.59±0.50E-06	1.12±0.47E-07
8605	DOWN(3)	**6.68**	**1,244**	4.42±8.23E-09	**1.00±0.07E-05**	**1.35±0.47E-07**
8605	DOWN(4)	6.69	**2,990**	-1.57±9.55E-09	**4.59±0.25E-06**	**1.09±0.34E-07**
8607	DOWN(1)	**6.58**	**675**	**2.21±2.19E-09**	**1.38±0.36E-08**	4.48±9.49E-08
8607	DOWN(2)	**6.35**	1,358	0.22±1.75E-09	2.80±0.47E-08	**5.21±4.70E-08**
8607	DOWN(3)	6.37	**3,350**	-1.48±1.69E-08	**3.07±0.87E-08**	1.27±4.53E-08
8607	DOWN(4)	6.36	2,723	1.33±8.05E-09	2.33±1.11E-08	2.18±4.57E-08

Note: Bolding convention applied to these data. (See p. D-1.)
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-1 *(continued)*
2007 Indicator Results From the Sand and Gravel Unit

Location Code	Hydraulic Position	pH (SU)	Conductivity (µmhos/cm@25^{0}C)	Gross Alpha (µCi/mL)	Gross Beta (µCi/mL)	Tritium (µCi/mL)
8609	DOWN(1)	7.01	2,113	1.19±4.96E-09	**2.12±0.07E-06**	**3.12±0.99E-07**
8609	DOWN(2)	**7.03**	**2,054**	-0.31±6.45E-09	**1.66±0.07E-06**	**2.26±0.50E-07**
8609	DOWN(3)	6.96	2,232	0.29±9.52E-09	1.96±0.16E-06	2.54±0.49E-07
8609	DOWN(4)	**6.76**	**2,424**	-0.47±1.05E-08	2.01±0.09E-06	2.88±0.50E-07
105	DOWN(1)	7.21	2,404	-0.58±4.37E-09	8.66±0.20E-05	**2.66±0.95E-07**
105	DOWN(2)	7.21	**2,254**	0.60±1.02E-08	**7.84±0.42E-05**	2.39±0.49E-07
105	DOWN(3)	**7.30**	2,298	-0.23±1.15E-08	8.26±0.62E-05	2.13±0.49E-07
105	DOWN(4)	**7.14**	**2,435**	0.31±1.44E-08	**8.78±0.56E-05**	**1.76±0.48E-07**
106	DOWN(1)	6.85	**1,604**	-0.72±7.01E-09	**2.71±0.12E-07**	**1.64±0.87E-07**
106	DOWN(2)	**6.97**	1,834	**1.31±0.29E-08**	4.01±0.16E-07	3.31±1.05E-07
106	DOWN(3)	6.96	**1,922**	-1.93±2.17E-09	**4.76±0.19E-07**	6.32±0.55E-07
106	DOWN(4)	**6.65**	1,860	8.60±8.83E-09	3.83±0.28E-07	**9.89±0.60E-07**
116	DOWN(1)	**7.10**	**1,688**	1.90±3.72E-09	**4.90±0.14E-06**	1.56±0.96E-07
116	DOWN(2)	**6.74**	1,840	7.85±8.93E-09	6.35±0.33E-06	**1.16±0.48E-07**
116	DOWN(3)	**7.10**	2,104	2.45±6.60E-09	8.02±0.52E-06	**1.71±0.48E-07**
116	DOWN(4)	6.92	**2,313**	-0.76±1.28E-08	**9.51±0.72E-06**	1.62±0.48E-07
605	DOWN(1)	7.00	587	-3.41±9.45E-10	2.38±0.48E-08	0.65±7.07E-08
605	DOWN(3)	6.93	978	1.13±0.32E-08	2.68±0.61E-08	-6.42±4.45E-08
801	DOWN(1)	**6.71**	**1,224**	1.33±2.91E-09	**1.27±0.03E-05**	8.72±9.48E-08
801	DOWN(2)	**6.71**	1,486	1.16±5.64E-09	1.40±0.08E-05	5.70±4.66E-08
801	DOWN(3)	6.69	1,646	-0.59±9.06E-09	**1.44±0.12E-05**	**1.55±0.34E-07**
801	DOWN(4)	**6.60**	**1,732**	-8.79±9.54E-09	1.38±0.07E-05	1.11±0.47E-07
802	DOWN(1)	**6.42**	272	2.68±6.39E-10	1.80±0.32E-08	0.38±1.01E-07
802	DOWN(2)	6.44	**150**	7.80±9.54E-10	**1.20±0.39E-08**	-0.30±4.65E-08
802	DOWN(3)	**6.93**	437	**1.66±0.18E-08**	6.84±0.48E-08	-4.95±4.47E-08
802	DOWN(4)	6.88	**1,548**	6.08±7.16E-09	**2.84±0.24E-07**	**1.18±0.32E-07**
803	DOWN(1)	**7.03**	1,256	0.36±5.39E-09	**2.50±0.83E-08**	-3.59±1.22E-07
803	DOWN(2)	7.01	**1,204**	1.70±3.69E-09	2.38±1.15E-08	9.74±4.72E-08
803	DOWN(3)	6.74	1,245	-0.44±6.33E-09	**9.10±7.11E-09**	-3.85±4.50E-08
803	DOWN(4)	**6.68**	**1,432**	4.78±5.39E-09	1.65±0.72E-08	**1.13±0.45E-07**
804	DOWN(1)	**6.80**	**765**	-1.70±2.89E-09	**1.28±0.11E-07**	-3.50±9.87E-08
804	DOWN(2)	6.49	**2,045**	**6.54±4.44E-09**	**3.76±0.22E-07**	**1.15±0.48E-07**
804	DOWN(3)	6.64	1,426	4.19±9.16E-09	2.63±0.24E-07	8.00±4.66E-08
804	DOWN(4)	**6.43**	1,210	1.85±5.29E-09	1.40±0.16E-07	0.37±4.59E-08
8603	DOWN(1)	7.13	2,418	2.38±5.21E-09	8.51±0.22E-05	2.30±0.97E-07
8603	DOWN(2)	7.20	**2,208**	0.89±1.08E-08	8.66±0.39E-05	**2.44±0.50E-07**
8603	DOWN(3)	**7.35**	2,300	**9.30±8.91E-09**	**9.01±0.43E-05**	1.99±0.49E-07
8603	DOWN(4)	**7.00**	**2,566**	-0.90±1.38E-08	**7.21±0.40E-05**	**1.63±0.48E-07**

Note: Bolding convention applied to these data. (See p. D-1.)
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-1 *(concluded)*
2007 Indicator Results From the Sand and Gravel Unit

Location Code	Hydraulic Position	p H (SU)	Conductivity (µmhos/cm@25^{0}C)	Gross Alpha (µCi/mL)	Gross Beta (µCi/mL)	Tritium (µCi/mL)
8604	DOWN(1)	7.06	2,261	2.19±4.80E-09	8.33±0.21E-05	2.43±0.97E-07
8604	DOWN(3)	7.26	2,140	-0.39±1.17E-08	8.21±0.57E-05	2.03±0.48E-07
8612	DOWN(1)	7.16	**1,500**	-0.95±9.72E-09	-2.41±7.05E-09	**2.53±0.99E-07**
8612	DOWN(2)	**7.20**	1,600	**9.72±8.98E-10**	0.00±1.66E-09	2.35±1.00E-07
8612	DOWN(3)	7.15	1,588	0.00±2.85E-09	0.76±4.93E-09	**2.28±0.49E-07**
8612	DOWN(4)	**6.69**	**1,647**	0.88±6.08E-09	-4.08±6.80E-09	2.30±0.49E-07
GSEEP	DOWN(1)	**6.63**	**910**	-2.00±5.31E-09	2.45±4.89E-09	**3.24±1.07E-07**
GSEEP	DOWN(2)	**7.09**	1,017	**2.34±1.56E-09**	4.82±2.56E-09	4.02±1.01E-07
GSEEP	DOWN(3)	6.65	1,215	-1.42±5.53E-09	**6.95±4.47E-09**	3.78±0.51E-07
GSEEP	DOWN(4)	6.82	**1,318**	2.99±5.48E-09	4.96±5.53E-09	**4.72±0.52E-07**
SP04	DOWN(1)	NS	NS	-1.89±7.60E-09	**1.03±0.76E-08**	0.70±1.04E-07
SP04	DOWN(3)	NS	NS	-0.32±1.02E-08	**2.67±0.64E-08**	1.89±0.48E-07
SP04	DOWN(4)	NS	NS	-1.81±4.26E-09	2.14±0.66E-08	**3.26±0.49E-07**
SP06	DOWN(1)	NS	NS	-0.42±4.23E-09	1.52±3.66E-09	0.41±1.00E-07
SP06	DOWN(3)	NS	NS	-0.58±5.69E-09	3.71±3.17E-09	5.98±4.65E-08
SP11	DOWN(1)	**7.07**	**1,109**	-2.77±6.85E-09	**9.23±0.85E-08**	0.83±1.01E-07
SP11	DOWN(2)	6.95	1,302	**4.22±2.47E-09**	1.06±0.08E-07	**1.63±0.85E-07**
SP11	DOWN(3)	6.95	1,495	-2.59±7.06E-09	**1.32±0.11E-07**	8.03±4.64E-08
SP11	DOWN(4)	**6.75**	**1,708**	4.07±6.69E-09	1.15±0.12E-07	6.08±4.64E-08
SP12	DOWN(1)	7.44	717	0.89±4.39E-09	0.51±3.39E-09	-1.92±9.88E-08
SP12	DOWN(3)	7.32	1,062	-4.27±5.61E-09	3.22±4.96E-09	1.77±0.49E-07
WP-A	DOWN(4)	9.00	115	1.12±2.45E-10	1.22±0.11E-08	1.15±0.04E-05
WP-C	DOWN(4)	8.01	122	0.65±2.71E-10	2.47±0.15E-08	3.08±0.09E-05
WP-H	DOWN(4)	6.58	1,596	-2.44±6.01E-09	8.19±0.64E-06	3.03±0.12E-06

Note: Bolding convention applied to these data. (See p. D-1.)
NS - Not sampled
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-2
2007 Indicator Results From the Lavery Till-Sand Unit

Location Code	Hydraulic Position	p H (SU)	Conductivity (µmhos/cm@25^{0}C)	Gross Alpha (µCi/mL)	Gross Beta (µCi/mL)	Tritium (µCi/mL)
302	UP(1)	6.73	4,632	1.15±1.55E-08	0.40±1.32E-08	0.98±1.02E-07
302	UP(3)	6.87	4,937	0.57±2.84E-08	1.28±2.46E-08	-7.53±4.44E-08
402	UP(1)	7.07	3,978	1.09±7.07E-09	1.15±1.40E-08	7.97±9.37E-08
402	UP(3)	7.03	4,162	-1.32±1.87E-08	0.21±1.30E-08	-0.89±4.53E-08
204	DOWN(1)	7.39	1,439	2.40±5.34E-09	3.46±6.54E-09	-9.58±9.71E-08
204	DOWN(2)	**7.51**	1,465	1.89±1.96E-09	0.81±2.12E-09	-1.62±9.60E-08
204	DOWN(3)	7.43	**1,414**	2.48±4.12E-09	2.61±5.20E-09	-4.43±3.20E-08
204	DOWN(4)	**7.14**	**1,506**	4.25±6.35E-09	-1.63±5.84E-09	-0.93±4.40E-08
206	DOWN(1)	7.41	1,568	1.88±9.74E-09	-3.07±7.02E-09	-6.36±9.78E-08
206	DOWN(3)	7.35	1,480	1.67±6.22E-09	-0.23±7.32E-09	-5.95±4.52E-08
208	DOWN(1)	7.67	328	1.51±1.49E-09	2.82±1.83E-09	0.72±1.01E-07
208	DOWN(3)	7.87	280	0.60±1.82E-09	0.44±1.76E-09	-6.78±4.44E-08

Note: Bolding convention applied to these data. (See p. D-1[illegible].)
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-3
2007 Indicator Results From the Weathered Lavery Till Unit

Location Code	Hydraulic Position	p H (SU)	Conductivity (µmhos/cm@25^{0}C)	Gross Alpha (µCi/mL)	Gross Beta (µCi/mL)	Tritium (µCi/mL)
908	UP(1)	6.84	2,565	0.77±1.52E-08	1.56±1.28E-08	0.16±1.01E-07
908	UP(3)	6.54	2,766	1.65±0.88E-08	0.94±1.04E-08	-1.04±4.53E-08
1005	UP(1)	6.95	796	2.48±5.90E-09	-1.60±4.70E-09	-0.81±1.03E-07
1005	UP(3)	7.17	757	5.63±6.11E-09	2.54±4.89E-09	-1.26±0.43E-07
1008C	UP(1)	7.45	620	-0.20±1.19E-09	3.16±3.72E-09	-2.36±1.00E-07
1008C	UP(3)	7.38	610	1.09±1.87E-09	1.07±2.58E-09	-2.22±4.51E-08
906	DOWN(1)	7.52	628	1.57±1.81E-09	5.48±3.80E-09	-0.72±1.03E-07
906	DOWN(3)	7.21	627	2.16±2.07E-09	4.31±2.77E-09	-1.02±0.44E-07
1006	DOWN(1)	6.91	1,665	0.67±1.12E-08	2.65±7.40E-09	-2.23±0.99E-07
1006	DOWN(3)	6.89	1,683	1.02±0.83E-08	2.93±7.34E-09	-9.51±4.39E-08
1007	DOWN(1)	6.87	1,318	0.16±1.12E-08	-1.33±7.20E-09	-1.76±1.02E-07
1007	DOWN(3)	6.83	1,315	5.36±7.11E-09	8.09±7.82E-09	-4.40±4.49E-08
NDATR	DOWN(1)	**7.32**	**549**	0.72±2.22E-09	**4.92±0.26E-07**	**4.36±0.71E-07**
NDATR	DOWN(2)	**8.04**	**1,015**	2.19±1.49E-09	3.61±0.14E-07	1.44±0.09E-06
NDATR	DOWN(3)	7.67	949	**4.67±4.31E-09**	**2.20±0.17E-07**	**3.46±0.13E-06**
NDATR	DOWN(4)	7.33	810	0.87±1.90E-09	3.86±0.16E-07	1.61±0.05E-06
909	DOWN(1)	6.80	1,261	0.44±2.85E-09	2.98±0.23E-07	6.94±1.04E-07
909	DOWN(2)	**6.86**	**1,194**	**2.32±2.14E-09**	**3.02±0.17E-07**	**6.53±1.06E-07**
909	DOWN(3)	6.74	1,262	-6.29±8.95E-09	**2.66±0.18E-07**	**7.22±0.56E-07**
909	DOWN(4)	**6.70**	**1,313**	-0.74±2.71E-09	2.80±0.17E-07	6.94±0.55E-07

Note: Bolding convention applied to these data. (See p. D-1.)
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-4
2007 Indicator Results From the Unweathered Lavery Till Unit

Location Code	Hydraulic Position	p H (SU)	Conductivity (µmhos/cm@25^{0}C)	Gross Alpha (µCi/mL)	Gross Beta (µCi/mL)	Tritium (µCi/mL)
405	UP(1)	**7.24**	**954**	1.42±2.16E-09	**1.24±0.71E-08**	-1.44±0.97E-07
405	UP(2)	7.13	**2,697**	0.51±3.02E-09	6.04±5.19E-09	-0.44±9.57E-08
405	UP(3)	**7.00**	2,326	6.44±9.25E-09	1.15±1.08E-08	-1.29±0.51E-07
405	UP(4)	7.05	2,364	0.79±1.09E-08	8.20±9.16E-09	1.66±4.58E-08
1303	UP(1)	7.80	**240**	0.47±1.43E-09	2.08±2.22E-09	-2.82±9.43E-08
1303	UP(2)	**7.78**	**334**	3.86±8.37E-10	**2.64±2.56E-09**	0.24±9.71E-08
1303	UP(3)	7.84	308	-0.65±1.78E-09	0.98±2.09E-09	-4.50±4.44E-08
1303	UP(4)	**7.97**	266	0.00±5.42E-10	0.54±1.08E-09	-4.05±4.32E-08
110	DOWN(1)	**7.47**	**530**	1.70±1.62E-09	1.85±3.63E-09	**9.21±1.16E-07**
110	DOWN(2)	7.43	528	1.62±1.98E-09	1.17±1.44E-09	**1.10±0.06E-06**
110	DOWN(3)	7.38	518	-1.72±4.08E-09	0.78±4.06E-09	1.02±0.06E-06
110	DOWN(4)	**7.29**	**510**	**4.39±2.85E-09**	1.02±2.64E-09	1.05±0.06E-06
704	DOWN(1)	6.55	**732**	-0.26±5.26E-09	1.20±3.65E-09	-1.27±1.02E-07
704	DOWN(2)	6.50	949	-0.76±1.83E-09	**8.15±5.39E-09**	-0.30±3.21E-08
704	DOWN(3)	**6.46**	1,054	-1.08±2.33E-09	4.15±2.78E-09	-2.46±4.52E-08
704	DOWN(4)	**6.64**	**1,234**	0.00±3.03E-09	5.85±4.89E-09	-0.74±4.42E-08
707	DOWN(1)	6.61	**392**	0.67±1.02E-09	2.06±2.69E-09	-1.27±1.00E-07
707	DOWN(2)	**6.48**	437	1.27±1.38E-09	**7.26±3.70E-09**	-3.77±3.19E-08
707	DOWN(3)	6.62	**668**	**2.45±2.18E-09**	3.61±1.91E-09	-9.84±5.05E-08
707	DOWN(4)	**6.68**	638	0.35±1.03E-09	1.36±2.06E-09	-7.35±4.89E-08
107	DOWN(1)	7.35	**651**	1.20±3.10E-09	**1.78±0.54E-08**	-0.78±1.00E-07
107	DOWN(2)	**7.45**	695	3.13±1.68E-09	1.22±0.33E-08	1.24±0.98E-07
107	DOWN(3)	7.01	854	0.41±1.61E-09	**8.84±3.07E-09**	1.11±0.33E-07
107	DOWN(4)	**7.00**	**968**	**5.71±3.66E-09**	1.33±0.32E-08	**2.12±0.47E-07**
108	DOWN(1)	**7.81**	517	2.56±1.39E-09	-0.07±4.49E-09	-0.37±1.01E-07
108	DOWN(2)	7.68	**542**	**3.17±1.51E-09**	**1.80±1.22E-09**	**2.00±0.49E-07**
108	DOWN(3)	**7.50**	524	-0.10±2.78E-09	2.24±3.01E-09	1.71±0.48E-07
108	DOWN(4)	7.55	**482**	2.57±2.27E-09	1.63±2.52E-09	1.04±0.45E-07
409	DOWN(1)	**8.02**	**331**	0.40±1.52E-09	**3.72±2.33E-09**	2.77±9.99E-08
409	DOWN(2)	7.95	**351**	**2.05±1.23E-09**	0.95±1.40E-09	-5.16±4.50E-08
409	DOWN(3)	7.80	338	8.56±9.83E-10	2.90±1.58E-09	-1.21±0.43E-07
409	DOWN(4)	**7.75**	334	1.40±1.02E-09	1.29±1.53E-09	-0.09±3.09E-08
910	DOWN(1)	**8.07**	850	2.52±2.40E-09	4.74±0.89E-08	0.15±9.46E-08
910	DOWN(2)	7.78	**1,040**	**3.15±2.03E-09**	**3.80±0.55E-08**	-3.69±9.67E-08
910	DOWN(3)	**7.46**	1,036	2.29±1.77E-09	3.90±0.39E-08	0.08±4.51E-08
910	DOWN(4)	7.53	**801**	1.49±2.06E-09	**5.56±0.15E-07**	2.77±4.60E-08

Note: Bolding convention applied to these data. (See p. D-1[illegible].)
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-5
2007 Indicator Results From the Kent Recessional Sequence

Location Code	Hydraulic Position	p H (SU)	Conductivity (µmhos/cm@25^{0}C)	Gross Alpha (µCi/mL)	Gross Beta (µCi/mL)	Tritium (µCi/mL)
901	UP(1)	7.78	344	0.74±1.65E-09	5.94±2.52E-09	-2.79±9.99E-08
901	UP(3)	7.53	360	-0.70±2.71E-09	1.88±2.44E-09	-7.79±4.50E-08
902	UP(1)	7.94	413	5.44±1.98E-09	1.31±2.73E-09	-1.40±0.98E-07
902	UP(3)	8.63	334	-1.21±2.53E-09	4.92±2.63E-09	-2.92±4.49E-08
1008B	UP(1)	7.90	318	3.11±2.00E-09	2.83±2.06E-09	-2.99±0.99E-07
1008B	UP(3)	7.68	314	1.09±1.14E-09	2.05±1.53E-09	-4.70±4.48E-08
903	DOWN(1)	7.43	906	-1.44±5.76E-09	1.16±4.84E-09	-1.01±1.00E-07
903	DOWN(3)	7.28	934	-0.88±1.91E-09	3.90±3.62E-09	-7.73±4.51E-08
8610	DOWN(1)	7.80	1,116	-1.27±4.48E-09	9.91±4.96E-09	-1.84±0.71E-07
8610	DOWN(3)	7.16	1,120	1.60±6.49E-09	4.19±5.24E-09	-4.89±4.43E-08
8611	DOWN(1)	7.61	927	-2.76±3.67E-09	4.56±4.60E-09	-1.81±1.02E-07
8611	DOWN(3)	7.11	909	1.87±2.40E-09	3.25±3.45E-09	-4.73±4.41E-08

Note: Bolding convention is not applicable to these data.
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-6
2007 Results for Metals in Groundwater
Title 6 NYCRR Appendix 33 List

Location Code	Hydraulic Position	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)
Sand and Gravel									
301	UP(3)	<10	<10	296	<1	<5	63	<50	<25
301	UP(4)	<10	<10	438	<1	<5	2,490	61	59
706	UP(1)	<10	<10	114	<1	<5	155	<50	<25
706	UP(2)	<10	<10	**97**	<1	<5	**49**	<50	<25
706	UP(3)	<10	<10	151	<1	<5	136	<50	<25
706	UP(4)	<10	<10	**162**	<1	<5	**268**	<50	<25
1304	UP(1)	<10	<10	102	<1	<5	<5	<50	<25
1304	UP(2)	<10	<10	**157**	<1	<5	<5	<50	<25
1304	UP(3)	<10	<10	150	<1	<5	<5	<50	<25
1304	UP(4)	<10	<10	**84**	<1	<5	<5	<50	<25
1302	DOWN(1)	<10	<10	98	<1	<5	<5	<50	<25
1302	DOWN(2)	<10	<10	**82**	<1	<5	<5	<50	<25
1302	DOWN(3)	<10	<10	**166**	<1	<5	<5	<50	<25
1302	DOWN(4)	<10	<10	149	<1	<5	<5	<50	<25
104	DOWN(3)	<10	<10	253	<1	<5	<10	<50	<25
104	DOWN(4)	<10	<10	342	<1	<5	416	<50	<25
111	DOWN(1)	<2	<3	85	<0.1	<0.3	<1	2	2
408	DOWN(3)	<10	<10	535	<1	<5	71	<50	<25
408	DOWN(4)	<10	<10	660	<1	<5	24	<50	<25
501	DOWN(3)	<10	<10	511	<1	<5	<10	<50	<25
501	DOWN(4)	<10	<10	654	<1	<5	<10	<50	<25
502	DOWN(1)	NS	**8**	**761**	NS	<0.3	**4,800**	7	79
502	DOWN(3)	<10	<10	**567**	<1	<5	**1,590**	<50	<25
502	DOWN(4)	<10	<10	745	<1	<5	2,590	<50	30
8605	DOWN(1)	<2	4	139	<0.1	<0.3	<1	1	2
8609	DOWN(3)	<10	<10	498	<1	<5	<10	<50	<25
8609	DOWN(4)	<10	<10	545	<1	<5	<10	<50	<25
Weathered Till									
NDATR	DOWN(1)	<10	<10	**33**	<1	<5	<5	<50	<25
NDATR	DOWN(2)	<10	<10	44	<1	<5	<5	<50	<25
NDATR	DOWN(3)	<10	<10	55	<1	<5	<5	<50	<25
NDATR	DOWN(4)	<10	<10	**64**	<1	<5	<5	<50	<25
909	DOWN(1)	<10	17	198	<1	<5	6	<50	<25

Note: Bolding convention applied to these data. (See p. D-1.)

NS - Not sampled.

Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-6 *(continued)*
2007 Results for Metals in Groundwater
Title 6 NYCRR Appendix 33 List

Location Code	Hydraulic Position	Antimony (µg/L)	Arsenic (µg/L)	Barium (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Cobalt (µg/L)	Copper (µg/L)
Unweathered Till									
405	UP(1)	<10	<10	**86**	<1	<5	804	<50	<25
405	UP(2)	<10	<10	138	<1	<5	**166**	<50	<25
405	UP(3)	<10	<10	103	<1	<5	585	<50	<25
405	UP(4)	<10	<10	**182**	<1	<5	**1,080**	<50	<25
1303	UP(1)	<10	**21**	**286**	1	<5	28	<50	<25
1303	UP(2)	<10	23	375	1	<5	35	<50	37
1303	UP(3)	<10	**34**	**467**	**2**	<5	**47**	<50	**44**
1303	UP(4)	<10	22	442	1	<5	**26**	<50	42

Note: Bolding convention applied to these data. (See p. D-1.)

Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-6 *(continued)*
2007 Results for Metals in Groundwater
Title 6 NYCRR Appendix 33 List

Location Code	Hydraulic Position	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Tin (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
Sand and Gravel										
301	UP(3)	<3	<0.2	96	<5	<10	<10	<3,000	<50	<20
301	UP(4)	<3	<0.2	2,940	<5	<10	<10	<3,000	<50	<20
706	UP(1)	<3	<0.2	793	<5	<10	<10	<3,000	<50	<20
706	UP(2)	<3	<0.2	**583**	<5	<10	<10	<3,000	<50	<20
706	UP(3)	<3	<0.2	820	<5	<10	<10	<3,000	<50	<20
706	UP(4)	<3	<0.2	**994**	<25	<10	<10	<3,000	<50	<20
1304	UP(1)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
1304	UP(2)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
1304	UP(3)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
1304	UP(4)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
1302	DOWN(1)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
1302	DOWN(2)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
1302	DOWN(3)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
1302	DOWN(4)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
104	DOWN(3)	<3	NS	<40	<5	<10	<10	<3,000	<50	<20
104	DOWN(4)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
111	DOWN(1)	<2	<0.1	4	<4	<0.5	<6	<4	<1	5
408	DOWN(3)	<3	NR	137	<5	<10	<10	<3,000	<50	<20
408	DOWN(4)	<3	<0.2	165	<5	<10	<10	<3,000	<50	<20
501	DOWN(3)	<3	NR	<40	<5	<10	<10	<3,000	<50	<20
501	DOWN(4)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
502	DOWN(1)	<2	<0.1	**206**	<4	<0.5	NS	NS	**13**	**6**
502	DOWN(3)	<3	NR	**70**	<5	<10	<10	<3,000	<50	<20
502	DOWN(4)	<3	<0.2	130	<5	<10	<10	<3,000	<50	<20
8605	DOWN(1)	<2	<0.1	<2	<4	<0.5	<6	<4	<1	1
8609	DOWN(3)	<3	NR	<40	<5	<10	<10	<3,000	<50	<20
8609	DOWN(4)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
Weathered Till										
NDATR	DOWN(1)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
NDATR	DOWN(2)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
NDATR	DOWN(3)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	<20
NDATR	DOWN(4)	<3	<0.2	<40	<5	<10	<10	<3,000	<50	**30**
909	DOWN(1)	4	<0.2	<40	<5	<10	<10	<3,000	<50	24

Note: Bolding convention applied to these data. (See p. D-1.)

NR - Mercury data not reported due to failure of analytical quality control.

NS - Not sampled.

Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-6 *(concluded)*
2007 Results for Metals in Groundwater
Title 6 NYCRR Appendix 33 List

Location Code	Hydraulic Position	Lead (µg/L)	Mercury (µg/L)	Nickel (µg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Tin (µg/L)	Vanadium (µg/L)	Zinc (µg/L)
Unweathered Till										
405	UP(1)	<3	<0.2	950	<5	<10	<10	<3,000	<50	<20
405	UP(2)	<3	<0.2	1,160	<5	<10	<10	<3,000	<50	<20
405	UP(3)	<3	<0.2	**666**	<5	<10	<10	<3,000	<50	<20
405	UP(4)	<3	<0.2	**1,650**	<5	<10	<10	<3,000	<50	<20
1303	UP(1)	**15**	<0.2	**43**	<5	<10	<10	<3,000	<50	**85**
1303	UP(2)	22	<0.2	58	<5	<10	<10	<3,000	<50	113
1303	UP(3)	29	<0.2	**74**	<5	<10	<10	<3,000	**58**	**146**
1303	UP(4)	**31**	<0.2	51	<5	<10	<10	<3,000	<50	106

Note: Bolding convention applied to these data. (See p. D-1.)

Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-7
2007 Radioactivity in groundwater From Selected Monitoring Locations

Location Code	Hydraulic Position	C-14 (µCi/mL)	Sr-90 (µCi/mL)	Tc-99 (µCi/mL)
Sand and Gravel				
301	UP(3)	NS	8.50±8.98E-10	NS
401	UP(1)	-4.28±2.99E-08	0.84±1.13E-09	2.77±2.08E-09
706	UP(1)	-0.36±3.62E-08	2.68±1.15E-09	1.33±1.40E-09
706	UP(2)	-3.02±3.08E-08	**2.42±0.82E-09**	-1.20±2.82E-09
706	UP(3)	-0.98±3.93E-08	2.56±0.77E-09	-0.17±1.65E-09
706	UP(4)	-0.40±3.70E-08	**2.82±0.97E-09**	0.75±1.96E-09
1304	UP(1)	0.55±3.15E-08	1.15±1.07E-09	0.98±1.97E-09
1304	UP(2)	1.54±3.08E-08	**2.45±1.13E-09**	-1.25±2.60E-09
1304	UP(3)	0.21±3.96E-08	1.58±0.82E-09	-0.12±1.68E-09
1304	UP(4)	-1.17±3.82E-08	-5.02±7.67E-10	1.35±1.97E-09
1302	DOWN(1)	-0.33±3.11E-08	6.42±8.63E-10	1.69±2.03E-09
1302	DOWN(2)	**5.02±3.17E-08**	5.80±9.44E-10	-1.96±2.58E-09
1302	DOWN(3)	-0.98±3.94E-08	2.52±9.19E-10	-0.24±1.66E-09
1302	DOWN(4)	-0.16±3.68E-08	-0.50±6.69E-10	-0.28±1.89E-09
103	DOWN(4)	NS	1.06±0.09E-07	NS
111	DOWN(1)	NS	1.46±0.01E-06	NS
406	DOWN(1)	-0.40±3.61E-08	1.72±1.11E-09	1.90±1.40E-09
408	DOWN(1)	2.48±3.42E-08	15.10±0.01E-05	1.10±0.28E-08
501	DOWN(1)	NS	7.04±0.01E-05	NS
502	DOWN(1)	NS	8.61±0.01E-05	NS
8605	DOWN(1)	NS	4.96±0.01E-06	NS
8607	DOWN(3)	-1.46±3.92E-08	9.56±1.27E-09	8.91±2.17E-09
8607	DOWN(4)	-2.88±3.63E-08	7.52±1.38E-09	1.21±0.25E-08
8609	DOWN(1)	NS	9.01±0.04E-07	NS
8609	DOWN(3)	NS	1.06±0.01E-06	NS
116	DOWN(1)	NS	2.66±0.01E-06	NS
116	DOWN(3)	NS	3.86±0.02E-06	NS
801	DOWN(1)	NS	6.47±0.01E-06	NS
801	DOWN(2)	NS	7.18±0.04E-06	NS
801	DOWN(3)	NS	**5.70±0.03E-06**	NS
801	DOWN(4)	NS	**7.99±0.04E-06**	NS
8603	DOWN(1)	NS	4.09±0.01E-05	NS
8603	DOWN(3)	NS	3.62±0.01E-05	NS

Note: Bolding convention applied to these data. (See p. D-1.)

NS - Not sampled.

Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-7 *(continued)*
2007 Radioactivity in groundwater From Selected Monitoring Locations

Location Code	Hydraulic Position	C-14 (µCi/mL)	Sr-90 (µCi/mL)	Tc-99 (µCi/mL)
Weathered Till				
NDATR	DOWN(1)	3.12±3.68E-08	2.10±0.15E-07	2.35±1.45E-09
NDATR	DOWN(3)	-2.26±3.89E-08	1.08±0.04E-07	-1.58±2.11E-09
909	DOWN(1)	3.43±3.67E-08	1.41±0.05E-07	2.30±1.41E-09
Unweathered Till				
405	UP(1)	3.64±3.69E-08	0.53±1.12E-09	**3.98±2.66E-09**
405	UP(2)	-2.16±3.11E-08	1.88±0.88E-09	-4.08±2.73E-09
405	UP(3)	-4.21±3.85E-08	1.64±0.68E-09	-0.13±1.72E-09
405	UP(4)	1.79±3.73E-08	**2.60±1.07E-09**	1.07±1.96E-09
1303	UP(1)	-2.13±3.07E-08	6.69±8.77E-10	1.65±2.07E-09
1303	UP(2)	1.39±3.06E-08	-0.75±6.15E-10	-2.09±2.58E-09
1303	UP(3)	-3.18±3.87E-08	-2.51±4.29E-10	-0.88±1.59E-09
1303	UP(4)	-1.97±3.79E-08	3.83±6.32E-10	1.36±1.98E-09
910	DOWN(1)	-2.35±3.04E-08	1.78±0.25E-08	0.89±2.04E-09

Note: Bolding convention applied to these data. (See p. D-1.)

Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-7 *(continued)*
2007 Radioactivity in groundwater From Selected Monitoring Locations

Location Code	Hydraulic Position	I-129 (µCi/mL)	Cs-137 (µCi/mL)	Ra-226 (µCi/mL)	Ra-228 (µCi/mL)	U-232 (µCi/mL)
Sand and Gravel						
401	UP(1)	3.60±4.23E-10	0.96±1.95E-09	0.26±1.10E-10	9.80±4.13E-10	-3.99±3.96E-11
706	UP(1)	-0.92±5.06E-10	-1.74±1.94E-09	**5.06±3.00E-10**	1.13±4.58E-10	-0.34±4.17E-11
706	UP(2)	0.52±3.62E-10	-0.45±2.06E-09	3.92±1.63E-10	0.54±2.82E-10	-0.42±4.33E-11
706	UP(3)	-0.71±5.24E-10	0.76±1.94E-09	**2.24±2.07E-10**	6.29±3.59E-10	-1.69±1.73E-11
706	UP(4)	-2.05±4.34E-10	-0.26±1.95E-09	3.59±1.67E-10	**1.18±0.41E-09**	3.07±5.54E-11
1304	UP(1)	-0.24±3.47E-10	0.37±2.03E-09	**1.76±1.15E-10**	**6.88±4.19E-10**	-1.64±3.02E-11
1304	UP(2)	-3.42±7.11E-10	**2.52±2.51E-09**	3.26±2.50E-10	3.83±3.80E-10	-5.75±7.68E-11
1304	UP(3)	2.75±8.02E-10	1.46±1.99E-09	**2.18±0.40E-09**	**3.46±2.48E-10**	-4.15±2.77E-11
1304	UP(4)	-2.08±4.12E-10	0.30±2.15E-09	3.11±1.52E-10	6.58±4.54E-10	-1.93±3.58E-11
1302	DOWN(1)	**5.79±3.64E-10**	0.50±1.93E-09	4.21±1.83E-10	4.95±3.77E-10	5.56±7.60E-11
1302	DOWN(2)	1.13±5.49E-10	-0.31±2.02E-09	-0.26±1.37E-10	1.39±2.82E-10	-0.19±1.02E-10
1302	DOWN(3)	0.36±2.85E-10	0.81±1.79E-09	**5.86±2.49E-10**	3.07±2.91E-10	3.69±9.18E-11
1302	DOWN(4)	7.01±9.03E-10	2.82±3.33E-09	3.43±1.63E-10	**1.24±0.44E-09**	-2.02±3.39E-11
406	DOWN(1)	-0.37±4.85E-10	0.26±1.95E-09	1.58±2.30E-10	2.68±4.43E-10	0.10±4.47E-11
408	DOWN(1)	-0.32±1.13E-09	3.70±4.49E-09	1.06±0.41E-09	3.89±0.82E-09	-0.15±7.59E-11
8607	DOWN(3)	1.09±3.30E-10	0.45±1.83E-09	1.36±1.51E-10	6.71±3.43E-10	-1.48±7.22E-11
8607	DOWN(4)	2.74±4.81E-10	0.26±1.84E-09	0.67±1.06E-10	7.54±3.27E-10	2.60±6.63E-11
Weathered Till						
NDATR	DOWN(1)	0.00±4.79E-10	-1.66±1.90E-09	3.96±1.99E-10	-1.58±4.14E-10	-2.80±3.07E-11
NDATR	DOWN(3)	0.00±1.06E-09	-0.81±1.86E-09	1.64±1.56E-10	5.45±3.13E-10	-2.21±7.58E-11
909	DOWN(1)	5.63±1.49E-09	0.55±2.00E-09	3.75±2.73E-10	4.60±4.70E-10	-0.50±2.84E-11
Unweathered Till						
405	UP(1)	-3.76±3.71E-10	0.75±1.96E-09	1.28±1.32E-10	7.24±5.04E-10	-1.32±4.21E-11
405	UP(2)	3.78±3.20E-10	0.46±2.04E-09	**5.58±2.37E-10**	**7.11±3.79E-10**	2.53±6.14E-11
405	UP(3)	**5.92±3.92E-10**	-0.27±1.29E-09	3.37±2.34E-10	8.27±4.16E-10	5.14±6.71E-11
405	UP(4)	-0.04±1.76E-10	0.46±2.12E-09	5.42±1.99E-10	**1.49±0.40E-09**	1.65±4.16E-11
1303	UP(1)	-0.71±3.23E-10	-0.06±2.01E-09	1.98±1.44E-10	3.15±3.69E-10	-2.25±2.89E-11
1303	UP(2)	-5.45±9.28E-10	-0.40±2.04E-09	1.58±2.07E-10	-0.35±2.54E-10	0.87±1.21E-10
1303	UP(3)	**5.41±4.76E-10**	-0.25±1.89E-09	2.14±1.78E-10	0.58±2.56E-10	-4.44±3.86E-11
1303	UP(4)	-2.54±3.16E-10	1.53±2.12E-09	**3.50±1.71E-10**	1.96±2.87E-10	-0.13±3.86E-11
910	DOWN(1)	0.29±1.01E-09	1.54±1.94E-09	2.32±1.56E-10	4.30±3.95E-10	-4.82±4.77E-11
910	DOWN(4)	NS	1.10±2.03E-09	NS	NS	NS

Note: Bolding convention applied to these data. (See p. D-1.)
NS - Not sampled.
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-7 *(concluded)*
2007 Radioactivity in groundwater From Selected Monitoring Locations

Location Code	Hydraulic Position	U-233/234 (µCi/mL)	U-235/236 (µCi/mL)	U-238 (µCi/mL)	Total U (µg/mL)
Sand and Gravel					
401	UP(1)	2.27±1.04E-10	2.76±3.79E-11	1.37±0.77E-10	2.86±0.08E-04
706	UP(1)	**8.08±6.00E-11**	3.54±4.32E-11	3.78±4.27E-11	**1.93±0.10E-04**
706	UP(2)	1.18±0.73E-10	1.43±3.24E-11	9.25±6.63E-11	9.39±0.47E-05
706	UP(3)	1.42±0.98E-10	0.47±3.54E-11	3.00±5.92E-11	0.00±5.67E-04
706	UP(4)	**1.81±0.86E-10**	3.52±4.91E-11	**1.05±0.63E-10**	0.00±6.78E-04
1304	UP(1)	**2.28±1.03E-10**	0.36±3.38E-11	1.92±0.93E-10	3.31±0.10E-04
1304	UP(2)	2.86±1.43E-10	1.38±3.67E-11	1.55±1.07E-10	**4.60±0.15E-04**
1304	UP(3)	2.29±1.20E-10	-1.52±3.43E-11	**1.19±0.94E-10**	3.80±0.12E-04
1304	UP(4)	**2.99±1.15E-10**	2.43±3.73E-11	**2.21±0.98E-10**	0.00±6.78E-04
1302	DOWN(1)	**8.79±7.90E-11**	2.51±4.96E-11	**9.46±7.85E-11**	-4.52±0.22E-05
1302	DOWN(2)	**3.18±1.73E-10**	1.73±4.58E-11	1.65±1.27E-10	1.39±0.05E-04
1302	DOWN(3)	1.97±1.14E-10	1.17±3.11E-11	1.00±0.80E-10	**1.82±0.09E-04**
1302	DOWN(4)	1.51±0.89E-10	**5.02±4.92E-11**	**1.76±0.96E-10**	0.00±6.78E-04
406	DOWN(1)	8.12±6.74E-11	3.02±4.14E-11	1.61±0.88E-10	1.07±0.36E-04
408	DOWN(1)	4.20±1.74E-10	1.19±1.05E-10	2.90±1.40E-10	7.78±0.22E-04
8607	DOWN(3)	5.64±7.69E-11	3.62±5.69E-11	1.47±5.37E-11	8.98±0.76E-05
8607	DOWN(4)	3.81±4.85E-11	3.36±4.24E-11	8.30±5.95E-11	0.00±6.78E-04
Weathered Till					
NDATR	DOWN(1)	3.39±1.29E-10	9.15±6.77E-11	4.01±1.40E-10	1.20±0.03E-03
NDATR	DOWN(3)	1.86±0.36E-09	8.43±8.27E-11	1.30±0.31E-09	4.52±0.12E-03
909	DOWN(1)	5.12±1.53E-10	1.21±0.77E-10	4.48±1.44E-10	1.11±0.05E-03
Unweathered Till					
405	UP(1)	4.72±1.46E-10	2.52±3.86E-11	**2.48±1.04E-10**	7.38±0.23E-04
405	UP(2)	**3.95±1.20E-10**	6.84±5.08E-11	2.68±0.98E-10	**5.64±0.18E-04**
405	UP(3)	4.66±1.76E-10	4.68±5.82E-11	**3.43±1.53E-10**	6.80±0.22E-04
405	UP(4)	**5.37±1.61E-10**	**1.41±0.83E-10**	2.86±1.17E-10	**1.08±0.03E-03**
1303	UP(1)	2.26±1.06E-10	-1.36±2.84E-11	2.43±1.05E-10	3.79±0.10E-04
1303	UP(2)	**4.16±2.01E-10**	2.35±4.60E-11	**1.99±1.38E-10**	4.49±0.12E-04
1303	UP(3)	3.77±1.51E-10	0.43±3.27E-11	2.58±1.29E-10	**4.93±0.17E-04**
1303	UP(4)	**2.14±0.96E-10**	3.58±4.04E-11	**2.92±1.07E-10**	0.00±6.78E-04
910	DOWN(1)	8.08±2.30E-10	2.55±4.78E-11	3.69±1.58E-10	1.01±0.02E-03

Note: Bolding convention applied to these data. (See p. D-1.)
Sample collection quarter is noted in parentheses next to hydraulic position. Hydraulic position is relative to other wells within the same hydrogeologic unit.

TABLE D-8
Practical Quantitation Limits (PQLs)

COMPOUND	PQL (µg/L)	COMPOUND	PQL (µg/L)
6 NYCRR[a] Appendix 33 Volatiles		6 NYCRR[a] Appendix 33 Volatiles	
Acetone	10	Isobutyl alcohol	100
Acetonitrile	100	Methacrylonitrile	5
Acrolein	11	Methyl ethyl ketone	10
Acrylonitrile	10	Methyl iodide	5
Allyl chloride	5	Methyl methacrylate	5
Benzene	5	4-Methyl-2-pentanone	10
Bromodichloromethane	5	Methylene bromide	10
Bromoform	5	Methylene chloride	5
Bromomethane	10	Pentachloroethane	5
Carbon disulfide	10	Propionitrile	50
Carbon tetrachloride	5	Styrene	5
Chlorobenzene	5	1,1,1,2-Tetrachloroethane	5
Chloroethane	10	1,1,2,2-Tetrachloroethane	5
Chloroform	5	Tetrachloroethylene	5
Chloromethane	10	Toluene	5
Chloroprene	5	1,1,1-Trichloroethane (1,1,1-TCA)	5
1,2-Dibromo-3-chloropropane	5	1,1,2-Trichloroethane	5
Dibromochloromethane	5	1,2,3-Trichloropropane	5
1,2-Dibromoethane	5	Vinyl acetate	10
Dichlorodifluoromethane (DCDFMeth)	5	Vinyl chloride	10
1,1-Dichloroethane (1,1-DCA)	5	Xylene (total)	5
1,2-Dichloroethane (1,2-DCA)	5	cis-1,3-Dichloropropene	5
1,1-Dichloroethylene (1,1-DCE)	5	trans-1,2-Dichloroethylene (1,2-DCE[trans])	5
1,2-Dichloropropane	5	trans-1,3-Dichloropropene	5
Ethyl benzene	5	trans-1,4-Dichloro-2-butene	5
Ethyl methacrylate	5	Trichloroethylene (TCE)	5
2-Hexanone	10	Trichlorofluoromethane	5
6 NYCRR[a] Appendix 33 Metals		6 NYCRR[a] Appendix 33 Metals	
Aluminum[b]	200	Lead	3
Antimony	10	Manganese[b]	15
Arsenic	10	Mercury	0.2
Barium	200	Nickel	40
Beryllium	1	Selenium	5
Cadmium	5	Silver	10
Chromium	10	Thallium	10
Cobalt	50	Tin	3,000

Note: Specific quantitation limits are highly matrix dependent and may not always be achievable.
[a] Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York.
[b] Not a 6 NYCRR Appendix 33 parameter; sampled for the north plateau early warning program.

TABLE D-8 *(continued)*
Practical Quantitation Limits (PQLs)

COMPOUND	PQL (µg/L)	COMPOUND	PQL (µg/L)
6 NYCRR[a] Appendix 33 Semivolatiles		6 NYCRR[a] Appendix 33 Semivolatiles	
Acenaphthene	10	2,4-Dinitrotoluene	10
Acenaphthylene	10	2,6-Dinitrotoluene	10
Acetophenone	10	Diphenylamine	10
2-Acetylaminofluorene	10	Ethyl methanesulfonate	10
4-Aminobiphenyl	10	Famphur	15
Aniline	10	Fluoranthene	10
Anthracene	10	Fluorene	10
Aramite	20	Hexachlorobenzene	10
Benzo[a]anthracene	10	Hexachlorobutadiene	10
Benzo[a]pyrene	10	Hexachlorocyclopentadiene	24
Benzo[b]fluoranthene	10	Hexachloroethane	10
Benzo[ghi]perylene	10	Hexachlorophene	250
Benzo[k]fluoranthene	10	Hexachloropropene	10
Benzyl alcohol	10	Indeno(1,2,3,-cd)pyrene	10
Bis(2-chlorethyl)ether	10	Isodrin	10
Bis(2-chloroethoxy)methane	10	Isophorone	10
Bis(2-chloroisopropyl)ether	10	Isosafrole	10
Bis(2-ethylhexyl)phthalate	10	Kepone	50
4-Bromophenyl phenyl ether	10	Methapyrilene	40
Butyl benzyl phthalate	10	Methyl methanesulfonate	10
Chlorobenzilate	10	3-Methylcholanthrene	10
2-Chloronaphthalene	10	2-Methylnaphthalene	10
2-Chlorophenol	10	1,4-Naphthoquinone	10
4-Chlorophenyl phenyl ether	10	1-Naphthylamine	10
Chrysene	10	2-Naphthylamine	10
Di-n-butyl phthalate	10	Nitrobenzene	10
Di-n-octyl phthalate	10	5-Nitro-o-toluidine	10
Diallate	10	4-Nitroquinoline 1-oxide	40
Dibenz[a,h]anthracene	10	N-Nitrosodi-n-butylamine	10
Dibenzofuran	10	N-Nitrosodiethylamine	10
3,3-Dichlorobenzidine	10	N-Nitrosodimethylamine	10
2,4-Dichlorophenol	10	N-Nitrosodipropylamine	10
2,6-Dichlorophenol	10	N-Nitrosodiphenylamine	10
Diethyl phthalate	10	N-Nitrosomethylethylamine	10
Dimethoate	10	N-Nitrosomorpholine	10
7, 12-Dimethylbenz[a]anthracene	10	N-Nitrosopiperidine	50
3,3-Dimethylbenzidine	20	N-Nitrosopyrrolidine	10
2,4-Dimethylphenol	10	Naphthalene	10
Dimethyl phthalate	10	0,0,0-Triethyl phosphorothioate	10
4,6-Dinitro-o-cresol	25	0,0-Diethyl 0-2-pyrazinyl- phosphorothioate	10
2,4-Dinitrophenol	25		

Note: Specific quantitation limits are highly matrix dependent and may not always be achievable.
[a] Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York.

TABLE D-8 *(concluded)*
Practical Quantitation Limits (PQLs)

COMPOUND	PQL (µg/L)	COMPOUND	PQL (µg/L)
6 NYCRR[a] Appendix 33 Semivolatiles		6 NYCRR[a] Appendix 33 Semivolatiles	
p-(Dimethylamino)azobenzene	10	2,3,4,6-Tetrachlorophenol	10
p-Chloroaniline	10	Tetraethyl dithiopyrophosphate	10
p-Chloro-m-cresol	10	1,2,4-Trichlorobenzene	10
p-Cresol	10	2,4,5-Trichlorophenol	25
p-Dichlorobenzene	10	2,4,6-Trichlorophenol	10
p-Nitroaniline	25	alpha,alpha-Dimethylphenethylamine	50
p-Nitrophenol	25	m-Cresol	10
p-Phenylenediamine	35	m-Dichlorobenzene	10
Parathion	10	m-Dinitrobenzene	10
Pentachlorobenzene	10	m-Nitroaniline	25
Pentachloronitrobenzene	50	o-Cresol	10
Pentachlorophenol	25	o-Dichlorobenzene	10
Phenacetin	10	o-Nitroaniline	25
Phenanthrene	10	o-Nitrophenol	10
Phenol	10	o-Toluidine	10
Pronamide	10	sym-Trinitrobenzene	10
Pyrene	10	2-Picoline	10
Safrole	10	Pyridine	10
1,2,4,5-Tetrachlorobenzene	10	1,4-Dioxane	10
Other Organic Compounds			
1,2-Dichloroethelyne (Total)	5		
Tributyl phosphate	10		

Note: Specific quantitation limits are highly matrix dependent and may not always be achievable.
[a] Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York.