DATA ON CHLOROFLUOROCARBONS (CCl_3F and CCl_2F_2) AS DATING TOOLS AND HYDROLOGIC TRACERS IN SHALLOW GROUND WATER OF THE DELMARVA PENINSULA

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ILLUSTRATIONS

CONVERSION FACTORS, VERTICAL DATUM, AND ABBREVIATED WATER-QUALITY UNITS

Multiply	By	To obtain
foot (ft)	0.3048	meter (m)
gallon (gal)	3.785	liter (l)
gallon per minute (gal/min)	0.06309	liter per second (l/s)
inch (in)	2.540	centimeter (cm)
mile (mi)	1.609	kilometer (km)
tritium unit (TU)	3.24×10^{-15}	curies per milliliter (Ci/ml)
tritium unit (TU)	3.24	picocuries per liter (pCi/L)

Temperature in degree Fahrenheit (°F) can be converted to degree Celsius (°C) as follows:

$$°C = (°F - 32)/1.8$$

Temperature in degree Celsius (°C) can be converted to degree Fahrenheit (°F) as follows:

$$°F = 1.8°C + 32$$

The following terms and abbreviations are also used in this report:

centimeter (cm)
milligram per liter (mg/l)
picogram per kilogram (pg/kg)
tritium unit (TU)
parts per trillion volume (pptv)
microsiemens per cm (μS/cm)
tritium atoms per 10^{18} hydrogen atoms (TU)
cubic centimeter per second (cm^3/s)

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)-- a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

DATA ON CHLOROFLUOROCARBONS (CCl_3F and CCl_2F_2) AS DATING TOOLS AND HYDROLOGIC TRACERS IN SHALLOW GROUND WATER OF THE DELMARVA PENINSULA

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ABSTRACT

Data on concentrations of two chlorofluorocarbons (CFC's; CCl_3F and CCl_2F_2), tritium, and oxygen-18 and deuterium stable-isotope composition; pH; water temperature; dissolved oxygen (DO); and specific conductance are reported for ground water from 109 shallow wells in sediments of the Delaware-Maryland-Virginia (Delmarva) Peninsula of the mid-Atlantic Coastal Plain. The shallow piezometers were sampled during May 1989 - December 1992, and are part of a network of monitoring wells established by the U.S. Geological Survey's National Water Quality Assessment Program. pH, DO concentration, specific conductance, and temperature were measured at the sampling site. Water samples collected for CFC analysis were flame-sealed into 62 milliliter borosilicate-glass ampules in the field and returned to the laboratory for analysis. The data on the chemical, isotopic, and chlorofluorocarbon composition of Delmarva ground water are tabulated in two appendixes. Recharge ages are assigned to each water sample and tabulated for each well sampled. The data are being used to evaluate the reliability and utility of CFC's as age-dating tools for shallow ground water.

INTRODUCTION

Chlorofluorocarbons are stable synthetic compounds that have been used in age-dating and tracing ground water (Randall and Schultz, 1976; Thompson and Hayes, 1979; Busenberg and Plummer, 1991, p. 542-547; Busenberg and Plummer, 1992; Busenberg and others, 1993; Plummer and others, 1993). The introduction of a sampling procedure for the collection and storage of water samples in borosilicate-glass ampules without contact with air (Busenberg and Plummer, 1991; Busenberg and Plummer, 1992) has facilitated age-dating of ground water using CFC's in a variety of environments. Busenberg and others (1993) evaluate the CFC age-dating method for ground water and unsaturated-zone air in the Snake River Plain Aquifer at the Idaho National Engineering Laboratory, Idaho. Plummer and others (1993) summarize the CFC age-dating method, evaluate the effects of hydrodynamic dispersion, and compare CFC age-dating to dating methods incorporating other environmental tracers. Dunkle and others (1993) apply CFC age-dating to shallow ground water of the Delmarva Peninsula, mid-Atlantic Coastal Plain.

This report presents data on concentrations of two chlorofluorocarbons (CFC's; CCl_2F, hereafter referred to as CFC-11, and CCl_2F_2, hereafter referred to as CFC-12) and other chemical, isotopic and hydrologic data for ground water collected from shallow coastal plain sands on the Delaware-Maryland-Virginia (Delmarva) Peninsula of the mid-Atlantic Coastal Plain. The data are discussed and interpreted in a companion report (Dunkle and others,

1993). The data were collected during May 1989 - December 1992, as part of a study being conducted by the U.S. Geological Survey to investigate applications of CFC's as tools for age-dating ground water.

DATA ON CHLOROFLUOROCARBON CONCENTRATIONS

The wells sampled were selected from a monitoring network established by the U.S. Geological Survey as part of its National Water Quality Assessment (NAWQA) Program. With few exceptions (see Dunkle and others, 1993), the wells are 5.08-cm (2-inch inside diameter (i.d.)) polyvinyl chloride (PVC) piezometers with 0.91-m (3-ft-long) screened intervals at the bottom. The location of wells on regional transects and the location of local-scale networks sampled in this study are shown in figure 1. Further details of well construction are given in Dunkle and others (1993).

Appendix A includes the assigned well number, name, local identifer, latitude, and longitude; the date of sampling; the formation sampled; a generalized classification of the hydrogeologic environment (as either recharge zone, discharge zone, confined aquifer, or location in an area of low hydraulic gradient) (see Dunkle and others, 1993, for criteria used to classify hydrogeologic environments); altitude of the land surface; depth to top and bottom of the screened interval; depth to water; time when well purging began; concentrations of tritium (^3H, in tritium units, TU's, and reported for the date of sampling); stable isotope compositions of O and H (in per mil relative to Vienna Standard Mean Ocean Water (VSMOW) and compositions normalized on scales such that the O and H isotopic compositions of Standard Light Antartic Precipitation (SLAP) are -55.5 ($\delta^{18}O$) and -428 (δD) per mil, respectively (Coplen, 1988)); purging times corresponding to field measurements of water temperature, pH, dissolved oxygen concentration (DO, in milligrams per liter); and specific conductance (in microsiemens per centimeter ($\mu S/cm$) at 25 degrees Celsius).

The duration of well purging was at least that required to remove three well volumes prior to sampling (typically 20 to 40 minutes). Water samples were collected by means of a helical-rotor submersible pump (Keck[1]) with a 1.3-cm (0.5-inch i.d.) Teflon discharge line at pumping rates of approximately 20 to 80 cm^3/s. Typically the wells were purged with the pump positioned 1 to 2 m above the screened interval. Stability in the field-recorded properties-- pH, temperature, DO, and specific conductance-- was also used to determine purging times prior to the start of CFC sampling. After purging was completed, the pump was lowered into the screened interval for sampling.

A total of 109 wells were sampled for CFC's (Appendix B). Multiple samples were collected for CFC analysis (typically six samples) during each well sampling. Many of the wells were sampled in the fall of 1991 and in the spring of 1992. Some wells were sampled on four separate occasions. Each water sample was flame-sealed into a borosilicate-glass ampule

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[1] The use of brand names in this report is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

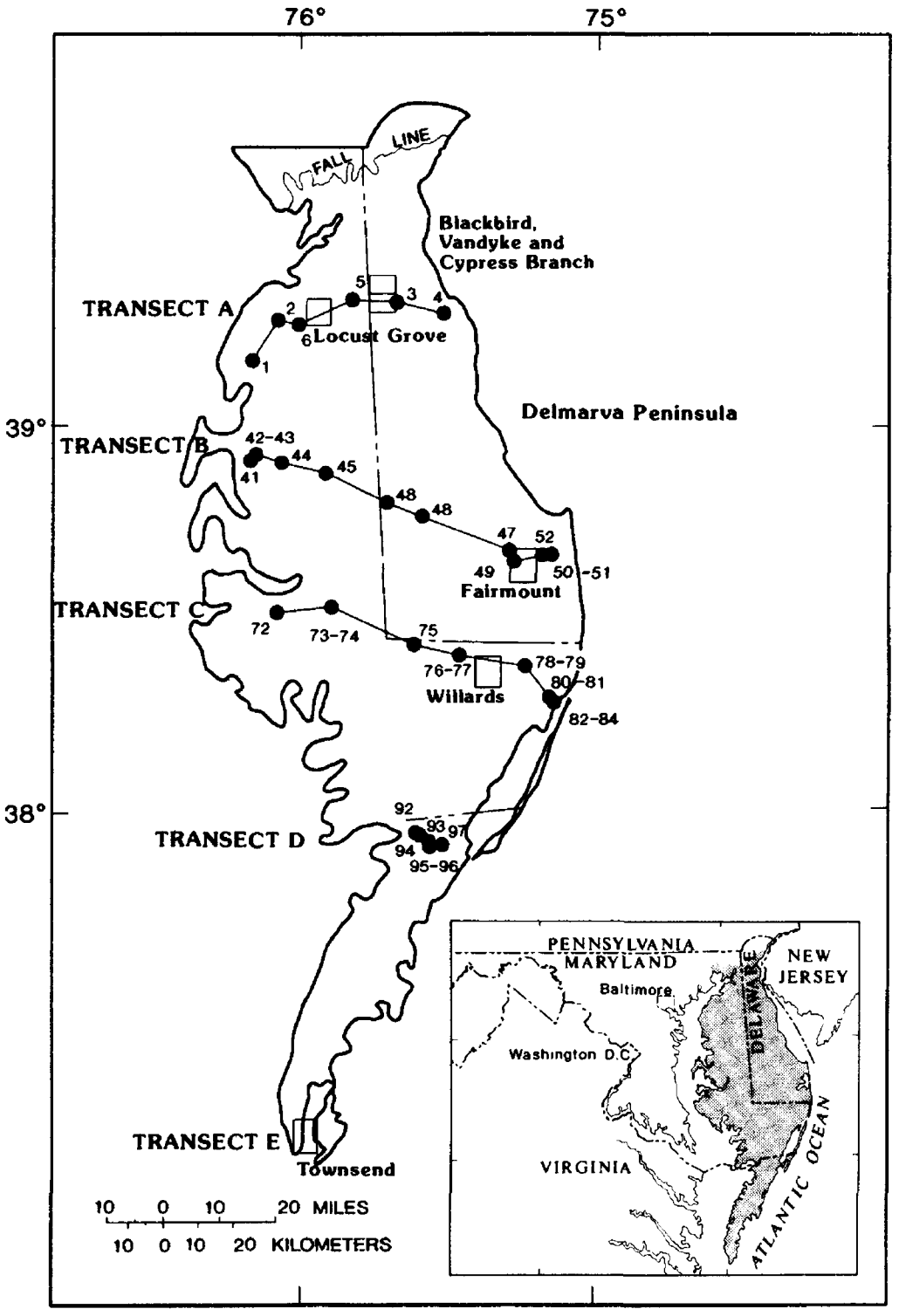

Figure 1. Map showing the location of the study area, the local-scale networks, and the wells on the transects. Well numbers are from Appendix A and B.

and returned to the U.S. Geological Survey Chlorofluorocarbon Laboratory in Reston, Virginia, for analysis. CFC data for selected surface waters on Delmarva are included in Appendix B (samples 110-116).

Appendix B lists measured concentrations of CFC-11 and CFC-12 in each sealed ampule, in picograms per kilogram of solution (pg/kg), for each sampling time at each well. Busenberg and Plummer (1992) describe the sampling and analytical procedures. Appendix B also includes the calculated atmospheric CFC concentration that would exist in equilibrium with the analyzed concentration in the ground water at the recharge temperature. The recharge temperatures used to calculate the equilibrium partial pressures of CFC's were 9°C for wells 1-97 and 14°C for wells 98-109 (Dunkle and others, 1993). The water temperatures used for surface water samples 110 to 116 are given in Dunkle and others (1993) where additional information on the method of calculation of recharge age also is given. Appendix B also gives the modeled CFC-based recharge dates resolved to the nearest 0.5 years for CFC-11 and CFC-12 for each water sample (ampule) and a summary for CFC-11 and CFC-12 analyses of all samples for the sampling date; the appendix lists the average Julian recharge date, the average water age, and the standard deviation of water age, in years, as reported in Dunkle and others (1993).

The CFC-based ages are referenced to the National Oceanographic and Atmospheric Administration (NOAA) atmospheric air scale for air sampled at Niwot Ridge, Colorado (Elkins and others 1993). The atmospheric concentrations of CFC's used to calculate water ages are given in Busenberg and others (1993) and Dunkle and others (1993). The reader is referred to Hamilton, Shedlock and Phillips (1989), Hamilton and Shedlock (1992), and Shedlock and others (1993) for information on the Delmarva Peninsula study area, and to Dunkle and others (1993) for discussion of the results of the CFC dating of Delmarva ground water.

Dashed lines in Appendix B indicate that the concentrations of CFC-11 or CFC-12 were below the detection limit of 1 pg/kg, or that the CFC-11 or CFC-12 peak on the chromatogram could not be separated from another peak such as that of N_2O. The assigned age is determined for the remaining samples according to procedures given in Busenberg and Plummer (1992) and Dunkle and others (1993). The wells sampled in 1989 show extreme variations because of the infancy of the dating technique at the time they were collected. Samples were also contaminated with CFC-11 that was introduced from the Tygon tubing used in the sampling equipment at the time. For these wells, the analyses were not averaged, but the oldest age obtained for any sample was chosen as the assigned age; this oldest age represents a minimum age. Some ages appear to be more uncertain compared to other ages of water samples from a particular well; however, there is no obvious basis to discard these uncertain ages, which, although retained in the data base, were not included in obtaining the averaged assigned ages (Appendix B). Dunkle and others (1993) discuss the criteria used in assigning recharge ages for the Delmarva waters.

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Appendix A.--*Summary of well construction and water quality data*

[Type: I, individual well; C, well cluster; Formation: Al, Alluvium; Aq, Aquia; BS, Beaverton Sand; Ch, Chesapeake; JN, Jones Neck; KI, Kent Island; Ma, Manokin; Na, Nassawadox; Om, Omar; Pa, Parsonburg; Pe, Pennsauken; Si, Sinepuxent; Wa, Wachapreague; Yo, Yorktown; hydrogeologic setting: C, confined; D, discharge zone; LG, low hydraulic gradient; R, recharge zone; elevations and depths in meters above sea level datum; TU, tritium concentration in tritium units; Delta O-18, oxygen-18 in per mil;Delta D, deuterium in per mil; DO, dissolved oxygen in milligrams per liter; C, temperature in degrees Celsius; specific conductance in microsiemens per centimeter at 25 degrees Celsius]

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific conductance
TRANSECT A																					
1	Ke Cc 28	KE401	I	391028	760853	10/29/90	Aq R	9.14	14.8	15.7	--	1635	2.74	0.19	-7.30	-42.0	1703	13.5	5.9	4.8	--
																	1708	13.5	6.2	4.5	--
																	1713	13.5	6.2	4.5	115
																	1718	13.5	6.2	4.5	--
																	1723	13.5	6.2	4.5	--
																	1728	13.5	6.2	4.3	--
																	1733	13.5	6.2	4.4	112
2	KE Bd 39	KE404	I	391645	760350	10/29/90	Aq R	22.86	10.8	11.7	4.66	1502	40.20	1.50	-8.05	-49.5	1517	12.7	4.6	2.6	--
																	1522	12.4	4.6	1.8	--
																	1527	12.5	4.6	1.6	--
																	1532	12.4	4.6	1.3	--
																	1542	12.7	4.6	1.1	66
																	1547	12.6	4.6	1.0	--
																	1552	12.6	4.7	1.0	--
																	1557	12.4	4.7	1.0	68
3	Hd15-07	NC204	I	391938	754014	10/30/90	Pe R	20.73	5.5	6.4	--	835	19.40	0.70	-7.35	-42.5	855	14.9	5.2	3.6	--
																	900	14.8	5.2	3.6	--
																	907	15.0	5.2	3.6	--
																	912	15.0	5.2	3.6	--
																	917	15.0	5.3	3.7	--
																	922	15.0	--	3.9	102
																	927	15.2	5.3	3.8	--
																	932	14.5	5.3	3.9	--
																	937	14.1	5.3	3.9	--
																	940	14.1	5.2	4.0	--
																	942	14.2	5.3	4.0	--
																	945	14.2	5.3	4.0	104
4	Hd14-01	NC105	I	391804	753051	10/30/90	Pe R	4.57	7.7	8.6	1.01	1040	24.50	0.90	-6.70	-38.5	1050	14.2	4.4	0.9	--
																	1055	14.2	4.3	0.8	--
																	1100	14.5	4.3	0.7	--
																	1108	14.8	4.3	0.7	--
																	1117	15.3	4.3	0.7	239
																	1123	14.6	4.3	0.7	243
																	1128	14.3	4.3	0.7	--

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific conductance
																	1133	14.2	4.3	0.7	--
																	1138	14.4	4.3	0.7	242
5	KE Bg 35	KE101	I	391957	754906	10/29/90	Pe R	18.90	13.6	14.6	--	--	15.20	1.10	-7.35	-42.0	1205	12.4	5.1	9.8	--
																	1209	12.4	5.1	9.8	--
																	1212	12.3	5.1	9.8	--
																	1216	12.4	5.1	9.8	--
																	1220	12.3	5.0	9.8	--
																	1225	12.3	5.0	9.8	--
																	1233	12.3	5.0	9.8	--
																	1240	12.3	5.0	9.8	--
																	1250	12.4	5.0	9.7	--
5	KE Bg 35	KE101	I	391957	754906	04/02/91	Pe R	18.90	13.6	14.6	5.65	1312	14.90	0.6	---	---	1330	13.3	5.3	9.5	240
																	1335	13.1	5.3	9.6	240
																	1340	13.0	5.3	9.7	230
																	1345	13.1	5.3	9.5	230
																	1350	13.0	5.3	9.7	230
																	1405	12.8	5.3	9.5	220
																	1410	12.9	5.3	9.6	220
																	1415	13.0	5.2	9.5	220
6	KE Be 65	KE405	I	391608	755943	10/29/90	Aq R	14.94	5.8	6.7	2.74	900	14.70	0.60	-6.50	-37.5	937	15.2	5.5	1.7	127
																	942	15.3	5.5	1.7	136
																	947	15.3	5.5	1.7	132
																	952	15.3	5.5	1.5	122
																	1011	15.6	5.5	1.3	83
																	1017	15.7	5.5	1.3	68
																	1022	15.7	5.5	1.3	48
																	1035	15.7	5.5	1.2	29
																	1038	15.8	5.5	1.2	41
LOCUST GROVE NETWORK																					
7	KE Be 53	LG 205S	C1	391810	755558	04/02/91	Pe R	22.74	6.1	6.7	5.15	1247	16.00	0.70	-6.85	-42.5	1251	13.3	5.3	9.0	97
																	1256	13.5	5.2	9.0	94
																	1300	13.3	5.2	9.0	93
																	1303	12.9	5.2	9.0	93
																	1305	12.8	5.2	9.2	92
																	1309	12.7	5.2	9.0	92
																	1318	13.1	5.2	8.4	92
																	1326	12.8	5.2	8.4	92
8	KE Be 52	LG 205D	C2	391810	755558	11/05/90	Pe R	22.77	10.1	11.0	5.46	1600	15.30	0.60	-7.55	-44.5	0	14.7	4.7	9.8	193
																	10	14.7	4.7	8.8	188

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	40	14.6	4.9	8.8	188
																	45	14.5	4.9	8.7	187
																	90	14.3	4.9	9.2	143
8	KE Be 52	LG 205D	C2	391810	755558	11/05/91	Pe R	22.77	10.1	11.0	--	1230	16.60	0.80	---	---	1245	14.5	4.9	--	212
																	1250	14.3	4.8	--	211
																	1255	14.5	4.9	--	210
																	1300	14.5	4.9	--	210
																	1305	14.7	4.8	--	209
																	1310	14.8	4.9	--	209
																	1315	14.6	4.9	--	208
																	1320	14.7	4.9	--	208
																	1325	14.8	4.9	--	207
																	1331	14.6	4.9	--	207
																	1350	14.8	4.9	--	206
																	1400	15.0	4.9	--	206
																	1410	14.8	4.9	--	206
																	1430	14.8	4.9	--	205
																	1440	14.8	4.9	--	205
																	1505	14.7	4.9	--	204
																	1530	14.5	4.8	--	205
																	1541	14.4	4.8	--	205
9	KE Be 61	LG 305	C3	391810	755558	11/05/90	Aq R	22.73	14.5	15.4	5.39	1130	50.00	1.60	-7.70	-47.0					
																	25	14.0	4.7	10.5	105
																	30	13.9	4.8	10.4	103
																	35	14.0	4.9	10.6	102
																	60	14.0	4.9	10.5	105
																	90	14.1	--	10.4	105
																	120	14.3	4.8	9.9	105
9	KE Be 61	LG 305	C3	391810	755558	04/02/91	Aq R	22.73	14.5	15.4	5.22	1331	60.30	2.50	---	---	1332	13.4	4.9	9.4	114
																	1338	13.3	4.9	11.0	106
																	1342	13.5	4.9	11.0	106
																	1345	13.5	4.9	11.2	106
																	1348	13.8	4.9	11.1	106
																	1351	13.9	4.9	11.2	106
																	1400	13.7	4.9	11.2	105
																	1411	13.7	4.9	11.0	106
																	1415	13.7	4.9	11.1	106
																	1420	13.7	4.9	11.2	105
9	KE Be 61	LG 305	C3	391810	755558	11/04/91	Aq R	22.73	14.5	15.4	--	1410	63.40	2.90	---	---	1445	13.4	4.9	--	137

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1450	13.3	5.0	--	137
																	1456	13.3	5.0	--	136
																	1502	13.1	5.0	--	136
																	1511	13.1	5.0	--	136
																	1521	12.9	5.0	--	135
																	1525	12.7	5.0	--	135
																	1533	13.1	5.0	--	135
																	1546	13.3	5.0	--	136
																	1643	13.1	5.1	--	135
																	1655	13.2	5.0	--	135
																	1702	13.2	5.0	--	134
																	1726	13.0	5.0	--	138
9	KE Be 61	LG 305	C3	391810	755558	11/05/91	Aq R	22.73	14.5	15.4	--	1022	---	---	---	---	1037	13.5	5.0	--	139
																	1104	13.5	4.9	--	138
																	1106	13.4	4.9	--	138
																	1116	13.5	4.9	--	139
																	1127	13.5	4.9	--	139
																	1148	13.8	4.9	--	138
9	KE Be 61	LG 305	C3	391810	755558	11/06/91	Aq R	22.73	14.5	15.4	--	1525	58.20	2.20	---	---	1540	13.2	--	--	140
																	1550	12.9	--	--	140
																	1600	12.9	--	--	140
																	1610	12.6	--	--	139
																	1637	13.3	4.9	--	139
																	1701	13.2	4.8	--	140
																	1715	13.3	4.9	--	139
																	1725	13.2	4.8	--	139
10	KE Be 62	LG 314	C1	391742	755548	11/06/90	Aq R	18.50	6.9	7.8	2.59	920	13.70	0.50	-7.20	-42.0	0	14.0	5.3	8.8	266
																	5	14.2	5.6	8.8	253
																	10	14.2	5.6	8.8	253
																	15	14.2	5.6	8.8	252
																	45	13.8	5.7	9.0	251
10	KE Be 62	LG 314	C1	391742	755548	11/06/91	Aq R	18.50	6.9	7.8	--	832	13.70	0.60	---	---	855	14.0	5.7	--	268
																	900	14.1	5.6	--	268
																	908	14.2	5.5	--	268
																	920	14.0	5.5	--	268
																	925	14.2	5.6	--	268
																	935	13.9	5.5	--	268
																	1000	13.8	5.5	--	267

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1024	13.7	5.5	--	267
																	1045	13.8	5.6	--	268
																	1117	13.7	5.6	--	267
11	KE Be 163	LG 514	C2	391742	755548	11/06/90	Aq R	18.54	12.2	13.1	2.59	1355	16.50	0.60	-7.45	-44.5	0	12.9	5.3	9.5	154
																	5	13.1	5.3	9.6	164
																	11	13.1	5.3	9.7	164
																	15	13.1	5.3	9.7	164
																	40	13.0	5.2	9.7	163
																	60	13.1	5.2	9.7	163
11	KE Be 163	LG 514	C2	391742	755548	11/06/91	Aq R	18.54	12.2	13.1	--	1136	16.70	0.80	---	---	1150	12.8	4.9	--	168
																	1155	12.9	4.9	--	168
																	1200	13.0	4.9	--	167
																	1205	12.9	4.9	--	167
																	1210	12.9	4.9	--	167
																	1215	12.9	4.9	--	167
																	1220	12.9	4.9	--	167
																	1225	12.9	4.9	--	167
																	1240	12.9	4.9	--	167
																	1250	12.9	4.9	--	166
																	1310	12.9	4.9	--	166
																	1340	12.9	5.0	--	166
																	1357	13.0	4.9	--	166
																	1407	12.9	4.9	--	166
12	KE Be 162	LG 414	C3	391742	755548	11/06/90	Aq R	18.60	19.5	20.4	2.65	1140	0.90	0.16	-7.30	-44.0	0	13.2	5.7	8.9	61
																	5	13.1	5.7	9.1	57
																	10	13.1	5.6	9.4	55
																	15	13.1	5.6	9.4	54
																	20	13.1	5.6	9.5	53
																	90	13.0	5.6	8.5	53
12	KE Be 162	LG 414	C3	391742	755548	11/06/91	Aq R	18.60	19.5	20.4	--	1415	2.20	0.15	---	---	1420	12.8	5.5	--	57
																	1430	13.0	5.6	--	55
																	1435	13.0	5.6	--	54
																	1440	13.1	5.6	--	55
																	1455	12.9	5.5	--	54
																	1505	13.0	5.5	--	54
13	KE Be 64	LG 313S	C1	391721	755545	11/06/90	Aq R	13.75	4.0	4.9	1.25	1640	16.50	0.60	-7.35	-43.5	0	15.3	5.0	8.4	--
																	5	15.6	5.0	--	--
																	10	15.7	5.0	8.4	--

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well No.	Well Name	Local Identifier	Type	Latitude	Longitude	Sampling Date (mo/day/yr)	Formation or Group; Hydrogeologic Setting	Altitude of Land Surface	Top of Screen	Bottom of Screen	Depth to Water	Pump Start Time	Tritium Concentration	Tritium One Std. Dev.	Delta 0-18	Delta D	Time of Measurement	Temperature C	pH	DO	Specific Conductance
																	15	15.7	5.0	8.4	--
14	KE Be 63	LG 313D	C2	391721	755545	11/06/90	Aq R	13.74	11.1	12.0	1.22	1535	38.50	1.40	-7.80	-47.0	0	13.7	5.5	7.7	228
																	5	13.3	5.4	9.4	87
																	10	13.3	5.3	9.5	81
																	15	13.3	5.3	9.5	78
																	20	13.3	5.3	9.5	77
																	58	13.5	--	9.8	74
15	KE Be 161	LG 667	C1	391720	755546	11/07/90	Aq R	13.77	4.9	5.8	1.43	1607	19.20	1.00	-7.35	-42.5	0	14.8	5.4	9.2	143
																	5	14.8	5.0	9.5	138
																	10	14.8	5.0	9.4	138
																	15	14.8	5.0	9.4	138
																	65	15.0	5.0	9.3	136
15	KE Be 161	LG 667	C1	391720	755546	04/02/91	Aq R	13.77	4.9	5.8	1.34	1140	---	---	---	---	1145	14.2	5.4	9.3	129
																	1150	14.0	5.4	9.3	126
																	1155	14.4	5.3	9.4	123
																	1200	14.5	5.3	9.4	120
																	1205	14.4	5.3	9.5	118
																	1210	13.8	5.3	9.5	117
15	KE Be 161	LG 667	C1	391720	755546	11/07/91	Aq R	13.77	4.9	5.8	--	1122	16.80	0.60	---	---	1133	14.9	5.1	--	155
																	1136	14.9	5.1	--	154
																	1143	15.0	5.1	--	154
																	1148	15.0	5.0	--	153
																	1200	14.8	5.0	--	152
																	1210	15.0	5.0	--	152
																	1228	14.9	5.0	--	150
																	1241	15.0	5.0	--	150
																	1302	14.9	4.9	--	149
																	1308	14.9	4.9	--	149
																	1315	15.0	4.9	--	148
																	1330	15.0	4.9	--	148
16	KE Be 160	LG 567	C2	391720	755546	11/19/90	Aq D	13.79	10.7	11.6	1.40	1605	20.00	1.10	-7.50	-44.5	1623	12.8	5.5	9.8	56
																	1629	13.1	5.5	9.9	56
																	1634	13.1	5.5	9.9	56
																	1640	13.1	5.3	9.9	55
																	1649	13.3	5.1	9.9	55
																	1655	13.3	5.0	9.9	55
16	KE Be 160	LG 567	C2	391720	755546	04/02/91	Aq D	13.79	10.7	11.6	1.28	1047	---	---	---	---	1105	14.1	6.2	9.4	52
																	1110	14.1	5.6	9.6	54

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1115	14.1	5.6	9.8	53
																	1120	14.1	5.5	9.5	52
																	1125	14.0	5.5	9.5	52
																	1130	14.0	5.5	9.4	52
																	1135	14.2	5.5	9.4	51
16	KE Be 160	LG 567	C2	391720	755546	11/07/91	Aq D	13.79	10.7	11.6	--	940	40.80	1.60	---	---	955	13.1	5.2	--	59
																	1007	13.3	5.1	--	59
																	1012	13.3	5.1	--	59
																	1020	13.3	5.1	--	59
																	1030	13.5	5.2	--	59
																	1055	13.3	5.2	--	59
																	1102	13.3	5.3	--	59
																	1108	13.3	5.3	--	59
																	1118	13.3	5.3	--	59
17	KE Be 159	LG 467	C3	391720	755546	11/07/90	Aq D	13.80	20.0	20.9	--	806	0.04	0.22	-7.85	-47.0	814	13.0	6.9	2.9	--
													-0.03	0.21	-7.90	-47.0	819	12.9	7.1	2.9	--
																	825	12.9	7.1	2.9	--
																	827	---	---	--	185
																	830	13.1	--	3.1	185
																	834	13.1	7.1	3.1	--
																	839	13.0	7.1	3.2	--
																	852	13.0	--	3.5	185
																	855	13.0	7.1	3.5	185
																	858	13.0	7.1	3.5	--
																	900	13.0	7.1	3.5	--
																	904	13.1	--	3.5	185
																	907	13.1	--	3.6	184
																	910	13.2	--	3.6	184
17	KE Be 159	LG 467	C3	391720	755546	11/07/90	Aq D	13.80	20.0	20.9	--	1430	-0.09	0.14	-7.85	-47.0	0	13.3	7.0	3.5	199
																	5	13.2	7.1	3.6	198
																	10	13.2	7.1	3.6	198
																	15	13.2	7.1	3.6	197
																	73	13.5	--	4.1	194
17	KE Be 159	LG 467	C3	391720	755546	04/02/91	Aq D	13.80	20.0	20.9	1.28	940	---	---	---	---	1005	13.4	7.3	2.2	210
																	1010	13.4	7.5	2.3	210
																	1015	13.5	7.5	2.3	210
																	1020	13.5	7.5	2.3	200
																	1025	13.5	7.5	2.4	200

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1030	13.5	7.5	2.4	200
																	1035	13.5	7.5	2.4	200
																	1040	13.5	7.5	2.5	200
17	KE Be 159	LG 467	C3	391720	755546	11/07/91	Aq D	13.80	20.0	20.9	--	1334	---	---	---	---	1340	13.3	6.5	--	226
																	1345	13.3	6.9	--	224
																	1358	13.2	7.2	--	221
																	1406	13.3	7.3	--	219
																	1416	13.3	7.3	--	218
																	1422	13.3	7.3	--	217
																	1428	13.3	7.4	--	216
																	1442	13.3	7.4	--	215
																	1447	13.2	7.4	--	214
																	1455	13.2	7.4	--	214
																	1510	13.1	7.4	--	213
																	1515	13.1	7.4	--	213
18	KE Be 167	LG 635	C1	391838	755609	11/07/90	Aq R	20.09	4.6	5.5	2.01	1205	13.90	0.80	-6.95	-40.0	0	15.3	5.1	9.2	202
																	5	16.0	5.1	10.8	187
																	10	16.0	5.1	10.1	187
																	15	16.0	5.1	10.1	188
																	46	15.9	--	10.0	187
19	KE Be 166	LG 535	C2	391838	755609	11/07/90	Aq R	20.06	7.6	8.5	1.98	1110	16.70	1.50	-7.70	-45.0	0	14.4	5.3	8.4	224
																	5	14.1	5.0	10.0	224
																	10	14.0	5.0	10.4	227
																	15	13.9	5.0	10.4	228
																	20	14.0	5.0	10.4	229
																	50	13.9	5.0	10.4	232
20	KE Be 165	LG 435	C3	391838	755609	11/07/90	Aq R	20.01	13.7	14.6	1.95	935	44.20	2.20	-8.15	-50.5	0	13.1	7.6	8.6	238
																	5	12.9	5.5	9.0	235
																	10	12.9	5.3	10.1	232
																	15	12.9	5.2	10.4	232
																	20	12.9	5.1	10.6	232
																	25	13.0	5.0	10.6	231
																	30	13.0	5.0	10.7	231
																	80	13.2	--	10.8	230
20	KE Be 165	LG 435	C3	391838	755609	04/02/91	Aq R	20.01	13.7	14.6	1.34	1450	42.10	1.60	---	---	1450	12.9	5.7	9.0	200
																	1455	12.8	5.5	10.2	238
																	1500	12.9	5.4	10.4	242
																	1513	13.0	5.3	10.6	247

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1517	13.1	5.3	10.6	246
																	1521	13.1	5.3	10.6	248
																	1526	13.1	5.3	10.6	247
																	1533	12.8	5.3	10.6	245
																	1542	12.9	5.3	10.4	245
																	1546	12.8	5.3	10.8	248
21	KE Be 59	LG 325	C1	391832	755608	11/19/90	Aq R	21.75	7.2	8.1	3.81	1132	14.80	0.70	-7.05	-43.0	1140	10.4	--	4.6	211
																	1145	10.4	--	5.6	241
																	1150	10.4	--	6.5	257
																	1155	10.4	--	7.0	268
																	1200	10.4	--	7.6	276
																	1205	14.9	5.2	7.6	281
																	1221	14.3	5.3	8.5	288
																	1232	14.4	5.5	8.2	290
																	1238	14.2	5.2	8.8	291
22	KE Be 164	LG 425	C2	391832	755608	11/19/90	Aq R	21.76	13.7	14.6	3.72	1000	31.50	1.20	-7.55	-45.5	1025	13.3	5.9	9.1	148
																	1030	13.3	5.9	9.0	147
																	1035	13.3	5.9	9.2	146
																	1040	13.4	5.9	9.2	146
23	KE Be 169	LG 371	I	391719	755547	04/02/91	Pe D	11.80	0.8	1.7	0.52	1137	12.20	0.50	-7.40	-43.0	1138	12.6	5.5	9.4	78
																	1139	12.6	5.3	9.4	69
																	1140	13.0	5.2	9.2	69
																	1141	12.8	5.2	9.2	70
																	1142	12.6	5.2	9.2	70
																	1143	12.6	5.2	9.2	70
																	1145	12.4	5.2	9.4	70
																	1150	12.6	5.1	9.2	70
																	1200	12.6	5.1	9.1	70
																	1207	11.8	5.1	9.4	70
																	1212	12.2	5.1	9.2	70
24	KE Be 170	LG 381	I	391720	755547	04/02/91	Pe R	12.28	1.2	2.1	0.70	1002	20.00	0.80	-6.95	-40.0	1043	13.3	6.1	5.4	260
																	1046	13.3	6.1	5.2	260
																	1049	12.9	6.1	5.2	262
																	1103	12.1	6.0	4.4	278
																	1108	12.4	6.0	4.6	268
																	1118	12.7	6.0	5.4	259
																	1125	11.7	6.0	6.3	252
																	1129	12.1	6.0	6.6	250

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
25	KE Be 50	LG 203	I	391851	755618	11/19/90	Pe R	21.39	6.1	6.7	3.63	1403	15.70	0.80	-7.35	-42.0	1415	15.3	5.1	8.8	383
																	1420	15.1	5.1	9.0	382
																	1425	15.0	5.1	9.0	382
																	1430	14.9	4.8	9.2	384
																	1439	15.1	4.8	9.2	384
																	1454	14.8	4.8	9.0	381
																	1506	15.1	4.8	9.4	472
																	1511	15.2	4.8	8.8	474
																	1517	15.3	4.8	8.7	474
																	1528	15.0	4.8	9.2	473
26	KE Be 49	LG 202	I	391923	755643	11/20/90	Pe R	22.45	6.7	7.6	4.12	730	15.60	0.80	-7.20	-41.0	810	14.6	5.6	9.1	275
																	815	14.4	5.6	9.3	249
																	820	14.4	5.6	9.2	248
																	826	14.2	5.6	9.1	248
																	832	14.0	5.6	9.6	249
																	839	14.2	5.6	9.4	248
																	844	14.4	5.6	9.3	248
																	848	14.4	5.6	9.3	246
27	KE Be 51	LG 204	I	391851	755544	11/20/90	Pe R	21.34	7.3	8.2	4.02	1550	18.50	1.00	-7.25	-42.5	1605	14.0	5.0	11.3	178
																	1610	14.0	5.1	11.2	172
																	1615	13.9	5.1	10.9	167
																	1620	13.9	4.9	10.8	164
																	1625	13.9	4.9	10.7	165
																	1630	13.7 *		10.7	166
																	1635	13.8	4.9	10.6	166
																	1640	13.9	4.9	10.7	167
28	KE Be 60	LG 319	I	391811	755649	11/21/90	Aq R	23.81	7.5	8.1	6.19	810	16.60	0.90	-7.05	-41.0	850	13.7	5.3	8.6	153
																	855	13.6	5.3	8.7	147
																	900	13.6	5.3	8.7	147
																	905	13.8	--	8.7	145
																	914	13.7	5.2	9.3	145
																	919	13.6	5.2	8.7	140
																	925	13.3	5.2	8.8	142
29	KE Be 158	LG 446	I	391814	755755	11/21/90	Aq R	20.41	9.4	10.4	7.18	945	15.10	0.80	-7.70	-46.0	1005	13.3	4.6	10.2	167
																	1010	13.6	4.8	9.8	164
																	1015	13.6	4.8	9.9	163
																	1020	13.5	4.8	9.7	163
																	1025	13.5	4.8	9.5	158

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1030	13.3	4.8	9.6	168
																	1035	13.3	4.8	9.7	171
																	1040	13.3	4.8	9.7	171
VAN DYKE NETWORK																					
30	Gb41-12	VDE 2	I	392120	754410	11/08/90	Pe R	24.63	4.6	5.5	--	1605	13.10	0.70	-7.30	-42.0	0	15.9	5.4	10.5	257
																	5	16.1	5.4	9.2	259
																	10	16.1	5.4	9.1	260
																	15	16.1	5.4	9.1	260
																	20	15.9	5.4	9.7	261
31	Gb41-09	VDE 3	C1	392120	754419	04/02/91	Pe R	25.62	3.7	4.6	1.35	1631	12.90	0.50	-6.55	-37.5	1640	12.4	5.8	9.9	200
																	1645	12.4	5.8	9.8	200
																	1650	12.4	5.8	9.8	200
																	1655	12.5	5.8	9.4	203
																	1700	12.4	5.8	9.2	203
32	Gb41-22	--	C2	392120	754419	04/02/91	Pe R	24.38	6.4	7.3	1.51	1536	15.10	0.60	-7.25	-43.0	1550	14.3	5.7	8.9	118
																	1555	14.7	5.6	8.7	115
																	1600	14.8	5.6	9.6	110
																	1605	15.0	5.6	9.5	114
																	1610	15.2	5.6	9.5	114
																	1615	14.9	5.5	9.3	112
																	1625	14.0	5.5	9.1	112
CYPRESS BRANCH NETWORK																					
33	Gb42-06	CY 103	I	392118	754347	11/08/90	Pe R	24.38	4.6	5.5	--	845	16.40	0.90	-7.15	-40.0	0	14.2	4.5	9.4	185
																	5	14.3	4.6	9.4	181
																	10	14.4	4.6	9.4	180
																	15	14.4	4.6	9.5	179
																	57	14.3	4.6	9.4	180
34	Gb42-08	CY 302	C1	392120	754344	11/08/90	Pe R	22.86	1.8	2.7	--	1230	18.90	0.90	-7.35	-42.5	0	15.9	6.0	7.2	263
																	5	16.1	5.7	8.6	255
																	10	16.1	5.6	8.8	253
																	15	16.1	5.5	8.8	253
																	20	16.3	5.5	8.8	252
																	70	16.0	5.4	9.0	250
35	Gb42-05	CY 202	C2	392120	754344	11/08/90	Pe R	22.86	4.6	5.5	--	1032	18.20	0.90	-7.30	-41.5	0	14.6	5.5	8.4	174
																	5	14.8	5.5	8.8	173
																	10	14.7	5.5	8.8	173

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	15	14.7	5.4	8.8	173
																	60	14.8	5.4	8.8	175
36	Gb42-07	CY 104	C1	392120	754343	11/08/90	Pe D	22.25	0.8	1.7	--	1400	24.10	1.20	-7.00	-41.0	0	14.6	5.8	5.9	66
																	5	14.6	5.8	5.8	65
																	10	14.6	5.8	5.9	65
																	15	14.7	5.8	5.9	65
																	65	13.4	5.8	5.4	66
37	Gb42-09A	CY 204	C2	392120	754343	04/02/91	Pe D	21.61	2.4	3.4	Flowi	1650	17.80	0.70	-7.10	-40.5	1655	11.8	5.6	7.5	104
																	1702	12.5	5.6	8.3	100
																	1705	12.5	5.6	8.3	100
																	1710	12.4	5.6	8.3	100
																	1714	12.1	5.6	8.5	100
																	1718	12.1	5.5	8.6	100
																	1724	12.0	5.5	8.7	99
																	1729	12.1	5.5	8.9	98
BLACKBIRD STATE FOREST NETWORK																					
38	Gb41-06	VD32	I	392045	754435	11/20/90	Pe R	25.49	7.3	8.2	2.76	1014	18.50	0.70	-3.95	-28.0	1025	13.1	5.5	0.1	53
																	1031	13.1	5.5	0.1	53
																	1036	13.1	5.6	0.1	53
																	1042	13.0	5.6	0.1	53
																	1055	13.0	5.7	0.1	54
																	1100	13.1	5.7	0.1	54
																	1105	13.1	5.6	0.1	54
																	1110	13.1	5.7	0.1	54
39	Gb41-07	VD33	I	392051	754439	11/20/90	Pe R	24.83	5.2	6.7	1.62	1310	23.70	1.20	-5.75	-34.5	1325	13.4	5.8	0.2	59
																	1330	13.4	5.8	0.2	59
																	1335	13.4	5.8	0.2	59
																	1340	13.4	5.8	0.2	59
																	1346	13.4	5.8	0.2	59
																	1350	13.3	5.8	0.2	60
40	Gb41-05	VD31	I	392104	754435	11/20/90	Pe R	25.56	8.2	9.1	3.06	1410	19.20	1.00	-7.25	-43.0	1430	12.5	6.7	4.4	255
																	1436	12.7	6.7	4.9	243
																	1441	12.9	6.7	4.8	241
																	1444	12.9	6.7	5.3	235
TRANSECT B																					
41	QA Fd 2	WY 102	I	395456	760903	11/02/90	Ch D	4.57	11.0	11.9	2.01	940	11.70	0.50	-7.30	-42.5	955	14.2	7.3	0.4	--
																	1000	13.9	7.3	0.4	361

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1005	14.0	7.3	0.3	--
																	1010	14.1	7.3	0.4	--
																	1015	14.1	7.3	0.4	--
																	1021	14.2	7.4	0.4	--
																	1025	14.2	7.4	0.4	--
																	1030	14.3	7.3	0.4	--
																	1035	14.4	7.4	0.4	361
41	QA Fd 2	WY 102	I	395456	760903	04/03/91	Ch D	4.57	11.0	11.9	1.16	1006	12.00	0.50	---	---	1015	14.5	7.1	0.2	399
																	1020	14.7	7.2	0.1	381
																	1025	14.8	7.3	0.1	345
																	1030	14.8	7.3	0.1	330
																	1035	15.2	7.3	0.1	310
																	1040	15.1	7.3	0.1	288
																	1045	14.9	7.3	0.1	307
																	1050	14.8	7.3	0.2	287
42	QA Ed 39	QA 402	C1	385555	760754	11/02/90	Pe R	18.29	7.0	7.9	3.75	740	19.60	1.00	-7.25	-42.5	750	14.1	5.0	7.6	--
																	802	14.4	4.9	8.0	--
																	807	14.4	4.9	8.4	164
																	812	14.4	4.9	8.4	--
																	817	14.4	4.9	8.3	--
																	822	14.4	4.9	8.2	--
																	827	14.4	4.9	8.2	--
																	832	14.5	4.9	8.3	167
																	837	14.4	4.7	8.3	--
																	842	14.4	4.7	8.1	--
																	847	14.5	4.7	8.2	--
42	QA Ed 39	QA 402	C1	385555	760754	04/03/91	Pe R	18.29	7.0	7.9	3.08	729	16.30	0.60	---	---	750	12.9	4.7	9.2	171
																	755	12.9	4.7	9.0	170
																	800	13.0	4.8	9.0	170
																	805	13.2	4.8	9.0	170
																	815	13.0	4.8	8.8	170
																	820	12.8	4.8	8.5	170
																	825	13.2	4.8	9.0	170
																	830	13.2	4.9	8.8	170
																	835	13.3	4.9	9.0	170
43	QA Ed 38	QA 302	C2	385555	760754	04/03/91	Pe R	18.29	10.1	11.0	3.14	836	21.80	0.90	-7.35	-45.0	900	13.2	6.6	2.0	356
																	905	13.3	6.7	0.9	371
																	910	13.6	6.7	1.0	364

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	917	13.6	6.6	3.6	319
44	TA Be 85	TA 101	I	395440	760244	11/01/90	Pe R	13.72	6.1	7.0	3.05	1525	17.60	0.90	-7.20	-40.0	1545	14.9	4.5	8.5	--
																	1550	14.9	4.5	8.5	--
																	1555	14.9	4.5	8.5	205
																	1602	14.9	4.6	8.6	--
																	1607	14.9	4.6	8.6	--
																	1612	14.9	4.6	8.6	--
																	1617	14.8	4.6	8.6	205
45	CO Dc 146	CA 102	I	385302	755401	11/01/90	Pe R	13.72	5.2	6.1	2.59	1405	16.10	0.80	-7.00	-41.0	1420	17.4	5.4	9.0	--
																	1425	17.2	5.3	9.5	269
																	1430	17.2	5.3	9.7	--
																	1435	17.1	5.3	9.8	--
																	1440	17.0	5.2	9.8	--
																	1445	17.0	5.2	9.8	264
																	1450	17.0	5.2	10.0	--
45	CO Dc 146	CA 102	I	385302	755401	04/03/91	Pe R	13.72	5.2	6.1	1.49	1235	17.50	0.80	---	---	1250	13.5	5.2	10.4	242
																	1255	13.5	5.2	10.5	242
																	1300	13.5	5.1	11.0	240
																	1305	13.5	5.1	10.9	237
																	1310	13.8	5.1	10.5	235
																	1315	13.6	5.1	10.6	236
																	1320	13.5	5.1	10.8	233
																	1325	13.6	5.0	10.8	231
																	1330	13.6	5.0	10.8	228
46	Nd41-04	SX 202	I	384630	753451	04/03/91	BS R	13.72	5.2	6.1	3.06	1012	10.90	0.60	-6.10	-34.0	1018	13.6	5.2	9.3	281
																	1022	14.3	5.2	8.0	286
																	1041	14.7	5.2	8.0	285
																	1044	14.3	5.2	8.4	289
																	1057	15.0	5.1	9.0	287
																	1112	14.7	5.1	9.6	287
																	1115	14.4	5.1	9.2	287
47	Og43-02	SX 206	I	384118	751731	04/03/91	BS R	13.41	5.2	6.1	0.52	1233	10.90	0.50	-7.80	-46.5	1238	13.3	4.9	10.0	135
																	1243	13.4	4.6	10.0	136
																	1247	13.4	4.6	11.2	137
																	1250	13.4	4.6	11.2	138
																	1253	13.4	4.6	11.2	137
																	1300	13.4	4.6	11.2	137
																	1303	13.4	4.6	11.2	137

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
48	Nb24-03	SX 301	I	384837	754152	11/01/90	BS R	11.58	3.4	4.0	1.98	1220	12.90	0.60	-6.30	-35.5	1238	17.7	5.2	0.8	58
																	1243	17.6	5.2	0.8	--
																	1248	17.6	5.2	0.9	--
																	1253	17.6	5.1	0.9	--
																	1258	17.6	5.2	1.0	--
																	1303	17.5	5.2	1.0	--
																	1308	17.4	5.1	1.0	59
49	Pg14-01	SX 205	I	383939	751638	10/30/90	BS R	12.50	6.1	7.0	2.59	1500	13.60	0.80	-7.25	-41.5	1505	16.2	4.3	8.0	--
																	1510	16.4	4.2	8.0	--
																	1513	16.5	4.3	8.5	--
																	1515	16.5	4.2	9.2	--
																	1518	16.5	4.2	9.1	--
																	1523	16.5	4.2	9.1	309
																	1527	16.3	4.2	8.9	--
																	1531	16.4	4.2	8.9	--
																	1535	16.3	4.2	8.9	--
																	1540	16.3	4.2	9.0	300
																	1545	16.3	4.2	9.0	--
50	Oi51-12	SX309	C1	384044	750910	11/01/90	BS R	3.05	5.6	6.6	1.40	844	22.80	1.00	-6.75	-37.5	900	14.5	5.7	3.3	58
																	905	14.6	5.7	3.1	--
																	915	14.6	5.7	2.9	--
																	920	14.6	5.7	2.8	--
																	925	14.7	5.7	2.9	--
																	930	14.7	5.7	2.9	--
																	938	14.7	5.7	2.8	62
51	Oi51-11	SX209	C2	384044	750910	11/01/90	BS R	3.05	16.8	17.7	1.43	720	26.10	1.00	-6.60	-38.0	807	13.3	5.4	1.5	--
																	810	13.2	5.4	1.5	--
																	815	13.1	5.3	1.6	--
																	820	13.2	5.4	1.5	--
																	825	13.2	5.3	1.5	--
																	830	13.2	5.3	1.5	--
																	835	13.2	5.4	1.4	--
																	840	13.2	5.4	1.4	110
FAIRMOUNT NETWORK																					
53	Ph13-03	--	C1	383907	751241	10/31/90	BS R	6.83	6.1	7.6	4.39	1630	15.30	0.80	-5.85	-31.5	1640	14.8	5.1	8.0	--
																	1645	14.8	5.1	8.0	--
																	1650	14.8	5.1	7.9	--

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1655	14.8	5.1	7.5	264
																	1700	14.8	5.1	7.8	--
																	1705	14.8	5.1	7.8	--
																	1710	14.8	5.1	7.9	--
																	1715	14.8	5.1	7.9	255
																	1720	14.8	5.1	7.9	--
																	1725	14.8	5.1	7.9	--
54	Ph13-16	--	C2	383907	751241	10/31/90	BS R	6.85	12.2	13.7	3.25	910	20.50	1.00	-6.25	-35.0	920	14.2	5.4	8.8	--
																	925	14.2	5.4	8.9	--
																	930	14.1	5.4	9.6	--
																	935	14.2	5.4	9.4	--
																	940	14.3	5.4	9.5	290
																	945	14.4	5.4	9.1	--
																	950	14.4	5.4	9.3	--
																	955	14.4	5.4	9.6	--
																	1000	14.4	5.4	9.4	288
																	1005	14.6	5.4	9.3	--
																	1010	14.6	5.3	9.3	--
55	Ph13-17	--	C3	383907	751241	10/31/90	BS R	6.86	16.8	18.3	2.59	1016	19.40	1.00	-6.50	-37.0	1030	14.9	5.0	6.1	--
																	1035	14.8	5.0	6.0	--
																	1040	14.6	5.0	6.9	--
																	1045	14.4	5.0	7.0	311
																	1055	14.1	5.0	7.3	--
																	1100	14.0	4.9	7.3	--
																	1105	14.1	5.0	7.4	--
																	1110	14.1	4.9	7.4	--
																	1115	14.3	4.9	7.5	--
																	1120	14.4	4.9	7.4	318
																	1128	14.1	5.0	7.5	--
56	Ph13-18	--	C4	383907	751241	10/31/90	BS R	6.87	24.4	25.9	3.26	800	29.30	1.40	-6.90	-39.5	820	12.9	5.7	5.2	--
																	825	13.1	5.7	5.1	--
																	830	13.1	5.7	5.4	--
																	835	13.2	5.7	5.4	--
																	840	13.5	5.7	5.3	164
																	845	13.6	5.6	5.3	--
																	850	13.7	5.6	5.3	--
																	855	13.8	5.6	5.3	--
																	900	13.7	5.6	5.4	163

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	905	13.8	5.6	5.3	--
57	Ph13-04	--	C1	383903	751230	04/04/91	BS R	5.88	6.1	7.6	2.01	1025	14.70	0.70	-6.65	-37.0	1035	13.7	5.0	10.2	319
																	1040	13.7	5.0	10.0	322
																	1045	13.8	5.0	9.9	323
																	1050	13.9	5.0	9.9	324
																	1055	14.2	5.0	9.7	324
																	1100	13.9	5.0	9.9	325
58	Ph13-23	--	C2	383903	751230	04/04/91	BS R	5.89	12.2	13.7	2.04	1154	18.80	0.80	-6.75	-38.5	1215	14.4	4.9	9.1	351
																	1220	14.3	5.0	8.9	353
																	1225	14.2	5.0	8.8	354
																	1230	14.2	5.0	8.8	354
																	1235	14.5	5.0	8.3	354
																	1305	14.4	5.0	8.0	354
																	1310	14.2	5.0	8.9	354
59	Ph13-24	--	C3	383903	751230	04/04/91	BS R	5.89	18.3	19.8	2.01	1117	22.10	1.00	-6.75	-39.0	1125	14.7	5.6	7.5	340
																	1130	14.1	5.7	7.4	342
																	1135	14.2	5.7	7.4	341
																	1140	14.7	5.7	6.7	339
																	1145	14.3	5.7	7.2	340
																	1150	14.3	5.7	7.3	339
60	Ph13-25	--	C4	383903	751230	04/04/91	BS R	5.89	24.4	25.9	1.98	810	27.80	1.10	-6.70	-39.0	900	13.9	6.8	7.1	236
																	905	14.0	5.6	7.2	236
																	910	14.0	5.6	6.7	236
																	915	14.1	5.6	7.1	236
61	Ph13-26	--	C4	383903	751230	04/04/91	BS R	5.90	29.6	31.1	2.04	923	28.60	1.00	-6.80	-38.0	950	14.4	5.5	7.7	227
																	955	14.1	5.5	7.4	225
																	1000	14.1	5.5	7.1	224
																	1005	14.7	5.5	6.5	224
																	1010	14.1	5.5	6.9	224
																	1015	14.1	5.5	6.9	223
																	1020	14.1	5.5	6.9	223
62	Ph23-10	--	C1	383854	751220	10/31/90	BS R	5.82	6.1	7.6	3.07	1444	17.50	0.80	-6.65	-37.5	1455	13.7	5.4	6.4	--
																	1500	13.7	5.4	6.1	--
																	1505	13.7	5.4	5.9	--
																	1510	13.7	5.5	5.9	328
																	1515	13.7	5.5	5.6	--
																	1518	13.7	5.5	5.6	--
																	1523	13.7	5.5	5.6	328

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
62	Ph23-10	--	C1	383854	751220	04/04/91	BS R	5.82	6.1	7.6	2.02	1045	12.20	0.50	---	---	1050	13.1	4.9	4.0	372
																	1055	13.2	4.9	4.4	372
																	1100	13.4	4.9	4.4	371
																	1105	13.2	4.8	5.0	371
																	1110	13.5	4.8	5.0	371
																	1130	13.8	4.8	5.0	370
																	1135	14.0	4.8	5.0	370
																	1140	13.8	4.8	5.0	371
63	Ph23-12	--	C2	383854	751220	10/31/90	BS R	5.79	12.2	13.7	3.02	1530	12.80	0.60	-7.05	-40.0	1540	14.6	5.0	1.1	--
																	1545	14.6	5.0	1.3	--
																	1550	14.6	5.0	1.3	379
																	1555	14.6	5.0	1.4	--
																	1600	14.6	5.0	1.6	--
																	1605	14.5	5.0	1.6	374
																	1610	14.4	5.0	1.6	--
63	Ph23-12	--	C2	383854	751220	04/04/91	BS R	5.79	12.2	13.7	2.00	1145	18.40	0.80	---	---	1150	14.0	5.1	4.5	364
																	1155	14.1	5.2	5.4	363
																	1200	14.2	5.2	5.5	363
																	1205	14.2	5.2	5.6	362
																	1210	14.4	5.2	5.7	362
																	1212	14.3	5.2	5.7	362
																	1218	14.4	5.2	5.8	362
																	1242	14.3	5.2	5.9	362
																	1245	14.4	5.2	5.9	362
64	Ph23-13	--	C3	383854	751220	10/31/90	BS R	5.85	18.3	19.8	3.06	1329	15.50	0.70	-6.90	-40.5	1350	14.6	5.8	5.0	--
																	1358	13.6	5.7	7.6	--
																	1405	13.6	5.7	7.5	--
																	1410	13.5	5.7	7.4	--
																	1415	13.4	5.7	7.3	261
																	1420	13.4	5.7	7.2	--
																	1425	13.5	5.7	7.2	--
																	1430	13.7	5.7	7.1	--
																	1435	13.6	5.7	7.1	--
																	1438	13.5	5.7	7.1	257
64	Ph23-13	--	C3	383854	751220	04/04/91	BS R	5.85	18.3	19.8	2.04	945	16.70	0.50	---	---	950	13.4	5.5	10.2	347
																	955	13.5	5.6	10.1	346
																	1000	13.6	5.6	10.1	346
																	1005	13.6	5.5	10.1	346

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1010	13.7	5.6	10.1	346
																	1017	13.6	5.6	10.1	345
																	1034	13.6	5.5	9.8	345
																	1040	13.8	5.5	9.8	345
65	Ph23-14	--	C4	383854	751220	10/31/90	BS R		23.8	25.3	3.03	1220	22.90	0.90	-6.65	-37.5	1235	13.7	5.5	3.3	--
																	1240	13.7	5.6	3.5	--
																	1245	13.7	5.5	3.6	--
																	1250	13.5	5.5	3.7	--
																	1255	13.5	5.5	3.7	349
																	1300	13.5	5.5	3.8	--
																	1305	13.5	5.5	3.8	--
																	1310	13.5	5.6	3.8	--
																	1315	13.5	5.6	3.8	--
																	1320	13.5	5.6	3.8	347
																	1323	13.6	5.6	3.8	--
65	Ph23-14	--	C4	383854	751220	04/04/91	BS R	5.86	23.8	25.3	4.99	832	25.30	1.20	---	---	842	13.4	5.4	5.2	412
																	847	13.4	5.4	5.2	411
																	852	13.5	5.4	5.2	410
																	857	13.5	5.5	6.0	410
																	902	13.5	5.4	6.2	410
																	903	13.5	5.4	6.4	409
																	909	13.5	5.4	6.4	409
																	935	13.5	5.5	6.4	406
																	940	13.6	5.4	6.4	406
70	Ph13-30	SX201	C1	383939	751201	04/03/91	BS R	3.44	3.7	4.6	1.04	1515	11.80	0.50	-6.10	-33.0	1518	10.8	5.1	4.0	79
																	1521	10.7	5.0	3.0	71
																	1524	10.8	4.9	2.4	71
																	1527	10.8	4.9	3.4	72
																	1529	11.0	4.9	1.8	73
																	1535	10.8	4.9	1.6	72
																	1541	10.8	4.9	1.6	72
																	1545	10.8	4.9	1.6	72
71	Ph13-29	SX101	C2	383939	751201	10/30/90	BS R	3.44	22.9	23.8	--	1710	13.70	0.60	-6.80	-37.5	1720	13.3	5.3	4.6	--
																	1725	13.3	5.3	4.6	--
																	1730	13.3	5.3	4.6	108
																	1735	13.3	5.3	4.5	--
																	1740	13.3	5.3	4.4	--
																	1745	13.3	5.3	4.4	106

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1750	13.3	5.2	4.5	--
																	1755	13.3	5.2	4.5	--
71	Ph13-29	SX101	C2	383939	751201	04/03/91	BS R	3.44	22.9	23.8	0.98	1407	23.60	0.90	---	---	1407	13.6	5.1	5.5	165
																	1410	13.6	5.1	5.5	165
																	1420	13.4	5.3	5.6	163
																	1425	14.0	5.3	6.2	164
																	1430	13.6	5.3	6.2	163
																	1434	13.5	5.3	6.2	164
																	1439	13.4	5.3	6.2	164
																	1445	13.2	5.3	6.1	164
																	1452	13.3	5.3	6.4	163
																	1502	13.3	5.3	6.4	164
																	1510	13.3	5.3	6.4	163
TRANSECT C																					
72	DO Ce 89	DO401	I	383123	760313	11/16/90	KI LG	3.66	4.4	5.3	1.71	1456	5.19	0.27	-6.60	-38.0	1515	18.8	6.0	0.4	438
																	1520	18.8	6.0	0.4	--
																	1525	18.8	6.0	0.4	--
																	1530	18.7	6.0	0.3	442
																	1535	18.8	6.0	0.3	--
																	1540	18.8	6.0	0.3	441
																	1545	18.7	6.0	0.3	--
73	DO Cg 46	DO403S	C1	383218	755228	11/13/90	BS LG	5.49	4.3	5.2	1.17	1644	23.60	1.10	-6.95	-41.0	1655	16.7	4.8	0.4	94
																	1700	16.7	4.8	0.3	--
																	1705	16.7	4.8	0.4	94
																	1710	16.7	4.8	0.3	--
																	1715	16.8	4.8	0.3	94
																	1720	16.9	4.8	0.3	--
																	1725	17.0	4.8	0.4	94
74	DO Cg 45	DO403D	C2	383218	755228	11/13/90	BS LG	5.49	14.2	15.1	1.11	1525	4.18	0.26	-6.65	-40.5	1600	14.0	6.1	5.3	84
																	1605	14.0	6.1	2.2	--
																	1610	14.1	6.1	1.9	83
																	1615	14.0	6.1	1.8	--
																	1620	13.9	6.2	1.7	--
																	1625	14.0	6.2	1.7	84
																	1635	14.0	6.2	1.6	--
																	1640	14.0	6.1	1.5	79
75	WI Be 52	WO404D	I	382644	753612	11/12/90	BS C	14.33	14.0	14.9	4.40	740	11.90	0.70	-6.85	-39.5	805	14.1	4.9	11.0	--

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	815	14.1	4.9	11.0	--
																	820	14.1	4.8	11.0	--
																	825	14.1	4.9	10.8	--
																	831	14.1	4.9	10.6	--
																	835	14.0	4.9	10.7	149
																	840	13.8	4.9	10.8	--
																	845	13.9	4.9	10.8	--
																	852	13.8	4.8	10.8	--
																	900	13.9	4.9	11.0	--
																	907	13.8	4.9	11.0	154
																	912	13.8	4.9	10.8	--
																	915	13.8	4.8	10.9	--
76	WI Bg 18	WO405S	C1	382508	752712	11/12/90	Pa R	19.81	3.7	4.3	2.33	1124	15.50	0.80	-6.40	-34.5	1030	15.2	5.0	1.1	--
																	1035	16.1	5.1	1.1	73
																	1040	15.4	5.1	1.2	--
																	1045	15.3	5.1	0.8	--
																	1050	15.4	5.1	0.7	--
																	1055	15.9	5.0	0.8	--
																	1100	15.8	5.0	0.6	--
																	1105	15.6	5.0	0.6	72
																	1110	15.7	5.0	0.6	--
																	1115	15.6	5.0	0.6	--
76	WI Bg 18	WO405S	C1	382508	752712	04/03/91	Pa R	19.81	3.7	4.3	0.91	1624	---	---	---	---	1640	12.6	5.2	0.6	75
																	1650	12.4	5.2	0.6	73
																	1655	12.2	5.2	0.5	72
																	1700	12.2	5.2	0.5	71
77	WI Bg 17	WO405D	C2	382508	752712	11/12/90	BS C	19.81	15.2	16.2	7.07	1013	3.60	0.40	-6.65	-36.5	1150	14.0	5.7	0.3	--
																	1155	13.7	5.8	0.3	50
																	1200	13.8	5.9	0.3	--
																	1205	13.7	5.9	0.3	--
																	1210	13.7	6.0	0.3	--
																	1215	13.9	5.9	0.4	--
																	1218	13.7	5.9	0.3	50
																	1225	13.7	5.9	0.3	--
																	1228	13.8	5.9	0.3	--
77	WI Bg 17	WO405D	C2	382508	752712	04/03/91	BS C	19.81	15.2	16.2	5.43	1515	---	---	---	---	1540	14.5	6.2	0.1	48
																	1550	14.4	6.2	2.5	47
																	1555	14.4	6.2	1.6	47

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1600	14.3	6.2	1.3	47
																	1605	14.3	6.2	1.2	47
																	1610	14.3	6.2	0.8	47
																	1615	14.4	6.2	0.6	47
																	1620	14.3	6.2	0.5	47
78	WO Bf 87	WR402S	C1	382332	751418	11/12/90	BS R	10.06	4.6	5.5	1.65	1345	12.40	0.60	-6.40	-36.0	1355	17.3	5.6	7.7	--
																	1400	17.2	5.6	7.7	313
																	1405	17.2	5.6	7.7	--
																	1410	17.2	5.5	7.7	--
																	1415	17.4	5.5	7.7	--
																	1420	17.2	5.5	7.7	--
																	1425	17.2	5.5	7.7	--
																	1430	17.2	5.5	7.7	307
																	1435	17.4	5.5	7.7	--
																	1440	17.3	5.5	7.7	--
																	1445	17.3	5.5	7.7	--
																	1450	17.3	5.5	7.7	--
79	WO Bf 86	WR402D	C2	382332	751418	11/12/90	BS R	10.06	14.2	15.1	1.70	1456	14.80	0.70	-6.50	-36.0	1520	14.0	5.3	9.0	--
																	1525	14.0	5.2	9.2	151
																	1530	13.9	5.2	8.9	--
																	1535	13.9	5.2	9.0	--
																	1540	13.9	5.2	9.0	--
																	1545	13.8	5.2	9.0	--
																	1550	13.7	5.2	9.0	146
																	1555	13.7	5.2	9.1	--
80	WO Cg 80	WR403S	C1	381844	750932	11/13/90	Si R	1.52	3.7	4.3	0.14	1250	8.80	0.50	-5.50	-27.5	1307	17.2	6.5	0.8	79
																	1312	17.8	6.5	1.2	--
																	1317	17.8	6.4	1.4	79
																	1322	17.8	6.4	1.4	--
																	1327	17.6	6.3	1.4	--
																	1332	17.6	6.3	1.3	--
																	1337	17.6	6.3	1.1	84
																	1342	17.6	6.2	1.1	84
80	WO Cg 80	WR403S	C1	381844	750932	04/04/91	Si R	1.52	3.7	4.3	0.02	1455	14.70	0.60	---	---	1500	14.1	6.6	1.3	112
																	1510	14.3	6.3	1.3	102
																	1515	14.2	6.2	1.4	97
																	1520	14.3	6.2	1.5	95
																	1525	14.1	6.1	1.5	94

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1545	14.1	6.0	1.5	90
																	1550	14.1	6.0	1.5	88
81	WO Cg 79	WR403D	C2	381844	750932	11/13/90	BS D	1.52	12.3	13.3	0.16	1150	0.01	0.14	-6.15	-34.0	1205	13.7	6.6	0.3	132
																	1210	13.7	6.5	0.4	--
																	1215	13.9	6.5	0.3	129
																	1220	13.8	6.5	0.3	--
																	1225	13.6	6.5	0.3	129
																	1230	13.8	6.5	0.2	--
																	1235	13.8	6.5	0.2	--
																	1240	13.7	6.5	0.2	129
																	1245	13.9	6.5	0.2	--
81	WO Cg 79	WR403D	C2	381844	750932	04/04/91	BS D	1.52	12.3	13.3	Flowi	1415	0.07	0.16	---	---	1417	15.5	6.1	1.0	130
																	1421	15.7	6.1	1.0	130
																	1424	15.7	6.2	0.8	130
																	1430	15.5	6.3	0.9	130
																	1435	15.6	6.4	0.8	130
																	1440	15.6	6.4	0.8	130
																	1449	15.5	6.4	0.8	130
81	WO Cg 79	WR403D	C2	381844	750932	12/23/92	BS D	1.52	12.3	13.3	Flowi	940	---	---	---	---	955	14.9	6.3	0.4	133
																	1008	15.0	6.5	0.3	132
																	1020	15.0	6.5	0.2	130
																	1027	15.0	6.5	0.2	129
																	1047	14.7	6.6	0.2	130
																	1054	14.7	6.5	0.2	130
																	1058	14.7	6.5	0.2	130
																	1103	14.7	6.6	0.2	130
																	1107	14.7	6.6	0.2	130
																	1114	14.7	6.5	0.2	130
82	WO Cg 78	P28S	C1	381754	750836	11/13/90	Si LG	3.66	3.0	4.0	2.60	905	10.90	0.60	-6.40	-37.0	910	17.0	4.8	0.3	123
																	915	17.0	4.8	0.3	--
																	920	17.0	4.8	0.3	--
																	925	17.0	4.8	0.3	126
																	930	17.1	4.8	0.3	--
																	935	17.0	4.7	0.3	--
																	940	16.9	4.8	0.3	131
																	945	17.0	4.8	0.3	131
83	WO Cg 77	P28I	C2	381754	750836	11/13/90	Si LG	3.66	9.1	10.1	2.51	742	18.60	0.60	-6.55	-37.5	810	14.9	6.7	0.3	206
																	815	14.9	6.7	0.3	206

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	820	15.0	6.8	0.3	--
																	826	14.9	6.9	0.3	--
																	830	15.0	6.9	0.3	--
																	835	14.8	6.9	0.3	207
																	841	14.8	6.7	0.3	--
																	845	14.8	6.8	0.3	--
																	850	14.9	6.8	0.3	--
																	856	14.8	6.8	0.3	210
																	900	14.8	6.9	0.3	205
83	WO Cg 77	P28I	C2	381754	750836	04/04/91	Si LG	3.66	9.1	10.1	0.91	1707	21.20	0.80	---	---	1712	15.3	6.5	1.3	230
																	1717	15.4	6.7	0.9	229
																	1722	15.4	6.8	0.9	228
																	1727	15.4	6.8	0.8	228
																	1730	15.4	6.7	0.8	228
																	1740	15.4	6.8	0.8	227
																	1800	15.3	6.8	0.8	227
																	1805	15.3	6.8	0.8	227
84	WO Cg 76	P28D	C3	381754	750836	04/04/91	BS LG	3.66	21.3	27.4	--	1800	0.11	0.14	-5.95	-34.0	1820	14.0	6.8	0.7	219
																	1825	14.4	7.0	0.7	218
																	1845	13.5	7.3	0.7	218
WILLARDS NETWORK OF TRANSECT C																					
85	WI Ch 56	WS 106	C1	382452	752029	11/14/90	Pa R	12.55	4.6	5.2	3.11	1017	10.70	0.50	-6.45	-35.5	0	15.1	5.3	0.3	159
																	5	15.1	5.3	0.2	161
																	10	11.1	5.3	0.0	162
																	15	12.7	5.3	0.0	163
																	End	15.6	--	0.0	164
85	WI Ch 56	WS 106	C1	382452	752029	04/05/91	Pa R	12.55	4.6	5.2	2.53	905	---	---	---	---	908	13.2	5.2	2.7	180
																	910	12.8	5.1	2.7	164
																	912	12.9	5.0	2.6	164
																	914	12.9	5.1	2.6	165
																	916	13.2	5.2	2.5	167
																	920	13.2	5.2	2.4	171
																	925	13.3	5.2	2.4	174
																	932	13.2	5.3	2.5	175
																	935	13.2	5.3	2.4	174
85	WI Ch 56	WS 106	C1	382452	752029	12/23/92	Pa R	12.55	4.6	5.2	--	1310	---	---	---	---	1324	14.7	5.8	1.3	165

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1332	14.7	5.8	1.3	165
																	1340	14.7	5.8	1.3	164
																	1347	14.6	5.8	1.3	164
																	1350	14.7	5.8	1.3	163
																	1356	14.7	5.8	1.3	163
																	1405	14.7	5.8	1.3	162
																	1412	14.7	5.8	1.3	161
86	WI Ch 57	WS 206	C2	382452	752029	11/14/90	BS R	12.66	14.3	15.2	3.05	805	15.80	0.70	-6.45	-35.5	0	12.9	--	0.5	150
																	10	13.0	5.5	0.1	299
																	15	13.0	5.5	0.1	308
																	20	13.1	5.6	0.1	313
																	25	12.9	5.6	0.1	315
																	79	12.9	--	0.1	339
																	End	13.2	--	0.1	342
86	WI Ch 57	WS 206	C2	382452	752029	04/05/91	BS R	12.66	14.3	15.2	2.53	747	15.40	0.60	---	---	757	14.2	5.5	0.7	320
																	802	14.2	5.6	0.6	321
																	807	14.3	5.6	0.6	321
																	813	14.3	5.6	0.6	325
																	827	14.4	5.7	0.5	328
																	840	14.4	5.7	0.5	329
																	848	14.6	5.7	0.5	337
																	853	14.4	5.7	0.5	332
																	900	14.4	5.6	0.4	337
86	WI Ch 57	WS 206	C2	382452	752029	12/23/92	BS R	12.66	14.3	15.2	--	1305	---	---	---	---	1425	14.0	5.8	0.2	261
																	1433	14.0	5.8	0.2	261
																	1440	14.0	5.8	0.2	262
																	1450	14.0	5.8	0.2	263
																	1505	13.9	5.9	0.2	273
																	1510	13.9	5.9	0.2	274
																	1515	13.9	5.9	0.1	272
																	1519	13.9	5.9	0.1	272
																	1524	13.9	5.9	0.1	272
																	1528	13.9	5.9	0.1	270
																	1532	13.9	5.9	0.1	271
																	1536	13.9	5.9	0.1	271
87	WI Bh 11	WS 210	I	382626	752018	11/14/90	BS C	10.51	9.4	10.4	1.11	1340	-0.15	0.14	-6.30	-35.0	0	13.5	6.0	0.5	151
																	5	13.5	6.1	0.5	146
																	10	13.7	6.1	0.1	145

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	15	13.6	6.1	0.1	145
																	End	13.8	--	0.1	144
87	WI Bh 11	WS 210	I	382626	752018	04/05/91	BS C	10.51	9.4	10.4	0.34	1200	---	---	---	---	1203	14.4	6.0	0.5	152
																	1210	14.4	5.9	0.5	148
																	1215	14.4	5.9	0.5	147
																	1220	14.4	5.9	0.5	147
																	1222	14.4	5.9	0.5	146
																	1225	14.4	5.9	0.5	146
																	1230	14.4	6.0	0.5	145
																	1234	14.5	5.9	0.5	144
88	WI Bh 8	WS 108	C1	382609	752105	04/05/91	Al D	11.06	3.4	4.0	1.83	1108	5.53	0.24	-6.30	-35.5	1112	14.5	6.1	0.5	203
																	1116	14.7	6.1	0.5	202
																	1120	14.9	6.1	0.5	205
																	1121	15.1	6.1	0.5	206
																	1125	15.4	6.1	0.5	209
																	1130	15.5	6.1	0.5	213
																	1135	15.4	6.1	0.5	212
89	WI Bh 9	WS 208	C2	382609	752105	04/05/91	BS C	11.06	11.6	12.5	1.23	1015	-0.10	0.13	-6.00	-34.5	1020	15.2	6.2	0.5	167
																	1025	15.0	6.2	0.5	165
																	1030	15.0	6.2	0.5	165
																	1035	14.9	6.2	0.5	165
																	1040	14.8	6.2	0.5	165
																	1045	14.8	6.2	0.5	165
																	1055	14.8	6.2	0.5	165
																	1103	14.8	6.2	0.5	165
90	WI Bh 4	WS 103	C1	382543	752122	04/05/91	Pa R	12.23	3.0	3.7	1.22	1430	13.20	0.60	-5.95	-32.5	1435	16.1	5.9	--	82
																	1440	13.9	5.5	1.4	105
																	1445	13.7	5.4	0.8	116
																	1447	13.8	5.4	0.8	117
																	1450	13.8	5.4	0.8	119
																	1455	13.9	5.4	0.7	122
																	1500	13.8	5.4	0.7	123
																	1503	13.9	5.4	0.7	125
91	WI Bh 5	WS 203	C2	382543	752122	04/05/91	BS C	12.22	9.1	10.1	1.86	1328	---	---	---	---	1348	16.0	5.9	--	87
																	1410	16.5	5.9	2.8	87
																	1420	16.5	6.0	2.8	89

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
92	66M 41	AC201D	I	375744	753536	11/15/90	Yo C	3.05	11.9	12.8	2.33	1537	1.50	0.18	-6.05	-33.5	1550	14.1	6.1	0.8	175
																	1555	14.3	6.1	0.5	--
																	1600	14.4	6.1	0.4	175
																	1605	14.4	6.1	0.4	--
																	1610	14.4	6.2	0.4	--
																	1615	14.3	6.1	0.3	171
																	1620	14.4	6.1	0.3	--
																	1625	14.3	6.1	0.3	--
92	66M 41	AC201D	I	375744	753536	04/04/91	Yo C	3.05	11.9	12.8	1.36	1557	2.22	0.14	---	---	1610	14.9	6.2	0.1	157
																	1615	14.9	6.2	0.1	157
																	1620	14.9	6.2	0.1	157
																	1625	14.9	6.2	0.1	157
																	1630	14.9	6.2	0.1	157
																	1635	14.8	6.2	0.1	157
																	1640	14.9	6.2	0.2	156
																	1645	14.8	6.2	0.1	157
																	1650	14.9	6.2	0.1	157
92	66M 41	AC201D	I	375744	753536	12/22/92	Yo C	3.05	11.9	12.8	--	1215	---	---	---	---	1247	14.8	6.5	0.3	171
																	1253	14.8	6.2	0.3	171
																	1302	14.8	6.2	0.2	171
																	1308	14.9	6.2	0.2	171
																	1321	14.8	6.2	0.3	173
																	1329	14.9	6.2	0.2	172
																	1330	14.8	6.2	0.3	172
																	1340	14.8	6.2	0.3	172
																	1349	14.8	6.2	0.2	172
																	1355	14.8	6.2	0.2	172
																	1400	14.8	6.2	0.2	172
																	1450	14.5	6.2	0.5	172
																	1456	14.6	6.3	0.3	172
																	1503	14.6	6.2	0.2	172
93	66M 19	SOW 110	I	375723	753444	11/16/90	KI C	3.35	7.9	11.0	3.36	733	13.50	0.50	-6.35	-35.5	825	14.6	5.2	0.2	97
																	830	14.6	5.2	0.1	97
																	835	14.6	5.2	0.1	97
																	840	14.6	5.1	0.1	97
																	845	14.6	5.2	0.2	97
																	850	14.6	5.1	0.1	97
																	855	14.7	5.2	0.1	97

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	900	14.7	5.2	0.2	97
																	905	14.7	5.2	0.2	97
94	66M 42	AC203	I	375623	753303	11/16/90	Om C	6.71	4.3	5.2	1.62	941	0.14	0.14	-6.25	-34.0	1005	17.0	6.4	--	150
																	1015	17.0	6.4	--	--
																	1020	16.9	6.5	--	150
																	1025	16.7	6.5	--	--
																	1030	16.7	6.5	--	--
																	1035	16.6	6.5	--	151
																	1040	16.6	6.5	--	--
																	1045	16.6	6.5	0.4	151
95	66M 44	AC204S	C1	375535	753249	11/15/90	Om C	8.23	5.9	6.9	2.36	1648	17.20	0.70	-6.15	-33.0	1655	16.6	5.1	0.0	230
																	1700	16.6	5.1	0.0	221
																	1705	16.6	5.1	0.0	217
																	1710	16.6	5.1	0.0	214
																	1715	16.6	5.1	0.0	214
																	1720	--	--	0.0	213
																	1725	--	--	0.0	213
																	1730	16.6	5.1	0.0	213
																	1735	16.6	5.1	0.0	213
96	66M 45	AC204D	C2	375535	753249	11/15/90	Om C	8.23	13.9	14.8	2.22	1539	20.80	1.00	-6.45	-36.0	1600	15.3	5.4	0.2	310
																	1605	15.3	--	0.0	320
																	1610	15.3	--	0.0	325
																	1615	15.3	--	0.0	330
																	1620	15.3	--	0.0	333
																	1625	15.3	--	0.0	338
																	1630	15.2	5.7	0.0	341
																	1635	15.2	5.7	0.0	343
																	1640	15.2	5.7	0.0	345
																	1645	15.2	5.7	0.0	347
97	66M 46	AC205S	I	375552	753018	11/15/90	Om C	9.14	5.8	6.7	2.45	1416	19.50	0.80	-6.20	-32.0	1430	15.7	5.0	2.3	436
																	1435	15.7	5.0	2.4	--
																	1440	15.7	5.0	2.4	--
																	1445	15.5	5.0	2.5	440
																	1450	15.6	5.0	2.5	--
																	1455	15.5	5.0	2.5	445
																	1500	15.5	5.0	2.5	--
TRANSECT E																					
98	63F 25	Well 1	I	371145	755659	11/14/90	JN&Wa D	3.77	1.1	2.0	0.32	933	21.00	0.80	-6.25	-35.0	945	16.7	6.3	3.1	490

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	950	16.8	6.3	3.3	489
																	955	16.7	6.3	3.5	--
																	1000	16.7	6.3	3.7	--
																	1005	16.7	6.3	3.8	490
																	1010	16.8	6.3	3.8	--
																	1015	16.8	6.3	3.9	490
																	1020	16.9	6.3	3.8	--
99	63F 26	Well 2	I	371143	755658	11/14/90	JN&Wa R	4.68	1.8	2.7	1.12	823	10.90	0.50	-6.80	-38.0	850	18.9	5.3	3.9	--
																	855	18.7	5.3	3.9	328
																	900	18.8	5.3	3.8	--
																	905	19.1	5.3	3.8	--
																	910	19.1	5.3	3.8	323
																	915	19.4	5.3	3.8	--
																	920	19.4	5.3	3.7	--
																	925	19.6	5.3	3.6	313
100	63F 49	Well 4E	C1	371125	755702	11/14/90	Na R	8.34	4.2	5.1	3.72	1647	8.90	0.40	-5.80	-31.5	1655	17.8	5.9	8.7	674
																	1700	18.3	5.5	8.7	653
																	1705	17.5	6.3	--	657
																	1710	18.0	5.5	8.6	657
																	1720	17.8	5.5	8.6	659
																	1725	17.8	5.4	8.6	--
																	1730	17.8	5.4	8.5	661
																	1735	17.8	5.4	8.5	--
																	1740	17.8	5.4	8.5	661
100	63F 49	Well 4E	C1	371125	755702	04/05/91	Na R	8.34	4.2	5.1	3.26	1312	11.70	0.50	---	---	1325	14.5	5.8	7.8	300
																	1330	14.4	5.8	7.9	300
																	1335	14.4	5.7	8.1	298
																	1340	14.4	5.7	8.0	297
																	1345	14.6	5.7	7.8	296
																	1350	14.5	5.7	8.0	296
																	1355	14.4	5.6	8.2	294
																	1400	14.4	5.6	8.0	294
101	63F 44	Well 4B	C2	371125	755702	11/14/90	Na R	8.33	7.0	7.9	3.72	1312	12.90	0.60	-6.35	-35.0	1330	17.4	5.4	8.6	324
																	1335	17.4	5.3	8.6	--
																	1340	17.6	5.4	8.3	322
																	1345	17.4	5.4	8.1	--
																	1350	17.6	5.3	8.3	--
																	1355	17.6	5.4	8.3	--

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1400	17.2	5.3	8.2	319
																	1405	16.6	5.4	8.3	--
101	63F 44	Well 4B	C2	371125	755702	04/05/91	Na R	8.33	7.0	7.9	3.90	1210	13.10	0.50	---	---	1220	16.0	5.5	8.2	240
																	1225	16.0	5.5	8.2	236
																	1230	16.0	5.5	8.2	263
																	1235	16.0	5.5	8.2	262
																	1240	16.0	5.5	7.5	262
																	1245	16.1	5.5	7.9	261
																	1250	15.8	5.4	8.2	260
																	1255	15.8	5.4	8.2	259
																	1300	15.9	5.4	8.2	258
102	63F 45	Well 4C	C3	371125	755702	11/14/90	Na R	8.21	11.7	12.6	3.55	1411	16.60	0.70	-6.30	-34.5	1425	14.7	6.1	7.9	449
																	1430	14.6	6.4	7.0	452
																	1435	14.5	6.4	6.6	452
																	1440	14.8	6.5	6.2	453
																	1445	14.8	6.5	6.1	454
																	1450	14.8	6.5	5.8	--
																	1455	15.0	6.5	5.8	--
																	1500	15.4	6.5	5.7	--
																	1505	15.2	6.5	5.7	462
																	1510	14.9	6.5	5.6	--
102	63F 45	Well 4C	C3	371125	755702	04/05/91	Na R	8.21	11.7	12.6	3.72	1048	17.30	0.60	---	---	1105	16.4	6.6	4.1	327
																	1110	16.4	6.6	5.5	323
																	1115	16.3	6.6	5.8	351
																	1120	16.4	6.6	5.8	348
																	1125	16.4	6.6	5.7	342
																	1130	16.6	6.6	5.7	343
																	1135	16.7	6.6	5.7	340
																	1140	16.4	6.6	5.8	336
																	1145	16.4	6.6	5.8	335
																	1150	16.4	6.6	5.8	333
																	1155	16.4	6.6	5.8	336
																	1200	16.5	6.6	5.7	330
103	63F 46	Well 4D	C4	371125	755702	11/14/90	Na C	8.25	17.8	18.7	3.74	1518	2.95	0.19	-6.20	-34.0	1540	15.9	7.7	1.5	365
																	1545	15.7	7.8	1.1	361
																	1550	15.7	7.8	0.8	--
																	1555	15.9	7.8	0.7	356
																	1600	16.1	7.8	0.6	356

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1605	15.9	7.8	0.5	--
																	1610	16.9	7.8	0.5	--
																	1615	17.3	7.8	0.4	350
																	1620	16.8	7.8	0.5	--
																	1628	15.6	7.3	11.3	--
																	1633	14.8	7.5	11.1	0
																	1638	14.2	7.5	11.1	--
103	63F 46	Well 4D	C4	371125	755702	04/05/91	Na C	8.25	17.8	18.7	3.66	932	4.00	0.40	---	---	1005	16.3	7.9	0.1	300
																	1010	16.1	7.9	0.1	281
																	1015	16.1	7.9	0.1	263
																	1020	16.2	7.9	0.1	258
																	1025	16.4	7.9	0.1	282
																	1030	16.2	7.9	0.1	301
																	1035	16.4	7.9	0.1	295
																	1040	16.1	7.9	0.1	292
																	1045	16.1	7.9	0.1	277
104	63F 29	Well 5A	C1	371121	755650	11/14/90	JN&Wa R	4.02	2.0	2.9	1.20	1211	10.40	0.40	-6.50	-35.0	1220	20.2	5.8	5.0	275
																	1225	20.7	5.8	4.9	--
																	1230	20.7	5.8	5.0	--
																	1235	20.7	5.8	4.9	276
																	1240	21.0	5.8	4.9	--
																	1245	20.8	5.8	4.9	272
105	63F 47	Well 5B	C2	371121	755650	11/14/90	JN&Wa R	4.10	7.6	8.5	1.20	1053	19.80	0.70	-6.20	-33.0	1115	16.7	5.2	5.6	411
																	1120	16.8	5.2	5.6	--
																	1125	16.8	5.2	5.6	412
																	1130	16.6	5.2	5.5	--
																	1140	17.0	5.3	5.5	--
																	1145	16.5	5.2	5.5	--
																	1150	16.6	5.2	5.5	--
																	1155	16.6	5.2	5.7	409
																	1200	16.8	5.2	5.7	--
																	1205	17.1	5.3	5.5	409
106	63F 30	Well 6	I	371128	755721	11/15/90	Na R	8.83	3.7	4.6	3.14	1124	11.80	0.50	-6.05	-33.5	1130	17.8	5.5	8.9	584
																	1135	17.9	5.5	9.0	581
																	1140	17.8	5.5	9.0	575
																	1145	17.8	5.5	8.9	576
																	1150	17.8	5.5	8.9	574
																	1155	17.9	5.5	8.9	574

Appendix A.--*Summary of well construction and water quality data (cont.)*

Well no.	Well name	Local identifier	Type	Latitude	Longitude	Sampling date (mo/d/yr)	Formation or group; hydrogeologic setting	Altitude of land surface	Top of screen	Bottom of screen	Depth to water	Pump start time	Tritium concentration	Tritium one std. dev.	Delta O-18	Delta D	Time of measurement	Temperature C	pH	DO	Specific Conductance
																	1200	17.8	5.5	8.9	574
																	1205	--	5.5	8.9	574
107	63F 31	Well 7A	C1	371136	755802	11/15/90	Na R	9.69	2.7	3.7	2.29	935	11.40	0.50	-6.30	-34.5	940	17.1	5.5	5.6	457
																	945	17.2	5.5	5.5	458
																	950	17.2	5.4	5.5	458
																	955	17.2	5.5	5.4	458
																	1000	17.2	5.5	5.3	458
																	1005	17.2	5.5	5.2	458
108	63F 48	Well 7B	C2	371136	755802	11/15/90	Na R	9.53	8.5	9.4	2.15	823	26.00	0.90	-6.40	-35.5	850	15.9	5.6	2.2	227
																	855	15.9	5.6	2.2	227
																	900	15.9	5.6	2.1	226
																	905	15.9	5.6	2.1	226
																	910	15.7	5.6	2.1	227
																	915	15.6	5.7	2.0	229
																	920	15.5	5.6	2.1	229
																	925	15.5	5.6	2.1	230
																	930	15.5	5.6	2.1	230
109	63F 32	Well 8	I	371136	755748	11/15/90	Na R	8.82	2.9	3.7	1.90	1027	13.20	0.50	-6.30	-34.0	1035	18.5	5.3	6.6	614
																	1040	18.5	5.3	6.6	--
																	1045	18.4	5.3	6.8	604
																	1050	18.3	5.3	6.7	610
																	1055	18.4	5.3	6.7	612
																	1100	18.4	5.3	6.8	612
																	1105	18.4	5.3	6.8	612

Appendix B. – *Summary of chlorofluorocarbon data*

[CFC–11, chlorofluorocarbon–11; CFC–12, chlorofluorocarbon–12; pg/kg, picograms per kilogram of solution; pptv, parts per trillion (volume); – – –, no data; C, contaminated– – CFC concentration > modern; Modern, CFC concentration = modern]

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC–based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12
1	KE Cc 28	KE 401	1	10/29/90	1713	41.8	40.1	13.6	57.6	1961.5	1963.5		
1	KE Cc 28	KE 401	2	10/29/90	1716	40.3	16.3	13.1	23.3	1961.0	1957.0		
1	KE Cc 28	KE 401	3	10/29/90	1720	33.6	18.9	11.0	27.2	1960.0	1958.0	6.00	6.00
1	KE Cc 28	KE 401	4	10/29/90	1724	46.4	38.9	15.1	55.8	1962.0	1963.5	1961.08	1960.33
1	KE Cc 28	KE 401	5	10/29/90	1728	44.8	18.0	14.6	25.8	1961.5	1957.5	29.74	30.49
1	KE Cc 28	KE 401	6	10/29/90	1733	37.1	33.8	12.1	48.4	1960.5	1962.5	0.67	2.87
2	KE Bd 39	KE 404	1	10/29/90	1525	55.4	54.3	18.1	77.9	1962.5	1966.0		
2	KE Bd 39	KE 404	2	10/29/90	1529	39.7	6.4	12.9	9.2	1961.0	1951.0	5.00	5.00
2	KE Bd 39	KE 404	3	10/29/90	1544	24.9	24.6	8.1	35.4	1958.0	1960.0	1960.70	1958.20
2	KE Bd 39	KE 404	5	10/29/90	1552	38.4	4.1	12.5	5.9	1961.0	1949.0	30.13	32.63
2	KE Bd 39	KE 404	6	10/29/90	1556	38.3	47.4	12.5	68.0	1961.0	1965.0	1.47	7.03
3	Hd 15–07	NC 204	1	10/30/90	913	257.7	175.4	84.0	251.7	1972.5	1976.5		
3	Hd 15–07	NC 204	2	10/30/90	917	271.1	130.1	88.4	186.7	1972.5	1973.0		
3	Hd 15–07	NC 204	3	10/30/90	921	257.8	123.3	84.0	176.9	1972.5	1972.5		
3	Hd 15–07	NC 204	4	10/30/90	927	264.7	153.7	86.3	220.6	1972.5	1975.0		
3	Hd 15–07	NC 204	5	10/30/90	932	274.2	133.2	89.4	191.1	1972.5	1973.5	8.00	8.00
3	Hd 15–07	NC 204	6	10/30/90	934	266.6	153.1	86.9	219.7	1972.5	1974.5	1972.63	1974.13
3	Hd 15–07	NC 204	7	10/30/90	– – –	310.2	137.8	101.1	197.8	1973.5	1973.5	18.21	16.71
3	Hd 15–07	NC 204	8	10/30/90	942	260.5	149.6	84.9	214.7	1972.5	1974.5	0.33	1.19
4	Hd 14–01	NC 105	1	10/30/90	1101	33.9	107.2	11.0	153.8	1960.0	1971.5	4.00	4.00
4	Hd 14–01	NC 105	2	10/30/90	1113	32.6	84.7	10.6	121.5	1960.0	1969.5	1959.50	1969.88
4	Hd 14–01	NC 105	3	10/30/90	1123	23.8	74.2	7.8	106.4	1958.0	1968.5	31.33	20.96
4	Hd 14–01	NC 105	4	10/30/90	1128	31.9	92.7	10.4	133.0	1960.0	1970.0	0.87	1.08
5	KE Bg 35	KE 101	1	10/29/90	1220	593.0	265.6	193.3	381.1	1982.5	1984.5		
5	KE Bg 35	KE 101	3	10/29/90	1235	591.8	224.4	192.9	322.1	1982.5	1981.0	5.00	5.00
5	KE Bg 35	KE 101	4	10/29/90	1243	617.9	257.0	201.4	368.8	1983.5	1983.5	1982.80	1983.10
5	KE Bg 35	KE 101	5	10/29/90	1247	593.7	244.1	193.5	350.4	1982.5	1982.5	8.03	7.73
5	KE Bg 35	KE 101	6	10/29/90	1253	611.2	262.7	199.2	377.0	1983.0	1984.0	0.40	1.24
5	KE Bg 35	KE 101	1	04/02/91	1344	631.4	267.9	205.8	384.5	1984.0	1984.5	1984.00	1985.00
5	KE Bg 35	KE 101	3	04/02/91	1410	624.3	281.3	203.5	403.7	1984.0	1985.5	7.25	6.25
6	KE Be 65	KE 405	2	10/29/90	1015	525.0	234.8	171.1	336.9	1980.0	1981.5	0.00	0.50
6	KE Be 65	KE 405	3	10/29/90	1019	488.4	293.8	159.2	421.6	1978.5	1986.5	5.00	5.00
6	KE Be 65	KE 405	4	10/29/90	1024	564.1	299.9	183.9	430.4	1981.5	1987.0	1980.30	1986.50
6	KE Be 65	KE 405	5	10/29/90	1030	542.4	345.5	176.8	495.9	1980.5	1991.0	10.53	4.33
6	KE Be 65	KE 405	6	10/29/90	1035	544.8	296.1	177.6	425.0	1981.0	1986.5	1.03	3.02
7	KE Be 53	LG 205S	1	04/02/91	1305	862.1	307.6	281.0	441.4	Modern	1987.0	4.00	4.00
7	KE Be 53	LG 205S	2	04/02/91	1309	742.4	261.2	242.0	374.8	1987.0	1984.0	1989.13	1985.38
7	KE Be 53	LG 205S	3	04/02/91	1318	858.3	303.8	279.8	436.1	Modern	1987.0	2.13	5.88
7	KE Be 53	LG 205S	4	04/02/91	1326	730.4	258.7	238.1	371.2	1987.0	1983.5	2.13	1.63
8	KE Be 52	LG 205D	1	11/05/90	1615	714.9	243.7	233.0	349.8	1986.5	1982.5		
8	KE Be 52	LG 205D	2	11/05/90	1617	768.3	251.4	250.4	360.8	1988.0	1983.0	5.00	5.00
8	KE Be 52	LG 205D	3	11/05/90	1623	742.1	208.4	241.9	299.1	1987.0	1979.5	1987.20	1981.90
8	KE Be 52	LG 205D	4	11/05/90	1632	735.8	244.9	239.9	351.4	1987.0	1982.5	3.65	8.95
8	KE Be 52	LG 205D	5	11/05/90	1636	757.1	235.9	246.8	338.5	1987.5	1982.0	0.51	1.24

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
8	KE Be 52	LG 205D	1	11/05/91	1315	615.0	250.7	200.5	359.8	1983.5	1983.0		
8	KE Be 52	LG 205D	2	11/05/91	1320	604.9	248.4	197.2	356.6	1983.0	1983.0		
8	KE Be 52	LG 205D	3	11/05/91	1334	643.5	257.9	209.8	370.1	1984.5	1983.5		
8	KE Be 52	LG 205D	4	11/05/91	1439	618.4	254.9	201.6	365.7	1983.5	1983.0		
8	KE Be 52	LG 205D	5	11/05/91	1442	642.5	266.7	209.4	382.7	1984.5	1984.5	8.00	8.00
8	KE Be 52	LG 205D	6	11/05/91	1534	647.5	269.4	211.1	386.6	1984.5	1984.5	1983.75	1983.44
8	KE Be 52	LG 205D	7	11/05/91	1539	631.6	258.6	205.9	371.1	1984.0	1983.5	8.10	8.41
8	KE Be 52	LG 205D	8	11/05/91	1543	590.9	244.2	192.6	350.5	1982.5	1982.5	0.71	0.68
8	KE Be 52	LG 205D	1	03/31/92	1355	669.5	270.1	218.2	387.6	1985.0	1984.5		
8	KE Be 52	LG 205D	2	03/31/92	1406	679.7	256.6	221.6	368.3	1985.5	1983.5	5.00	5.00
8	KE Be 52	LG 205D	3	03/31/92	1412	670.9	270.6	218.7	388.3	1985.5	1984.5	1985.30	1984.30
8	KE Be 52	LG 205D	4	03/31/92	1420	674.3	265.0	219.8	380.3	1985.5	1984.5	6.95	7.95
8	KE Be 52	LG 205D	5	03/31/92	1427	660.2	264.8	215.2	380.1	1985.0	1984.5	0.24	0.40
9	KE Be 61	LG 301	1	11/05/90	1225	526.4	108.9	171.6	156.3	1980.0	1971.5		
9	KE Be 61	LG 301	2	11/05/90	1230	539.9	104.5	176.0	149.9	1980.5	1971.0	5.00	5.00
9	KE Be 61	LG 301	3	11/05/90	1240	533.2	92.2	173.8	132.3	1980.0	1970.0	1979.50	1971.10
9	KE Be 61	LG 301	4	11/05/90	1250	490.8	105.1	160.0	150.8	1978.5	1971.0	11.35	19.75
9	KE Be 61	LG 301	5	11/05/90	1254	492.4	111.8	160.5	160.4	1978.5	1972.0	0.84	0.66
9	KE Be 61	LG 301	2	04/02/91	1351	251.4	83.9	81.9	120.5	1972.0	1969.5	3.00	4.00
9	KE Be 61	LG 301	3	04/02/91	1411	276.5	98.3	90.1	141.1	1973.0	1970.5	1972.17	1971.88
9	KE Be 61	LG 301	4	04/02/91	1415	239.7	84.3	78.1	121.0	1971.5	1969.5	19.09	19.38
9	KE Be 61	LG 301	5	04/02/91	1420	----	199.8	----	286.7	----	1978.0	0.62	3.56
9	KE Be 61	LG 301	1	11/04/91	1456	284.6	112.9	92.8	162.0	1973.0	1972.0	4.00	4.00
9	KE Be 61	LG 301	2	11/04/91	1515	273.4	108.4	89.1	155.6	1972.5	1971.5	1972.63	1971.50
9	KE Be 61	LG 301	3	11/04/91	1534	282.9	108.4	92.2	155.5	1973.0	1971.5	19.22	20.34
9	KE Be 61	LG 301	4	11/04/91	1657	242.7	104.8	79.1	150.3	1972.0	1971.0	0.41	0.35
9	KE Be 61	LG 301	1	11/05/91	1108	211.7	91.6	69.0	131.4	1971.0	1970.0		
9	KE Be 61	LG 301	2	11/05/91	1208	209.7	91.3	68.4	131.0	1971.0	1970.0		
9	KE Be 61	LG 301	3	11/05/91	1215	232.3	106.5	75.7	152.8	1971.5	1971.5	6.00	6.00
9	KE Be 61	LG 301	4	11/05/91	1220	237.2	104.0	77.3	149.3	1971.5	1971.0	1971.42	1970.67
9	KE Be 61	LG 301	5	11/05/91	1702	228.9	95.3	74.6	136.8	1971.5	1970.5	20.43	21.18
9	KE Be 61	LG 301	6	11/05/91	1705	253.7	105.3	82.7	151.2	1972.0	1971.0	0.34	0.55
9	KE Be 61	LG 301	1	11/06/91	1600	203.1	91.0	66.2	130.6	1970.5	1970.0		
9	KE Be 61	LG 301	2	11/06/91	1609	229.9	103.6	74.9	148.7	1971.5	1971.0		
9	KE Be 61	LG 301	3	11/06/91	1634	221.6	101.6	72.2	145.8	1971.0	1971.0	6.00	6.00
9	KE Be 61	LG 301	4	11/06/91	1734	225.5	101.9	73.5	146.2	1971.5	1971.0	1971.00	1970.67
9	KE Be 61	LG 301	5	11/06/91	1738	218.8	101.2	71.3	145.3	1971.0	1971.0	20.85	21.18
9	KE Be 61	LG 301	6	11/06/91	1745	204.7	92.5	66.7	132.8	1970.5	1970.0	0.41	0.47
10	KE Be 62	LG 314	1	11/06/90	1030	1176.6	315.5	383.5	452.8	C	1988.0		
10	KE Be 62	LG 314	2	11/06/90	1034	1022.8	375.7	333.4	539.1	C	Modern		
10	KE Be 62	LG 314	3	11/06/90	1043	1607.4	373.8	524.0	536.4	C	Modern	1.00	5.00
10	KE Be 62	LG 314	4	11/06/90	1100	924.0	871.3	301.2	1250.4	C	C	1986.00	1988.84
10	KE Be 62	LG 314	5	11/06/90	1110	1182.2	308.9	385.4	443.4	C	1987.5	4.85	2.01
10	KE Be 62	LG 314	6	11/06/90	1130	700.6	302.1	228.4	433.5	1986.0	1987.0	----	1.67

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC–based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12
10	KE Be 62	LG 314	2	11/06/91	919	793.7	329.3	258.7	472.6	1988.5	1989.0	4.00	4.00
10	KE Be 62	LG 314	3	11/06/91	924	772.3	312.3	251.8	448.2	1988.0	1987.5	1988.63	1988.25
10	KE Be 62	LG 314	4	11/06/91	1122	806.3	318.5	262.8	457.1	1989.0	1988.0	3.22	3.60
10	KE Be 62	LG 314	5	11/06/91	1126	803.1	324.2	261.8	465.3	1989.0	1988.5	0.41	0.56
10	KE Be 62	LG 314	1	03/31/92	1524	720.4	292.8	234.8	420.3	1986.5	1986.5		
10	KE Be 62	LG 314	2	03/31/92	1537	813.4	306.3	265.1	439.6	1989.5	1987.0	5.00	5.00
10	KE Be 62	LG 314	3	03/31/92	1559	740.9	294.8	241.5	423.1	1987.0	1986.5	1987.40	1986.60
10	KE Be 62	LG 314	4	03/31/92	1608	724.8	288.9	236.2	414.5	1987.0	1986.0	4.85	5.65
10	KE Be 62	LG 314	5	03/31/92	1620	734.5	302.8	239.4	434.5	1987.0	1987.0	1.07	0.37
11	KE Be 163	LG 514	1	11/06/90	1433	652.0	227.7	212.5	326.7	1984.5	1981.0	4.00	4.00
11	KE Be 163	LG 514	2	11/06/90	1438	888.6	228.1	289.7	327.4	Modern	1981.0	1986.09	1980.88
11	KE Be 163	LG 514	4	11/06/90	1448	666.6	233.3	217.3	334.8	1985.0	1981.5	4.76	9.98
11	KE Be 163	LG 514	5	11/06/90	1452	634.8	216.2	206.9	310.2	1984.0	1980.0	2.77	0.54
11	KE Be 163	LG 514	1	11/06/91	1207	568.9	242.6	185.4	348.2	1982.0	1982.5		
11	KE Be 163	LG 514	2	11/06/91	1212	570.4	238.9	185.9	342.9	1982.0	1982.0		
11	KE Be 163	LG 514	3	11/06/91	1217	609.0	252.6	198.5	362.5	1983.0	1983.0		
11	KE Be 163	LG 514	4	11/06/91	1222	616.7	251.5	201.0	360.9	1983.5	1983.0	7.00	7.00
11	KE Be 163	LG 514	5	11/06/91	1400	604.9	252.7	197.2	362.6	1983.0	1983.0	1982.50	1982.64
11	KE Be 163	LG 514	6	11/06/91	1404	590.0	253.0	192.3	363.1	1982.5	1983.0	9.35	9.21
11	KE Be 163	LG 514	7	11/06/91	1408	561.4	236.4	183.0	339.3	1981.5	1982.0	0.65	0.44
12	KE Be 162	LG 414	1	11/06/90	1323	114.5	9.8	37.3	14.1	1967.0	1953.5	4.00	4.00
12	KE Be 162	LG 414	2	11/06/90	1329	122.6	11.2	40.0	16.0	1967.5	1954.5	1967.25	1953.88
12	KE Be 162	LG 414	3	11/06/90	1333	129.4	9.4	42.2	13.4	1967.5	1953.5	23.60	36.98
12	KE Be 162	LG 414	4	11/06/90	1335	114.0	10.4	37.2	14.9	1967.0	1954.0	0.25	0.41
12	KE Be 162	LG 414	1	11/06/91	1438	40.1	14.4	13.1	20.7	1961.0	1956.0	4.00	4.00
12	KE Be 162	LG 414	2	11/06/91	1442	55.3	14.0	18.0	20.0	1962.5	1956.0	1962.25	1956.63
12	KE Be 162	LG 414	3	11/06/91	1500	62.1	18.9	20.2	27.1	1963.5	1958.0	29.60	35.22
12	KE Be 162	LG 414	4	11/06/91	1505	50.1	15.2	16.3	21.8	1962.0	1956.5	0.90	0.82
13	KE Be 64	LG 313S	1	11/06/90	1706	728.5	243.9	237.5	350.1	1987.0	1982.5	3.00	4.00
13	KE Be 64	LG 313S	2	11/06/90	1710	1005.3	285.6	327.7	409.9	C	1986.0	1987.33	1983.00
13	KE Be 64	LG 313S	4	11/06/90	1719	736.0	244.3	239.9	350.6	1987.0	1982.5	3.52	7.85
13	KE Be 64	LG 313S	5	11/06/90	1722	776.7	223.8	253.2	321.2	1988.0	1981.0	0.47	1.84
14	KE Be 63	LG 313D	2	11/06/90	1610	369.0	111.7	120.3	160.3	1975.0	1971.5		
14	KE Be 63	LG 313D	3	11/06/90	1615	393.2	120.0	128.2	172.2	1975.5	1972.5	5.00	5.00
14	KE Be 63	LG 313D	4	11/06/90	1628	351.3	115.9	114.5	166.3	1974.5	1972.0	1974.60	1971.70
14	KE Be 63	LG 313D	5	11/06/90	1602	343.5	115.5	105.8	157.6	1974.0	1971.5	16.25	19.15
14	KE Be 63	LG 313D	6	11/06/90	1630	329.4	100.1	107.4	143.7	1974.0	1971.0	0.58	0.51
15	KE Be 161	LG 667	1	11/07/90	1632	584.3	214.9	190.5	308.4	1982.5	1980.0	4.00	4.00
15	KE Be 161	LG 667	3	11/07/90	1641	601.7	190.5	196.1	273.3	1983.0	1977.5	1982.63	1978.75
15	KE Be 161	LG 667	4	11/07/90	1657	600.8	215.7	195.8	309.5	1983.0	1980.0	8.23	12.10
15	KE Be 161	LG 667	5	11/07/90	1701	573.7	191.8	187.0	275.2	1982.0	1977.5	0.41	1.25

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC–based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12
15 KE Be 161	LG 667	1	04/02/91	1151	501.9	224.0	163.6	321.5	1979.0	1981.0	1978.75	1981.00
15 KE Be 161	LG 667	3	04/02/91	1203	488.3	228.2	159.2	327.6	1978.5	1981.0	12.50	10.25
15 KE Be 161	LG 667	1	11/07/91	1141	549.7	228.6	179.2	328.1	1981.0	1981.0	0.25	0.00
15 KE Be 161	LG 667	2	11/07/91	1145	575.5	237.9	187.6	341.4	1982.0	1982.0		
15 KE Be 161	LG 667	3	11/07/91	1150	559.9	237.7	182.5	341.2	1981.5	1982.0	6.00	6.00
15 KE Be 161	LG 667	4	11/07/91	1302	553.0	223.6	180.3	320.9	1981.0	1981.0	1980.92	1981.33
15 KE Be 161	LG 667	5	11/07/91	1308	535.2	233.3	174.5	334.8	1980.5	1981.5	10.94	10.52
15 KE Be 161	LG 667	6	11/07/91	1330	514.7	217.8	167.8	312.6	1979.5	1980.5	0.79	0.55
16 KE Be 160	LG 567	1	11/19/90	1630	138.0	48.8	45.0	70.0	1968.0	1965.0		
16 KE Be 160	LG 567	2	11/19/90	1634	139.4	46.4	45.5	66.5	1968.0	1964.5		
16 KE Be 160	LG 567	3	11/19/90	1638	136.6	37.9	44.5	54.5	1968.0	1963.5	6.00	6.00
16 KE Be 160	LG 567	4	11/19/90	1642	164.4	37.4	53.6	53.7	1969.0	1963.0	1968.42	1964.17
16 KE Be 160	LG 567	5	11/19/90	1650	141.2	50.8	46.0	72.9	1968.0	1965.5	22.47	26.72
16 KE Be 160	LG 567	6	11/19/90	1655	175.7	38.6	57.3	55.4	1969.5	1963.5	0.61	0.90
16 KE Be 160	LG 567	1	04/02/91	1115	133.9	74.1	43.6	106.4	1968.0	1968.5	1967.75	1968.25
16 KE Be 160	LG 567	3	04/02/91	1129	130.9	71.1	42.7	102.1	1967.5	1968.0	23.50	23.00
16 KE Be 160	LG 567	1	11/07/91	1020	141.4	70.2	46.1	100.7	1968.0	1968.0	0.25	0.25
16 KE Be 160	LG 567	2	11/07/91	1029	162.7	80.5	53.0	115.5	1969.0	1969.0		
16 KE Be 160	LG 567	3	11/07/91	1035	174.8	85.0	57.0	122.0	1969.5	1969.5	6.00	6.00
16 KE Be 160	LG 567	4	11/07/91	1109	166.3	93.7	54.2	134.5	1969.0	1970.0	1968.92	1969.17
16 KE Be 160	LG 567	5	11/07/91	1114	175.7	79.9	57.3	114.7	1969.5	1969.0	22.94	22.69
16 KE Be 160	LG 567	6	11/07/91	1118	147.5	83.8	48.1	120.3	1968.5	1969.5	0.53	0.62
16 KE Be 160	LG 567	1	03/31/92	1728	210.3	80.1	68.5	114.9	1971.0	1969.0		
16 KE Be 160	LG 567	2	03/31/92	1734	176.6	74.1	57.6	106.3	1969.5	1968.5	5.00	5.00
16 KE Be 160	LG 567	3	03/31/92	1741	203.8	79.9	66.4	114.6	1970.5	1969.0	1970.30	1968.60
16 KE Be 160	LG 567	4	03/31/92	1748	177.8	72.2	58.0	103.7	1969.5	1968.0	21.95	23.65
16 KE Be 160	LG 567	5	03/31/92	1755	211.6	73.9	69.0	106.0	1971.0	1968.5	0.68	0.37
17 KE Be 159	LG 467	1	11/07/90	1525	70.0	3.5	22.8	5.0	1964.0	1948.5		
17 KE Be 159	LG 467	2	11/07/90	1529	69.0	0.0	22.5	0.0	1964.0	1940.0	5.00	4.00
17 KE Be 159	LG 467	3	11/07/90	1533	62.6	----	20.4	----	1963.5	----	1963.90	1945.50
17 KE Be 159	LG 467	4	11/07/90	1544	68.0	0.0	22.2	0.0	1964.0	1940.0	26.95	45.35
17 KE Be 159	LG 467	5	11/07/90	1549	69.3	9.9	22.6	14.2	1964.0	1953.5	0.20	5.78
17 KE Be 159	LG 467	1	04/02/91	1014	66.5	18.2	21.7	26.1	1963.5	1958.0	1963.25	1956.50
17 KE Be 159	LG 467	3	04/02/91	1030	56.7	12.5	18.5	18.0	1963.0	1955.0	28.00	34.75
17 KE Be 159	LG 467	0	11/07/91	----	11.0	3.8	3.6	5.4	1954.5	1948.5	4.25	3.25
17 KE Be 159	LG 467	0	11/07/91	----	17.0	0.0	5.5	0.0	1956.5	1940.0		
17 KE Be 159	LG 467	1	11/07/91	1425	14.8	11.0	4.8	15.7	1956.0	1954.5		
17 KE Be 159	LG 467	2	11/07/91	1438	20.8	0.6	6.8	0.8	1957.0	1942.5		
17 KE Be 159	LG 467	3	11/07/91	1443	31.8	4.1	10.4	5.9	1960.0	1949.0		
17 KE Be 159	LG 467	4	11/07/91	1450	14.9	5.3	4.8	7.6	1956.0	1950.0		
17 KE Be 159	LG 467	5	11/07/91	1500	32.4	4.0	10.5	5.8	1960.0	1949.0	10.00	10.00
17 KE Be 159	LG 467	6	11/07/91	1506	8.8	0.0	2.9	0.0	1954.0	1940.0	1956.60	1945.35
17 KE Be 159	LG 467	7	11/07/91	1513	19.2	0.0	6.3	0.0	1957.0	1940.0	35.25	46.50
17 KE Be 159	LG 467	8	11/07/91	1516	12.0	0.0	3.9	0.0	1955.0	1940.0	1.95	5.14

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
18 KE Be 167	LG 635	1	11/07/90	1232	926.3	335.6	301.9	481.6	C	1989.5		
18 KE Be 167	LG 635	2	11/07/90	1236	977.5	350.9	318.6	503.7	C	Modern	5.00	5.00
18 KE Be 167	LG 635	3	11/07/90	1241	1321.8	307.3	430.9	441.1	C	1987.0	C	1989.60
18 KE Be 167	LG 635	4	11/07/90	1252	1000.7	352.3	326.2	505.6	C	Modern	----	1.25
18 KE Be 167	LG 635	5	11/07/90	1256	994.7	325.0	324.2	466.3	C	1988.5	----	1.74
19 KE Be 166	LG 535	1	11/07/90	1134	702.3	273.5	228.9	392.5	1986.0	1985.0		
19 KE Be 166	LG 535	2	11/07/90	1143	724.0	288.0	236.0	413.3	1987.0	1986.0	5.00	5.00
19 KE Be 166	LG 535	3	11/07/90	1147	748.8	251.4	244.1	360.8	1987.5	1983.0	1986.90	1984.70
19 KE Be 166	LG 535	4	11/07/90	1154	727.5	286.9	237.1	411.8	1987.0	1986.0	3.95	6.15
19 KE Be 166	LG 535	5	11/07/90	1158	728.4	257.9	237.4	370.1	1987.0	1983.5	0.49	1.25
20 KE Be 165	LG 435	1	11/07/90	1020	339.2	99.9	110.6	143.3	1974.5	1971.0	4.00	4.00
20 KE Be 165	LG 435	2	11/07/90	1023	375.7	117.0	122.5	168.0	1975.0	1972.0	1974.75	1971.50
20 KE Be 165	LG 435	3	11/07/90	1027	340.4	101.7	110.9	145.9	1974.5	1971.0	16.10	19.35
20 KE Be 165	LG 435	4	11/07/90	1033	362.3	116.2	118.1	166.8	1975.0	1972.0	0.25	0.50
20 KE Be 165	LG 435	1	04/02/91	1513	371.9	141.5	121.2	203.1	1975.0	1974.0		
20 KE Be 165	LG 435	2	04/02/91	1517	----	181.0	----	259.7	----	1977.0	4.00	5.00
20 KE Be 165	LG 435	3	04/02/91	1526	344.0	138.6	112.1	198.9	1974.5	1973.5	1977.25	1977.30
20 KE Be 165	LG 435	4	04/02/91	1542	508.6	224.8	165.8	322.7	1979.5	1981.0	14.00	13.95
20 KE Be 165	LG 435	5	04/02/91	1546	530.0	224.4	172.8	322.0	1980.0	1981.0	2.51	3.25
21 KE Be 59	LG 325	1	11/19/90	1155	733.3	262.0	239.0	375.9	1987.0	1984.0		
21 KE Be 59	LG 325	2	11/19/90	1205	805.9	286.6	262.7	411.4	1989.0	1986.0		
21 KE Be 59	LG 325	3	11/19/90	1218	922.7	269.4	300.8	386.6	C	1984.5	5.00	6.00
21 KE Be 59	LG 325	4	11/19/90	1225	855.8	277.7	279.0	398.6	Modern	1985.5	1989.46	1984.83
21 KE Be 59	LG 325	5	11/19/90	1230	835.1	274.9	272.2	394.5	Modern	1985.0	1.43	6.05
21 KE Be 59	LG 325	6	11/19/90	1235	810.7	264.1	264.3	379.0	1989.5	1984.0	1.44	0.75
22 KE Be 164	LG 425	1	11/19/90	1037	302.2	70.1	98.5	100.7	1973.5	1968.0		
22 KE Be 164	LG 425	2	11/19/90	1043	291.3	83.2	95.0	119.3	1973.0	1969.0		
22 KE Be 164	LG 425	3	11/19/90	1048	233.8	44.1	76.2	63.3	1971.5	1964.5	6.00	6.00
22 KE Be 164	LG 425	4	11/19/90	1055	265.5	69.6	86.5	99.9	1972.5	1968.0	1972.67	1966.92
22 KE Be 164	LG 425	5	11/19/90	1100	246.3	49.7	80.3	71.4	1972.0	1965.5	18.22	23.97
22 KE Be 164	LG 425	6	11/19/90	1107	311.2	58.0	101.4	83.3	1973.5	1966.5	0.75	1.57
23 KEBe 169	LG 371	1	04/02/91	1147	392.0	46.4	127.8	66.6	1975.5	1964.5	1980.33	1971.83
23 KEBe 169	LG 371	2	04/02/91	1150	620.6	156.2	202.3	224.2	1983.5	1975.0	10.92	19.42
23 KEBe 169	LG 371	4	04/02/91	1212	569.9	173.2	185.8	248.6	1982.0	1976.0	3.47	5.20
24 KE Be 170	LG 381	1	04/02/91	1103	483.3	121.9	157.6	175.0	1978.5	1972.5	3.00	4.00
24 KE Be 170	LG 381	2	04/02/91	1108	----	103.6	----	148.7	----	1971.0	1977.50	1973.63
24 KE Be 170	LG 381	3	04/02/91	1125	473.6	133.8	154.4	192.1	1978.0	1973.5	13.75	17.63
24 KE Be 170	LG 381	4	04/02/91	1129	417.1	189.1	136.0	271.4	1976.0	1977.5	1.08	2.41
25 KE Be 50	LG 203	1	11/19/90	1423	816.9	304.1	266.3	436.4	1989.5	1987.0		
25 KE Be 50	LG 203	2	11/19/90	1427	907.9	311.1	295.9	446.4	C	1987.5		
25 KE Be 50	LG 203	3	11/19/90	1439	1051.1	284.7	342.6	408.6	C	1986.0	1.00	6.00
25 KE Be 50	LG 203	4	11/19/90	1456	975.0	361.6	317.8	519.0	C	Modern	1989.50	1988.07
25 KE Be 50	LG 203	5	11/19/90	1500	907.2	298.4	295.7	428.2	C	1987.0	1.39	2.82
25 KE Be 50	LG 203	6	11/19/90	1504	965.2	339.2	314.6	486.7	C	1990.0	----	1.76

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC–based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12
25	KE Be 50	LG 203	1	11/14/91	1400	821.0	345.1	267.6	495.2	1989.5	1990.5		
25	KE Be 50	LG 203	2	11/14/91	1409	797.2	334.7	259.8	480.3	1989.0	1989.5	5.00	5.00
25	KE Be 50	LG 203	3	11/14/91	1417	823.6	428.8	268.5	615.4	1990.0	Modern	1989.40	1990.07
25	KE Be 50	LG 203	4	11/14/91	1427	796.0	337.6	259.5	484.5	1989.0	1989.5	2.47	1.80
25	KE Be 50	LG 203	5	11/14/91	1435	814.6	330.3	265.5	474.1	1989.5	1989.0	0.37	1.02
25	KE Be 50	LG 203	1	03/31/92	1205	880.3	347.9	286.9	499.2	Modern	1991.0		
25	KE Be 50	LG 203	2	03/31/92	1212	915.9	332.6	298.6	477.3	Modern	1989.5	5.00	5.00
25	KE Be 50	LG 203	3	03/31/92	1220	918.6	348.3	299.4	499.9	Modern	1991.0	Modern	1990.50
25	KE Be 50	LG 203	4	03/31/92	1229	902.1	335.0	294.1	480.8	Modern	1989.5	0.00	1.75
25	KE Be 50	LG 203	5	03/31/92	1237	917.0	353.4	298.9	507.2	Modern	1991.5	----	0.84
26	KE Be 49	LG 202	1	11/20/90	821	703.5	273.1	229.3	392.0	1986.0	1985.0		
26	KE Be 49	LG 202	2	11/20/90	824	766.5	287.5	249.9	412.6	1987.5	1986.0		
26	KE Be 49	LG 202	3	11/20/90	829	816.9	278.8	266.3	400.1	1989.5	1985.5	6.00	6.00
26	KE Be 49	LG 202	4	11/20/90	835	827.5	304.2	269.7	436.6	1990.5	1987.0	1988.50	1986.33
26	KE Be 49	LG 202	5	11/20/90	841	756.3	282.0	246.5	404.7	1987.5	1985.5	2.39	4.56
26	KE Be 49	LG 202	6	11/20/90	847	824.1	331.7	268.6	476.0	1990.0	1989.0	1.61	1.34
27	KE Be 51	LG 204	1	11/20/90	1616	775.5	234.8	252.8	337.0	1988.0	1981.5		
27	KE Be 51	LG 204	2	11/20/90	1620	749.7	232.9	244.4	334.2	1987.5	1981.5		
27	KE Be 51	LG 204	3	11/20/90	1624	772.1	211.9	251.7	304.1	1988.0	1979.5	6.00	6.00
27	KE Be 51	LG 204	4	11/20/90	1628	718.9	215.8	234.3	309.8	1986.5	1980.0	1987.17	1980.58
27	KE Be 51	LG 204	5	11/20/90	1632	748.7	235.4	244.0	337.9	1987.5	1981.5	3.72	10.31
27	KE Be 51	LG 204	6	11/20/90	1639	673.5	210.8	219.5	302.6	1985.5	1979.5	0.90	0.93
28	KE Be 60	LG 319	1	11/21/90	904	1047.7	199.8	341.5	286.7	C	1978.0	Modern	1979.75
28	KE Be 60	LG 319	2	11/21/90	927	849.1	233.3	276.8	334.9	Modern	1981.5	----	11.14
29	KE Be 158	LG 446	1	11/21/90	1019	770.3	280.4	251.1	402.4	1988.0	1985.5		
29	KE Be 158	LG 446	2	11/21/90	1023	773.5	286.6	252.1	411.3	1988.0	1986.0		
29	KE Be 158	LG 446	3	11/21/90	1029	763.1	229.9	248.8	330.0	1987.5	1981.5	6.00	6.00
29	KE Be 158	LG 446	4	11/21/90	1032	718.2	236.3	234.1	339.2	1986.5	1982.0	1987.50	1984.08
29	KE Be 158	LG 446	5	11/21/90	1037	746.7	289.9	243.4	416.1	1987.5	1986.0	3.39	6.81
29	KE Be 158	LG 446	6	11/21/90	1042	744.3	257.9	242.6	370.1	1987.5	1983.5	0.50	1.86
30	Gb 41–12	VDE 2	1	11/08/90	1640	920.5	351.2	300.0	504.0	C	Modern		
30	Gb 41–12	VDE 2	2	11/08/90	1652	885.4	353.7	288.6	507.6	Modern	Modern	1	5.00
30	Gb 41–12	VDE 2	3	11/08/90	1656	1315.4	326.6	428.8	468.7	C	1988.5	Modern	1990.10
30	Gb 41–12	VDE 2	4	11/08/90	1705	910.9	328.3	296.9	471.1	C	1989.0	----	0.76
30	Gb 41–12	VDE 2	5	11/08/90	1710	927.0	339.5	302.2	487.3	C	1990.0	----	1.24
31	Gb 41–09	VDE 3	3	04/02/91	1659	706.7	342.5	230.4	491.6	1986.5	1990.5	1986.50	1990.50
32	Gb 41–22	----	1	04/02/91	1606	679.0	279.6	221.3	401.3	1985.5	1985.5	1985.50	1985.50
33	Gb 42–06	CY 103	1	11/08/90	926	916.9	330.9	298.9	474.9	C	1989.0	5.75	5.75
33	Gb 42–06	CY 103	2	11/08/90	932	927.8	341.9	302.4	490.7	C	1990.0	1	5.00
33	Gb 42–06	CY 103	3	11/08/90	938	1258.9	312.2	410.4	448.1	C	1987.5	Modern	1988.90
33	Gb 42–06	CY 103	4	11/08/90	948	928.4	330.4	302.6	474.2	C	1989.0	----	1.96
33	Gb 42–06	CY 103	5	11/08/90	955	908.5	331.7	296.1	476.0	Modern	1989.0	----	0.80
34	Gb 42–08	CY 302	1	11/08/90	1255	876.4	331.3	285.7	475.4	Modern	1989.0		
34	Gb 42–08	CY 302	2	11/08/90	1310	956.1	324.5	311.6	465.7	C	1988.5	1	5.00
34	Gb 42–08	CY 302	3	11/08/90	1315	1345.7	315.5	438.6	452.8	C	1988.0	Modern	1989.44
34	Gb 42–08	CY 302	4	11/08/90	1325	1001.9	369.5	326.6	530.3	C	Modern	----	1.41
34	Gb 42–08	CY 302	5	11/08/90	1330	1003.9	348.4	327.2	499.9	C	Modern	----	1.20

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
34 Gb 42-08		CY 302	1	03/30/92	1710	772.3	374.4	251.8	537.4	1988.0	Modern		
34 Gb 42-08		CY 302	2	03/30/92	1715	743.6	349.3	242.4	501.4	1987.0	1991.5	5.00	5.00
34 Gb 42-08		CY 302	3	03/30/92	1723	772.8	370.2	251.9	531.2	1988.0	Modern	1987.80	1991.95
34 Gb 42-08		CY 302	4	03/30/92	1730	760.1	354.7	247.8	509.0	1987.5	1991.5	4.45	0.30
34 Gb 42-08		CY 302	5	03/30/92	1739	791.9	368.4	258.1	528.6	1988.5	Modern	0.51	0.37
35 Gb 42-05		CY 202	1	11/08/90	1110	735.0	260.5	239.6	373.9	1987.0	1984.0		
35 Gb 42-05		CY 202	2	11/08/90	1117	702.7	264.0	229.0	378.8	1986.0	1984.0	5.00	5.00
35 Gb 42-05		CY 202	3	11/08/90	1122	711.6	258.3	231.9	370.7	1986.5	1983.5	1986.40	1983.50
35 Gb 42-05		CY 202	4	11/08/90	1132	711.7	250.7	219.3	342.1	1985.5	1982.0	4.46	7.36
35 Gb 42-05		CY 202	5	11/08/90	1136	722.9	262.4	235.6	376.6	1987.0	1984.0	0.58	0.77
35 Gb 42-05		CY 202	1	03/30/92	1552	574.8	288.6	187.4	414.2	1982.0	1986.0		
35 Gb 42-05		CY 202	2	03/30/92	1600	583.0	270.9	190.0	388.8	1982.5	1984.5	5.00	5.00
35 Gb 42-05		CY 202	3	03/30/92	1607	587.8	287.2	191.6	412.2	1982.5	1986.0	1982.30	1985.40
35 Gb 42-05		CY 202	4	03/30/92	1614	581.5	274.6	189.5	394.0	1982.0	1985.0	9.95	6.85
35 Gb 42-05		CY 202	5	03/30/92	1625	583.2	283.8	190.1	407.3	1982.5	1985.5	0.24	0.58
36 Gb 42-07		CY 104	2	11/08/90	1436	533.7	144.6	174.0	207.6	1980.5	1974.0	4.00	4.00
36 Gb 42-07		CY 104	3	11/08/90	1458	795.8	117.0	259.4	167.9	1989.0	1972.0	1984.13	1973.63
36 Gb 42-07		CY 104	4	11/08/90	1520	591.8	146.3	192.9	210.0	1982.5	1974.0	6.73	17.23
36 Gb 42-07		CY 104	5	11/08/90	1530	643.0	150.3	209.6	215.7	1984.5	1974.5	3.15	0.96
36 Gb 42-07		CY 104	2	03/30/92	1409	452.6	278.1	147.5	399.1	1977.0	1985.5	4.00	4.00
36 Gb 42-07		CY 104	3	03/30/92	1414	448.8	215.4	146.3	309.1	1977.0	1980.0	1977.00	1980.88
36 Gb 42-07		CY 104	4	03/30/92	1422	443.9	201.8	144.7	289.6	1977.0	1978.5	15.25	11.37
36 Gb 42-07		CY 104	5	03/30/92	1430	441.7	207.9	144.0	298.3	1977.0	1979.5	0.00	2.72
37 Gb 42-09A		CY 204	2	04/02/91	1718	580.8	218.7	189.3	313.9	1982.0	1980.5	1983.33	1980.00
37 Gb 42-09A		CY 204	3	04/02/91	1724	691.0	215.7	225.2	309.5	1986.0	1980.0	7.92	11.25
37 Gb 42-09A		CY 204	4	04/02/91	1729	581.4	213.3	189.5	306.1	1982.0	1979.5	1.89	0.41
38 Gb 41-06		VD 32	1	11/20/90	1034	46.0	107.8	15.0	154.7	1962.0	1971.5		
38 Gb 41-06		VD 32	2	11/20/90	1039	47.9	107.2	15.6	153.8	1962.0	1971.5		
38 Gb 41-06		VD 32	3	11/20/90	1044	89.6	55.5	29.2	79.7	1965.5	1966.0	6.00	6.00
38 Gb 41-06		VD 32	4	11/20/90	1048	38.0	74.7	12.4	107.2	1961.0	1968.5	1962.00	1969.83
38 Gb 41-06		VD 32	5	11/20/90	1053	49.1	109.5	16.0	157.2	1962.0	1971.5	28.89	21.06
38 Gb 41-06		VD 32	6	11/20/90	1058	31.5	93.7	10.3	134.4	1959.5	1970.0	1.80	2.03
39 Gb 41-07		VD 33	1	11/20/90	1331	1602.5	106.1	522.4	152.3	C	1971.5		
39 Gb 41-07		VD 33	2	11/20/90	1336	1391.8	124.6	453.7	178.8	C	1972.5		
39 Gb 41-07		VD 33	3	11/20/90	1339	1260.0	89.3	410.7	128.2	C	1970.0	6	6.00
39 Gb 41-07		VD 33	4	11/20/90	1343	1152.0	87.2	375.5	125.2	C	1969.5	C	1971.33
39 Gb 41-07		VD 33	5	11/20/90	1346	1014.2	124.1	330.6	178.1	C	1972.5	----	19.56
39 Gb 41-07		VD 33	6	11/20/90	1349	992.3	114.3	323.5	164.0	C	1972.0	----	1.18
40 Gb 41-05		VD 31	1	11/20/90	1440	1530.9	321.1	499.0	460.9	C	1988.0	C	1988.00
40 Gb 41-05		VD 31	2	11/20/90	1443	1438.0	319.7	468.7	458.8	C	1988.0	----	2.89
41 QA Fd 2		WY 102	1	11/02/90	1006	23.1	0.0	7.5	0.0	1958.0	1940.0		
41 QA Fd 2		WY 102	2	11/02/90	1011	27.3	0.0	8.9	0.0	1959.0	1940.0		
41 QA Fd 2		WY 102	3	11/02/90	1016	15.0	----	4.9	----	1956.0	----	6.00	4.00
41 QA Fd 2		WY 102	4	11/02/90	1022	16.1	1.3	5.3	1.9	1956.0	1945.5	1957.67	1941.38
41 QA Fd 2		WY 102	5	11/02/90	1027	26.7	0.0	8.7	0.0	1958.5	1940.0	33.17	49.46
41 QA Fd 2		WY 102	6	11/02/90	1032	26.3	----	8.6	----	1958.5	----	1.21	2.38

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
41	QA Fd 2	WY 102	1	04/03/91	1028	34.9	9.2	11.4	13.2	1960.5	1953.0	1959.50	1953.25
41	QA Fd 2	WY 102	3	04/03/91	1052	27.1	9.4	8.8	13.5	1958.5	1953.5	31.76	38.01
42	QA Ed 39	QA 402	1	11/02/90	806	568.4	219.3	185.3	314.7	1982.0	1980.5	1.00	0.25
42	QA Ed 39	QA 402	2	11/02/90	808	569.0	214.3	185.5	307.6	1982.0	1980.0		
42	QA Ed 39	QA 402	3	11/02/90	812	571.4	188.8	186.2	271.0	1982.0	1977.5		
42	QA Ed 39	QA 402	4	11/02/90	818	548.3	222.9	178.7	319.9	1981.0	1981.0	7.00	7.00
42	QA Ed 39	QA 402	5	11/02/90	823	554.9	211.7	180.9	303.8	1981.0	1979.5	1981.57	1980.07
42	QA Ed 39	QA 402	6	11/02/90	828	570.1	221.5	185.8	317.9	1982.0	1981.0	9.27	10.77
42	QA Ed 39	QA 402	7	11/02/90	840	549.0	223.1	178.9	320.2	1981.0	1981.0	0.49	1.18
42	QA Ed 39	QA 402	1	04/03/91	800	541.3	226.6	176.4	325.2	1980.5	1981.0	1981.50	1981.75
42	QA Ed 39	QA 402	3	04/03/91	830	590.1	241.9	192.4	347.1	1982.5	1982.5	9.76	9.51
43	QA Ed 38	QA 302	1	04/03/91	859	182.8	113.0	59.6	162.2	1970.0	1972.0	1969.75	1972.00
43	QA Ed 38	QA 302	3	04/03/91	913	174.4	----	56.8	----	1969.5	----	21.51	19.26
44	QA Ed 38	TA 101	1	11/01/90	1551	605.7	261.5	197.4	375.3	1983.0	1984.0	0.25	
44	QA Ed 38	TA 101	2	11/01/90	1555	586.6	248.1	191.2	356.0	1982.5	1983.0		
44	QA Ed 38	TA 101	3	11/01/90	1542	588.6	181.8	191.9	260.9	1982.5	1977.0	6.00	6.00
44	QA Ed 38	TA 101	4	11/01/90	1607	580.8	238.5	189.3	342.3	1982.0	1982.0	1982.58	1981.67
44	QA Ed 38	TA 101	5	11/01/90	1611	608.0	247.0	198.2	354.5	1983.0	1982.5	8.25	9.17
44	QA Ed 38	TA 101	6	11/01/90	1615	587.6	229.0	191.5	328.6	1982.5	1981.5	0.34	2.23
45	CO Dc 146	CA 102	1	11/01/90	1427	710.2	301.9	231.5	433.2	1986.5	1987.0		
45	CO Dc 146	CA 102	2	11/01/90	1432	708.2	298.0	230.8	427.7	1986.5	1987.0		
45	CO Dc 146	CA 102	3	11/01/90	1436	744.0	270.9	242.5	388.8	1987.0	1984.5	6.00	6.00
45	CO Dc 146	CA 102	4	11/01/90	1441	671.9	298.1	219.0	427.8	1985.5	1987.0	1986.17	1986.00
45	CO Dc 146	CA 102	5	11/01/90	1445	690.2	257.7	225.0	369.8	1986.0	1983.5	4.67	4.84
45	CO Dc 146	CA 102	6	11/01/90	1450	684.2	303.6	223.0	435.7	1985.5	1987.0	0.55	1.44
45	CO Dc 146	CA 102	1	04/03/91	1257	680.7	314.2	221.9	450.9	1985.5	1987.5	1985.25	1987.25
45	CO Dc 146	CA 102	3	04/03/91	1322	664.3	303.4	216.5	435.4	1985.0	1987.0	6.01	4.01
46	Nd 41-04	SX 202	1	04/03/91	1041	1076.7	356.8	351.0	512.1	C	1992.0	1989.25	1990.59
46	Nd 41-04	SX 202	2	04/03/91	1044	830.6	362.8	270.7	520.7	1991.0	Modern	2.01	0.67
46	Nd 41-04	SX 202	4	04/03/91	1113	765.0	324.9	249.4	466.2	1987.5	1988.5	1.75	1.51
47	Og 43-02	SX 206	1	04/03/91	1247	663.5	319.3	216.3	458.3	1985.0	1988.0	4.00	4.00
47	Og 43-02	SX 206	2	04/03/91	1250	774.6	381.1	252.5	547.0	1988.0	Modern	1986.25	1988.19
47	Og 43-02	SX 206	3	04/03/91	1300	773.5	308.1	252.1	442.2	1988.0	1987.5	5.01	3.07
47	Og 43-02	SX 206	4	04/03/91	1303	632.7	290.0	206.2	416.2	1984.0	1986.0	1.79	1.92
48	Nb 24-03	SX 301	2	11/01/90	1246	161.7	192.9	52.7	276.9	1969.0	1977.5		
48	Nb 24-03	SX 301	3	11/01/90	1256	155.2	152.0	50.6	218.1	1969.0	1974.5	5.00	5.00
48	Nb 24-03	SX 301	4	11/01/90	1302	157.5	164.9	51.3	236.6	1969.0	1975.5	1969.00	1976.20
48	Nb 24-03	SX 301	5	11/01/90	1306	175.1	197.0	57.1	282.8	1969.5	1978.0	21.84	14.64
48	Nb 24-03	SX 301	6	11/01/90	1310	154.9	163.7	50.5	235.0	1968.5	1975.5	0.32	1.33
49	Pg 14-01	SX 205	1	10/30/90	1518	641.6	280.8	209.2	402.9	1984.5	1985.5		
49	Pg 14-01	SX 205	2	10/30/90	1522	628.6	285.2	204.9	409.3	1984.0	1986.0		
49	Pg 14-01	SX 205	3	10/30/90	1530	638.6	232.3	208.2	333.3	1984.5	1981.5	6.00	6.00
49	Pg 14-01	SX 205	4	10/30/90	1534	633.5	301.2	206.5	432.3	1984.0	1987.0	1984.08	1985.17
49	Pg 14-01	SX 205	5	10/30/90	1540	632.4	284.3	206.1	408.1	1984.0	1986.0	6.75	5.66
49	Pg 14-01	SX 205	6	10/30/90	1547	614.1	271.2	200.2	389.2	1983.5	1985.0	0.34	1.75

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
50 Oi 51-12		SX 309	1	11/01/90	905	508.0	218.4	165.6	313.5	1979.5	1980.5		
50 Oi 51-12		SX 309	2	11/01/90	918	531.5	201.5	173.3	289.2	1980.0	1978.5		
50 Oi 51-12		SX 309	3	11/01/90	921	509.5	160.5	166.1	230.4	1979.5	1975.0	6.00	6.00
50 Oi 51-12		SX 309	4	11/01/90	925	503.5	187.2	164.1	268.6	1979.5	1977.5	1979.83	1977.83
50 Oi 51-12		SX 309	5	11/01/90	930	549.7	198.5	179.2	284.9	1981.0	1978.0	11.00	13.00
50 Oi 51-12		SX 309	6	11/01/90	940	506.5	188.7	165.1	270.9	1979.5	1977.5	0.55	1.62
51 Oi 51-11		SX 209	1	11/01/90	812	488.3	185.4	159.2	266.1	1978.5	1977.0		
51 Oi 51-11		SX 209	2	11/01/90	818	474.4	184.1	154.6	264.3	1978.0	1977.0		
51 Oi 51-11		SX 209	3	11/01/90	822	458.6	153.2	149.5	219.9	1977.5	1974.5	6.00	6.00
51 Oi 51-11		SX 209	4	11/01/90	829	466.4	168.0	152.0	241.1	1978.0	1976.0	1977.75	1976.17
51 Oi 51-11		SX 209	5	11/01/90	834	465.2	185.6	151.6	266.3	1978.0	1977.0	13.09	14.67
51 Oi 51-11		SX 209	6	11/01/90	838	433.9	165.8	141.4	238.0	1976.5	1975.5	0.63	0.94
52 Oh 54-1		----	B	05/22/89	---	126	3	40.9	4.3	1967.50	1948.00		
52 Oh 54-1		----	F1	05/22/89	---	41	54	13.2	77.5	1961.00	1966.00		
52 Oh 54-1		----	F2	05/22/89	---	14	12	4.4	17.2	1955.50	1955.00		
52 Oh 54-1		----	F3	05/22/89	---	107	4	34.8	5.8	1966.50	1949.00		
52 Oh 54-1		----	3	05/22/89	---	46	38	14.9	53.6	1961.50	1963.00	1.00	1.00
52 Oh 54-1		----	3	05/22/89	---	63	1	20.5	1.0	1963.50	1943.50	1951.50	1943.50
52 Oh 54-1		----	4	05/22/89	---	3	13	1.0	17.9	1951.50	1955.00	37.89	45.89
52 Oh 54-1		----	F2	05/22/89	---	6	4	1.8	6.0	1952.50	1949.00	----	----
53 Ph 13-03		----	1	10/31/90	1647	674.8	628.8	220.0	902.5	1985.5	C		
53 Ph 13-03		----	2	10/31/90	1652	49227.1	312.8	16046	448.9	C	1987.5		
53 Ph 13-03		----	3	10/31/90	1702	71090.0	247.8	23173	355.6	C	1982.5	1.00	5.00
53 Ph 13-03		----	4	10/31/90	1714	45999.3	233.3	14994	334.9	C	1981.5	1985.50	1983.80
53 Ph 13-03		----	5	10/31/90	1720	48682.4	308.6	14998	421.1	C	1986.5	5.33	7.03
53 Ph 13-03		----	6	10/31/90	1725	48473.6	227.0	15801	325.8	C	1981.0	----	2.68
54 Ph 13-16		----	1	10/31/90	936	542.7	236.7	176.9	339.7	1980.5	1982.0	1981.33	1981.17
54 Ph 13-16		----	3	10/31/90	950	626.4	249.9	204.2	358.6	1984.0	1983.0	9.50	9.67
54 Ph 13-16		----	6	10/31/90	1010	514.5	204.2	167.7	293.0	1979.5	1978.5	1.93	1.93
55 Ph 13-17		----	2	10/31/90	1101	571.5	177.1	186.3	254.1	1982.0	1976.5		
55 Ph 13-17		----	3	10/31/90	1105	642.2	193.0	209.3	277.0	1984.5	1977.5	5.00	4.00
55 Ph 13-17		----	4	10/31/90	1111	536.0	442.7	174.7	635.4	1980.5	C	1981.60	1975.75
55 Ph 13-17		----	5	10/31/90	1116	576.7	178.4	188.0	256.0	1982.0	1976.5	9.23	15.08
55 Ph 13-17		----	6	10/31/90	1127	496.7	119.2	161.9	171.1	1979.0	1972.5	1.83	1.92
56 Ph 13-18		----	1	10/31/90	833	110.9	55.6	36.1	79.8	1966.5	1966.0	4.00	4.00
56 Ph 13-18		----	2	10/31/90	839	108.5	52.0	35.4	74.7	1966.5	1965.5	1965.88	1966.00
56 Ph 13-18		----	5	10/31/90	855	95.5	65.4	31.1	93.8	1965.5	1967.5	24.96	24.83
56 Ph 13-18		----	6	10/31/90	900	86.4	48.4	28.2	69.5	1965.0	1965.0	0.65	0.94
57 Ph 13-04		----	1	04/04/91	1044	671.2	284.7	218.8	408.6	1985.5	1986.0	1985.00	1985.75
57 Ph 13-04		----	3	04/04/91	1056	651.5	279.1	212.4	400.6	1984.5	1985.5	6.26	5.51
58 Ph 13-23		----	1	04/04/91	1219	589.7	265.2	192.2	380.5	1982.5	1984.5	1982.25	1984.00
58 Ph 13-23		----	3	04/04/91	1315	575.3	255.7	187.5	367.0	1982.0	1983.5	9.01	7.26
59 Ph 13-24		----	1	04/04/91	1130	414.4	205.2	135.1	294.5	1976.0	1979.0	1976.00	1980.00
59 Ph 13-24		----	3	04/04/91	1144	403.9	226.8	131.7	325.4	1976.0	1981.0	15.26	11.26

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
60	Ph 13-25	----	1	04/04/91	859	216.8	99.1	70.7	142.3	1971.0	1970.5	1971.50	1974.75
60	Ph 13-25	----	3	04/04/91	912	247.8	205.6	80.8	295.0	1972.0	1979.0	19.76	16.51
61	Ph 13-26	----	1	04/04/91	954	208.4	98.5	67.9	141.4	1970.5	1970.5	1970.50	1970.25
61	Ph 13-26	----	3	04/04/91	1015	205.8	92.1	67.1	132.1	1970.5	1970.0	20.76	21.01
62	Ph 23-10	----	1	10/31/90	1458	822.1	399.6	268.0	573.5	1990.0	Modern		
62	Ph 23-10	----	2	10/31/90	1504	872.1	580.1	284.3	832.5	Modern	C	5.00	4.00
62	Ph 23-10	----	4	10/31/90	1516	793.1	378.8	258.5	543.6	1988.5	Modern	1989.83	Modern
62	Ph 23-10	----	5	10/31/90	1520	844.1	406.6	275.1	583.6	Modern	Modern	1.00	0.00
62	Ph 23-10	----	6	10/31/90	1525	798.4	404.5	260.3	580.5	1989.0	Modern	0.95	----
62	Ph 23-10	----	1	04/04/91	1212	865.1	382.1	282.0	548.4	Modern	Modern	4.00	4.00
62	Ph 23-10	----	2	04/04/91	1218	739.2	330.0	241.0	473.6	1987.0	1989.0	1989.13	1990.69
62	Ph 23-10	----	3	04/04/91	1242	869.3	381.4	283.4	547.4	Modern	Modern	2.13	0.56
62	Ph 23-10	----	4	04/04/91	1245	722.1	404.7	235.4	580.8	1987.0	Modern	2.13	0.98
63	Ph 23-12	----	2	10/31/90	1546	452.8	238.0	147.6	341.6	1977.0	1982.0	3.00	3.00
63	Ph 23-12	----	5	10/31/90	1604	404.6	191.8	131.9	275.2	1976.0	1977.5	1976.33	1979.17
63	Ph 23-12	----	6	10/31/90	1608	412.3	199.5	134.4	286.3	1976.0	1978.0	0.47	2.01
63	Ph 23-12	----	1	04/05/91	1105	685.1	274.9	223.3	394.5	1985.5	1985.0	4.00	4.00
63	Ph 23-12	----	2	04/05/91	1110	576.6	233.6	187.9	335.2	1982.0	1981.5	1984.00	1983.25
63	Ph 23-12	----	3	04/05/91	1135	707.2	274.2	230.5	393.5	1986.5	1985.0	7.26	8.01
63	Ph 23-12	----	4	04/05/91	1140	579.5	231.0	188.9	331.4	1982.0	1981.5	2.03	1.75
64	Ph 23-13	----	1	10/31/90	1357	419.4	135.4	136.7	194.4	1976.5	1973.5	4.00	4.00
64	Ph 23-13	----	2	10/31/90	1410	454.8	177.2	148.3	254.3	1977.5	1976.5	1976.88	1975.25
64	Ph 23-13	----	5	10/31/90	1432	456.5	176.8	148.8	253.8	1977.5	1976.5	13.96	15.58
64	Ph 23-13	----	6	10/31/90	1438	403.7	151.1	131.6	216.9	1976.0	1974.5	0.65	1.30
64	Ph 23-13	----	1	04/04/91	1010	442.1	163.7	144.1	235.0	1977.0	1975.5	3.00	4.00
64	Ph 23-13	----	2	04/04/91	1017	371.8	118.3	121.2	169.8	1975.0	1972.5	1976.33	1974.00
64	Ph 23-13	----	3	04/04/91	1034	443.6	163.8	144.6	235.1	1977.0	1975.5	14.92	17.26
64	Ph 23-13	----	4	04/04/91	1040	----	122.4	----	175.6	----	1972.5	0.94	1.50
65	Ph 23-14	----	0	10/31/90	1250	407.7	26.8	132.9	38.5	1976.0	1960.5		
65	Ph 23-14	----	1	10/31/90	1256	281.2	136.4	91.7	195.8	1973.0	1973.5		
65	Ph 23-14	----	2	10/31/90	1301	261.1	114.9	85.1	164.9	1972.5	1972.0		
65	Ph 23-14	----	3	10/31/90	1306	300.1	152.2	97.8	218.4	1973.5	1974.5	7.00	6.00
65	Ph 23-14	----	4	10/31/90	1311	431.6	506.2	140.7	726.5	1976.5	C	1973.64	1970.83
65	Ph 23-14	----	5	10/31/90	1316	269.1	136.0	87.7	195.2	1972.5	1973.5	17.19	20.00
65	Ph 23-14	----	6	10/31/90	1323	234.7	101.7	76.5	145.9	1971.5	1971.0	1.75	4.76
65	Ph 23-14	----	1	04/04/91	903	287.9	122.6	93.8	175.9	1973.0	1972.5	1973.00	1970.83
65	Ph 23-14	----	2	04/04/91	909	----	94.8	----	136.0	----	1970.5	18.26	20.42
65	Ph 23-14	----	4	04/04/91	940	----	84.2	----	120.9	----	1969.5	----	1.25
66	Pg 15-03	----	1	05/22/89	---	598	314	194.2	448.3	1982.50	1987.50	3.00	3.00
66	Pg 15-03	----	2	05/22/89	---	775	810	251.5	1157.6	1988.00	C	1983.67	1985.83
66	Pg 15-03	----	3	05/22/89	---	542	249	175.9	356.3	1980.50	1983.00	5.72	3.56
66	Pg 15-03	----	F	05/22/89	---	5924	299	1923.1	427.9	C	1987.00	3.17	2.01

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
67	Pg 15-02	----	F1	05/22/89	---	3157	152	1024.8	217.4	C	1974.50		
67	Pg 15-02	----	F2	05/22/89	---	4348	192	1411.4	274.3	C	1977.50	1.00	4.00
67	Pg 15-02	----	1	05/22/89	---	909	1169	295.2	1670.1	Modern	C	Modern	1976.13
67	Pg 15-02	----	2	05/22/89	---	8766	194	2845.3	276.6	C	1977.50	----	13.27
67	Pg 15-02	----	3	05/22/89	---	12834	156	4165.8	223.0	C	1975.00	----	1.39
68	Ph 22-12	----	1	05/22/89	---	574	235	186.3	335.9	1982.00	1981.50	1.00	1.00
68	Ph 22-12	----	2	05/22/89	---	957	936	310.7	1337.9	C	C	1982.00	1981.50
68	Ph 22-12	----	3	05/22/89	---	842	810	273.3	1157.8	Modern	C	7.39	7.89
68	Ph 22-12	----	F	05/22/89	---	7267	49	2359.0	70.7	C	1965.00	----	----
69	Ph 22-11	----	1	05/22/89	---	436	106	141.4	152.1	1976.50	1971.50	4.00	4.00
69	Ph 22-11	----	2	05/22/89	---	663	73	215.3	103.9	1985.00	1968.00	1978.88	1971.00
69	Ph 22-11	----	3	05/22/89	---	410	155	133.0	221.2	1976.00	1975.00	10.52	18.39
69	Ph 22-11	----	F	05/22/89	---	473	85	153.6	121.1	1978.00	1969.50	3.61	2.62
70	Ph 13-30	SX 201	1	04/03/91	1529	375.8	295.2	122.5	423.7	1975.0	1986.5	3.00	4.00
70	Ph 13-30	SX 201	2	04/03/91	1535	----	282.5	----	405.5	----	1985.5	1974.17	1985.88
70	Ph 13-30	SX 201	3	04/03/91	1541	336.9	305.2	109.8	437.9	1974.5	1987.0	17.09	5.38
70	Ph 13-30	SX 201	4	04/03/91	1545	280.8	269.6	91.5	386.9	1973.0	1984.5	0.85	0.96
71	Ph13-29	SX 101	F1	05/22/89	---	8503	23	2760.1	32.3	C	1959.50	3.00	3.00
71	Ph13-29	SX 101	2	05/22/89	---	63	51	20.4	72.9	1963.50	1965.50	1967.00	1963.00
71	Ph13-29	SX 101	4	05/22/89	---	335	501	108.7	716.6	1974.00	C	22.39	26.39
71	Ph13-29	SX 101	5	05/22/89	---	68	42	21.9	60.2	1963.50	1964.00	4.95	2.55
71	Ph 13-29	SX 101	1	10/30/90	1733	120.1	28.4	39.1	40.8	1967.0	1961.0		
71	Ph 13-29	SX 101	2	10/30/90	1737	112.6	25.8	36.7	37.1	1966.5	1960.5		
71	Ph 13-29	SX 101	3	10/30/90	1740	102.7	44.0	33.5	63.1	1966.0	1964.5	6.00	6.00
71	Ph 13-29	SX 101	4	10/30/90	1745	88.5	37.7	28.8	54.1	1965.5	1963.0	1966.08	1962.00
71	Ph 13-29	SX 101	5	10/30/90	1750	106.0	25.2	34.5	36.2	1966.5	1960.0	24.75	28.83
71	Ph 13-29	SX 101	6	10/30/90	1755	82.0	37.6	26.7	53.9	1965.0	1963.0	0.67	1.61
71	Ph 13-29	SX 101	1	04/03/91	1434	148.8	52.1	48.5	74.7	1968.5	1965.5	4.00	4.00
71	Ph 13-29	SX 101	2	04/03/91	1439	129.2	37.4	42.1	53.6	1967.5	1963.0	1968.00	1964.25
71	Ph 13-29	SX 101	3	04/03/91	1452	145.2	51.2	47.3	73.4	1968.5	1965.5	23.26	27.01
71	Ph 13-29	SX 101	4	04/03/91	1502	130.2	37.6	42.4	54.0	1967.5	1963.0	0.50	1.25
72	DO Ce 89	DO 401	1	11/16/90	1521	199.7	16.6	65.1	23.8	1970.5	1957.0		
72	DO Ce 89	DO 401	2	11/16/90	1526	179.7	8.3	58.6	11.9	1969.5	1952.5		
72	DO Ce 89	DO 401	3	11/16/90	1531	172.7	0.0	56.3	0.0	1969.5	1940.0	6.00	6.00
72	DO Ce 89	DO 401	4	11/16/90	1535	187.4	0.0	61.1	0.0	1970.0	1940.0	1969.67	1946.92
72	DO Ce 89	DO 401	5	11/16/90	1540	177,8	7.9	58.0	11.3	1969.5	1952.0	21.21	43.96
72	DO Ce 89	DO 401	6	11/16/90	1544	167.1	0.0	54.5	0.0	1969.0	1940.0	0.47	7.10
73	DO Cg 46	DO 403S	1	11/13/90	1703	103.6	111.6	33.8	160.2	1966.0	1971.5		
73	DO Cg 46	DO 403S	2	11/13/90	1706	51.6	97.4	16.8	139.8	1962.5	1970.5		
73	DO Cg 46	DO 403S	3	11/13/90	1709	88.5	85.1	28.9	122.1	1965.5	1969.5	6.00	6.00
73	DO Cg 46	DO 403S	4	11/13/90	1716	114.6	100.6	37.4	144.4	1967.0	1971.0	1965.00	1970.42
73	DO Cg 46	DO 403S	5	11/13/90	1719	73.2	92.7	23.9	133.0	1964.0	1970.0	25.87	20.45
73	DO Cg 46	DO 403S	6	11/13/90	1722	83.7	92.4	27.3	132.6	1965.0	1970.0	1.44	0.67

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampliag date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC–based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12
74 DO Cg 45	DO 403D	1	11/13/90	1618	46.5	42.8	15.2	61.4	1962.0	1964.0		
74 DO Cg 45	DO 403D	2	11/13/90	1621	44.0	11.9	13.5	16.3	1961.5	1954.5		
74 DO Cg 45	DO 403D	3	11/13/90	1627	35.3	13.1	11.5	18.8	1960.5	1955.5	6.00	6.00
74 DO Cg 45	DO 403D	4	11/13/90	1632	60.2	31.9	19.6	45.8	1963.0	1962.0	1961.92	1958.08
74 DO Cg 45	DO 403D	5	11/13/90	1636	40.0	5.9	13.0	8.4	1961.0	1950.5	28.95	32.79
74 DO Cg 45	DO 403D	6	11/13/90	1639	61.9	32.7	20.2	46.9	1963.5	1962.0	1.06	4.88
75 WI Be 52	WO 404D	1	11/12/90	827	564.3	245.2	183.9	352.0	1981.5	1982.5		
75 WI Be 52	WO 404D	2	11/12/90	838	518.5	219.0	169.0	314.3	1979.5	1980.5		
75 WI Be 52	WO 404D	3	11/12/90	843	501.8	211.3	163.6	303.3	1979.0	1979.5	6.00	6.00
75 WI Be 52	WO 404D	4	11/12/90	905	548.3	241.0	178.7	345.8	1981.0	1982.0	1980.17	1981.17
75 WI Be 52	WO 404D	5	11/12/90	908	502.9	207.6	163.9	298.0	1979.5	1979.5	10.70	9.70
75 WI Be 52	WO 404D	6	11/12/90	914	539.9	249.0	176.0	357.4	1980.5	1983.0	0.90	1.40
76 WI Bg 18	WO 405S	2	11/02/90	1050	1942.6	167.7	633.2	240.7	C	1976.0		
76 WI Bg 18	WO 405S	3	11/12/90	1057	218.4	----	71.2	----	1971.0	----	4.00	4.00
76 WI Bg 18	WO 405S	4	11/12/90	1103	242.0	180.2	78.9	258.6	1972.0	1976.5	1971.00	1976.13
76 WI Bg 18	WO 405S	5	11/12/90	1107	176.1	165.4	57.4	237.4	1969.5	1975.5	19.87	14.74
76 WI Bg 18	WO 405S	6	11/12/90	1118	238.2	179.0	77.6	256.9	1971.5	1976.5	0.94	0.41
76 WIBg 18	WO 405S	1	04/04/91	1655	160.3	183.0	52.3	262.7	1969.0	1977.0	1969.00	1977.00
77 WI Bg 17	WO 405D	2	11/12/90	1205	45.8	44.8	14.9	64.4	1961.5	1964.5	1961.25	1963.50
77 WI Bg 17	WO 405D	5	11/12/90	1222	38.0	35.3	12.4	50.6	1961.0	1962.5	29.62	27.37
77 WI Bg 17	WO 405D	1	04/03/91	1601	24.5	7.8	8.0	11.3	1958.0	1952.0	1957.50	1951.25
77 WI Bg 17	WO 405D	3	04/03/91	1615	20.8	5.7	6.8	8.2	1957.0	1950.5	33.76	40.01
78 WO Bf 87	WR 402S	1	11/12/90	1408	524.9	214.7	171.1	308.1	1980.0	1980.0	0.50	0.75
78 WO Bf 87	WR 402S	2	11/12/90	1417	521.0	222.7	169.8	319.7	1980.0	1981.0		
78 WO Bf 87	WR 402S	3	11/12/90	1423	539.4	197.1	175.8	282.9	1980.5	1978.0	6.00	5.00
78 WO Bf 87	WR 402S	4	11/12/90	1428	604.6	488.9	197.1	701.7	1983.0	C	1980.08	1979.30
78 WO Bf 87	WR 402S	5	11/12/90	1437	492.7	207.7	160.6	298.1	1978.5	1979.5	10.78	11.57
78 WO Bf 87	WR 402S	6	11/12/90	1450	483.7	200.2	157.7	287.3	1978.5	1978.0	1.51	1.17
79 WO Bf 86	WR 402D	1	11/12/90	1532	437.4	198.7	142.6	285.1	1976.5	1978.0		
79 WO Bf 86	WR 402D	2	11/12/90	1536	510.6	215.7	166.4	309.6	1979.5	1980.0		
79 WO Bf 86	WR 402D	3	11/12/90	1541	204.9	90.2	66.8	129.4	1970.5	1970.0	6.00	6.00
79 WO Bf 86	WR 402D	4	11/12/90	1544	465.2	190.5	151.6	273.3	1978.0	1977.5	1977.00	1977.08
79 WO Bf 86	WR 402D	5	11/12/90	1548	510.3	211.0	166.4	302.9	1979.5	1979.5	13.87	13.78
79 WO Bf 86	WR 402D	6	11/12/90	1552	473.2	188.1	154.3	270.0	1978.0	1977.5	3.08	3.31
80 WO Cg 80	WR 403S	1	11/13/90	1321	367.1	216.5	119.7	310.7	1975.0	1980.0		
80 WO Cg 80	WR 403S	2	11/13/90	1326	89.4	196.8	29.2	282.4	1965.5	1978.0		
80 WO Cg 80	WR 403S	3	11/13/90	1330	377.8	214.6	123.2	308.0	1975.5	1980.0	6.00	6.00
80 WO Cg 80	WR 403S	4	11/13/90	1333	396.6	193.7	129.3	278.0	1975.5	1978.0	1971.92	1978.67
80 WO Cg 80	WR 403S	5	11/13/90	1337	79.9	197.3	26.0	283.1	1964.5	1978.0	18.95	12.20
80 WO Cg 80	WR 403S	6	11/13/90	1340	379.7	196.5	123.8	282.0	1975.5	1978.0	4.90	0.94
80 WO Cg 80	WR 403S	1	04/04/91	1520	252.5	128.4	82.3	184.3	1972.0	1973.0	4.00	4.00
80 WO Cg 80	WR 403S	2	04/04/91	1525	220.1	116.1	71.7	166.6	1971.0	1972.0	1971.50	1972.38
80 WO Cg 80	WR 403S	3	04/04/91	1545	241.5	122.4	78.7	175.7	1972.0	1972.5	19.76	18.88
80 WO Cg 80	WR 403S	4	04/04/91	1550	213.7	113.9	69.7	163.4	1971.0	1972.0	0.50	0.41

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC–based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12
81 WO Cg 79		WR 403D	1	11/13/90	1221	13.2	1.6	4.3	2.3	1955.5	1946.0		
81 WO Cg 79		WR 403D	2	11/13/90	1226	12.7	1.5	4.1	2.2	1955.5	1946.0		
81 WO Cg 79		WR 403D	3	11/13/90	1230	12.5	1.3	4.1	1.9	1955.0	1945.5	6.00	6.00
81 WO Cg 79		WR 403D	4	11/13/90	1235	14.1	9.6	4.6	13.7	1955.5	1953.5	1956.08	1947.58
81 WO Cg 79		WR 403D	5	11/13/90	1239	15.0	0.0	4.9	0.0	1956.0	1940.0	34.79	43.29
81 WO Cg 79		WR 403D	6	11/13/90	1242	27.7	10.9	9.0	15.6	1959.0	1954.5	1.34	5.00
81 WO Cg 79		WR 403D	1	04/04/91	1430	46.6	3.1	15.2	4.5	1962.0	1948.0	2.00	4.00
81 WO Cg 79		WR 403D	2	04/04/91	1435	----	0.0	----	0.0	----	1940.0	1961.00	1942.00
81 WO Cg 79		WR 403D	3	04/04/91	1440	33.4	0.0	10.9	0.0	1960.0	1940.0	30.26	49.26
81 WO Cg 79		WR 403D	4	04/04/91	1449	----	0.0	----	0.0	----	1940.0	1.00	3.46
81 WO Cg 79		WR 403D	4	12/23/92	1053	0.0	0.0	0.0	0.0	1945.0	1940.0		
81 WO Cg 79		WR 403D	5	12/23/92	1057	0.0	0.0	0.0	0.0	1945.0	1940.0	5.00	5.00
81 WO Cg 79		WR 403D	6	12/23/92	1102	0.0	0.0	0.0	0.0	1945.0	1940.0	1945.00	1940.00
81 WO Cg 79		WR 403D	7	12/23/92	1106	0.0	0.0	0.0	0.0	1945.0	1940.0	47.98	52.98
81 WO Cg 79		WR 403D	8	12/23/92	1113	0.0	0.0	0.0	0.0	1945.0	1940.0	0.00	0.00
82 WO Cg 78		P 28S	1	11/13/90	922	250.1	233.0	81.5	334.4	1972.0	1981.5		
82 WO Cg 78		P 28S	2	11/13/90	928	251.5	235.7	82.0	338.2	1972.0	1982.0		
82 WO Cg 78		P 28S	3	11/13/90	932	254.4	164.6	82.9	236.2	1972.0	1975.5	6.00	6.00
82 WO Cg 78		P 28S	4	11/13/90	935	274.4	199.1	89.4	285.7	1972.5	1978.0	1972.33	1979.50
82 WO Cg 78		P 28S	5	11/13/90	940	261.7	241.1	85.3	346.1	1972.5	1982.0	18.54	11.37
82 WO Cg 78		P 28S	6	11/13/90	944	286.2	199.7	93.3	286.5	1973.0	1978.0	0.37	2.48
83 WO Cg 77		P28I	1	11/13/90	827	124.7	13.4	40.6	19.3	1967.5	1955.5		
83 WO Cg 77		P28I	2	11/13/90	837	52.1	12.8	17.0	18.4	1962.5	1955.5		
83 WO Cg 77		P28I	3	11/13/90	844	28.3	32.6	9.2	46.8	1959.0	1962.0	6.00	6.00
83 WO Cg 77		P28I	4	11/13/90	851	24.1	33.2	7.9	47.6	1958.0	1962.5	1961.08	1958.83
83 WO Cg 77		P28I	5	11/13/90	855	59.1	12.8	19.3	18.4	1963.0	1955.5	29.79	32.04
83 WO Cg 77		P28I	6	11/13/90	900	17.8	31.8	5.8	45.6	1956.5	1962.0	3.69	3.34
83 WO Cg 77		P28I	1	04/04/91	1730	30.8	80.8	10.0	115.9	1959.5	1969.0	4.00	4.00
83 WO Cg 77		P28I	2	04/04/91	1740	45.5	51.7	14.8	74.2	1961.5	1965.5	1960.38	1965.88
83 WO Cg 77		P28I	3	04/04/91	1800	32.4	48.0	10.6	68.9	1960.0	1965.0	30.88	25.38
83 WO Cg 77		P28I	4	04/04/91	1805	34.8	42.2	11.3	60.5	1960.5	1964.0	0.74	1.88
84 WO Cg 76		P28D	1	04/04/91	1830	5.6	2.5	1.8	3.6	1952.5	1947.0	3.00	4.00
84 WO Cg 76		P28D	2	04/04/91	1833	----	0.0	----	0.0	----	1940.0	1952.17	1941.75
84 WO Cg 76		P28D	3	04/04/91	1837	3.8	0.0	1.2	0.0	1951.5	1940.0	39.09	49.51
84 WO Cg 76		P28D	4	04/04/91	1840	5.7	0.0	1.9	0.0	1952.5	1940.0	0.47	3.03
85 WI Ch 56		WS 106	1	11/14/90	1045	299.5	206.7	97.6	296.6	1973.5	1979.5		
85 WI Ch 56		WS 106	2	11/14/90	1050	339.4	214.6	110.6	308.0	1974.5	1980.0		
85 WI Ch 56		WS 106	3	11/14/90	1057	289.4	149.6	94.3	214.7	1973.0	1974.5	6.00	6.00
85 WI Ch 56		WS 106	4	11/14/90	1102	341.1	188.2	111.2	270.1	1974.5	1977.5	1973.92	1978.58
85 WI Ch 56		WS 106	5	11/14/90	1110	306.6	243.7	100.0	349.7	1973.5	1982.5	16.96	12.29
85 WI Ch 56		WS 106	6	11/14/90	1115	339.7	189.1	110.7	271.4	1974.5	1977.5	0.61	2.49
85 WI Ch 56		WS 106	1	04/05/91	916	376.6	284.0	122.7	407.6	1975.0	1985.5	4.00	4.00
85 WI Ch 56		WS 106	2	04/05/91	920	318.6	256.0	103.9	367.4	1974.0	1983.5	1974.38	1985.13
85 WI Ch 56		WS 106	3	04/05/91	932	370.6	288.7	120.8	414.4	1975.0	1986.0	16.89	6.14
85 WI Ch 56		WS 106	4	04/05/91	935	304.3	279.0	99.2	400.4	1973.5	1985.5	0.65	0.96

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
85	WI Ch 56	WS 106	1	12/23/92	1345	454.0	305.6	148.0	438.6	1977.5	1987.0		
85	WI Ch 56	WS 106	2	12/23/92	1349	453.3	296.4	147.8	425.4	1977.5	1986.5		
85	WI Ch 56	WS 106	3	12/23/92	1359	468.9	328.1	152.8	470.8	1978.0	1989.0	6.00	6.00
85	WI Ch 56	WS 106	4	12/23/92	1404	465.5	300.9	151.7	431.9	1978.0	1987.0	1977.83	1987.25
85	WI Ch 56	WS 106	5	12/23/92	1408	470.6	302.6	153.4	434.3	1978.0	1987.0	15.15	5.73
85	WI Ch 56	WS 106	6	12/23/92	1412	466.4	300.3	152.0	430.9	1978.0	1987.0	0.24	0.80
86	WI Ch 57	WS 206	1	11/14/90	858	306.1	146.0	99.8	209.5	1973.5	1974.0		
86	WI Ch 57	WS 206	2	11/14/90	907	291.7	149.1	95.1	214.0	1973.0	1974.5		
86	WI Ch 57	WS 206	3	11/14/90	914	276.4	86.8	90.1	124.6	1973.0	1969.5	6.00	6.00
86	WI Ch 57	WS 206	4	11/14/90	922	332.3	122.7	108.3	176.0	1974.0	1972.5	1973.58	1972.92
86	WI Ch 57	WS 206	5	11/14/90	933	294.2	142.2	95.9	204.1	1973.0	1974.0	17.29	17.96
86	WI Ch 57	WS 206	6	11/14/90	938	375.8	128.0	122.5	183.6	1975.0	1973.0	0.73	1.67
86	WI Ch 57	WS 206	1	04/05/91	813	298.7	165.6	97.4	237.6	1973.5	1975.5	4.00	4.00
86	WI Ch 57	WS 206	2	04/05/91	840	259.4	132.3	84.5	189.9	1972.5	1973.5	1973.00	1974.88
86	WI Ch 57	WS 206	3	04/05/91	853	332.5	170.6	108.4	244.9	1974.0	1976.0	18.26	16.39
86	WI Ch 57	WS 206	4	04/05/91	900	251.3	151.5	81.9	217.4	1972.0	1974.5	0.79	0.96
86	WI Ch 57	WS 206	1	11/15/91	1324	381.2	263.9	124.3	378.7	1975.5	1984.0	1972.67	1986.17
86	WI Ch 57	WS 206	3	11/15/91	1339	222.1	279.0	72.4	400.4	1971.0	1985.5	19.21	5.71
86	WI Ch 57	WS 206	5	11/15/91	1353	232.8	330.9	75.9	475.0	1971.5	1989.0	2.01	2.09
86	WI Ch 57	WS 206	1	04/01/92	1354	238.1	223.5	77.6	320.8	1971.5	1981.0		
86	WI Ch 57	WS 206	2	04/01/92	1401	234.9	203.0	76.6	291.3	1971.5	1978.5	5.00	5.00
86	WI Ch 57	WS 206	3	04/01/92	1407	231.5	226.9	75.5	325.6	1971.5	1981.0	1971.60	1979.90
86	WI Ch 57	WS 206	4	04/01/92	1413	230.1	194.3	75.0	278.9	1971.5	1978.0	20.65	12.35
86	WI Ch 57	WS 206	5	04/01/92	1424	241.0	224.4	78.6	322.1	1972.0	1981.0	0.20	1.36
86	WI Ch 57	WS 206	4	12/23/92	1514	113.7	211.0	37.1	302.8	1967.0	1979.5		
86	WI Ch 57	WS 206	5	12/23/92	1518	116.0	223.8	37.8	321.2	1967.0	1981.0		
86	WI Ch 57	WS 206	6	12/23/92	1523	111.6	230.2	36.4	330.3	1966.5	1981.5	6.00	6.00
86	WI Ch 57	WS 206	7	12/23/92	1527	111.4	212.2	36.3	304.6	1966.5	1979.5	1966.75	1980.33
86	WI Ch 57	WS 206	8	12/23/92	1530	108.1	213.1	35.2	305.9	1966.5	1979.5	26.23	12.65
86	WI Ch 57	WS 206	9	12/23/92	1535	113.5	224.0	37.0	321.5	1967.0	1981.0	0.25	0.85
87	WI Bh 11	WS 210	1	11/14/90	1410	59.3	5.2	19.3	7.5	1963.0	1950.0		
87	WI Bh 11	WS 210	2	11/14/90	1423	41.6	2.4	13.6	3.4	1961.5	1947.0		
87	WI Bh 11	WS 210	3	11/14/90	1434	62.4	0.0	20.3	0.0	1963.5	1940.0	6.00	5.00
87	WI Bh 11	WS 210	4	11/14/90	1439	68.1	----	22.2	----	1964.0	----	1963.33	1944.30
87	WI Bh 11	WS 210	5	11/14/90	1446	55.0	0.9	17.9	1.4	1962.5	1944.5	27.54	46.57
87	WI Bh 11	WS 210	6	11/14/90	1451	92.5	0.0	30.2	0.0	1965.5	1940.0	1.25	3.92
87	WI Bh 11	WS 210	1	04/05/91	1222	43.3	0.0	14.1	0.0	1961.5	1940.0	1960.00	1940.00
87	WI Bh 11	WS 210	3	04/05/91	1230	25.9	0.0	8.5	0.0	1958.5	1940.0	31.26	51.26
88	WI Bh 8	WS 108	1	04/05/91	1121	72.0	14.8	23.5	21.2	1964.0	1956.5	4.00	4.00
88	WI Bh 8	WS 108	2	04/05/91	1125	96.5	36.4	31.5	52.2	1966.0	1963.0	1965.13	1957.88
88	WI Bh 8	WS 108	3	04/05/91	1130	70.6	12.9	23.0	18.6	1964.0	1955.5	26.14	33.39
88	WI Bh 8	WS 108	4	04/05/91	1135	107.6	15.3	35.1	22.0	1966.5	1956.5	1.14	2.99
89	WI Bh 9	WS 208	1	04/05/91	1040	35.9	0.0	11.7	0.0	1960.5	1940.0	4.00	4.00
89	WI Bh 9	WS 208	2	04/05/91	1045	44.6	0.0	14.5	0.0	1961.5	1940.0	1961.13	1940.00
89	WI Bh 9	WS 208	3	04/05/91	1055	34.2	0.0	11.2	0.0	1960.0	1940.0	30.14	51.26
89	WI Bh 9	WS 208	4	04/05/91	1103	55.4	0.0	18.1	0.0	1962.5	1940.0	0.96	0.00

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
89	WI Bh 9	WS 208	1	04/01/92	1532	134.1	4.0	43.7	5.8	1968.0	1949.0	4.00	4.00
89	WI Bh 9	WS 208	2	04/01/92	1542	125.6	4.0	40.9	5.7	1967.5	1949.0	1967.38	1948.50
89	WI Bh 9	WS 208	3	04/01/92	1547	106.4	2.7	34.7	3.9	1966.5	1947.5	24.88	43.75
89	WI Bh 9	WS 208	4	04/01/92	1559	130.9	3.6	42.7	5.2	1967.5	1948.5	0.54	0.61
90	WI Bh 4	WS 103	1	04/05/91	1447	498.0	237.8	162.3	341.3	1979.0	1982.0	4.00	4.00
90	WI Bh 4	WS 103	2	04/05/91	1450	414.8	142.4	135.2	204.3	1976.0	1974.0	1977.38	1976.63
90	WI Bh 4	WS 103	4	04/05/91	1500	445.2	159.3	145.1	228.6	1977.0	1975.0	13.89	14.64
90	WI Bh 4	WS 103	5	04/05/91	1503	460.3	161.5	150.0	231.7	1977.5	1975.5	1.08	3.15
90	WI Bh 4	WS 103	1	11/15/91	1444	587.9	324.7	191.6	466.0	1982.5	1988.5	1982.33	1987.67
90	WI Bh 4	WS 103	3	11/15/91	1503	595.9	309.2	194.2	443.8	1982.5	1987.5	9.54	4.21
90	WI Bh 4	WS 103	5	11/15/91	1521	571.0	307.2	186.1	440.8	1982.0	1987.0	0.24	0.62
90	WI Bh 4	WS 103	1	04/01/92	1658	497.4	244.9	162.1	351.5	1979.0	1982.5	1979.33	1982.00
90	WI Bh 4	WS 103	3	04/01/92	1711	507.1	241.8	165.3	347.0	1979.5	1982.0	12.92	10.25
90	WI Bh 4	WS 103	4	04/01/92	1717	515.9	235.4	168.2	337.8	1979.5	1981.5	0.24	0.41
91	WI Bh 5	WS 203	1	04/05/91	1410	443.9	131.5	144.7	188.8	1977.0	1973.0	1976.25	1972.50
91	WI Bh 5	WS 203	2	04/05/91	1425	387.4	114.2	126.3	163.9	1975.5	1972.0	15.01	18.76
92	66M 41	AC 201D	1	11/15/90	1600	26.7	6.3	8.7	9.1	1958.5	1951.0	0.75	0.50
92	66M 41	AC 201D	2	11/15/90	1605	73.9	6.4	24.1	9.2	1964.5	1951.0		
92	66M 41	AC 201D	3	11/15/90	1609	20.9	1.5	6.8	2.1	1957.0	1945.5	6.00	6.00
92	66M 41	AC 201D	4	11/15/90	1613	27.6	12.3	9.0	17.7	1959.0	1955.0	1959.25	1951.50
92	66M 41	AC 201D	5	11/15/90	1619	24.2	7.6	7.9	10.9	1958.0	1952.0	31.62	39.37
92	66M 41	AC 201D	6	11/15/90	1625	25.1	11.2	8.2	16.1	1958.5	1954.5	2.43	3.11
92	66M 41	AC 201D	1	04/04/91	1618	37.6	10.0	12.3	14.4	1960.5	1953.5	1960.00	1953.00
92	66M 41	AC 201D	3	04/04/91	1647	29.4	8.4	9.6	12.0	1959.5	1952.5	31.26	38.26
92	66M 41	AC 201D	5	12/22/92	1502	2.8	5.2	0.9	7.4	1951.0	1950.0	0.50	0.50
92	66M 41	AC 201D	6	12/22/92	1507	1.4	7.6	0.4	10.9	1949.5	1952.0	5.00	5.00
92	66M 41	AC 201D	7	12/22/92	1514	2.7	5.7	0.9	8.2	1951.0	1950.5	1950.10	1950.60
92	66M 41	AC 201D	8	12/22/92	1519	1.3	7.0	0.4	10.0	1949.5	1951.5	42.88	42.38
92	66M 41	AC 201D	9	12/22/92	1859	1.4	4.3	0.4	6.2	1949.5	1949.0	0.73	1.07
93	66M 19	SOW 110	1	11/16/90	847	68.8	25.9	22.4	37.2	1964.0	1960.5		
93	66M 19	SOW 110	2	11/16/90	850	69.6	23.0	22.7	33.0	1964.0	1959.5		
93	66M 19	SOW 110	3	11/16/90	854	3.0	191.9	1.0	275.4	1951.0	1977.5	6.00	6.00
93	66M 19	SOW 110	4	11/16/90	858	56.8	10.3	18.5	14.8	1963.0	1954.0	1961.58	1960.58
93	66M 19	SOW 110	5	11/16/90	901	67.6	23.5	22.0	33.8	1964.0	1959.5	29.29	30.29
93	66M 19	SOW 110	6	11/16/90	905	63.5	8.6	20.7	12.4	1963.5	1952.5	4.75	8.14
94	66M 42	AC 203S	1	11/16/90	1020	64.2	4.9	20.9	7.1	1963.5	1949.5		
94	66M 42	AC 203S	2	11/16/90	1024	----	1.8	----	2.6	----	1946.5		
94	66M 42	AC 203S	3	11/16/90	1030	65.8	1.8	21.4	2.6	1963.5	1946.5	5.00	6.00
94	66M 42	AC 203S	4	11/16/90	1038	89.2	0.0	29.1	0.0	1965.5	1940.0	1964.50	1945.08
94	66M 42	AC 203S	5	11/16/90	1040	76.4	3.2	24.9	4.6	1964.5	1948.0	26.38	45.79
94	66M 42	AC 203S	6	11/16/90	1048	89.1	0.0	29.1	0.0	1965.5	1940.0	0.89	3.74
95	66M 44	AC 204S	1	11/15/90	1710	87.8	268.8	28.6	385.8	1965.0	1984.5		
95	66M 44	AC 204S	2	11/15/90	1714	94.2	256.4	30.7	368.0	1965.5	1983.5		
95	66M 44	AC 204S	3	11/15/90	1719	71.7	201.6	23.4	289.3	1964.0	1978.5	6.00	6.00
95	66M 44	AC 204S	4	11/15/90	1726	83.8	231.0	27.3	331.4	1965.0	1981.5	1964.83	1982.42
95	66M 44	AC 204S	5	11/15/90	1731	87.1	274.6	28.4	394.1	1965.0	1985.0	26.04	8.46
95	66M 44	AC 204S	6	11/15/90	1735	80.4	229.5	26.2	329.4	1964.5	1981.5	0.47	2.21

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
96	66M 45	AC 204D	1	11/15/90	1617	429.5	85.1	140.0	122.1	1976.5	1969.5		
96	66M 45	AC 204D	2	11/15/90	1620	70.5	106.0	23.0	152.2	1964.0	1971.5		
96	66M 45	AC 204D	3	11/15/90	1624	292.3	65.8	95.3	94.5	1973.0	1967.5	6.00	6.00
96	66M 45	AC 204D	4	11/15/90	1631	72.2	75.4	23.5	108.2	1964.0	1968.5	1968.17	1968.83
96	66M 45	AC 204D	5	11/15/90	1636	116.0	93.0	37.8	133.5	1967.0	1970.0	22.71	22.04
96	66M 45	AC 204D	6	11/15/90	1643	75.8	55.3	24.7	79.4	1964.5	1966.0	4.87	1.77
97	66M 46	AC 205S	1	11/15/90	1435	462.1	172.3	150.6	247.3	1977.5	1976.0		
97	66M 46	AC 205S	2	11/15/90	1439	455.6	165.4	148.5	237.4	1977.5	1975.5	5.00	2.00
97	66M 46	AC 205S	3	11/15/90	1446	375.6	----	122.4	----	1975.0	----	1976.60	1975.75
97	66M 46	AC 205S	4	11/15/90	1453	424.8	----	138.5	----	1976.5	----	14.27	15.12
97	66M 46	AC 205S	6	11/15/90	1501	433.8	----	141.4	----	1976.5	----	0.92	0.25
98	63F 25	Well 1	1	11/14/90	951	250.1	94.5	106.3	171.9	1974.0	1972.5		
98	63F 25	Well 1	2	11/14/90	956	258.3	115.6	109.9	210.4	1974.5	1974.5		
98	63F 25	Well 1	3	11/14/90	1001	262.2	98.0	111.5	178.4	1974.5	1972.5	6.00	6.00
98	63F 25	Well 1	4	11/14/90	1006	262.1	106.1	111.5	193.0	1974.5	1973.5	1974.25	1973.50
98	63F 25	Well 1	5	11/14/90	1014	252.4	116.8	107.3	212.5	1974.0	1974.5	16.62	17.37
98	63F 25	Well 1	6	11/14/90	1017	255.5	107.7	108.7	195.9	1974.0	1973.5	0.25	0.82
99	63F 25	Well 2	2	11/14/90	909	605.5	255.4	257.5	464.6	1988.5	1988.5		
99	63F 25	Well 2	3	11/14/90	912	578.1	228.1	245.8	415.0	1987.5	1986.0	5.00	5.00
99	63F 25	Well 2	4	11/14/90	916	613.0	253.9	260.7	462.0	1989.0	1988.5	1987.90	1987.40
99	63F 25	Well 2	5	11/14/90	921	589.6	252.0	250.7	458.5	1988.0	1988.0	2.97	3.47
99	63F 25	Well 2	6	11/14/90	924	549.4	226.7	233.6	412.5	1986.5	1986.0	0.86	1.16
100	63F 49	Well 4E	1	11/14/90	1717	34081.1	245.5	14492	446.6	C	1987.5		
100	63F 49	Well 4E	2	11/14/90	1720	38063.6	204.1	16186	371.3	C	1983.5	5.00	5.00
100	63F 49	Well 4E	4	11/14/90	1730	18839.4	223.4	8011	406.5	C	1985.5	C	1985.70
100	63F 49	Well 4E	5	11/14/90	1734	49414.8	213.2	21013	387.9	C	1984.5	----	5.17
100	63F 49	Well 4E	6	11/14/90	1737	26140.5	248.2	11116	451.6	C	1987.5	----	1.60
100	63F 49	Well 4E	1	04/05/91	1335	59740.1	266.8	25403	485.4	C	1990.0	C	1989.25
100	63F 49	Well 4E	3	04/05/91	1356	51508.2	255.7	21903	465.2	C	1988.5	----	2.01
101	63F 44	Well 4B	2	11/14/90	1348	471.6	199.6	200.5	363.1	1983.5	1983.0		
101	63F 44	Well 4B	3	11/14/90	1353	444.9	182.8	189.2	332.5	1982.0	1981.5	5.00	5.00
101	63F 44	Well 4B	4	11/14/90	1357	452.8	201.1	192.6	365.8	1982.5	1983.0	1982.90	1982.80
101	63F 44	Well 4B	5	11/14/90	1401	458.7	198.0	195.1	360.3	1983.0	1983.0	7.97	8.07
101	63F 44	Well 4B	6	11/14/90	1406	473.2	201.7	201.2	366.9	1983.5	1983.5	0.58	0.68
101	63F 44	Well 4B	1	04/05/91	1229	484.6	202.5	206.1	368.5	1984.0	1983.5	1984.25	1983.50
101	63F 44	Well 4B	3	04/05/91	1255	491.3	202.7	208.9	368.8	1984.5	1983.5	7.01	7.76
102	63F 45	Well 4C	1	11/14/90	1451	262.9	159.4	111.8	290.0	1974.5	1978.5		
102	63F 45	Well 4C	2	11/14/90	1456	261.6	154.9	111.2	281.9	1974.5	1978.0		
102	63F 45	Well 4C	3	11/14/90	1459	247.5	135.0	105.3	245.7	1974.0	1976.0	6.00	6.00
102	63F 45	Well 4C	4	11/14/90	1504	266.0	153.4	113.1	279.1	1974.5	1978.0	1974.42	1977.67
102	63F 45	Well 4C	5	11/14/90	1507	260.0	153.1	110.6	278.5	1974.5	1978.0	16.46	13.21
102	63F 45	Well 4C	6	11/14/90	1511	270.4	151.5	115.0	275.6	1974.5	1977.5	0.19	0.80
102	63F 45	Well 4C	1	04/05/91	1114	331.3	155.2	140.9	282.4	1976.5	1978.0	1976.50	1978.25
102	63F 45	Well 4C	3	04/05/91	1154	319.9	159.7	136.0	290.7	1976.5	1978.5	14.76	13.01

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC–based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12	CFC–11	CFC–12
103 63F 46		Well 4D	1	11/14/90	1605	14.9	4.9	6.3	9.0	1957.0	1951.0		
103 63F 46		Well 4D	2	11/14/90	1611	32.8	6.3	13.9	11.4	1961.5	1952.5		
103 63F 46		Well 4D	3	11/14/90	1615	15.6	19.1	6.6	34.8	1957.0	1960.0		
103 63F 46		Well 4D	4	11/14/90	1621	22.9	17.6	9.7	32.1	1959.5	1959.5		
103 63F 46		Well 4D	5	11/14/90	1626	20.4	7.2	8.7	13.1	1958.5	1953.0	8.00	8.00
103 63F 46		Well 4D	6	11/14/90	1631	18.6	16.2	7.9	29.4	1958.0	1958.5	1958.31	1955.63
103 63F 46		Well 4D	7	11/14/90	1637	17.3	6.5	7.4	11.8	1957.5	1952.5	32.56	35.25
103 63F 46		Well 4D	8	11/14/90	1639	16.5	14.9	7.0	27.0	1957.5	1958.0	1.43	3.46
103 63F 46		Well 4D	1	04/05/91	1010	32.3	11.2	13.7	20.3	1961.5	1956.0	1961.50	1955.25
103 63F 46		Well 4D	3	04/05/91	1039	32.2	8.7	13.7	15.8	1961.5	1954.5	29.76	36.01
104 63F 29		Well 5A	2	11/14/90	1228	654.9	247.1	278.5	449.6	Modern	1987.5		
104 63F 29		Well 5A	3	11/14/90	1231	603.5	176.6	256.6	321.4	1988.5	1981.0	4.00	5.00
104 63F 29		Well 5A	4	11/14/90	1238	674.5	215.0	286.8	391.1	Modern	1985.0	1990.28	1985.20
104 63F 29		Well 5A	5	11/14/90	1241	710.6	247.0	302.2	449.5	C	1987.5	0.59	5.67
104 63F 29		Well 5A	6	11/14/90	1244	691.6	213.9	294.1	389.3	Modern	1985.0	1.03	2.38
105 63F 47		Well 5B	1	11/14/90	1144	350.8	181.5	149.2	330.2	1977.5	1981.5		
105 63F 47		Well 5B	2	11/14/90	1151	323.3	142.4	137.5	259.0	1976.5	1977.0		
105 63F 47		Well 5B	3	11/14/90	1154	323.1	128.7	137.4	234.1	1976.5	1975.5	6.00	6.00
105 63F 47		Well 5B	4	11/14/90	1157	304.5	122.3	129.5	222.5	1975.5	1975.0	1976.25	1976.67
105 63F 47		Well 5B	5	11/14/90	1201	319.3	140.4	135.8	255.4	1976.0	1976.5	14.62	14.21
105 63F 47		Well 5B	6	11/14/90	1204	304.1	120.3	129.3	218.9	1975.5	1974.5	0.69	2.32
106 63F 30		Well 6	2	11/15/90	1147	685.8	255.1	291.6	464.1	Modern	1988.5		
106 63F 30		Well 6	3	11/15/90	1152	673.4	239.2	286.4	435.3	Modern	1987.0	5.00	5.00
106 63F 30		Well 6	4	11/15/90	1156	640.1	229.4	272.2	417.3	Modern	1986.5	1990.87	1987.80
106 63F 30		Well 6	5	11/15/90	1200	684.6	262.3	291.1	477.3	Modern	1989.5	0.00	3.07
106 63F 30		Well 6	6	11/15/90	1205	679.2	247.8	288.8	450.8	Modern	1987.5	0.00	1.08
107 63F 31		Well 7A	1	11/15/90	948	10286.1	272.6	4373.9	496.0	C	Modern		
107 63F 31		Well 7A	2	11/15/90	952	17011.2	267.5	7233.6	486.7	C	1990.0		
107 63F 31		Well 7A	3	11/15/90	955	6747.1	223.0	2869.0	405.7	C	1985.5	6.00	6.00
107 63F 31		Well 7A	4	11/15/90	959	4604.7	236.9	1958.1	431.1	C	1987.0	C	1988.25
107 63F 31		Well 7A	5	11/15/90	1002	22004.6	261.0	9357.0	475.0	C	1989.0	----	2.62
107 63F 31		Well 7A	6	11/15/90	1006	3588.0	240.6	1525.7	437.8	C	1987.0	----	1.91
108 63F 48		Well 7B	1	11/15/90	901	215.0	83.2	91.4	151.5	1973.0	1971.5		
108 63F 48		Well 7B	2	11/15/90	907	208.4	74.9	88.6	136.3	1972.5	1970.5		
108 63F 48		Well 7B	3	11/15/90	915	235.7	66.8	100.2	121.5	1973.5	1969.5	6.00	6.00
108 63F 48		Well 7B	4	11/15/90	920	199.4	72.9	84.8	132.6	1972.5	1970.0	1972.75	1970.50
108 63F 48		Well 7B	5	11/15/90	925	203.2	75.4	86.4	137.2	1972.5	1970.5	18.12	20.37
108 63F 48		Well 7B	6	11/15/90	929	199.3	81.7	84.8	148.6	1972.5	1971.0	0.38	0.65
109 63F 32		Well 8	1	11/15/90	1047	31611.2	244.1	13442	444.1	C	1987.5		
109 63F 32		Well 8	2	11/15/90	1050	44412.8	246.4	18886	448.2	C	1987.5		
109 63F 32		Well 8	3	11/15/90	1055	26609.1	208.3	11315	379.0	C	1984.0	6.00	6.00
109 63F 32		Well 8	4	11/15/90	1059	15277.4	244.1	6496	444.1	C	1987.5	C	1986.75
109 63F 32		Well 8	5	11/15/90	1102	38603.9	245.5	16415	446.8	C	1987.5	----	4.12
109 63F 32		Well 8	6	11/15/90	1105	15547.7	233.5	6611	424.8	C	1986.5	----	1.28

Appendix B. – *Summary of chlorofluorocarbon data (cont.)*

Well no.	Well name	Local identifer	Vial no.	Sampling date mo/d/yr	Time	Concentration in solution, in pg/kg		Partial pressure, in pptv, at recharge temperature		Model CFC-based recharge dates		No. of samples, Julian date, age in years, standard deviation,	
						CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12	CFC-11	CFC-12
110	Stream near Well 2			11/14/90	840	756.6	321.7	265.0	492.3	1989.5	1990.5	1987.83	1990.75
110	Stream near Well 2			11/14/90	845	685.1	357.2	239.9	546.5	1987.0	Modern	3.04	0.12
110	Stream near Well 2			11/14/90	845	692.0	338.8	242.3	518.4	1987.0	Modern	1.18	0.18
111	Stream near WR 403			11/13/90	1300	820.6	367.1	261.5	516.4	1989.0	Modern	1989.93	Modern
111	Stream near WR 403			11/13/90	1300	935.4	430.9	298.1	606.2	Modern	C	0.93	----
112	Cypress Branch			11/08/90	850	921.2	295.5	308.8	434.8	C	1987.0	C	1989.25
112	Cypress Branch			11/08/90	850	1161.6	345.7	389.3	508.6	C	Modern	----	1.61
112	Cypress Branch			04/02/91	1654	520.9	229.8	192.5	369.0	1982.5	1983.5	1982.50	1983.50
113	Chesterville Branch			11/06/90	900	1050.1	295.9	351.9	435.3	C	1987.0	C	1984.50
113	Chesterville Branch			11/06/90	900	1091.6	231.7	365.9	340.9	C	1982.0	----	6.35
113	Chesterville Branch 112			04/02/91	1815	702.0	340.5	266.5	559.8	1989.5	Modern	1989.50	Modern
114	Chesterville Branch Spr			04/02/91	1037	605.5	292.1	204.1	431.9	1984.0	1987.0	1984.00	1987.00
115	Chesterville Branch Spr			04/02/91	1830	796.5	582.8	292.8	931.2	Modern	C	Modern	C
116	Pocomoke River			04/05/91	1300	687.2	389.3	272.0	664.5	1991.0	C	1991.13	Modern
116	Pocomoke River			04/05/91	1300	748.6	347.2	296.3	592.5	Modern	Modern	0.13	----

*U.S. G.P.O.:1993-301-077:8004