APPENDIX E
SUMMARY OF GROUNDWATER MONITORING

TABLE E-1
SUPPORTING GROUNDWATER MONITORING STATIONS
SAMPLED DURING 1988

LOCATION CODE	PERIOD SAMPLED*	pH	CONDUCTIVITY @ 25°C (µmhos/cm)	ALPHA	BETA	Tritium	Cs-137
				WELLS NEAR SITE FACILTIES			
WNW80-03	8810	7.30	638	<5.41 E-09	2.93 E-07 ± 1.43 E-08	<1.24 E-07	<4.2 E-08
WNW80-03	8820	7.62	292	<1.06 E-09	1.23 E-07 ± 6.41 E-09	<1.0 E-07	<3.7 E-08
WNW80-04	8810	7.08	556	<2.09 E-09	1.09 E-08 ± 2.67 E-09	2.28 E-07 ± 1.36 E-07	<3.7 E-08
WNW80-04	8820	7.35	548	<1.53 E-09	1.06 E-08 ± 2.62 E-09	<1.18 E-07	<3.7 E-08
				WELLS NEAR NRC DISPOSAL UNIT			
WNW82-1A	8810	7.23	1223	1.16 E-08 ± 7.69 E-09	3.64 E-09 ± 2.38 E-09	3.66 E-07 ± 1.24 E-07	<3.7 E-08
WNW82-1A	8820	7.45	1325	<2.66 E-09	2.63 E-09 ± 2.30 E-09	1.41 E-07 ± 1.22 E-07	<3.7 E-08
WNW82-1B	8810	7.35	1439	<4.03 E-09	7.42 E-09 ± 2.68 E-09	<1.18 E-07	<3.7 E-08
WNW82-1B	8820	7.27	1460	<5.17 E-09	7.61 E-09 ± 2.78 E-09	<1.18 E-07	<3.7 E-08
WNW82-1C	8810	7.78	418	5.81 E-09 ± 5.67 E-09	2.27 E-09 ± 2.23 E-09	<1.0 E-07	<3.7 E-08
WNW82-1C	8820	7.76	400	6.75 E-09 ± 5.95 E-09	3.65 E-09 ± 2.34 E-09	<1.0 E-07	<3.7 E-08
WNW82-2B	8810	7.42	764	5.28 E-09 ± 5.15 E-09	5.12 E-09 ± 2.40 E-09	<1.0 E-07	<3.7 E-08
WNW82-2B	8820	7.33	752	<6.11 E-09	6.42 E-09 ± 2.69 E-09	<1.0 E-07	<3.7 E-08
WNW82-2C	8810	9.23	718	7.80 E-09 ± 5.86 E-09	<3.61 E-09	<1.0 E-07	N/A
WNW82-2C	8820	9.28	667	<6.34 E-09	<3.83 E-09	<1.0 E-07	<4.2 E-08
WNW82-3A	8810	7.62	446	***NOT AVAILABLE***		<1.0 E-07	N/A
WNW82-3A	8820	7.86	374	3.74 E-09 ± 2.81 E-09	5.85 E-09 ± 2.19 E-09	<1.0 E-07	<3.7 E-08
WNW82-4A1	8810	6.90	1332	<5.74 E-09	3.70 E-09 ± 2.49 E-09	5.54 E-05 ± 1.69 E-06	<3.7 E-08
WNW82-4A1	8820	7.18	1383	<7.14 E-09	<2.48 E-09	6.02 E-05 ± 1.83 E-06	<3.7 E-08
WNW82-4A2	8810	6.85	1515	<3.24 E-09	<1.99 E-09	<1.21 E-07	<3.7 E-08
WNW82-4A2	8820	6.91	1488	<5.38 E-09	<2.48 E-09	1.37 E-07 ± 1.19 E-07	<3.7 E-08
WNW82-4A3	8810	6.86	1423	<5.28 E-09	5.06 E-09 ± 2.84 E-09	<1.0 E-07	<3.7 E-08
WNW82-4A3	8820	7.12	1410	<4.06 E-09	<2.54 E-09	<1.22 E-07	<3.7 E-08

* Periods sampled: 8810, 1st Semiannual; 8820, 2nd Semiannual.

TABLE E-2

1988 FUEL TANK GROUNDWATER MONITORING

PARAMETER	WNW86-13 8801*	WNW86-13 8810*	WNW86-13 8820*
pH	6.94	6.96	7.06
Conductivity (µmhos/cm @25C)	721	680	623
TOC (mg/L)	3.30	1.80	5.00
Phenols (mg/L)	<0.01	<0.01	<0.01
Benzene (µg/L)	<0.2	<1	<1
Toluene (µg/L)	<0.2	<1	<1
o-xylene (µg/L)	<0.2	<2	<1
m-xylene (µg/L)	<0.2	<1	<1
p-xylene (µg/L)	<0.2	<1	<1
Tritium (µci/mL)	<1.0 E-07	<1.0 E-07	<1.0 E-07
Alpha (µci/mL)	<5.30 E-09	<3.34 E-09	<2.71 E-09
Beta (µCi/mL)	1.16 E-08 ± 2.84 E-09	7.68 E-09 ± 2.38 E-09	<1.81 E-09

* Periods sampled: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

TABLE E-3
1988 WATER QUALITY PARAMETERS FOR
HIGH-LEVEL WASTE TANK COMPLEX
GROUNDWATER MONITORING UNIT

LOCATION CODE	PERIOD SAMPLED*	pH	CONDUCTIVITY (@25 °C) (µmhos/cm)	mg/L TOC	PHENOL	TOX	CHLORIDE	NITRATE-N	SULFATE	FLUORIDE
WNW80-02	8801	7.76	359	1.0	<0.01	N/A	36.0	0.67	10	<0.10
WNW80-02	8810	7.60	370	3.0	<0.01	<0.010	35.0	0.32	43	<0.10
WNW80-02	8820	7.94	374	1.1	<0.01	<0.010	38.3	0.60	22	<0.10
WNDMPNE**	8801	6.91	526	2.8	<0.01	N/A	50.0	1.58	48	<0.10
WNDMPNE	8810	6.83	667	1.1	<0.01	0.013	76.5	0.80	50	<0.10
WNDMPNE	8820	6.91	582	4.2	<0.01	<0.010	46.0	0.82	66	<0.10
WNW86-07	8801	6.85	810	1.1	<0.01	N/A	5.6	1.30	185	<0.10
WNW86-07	8810	6.96	870	<1.0	<0.01	0.003	9.7	0.81	188	<0.10
WNW86-07	8820	6.47	823	2.0	<0.01	0.011	9.2	0.44	153	<0.10
WNW86-08	8801	6.53	629	3.4	<0.01	N/A	23.8	0.05	135	<0.10
WNW86-08	8810	7.05	734	<1.0	<0.01	0.015	20.5	0.10	140	<0.10
WNW86-08	8820	6.83	657	4.3	<0.01	0.013	9.4	0.09	160	<0.10
WNW86-09	8801	7.03	732	1.8	<0.01	N/A	98.0	1.88	31	<0.10
WNW86-09	8810	7.28	653	<1.0	<0.01	0.017	35.8	1.30	46	<0.10
WNW86-09	8820	7.38	593	1.2	<0.01	0.005	30.5	2.68	29	<0.10
WNW86-12**	8801	7.66	596	11.5	<0.01	N/A	32.0	0.12	53	<0.10
WNW86-12	8810	7.61	591	<1.0	<0.01	0.010	41.0	0.06	65	<0.10
WNW86-12	8820	7.56	615	7.2	<0.01	<0.010	40.0	0.06	50	<0.10

Notes: Each entry represents the average of four replicate measurements per period. Cohen's method from the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" was used to average the mixture of positive and less-than-detection-limit values.

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

** Monitoring wells near former cold dump.

TABLE E-4
1988 TOTAL METALS FOR
HIGH-LEVEL RADIOACTIVE WASTE TANK COMPLEX
GROUNDWATER MONITORING UNIT
(mg/L)

LOCATION CODE	PERIOD SAMPLED*	ARSENIC	BARIUM	CADMIUM	CHROMIUM	IRON	LEAD	MANGANESE	MERCURY	SELENIUM	SILVER	SODIUM
WNW80-02	8801	<0.005	0.07	<0.005	0.004	0.65	<0.060	0.03	<0.0005	<0.005	<0.005	<5.0
WNW80-02	8810	<0.005	0.10	0.009	<0.007	1.15	0.016	0.06	<0.0005	<0.005	<0.005	7.0
WNW80-02	8820	<0.005	0.09	<0.010	0.006	1.30	<0.005	0.07	<0.0004	<0.005	<0.010	4.3
WNDMPNE**	8801	<0.005	0.08	<0.005	<0.005	0.18	<0.020	0.13	<0.0005	<0.005	<0.005	12.3
WNDMPNE	8810	<0.005	0.13	0.006	<0.007	0.17	0.010	0.04	<0.0005	<0.005	<0.005	21.8
WNDMPNE	8820	<0.005	0.10	0.006	<0.020	3.78	<0.005	0.13	<0.0004	<0.005	<0.010	15.8
WNW86-07	8801	<0.005	0.07	<0.005	0.005	0.98	0.030	0.10	0.0034	<0.005	<0.005	11.0
WNW86-07	8810	0.005	0.06	0.012	0.009	2.80	0.016	0.36	<0.0005	<0.005	<0.005	9.0
WNW86-07	8820	<0.005	0.06	<0.010	0.026	0.95	<0.005	0.61	<0.0004	<0.005	<0.010	20.0
WNW86-08	8801	<0.005	0.08	<0.005	<0.005	0.75	<0.030	7.78	<0.0002	<0.005	<0.005	7.0
WNW86-08	8810	<0.005	0.09	0.011	0.008	2.48	0.042	2.60	<0.0008	<0.005	<0.005	8.0
WNW86-08	8820	0.008	0.11	<0.010	0.021	8.33	0.005	5.13	<0.0004	<0.005	<0.010	10.3
WNW86-09	8801	<0.005	0.23	<0.005	0.005	2.15	<0.030	0.13	0.0024	<0.005	<0.005	8.0
WNW86-09	8810	0.008	0.24	0.011	0.016	11.75	0.012	0.36	<0.0005	<0.005	<0.005	7.8
WNW86-09	8820	<0.005	0.16	<0.010	0.008	3.95	<0.005	0.13	<0.0004	<0.005	0.010	6.1
WNW86-12**	8801	<0.005	0.32	<0.005	<0.005	0.28	<0.030	0.08	<0.0002	<0.005	<0.005	11.8
WNW86-12	8810	0.005	0.31	0.008	0.005	0.31	0.009	0.09	<0.0005	<0.005	<0.005	12.0
WNW86-12	8820	0.004	0.32	<0.010	0.027	1.58	<0.005	0.10	<0.0004	<0.005	<0.010	12.3

Notes: Each entry represents the average of four replicate measurements per period. Cohen's method from the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" was used to average the mixture of positive and less-than-detection-limit values.

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

** Monitoring wells near former cold dump.

TABLE E-5
1988 DISSOLVED METALS FOR
HIGH-LEVEL RADIOACTIVE WASTE TANK COMPLEX
GROUNDWATER MONITORING UNIT
(mg/L)

LOCATION CODE	PERIOD SAMPLED*	ARSENIC	BARIUM	CADMIUM	CHROMIUM	IRON	LEAD	MANGANESE	MERCURY	SELENIUM	SILVER	SODIUM
WNW80-02	8801	<0.005	0.09	<0.005	<0.005	<0.03	<0.060	0.02	<0.0005	<0.005	<0.005	<5.0
WNW80-02	8810	<0.005	0.12	<0.006	<0.007	0.002	<0.005	0.05	<0.0005	<0.005	<0.005	5.1
WNW80-02	8820	<0.005	0.07	<0.010	<0.005	0.02	<0.005	0.04	<0.0004	<0.005	<0.010	4.0
WNDMPNE**	8801	<0.005	0.08	<0.005	<0.005	0.05	<0.020	0.11	<0.0005	<0.005	<0.005	11.8
WNDMPNE	8810	<0.005	0.13	<0.006	<0.007	0.02	<0.005	0.02	<0.0005	<0.005	<0.005	22.0
WNDMPNE	8820	<0.005	0.09	<0.010	0.020	0.04	<0.005	0.02	<0.0004	<0.005	0.010	13.8
WNW86-07	8801	<0.005	0.06	<0.005	<0.005	<0.02	<0.030	0.05	<0.0002	<0.005	<0.005	9.5
WNW86-07	8810	<0.005	0.05	0.008	0.005	<0.03	<0.005	0.04	<0.0005	<0.005	<0.005	7.8
WNW86-07	8820	<0.005	0.07	<0.010	<0.02	0.05	<0.005	0.42	<0.0004	<0.005	<0.010	17.3
WNW86-08	8801	<0.005	0.08	<0.005	<0.005	0.72	<0.030	7.73	<0.0002	<0.005	<0.005	6.0
WNW86-08	8810	<0.005	0.09	0.007	<0.005	0.09	<0.005	2.80	<0.0008	<0.005	<0.005	6.8
WNW86-08	8820	<0.005	0.10	<0.010	<0.20	0.82	0.005	5.95	<0.0004	<0.005	<0.010	7.0
WNW86-09	8801	<0.005	0.20	<0.005	<0.005	0.05	<0.030	0.002	<0.0002	<0.005	<0.005	7.0
WNW86-09	8810	<0.005	0.15	0.006	0.006	<0.04	<0.005	0.01	<0.0005	<0.005	<0.005	6.3
WNW86-09	8820	<0.005	0.18	<0.010	<0.005	<0.04	<0.005	0.01	<0.0004	<0.005	<0.010	5.9
WNW86-12**	8801	<0.005	0.32	<0.005	<0.005	0.19	<0.030	0.08	<0.0002	<0.005	<0.005	11.3
WNW86-12	8810	<0.005	0.28	0.005	<0.005	0.29	<0.005	0.09	<0.0005	<0.005	<0.005	11.3
WNW86-12	8820	<0.005	0.32	<0.010	0.020	0.26	<0.005	0.09	<0.0004	<0.005	<0.010	13.0

Notes: Each entry represents the average of four replicate measurements per period. Cohen's method from the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" was used to average the mixture of positive and less-than-detection-limit values.

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

** Monitoring wells near former cold dump.

TABLE E-6
1988 RADIOACTIVITY CONCENTRATIONS FOR
GROUNDWATER IN HIGH-LEVEL RADIOACTIVE WASTE TANK
COMPLEX MONITORING UNIT
(μCi/mL)

LOCATION CODE	PERIOD SAMPLED*	ALPHA	BETA	Tritium	Cs-137	Co-60
WNW80-02	8801	<8.70 E-10	<8.40 E-10	<1.00 E-07	<1.08 E-07	<1.09 E-07
WNW80-02	8810	<7.10 E-10	2.22 E-09 ± 8.90 E-10	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNW80-02	8820	<7.57 E-10	<8.08 E-10	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNDMPNE**	8801	<9.22 E-10	1.55 E-07 ± 3.67 E-09	8.55 E-07 ± 6.50 E-08	<1.08 E-07	<1.09 E-07
WNDMPNE	8810	<9.13 E-10	8.95 E-08 ± 2.91 E-09	1.15 E-06 ± 6.88 E-08	<3.05 E-08	<3.20 E-08
WNDMPNE	8820	<1.27 E-09	1.12 E-07 ± 3.21 E-09	8.68 E-07 ± 7.96 E-08	<3.05 E-08	<3.20 E-08
WNW86-07	8801	<1.32 E-09	8.84 E-09 ± 1.25 E-09	<5.14 E-08	<1.08 E-07	<1.09 E-07
WNW86-07	8810	3.01 E-09 ± 1.87 E-09	7.02 E-09 ± 1.21 E-09	2.54 E-07 ± 5.79 E-08	<3.05 E-08	<3.20 E-08
WNW86-07	8820	<1.24 E-09	6.52 E-09 ± 1.16 E-09	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNW86-08	8801	<7.74 E-10	8.87 E-09 ± 1.21 E-09	4.20 E-07 ± 8.95 E-08	<1.08 E-07	<1.09 E-07
WNW86-08	8810	3.87 E-09 ± 1.91 E-09	7.79 E-09 ± 1.21 E-09	5.37 E-06 ± 1.26 E-07	<3.05 E-08	<3.20 E-08
WNW86-08	8820	<1.36 E-09	9.86 E-09 ± 1.24 E-09	2.19 E-06 ± 1.03 E-07	<3.05 E-08	<3.20 E-08
WNW86-09	8801	2.74 E-09 ± 2.07 E-09	1.71 E-07 ± 4.06 E-09	2.24 E-06 ± 8.14 E-08	<1.08 E-07	<1.09 E-07
WNW86-09	8810	9.36 E-09 ± 3.20 E-09	1.87 E-07 ± 4.34 E-09	2.44 E-06 ± 8.54 E-08	<3.05 E-08	<3.20 E-08
WNW86-09	8820	<1.05 E-09	1.70 E-07 ± 3.93 E-09	1.85 E-06 ± 9.18 E-08	<3.05 E-08	<3.20 E-08
WNW86-12**	8801	<1.01 E-09	9.25 E-10 ± 8.86 E-10	4.95 E-06 ± 1.18 E-07	<1.08 E-07	<1.09 E-07
WNW86-12	8810	<8.78 E-10	9.26 E-10 ± 8.64 E-10	4.10 E-06 ± 1.06 E-07	<3.05 E-08	<3.20 E-08
WNW86-12	8820	<1.02 E-09	1.49 E-09 ± 8.91 E-10	3.96 E-06 ± 1.24 E-07	<3.05 E-08	<3.20 E-08

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.
** Monitoring wells near former cold dump.

TABLE E-7
1988 WATER QUALITY PARAMETERS FOR
LOW-LEVEL RADIOACTIVE WASTE LAGOON SYSTEM
GROUNDWATER MONITORING UNIT

LOCATION CODE	PERIOD SAMPLED*	pH	CONDUCTIVITY (@25 °C) (µmhos/cm)	mg/L TOC	PHENOL	TOX	CHLORIDE	NITRATE-N	SULFATE	FLUORIDE
WNW86-06	8801	6.69	1357	1.0	<0.01	N/A	345.0	0.15	29	<0.10
WNW86-06	8810	6.79	1360	<1.0	<0.01	0.012	317.5	0.16	32	<0.10
WNW86-06	8820	6.80	4018	2.0	<0.01	0.016	1150.0	0.09	37	<0.10
WNGSEEP	8801	6.34	449	<1.0	0.01	N/A	38.8	1.13	42	<0.10
WNGSEEP	8810	6.58	567	<1.0	<0.01	0.011	74.3	0.72	52	<0.10
WNGSEEP	8820	6.32	545	1.4	<0.01	0.010	46.0	0.93	50	<0.10
WNSP008	8801	7.12	897	0.9	0.01	N/A	78.0	1.78	73	<0.10
WNSP008	8810	6.89	998	1.5	<0.01	0.016	110.0	0.99	70	<0.10
WNSP008	8820	6.95	926	4.1	<0.01	0.011	77.8	0.83	85	<0.10
WNW80-05	8801	7.15	542	1.0	0.01	N/A	49.0	0.83	34	0.12
WNW80-05	8810	7.43	779	<1.0	<0.01	0.005	100.0	0.72	62	0.10
WNW80-05	8820	6.94	634	5.6	<0.01	<0.001	74.0	0.44	52	<0.10
WNW80-06	8801	6.22	698	<1.0	<0.01	N/A	36.0	0.11	130	<0.10
WNW80-06	8810	6.48	912	3.5	<0.01	0.070	26.8	0.15	200	<0.10
WNW80-06	8820	6.44	852	3.4	<0.01	<0.010	33.5	0.09	200	<0.10
WNW86-03	8801	7.52	849	<1.0	0.01	N/A	105.0	1.38	37	<0.10
WNW86-03	8810	7.06	788	<1.0	<0.01	0.010	99.5	1.10	42	<0.10
WNW86-03	8820	7.37	884	2.7	<0.01	0.008	127.5	1.23	35	<0.10
WNW86-04	8801	7.24	835	<1.0	<0.01	N/A	96.3	1.45	37	<0.10
WNW86-04	8810	6.98	786	<1.0	<0.01	0.010	100.3	1.00	46	<0.10
WNW86-04	8820	7.33	852	1.3	<0.01	0.015	122.5	1.33	36	<0.10
WNW86-05	8801	6.78	709	4.1	0.02	N/A	17.1	0.08	43	<0.10
WNW86-05	8810	6.79	946	12.9	<0.01	0.028	41.5	<0.10	70	0.25
WNW86-05	8820	6.98	641	8.5	<0.01	0.014	7.8	<0.10	58	0.09

Notes: Each entry represents the average of four replicate measurements per period. Cohen's method from the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" was used to average the mixture of positive and less-than-detection-limit values.

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

TABLE E-8

1988 TOTAL METALS FOR

LOW-LEVEL RADIOACTIVE WASTE LAGOON SYSTEM

GROUNDWATER MONITORING UNIT

(mg/L)

LOCATION CODE	PERIOD SAMPLED*	ARSENIC	BARIUM	CADMIUM	CHROMIUM	IRON	LEAD	MANGANESE	MERCURY	SELENIUM	SILVER	SODIUM
WNW86-06	8801	<0.005	0.075	<0.005	<0.005	0.16	0.030	3.18	<0.0002	<0.005	<0.005	140
WNW86-06	8810	0.017	0.051	0.010	<0.005	0.29	0.012	1.65	<0.0005	<0.005	<0.005	185
WNW86-06	8820	<0.005	0.180	<0.005	0.009	0.17	<0.005	4.78	<0.0004	<0.005	<0.010	633
WNGSEEP	8801	<0.005	0.100	<0.005	<0.005	0.08	<0.060	<0.01	<0.0005	<0.005	<0.005	12
WNGSEEP	8810	<0.005	0.130	0.009	0.005	1.68	0.004	0.04	<0.0008	<0.005	<0.005	15
WNGSEEP	8820	<0.005	0.120	0.007	0.010	1.45	<0.005	0.05	0.0006	<0.005	0.005	15
WNSP008	8801	<0.005	0.083	<0.005	<0.005	0.06	<0.020	2.30	<0.0005	<0.005	<0.005	43
WNSP008	8810	<0.005	0.110	0.010	<0.007	0.09	0.005	2.38	<0.0005	<0.005	<0.005	63
WNSP008	8820	<0.005	0.068	<0.010	<0.020	0.06	<0.005	2.10	<0.0004	<0.006	<0.010	51
WNW80-05	8801	<0.005	0.100	<0.005	0.004	2.75	<0.060	0.04	<0.0005	<0.005	<0.005	9
WNW80-05	8810	<0.005	0.095	0.013	<0.005	2.95	0.020	0.17	<0.0008	<0.005	<0.005	15
WNW80-05	8820	<0.005	0.095	<0.005	<0.010	1.23	<0.005	0.07	0.0051	<0.005	<0.010	19
WNW80-06	8801	<0.005	0.073	<0.005	<0.005	0.95	<0.060	9.75	<0.0005	<0.005	<0.005	14
WNW80-06	8810	0.005	0.075	<0.007	0.010	0.41	<0.005	9.30	<0.0002	<0.005	<0.010	18
WNW80-06	8820	<0.005	0.043	<0.010	0.020	0.50	0.008	5.55	<0.0004	<0.005	0.013	18
WNW86-03	8801	<0.005	0.210	<0.005	<0.005	<0.03	<0.060	< 0.01	<0.0005	<0.005	<0.005	23
WNW86-03	8810	<0.005	0.245	0.008	0.006	0.07	0.018	0.01	<0.0005	<0.005	<0.005	28
WNW86-03	8820	<0.005	0.195	<0.005	0.015	0.12	<0.005	0.01	<0.0004	<0.005	<0.010	28
WNW86-04	8801	<0.005	0.183	<0.005	<0.005	0.70	<0.060	0.04	<0.0005	<0.005	<0.005	22
WNW86-04	8810	<0.005	0.268	0.008	<0.007	3.30	0.017	0.08	<0.0005	<0.005	<0.005	29
WNW86-04	8820	<0.005	0.203	<0.005	0.009	1.05	<0.005	0.07	<0.0004	<0.005	<0.010	29
WNW86-05	8801	<0.200	0.104	<0.002	<0.020	3.80	<0.050	7.58	<0.0002	<0.200	<0.010	37
WNW86-05	8810	0.006	0.125	<0.002	<0.020	5.06	<0.050	10.85	<0.0002	<0.002	<0.010	70
WNW86-05	8820	0.006	0.100	<0.002	<0.020	3.50	<0.002	7.96	<0.0002	<0.002	<0.001	29

Notes: Each entry represents the average of four replicate measurements per period. Cohen's method from the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" was used to average the mixture of positive and less-than-detection-limit values.

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

TABLE E-9
1988 DISSOLVED METALS FOR
LOW-LEVEL RADIOACTIVE WASTE LAGOON SYSTEM
GROUNDWATER MONITORING UNIT
(mg/L)

LOCATION CODE	PERIOD SAMPLED*	ARSENIC	BARIUM	CADMIUM	CHROMIUM	IRON	LEAD	MANGANESE	MERCURY	SELENIUM	SILVER	SODIUM
WNW86-06	8801	<0.005	0.08	<0.005	<0.005	<0.02	<0.030	3.20	<0.0002	<0.005	<0.005	120
WNW86-06	8810	<0.005	0.05	0.006	<0.005	<0.03	<0.005	1.60	<0.0005	<0.005	<0.005	188
WNW86-06	8820	<0.005	0.18	<0.010	<0.010	0.10	<0.005	4.68	<0.0004	<0.005	<0.010	648
WNGSEEP	8801	<0.005	0.07	<0.005	<0.005	<0.03	<0.060	< 0.01	<0.0005	<0.005	<0.005	11
WNGSEEP	8810	<0.005	0.12	0.005	<0.005	<0.03	<0.005	0.01	<0.0008	<0.005	<0.005	13
WNGSEEP	8820	<0.005	0.11	<0.010	0.020	<0.03	<0.005	0.01	<0.0004	<0.005	<0.010	15
WNSP008	8801	<0.005	0.09	<0.005	<0.005	0.02	0.024	2.25	<0.0005	<0.005	<0.005	45
WNSP008	8810	<0.005	0.11	0.004	<0.007	0.03	<0.005	2.35	<0.0005	<0.005	<0.005	66
WNSP008	8820	<0.005	0.08	<0.010	0.021	0.04	0.004	2.23	<0.0004	<0.005	<0.010	48
WNW80-05	8801	<0.005	0.06	<0.005	<0.005	0.09	<0.060	0.02	<0.0005	<0.005	<0.005	7
WNW80-05	8810	<0.005	0.08	0.007	<0.005	0.69	<0.005	0.14	<0.0008	<0.005	<0.005	15
WNW80-05	8820	<0.005	0.09	<0.010	<0.010	0.54	<0.005	0.04	<0.0004	<0.005	<0.010	11
WNW80-06	8801	<0.005	0.04	<0.005	<0.005	0.78	<0.060	9.08	<0.0005	<0.005	<0.005	12
WNW80-06	8810	<0.005	0.11	<0.007	<0.010	0.38	<0.005	11.00	<0.0002	<0.005	<0.010	18
WNW80-06	8820	<0.005	0.06	<0.010	0.011	0.37	<0.005	7.95	<0.0004	<0.005	<0.010	18
WNW86-03	8801	<0.005	0.23	<0.005	<0.005	<0.03	<0.060	< 0.01	<0.0005	<0.005	<0.005	22
WNW86-03	8810	<0.005	0.24	0.006	<0.007	0.02	<0.005	0.01	<0.0005	<0.005	<0.005	27
WNW86-03	8820	<0.005	0.20	<0.010	<0.010	0.05	<0.005	0.01	0.0019	<0.005	<0.010	29
WNW86-04	8801	<0.005	0.18	<0.005	<0.005	0.02	<0.060	0.04	<0.0005	<0.005	<0.005	22
WNW86-04	8810	<0.005	0.24	0.005	<0.007	0.04	<0.005	0.04	<0.0005	<0.005	<0.005	27
WNW86-04	8820	<0.005	0.24	<0.010	<0.010	0.08	<0.005	0.04	<0.0004	<0.005	<0.010	25
WNW86-05	8801	<0.200	0.11	<0.002	<0.020	4.10	<0.050	7.91	<0.0002	<0.200	<0.010	38
WNW86-05	8810	0.007	0.13	<0.002	<0.020	5.36	<0.050	11.08	<0.0002	<0.002	<0.010	70
WNW86-05	8820	0.003	0.09	<0.002	<0.020	2.31	<0.002	7.92	<0.0002	<0.002	<0.001	29

Notes: Each entry represents the average of four replicate measurements per period. Cohen's method from the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" was used to average the mixture of positive and less-than-detection-limit values.

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

TABLE E-10
1988 RADIOACTIVITY CONCENTRATIONS FOR GROUNDWATER IN THE
LOW-LEVEL RADIOACTIVE WASTE LAGOON SYSTEM
GROUNDWATER MONITORING UNIT
(μCi/mL)

LOCATION CODE	PERIOD SAMPLED*	ALPHA	BETA	Tritium	Cs-137	Co-60
WNW86-06	8801	<1.95 E-09	7.68 E-09 ± 1.31 E-09	<1.00 E-07	<1.08 E-07	<1.09 E-07
WNW86-06	8810	<1.33 E-09	5.59 E-09 ± 1.15 E-09	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNW86-06	8820	<3.44 E-09	9.37 E-09 ± 1.70 E-09	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNGSEEP	8801	<7.72 E-10	1.99 E-09 ± 9.12 E-10	1.31 E-06 ± 7.04 E-08	<1.08 E-07	<1.09 E-07
WNGSEEP	8810	1.01 E-08 ± 3.25 E-09	1.67 E-08 ± 1.54 E-09	1.69 E-06 ± 7.61 E-08	<3.05 E-08	<3.20 E-08
WNGSEEP	8820	<8.56 E-10	2.72 E-09 ± 9.29 E-10	1.18 E-06 ± 8.26 E-08	<3.05 E-08	<3.20 E-08
WNSP008	8901	1.99 E-09 ± 1.82 E-09	3.27 E-08 ± 1.95 E-09	7.27 E-06 ± 1.55 E-07	<1.08 E-07	<1.09 E-07
WNSP008	8810	<1.40 E-09	3.72 E-08 ± 2.04 E-09	7.45 E-06 ± 1.57 E-07	<3.05 E-08	<3.20 E-08
WNSP008	8820	<1.19 E-09	3.72 E-08 ± 2.06 E-09	7.19 E-06 ± 1.76 E-07	<3.05 E-08	<3.20 E-08
WNW80-05	8801	<1.05 E-09	1.20 E-09 ± 8.98 E-10	2.82 E-07 ± 6.15 E-08	<1.08 E-07	<1.09 E-07
WNW80-05	8810	<8.83 E-10	2.93 E-09 ± 9.97 E-10	7.44 E-07 ± 6.76 E-08	<3.05 E-08	<3.20 E-08
WNW80-05	8820	<1.08 E-09	2.52 E-09 ± 9.64 E-10	7.31 E-07 ± 7.76 E-08	<3.05 E-08	<3.20 E-08
WNW80-06	8801	<1.26 E-09	2.75 E-09 ± 1.01 E-09	7.97 E-07 ± 9.15 E-08	<1.08 E-07	<1.09 E-07
WNW80-06	8810	<1.41 E-09	5.08 E-09 ± 1.13 E-09	7.22 E-07 ± 7.61 E-08	<3.05 E-08	<3.20 E-08
WNW80-06	8820	<1.03 E-09	2.47 E-09 ± 9.74 E-10	8.76 E-07 ± 9.63 E-08	<3.05 E-08	<3.20 E-08
WNW86-03	8801	<1.38 E-09	7.43 E-09 ± 1.23 E-09	1.13 E-06 ± 6.86 E-08	<1.08 E-07	<1.09 E-07
WNW86-03	8810	<7.35 E-10	8.93 E-09 ± 1.23 E-09	1.39 E-06 ± 7.10 E-08	<3.05 E-08	<3.20 E-08
WNW86-03	8820	<1.31 E-09	9.36 E-09 ± 1.27 E-09	1.20 E-06 ± 8.24 E-08	<3.05 E-08	<3.20 E-08
WNW86-04	8801	<1.59 E-09	2.50 E-08 ± 1.75 E-09	1.47 E-06 ± 7.23 E-08	<1.08 E-07	<1.09 E-07
WNW86-04	8810	<8.76 E-10	3.07 E-08 ± 1.85 E-09	1.44 E-06 ± 7.19 E-08	<3.05 E-08	<3.20 E-08
WNW86-04	8820	<1.25 E-09	3.64 E-08 ± 2.03 E-09	1.37 E-06 ± 8.43 E-08	<3.05 E-08	<3.20 E-08
WNW86-05	8801	6.12 E-08 ± 6.47 E-09	1.80 E-05 ± 3.96 E-08	1.86 E-05 ± 3.12 E-07	<1.08 E-07	<1.09 E-07
WNW86-05	8810	8.12 E-09 ± 2.70 E-09	2.84 E-05 ± 5.10 E-08	1.73 E-05 ± 2.96 E-07	<3.05 E-08	<3.20 E-08
WNW86-05	8820	2.59 E-08 ± 4.06 E-09	2.11 E-05 ± 4.27 E-08	1.24 E-05 ± 2.24 E-07	<3.05 E-08	<3.20 E-08

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

TABLE E-11
1988 WATER QUALITY PARAMETERS FOR
NRC-LICENSED DISPOSAL AREA
GROUNDWATER MONITORING UNIT

LOCATION CODE	PERIOD SAMPLED*	pH	CONDUCTIVITY (@25 °C) (µmhos/cm)	mg/L TOC	PHENOL	TOX	CHLORIDE	NITRATE-N	SULFATE	FLUORIDE
WNW83-1D	8801	7.85	297	1.8	<0.01	N/A	6.1	0.10	1	0.46
WNW83-1D	8810	7.85	296	5.9	<0.01	<0.005	6.8	0.14	9	0.51
WNW83-1D	8820	8.01	293	3.9	<0.01	<0.010	6.5	0.27	8	0.44
WNW86-10	8801	8.33	593	0.7	<0.01	N/A	1.5	0.03	54	0.13
WNW86-10	8810	8.30	593	<1.0	<0.01	<0.005	1.4	0.06	94	0.12
WNW86-10	8820	7.94	626	14.6	<0.01	<0.010	<1.0	0.06	67	0.15
WNW86-11	8801	7.88	654	1.3	<0.01	N/A	0.9	0.14	96	0.18
WNW86-11	8810	7.95	664	2.9	<0.01	<0.005	1.0	0.24	123	0.22
WNW86-11	8820	7.76	698	9.9	<0.02	<0.010	<1.0	0.16	120	0.16

Notes: Each entry represents the average of four replicate measurements per period. Cohen's method from the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" was used to average the mixture of positive and less-than-detection-limit values.

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

TABLE E-12
1988 TOTAL METALS FOR
NRC-LICENSED DISPOSAL AREA
GROUNDWATER MONITORING UNIT
(mg/L)

LOCATION CODE	PERIOD SAMPLED*	ARSENIC	BARIUM	CADMIUM	CHROMIUM	IRON	LEAD	MANGANESE	MERCURY	SELENIUM	SILVER	SODIUM
WNW83-1D	8801	<0.005	0.68	<0.005	0.004	2.98	<0.050	0.11	<0.0002	<0.005	<0.005	27
WNW83-1D	8810	0.005	0.76	<0.005	<0.010	5.78	<0.005	0.13	<0.0002	<0.005	<0.010	24
WNW83-1D	8820	<0.005	0.72	<0.010	0.013	6.80	0.009	0.15	<0.0004	<0.005	0.015	22
WNW86-10	8801	<0.005	0.19	<0.005	0.005	1.15	<0.030	0.07	0.0047	<0.005	<0.005	61
WNW86-10	8810	0.025	0.20	0.008	0.014	3.15	0.005	0.14	<0.0005	<0.005	<0.005	63
WNW86-10	8820	0.011	0.23	<0.010	0.072	16.83	0.040	0.65	<0.0004	<0.005	0.009	64
WNW86-11	8801	<0.005	0.12	<0.005	0.038	5.93	0.029	0.27	0.0047	<0.005	<0.005	56
WNW86-11	8810	0.006	0.09	<0.007	0.054	11.98	0.006	0.28	<0.0002	<0.005	<0.010	59
WNW86-07	8820	<0.005	0.11	<0.10	0.064	9.10	0.043	0.32	<0.0004	<0.005	<0.010	63

Notes: Each entry represents the average of four replicate measurements per period. Cohen's method from the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" was used to average the mixture of positive and less-than-detection-limit values.

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

TABLE E-13
1988 DISSOLVED METALS FOR
NRC-LICENSED DISPOSAL AREA
GROUNDWATER MONITORING UNIT
(mg/L)

LOCATION CODE	PERIOD SAMPLED*	ARSENIC	BARIUM	CADMIUM	CHROMIUM	IRON	LEAD	MANGANESE	MERCURY	SELENIUM	SILVER	SODIUM
WNW83-1D	8801	<0.005	0.76	<0.005	<0.005	<0.03	<0.050	0.10	<0.0002	<0.005	<0.005	27
WNW83-1D	8810	0.005	0.78	<0.007	<0.010	0.02	<0.005	0.09	<0.0002	<0.005	<0.010	25
WNW83-1D	8820	<0.005	0.75	<0.010	0.010	0.08	<0.005	0.12	<0.0004	<0.005	0.010	26
WNW86-10	8801	0.006	0.19	<0.005	<0.005	0.06	<0.030	0.05	<0.0002	<0.005	<0.005	62
WNW86-10	8810	0.007	0.17	<0.005	<0.005	0.16	<0.005	0.06	<0.0005	<0.005	<0.005	61
WNW86-10	8820	<0.005	0.15	0.009	0.013	0.03	<0.005	0.09	<0.0004	<0.005	<0.010	67
WNW86-11	8801	<0.005	0.08	<0.005	<0.005	<0.02	<0.030	0.11	<0.0002	<0.005	<0.005	57
WNW86-11	8810	<0.005	0.08	<0.007	0.010	0.02	<0.005	0.09	<0.0002	<0.005	<0.010	59
WNW86-11	8820	<0.005	0.06	<0.10	0.021	<0.03	<0.005	0.08	<0.0004	<0.005	<0.010	69

Notes: Each entry represents the average of four replicate measurements per period. Cohen's method from the "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" was used to average the mixture of positive and less-than-detection-limit values.

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

TABLE E-14

1988 RADIOACTIVITY CONCENTRATIONS FOR GROUNDWATER IN THE NRC-LICENSED DISPOSAL AREA GROUNDWATER MONITORING UNIT

(μCi/mL)

LOCATION CODE	PERIOD SAMPLED*	ALPHA	BETA	Tritium	Cs-137	Co-60
WNW83-1D	8801	<8.52 E-10	2.62 E-09 ± 9.17 E-10	<1.00 E-07	<1.08 E-07	<1.09 E-07
WNW83-1D	8810	2.36 E-09 ± 9.83 E-10	4.8E E-09 ± 9.92 E-10	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNW83-1D	8820	1.18 E-09 ± 9.64 E-10	3.32 E-09 ± 9.17 E-10	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNW86-10	8801	3.47 E-09 ± 1.78 E-09	6.70 E-09 ± 1.15 E-09	1.18 E-07 ± 5.24 E-08	<1.08 E-07	<1.09 E-07
WNW86-10	8810	1.27 E-08 ± 4.85 E-09	3.02 E-08 ± 2.15 E-09	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNW86-10	8820	<1.71 E-09	8.09 E-09 ± 1.25 E-09	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNW86-11	8901	8.13 E-09 ± 3.33 E-09	1.43 E-08 ± 1.52 E-09	<1.00 E-07	<1.08 E-07	<1.09 E-07
WNW86-11	8810	3.27 E-09 ± 1.81 E-09	7.82 E-09 ± 1.22 E-09	<1.00 E-07	<3.05 E-08	<3.20 E-08
WNW86-11	8820	<1.52 E-09	5.72 E-09 ± 1.13 E-09	<1.00 E-07	<3.05 E-08	<3.20 E-08

* Periods: 8801, 1st Quarter; 8810, 1st Semiannual; 8820, 2nd Semiannual.

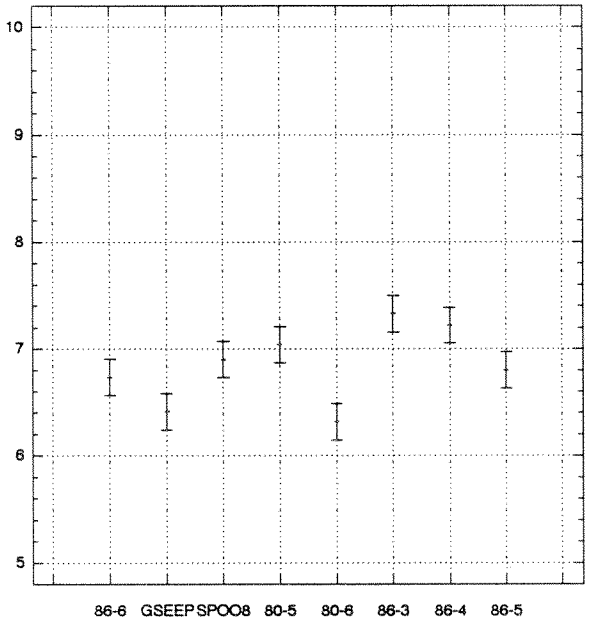

Figure E-1
pH in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

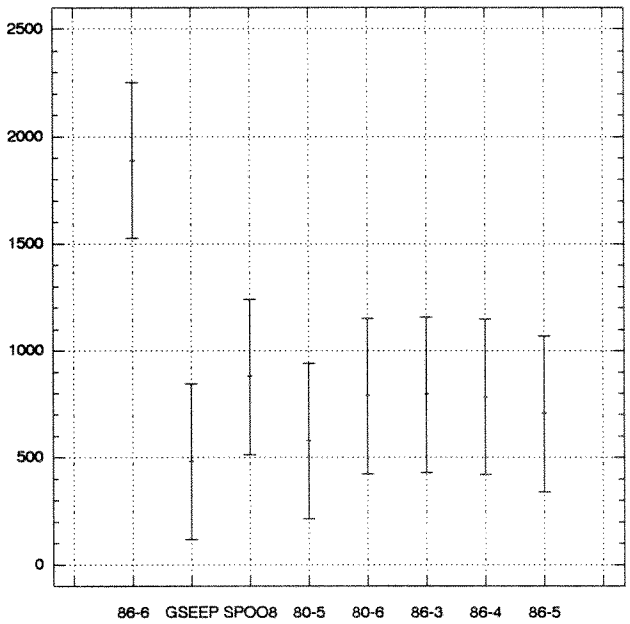

Figure E-2
Conductivity (μmhos/cm at 25 °C) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

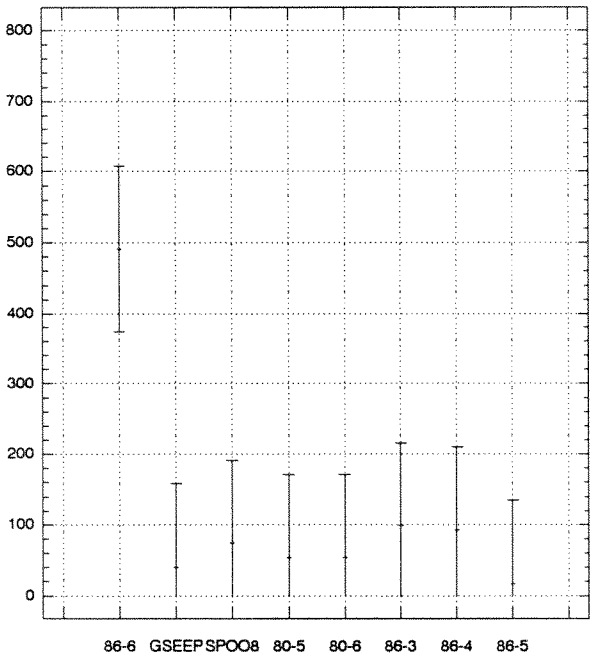

Figure E-3
Chloride (mg/L) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

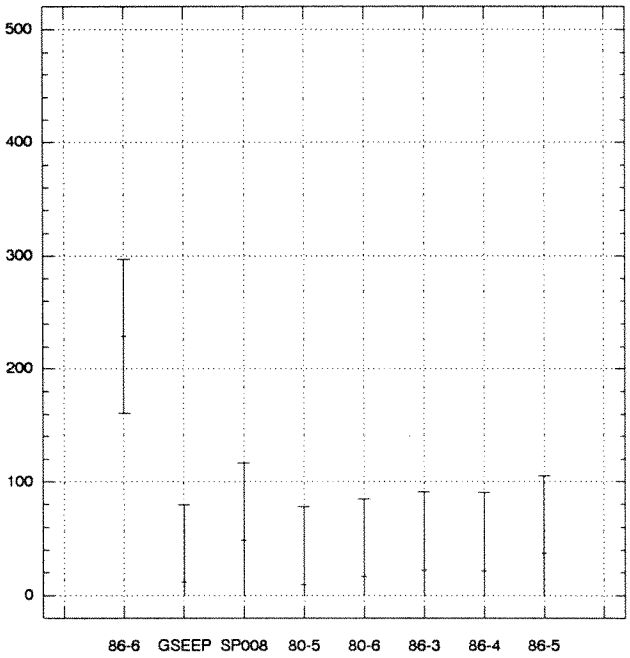

Figure E-4
Dissolved sodium (mg/L) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

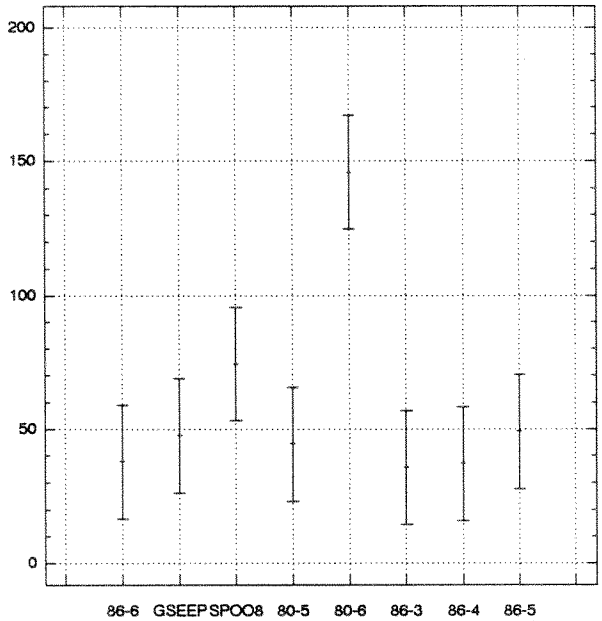

Figure E-5
Sulfate (mg/L) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

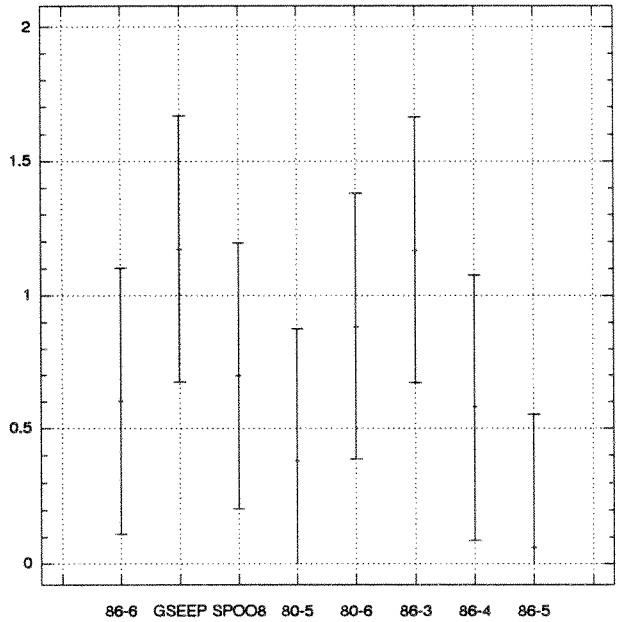

Figure E-6
Nitrate-N (mg/L) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

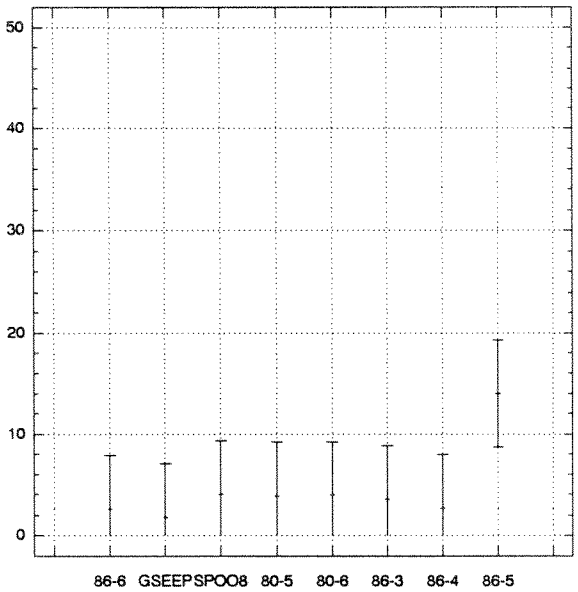

Figure E-7
Total organic carbon (mg/L) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

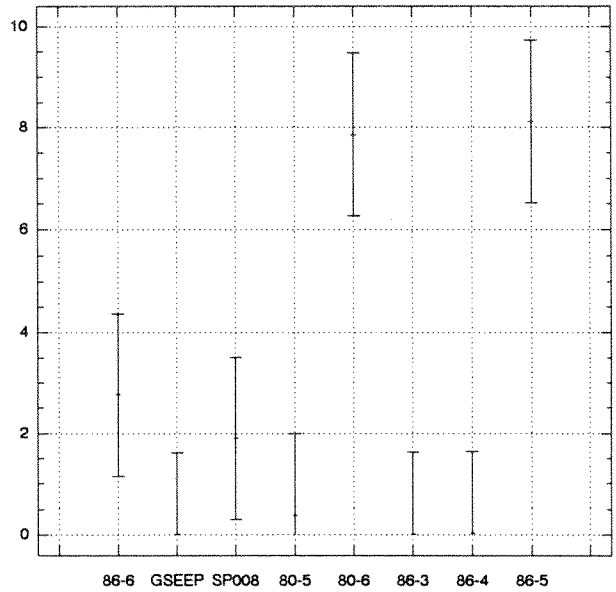

Figure E-8
Dissolved manganese (mg/L) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

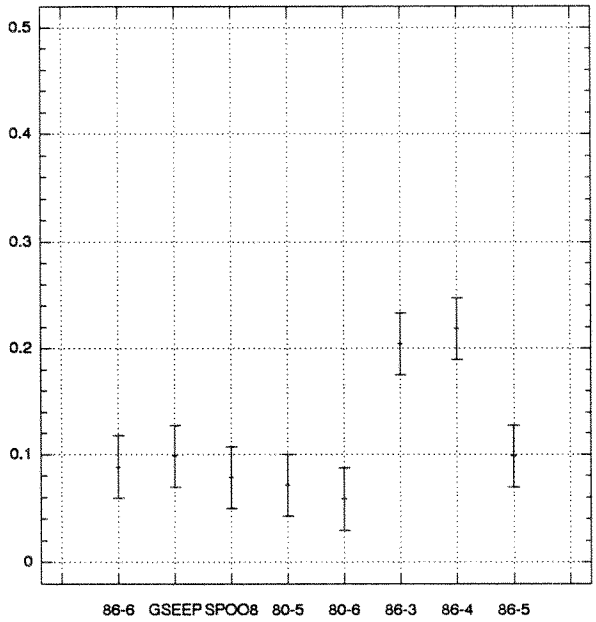

Figure E-9
Dissolved barium (mg/L) in groundwater samples from the Low-level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

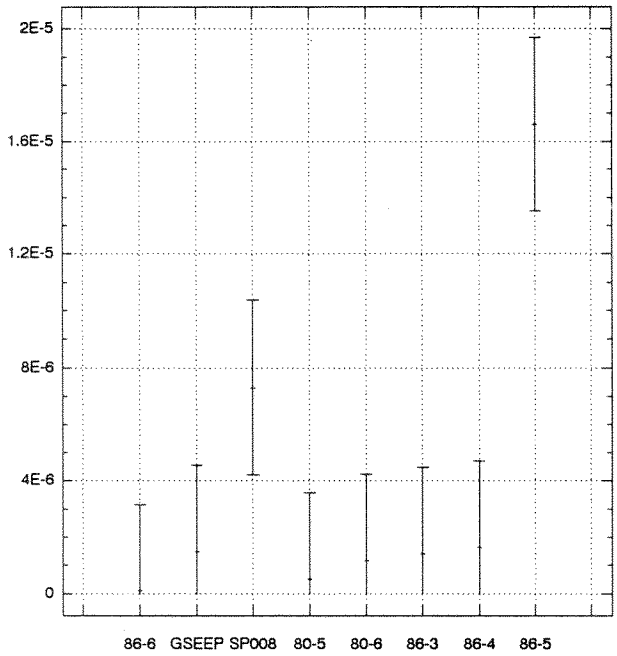

Figure E-10
Tritium activity (μCi/mL) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient. Figure E-11 follows without Well 86-5 to provide adequate scaling.

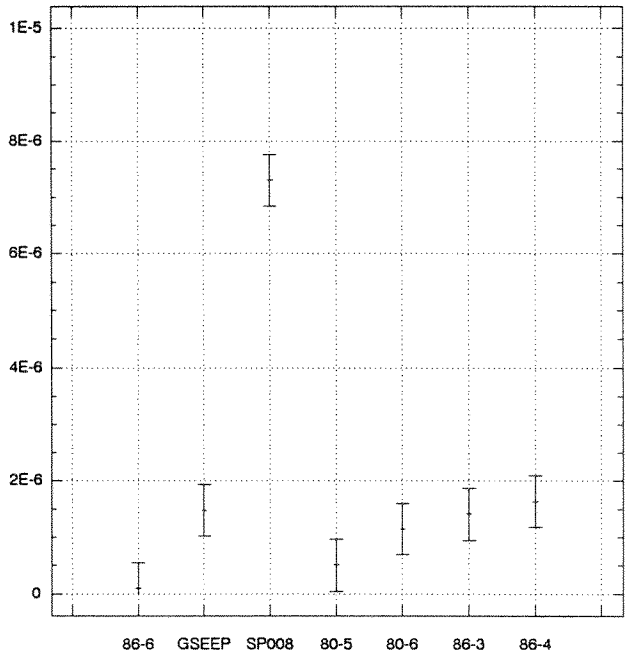

Figure E-11
Tritium activity (μCi/mL) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit , without Well 86-5.

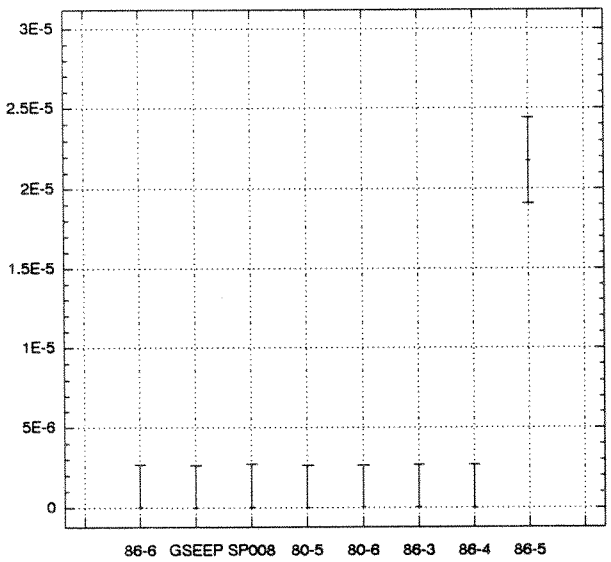

Figure E-12
Gross Beta activity (μCi/mL) in groundwater samples from the Low-Level Radioactive Waste Lagoon Monitoring Unit. Well 86-6 is upgradient. Figure E-13 follows without Well 86-5 to provide adequate scaling.

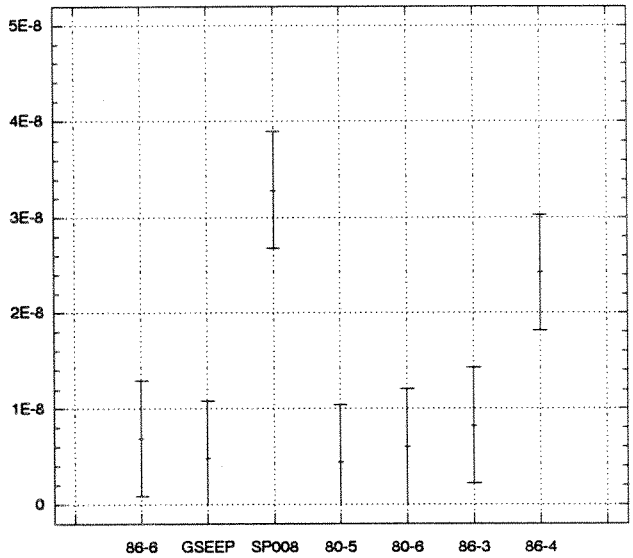

Figure E-13
Gross Beta activity (μCi/mL) in groundwater samples from the Low-Level Radioactive Waste Lagoon Monitoring Unit, without Well 86-5.

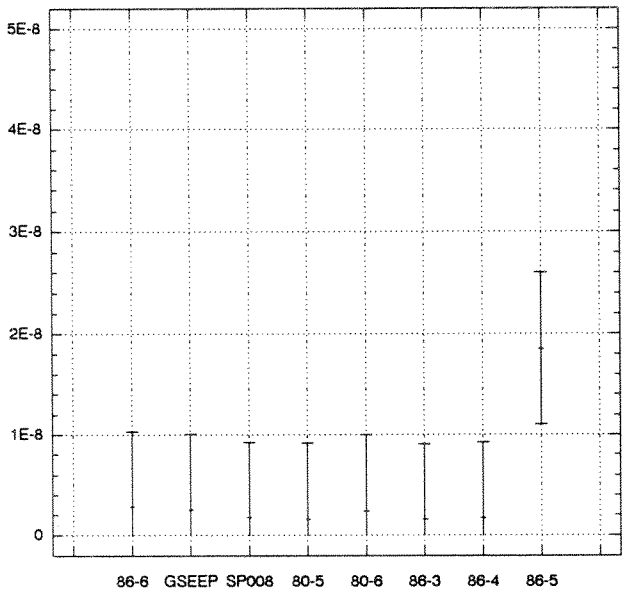

Figure E-14
Gross Alpha activity (μCi/mL) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

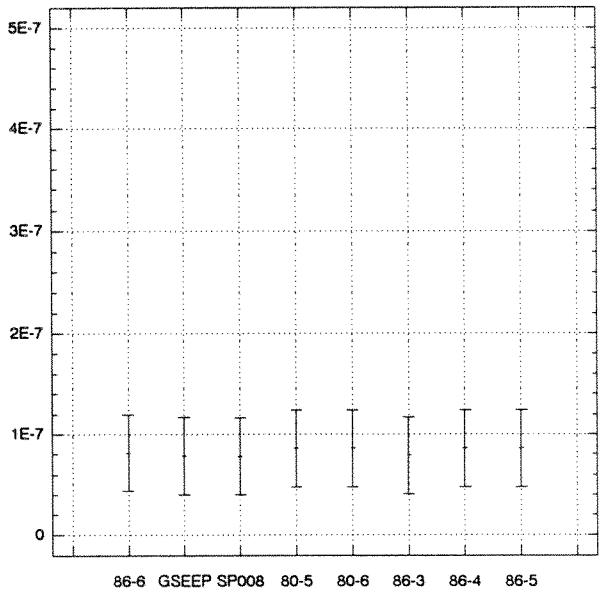

Figure E-15
Cesium activity (μCi/mL) in groundwater samples from the Low-Level Radioactive Waste Lagoon System Monitoring Unit. Well 86-6 is upgradient.

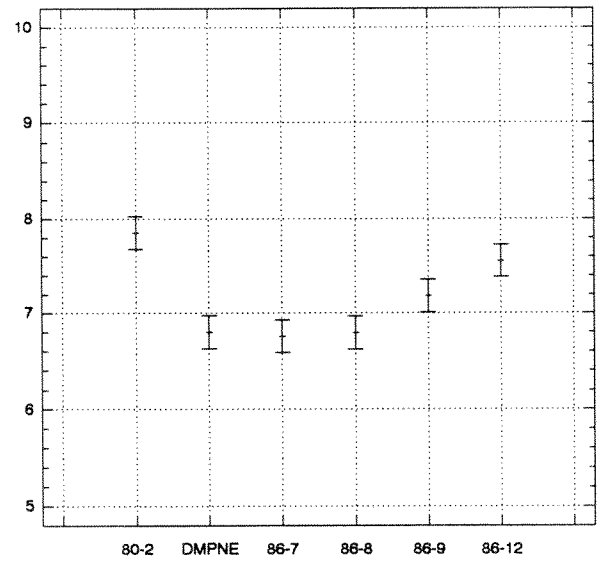

Figure E-16
pH in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

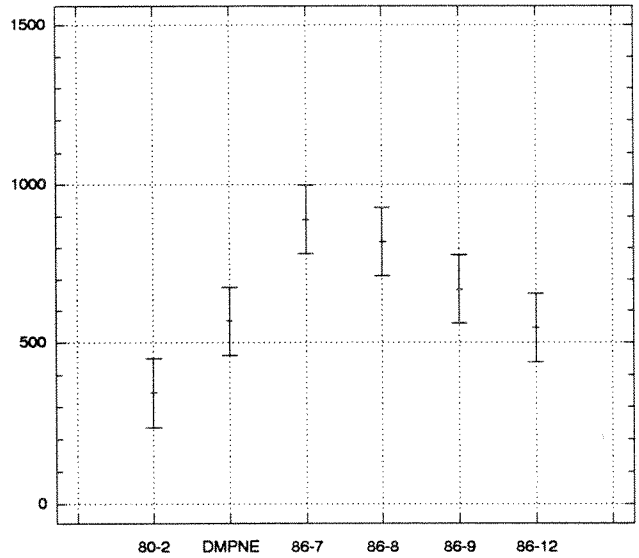

Figure E-17
Conductivity (μmhos/cm at 25 °C) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

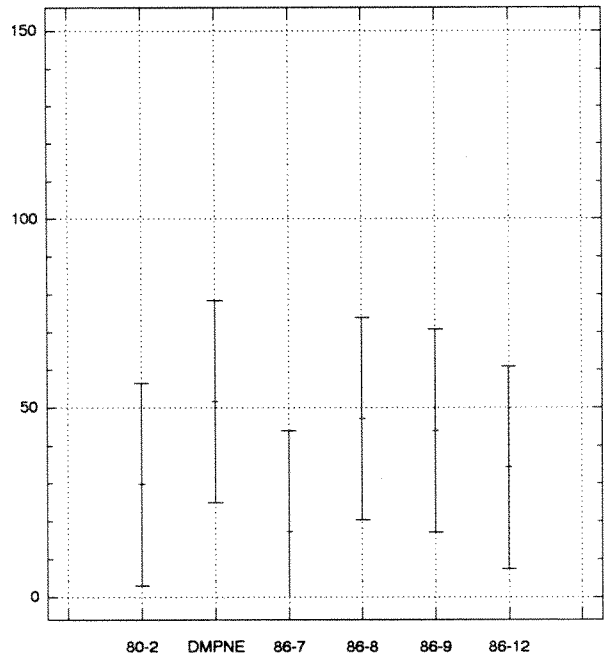

Figure E-18
Chloride (mg/L) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

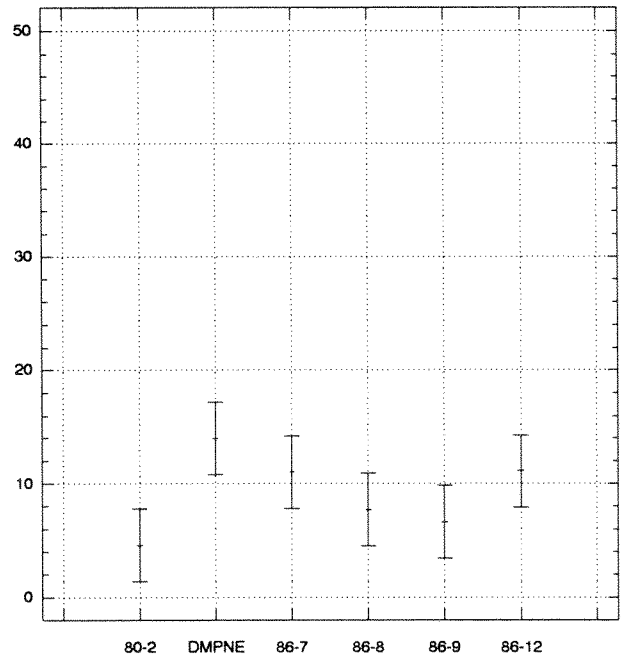

Figure E-19
Dissolved sodium (mg/L) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

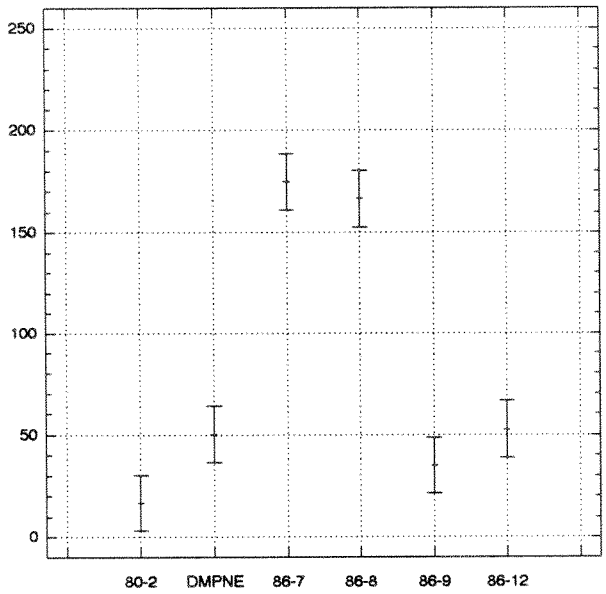

Figure E-20
Sulfate (mg/L) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

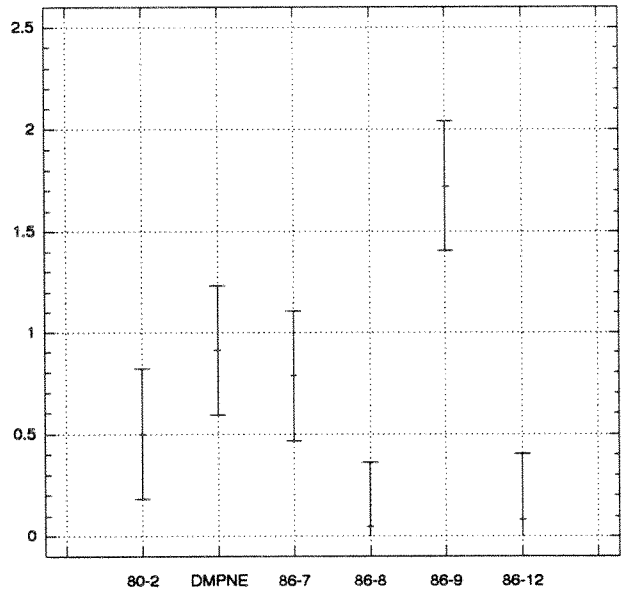

Figure E-21
Nitrate-N (mg/L) in groundwater samples from the High-Level Radioactive Waste tank Complex Monitoring Unit. Well 80-2 is upgradient.

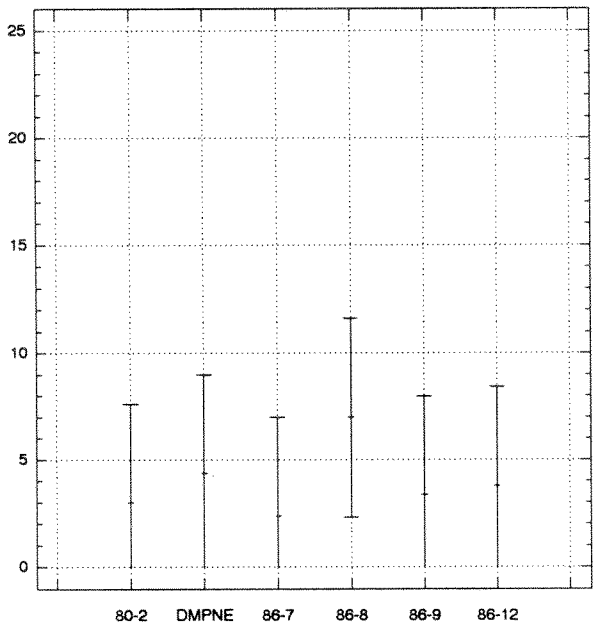

Figure E-22
Total organic carbon (mg/L) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

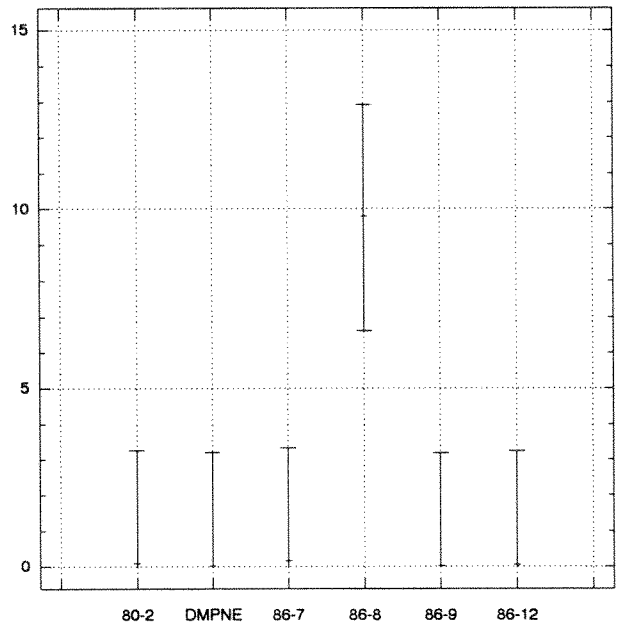

Figure E-23
Dissolved manganese (mg/L) in groundwater samples from the High-Level Radioactive waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

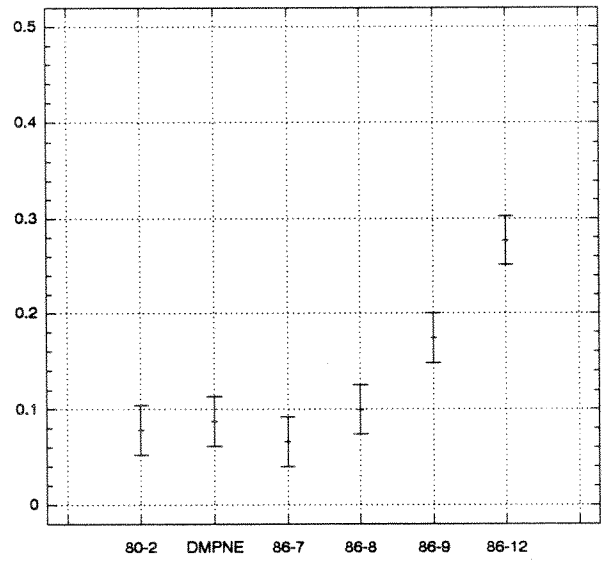

Figure E-24
Dissolved barium (mg/L) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

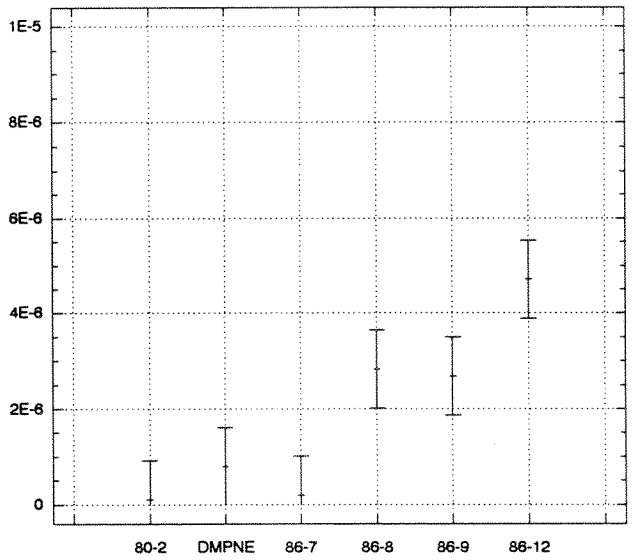

Figure E-25
Tritium activity (μCi/mL) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

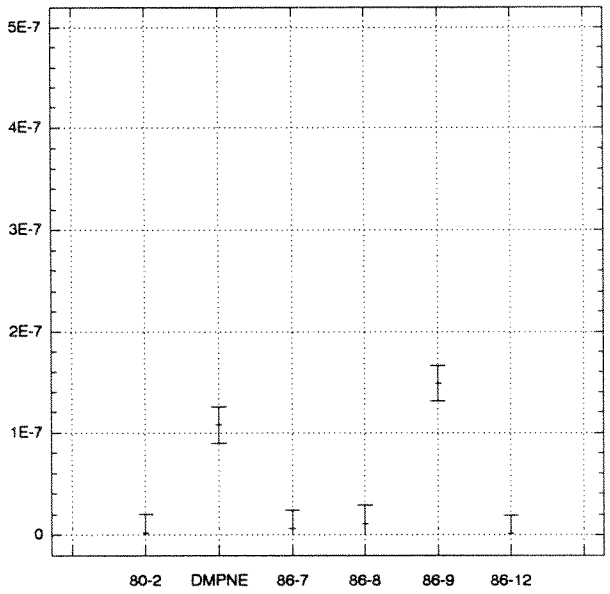

Figure E-26
Gross beta activity (μCi/mL) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

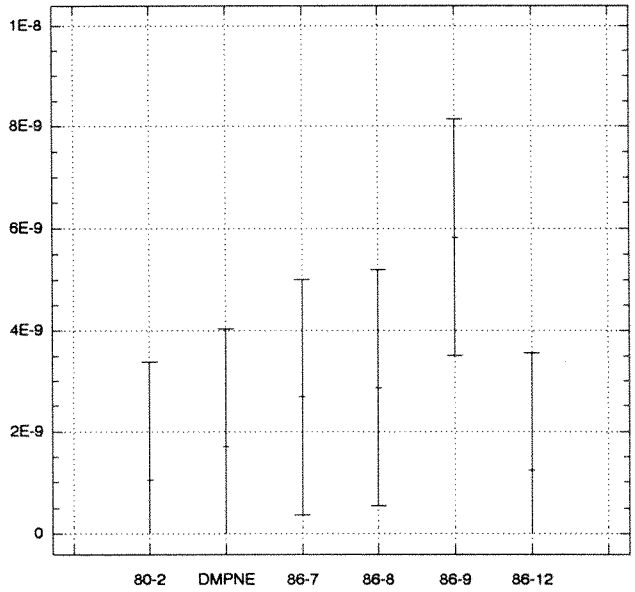

Figure E-27
Gross alpha activity (μCi/mL) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

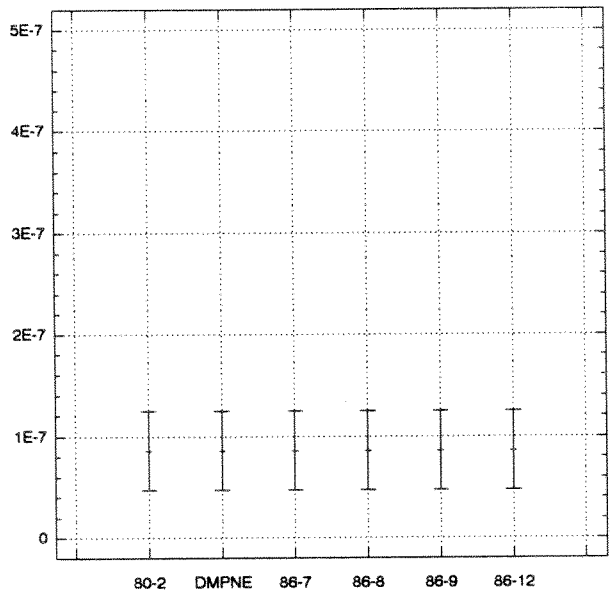

Figure E-28
Cesium activity (μCi/mL) in groundwater samples from the High-Level Radioactive Waste Tank Complex Monitoring Unit. Well 80-2 is upgradient.

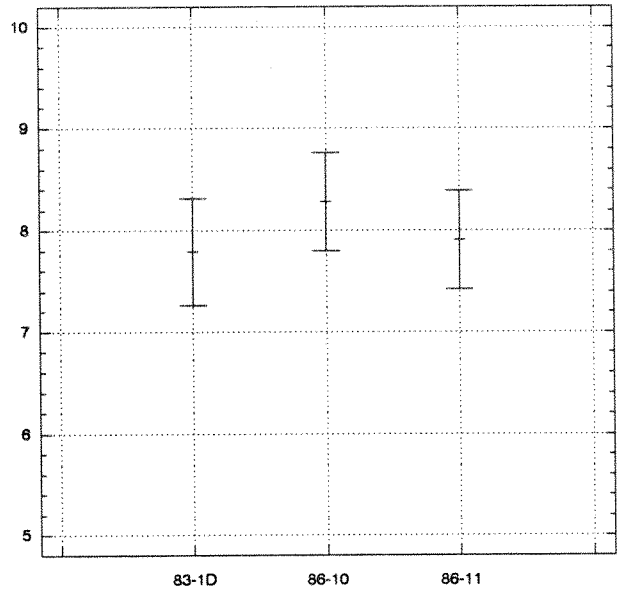

Figure E-29
pH in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

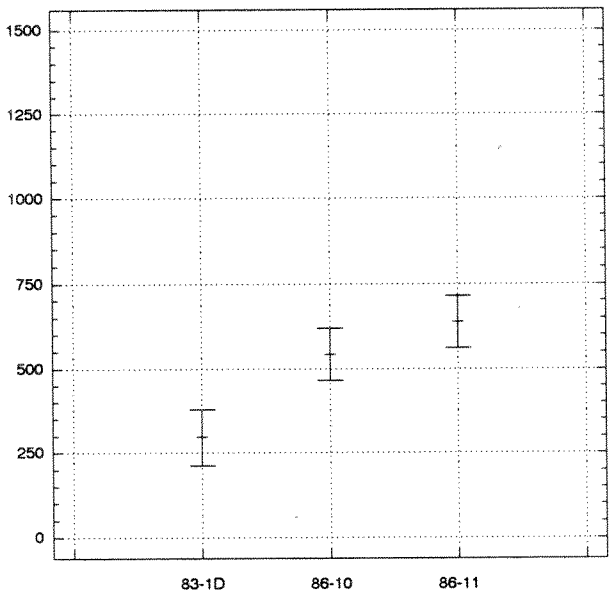

Figure E-30
Conductivity (μmhos/cm at 25 °C) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

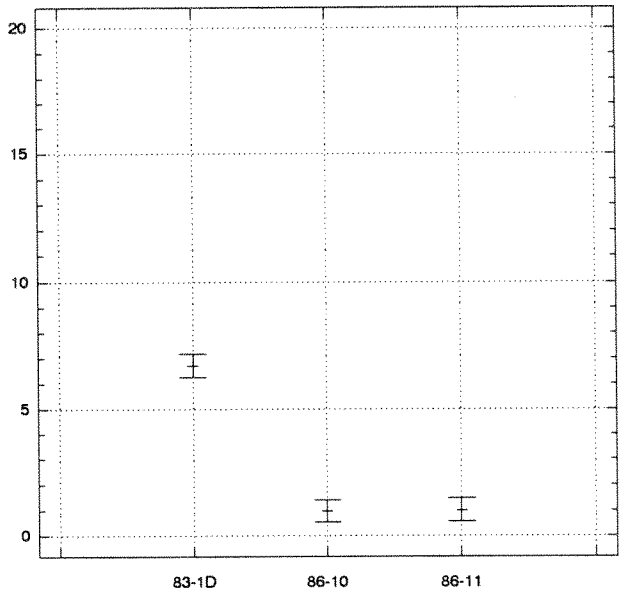

Figure E-31
Chloride (mg/L) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

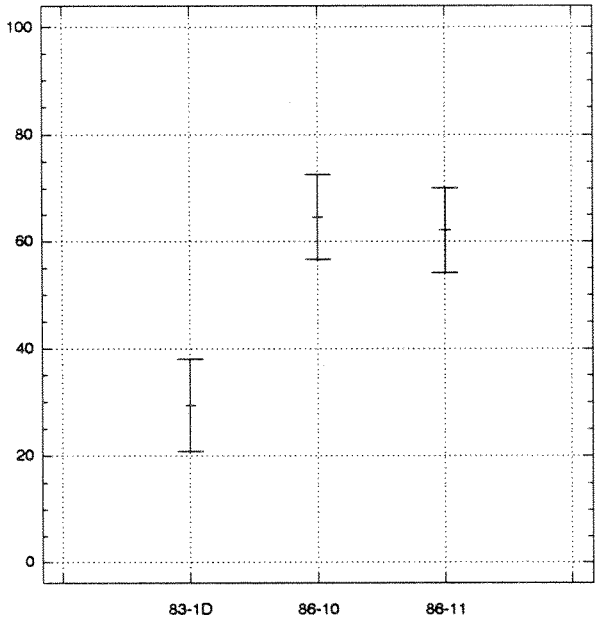

Figure E-32
Dissolved sodium (mg/L) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

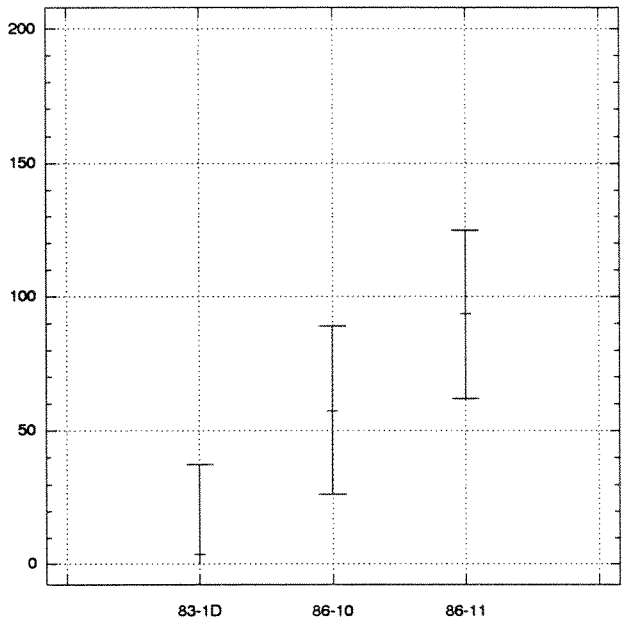

Figure E-33
Sulfate (mg/L) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

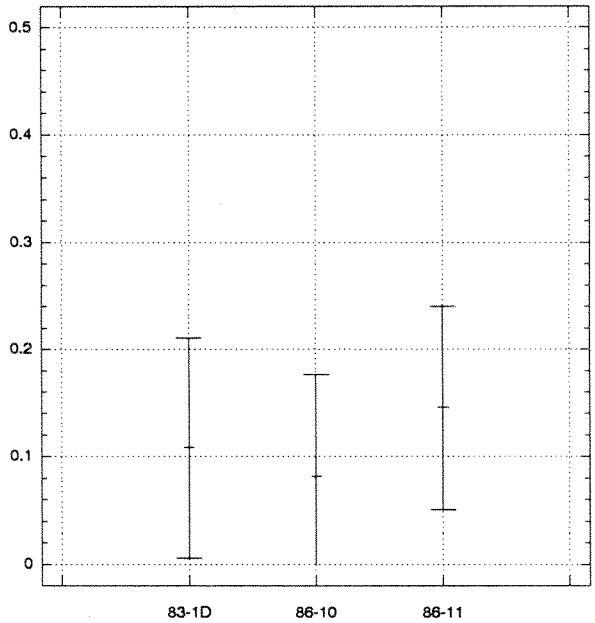

Figure E-34
Nitrate-N (mg/L) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

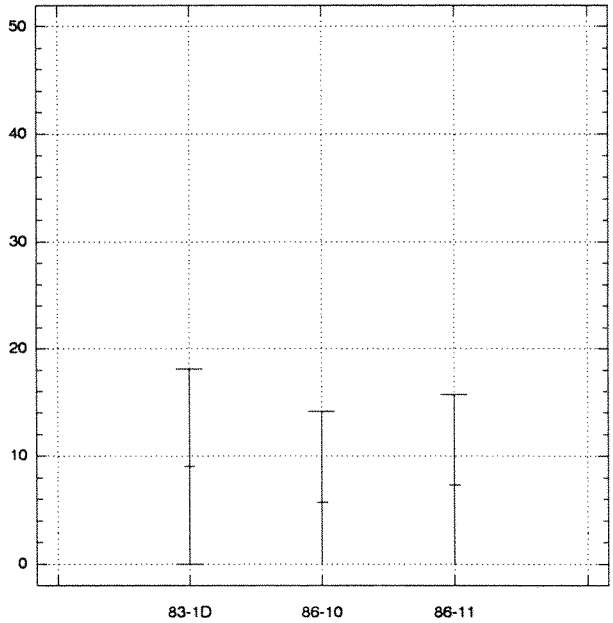

Figure E-35
Total organic carbon (mg/L) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

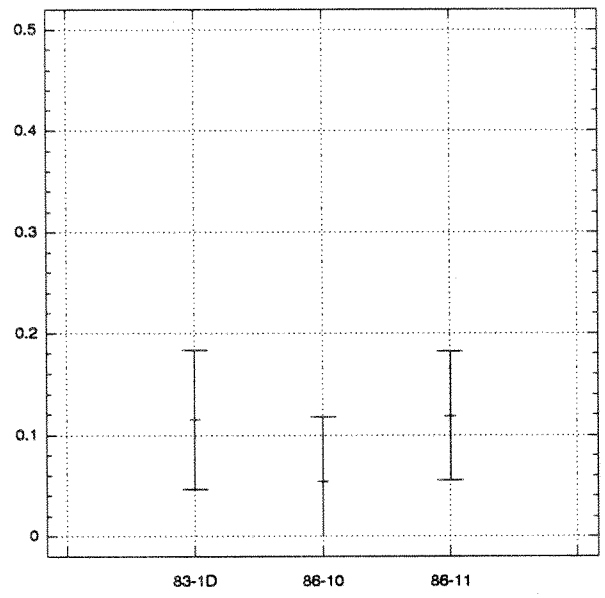

Figure E-36
Dissolved manganese (mg/L) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

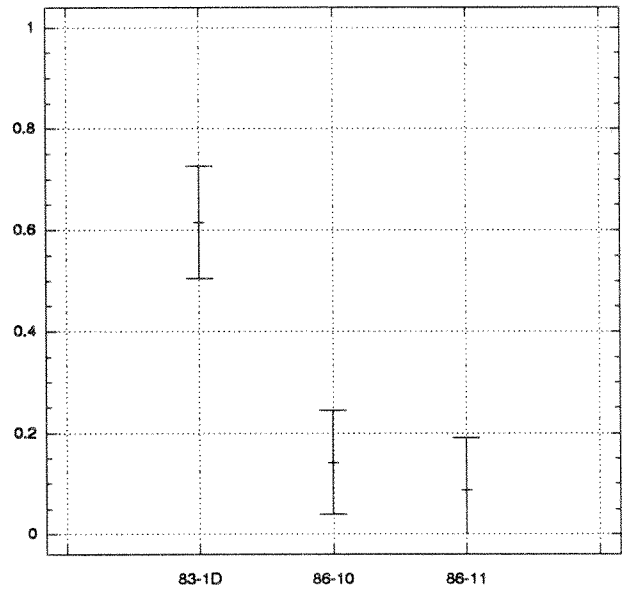

Figure E-37
Dissolved barium (mg/L) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

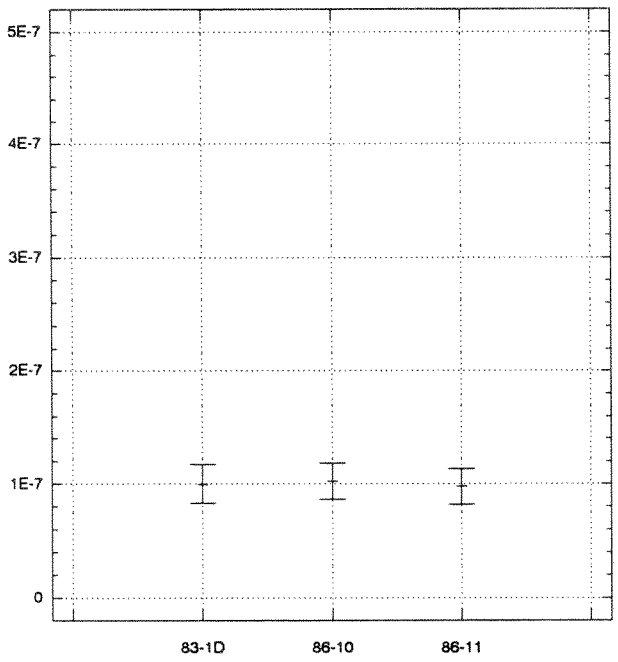

Figure E-38
Tritium activity (μCi/mL) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

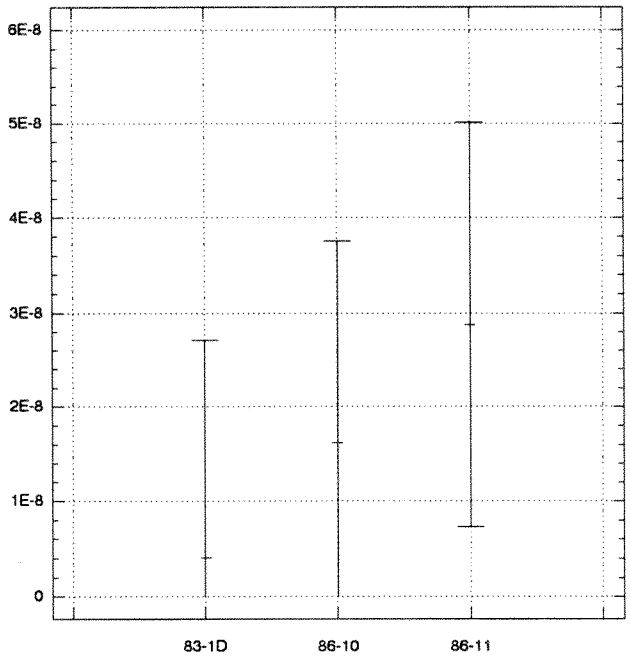

Figure E-39
Gross beta activity (μCi/mL) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

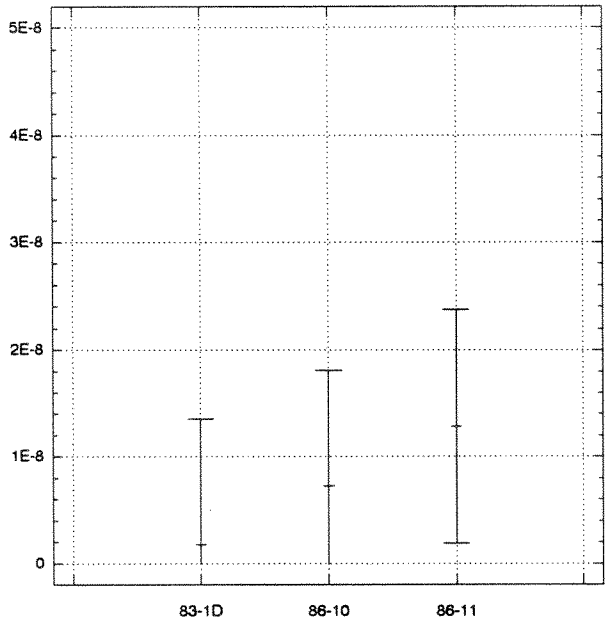

Figure E-40
Gross alpha activity (μCi/mL) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.

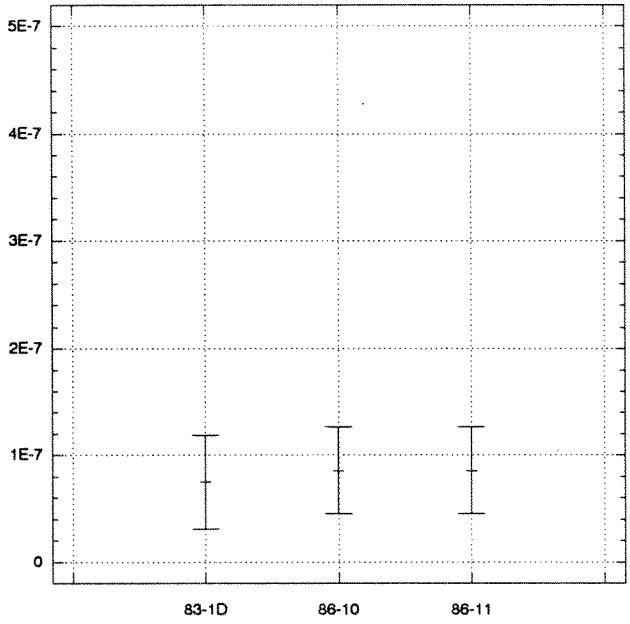

Figure E-41
Cesium activity (μCi/mL) in groundwater samples from the NRC-Licensed Disposal Area Monitoring Unit. Well 83-1D is upgradient.