

TABLE E - 9 (continued)

1990 Dissolved Metals for the Low-level Liquid Waste Treatment Facility (mg/L)

Location Code	Hydraulic Position	Sample Date	Arsenic	Barium	Cadmium	Chromium	Iron	Lead	Manganese	Mercury	Selenium	Silver	Sodium
<b>**Quality Standards<sup>1</sup>**</b>			.025	1.0	.01	.05	.30	.025	.30	.002	.01	.05	< 20
WNW80-06	DOWN	02/20/90	<.005	<.06	<.005	<.010	.08	<.005	1.6	<.0004	<.005	<.005	8.90
WNW80-06	DOWN	04/23/90	<.005	.08	<.005	<.010	.11	<.005	2.6	<.0004	<.005	<.010	13.00
WNW80-06	DOWN	06/05/90	<.005	.07	<.005	<.010	.23	<.005	5.1	<.0004	<.005	<.010	12.50
WNW80-06	DOWN	06/14/90	<.005	.08	<.005	<.010	.29	<.005	7.0	<.0004	<.005	<.010	11.50
WNW80-06	DOWN	09/10/90	<.005	.10	<.005	<.010	<.05	<.003	3.7	<.0004	<.005	<.005	11.00
WNW80-06	DOWN	09/27/90	<.005	.12	<.005	<.010	.12	.012	4.2	<.0004	<.005	<.005	12.10
WNW80-06	DOWN	10/24/90	<.005	.10	<.005	<.010	<.05	<.003	3.5	.0012	<.005	<.005	13.00
WNW80-06	DOWN	11/07/90	<.005	.11	<.005	<.010	.054	<.003	5.4	<.0004	<.005	<.005	15.60
WNW86-03	DOWN	02/21/90	<.005	.25	<.005	<.010	<.05	<.005	.026	<.0004	<.005	<.005	27.00
WNW86-03	DOWN	04/23/90	<.005	.21	<.005	<.010	<.05	<.005	.007	<.0004	<.005	<.010	29.00
WNW86-03	DOWN	05/24/90	<.005	.23	<.005	<.010	<.05	<.005	.007	<.0004	<.005	<.010	26.80
WNW86-03	DOWN	06/15/90	.005	.23	<.005	<.010	<.05	<.005	<.005	<.0004	<.005	<.010	28.80
WNW86-03	DOWN	07/09/90	<.005	.19	.009	.013	<.05	<.005	.008	<.0004	<.005	<.007	27.80
WNW86-03	DOWN	09/24/90	<.005	.23	<.005	<.010	<.02	<.003	.005	<.0004	<.005	<.005	31.20
WNW86-03	DOWN	10/24/90	<.005	.24	<.005	<.010	<.05	<.003	.007	.0015	<.005	<.005	32.00
WNW86-03	DOWN	11/08/90	<.005	<.15	<.005	<.010	<.05	<.003	.009	<.0004	<.005	<.005	31.8
WNW86-04	DOWN	03/01/90	<.005	.21	<.005	<.010	.04	<.005	.03	<.0004	<.005	<.005	29.0
WNW86-04	DOWN	04/26/90	<.005	.17	<.005	<.010	<.05	<.005	.034	<.0004	<.005	.005	30.0
WNW86-04	DOWN	05/23/90	<.005	.22	<.005	<.010	<.05	<.005	.025	<.0004	<.005	<.005	28.2
WNW86-04	DOWN	06/15/90	<.005	.27	<.005	<.010	.11	<.005	.054	<.0004	<.005	<.010	27.1
WNW86-04	DOWN	09/12/90	<.005	.29	<.005	<.010	.10	<.003	.06	<.0004	<.005	<.005	30.4
WNW86-04	DOWN	09/24/90	<.005	.33	<.005	<.010	.16	<.003	.058	<.0004	<.005	<.005	28.0
WNW86-04	DOWN	10/24/90	<.005	.32	<.005	<.010	.17	<.003	.057	.0006	<.005	<.005	30.0
WNW86-04	DOWN	11/08/90	<.005	.26	.006	<.010	.12	<.003	.05	<.0004	<.005	<.005	29.2
WNW86-05	DOWN	03/01/90	.002	.078	<.002	.017	.838	.007	5.790	<.0002	<.002	<.010	28.2
WNW86-05	DOWN	04/26/90	.005	.09	.002	.018	2.88	.003	11.20	<.0002	<.002	.011	36.9
WNW86-05	DOWN	06/08/90	<.050	.112	.003	.022	4.64	.002	10.70	.0002	.002	.015	63.8
WNW86-05	DOWN	06/21/90	.008	.12	.003	.023	5.87	.004	11.10	N/A	<.002	.015	73.4
WNW86-05	DOWN	09/12/90	.008	.10	.002	<.010	2.77	<.002	9.243	<.0002	<.002	<.010	65.3
WNW86-05	DOWN	09/27/90	.010	.115	.004	<.020	4.40	<.002	10.60	<.0002	<.002	<.010	67.4
WNW86-05	DOWN	10/24/90	.010	.104	.004	.014	4.38	<.002	9.450	<.0002	<.002	.015	46.1
WNW86-05	DOWN	11/12/90	.008	.098	.003	.012	4.21	<.002	9.258	<.0002	<.002	.014	45.96

<sup>1</sup> Quality standards for Class GA Groundwater are from 6 NYCRR Part 703.5

N/A - Not available

TABLE E - 10

1990 Radioactivity Concentrations in the Low-level Liquid Waste Treatment Facility ( $\mu\text{Ci/mL}$ )

Location Code	Hydraulic Position	Sample Date	Gross Alpha	Gross Beta	Tritium	Cs-137	Co-60
*****Department of Energy DCGs*****			3.0E-08	1.0E-06	2.0E-03	3.0E-06	5.0E-06
*****Quality Standards <sup>1</sup> *****			1.5E-08	1.0E-06	2.0E-05	N/A	N/A
WNW86-06	UP	03/08/90	< 2.41E-09	< 4.36E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-06	UP	04/26/90	< 2.68E-09	< 6.70E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-06	UP	05/23/90	< 8.24E-09	< 5.73E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-06	UP	06/15/90	< 5.93E-09	7.28±6.19E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-06	UP	08/15/90	< 3.89E-09	< 5.59E-09	< 9.84E-08	< 3.7E-08	< 3.8E-08
WNW86-06	UP	09/24/90	< 6.68E-09	6.85±6.58E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-06	UP	10/25/90	4.54±4.45E-09	< 5.91E-09	< 1.17E-07	< 3.7E-08	< 3.8E-08
WNW86-06	UP	11/08/90	< 5.40E-09	< 5.54E-09	< 1.18E-07	< 3.7E-08	< 3.8E-08
WNGSEEP	DOWN	02/21/90	< 2.36E-09	2.75±2.05E-09	9.36±1.32E-07	< 3.7E-08	< 3.8E-08
WNGSEEP	DOWN	04/24/90	< 2.67E-09	3.17±1.56E-09	8.86±1.30E-07	< 3.7E-08	< 3.8E-08
WNGSEEP	DOWN	06/06/90	< 3.87E-09	4.51±2.16E-09	8.82±1.31E-07	< 3.7E-08	< 3.8E-08
WNGSEEP	DOWN	06/14/90	< 5.23E-09	4.58±2.06E-09	1.02±0.13E-06	< 3.7E-08	< 3.8E-08
WNGSEEP	DOWN	07/09/90	< 1.26E-09	3.19±1.93E-09	2.58±0.74E-07	< 3.7E-08	< 3.8E-08
WNGSEEP	DOWN	09/24/90	< 3.20E-09	6.53±1.61E-09	8.17±1.38E-07	< 3.7E-08	< 3.8E-08
WNGSEEP	DOWN	10/24/90	3.31±2.65E-09	4.22±2.13E-09	6.72±1.23E-07	< 3.7E-08	< 3.8E-08
WNGSEEP	DOWN	11/08/90	< 4.38E-09	3.07±1.82E-09	8.34±1.30E-07	< 3.7E-08	< 3.8E-08
WNSP008	DOWN	02/21/90	< 2.73E-09	4.58±.52E-08	7.01±.29E-06	< 3.7E-08	< 3.8E-08
WNSP008	DOWN	04/24/90	< 5.20E-09	3.20±.46E-08	5.88±.26E-06	< 3.7E-08	< 3.8E-08
WNSP008	DOWN	06/06/90	< 5.33E-09	5.17±.60E-08	5.92±.26E-06	< 3.7E-08	< 3.8E-08
WNSP008	DOWN	06/14/90	< 8.74E-09	6.01±.61E-08	6.05±.27E-06	< 3.7E-08	< 3.8E-08
WNSP008	DOWN	09/10/90	< 5.18E-09	4.75±.55E-08	3.50±.19E-06	< 3.7E-08	< 3.8E-08
WNSP008	DOWN	09/24/90	< 4.54E-09	4.91±.56E-08	7.36±1.26E-07	< 3.7E-08	< 3.8E-08
WNSP008	DOWN	10/24/90	< 7.55E-09	5.30±.58E-08	5.49±.25E-06	< 3.7E-08	< 3.8E-08
WNSP008	DOWN	11/08/90	< 6.11E-09	4.21±.53E-08	5.45±.25E-06	< 3.7E-08	< 3.8E-08
WNW80-05	DOWN	02/21/90	< 5.94E-09	4.63±1.91E-09	9.55±3.30E-07	< 3.7E-08	< 3.8E-08
WNW80-05	DOWN	04/24/90	< 5.04E-09	3.78±1.78E-09	6.54±1.26E-07	< 3.7E-08	< 3.8E-08
WNW80-05	DOWN	06/05/90	< 4.34E-09	3.88±2.09E-09	9.11±1.35E-07	< 3.7E-08	< 3.8E-08
WNW80-05	DOWN	06/15/90	< 5.06E-09	< 2.06E-09	1.21±.14E-06	< 3.7E-08	< 3.8E-08
WNW80-05	DOWN	09/10/90	< 3.06E-09	2.37±2.09E-09	7.90±1.34E-07	< 3.7E-08	< 3.8E-08
WNW80-05	DOWN	09/26/90	< 6.84E-09	8.87±1.93E-09	4.79±.23E-06	< 3.7E-08	< 3.8E-08
WNW80-05	DOWN	10/24/90	< 4.18E-09	< 1.85E-09	6.55±1.24E-07	< 3.7E-08	< 3.8E-08
WNW80-05	DOWN	11/12/90	< 5.33E-09	3.45±2.05E-09	7.08±1.28E-07	< 3.7E-08	< 3.8E-08

<sup>1</sup> Quality standards for Class GA Groundwater are from 6 NYCRR Part 703.5

N/A Not available

Note: Gross alpha DCG as Am-241; gross beta DCG as Sr-90

TABLE E - 10 (continued)

1990 Radioactivity Concentrations in the Low-level Liquid Waste Treatment Facility ( $\mu\text{Ci/mL}$ )

Location Code	Hydraulic Position	Sample Date	Gross Alpha	Gross Beta	Tritium	Cs-137	Co-60
*****Department of Energy DCGs*****			3.0E-08	1.0E-06	2.0E-03	3.0E-06	5.0E-06
*****Quality Standards <sup>1</sup> *****			1.5E-08	1.0E-06	2.0E-05	N/A	N/A
WNW80-06	DOWN	02/20/90	<4.54E-09	3.04±2.27E-09	6.42±1.26E-07	<3.7E-08	<3.8E-08
WNW80-06	DOWN	04/23/90	<6.02E-09	2.84±1.68E-09	1.20±.14E-06	<3.7E-08	<3.8E-08
WNW80-06	DOWN	06/05/90	<3.06E-09	2.96±1.95E-09	1.15±.14E-06	<3.7E-08	<3.8E-08
WNW80-06	DOWN	06/14/90	<2.48E-09	4.00±2.18E-09	1.50±.14E-06	<3.7E-08	<3.8E-08
WNW80-06	DOWN	09/10/90	<6.71E-09	4.81±2.26E-09	1.01±0.13E-06	<3.7E-08	<3.8E-08
WNW80-06	DOWN	09/27/90	<6.01E-09	1.21±.21E-08	5.94±1.23E-07	<3.7E-08	<3.8E-08
WNW80-06	DOWN	10/24/90	<9.67E-09	7.27±2.54E-09	4.87±0.78E-07	<3.7E-08	<3.8E-08
WNW80-06	DOWN	11/07/90	<5.25E-09	4.83±2.14E-09	1.42±0.14E-06	<3.7E-08	<3.8E-08
WNW86-03	DOWN	02/21/90	<4.70E-09	1.31±.32E-08	1.18±.14E-06	<3.7E-08	<3.8E-08
WNW86-03	DOWN	04/23/90	<7.43E-09	1.22±.31E-08	8.79±1.30E-07	<3.7E-08	<3.8E-08
WNW86-03	DOWN	05/24/90	<5.06E-08	3.41±1.95E-08	9.64±1.33E-07	<3.7E-08	<3.8E-08
WNW86-03	DOWN	06/15/90	<6.91E-09	1.34±.34E-08	1.42±0.14E-06	<3.7E-08	<3.8E-08
WNW86-03	DOWN	07/09/90	<6.35E-09	1.16±.35E-08	9.78±0.89E-07	<3.7E-08	<3.8E-08
WNW86-03	DOWN	09/24/90	<6.67E-09	1.98±.40E-08	1.14±0.13E-06	<3.7E-08	<3.8E-08
WNW86-03	DOWN	10/24/90	<8.10E-09	1.42±.37E-08	1.31±0.14E-06	<3.7E-08	<3.8E-08
WNW86-03	DOWN	11/08/90	<8.99E-09	1.47±.36E-08	1.06±0.13E-06	<3.7E-08	<3.8E-08
WNW86-04	DOWN	03/01/90	<2.11E-09	2.95±.12E-07	9.05±1.33E-07	<3.7E-08	<3.8E-08
WNW86-04	DOWN	04/26/90	<4.46E-09	4.75±.15E-07	1.08±.14E-06	<3.7E-08	<3.8E-08
WNW86-04	DOWN	05/23/90	<4.93E-09	6.37±.17E-07	1.14±.14E-06	<3.7E-08	<3.8E-08
WNW86-04	DOWN	06/15/90	<1.17E-08	4.27±.15E-07	1.32±.14E-06	<3.7E-08	<3.8E-08
WNW86-04	DOWN	09/12/90	<4.23E-09	5.25±.16E-07	1.25±.14E-06	<3.7E-08	<3.8E-08
WNW86-04	DOWN	09/24/90	<1.16E-08	4.68±.16E-07	1.13±.13E-06	<3.7E-08	<3.8E-08
WNW86-04	DOWN	10/24/90	<6.86E-09	5.20±.17E-07	1.95±.11E-06	<3.7E-08	<3.8E-08
WNW86-04	DOWN	11/08/90	<1.09E-08	5.74±.18E-07	1.45±.14E-06	<3.7E-08	<3.8E-08
WNW86-05	DOWN	03/01/90	5.29±4.99E-09	2.60±.02E-05	1.42±.59E-05	<3.7E-08	<3.8E-08
WNW86-05	DOWN	04/26/90	5.59±4.79E-09	1.76±.01E-05	1.59±.60E-05	<3.7E-08	<3.8E-08
WNW86-05	DOWN	06/08/90	8.59±7.88E-09	3.21±.02E-05	2.16±.07E-05	<3.7E-08	<3.8E-08
WNW86-05	DOWN	06/21/90	<7.33E-09	3.34±.02E-05	1.70±.06E-05	<3.7E-08	<3.8E-08
WNW86-05	DOWN	09/12/90	<1.08E-08	2.32±.03E-05	1.53±.05E-05	<3.7E-08	<3.8E-08
WNW86-05	DOWN	09/27/90	<1.03E-08	3.08±.03E-05	1.73±.06E-05	<3.7E-08	<3.8E-08
WNW86-05	DOWN	10/24/90	<8.48E-09	2.85±.03E-05	1.65±.06E-05	<3.7E-08	<3.8E-08
WNW86-05	DOWN	11/12/90	<1.02E-08	2.90±.03E-05	1.50±.05E-05	<3.7E-08	<3.8E-08

<sup>1</sup> Quality standards for Class GA Groundwater are from 6 NYCRR Part 703.5

N/A Not available

Note: Gross alpha DCG as Am-241; gross beta DCG as Sr-90

TABLE E - 11

1990 Water Quality Parameters for the NRC-licensed Disposal Area Groundwater Monitoring Unit (mg/L)

Location Code	Hydraulic Position	Sample Date	pH	Conductivity <sup>2</sup>	TOC	Phenols	TOH	Chloride	Nitrate-N	Sulfate	Fluoride
*** Quality Standards <sup>1</sup> ***			6.5-8.5	N/A	N/A	.001	N/A	250	10	250	1.5
WNW83-1D	UP	06/07/90	7.75	287	< 1.0	<.008	<.005	6.0	.15	13.2	.42
WNW83-1D	UP	06/14/90	7.73	287	1.0	<.008	<.005	7.2	<.05	19.2	.27
WNW83-1D	UP	06/19/90	7.64	288	N/A	<.014	<.005	6.5	.20	34.0	.27
WNW83-1D	UP	07/03/90	7.70	257	8.1	.020	N/A	5.2	.10	4.0	.39
WNW83-1D	UP	09/24/90	7.93	291	< 1.0	<.008	.340	8.8	.24	6.0	.40
WNW83-1D	UP	10/23/90	7.86	283	< 1.0	<.008	<.005	8.2	.056	40.0	.40
WNW83-1D	UP	11/08/90	7.58	299	1.3	<.008	<.005	6.2	<.05	17.7	.38
WNW86-10	DOWN	02/01/90	8.19	628	2.0	<.008	<.010	1.7	.051	100	.13
WNW86-10	DOWN	06/21/90	7.82	694	3.6	<.012	<.005	2.1	<.05	105	.11
WNW86-10	DOWN	06/26/90	8.01	757	12.4	<.007	<.005	1.8	<.05	119	.12
WNW86-10	DOWN	06/28/90	8.13	702	13.6	<.008	.007	1.8	.05	109	.11
WNW86-10	DOWN	11/12/90	8.20	705	1.2	<.009	.013	<1.0	<.05	93.0	<.10
WNW86-10	DOWN	11/28/90	8.12	673	5.8	<.008	<.005	4.3	.086	94.0	.16
WNW86-10	DOWN	12/06/90	7.90	699	15.2	<.010	<.010	4.3	N/A	75.6	.16
WNW86-10	DOWN	12/13/90	7.39	722	12.4	.006	.013	5.1	.16	320	.14
WNW86-11	DOWN	02/01/90	7.98	763	3.0	<.007	<.010	<1.0	.12	160	.18
WNW86-11	DOWN	06/07/90	7.56	751	6.5	<.006	.017	2.5	.14	200	.16
WNW86-11	DOWN	06/21/90	7.82	N/A	5.9	<.007	.024	2.7	.19	206	.18
WNW86-11	DOWN	06/26/90	7.80	N/A	3.3	<.007	<.005	1.6	<.05	239	.12
WNW86-11	DOWN	09/13/90	7.56	853	2.4	.059	.010	<1.0	.081	234	.17
WNW86-11	DOWN	09/27/90	7.62	860	3.2	<.008	.008	7.2	.11	46.4	.17
WNW86-11	DOWN	10/25/90	7.52	850	2.6	<.010	.013	5.0	.17	175	.14
WNW86-11	DOWN	11/08/90	7.44	849	< 1.0	<.005	<.005	<1.0	<.050	182	.16

<sup>1</sup> Quality standards for Class GA Groundwater are from 6 NYCRR Part 703.5

<sup>2</sup> Measured in  $\mu$ mhos/cm at 25°C

N/A Not available

TABLE E - 12

1990 Total Metals for the NRC-licensed Disposal Area Groundwater Monitoring Unit (mg/L)

Location Code	Hydraulic Position	Sample Date	Arsenic	Barium	Cadmium	Chromium	Iron	Lead	Manganese	Mercury	Selenium	Silver	Sodium
***Quality Standards <sup>1</sup> ***			.025	1.0	.01	.05	.30	.025	.30	.002	.01	.05	< 20
WNW83-1D	UP	06/07/90	.005	.85	.010	.036	23.3	.010	.31	< .0004	< .005	< .010	15.8
WNW83-1D	UP	06/14/90	.020	.84	.009	.018	3.1	.011	.14	< .0004	< .005	< .010	18.4
WNW83-1D	UP	06/19/90	< .005	.87	.007	.023	10.4	.009	.18	< .0004	< .005	< .010	15.8
WNW83-1D	UP	07/03/90	.007	.82	< .010	< .010	16.7	< .005	.26	< .0004	.011	< .007	19.1
WNW83-1D	UP	09/24/90	< .005	.84	< .005	< .010	2.7	< .003	.13	< .0004	< .005	< .005	19.0
WNW83-1D	UP	10/23/90	< .005	.079	.008	< .010	1.93	< .003	.14	.0015	< .005	.023	39.7
WNW83-1D	UP	11/08/90	< .005	.71	.007	< .010	3.6	< .003	.14	< .0004	< .005	< .005	18.0
WNW86-10	DOWN	02/01/90	< .005	.12	.005	.076	7.4	.016	.18	< .0004	< .005	< .010	69.0
WNW86-10	DOWN	06/21/90	.008	.11	.009	.140	16.5	.029	.30	.0011	< .005	< .010	62.5
WNW86-10	DOWN	06/26/90	.006	.17	< .005	.073	11.2	.042	.25	< .0004	< .005	.015	66.4
WNW86-10	DOWN	06/28/90	< .005	.11	< .005	.054	14.7	.031	.38	< .0004	< .005	< .010	68.4
WNW86-10	DOWN	11/12/90	.006	.10	< .005	.018	5.6	.021	.16	< .0004	< .005	< .010	71.2
WNW86-10	DOWN	11/28/90	.013	.092	< .005	.025	2.1	.028	.15	< .0004	< .005	< .005	58.0
WNW86-10	DOWN	12/06/90	.005	.10	.007	.068	5.52	.025	.169	< .0002	< .002	.012	63.9
WNW86-10	DOWN	12/13/90	.007	.15	< .005	.059	11.9	.041	.35	< .0004	< .005	< .005	70.6
WNW86-11	DOWN	02/01/90	.014	.16	.006	.270	41.0	< .005	.78	< .0004	< .005	< .010	65.0
WNW86-11	DOWN	06/07/90	.010	.10	.007	.110	27.8	.027	.47	< .0004	< .005	< .010	60.1
WNW86-11	DOWN	06/21/90	.005	.09	< .005	.019	10.5	.008	.19	< .0004	< .005	< .010	55.2
WNW86-11	DOWN	06/26/90	< .005	.11	< .005	.016	7.3	.014	.13	< .0004	< .005	.015	54.6
WNW86-11	DOWN	09/13/90	< .005	.05	.008	.035	7.5	.020	.20	< .0004	< .005	< .005	66.0
WNW86-11	DOWN	09/27/90	< .005	< .05	< .005	< .010	2.6	.005	.11	< .0004	< .005	< .005	64.8
WNW86-11	DOWN	10/25/90	< .005	< .15	.005	.012	1.9	.007	.11	< .0004	< .005	.012	61.0
WNW86-11	DOWN	11/08/90	< .005	< .15	.009	.012	2.4	.008	.086	< .0004	< .005	< .005	56.4

<sup>1</sup> Quality standards for Class GA Groundwater are from 6 NYCRR Part 703.5

TABLE E - 13

1990 Dissolved Metals for the NRC-licensed Disposal Area Groundwater Monitoring Unit (mg/L)

Location Code	Hydraulic Position	Sample Date	Arsenic	Barium	Cadmium	Chromium	Iron	Lead	Manganese	Mercury	Selenium	Silver	Sodium
<b>**Quality Standards<sup>1</sup>**</b>			.025	1.0	.01	.05	.30	.025	.30	.002	.01	.05	<20
WNW83-1D	UP	06/07/90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WNW83-1D	UP	06/14/90	< .005	.75	.010	.015	< .05	< .005	.12	< .0004	< .005	< .010	18.8
WNW83-1D	UP	06/19/90	< .005	.77	.005	< .010	< .05	< .005	.11	< .0004	< .005	< .010	20.3
WNW83-1D	UP	07/03/90	< .005	.84	< .005	< .010	.06	< .005	.11	< .0004	< .005	< .010	18.9
WNW83-1D	UP	09/24/90	< .005	.84	< .005	< .010	.047	< .003	.12	< .0004	< .005	< .005	19.2
WNW83-1D	UP	10/23/90	< .005	< .10	< .005	< .010	< .05	< .003	.12	< .0004	< .005	< .006	21.8
WNW83-1D	UP	11/08/90	< .005	< .15	< .005	< .010	< .05	< .003	< .007	< .0004	< .005	< .006	18.7
WNW86-10	DOWN	02/01/90	< .005	.07	.005	.012	< .05	< .005	.027	< .0004	< .005	< .010	72.0
WNW86-10	DOWN	06/21/90	< .005	.06	< .005	< .010	< .05	< .005	.024	< .0004	< .005	< .010	80.4
WNW86-10	DOWN	06/26/90	< .005	.07	< .005	< .010	< .05	< .005	.051	< .0004	< .005	.015	87.7
WNW86-10	DOWN	06/28/90	< .005	< .06	< .005	.020	< .05	< .005	.042	< .0004	< .005	< .010	87.3
WNW86-10	DOWN	11/12/90	.005	.05	< .005	< .010	.05	< .003	.042	< .0004	< .005	< .010	72.5
WNW86-10	DOWN	11/28/90	.005	.064	< .005	< .010	< .02	< .003	.038	< .0004	< .005	< .005	68.8
WNW86-10	DOWN	12/06/90	.003	.067	.006	< .010	< .01	< .002	.049	< .0002	< .002	< .010	67.9
WNW86-10	DOWN	12/13/90	< .005	.089	< .005	< .010	< .03	< .003	.14	< .0004	< .005	< .005	70.4
WNW86-11	DOWN	02/01/90	< .005	.05	< .005	.013	< .05	< .005	.06	< .0004	< .005	< .010	67.0
WNW86-11	DOWN	06/07/90	< .005	.06	< .005	.021	< .05	< .005	.038	< .0004	< .005	< .010	72.4
WNW86-11	DOWN	06/21/90	< .005	.06	< .005	< .010	< .05	< .005	.034	< .0004	< .005	< .010	73.2
WNW86-11	DOWN	06/26/90	< .005	.07	< .005	< .010	< .05	< .005	.046	< .0004	< .005	.012	71.1
WNW86-11	DOWN	09/13/90	< .005	< .05	< .005	< .010	< .02	< .003	.078	< .0004	< .005	< .005	66.4
WNW86-11	DOWN	09/27/90	< .005	< .05	< .005	< .010	< .02	< .003	.053	< .0004	< .005	< .005	63.1
WNW86-11	DOWN	10/25/90	< .005	< .10	< .005	< .010	< .05	< .003	.069	< .0004	< .005	< .006	67.1
WNW86-11	DOWN	11/08/90	< .005	< .15	< .005	< .010	< .05	< .003	.041	< .0004	< .005	< .005	61.6

<sup>1</sup> Quality standards for Class GA Groundwater are from 6 NYCRR Part 703.5

N/A Not available

TABLE E - 14

1990 Radioactivity Concentrations in the NRC-licensed Disposal Area  
Groundwater Monitoring Unit ( $\mu\text{Ci/mL}$ )

Location Code	Hydraulic Position	Sample Date	Gross Alpha	Gross Beta	Tritium	Cs-137	Co-60
****Department of Energy DCGs****			3.0E-08	1.0E-06	2.0E-03	3.0E-06	5.0E-06
****Quality Standards <sup>1</sup> ****			1.5E-08	1.0E-06	2.0E-05	N/A	N/A
WNW83-1D	UP	06/07/90	< 1.10E-09	2.71±1.77E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW83-1D	UP	06/14/90	< 1.25E-09	3.88±1.75E-09	3.25±1.16E-07	< 3.7E-08	< 3.8E-08
WNW83-1D	UP	06/19/90	< 1.21E-09	< 1.63E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW83-1D	UP	07/03/90	< 1.26E-09	1.99±1.56E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW83-1D	UP	09/24/90	< 7.40E-10	3.75±1.22E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW83-1D	UP	10/23/90	< 8.01E-10	< 1.74E-09	1.35±1.13E-07	< 3.7E-08	< 3.8E-08
WNW83-1D	UP	11/08/90	< 1.51E-09	2.65±1.62E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-10	DOWN	02/01/90	< 2.94E-09	5.38±2.29E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-10	DOWN	06/21/90	< 3.33E-09	4.31±2.10E-09	2.18±1.13E-07	< 3.7E-08	< 3.8E-08
WNW86-10	DOWN	06/26/90	< 3.61E-09	7.53±2.41E-09	5.85±1.22E-07	< 3.7E-08	< 3.8E-08
WNW86-10	DOWN	06/28/90	1.11±.87E-08	8.82±2.52E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-10	DOWN	11/12/90	< 4.32E-09	6.91±2.22E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-10	DOWN	11/28/90	< 1.88E-09	5.29±2.19E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-10	DOWN	12/06/90	< 1.29E-08	8.90±2.77E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-10	DOWN	12/13/90	< 2.66E-09	8.38±2.44E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-11	DOWN	02/01/90	< 1.25E-08	< 2.29E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-11	DOWN	06/07/90	< 6.86E-09	3.87±2.09E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-11	DOWN	06/21/90	< 4.59E-09	5.10±2.26E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-11	DOWN	06/26/90	< 8.38E-09	4.07±2.10E-09	2.03±1.15E-07	< 3.7E-08	< 3.8E-08
WNW86-11	DOWN	09/13/90	4.37±4.28E-09	4.38±2.18E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-11	DOWN	09/27/90	< 2.97E-09	5.08±1.48E-09	< 1.00E-07	< 3.7E-08	< 3.8E-08
WNW86-11	DOWN	10/25/90	< 4.51E-09	2.41±2.22E-09	1.24±1.11E-07	< 3.7E-08	< 3.8E-08
WNW86-11	DOWN	11/08/90	< 4.72E-09	5.49±2.21E-09	< 1.57E-07	< 3.7E-08	< 3.8E-08

<sup>1</sup> Quality standards for Class GA Groundwater are from 6 NYCRR Part 703.5

N/A Not available

TABLE E - 15

Summary of Initial Sampling of Selected New 90-series Groundwater Monitoring Wells ( $\mu\text{Ci}/\text{mL}$ )

Location Code	Hydraulic Position	Sample Date	pH	Conductivity*	Alpha	Beta	Tritium
WNW0103	UP	12/27/90	12.33	16,520	<1.05E-07	<5.68E-08	5.47±0.76E-07
WNW0104	UP	12/21/90	7.21	882	<3.54E-09	7.23±0.21E-07	1.19±0.10E-06
WNW0105	DOWN	12/21/90	7.12	784	6.37±5.58E-09	1.11±0.37E-08	9.11±0.93E-07
WNW0106	DOWN	12/28/90	7.15	1573	<1.16E-08	5.31±3.57E-09	1.83±0.12E-06
WNW0107	DOWN	12/21/90	7.35	1003	1.32±0.82E-08	9.69±3.58E-09	1.85±0.12E-06
WNW0108	DOWN	12/27/90	7.71	900	<4.97E-09	5.53±3.10E-09	<1.00E-07
WNW0109	DOWN	12/26/90	7.47	670	<3.65E-09	<2.56E-09	9.24±0.93E-07
WNW0110	DOWN	12/26/90	7.55	519	<2.53E-09	6.85±3.04E-09	5.72±0.92E-07
WNW0111	DOWN	12/28/90	6.60	786	3.65±3.39E-09	3.39±0.04E-06	2.23±0.13E-06
WNW0114	DOWN	12/21/90	7.51	495	3.73±3.46E-09	3.81±2.72E-09	3.36±0.85E-07
WNW0115	DOWN	12/28/90	8.04	398	<2.18E-09	5.13±2.75E-09	4.75±0.86E-07
WNW0116	DOWN	12/28/90	7.48	1267	<6.53E-09	1.03±0.38E-08	1.45±0.11E-06
WNW0701	UP	12/28/90	7.60	769	<3.19E-09	<2.55E-09	<1.00E-07
WNW0702	DOWN	12/28/90	7.59	203	7.74±7.19E-09	5.18±3.09E-09	<1.00E-07
WNW0703	DOWN	12/26/90	7.54	871	<2.991E-09	4.82±2.88E-09	<1.00E-07
WNW0704	DOWN	12/26/90	6.60	1175	1.27±1.18E-08	1.58±0.42E-08	<1.00E-07
WNW0705	DOWN	12/21/90	7.48	462	3.94±3.09E-09	<2.48E-09	<1.00E-07
WNW0706	UP	12/28/90	6.66	619	<2.28E-09	7.31±3.02E-09	<1.00E-07
WNW0707	DOWN	12/28/90	7.27	384	<2.11E-09	5.29±2.75E-09	<1.00E-07
WNW0801	UP	12/21/90	6.88	801	4.17±3.65E-09	1.82±0.11E-07	9.59±0.93E-07
WNW0802	DOWN	12/21/90	6.66	230	<1.17E-09	<2.24E-09	3.19±0.82E-07
WNW0803	DOWN	12/21/90	6.96	1081	8.91±7.81E-09	8.96±3.64E-09	1.44±0.11E-06
WNW0804	DOWN	12/28/90	6.80	633	<1.80E-09	2.00±0.41E-08	3.21±0.83E-07

\* Measured in  $\mu\text{mhos}/\text{cm}@25^{\circ}\text{C}$



**TABLE E - 16**

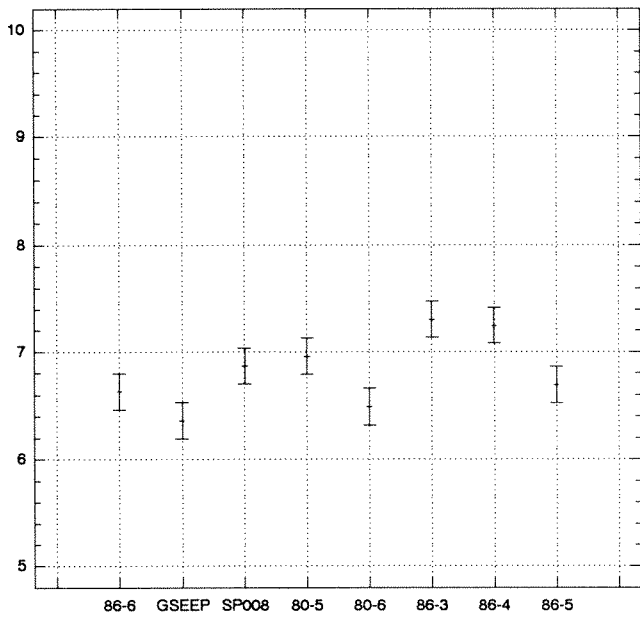
**1990 Radioactivity Concentrations in the NYS - licensed Disposal Area Groundwater Monitoring Unit**

Well ID	Sample Date	Gross Alpha ( $\mu\text{Ci/mL}$ )	Gross Beta ( $\mu\text{Ci/mL}$ )	Tritium ( $\mu\text{Ci/mL}$ )	pH	Conductivity <sup>1</sup>
<b>*1101A</b>	12/17/90	<3.10E-09	4.19 $\pm$ 2.99E-09	< 1.0E-07	7.30	763
<b>*1101B</b>	12/17/90	<6.63E-09	3.26 $\pm$ 3.10E-09	< 1.0E-07	7.30	945
<b>*1101C</b>	12/18/90	<3.45E-09	1.31 $\pm$ 0.37E-08	< 1.0E-07	7.78	465
<b>1102A</b>	12/17/90	6.83 $\pm$ 5.80E-09	5.29 $\pm$ 3.01E-09	< 1.0E-07	7.07	838
<b>1102B</b>	12/18/90	3.70 $\pm$ 2.74E-09	3.10 $\pm$ 2.68E-09	< 1.0E-07	7.24	554
<b>1103A</b>	12/20/90	<4.99E-09	3.20 $\pm$ 3.04E-09	8.35 $\pm$ 0.90E-07	7.27	873
<b>1103B</b>	12/20/90	3.31 $\pm$ 2.90E-09	5.96 $\pm$ 3.03E-09	< 1.0E-07	7.35	686
<b>1103C</b>	12/20/90	**	**	< 1.53E-07	**	**
<b>1104A</b>	12/20/90	<3.92E-09	5.71 $\pm$ 3.15E-09	2.20 $\pm$ 0.81E-07	7.29	757
<b>1104B</b>	12/20/90	<4.23E-09	5.47 $\pm$ 3.18E-09	< 1.0E-07	7.43	804
<b>1104C</b>	12/20/90	**	**	< 1.0E-07	7.67	1978
<b>1105A</b>	12/26/90	7.16 $\pm$ 4.23E-09	<2.67E-09	< 1.0E-07	7.59	795
<b>1105B</b>	12/26/90	6.28 $\pm$ 4.10E-09	5.13 $\pm$ 2.97E-09	< 1.0E-07	7.67	833
<b>*1106A</b>	12/20/90	<7.14E-09	1.07 $\pm$ 0.38E-08	8.88 $\pm$ 0.93E-07	7.19	1051
<b>*1106B</b>	12/20/90	<6.25E-09	5.09 $\pm$ 3.21E-09	1.33 $\pm$ 0.80E-07	7.31	877
<b>1107A</b>	10/26/90	2.14 $\pm$ 1.10E-08	1.17 $\pm$ 0.30E-08	2.57 $\pm$ 0.08E-05	6.77	1254
<b>1107A</b>	12/18/90	1.51 $\pm$ 1.12E-08	5.57 $\pm$ 3.48E-09	2.78 $\pm$ 0.15E-05	6.52	1223
<b>*1108A</b>	12/20/90	<1.14E-08	1.26 $\pm$ 0.44E-08	< 1.0E-07	7.04	1592
<b>*1109A</b>	12/26/90	3.92 $\pm$ 3.14E-09	4.21 $\pm$ 2.86E-09	3.24 $\pm$ 0.84E-07	7.58	762
<b>*1109B</b>	12/26/90	<1.10E-09	2.57 $\pm$ 2.53E-09	2.42 $\pm$ 0.84E-07	8.08	418
<b>1110A</b>	12/20/90	<7.15E-09	1.25 $\pm$ 0.44E-08	< 1.0E-07	6.90	1735
<b>1111A</b>	12/18/90	7.74 $\pm$ 6.19E-09	7.40 $\pm$ 3.42E-09	< 1.0E-07	6.98	1000

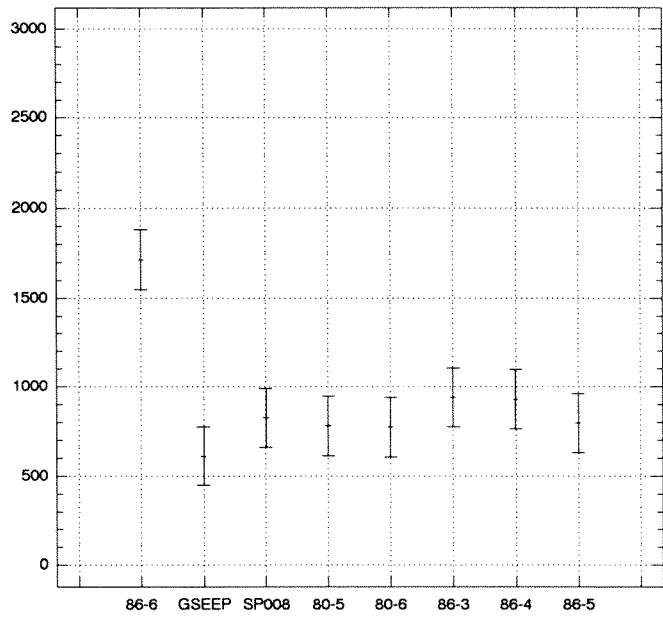
<sup>1</sup> Measured in  $\mu\text{mhos/cm@25}^{\circ}\text{C}$

\* Upgradient wells

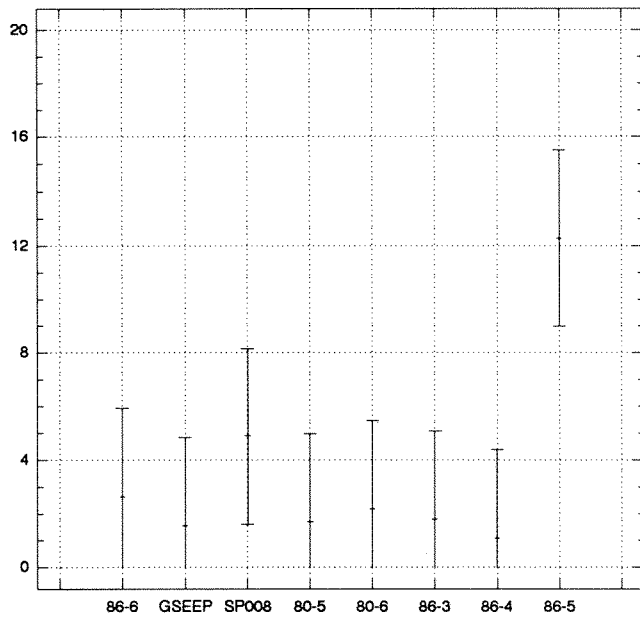
\*\* Volume too low for sample analysis



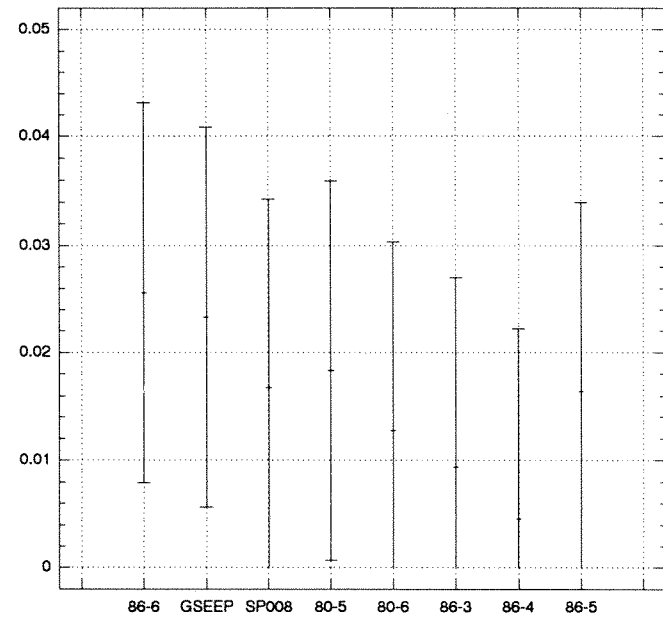
**Figure E - 1.**  
**pH in groundwater samples from the low-level liquid waste treatment facility. Well 86-6 is upgradient.**



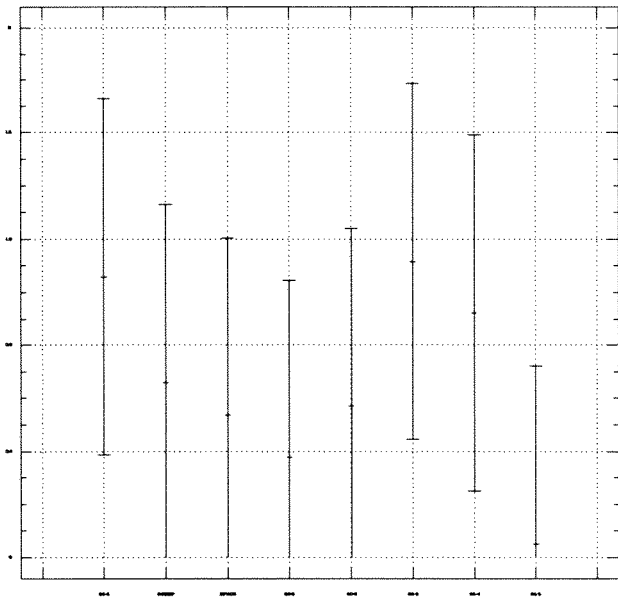
**Figure E - 2.**  
**Conductivity (umhos/cm at 25°C) in groundwater samples from the low-level liquid waste treatment facility. Well 86-6 is upgradient.**



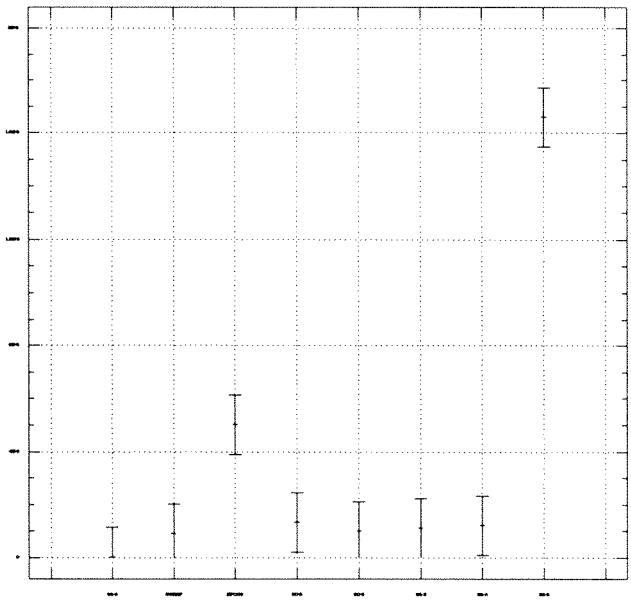
**Figure E - 3.**  
**Total organic carbon (mg/L) in groundwater samples from the low-level liquid waste treatment facility. Well 86-6 is upgradient.**



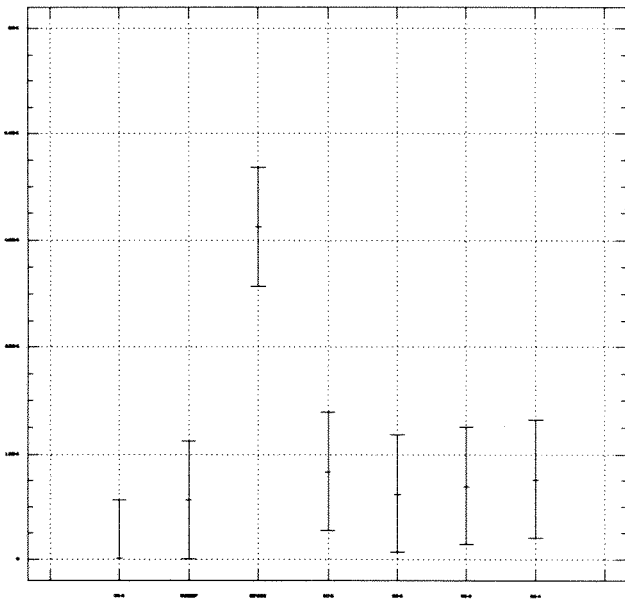
**Figure E - 4.**  
**Total organic halogens (mg/L) in groundwater samples from the low-level liquid waste treatment facility. Well 86-6 is upgradient.**



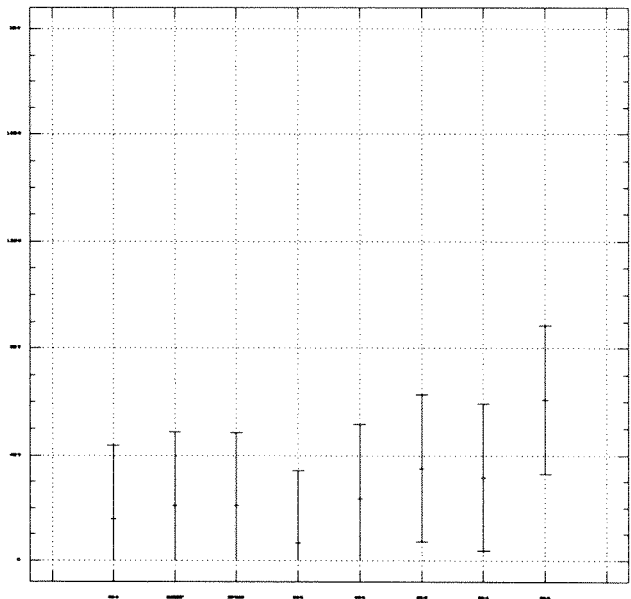
**Figure E - 5.**  
**Nitrate - N (mg/L) in groundwater samples from the low-level liquid waste treatment facility. Well 86-6 is upgradient.**



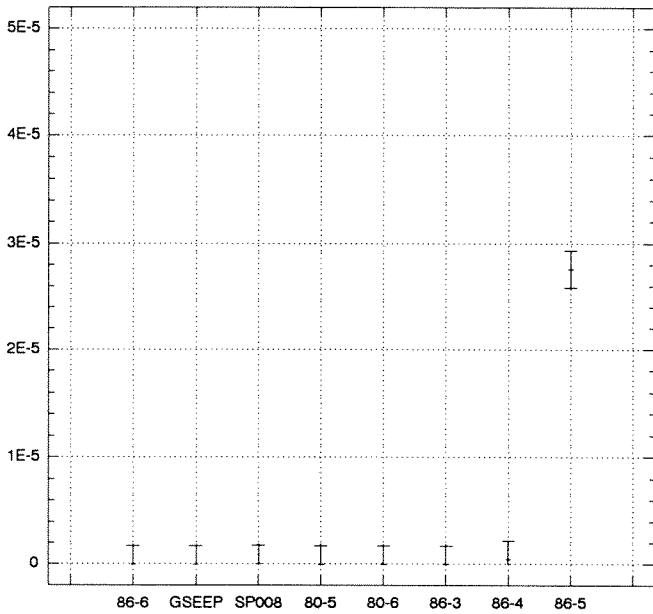
**Figure E - 6.**  
**Tritium activity ( $\mu\text{Ci/mL}$ ) in groundwater samples from the low-level liquid waste treatment facility. Well 86-6 is upgradient. Figure E - 7 follows without well 86-5 to provide adequate scaling.**



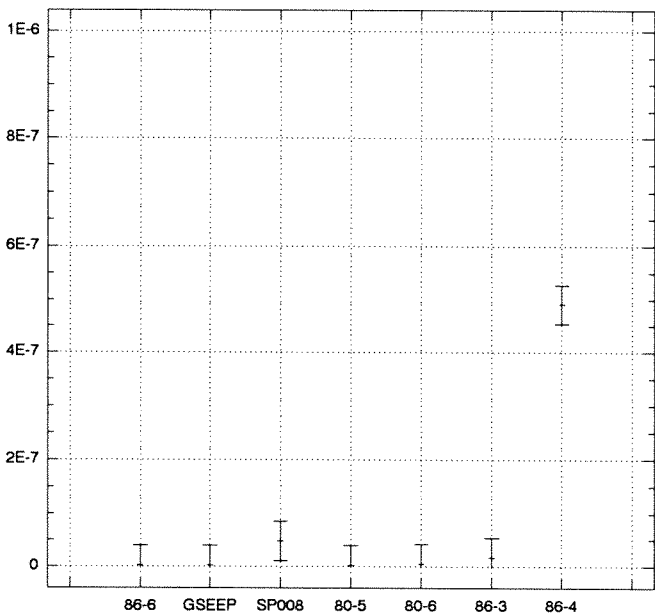
**Figure E - 7.**  
**Tritium activity ( $\mu\text{Ci/mL}$ ) in groundwater samples from the low-level liquid waste treatment facility without well 86-5.**



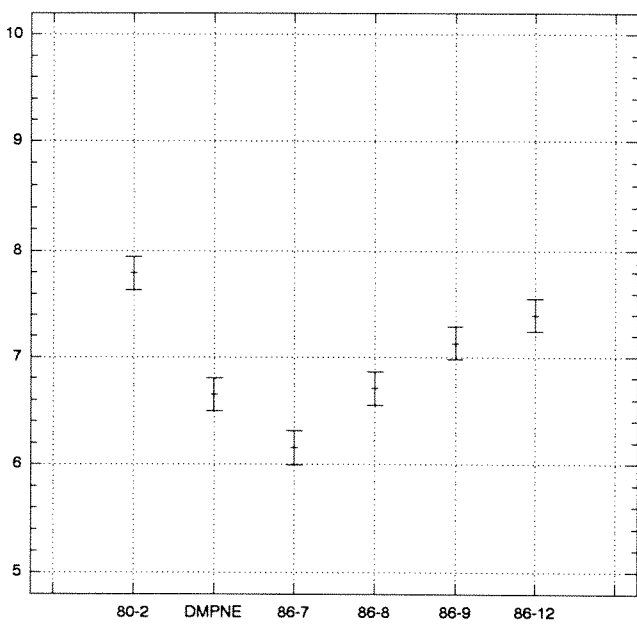
**Figure E - 8.**  
**Gross alpha activity ( $\mu\text{Ci/mL}$ ) in groundwater samples from the low-level liquid waste treatment facility. Well 86-6 is upgradient.**



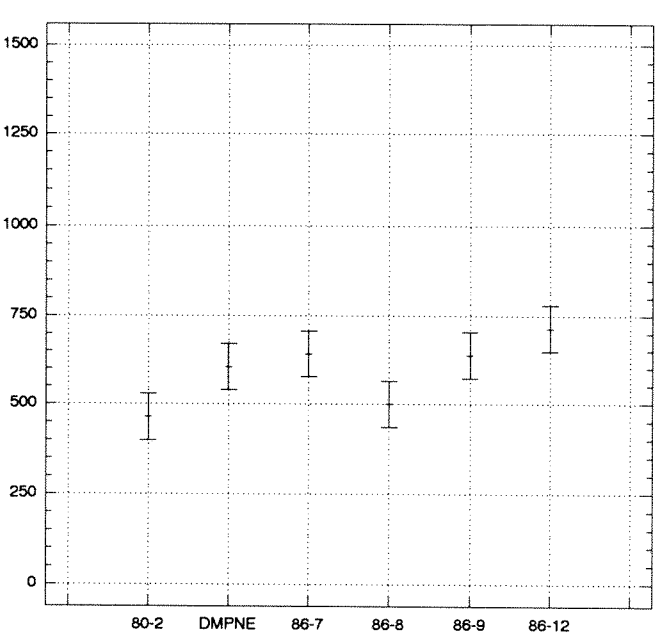
**Figure E - 9.**  
**Gross beta activity ( $\mu\text{Ci}/\text{mL}$ ) in groundwater samples from the low-level liquid waste treatment facility. Well 86-6 is upgradient. Figure E - 10 follows without well 86-5 to provide adequate scaling.**



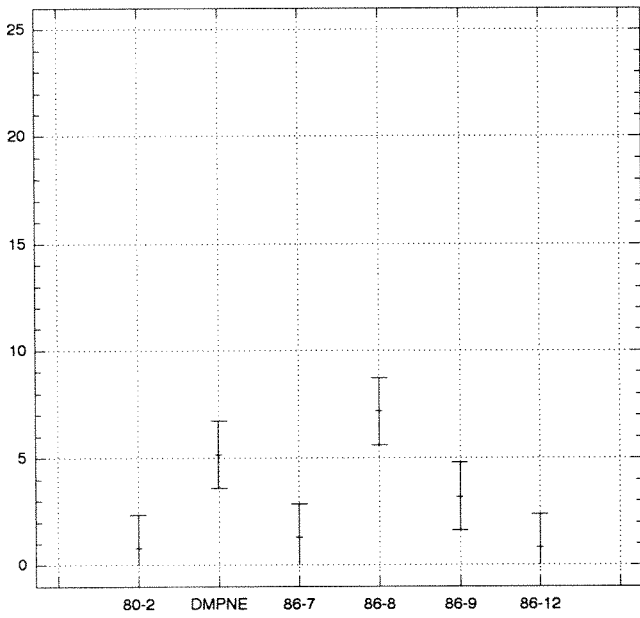
**Figure E - 10.**  
**Gross beta activity ( $\mu\text{Ci}/\text{mL}$ ) in groundwater samples from the low-level liquid waste treatment facility without well 86-5 .**



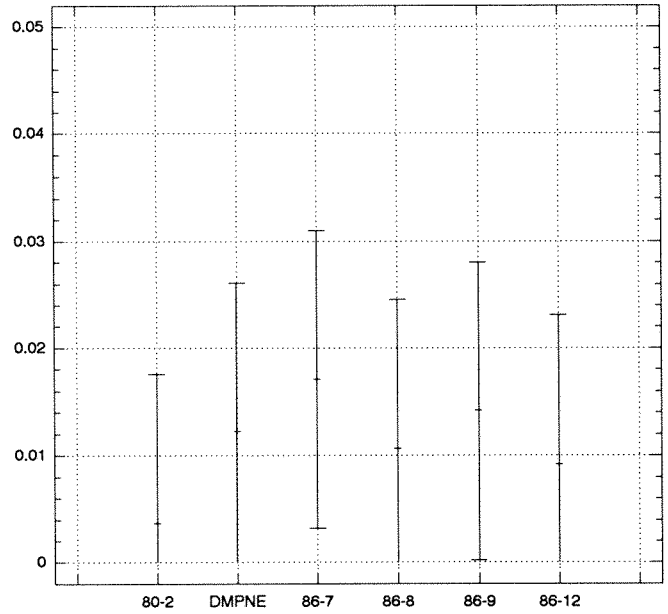
**Figure E - 11.**  
**pH in groundwater samples from the high-level waste storage and processing area. Well 80-2 is upgradient.**



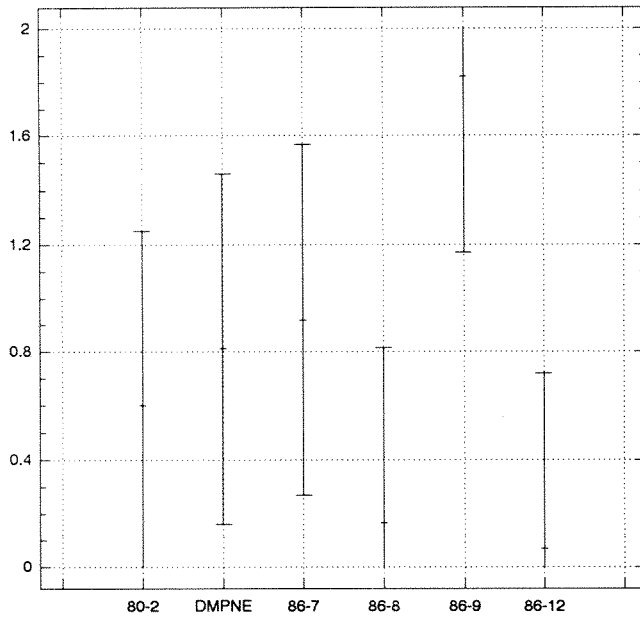
**Figure E - 12.**  
**Conductivity ( $\mu\text{mhos}/\text{cm}$  at  $25^\circ\text{C}$ ) in groundwater samples from the high-level waste processing and storage area. Well 80-2 is upgradient.**



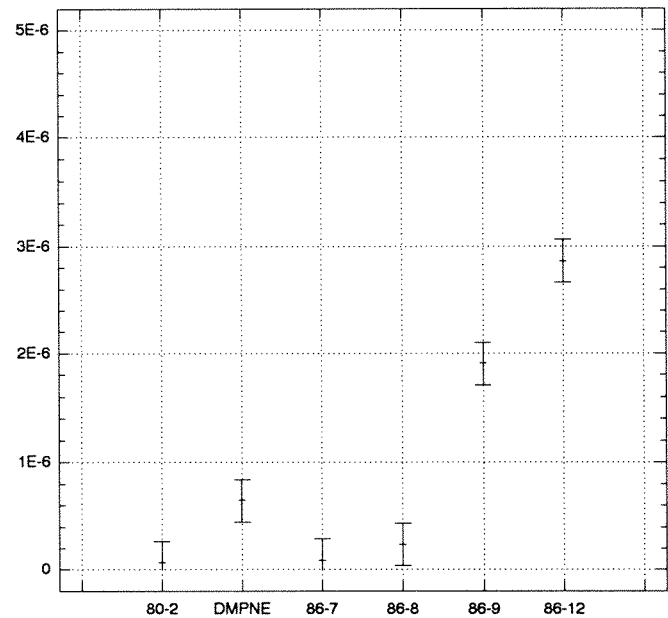
**Figure E - 13.**  
**Total organic carbon (mg/L) in groundwater samples from the high-level waste storage and processing area. Well 80-2 is upgradient.**



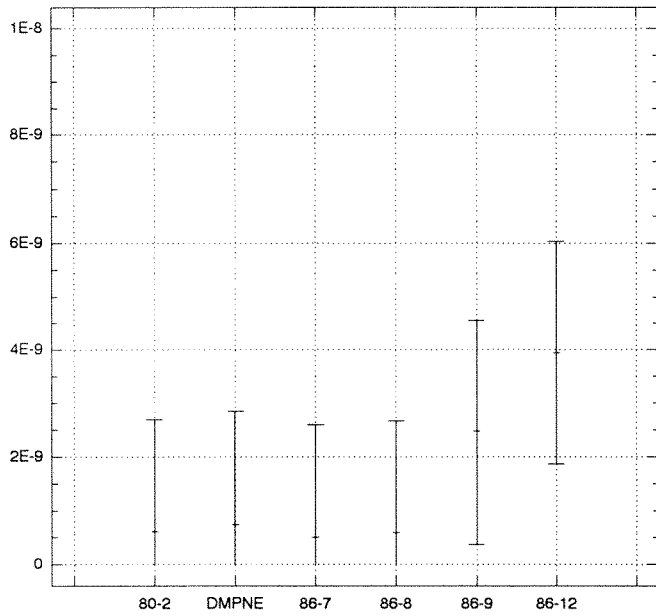
**Figure E - 14.**  
**Total organic halogens (mg/L) in groundwater samples from the high-level waste storage and processing area. Well 80-2 is upgradient.**



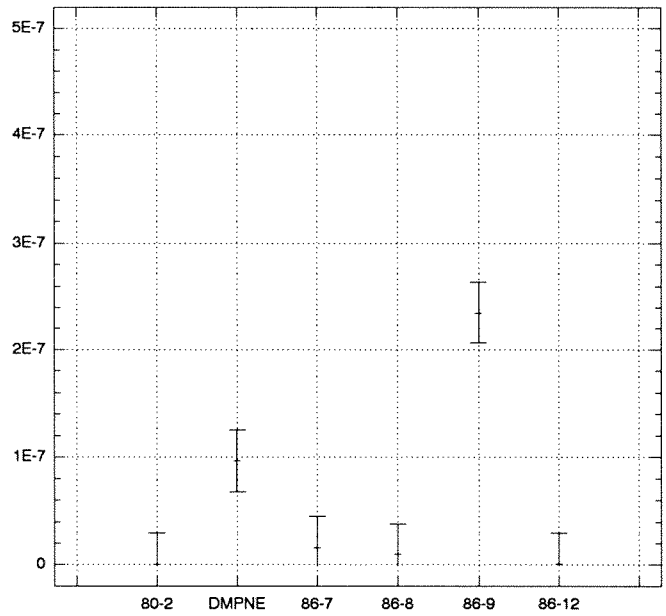
**Figure E - 15.**  
**Nitrate-N (mg/L) in groundwater samples from the high-level waste storage and processing area. Well 80-2 is upgradient.**



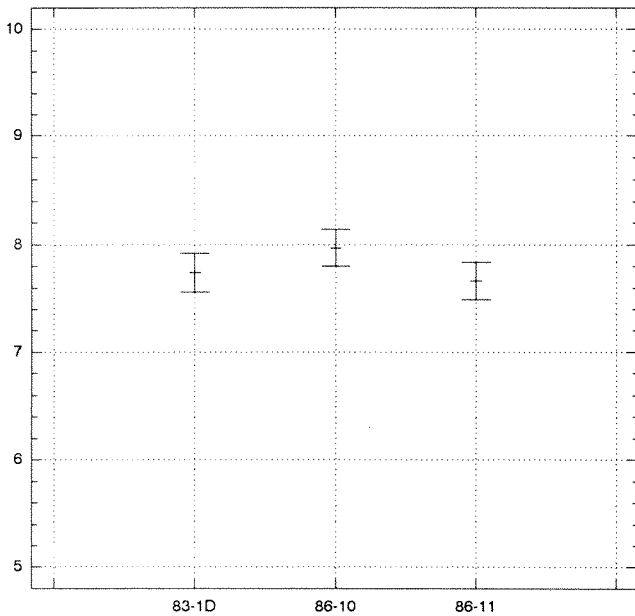
**Figure E - 16.**  
**Tritium activity (μCi/mL) in groundwater samples from the high-level waste storage and processing area. Well 80-2 is upgradient.**



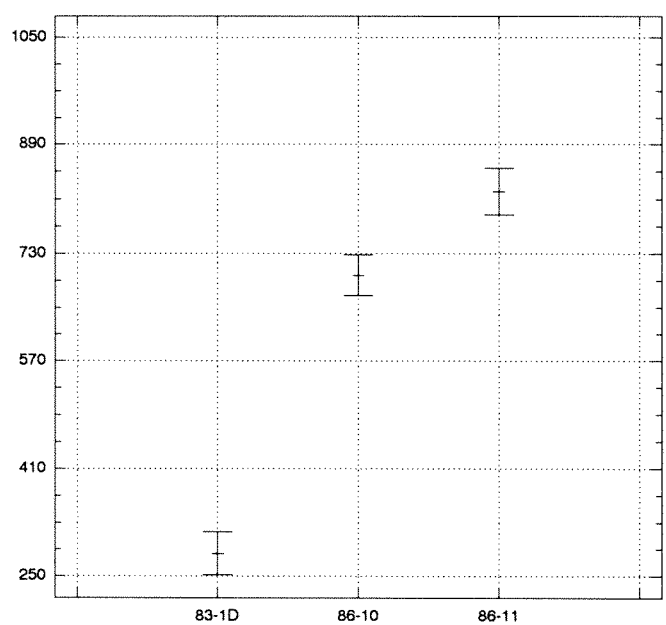
**Figure E - 17.**  
**Gross alpha activity ( $\mu\text{Ci}/\text{mL}$ ) in groundwater samples from the high-level waste storage and processing area. Well 80-2 is upgradient.**



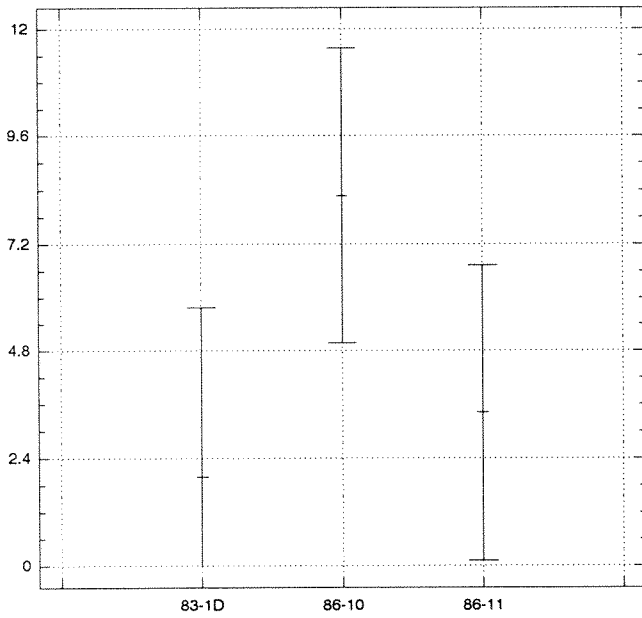
**Figure E - 18.**  
**Gross beta activity ( $\mu\text{Ci}/\text{mL}$ ) in groundwater samples from the high-level waste storage and processing area. Well 80-2 is upgradient.**



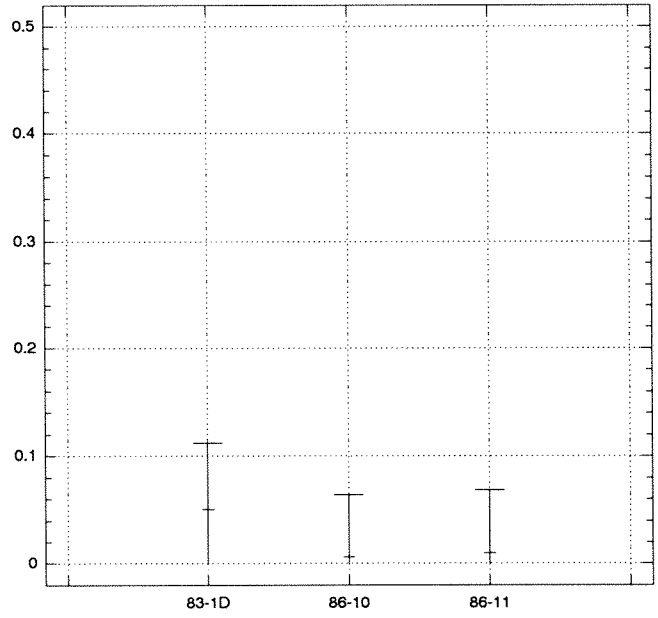
**Figure E - 19.**  
**pH in groundwater samples from the NRC-licensed disposal area monitoring unit. Well 83-1D is upgradient.**



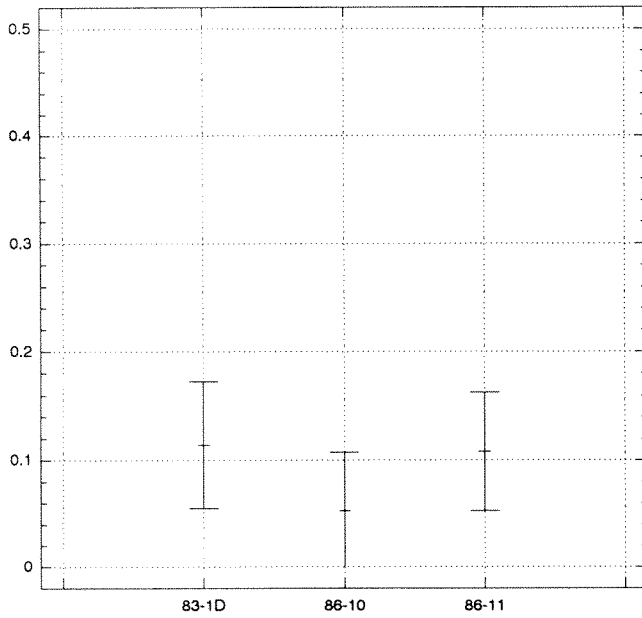
**Figure E - 20.**  
**Conductivity ( $\mu\text{mhos}/\text{cm}$  at 25 °C) in groundwater samples from the NRC-licensed disposal area monitoring unit. Well 83-1D is upgradient.**



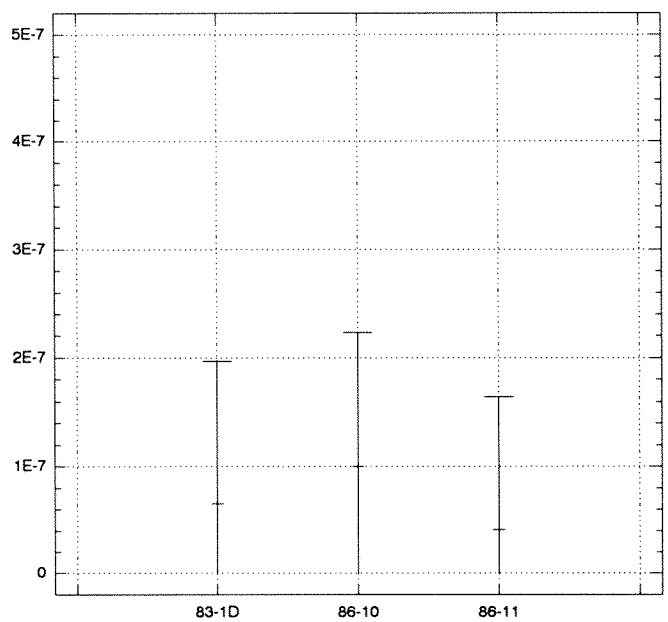
**Figure E - 21.**  
**Total organic carbon (mg/L) in groundwater samples from the NRC-licensed disposal area monitoring unit. Well 83-1D is upgradient.**



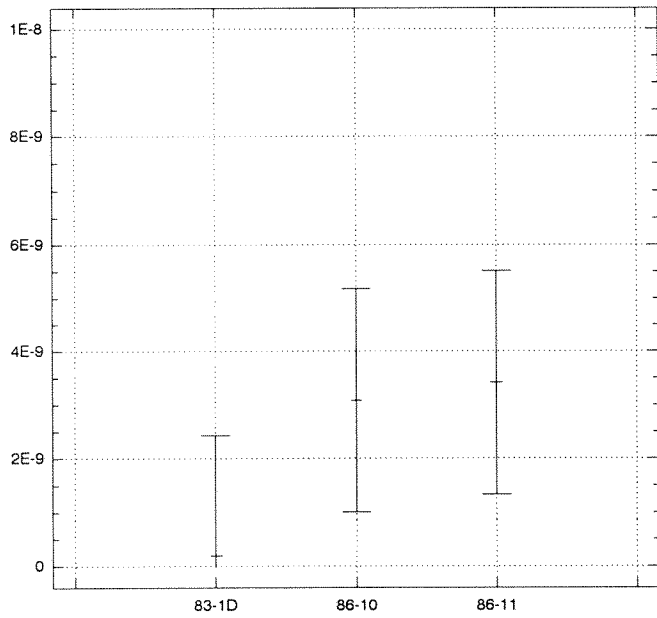
**Figure E - 22.**  
**Total organic halogens (mg/L) in groundwater samples from the NRC-licensed disposal area monitoring unit. Well 83-1D is upgradient.**



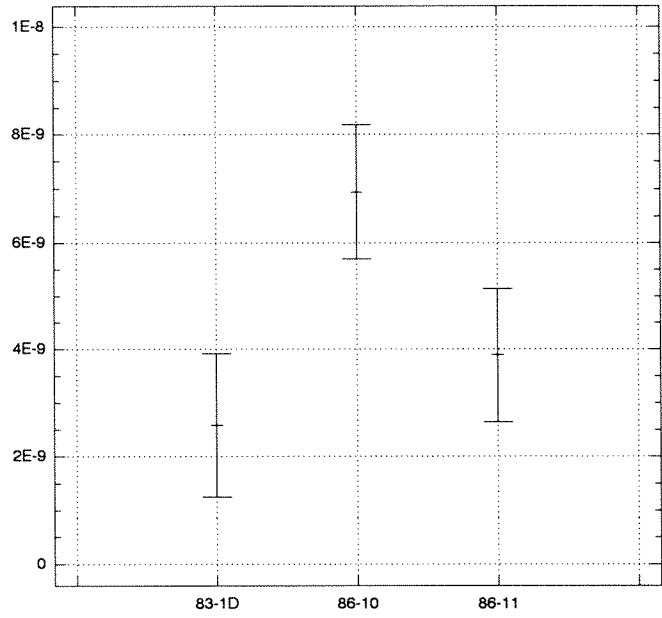
**Figure E - 23.**  
**Nitrate-N (mg/L) in groundwater samples from the NRC-licensed disposal area monitoring unit. Well 83-1D is upgradient.**



**Figure E - 24.**  
**Tritium activity ( $\mu\text{Ci/mL}$ ) in groundwater samples from the NRC-licensed disposal area monitoring unit. Well 83-1D is upgradient.**



**Figure E - 25.**  
**Gross alpha activity ( $\mu\text{Ci}/\text{mL}$ ) in groundwater samples from the NRC-licensed disposal area monitoring unit. Well 83-1D is upgradient.**



**Figure E - 26.**  
**Gross beta activity ( $\mu\text{Ci}/\text{mL}$ ) in groundwater samples from the NRC-licensed disposal area monitoring unit. Well 83-1D is upgradient.**



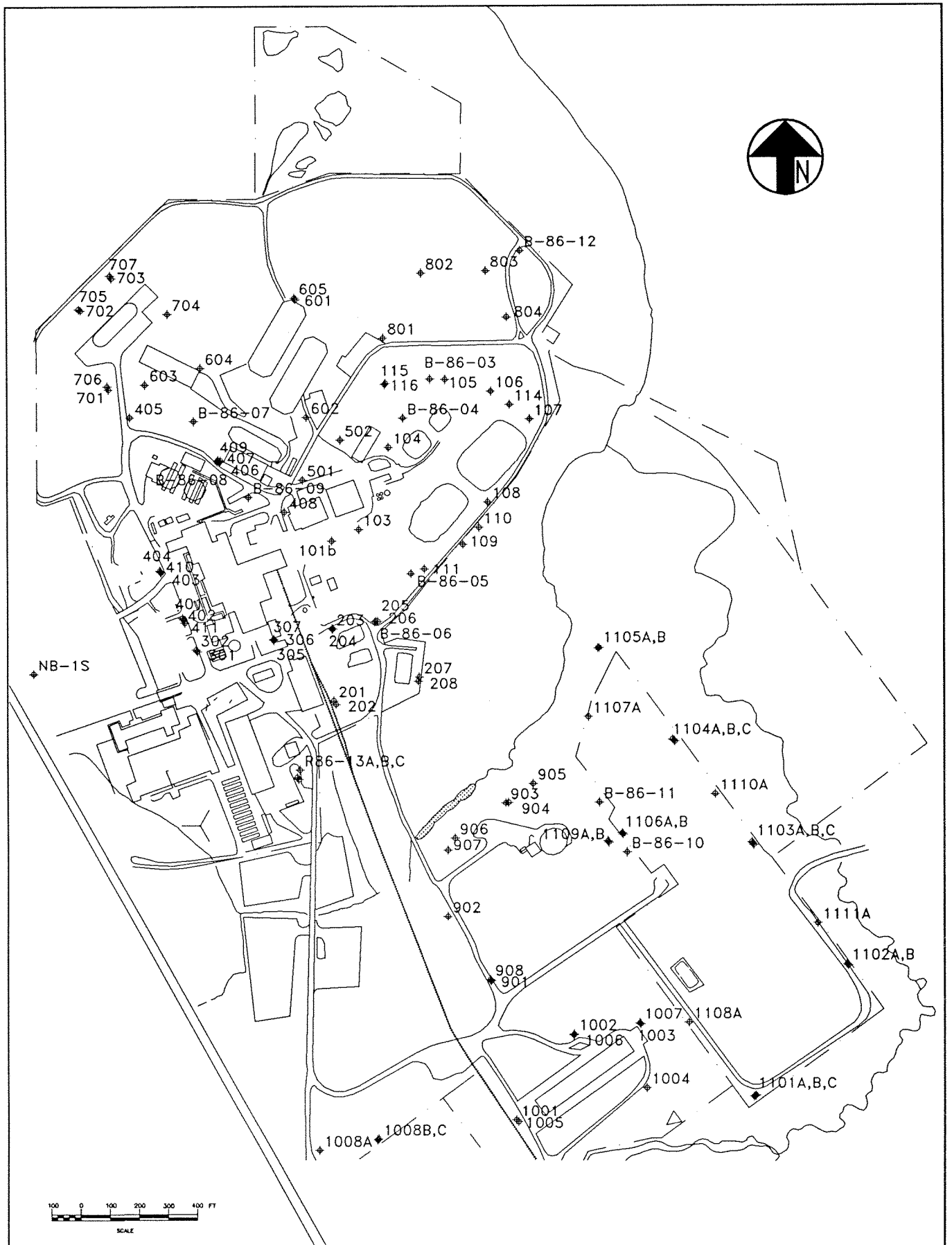


Figure E-27. Location of On-site Groundwater Network Wells Including 1990 Installations

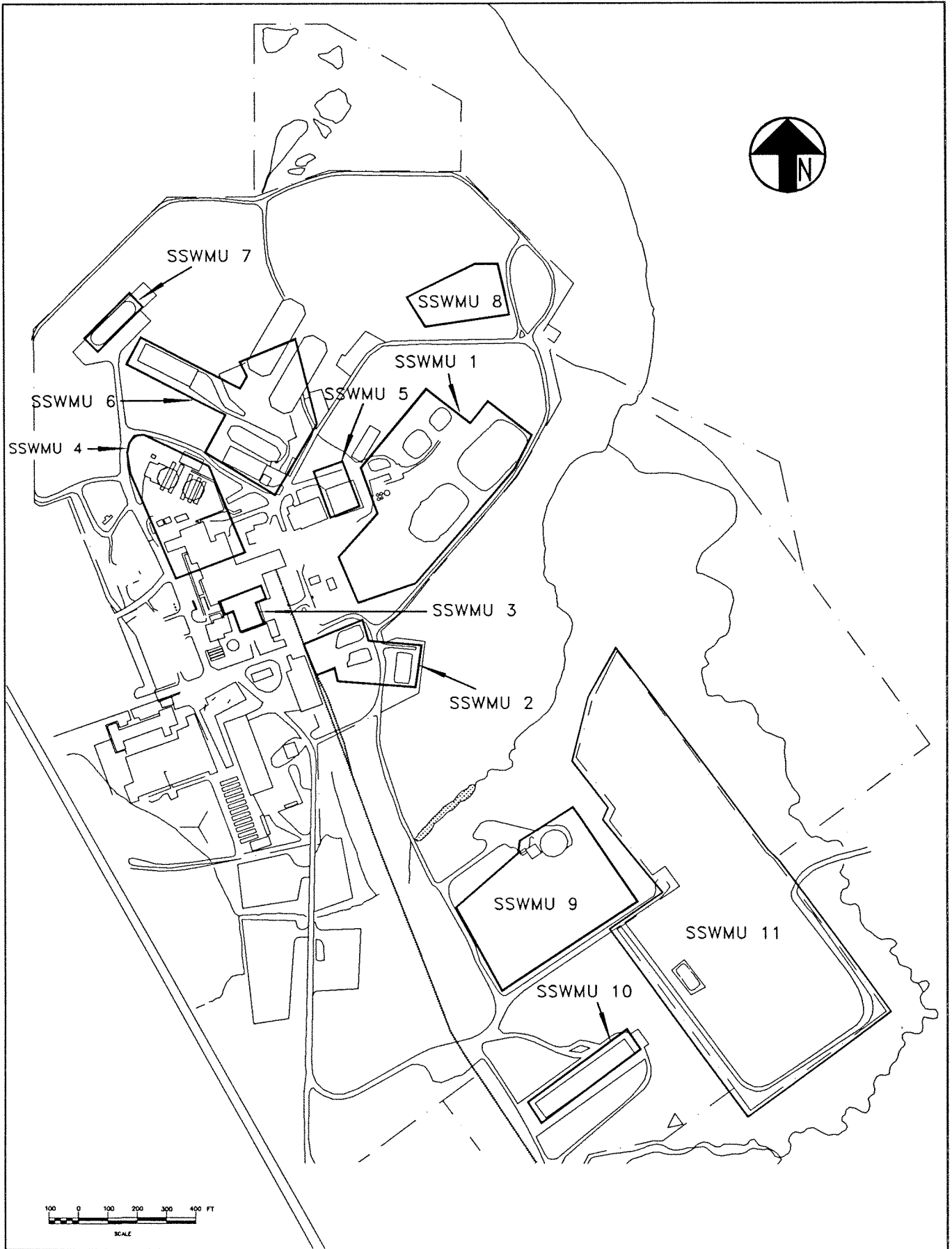


Figure E-28. Location of Super Solid Waste Management Units near WVPD Facilities.