Sanitary Landfill Groundwater Quality Assessment Plan Savannah River Site

by

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**SAVANNAH RIVER SITE SANITARY LANDFILL
GROUNDWATER ASSESSMENT MONITORING PLAN
TABLE OF CONTENTS**

	<u>PAGE NUMBER</u>
INTRODUCTION	
SITE DESCRIPTION	1
DETECTION MONITORING NETWORK	1
GROUNDWATER MONITORING DATA	2
PROPOSED ASSESSMENT PROGRAM	5
SOIL BORINGS	5
MONITORING WELLS	6
FIELD AND LAB TESTING	7
SAMPLING AND ANALYSIS	7
SCHEDULE FOR IMPLEMENTATION	8

APPENDICES

APPENDIX A	GUIDANCE FROM SCDHEC ON THE PREPARATION OF THIS PLAN
APPENDIX B	WELL CONSTRUCTION RECORDS
APPENDIX C	GEOLOGIC LOGS, LFW 26 THROUGH LFW 42
APPENDIX D	1ST QUARTER THROUGH 4TH QUARTER 1989 ANALYTICAL DATA FOR THE LANDFILL MONITORING WELLS
APPENDIX E	SAVANNAH RIVER SITE SAMPLING AND ANALYSIS PLAN

LIST OF TABLES AND FIGURES

		<u>PAGE</u>
TABLE 1	WATER TABLE DEPTHS AT THE LANDFILL WELLS FROM 4TH QUARTER 1983 TO 4TH QUARTER 1989	9
TABLE 2	COORDINATES AND LATITUDES/LONGITUDES FOR THE PROPOSED WELLS AND BORINGS	11
TABLE 3	APPROXIMATE DEPTHS AND SCREENED ZONES FOR THE PROPOSED WELLS AND BORINGS	12
FIGURE 1	LOCATION MAP OF THE SANITARY LANDFILL	13
FIGURE 2	BASE MAP SHOWING BOUNDARIES OF THE ORIGINAL LANDFILL AND EXPANSIONS	14
FIGURE 3	ORIGINAL LANDFILL	15
FIGURE 4	LOCATIONS OF EXISTING MONITORING WELLS	16
FIGURE 5	WATER TABLE SURFACE AT THE LANDFILL	17
FIGURE 6	3RD QUARTER 1989 TRITIUM CONCENTRATIONS	18
FIGURE 7	3RD QUARTER 1989 TCE CONCENTRATIONS	19
FIGURE 8	3RD QUARTER 1989 TOTAL RADIUM CONC.	20
FIGURE 9	3RD QUARTER 1989 GROSS ALPHA CONC.	21
FIGURE 10	DEPTH TO THE WATER TABLE (4Q89)	22
FIGURE 11	LOCATIONS OF PROPOSED SOIL BORINGS	23
FIGURE 12	LOCATIONS OF PROPOSED MONITORING WELLS	24
FIGURE 13	LITHOLOGIC COLUMN FROM P-29 COREHOLE	25

INTRODUCTION

This assessment monitoring plan has been prepared in accordance with the guidance provided by the SCDHEC in a letter dated December 7, 1989 from Pearson to Wright and a letter dated October 9, 1989 from Keisler to Lindler. The letters are included as Appendix A, for informational purposes.

Included in the plan are all of the monitoring data from the landfill monitoring wells for 1989, and a description of the present monitoring well network. The plan proposes thirty-two new wells and an extensive coring project that includes eleven soil borings. Locations of the proposed wells attempt to follow the SCDHEC guidelines and are downgradient, sidegradient and in the heart of suspected contaminant plumes.

Also included in the plan is the current Savannah River Site Sampling and Analysis Plan and the well construction records for all of the existing monitoring wells around the sanitary landfill.

SITE DESCRIPTION

The Savannah River Site Sanitary Landfill is an approximately 70 acre site situated just south of SRS road C between the Savannah River Site's "B" area and Upper Three Runs Creek (Figure 1). The site has been receiving sanitary waste since 1974, and is currently operating under Domestic Waste Permit Modification #087-A. The original landfill is a 32 acre square shaped area that was developed in four phases and was filled to capacity in early 1987. Figure 2 is a map depicting the boundaries of the original tract and the northern and southern expansion. Figure 3 is a map of the original landfill showing the four phases of development. In 1987, two expansion areas were permitted to the north and south of the original landfill. The northern expansion is a 16 acre tract and the southern expansion is a 22 acre tract. The southern expansion is approximately two thirds full at this time and the northern expansion has not yet been used.

In 1988, the sanitary landfill became the subject of a RCRA Facility Investigation due to recurring evidence of elevated levels of RCRA hazardous constituents in the groundwater at the site.

There are thirty-one wells that monitor groundwater quality at the sanitary landfill. All of the wells monitor the water table hydrologic unit. Fourteen of the wells are in or around the boundaries of the original thirty two acre landfill and were installed prior to the practice of installing RCRA standard wells at the Savannah River Site. The fourteen wells are LFW 6, 7, 8, 10A, 16, 17, 18, 19, 20, 21, 22, 23, 24, and 25. Seventeen RCRA standard wells were installed in late 1986, around the southern and northern expansions. The newer wells are LFW 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, and 42.

Groundwater monitoring data from the thirty-one wells for all four quarters 1989 are included in this report. Figure 4 is a map depicting the locations of all of the monitoring wells around the landfill.

DETECTION MONITORING NETWORK

Thirty-one wells currently monitor groundwater quality at the Sanitary Landfill. All of the wells are screened in the water table hydrologic unit. Eight of the wells (LFW 6, 7, 8, 16, 17, 18, 19, and 20) were installed in 1981. LFW 6, 7, and 8 are constructed of 4" galvanized steel casings with PVC screens. LFW 16-20 are constructed with PVC casings and screens. LFW 10A, 21, 22, 23, 24, and 25 were

installed in 1984 and have PVC casings and screens. LFW 26 through 42 were installed in late 1986 around the southern and northern expansions of the landfill, and they are constructed with PVC casings and stainless steel screens. Appendix B is a compilation of the construction records for all of the existing wells around the sanitary landfill.

GROUNDWATER MONITORING DATA

Monitoring Data

The sanitary landfill groundwater quality data included in this plan are field and lab analyses from monitoring wells sampled during the four quarters of 1989. All of the wells monitor the water table hydrologic unit. A map indicating the locations of the thirty-one wells in and around the landfill is included as Figure 4. Tables of all the data for 1989 are included as Appendix C. The Savannah River site has been supplying monitoring data from wells at the sanitary landfill to the SCDHEC since 1983 but to have included it all in this assessment plan would have added too much bulk to the plan.

A water table elevation map is provided in Figure 5 and is based on measurements collected during the fourth quarter of 1989. As expected, the map depicts groundwater flow to the south/southeast toward Upper Three Runs. Wells LFW 26 through 35 are all around the northern expansion of the landfill which has never been used and they are all hydraulically upgradient of the original landfill and the southern expansion. LFW 6, 7, 8, 10A, 16, 17, 18, 19, 20, 21, 22, 23, 24, and 25 are in and around the original landfill. LFW 36 through 42 are around the boundaries of the southern expansion of the landfill.

In the first half of 1989, concentrations of at least one of the following constituents, tritium, gross alpha, and trichloroethylene in excess of the primary drinking water standard were observed in at least one well monitoring the Sanitary Landfill. All three of these constituents have been detected in elevated levels at the same wells in more than one quarter. One well (LFW 18) exhibited elevated tritium in excess of the PDWS in both the first and second quarter of 1989. One well (LFW 21) exhibited slightly elevated gross alpha in both quarters and one well (LFW 37) exhibited concentrations of trichloroethylene in excess of the PDWS in both quarters of 1989. Three of the wells that exhibited levels of either trichloroethylene or tetrachloroethylene, above the PDWS in the first quarter of 1989 (LFW 21, 22, and 39) were not analyzed for organics in the second quarter. One of these wells (LFW 21) has consistently displayed elevated levels of TCE through ten quarters of sampling. Steps have since been taken to ensure

that these wells are sampled for both trichloroethylene and tetrachloroethylene every quarter.

For the first quarter of 1989 at least one measurement at the following wells exceeded the primary drinking water standard for the indicated constituents:

- A) Gross Alpha LFW 7, LFW 21
- B) Total Radium LFW 7, LFW 21
- C) Tritium LFW 18
- D) Trichloroethylene LFW 21, LFW 22, LFW 37, LFW 38
- E) Tetrachloroethylene LFW 21, LFW 39
- F) Chromium LFW 31

For the second quarter of 1989 at least one measurement at the following wells exceeded the primary drinking water standard for the indicated constituents:

- A) Gross Alpha LFW 21
- B) Tritium LFW 7, LFW 8, LFW 18, LFW 21
- C) Trichloroethylene LFW 36, LFW 37
- D) Benzene LFW 36

In the second half of 1989, concentrations of at least one of the following constituents: tritium, gross alpha, carbon tetrachloride, 1,1-dichloroethylene, 1,2-dichloroethane, total radium and trichloroethylene in excess of the primary drinking water standard were observed in at least one well monitoring the Sanitary Landfill. Gross alpha, total radium, and trichloroethylene have all been detected in elevated levels at the same wells in more than one quarter.

For the third quarter of 1989 at least one measurement at the following wells exceeded the primary drinking water standard for the indicated constituents:

- A) Gross Alpha LFW 6, LFW 7, LFW 21
- B) Total Radium LFW 6, LFW 7, LFW 16, LFW 18, LFW 21
- C) Tritium LFW 10A

- D) Trichloroethylene LFW 21, LFW 37, LFW 38
- E) Carbon tetrachloride LFW 10A, LFW 21, LFW 38, LFW 40
- F) 1,1-dichloroethylene LFW 10A, LFW 21, LFW 37, LFW 38
- G) 1,2-dichloroethane LFW 38

All of the wells are downgradient of areas that have been used to landfill waste. The only recorded tritium concentration above the PDWS was in LFW 10A at 110 pCi/ml. Figures 6 through 9 are maps depicting tritium, trichloroethylene, total radium and gross alpha concentrations, (the most consistently detected constituents), respectively, for all of the LFW wells from the third quarter of 1989. LFW 21, LFW 37 and LFW 38, which had elevated levels of TCE in the first half of 1989, also had elevated levels of TCE in the second half of 1989.

For the fourth quarter of 1989 the LFW well samples were analyzed for only one constituent, uranium. This was due to a scheduling oversight and the schedule has since been rectified. Only one well (LFW 38) exceeded the detection limit of 84 ug/l, with a measured concentration of 170 ug/l (2x the detection limit). Following is a list of parameters that all of the LFW well samples are scheduled to be analyzed for in every quarter of 1990:

Benzene, trichloroethylene, tetrachloroethylene, tritium, 1,2-dichloroethylene, 1,1 -dichloroethylene, 1,2-dichloroethane, gross alpha, non-volatile beta, total radium, pH, conductivity, total organic carbon, total organic halogen, chloride, sulfate, nitrate, arsenic, barium, cadmium, chromium, fluoride, lead, mercury, selenium, silver, endrin, lindane, methoxychlor, toxaphene, 2,4-D, 2,4, 5-TP (Silvex), and full GCMS.

WATER LEVELS

Table 1 is a compilation of depths to the water table below ground surface at the LFW wells from the 3rd quarter of 1983 to the 4th quarter of 1989. As can be seen in the table, there are three wells (LFW 6, LFW 24, and LFW 25) in which the depth to the water table was less than 15 feet below ground surface in 1984. These three wells are around the original thirty-two acre landfill and the data suggest that there could have been intersection between the trenches and the groundwater at some points during the life of the landfill, depending upon what the maximum trench depth in that portion of the landfill is. Earlier reports that have been reviewed indicate that the trench depths in the original landfill were from 10 to 15 feet and that makes intersection with the groundwater a good possibility at certain points in time which would undoubtedly have had an

accelerating effect on the generation of leachate and its subsequent migration into the water table hydrologic unit.

Trench depths in the southern expansion are reported to be between 12 and 14 feet below grade. The water depth data in Table 1 indicate that this is probably a safe depth. The measurement of trench depth has not been very tightly controlled in the past, but steps are being taken to modify operating procedures so that exact trench depths will be known."

The proposed solution to the above mentioned problems is to set a minimum elevation for the bottom of trenches (at least five feet above the ten year water table high) and then to check that by approved surveying methods. Based on the six years of data analyzed for this plan, that minimum elevation would be 156 feet above mean sea level for the southern expansion and 170 feet above mean sea level for the northern expansion. The situation requires further study to best predict a long term water table high (ten years or more) and then to develop a trench depth policy accordingly. This study is currently in progress and will be put into action as soon as possible. Figure 10 is a map depicting depth to the water table below land surface based on 2nd Quarter 1987 data, which is the highest water table of any of the quarters for which data exists from all of the LFW wells, (over the last three years).

PROPOSED ASSESSMENT PROGRAM

CHARACTERIZATION OF SITE GEOLOGY

Eleven borings are planned to attempt to adequately characterize the geology of the uppermost aquifer at the site. Borings are located at each corner of the facility (Figure 11). Four of the borings will be terminated in the Upper clay of the Pee Dee Formation (after Bledsoe, 1988) and the other seven will be terminated in the upper clay of the Ellenton Formation (Fig. 11). All of the borings will be continuously cored and geophysically logged and the core will be described in the field by a qualified geologist and then described again in a core lab by a geologist with the Savannah River Laboratory. Sediment samples will be collected for sieve analyses from each significant water bearing zone. Undisturbed (Shelby tube) samples will be collected from each significant confining layer and will be shipped off site for detailed analysis which will include at a minimum: horizontal and vertical permeability, plasticity index, moisture content and sieve and hydrometer.

The coreholes will all be abandoned immediately upon completion by pumping them full of a cement/bentonite grout in accordance with Savannah River Site well abandonment

procedures. When all of the lithologic data has been collected, it will be analyzed and reviewed and screen zones will be selected for the assessment wells. The depths of the coreholes and the depths of the proposed assessment wells have been estimated based on the lithology encountered at well cluster P-29 which is approximately 3500 feet west of the center of the landfill. The lithologic column for P-29 is included as Figure 13.

Table 2 lists the proposed SRS coordinates and latitudes/longitudes of the soil borings.

PROPOSED ASSESSMENT WELLS

Thirty two new wells are proposed for assessment monitoring at the sanitary landfill. They are downgradient and sidegradient of any existing LFW well that displayed concentrations of any hazardous constituent above the Primary Drinking Water Standard in 1989. Figure 12 is a map depicting the locations of the proposed wells. Table 2 lists the SRS coordinates and the latitude/longitudes of the proposed wells and Table 3 gives approximate depths of the wells based on rough correlation with the P-29 cluster which is approximately 3500 feet to the west of the site. As can be seen in the tables, there will be eighteen new water table wells (D), ten C wells and four B wells. The letter designations will correspond to the same letter designations used by Bledsoe in the P-29 well cluster (Fig. 13).

The wells will be installed in accordance with approved Savannah River Site well installation procedures with a few notable exceptions: a) Quantities of drilling mud and potable water introduced into the formation will be strictly tabulated to use as a reference when developing the wells; b) Well development will be strictly supervised by a hydrogeological consultant c) Water table wells will not necessarily straddle the water table but will be screened in the most transmissive zone to avoid high turbidity in samples. In cases where the monitoring well does not straddle the water table, a piezometer will be installed nearby that can be used for providing water level measurements.

FIELD AND LABORATORY TESTS

All of the new wells will be slug tested after well development. In addition to slug tests, constant head permeability tests will be conducted on the wells after Cedergren, 1967 (USBR Method E-18). Water that is introduced during the constant head tests will be potable and will be purged from the wells after completion of the tests.

SAMPLING AND ANALYSIS

Sampling will be conducted in accordance with the approved Savannah River Site sampling plan (included as appendix D).

A comprehensive analysis will be run on every well for every quarter of the first year that they are sampled.

SCHEDULE FOR IMPLEMENTATION

The schedule for completing the assessment program after approval by the SCDHEC is as follows:

Continuously core/geophysically log and abandon eleven
exploratory holes (1825 ft.) 40 days

Interpret geology and select screen zones based on core
holes 30 days

Install thirty two wells at an average depth of 52 feet per
well 62 days

Develop thirty two wells (this will be concurrent with
installations and will add only on the end) 2 days

Field permeability testing 60 days

subtotal 194 days

* 194 working days is 39 weeks. At the end of 39 weeks the
first round of samples can be collected:

First round of samples collected 10 days

Data back from analytical lab 60 days

First reporting of data to SCDHEC 30 days

* This brings the total number of working days from project
startup to the first report being sent to the SCDHEC to 294
or 59 weeks.

TABLE 1

DEPTHS TO THE WATER TABLE
BELOW GROUND SURFACE
AT LANDFILL WELLS

	4Q83	1Q84	2Q84	3Q84	4Q84	1Q85	2Q85	3Q85	4Q85	1Q86	2Q86	3Q86	4Q86	1Q87	2Q87	3Q87
LFW6	2.5	15.6	15.6	14.3	13.9	-2.5	-2.5	15.3	16.1	-2.5	16.4	21.7	17.27	17.14	16.66	15.86
LFW7	2.5	17.1	16.7	15.8	15.4	-2.5	-2.5	17.1	17.5	-2.5	17.6	18.1	18.03	18.23	17.95	17.94
LFW8	2.5	18	17.3	16.6	17.1	-2.5	-2.5	18.9	19.2	-2.5	19	19.4	19.81	19.65	18.85	18.18
LFW10A	2.5	-2.5	19.9	20	19.4	20.2	-2.5	22	27.5	-2.5	22.4	27.53	23.12	22.57	22.17	20.78
LFW16	2.5	21.1	20.6	19.6	19.1	-2.5	-2.5	21.6	22.5	-2.5	22.3	22.7	23.51	22.92	23.34	20.91
LFW17	2.5	21.4	21.3	17.4	19.1	-2.5	-2.5	22.3	21.8	-2.5	21.9	22.2	22.85	22.67	21.92	18.32
LFW18	2.5	18.4	18	17.9	17.1	-2.5	-2.5	18.4	18.8	-2.5	19.8	19.65	20.32	20	18.97	18.03
LFW19	2.5	18.5	17.5	17.6	17	-2.5	-2.5	19.2	19.3	-2.5	19.6	19.9	20.47	20.14	19.76	18.3
LFW20	2.5	19.9	20.7	18.3	17.7	-2.5	-2.5	19.8	37.8	-2.5	21.3	38.05	21.93	21.48	20.75	19.09
LFW21	2.5	-2.5	-2.5	21.8	21.8	22.3	-2.5	23.4	24.3	-2.5	24.1	37.4	25.15	24.55	23.59	22.28
LFW22	2.5	-2.5	-2.5	19.8	19.7	20.6	-2.5	21.4	22	-2.5	22.2	37.2	23.43	23.3	22.22	20.61
LFW23	2.5	-2.5	-2.5	16.6	17.2	17.6	-2.5	18.5	19.8	-2.5	19.2	37.25	20.72	20.31	19.5	17.5
LFW24	2.5	-2.5	-2.5	13	13.3	13.8	-2.5	16.2	16.4	-2.5	16.8	36.4	17.71	17.37	16.35	15.26
LFW25	2.5	-2.5	-2.5	15.4	14.2	14.8	-2.5	16.7	17.7	-2.5	17.9	37.45	18.88	18.47	17.56	15.13
LFW26	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	23.83	22.64
LFW27	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	25.67	24.74
LFW28	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	28.17	26.47
LFW29	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	29.82	28.22
LFW30	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	44.66	42.64
LFW31	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	64.27	62.6
LFW32	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	62.12	59.02
LFW33	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	51.81	50.12
LFW34	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	40.05	38.89
LFW35	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	23.78	22.45
LFW36	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	21.69	21.04
LFW37	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	23.75	24.21
LFW38	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	23.3	23.8
LFW39	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	24.43	24.74
LFW40	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	24.56	24.76
LFW41	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	21.94	22.01
LFW42	2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	19.83	19.84
MEAN	18.75	18.62222	17.43571	17.28571	18.21667	MEAN	19.34286	21.47857		20.03571	28.20929	20.94286	20.62857	26.87968	25.64645	27.00774
MIN	15.6	15.6	13	13.3	13.8	MIN	15.3	16.1		16.4	18.1	17.27	17.14	16.35	15.13	15.86
MAX	21.4	21.3	21.8	21.8	22.3	MAX	23.4	37.8		24.1	38.05	25.15	24.55	64.27	62.6	63.46
STD	1.845941	1.922254	2.308558	2.360647	3.105059	STD	2.418002	5.456213		2.286484	8.140541	2.367242	2.257055	12.26095	11.98864	11.78418

* -2.5 represent no data

TABLE 1 (cont)

4087	1088	2088	3088	4088	1089	2089	3089	4089
16.69	16.52	16.68	20.53	17.64	17.75	16.82	16.99	16.67
17.98	17.74	17.87	18.77	18.86	18.85	17.93	18.17	17.79
20.35	18.91	18.96	19.9	19.93	19.96	18.89	19.13	18.9
22.44	22.42	22.36	23.33	22.53	22.97	22.42	22.17	22.12
23.19	22.9	22.84	23.7	24.04	24.24	22.63	22.42	22.65
22.51	21.99	22.19	23.16	23.29	23.39	21.99	22.21	21.97
19.94	19.39	19.49	20.39	20.54	20.62	19.47	19.64	19.24
19.98	19.75	19.93	19.9	20.91	21	20.18	20.2	20.03
20.98	21.26	21.24	23.08	22.51	21.96	21.19	21.07	21.23
25.21	24.2	23.89	24.91	25.12	25.11	23.87	23.76	23.87
23.23	22.68	22.31	23.49	23.49	23.7	21.98	22.11	22.21
20.1	20.06	19.57	21.97	20.96	21.11	19.07	19.12	19.19
17.42	17.38	17.09	18.32	18.52	18.69	16.42	16.42	16.41
18.27	18.32	18.02	19.21	19.39	19.65	17.53	17.53	17.51
24.23	24.97	25.04	25.82	26.08	26.15	25.19	25.04	25.28
26.14	26.76	26.98	27.79	28.24	28.37	27.3	27.04	27.2
29.02	28.64	28.92	29.68	29.88	30.26	29.38	28.94	29.07
30.59	30.17	30.56	31.37	31.6	31.9	31.26	30.64	30.75
44.48	44.91	45.34	46.05	46.22	46.76	46.17	45.23	45.49
64.57	64.5	64.88	65.6	65.93	66.25	65.72	65.15	65.18
61.14	61.02	61.21	61.88	62.24	62.52	61.84	61.29	61.47
51.79	52.02	52.37	53.1	53.36	53.6	52.89	52.47	52.64
40.76	40.64	40.84	41.62	41.87	42.09	41.57	40.9	41.09
24.79	24.39	24.5	25.36	25.57	25.86	24.66	24.53	24.67
24.29	22.61	22.53	23.41	26.35	23.29	22.43	22.78	22.63
25.71	25.06	25.03	25.75	25.64	25.57	24.93	25.15	24.88
26.12	25.35	25.16	26.21	26.06	25.96	24.93	25.19	25.03
26.94	26.29	26.22	27.34	27.12	26.97	25.97	26.17	26.04
27.16	26.35	26.27	27.59	27.26	27.12	25.97	26.31	26
25.6	25.01	18.62	26.13	25.92	25.83	23.99	24.14	23.99
22.39	22.24	21.82	23.17	23.21	23.06	21.35	21.7	21.5
27.87129	27.5629	27.37839	28.66226	28.71871	28.72774	27.61097	27.53581	27.50645
16.69	16.52	16.68	18.32	17.64	17.75	16.42	16.42	16.41
64.57	64.5	64.88	65.6	65.93	66.25	65.72	65.15	65.18
11.88922	12.0128	12.24214	11.95059	12.09019	12.20858	12.45648	12.21652	12.30585

TABLE 2

**SANITARY LANDFILL
ASSESSMENT MONITORING WELLS**

WELL NAME	SRS COORDINATES	LATITUDE/LONGITUDE
LFW 43 (B,C)	N86360 E45280	33.2906454/81.7153252
LFW 44	N84525 E45025	33.2861721/81.7124294
LFW 45	N84260 E45100	33.2857086/81.7117169
LFW 46	N84050 E45140	33.2853096/81.7112034
LFW 47 (C,D)	N83825 E45160	33.2848448/81.7107134
LFW 48 (C,D)	N83860 E45430	33.2853630/81.7100707
LFW 49	N84070 E45650	33.2861864/81.7098998
LFW 50 (C,D)	N84100 E45750	33.2864160/81.7096948
LFW 51	N84130 E45900	33.2867273/81.7093583
LFW 52 (C,D)	N83860 E45950	33.2862119/81.7087019
LFW 53	N83900 E46170	33.2866595/81.7082005
LFW 54 (C,D)	N83940 E46350	33.2870418/81.7078044
LFW 55 (C,D)	N83600 E45200	33.2844126/81.7101708
LFW 56	N83400 E45300	33.2841337/81.7095188
LFW 57 (B,C,D)	N83200 E45400	33.2838547/81.7088668
LFW 58	N82950 E45700	33.2837917/81.7075912
LFW 59 (B,C,D)	N83025 E46050	33.2845290/81.7068157
LFW 60	N83050 E46270	33.2849434/81.7062851
LFW 61 (B,C,D)	N83100 E46490	33.2854131/81.7058032

NOTE: D = Well screened in water table hydrologic unit.
 C = Well screened in upper part of first confined unit below the water table hydrologic unit.
 B = Well screened in lower part of first confined unit below the water table hydrologic unit.

SOIL BORING LOCATIONS

BORING NO.	SRS COORDINATES	LATITUDE/LONGITUDE
LFW 1SB	N86300 E44925	33.2899332/81.7161431
LFW 2SB	N86375 E45400	33.2908745/81.7150385
LFW 3SB	N85220 E45000	33.2876678/81.7138462
LFW 4SB	N85450 E45350	33.2887478/81.7133719
LFW 5SB	N85530 E46200	33.2903124/81.7112899
LFW 6SB	N84050 E45300	33.2855708/81.7107822
LFW 7SB	N84100 E46000	33.2868242/81.7090367
LFW 8SB	N84350 E46620	33.2883891/81.7078906
LFW 9SB	N83000 E45600	33.2837390/81.7079516
LFW 19SB	N83100 E46100	33.2847764/81.7068298
LFW 11SB	N83150 E46700	33.2858665/81.7053475

NOTE: LFW 1SB, 4SB, 7SB, 10SB will be cored to the upper Pee Dee clay (after Bledsoe, 1988)
 LFW 2SB, 3SB, 5SB, 6SB, 8SB, 9SB and 11SB will be cored to the top of the Ellenton clay (after Bledsoe, 1988).

TABLE 3

ESTIMATED DEPTHS OF SOIL BORINGS AND PROPOSED WELLS

WELL/BORING-NO.	ESTIMATED SCREEN DEPTH	EST. TOTAL DEPTH
LFW 1SB	NA	250 FT.
LFW 2SB	NA	145 FT.
LFW 3SB	NA	135 FT.
LFW 4SB	NA	200 FT.
LFW 5SB	NA	130 FT.
LFW 6SB	NA	120 FT.
LFW 7SB	NA	195 FT.
LFW 8SB	NA	120 FT.
LFW 9SB	NA	120 FT.
LFW 10SB	NA	190 FT.
LFW 11SB	NA	120 FT.
TOTAL CORED FOOTAGE		1825 FT.
LFW 43C	57 - 67 FT.	70 FT.
LFW 43B	106 - 116 FT	120 FT.
LFW 44	9 - 29 FT.	35 FT.
LFW 45	9 - 29 FT.	35 FT.
LFW 46	10 - 30 FT.	35 FT.
LFW 47C	40 - 50 FT.	55 FT.
LFW 47D	17 - 37 FT.	42 FT.
LFW 48C	40 - 50 FT.	55 FT.
LFW 48D	17 - 37 FT.	42 FT.
LFW 49	20 - 40 FT.	45 FT.
LFW 50C	40 - 50 FT.	55 FT.
LFW 50D	20 - 40 FT.	45 FT.
LFW 51	20 - 40 FT.	45 FT.
LFW 52C	35 - 45 FT.	50 FT.
LFW 52D	12 - 32 FT.	37 FT.
LFW 53	18 - 38 FT.	43 FT.
LFW 54C	35 - 45 FT.	50 FT.
LFW 54D	12 - 32 FT.	37 FT.
LFW 55C	35 - 45 FT.	50 FT.
LFW 55D	12 - 32 FT.	37 FT.
LFW 56	12 - 32 FT.	37 FT.
LFW 57B	78 - 88 FT.	93 FT.
LFW 57C	25 - 35 FT.	40 FT.
LFW 57D	10 - 30 FT.	35 FT.
LFW 58	13 - 33 FT.	38 FT.
LFW 59B	78 - 88 FT.	93 FT.
LFW 59C	25 - 35 FT.	40 FT.
LFW 59D	13 - 33 FT.	38 FT.
LFW 60	13 - 33 FT.	38 FT.
LFW 61B	78 - 88 FT.	93 FT.
LFW 61C	25 - 35 FT.	40 FT.
LFW 61D	13 - 33 FT.	38 FT.
TOTAL WELL FOOTAGE		1562 FT.

NOTE: All depths are in feet below ground surface.

LANDFILL ASSESSMENT SOIL BORINGS

LANDFILL ASSESSMENT MONITORING WELLS

BOUNDARIES OF ORIGINAL LANDFILL AND EXPANSIONS

FIGURE 2

FIGURE 3

SANITARY LANDFILL WELL LOCATIONS

FIGURE 4

SANITARY LANDFILL 4Q89 WATER TABLE ELEVATIONS

FIGURE 5

SANITARY LANDFILL 3Q89 TRITIUM CONCENTRATIONS (pCi/ml)

FIGURE 6

SANITARY LANDFILL 3Q89 TRICHLOROETHYLENE CONCENTRATIONS (ug/l)

SANITARY LANDFILL 3Q89 TOTAL RADIUM CONCENTRATIONS (pCi/l)

Figure 8

SANITARY LANDFILL 3Q89 GROSS ALPHA CONCENTRATIONS (pCi/l)

FIGURE 9

DEPTH TO THE WATER TABLE BELOW LAND SURFACE

2ND QUARTER 1987

FIGURE 10

EXISTING WELLS AT THE SANITARY LANDFILL

FIGURE 13 Graphic and Geophysical Logs for P-29TA

APPENDIX A

**GUIDANCE FROM THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL ON THE PREPARATION OF THE SANITARY
LANDFILL GROUNDWATER QUALITY ASSESSMENT PLAN**

South Carolina Department of Health
and Environmental Control

A050011

2600 Bull Street
Columbia, S.C. 29201

Commissioner
Michael D. Jarrett

Board
Henry S. Jordan, M.D., Chairman
John B. Pate, M.D., Vice-Chairman
William E. Applegate, III, Secretary
Toney Graham, Jr., M.D.
John H. Burriss
Richard E. Jabbour, D.D.S.
Currie B. Spivey, Jr.

December 7, 1989

Mr. S. R. Wright
Environmental Division, US DOE
P. O. Box A
Aiken, South Carolina 29808

RE: SRS Sanitary Landfill
DWP-087A
Aiken County

Dear Mr. Wright:

On November 14, 1989, a meeting was held with staff from Savannah River Site (SRS) and the Department of Health and Environmental Control (DHEC) to discuss the criteria needed to renew the permit for the sanitary landfill (DWP-087A) and to expand the landfill site.

Enclosed is a copy of a memorandum from Van Keisler dated October 9, 1989. The memorandum contains a list of constituents which have been found to be above Primary Drinking Water Standards in the monitoring wells surrounding the landfill. This information will be considered when the Department makes a decision concerning permit renewal.

At this time, the permitting section is awaiting comments from the Waste Assessment Section on the list of wastes, submitted by SRS, which "pre approval" has been requested for landfill disposal. A final decision will not be made concerning permit renewal until these comments are received.

DHEC informed SRS staff that a complete site characterization will be required before a permitting decision can be made on the expansion area. SRS staff agreed to perform the necessary site characterization work and submit the information for SCDHEC review and approval.

Mr. S. R. Wright
December 7, 1989
Page Two

If you have any questions, please call at 734-5200.

Sincerely,

Dewey H. Pearson, Jr., P.E., Manager
Solid Waste Permitting
Bureau of Solid and Hazardous Waste
Management

Enclosure

DHPj:/MAL/jth

cc: Van Keisler
Harold Seabrook
Marty Lindler

South Carolina Department of Health and Environmental Control

2600 Bull Street
Columbia, S.C. 29201

Commissioner
Michael D. Jarrett

Board
Toney Graham, Jr., M.D., Chairman
Henry S. Jordan, M.D., Vice-Chairman
John B. Paie, M.D., Secretary
William E. Applegate
Oren L. Brady, Jr.
John Hay Burriss
Euta M. Colvin, M.D.

MEMORANDUM

TO: Marty Lindler
Solid Waste Permitting Section
Division of Hydrogeology
Bureau of Solid and Hazardous Waste Management

FROM: Van Keisler, Hydrologist
Superfund and Solid Waste Section
Division of Hydrogeology
Bureau of Solid and Hazardous Waste Management

DATE: October 9, 1989 *AL*

RE: Data Review for Permit Renewal
Savannah River Site Sanitary Landfill
DWP-087
Aiken County

RECEIVED
OCT 11 1989
S. C. DEPT. OF
ENVIRONMENTAL
Bureau of Solid and Hazardous
Waste Management

As requested, monitoring results have been reviewed prior to issuance of a permit renewal. The review consisted of the "Sanitary Landfill Second Half 1988 Groundwater Monitoring Report", and all other monitoring results on department files. The following constituents have been found to be above Primary Drinking Water Standards (PDWS):

- 1) LFW-7 - Benzene: 6 ug/l, 1,2-Dichloroethane: 6 ug/l
- 2) LFW-8 - Benzene: 5 ug/l, Tritium: 21.3 pCi/ml,
1,2-Dichloroethane: 6 ug/l
- 3) LFW-18 - Tritium: 59.8 pCi/ml
- 4) LFW-21 - Benzene: 7 ug/l, Tritium: 75.3 pCi/ml
Tetrachloroethylene: 2.028 ug/l
Trichloroethylene: 97 ug/l, 1,1-Dichloroethylene:
19 ug/l
- 5) LFW-31 - Tetrachloroethylene: 94 ug/l
- 6) LFW-36 - Benzene: 8 ug/l, Trichloroethylene: 12 ug/l
1,2 Dichloroethylene: 13 ug/l

- 7) LFW-37 - Trichloroethylene: 24 ug/l
- 8) LFW-38 - Trichloroethylene: 28 ug/l

In addition, occurrences of highly elevated metals concentrations and other water quality indicators appear to indicate that groundwater degradation has occurred due to landfilling activities.

It is requested that Savannah River Site Sanitary landfill (DWP-087A) be required to perform a groundwater quality assessment as a condition for permit renewal. The Savannah River Site should submit a plan which details the actions to be taken to determine the source, along with the rate and extent of contaminant migration. Upon completion of a groundwater quality assessment, a plan for corrective action to remediate the groundwater problem should be submitted for departmental review. Attached is a copy of draft guidance for the preparation of a groundwater quality assessment monitoring plan.

Attachment

cc: Bob Benson
Steve Acree

DRAFT

GUIDANCE FOR PREPARATION
OF A
GROUND-WATER QUALITY ASSESSMENT MONITORING PLAN

South Carolina Department of Health and Environmental Control

Division of Hydrogeology

Bureau of Solid and Hazardous Waste Management

This document is intended to provide technical guidance for the implementation of a Ground-Water Quality Assessment Program. The information provided herein should only be considered guidance and should not be used as a regulation or as an amendment to existing regulations.

000001

Summary of Available Data

- 1) Previously collected ground-water data and current interpretations concerning contaminant migration and site hydrogeology should be presented in the assessment plan. This presentation should include all pertinent tables, graphs, maps, and cross-sections. Finally a detailed description should be provided for the adequacy of the monitoring system and sampling protocol utilized during detection monitoring and their relationship to the existing data's validity. Any variations in sampling protocol should also be described.

Base Map Requirements

- 2) The following items should be clearly illustrated on one or more maps of the facility that show a distance of 1,000 feet around the facility at a scale of one inch to no greater than 1,000 feet: (a) map scale, date, and title; (b) map orientation; (c) surface waters; (d) plant (facility) boundaries; (e) all existing and proposed production, extraction, and monitoring wells; (f) a delineation of the waste management area; (g) topography; and (h) all pertinent hydrogeologic and water quality information. Large scale maps may be reduced in order to be incorporated in the text; however, all reductions should be to the same scale, and the originals should be included as attachments.

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Monitoring Well Installation and Construction

- 3) The assessment plan should contain a detailed description of the methods and materials used for construction of new and existing wells that includes, but not be limited to, the following: 1) drilling methods, 2) type of drilling fluid, 3) type of materials used for casing and screen, considering the nature of the waste constituents and subsurface geochemistry, 4) screen slot size and methods used to determine the appropriate screen size, 5) grout and sand pack specifications and method(s) of emplacement, 6) procedures for well development, 7) procedures to decontaminate drilling and geologic sampling equipment between wells, 8) measures taken to protect the wells from destruction, and 9) surveyed measuring point elevation at each well.
- 4) The number, locations, and depths of upgradient monitoring wells should be sufficient to yield samples that are
 - (a) representative of naturally occurring background groundwater quality in the uppermost aquifer near the facility and
 - (b) not affected by the facility.
- 5) The number, locations, and depths, of downgradient monitoring wells should be capable of (a) immediately detecting any significant amounts of waste constituents that may migrate from the disposal unit(s) to the uppermost aquifer, and (b) adequately determining the rate, extent, and severity of contaminant migration.

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6) In most cases, monitoring well clusters will be needed to fully define the extent of contaminant migration. Well clusters should be installed (a) downgradient from the well(s) that failed the statistical evaluation; (b) in the heart of the contaminant plume; (c) downgradient of the contaminant plume; and (d) perpendicular to the direction of ground-water flow.

7) Failure to install an adequate monitoring system may be grounds to reject a facility's claim that ground-water has not been impacted. In this situation, the facility may be required to remain in assessment until an adequate monitoring system is installed, sampled and the data is evaluated.

8) All field or laboratory procedures used to determine the hydraulic properties of the uppermost aquifer and any confining bed(s) must be described in detail. Provisions should be made for determining the lateral and vertical variations in hydraulic conductivity. The most confidence will be given to site specific data and the least for estimates based upon the experience of the consultant.

9) The number, locations, and depths of borings should be sufficient to clearly delineate the lateral and vertical extent of the uppermost aquifer beneath the facility.

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- 10) Proposed monitoring wells must be designed such that screen length and well construction material do not affect the quality of ground-water samples.

Sampling and Analysis Plan

- 11) Presampling preparation procedures should be described in detail and include, at a minimum, the following: (a) a list of all equipment used for sample collection and transportation, (b) procedures for cleaning and storing equipment for transportation, and (c) procedures for calibrating pH, conductivity, and temperature meters.
- 12) All procedures for the collection, preservation, and transportation of ground-water samples must be described in detail. Procedures should be described specifically for the conditions existing at the facility (e.g. well number, diameter and depth; dedicated pumps; etc.)
- 13) The ground-water surface elevation at each well must be determined each time a sample is collected. A detailed description should be included for the methods and equipment used to make this determination. Total well depth should be measured at each well periodically to ensure proper calculation of the volume of water standing in the well and to check on the condition of the well (i.e., excessive siltation). The calculations and tables used to determine the water volume to be evacuated should also be included.

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- 14) A minimum of three to five well volumes should be evacuated from the well prior to sample collection. In addition, indicator parameters (pH, specific conductivity and temperature) should be measured periodically and recorded to ensure adequate well evacuation. For wells which are evacuated to dryness, samples should be collected as soon as a sufficient volume of water has entered the well.
- 15) Excess ground water resulting from well evacuation and sampling should be collected and disposed of properly.
- 16) Samples that are collected for total recoverable metals analysis must be acidified in the field. If analysis will be conducted for dissolved metals, the samples must be properly filtered and acidified in the field. If filtration is performed, the procedures and equipment used for filtering must be described in detail. Recent guidance from EPA discourages filtration of ground-water samples for dissolved analysis, and recommends that total recoverable analysis be conducted.
- 17) The type and size of all samples containers must be specified. Also, all field and laboratory preservation techniques and holding times must be described.
- 18) The method used for transporting ground-water samples should be described in detail. This method should be consistent

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with the procedures required for maintaining sample integrity and chain of custody.

19) All field and laboratory QA/QC procedures should be described in detail.

20) If non-dedicated sampling equipment is utilized, field cleaning procedures must be described in detail. These procedures must be capable of eliminating the possibility of cross contamination.

21) Analyses of indicator parameters may be adequate prior to assessment but analytical parameters should be expanded to include organic and inorganic constituents toxic to human health or the environment should indicator parameter analyses so warrant. The list of parameters to be analyzed should include all wastes that have been handled by the facility. The sampling frequency and analytical parameters must be specified in the assessment plan. The assessment plan should specify the analytical methods to be used.

22) The company(ies) or individual(s) responsible for sample collection and analysis should be specified.

Evaluation and Response Procedures

23) All procedures used to evaluate hydrogeologic and water quality data should be described in detail. This should

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include a discussion of any proposed statistical analysis or computer modeling. If contamination is uncertain, procedures will be required for evaluating ground water quality data to determine if a false positive has been identified. In some cases, contamination will be obvious, and a simple inspection of the data will be sufficient to confirm contamination. In less obvious cases, a statistical evaluation of the data may be used to support the presence or absence of contamination.

24) If contamination is confirmed, additional procedures will be required for evaluating the rate, extent, and severity of contaminant migration. Procedures will also be required to determine if additional areas are being contaminated and if concentrations of constituents within previously delineated areas of contamination have changed significantly.

25) In order to adequately determine the rate and extent of contaminant migration, it will be necessary to identify the physical and chemical properties of contaminants and how contaminants will react with the soils and ground water at the site.

26) An initial Ground-Water Quality Assessment Report must be submitted within 30 days of receiving the first round of analytical results. This report should include, at a minimum, the following: (a) a detailed description of the

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monitoring well system; (b) a sampling and analysis plan; (c) a detailed description of the regional and site hydrogeology; (d) a summary of all water quality data; (e) a determination of the rate, extent, and severity of ground-water contamination; (f) an identification of the concentration of contaminants in the ground-water; (g) a proposal for continued monitoring; and (h) a corrective action feasibility assessment.

- 27) If the assessment program verifies ground-water contamination, ground-water samples should be collected and analyzed at least quarterly until the full rate, extent and severity of contamination is identified and a corrective action program is initiated or a mixing zone is granted.

Schedule of Implementation

- 28) The Assessment Plan must include a schedule specifying the calendar dates for implementation. This schedule should include, but not be limited to, the following items:

- *Submittal of an adequate assessment plan
- *Site preparation, drill rig at site
- *Well installation and development completed
- *Initial round of ground-water samples collected
- *Analysis of samples completed
- *Submittal of initial assessment report

3017

29) Concentrations or values of indicator parameters and ground-water elevations for each monitoring well should be reported quarterly within fifteen days of analyses. Should the assessment program be expanded to include additional parameters, the quarterly schedule for sampling, analysis and reporting shall be maintained.

30) Submit concentrations or values of the parameters detected in each well, along with required statistical evaluations for these parameters. The owner or operator must separately identify any significant differences from initial background found in the upgradient wells. Significant differences should be reported to the Department within seven days of analyses. The annual data summary should be submitted by March 1 following each calendar year.

31) Submit results of an evaluation of ground-water surface elevations to determine whether monitoring wells continue to be adequately located. This evaluation should address seasonal fluctuations in ground-water level, seasonal variation in flow patterns, possible mounding of ground water by recharge from disposal units and the effect of local ground-water extraction on flow patterns. If the evaluation shows that the monitoring wells are no longer satisfactorily located, the owner/operator must immediately modify the number, location or depth of the wells. The annual evaluation of ground-water surface elevation must

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include potentiometric map(s) of the uppermost aquifer. The potentiometric map(s) should include (a) map scale, date, and title; (b) map orientation; (c) surface waters; (d) plant (facility) boundaries; (e) all existing and proposed production, extraction and monitoring wells; (f) a delineation of the waste management area; and topographic/geomorphic features influencing ground-water flow. The ground-water level evaluation should be submitted by March 1 following each calendar year.

32) Annually, submit a report containing the results of the ground-water assessment program which includes, but is not limited to, the calculated (or measured) rate of migration of waste constituents in the ground water during the reporting period. This information must be submitted by March 1 following each calendar year.

33) The owner or operator should keep records of the water quality analyses and evaluations throughout the active life of the facility and, for disposal facilities, throughout the post closure care period as well.

APPENDIX B

WELL CONSTRUCTION RECORDS FOR EXISTING WELLS AT THE LANDFILL

DRILLING REQUEST

REQUESTOR

NAME: EW, RABON ORGANIZATION: H.P.
LOCATION: 735-A PHONE: 2654

WELL

WELL NUMBER: SANITARY LANDFILL WELL # 6
COORDINATES OR LOCATION: N 84537.78 E 45241.22
GRND ELE 169.85

PERMITS: ☐ Not Required ☐ Work Clearance ☐ Site Clearance ☐ SR88
(OSR-20-103)

BORHOLE DIAMETER: ☐ 2" ☐ 4" ☐ 6" ☐ 8"

DEPTH: 29' 10" GROUND LEVEL

DRILLING METHOD: ☐ Auger ☒ Hydraulic Rotary ☐ Drive Hammer

MUD TYPE: ☐ Native Clay ☒ Bentonite

SAMPLING: ☐ Auger ☒ Ditch ☐ Cores

FREQUENCY: ☐ Continuous ☐ Foot Intervals

SCREEN TYPE: PVC Diameter: 4" Length: 20'

BOTTOM CLOSURE: ☐ Cast Concrete Plug ☐ Poured Concrete Plug

SETTING: ☐ Bottom Hole Placement ☐ Washed Down

☐ Casing and Packer Placement.

FINISH: ☐ None ☒ Gravel Pack ☒ Sand Pack Interval

CASING TYPE: GALVANIZED Diameter: 4" Length: 9' 10"

Above Ground: Cover:

GROUT: ☐ Neat ☐ 1/3 Sand

Placement: TOO SHALLOW TO PUMP GROUT
☐ Grout Pipe ☐ From Top

DEVELOPMENT: ☐ Not Required ☐ Surge and Pump

☐ Air Sparge ☐ Water Sparge

Surging Period(s) DEV. WITH AIR COMPRESSOR

Pumping Period(s) _____

FINISH: ☐ Not Required ☐ Yellow Paint ☐ Fence

☐ Guard Posts

CREW ASSIGNED: T + T

MATERIALS USED: ☐ Sacks Cement ☐ Sacks Sand ☐ Gallons Rock Chips

REMARKS: H₂O TABLE = 20' ON 2-2-81

DRILLING REQUEST

REQUESTOR

NAME: EW. ARON

ORGANIZATION: HP

LOCATION: 735-A

PHONE: 2654

WELL

WELL NUMBER: SANITARY LANDFILL WELL # 7

COORDINATES OR LOCATION: N 84.310.25 E 45318.87

6118 E/E 169.14

PERMITS: ☐ Not Required ☐ Work Clearance ☐ Site Clearance ☐ SR 94
(OSR-20-103)

BORSHOLE DIAMETER: ☐ 2" ☐ 4" ☐ 6" ☐ 8"

DEPTH: 29' 10" GROUND LEVEL

DRILLING METHOD: ☐ Auger ☒ Hydraulic Rotary ☐ Drive Hammer

MUD TYPE: ☐ Native Clay ☒ Bentonite

SAMPLING: ☐ Auger ☒ Ditch ☐ Cores

FREQUENCY: ☐ Continuous ☐ Foot Intervals

SCREEN TYPE: PVC Diameter: 4" Length: 20'

BOTTOM CLOSURE: ☐ Cast Concrete Plug ☐ Poured Concrete Plug

SETTING: ☐ Bottom Hole Placement ☐ Washed Down

☐ Casing and Packer Placement.

FINISH: ☐ None ☒ Gravel Pack ☒ Sand Pack Interval ☐

CASING TYPE: GALVANIZED Diameter: 4" Length: 9' 10"

Above Ground: ☐ Cover: ☐

GROUT: ☐ Neat ☐ 1/3 Sand

Placement: TO SHALLOW TO PUMP GROUT
☐ Grout Pipe ☐ From Top

DEVELOPMENT: ☐ Not Required ☐ Surge and Pump

☐ Air Sparge ☐ Water Sparge

Surging Period(s) DEU. WITH AIR COMPRESSOR

Pumping Period(s) _____

FINISH: ☐ Not Required ☐ Yellow Paint ☐ Fence

☐ Guard Posts

CREW ASSIGNED: T + T

MATERIALS USED: ☐ Sacks Cement ☐ Sacks Sand ☐ Gallons Rock Chips

REMARKS: H₂O TABLE = 20' ON 1-29-81

DRILLING REQUEST

REQUESTOR

NAME: EW ABON ORGANIZATION: HP

LOCATION: 735-A PHONE: 2654

de

WELL

WELL NUMBER: SANITARY LAND FILL WELL # 8

COORDINATES OR LOCATION: N-84032.55 E 45415.28

GRID ELE. 168.59

PERMITS: ☐ Not Required ☐ Work Clearance ☐ Site Clearance ☐ SR88
(OSR-20-103)

BOREHOLE DIAMETER: ☐ 2" ☐ 4" ☐ 6" ☐ 8"

DEPTH: 29' 10"

DRILLING METHOD: ☐ Auger ☒ Hydraulic Rotary ☐ Drive Hammer

MUD TYPE: ☐ Native Clay ☒ Bentonite

SAMPLING: ☐ Auger ☒ Ditch ☐ Cores

FREQUENCY: ☐ Continuous ☐ Foot Intervals

SCREEN TYPE: PVC Diameter: 4" Length: 20'

BOTTOM CLOSURE: ☐ Cast Concrete Plug ☐ Poured Concrete Plug

SETTING: ☐ Bottom Hole Placement ☐ Washed Down

☐ Casing and Packer Placement.

FINISH: ☐ None ☒ Gravel Pack ☒ Sand Pack Interval

CASING TYPE: GALVANIZED Diameter: 4" Length: 9' 10"

Above Ground: Cover:

GROUT: WELL TOO SHALLOW TO PUMP GROUT
☒ Neat ☐ 1/3 Sand

Placement: ☐ Grout Pipe ☐ From Top

DEVELOPMENT: ☐ Not Required ☐ Surge and Pump

☐ Air Sparge ☐ Water Sparge

Surging Period(s) DEV. WITH AIR COMPRESSOR

Pumping Period(s) _____

FINISH: ☐ Not Required ☐ Yellow Paint ☐ Fence

☐ Guard Posts

CREW ASSIGNED: T + T

MATERIALS USED: ☐ Sacks Cement ☐ Sacks Sand ☐ Gallons Rock Chips

REMARKS: H₂O TABLE = 20' ON 1-29-81

ENVIRODYNE ENGINEERS INC.

WELL CONSTRUCTION DETAILS

Date of Installation 1/13/84

Job No. _____
Time Started 11:00

Boring No. 7406 #10A
Time Completed 3:00

Ground Surface Elev. _____

All depth measurements of well detail are from ground surface unless otherwise indicated.

- ① Height of Protective Casing Above Ground N/A
- ② Total Length of Protective Casing N/A
- ③ Height of Standpipe Above Ground 2"
- ④ Depth to First Coupling 15'
Coupling Interval 15' 10"
- ⑤ Total Length of Blank Pipe 15'
- ⑥ Type of Blank Pipe sch 40 PVC - 4"
- ⑦ Length of Screen 30'
- ⑧ Type of Screen slotted PVC 4" - 0.18
- ⑨ Total Depth of Boring 45' Hole Diam. 10"
- ⑩ Type of Material SAND
- ⑪ Depth to Bottom of Screen 45'
- ⑫ Type of Screen Filter peg gravel
Quantity Used 28 bags
- ⑬ Depth to Top of Filter 10'
- ⑭ Type of Seal white sand
Quantity Used 2 bags
- ⑮ Depth to Top of Seal 7.5'
- ⑯ Type of Seal Weight N/A
Quantity Used N/A
- ⑰ Depth to Top of Seal Weight N/A
- ⑱ Type of Grout Cement
Grout Mixture Cement & water
- ⑲ Type of Protective Casing N/A
Concrete Collar Mixture Cement & water

Remarks:

DRILLING REQUEST

REQUESTOR

NAME: DZ ROSS ORGANIZATION: HP
LOCATION: 735-A PHONE: 2242

WELL

WELL NUMBER: #16 LANDFILL Wells
COORDINATES OR LOCATION: N 84748.90 E 45852.60
GRID ELE 176.88

PERMITS: YES Not Required NO Work Clearance YES Site Clearance SR88
(OSR-20-103)

BOREHOLE DIAMETER: 2" 4" 6" ☒ 10"

DEPTH: 46'

DRILLING METHOD: Auger ☒ Hydraulic Rotary Drive Hammer

MUD TYPE: Native Clay ☒ Bentonite

SAMPLING: Auger ☒ Ditch Cores

FREQUENCY: Continuous 5 Foot Intervals

SCREEN TYPE: PVC Diameter: 4" Length: 30'

BOTTOM CLOSURE: Cast Concrete Plug Poured Concrete Plug PVC SCALED

SETTING: ☒ Bottom Hole Placement Washed Down

Casing and Packer Placement.

FINISH: None 2 ^{ABOVE SCREEN} Gravel Pack 2 ^{ABOVE GRAVEL} Sand Pack Interval

CASING TYPE: PVC Diameter: 4" Length: 16'

Above Ground: 2' Cover:

GROUT: Neat 1/3 Sand

Placement: 7-8' ABOVE SAND FROM BOT TO TOP
Grout Pipe From Top

DEVELOPMENT: ☐ Not Required ☐ Surge and Pump

☒ Air Sparge ☐ Water Sparge

Surging Period(s) 3 HR AIR COMPRESSOR (NO SURGE BLOCK)

Pumping Period(s) _____

FINISH: ☐ Not Required ☐ Yellow Paint ☒ Fence

☒ Guard Posts

CREW ASSIGNED: D'APOLONIA

MATERIALS USED: 8 Sacks Cement 1 Sacks Sand 32' ^{PEA GRAVEL} ~~Galena Rock Chips~~

REMARKS: ONLY BLEW FROM BOTTOM OF WELL - DID NOT MOVE
TRIMMER PIPE UP & DOWN IN SEVERAL O.L.S.
H₂O TABLE = ~ 20.0'

DEVELOPMENT: ☐ Not Required ☐ Surge and Pump

☒ Air Sparge ☐ Water Sparge 2 hrs. 45 min with air compressor (No surge bl.)

Surging Period(s) 1 HR + 30 MIN ON 8-28-81

Pumping Period(s) _____

FINISH: ☐ Not Required ☐ Yellow Paint ch Fence

☒ Guard Posts

CREW ASSIGNED: D. Applegate

MATERIALS USED: 8 Sacks Cement 1 Sacks Sand 32 Gallons of 1/2" Gravel Rock Chips

REMARKS: H₂O TABLE ~ 20.0'

Did all blowing with pipe in bottom of well.

DRILLING REQUEST

REQUESTOR

NAME: DI ROSS ORGANIZATION: HP
LOCATION: 735-A PHONE: 2242

WELL

WELL NUMBER: WELL #18 LANDFILL
COORDINATES OR LOCATION: N 84577.26 E 45459.36
SRND EIE 173.57

PERMITS: YES Not Required NA Work Clearance YES Site Clearance SR88
(OSR-20-103)

BOREHOLE DIAMETER: 2" 4" 6" 10"

DEPTH: 44'

DRILLING METHOD: Auger ☒ Hydraulic Rotary Drive Hammer

MUD TYPE: Native Clay ☒ Bentonite

SAMPLING: Auger ☒ Ditch Cores

FREQUENCY: Continuous 5' Foot Intervals

SCREEN TYPE: PVC Diameter: 4" Length: 30'

BOTTOM CLOSURE: Cast Concrete Plug Poured Concrete Plug PVC SCREWED

SETTING: ☒ Bottom Hole Placement Washed Down

Casing and Packer Placement.

FINISH: None 2' ABOVE SCREEN Gravel Pack 2' ABOVE GRAVEL Sand Pack Interval

CASING TYPE: PVC Diameter: 4" Length: 14'

Above Ground: 2' Cover:

GROUT: Neat 1/3 Sand

7-PACKING SAND FROM BOTTOM TO TOP
Placement: Grout Pipe From Top

DEVELOPMENT: ☐ Not Required ☐ Surge and Pump

☒ Air Sparge ☐ Water Sparge ~ 3 hrs. with air compressor (4050-190)

Surging Period(s) _____

Pumping Period(s) _____

FINISH: ☐ Not Required ☐ Yellow Paint chain Fence

☒ Guard Posts

CREW ASSIGNED: D. APPOLONIA

MATERIALS USED: 5 Sacks Cement 1 Sacks Sand 32' Pea Gravel ~~32' Gravel Rock Chips~~

REMARKS: H₂O TABLE ~ 20.0'

Did all blowing with pipe in bottom of well

DRILLING REQUEST

REQUESTOR

NAME: D.I. Ross

ORGANIZATION: H.P.

LOCATION: 735-A

PHONE: 2242

WELL

WELL NUMBER: Well #19 LANDF./1

COORDINATES OR LOCATION: N 84817.16 E 45135.39

SPD ELE 174.72

PERMITS: Yes Not Required At Work Clearance Yes Site Clearance SR88
(OSR-20-103)

BOREHOLE DIAMETER: 2" 4" 6" 1 1/2"

DEPTH: 45'

DRILLING METHOD: Auger ☒ Hydraulic Rotary Drive Hammer

MUD TYPE: Native Clay ☒ Bentonite

SAMPLING: Auger ☒ Ditch Cores

FREQUENCY: Continuous 5' Foot Intervals

SCREEN TYPE: PVC Diameter: 4" Length: 30'

BOTTOM CLOSURE: Cast Concrete Plug Poured Concrete Plug PVC Screened

SPLITTING: ☒ Bottom Hole Placement Washed Down

Casing and Packer Placement.

FINISH: None 2' Above Screen Gravel Pack 2' Above Gravel Sand Pack Interval

CASING TYPE: PVC Diameter: 4" Length: 15'

Above Ground: 2' Cover:

GROUT: Neat 1/3 Sand sand from bottom to top.

Placement: 7-8' above Grout Pipe From Top

DEVELOPMENT: ☐ Not Required ☐ Surge and Pump

☒ Air Sparge ☐ Water Sparge 3 hrs. with compressor (No Sur)

Surging Period(s) _____

Pumping Period(s) _____

FINISH: ☐ Not Required ☐ Yellow Paint ☒ Fence

☒ Guard Posts

CREW ASSIGNED: D App. Lonia

MATERIALS USED: 7 Sacks Cement 1 Sacks Sand 32' ^{Pea Gravel} Gallons Rock-Chips

REMARKS: H₂O TABLE = ~ 20.0'
Used a 10' section of 1" PVC pipe with ^{3/8"} holes drill.
~ 8" apart. (Did not raise or lower in screen).

DRILLING REQUEST

REQUESTOR

NAME: DI ROSS ORGANIZATION: H.P.
LOCATION: 735-A PHONE: 2242

WELL

WELL NUMBER: LANDFILL WELL # 20
COORDINATES OR LOCATION: N 85262.59 E 45582.89
Grid EIE 178149

PERMITS: YES Not Required NO Work Clearance YES Site Clearance SR88
(OSR-20-103)

BOREHOLE DIAMETER: 2" 4" 6" ✓ 10"

DEPTH: 44'

DRILLING METHOD: Auger ✓ Hydraulic Rotary Drive Hammer

MUD TYPE: Native Clay ✓ Bentonite

SAMPLING: Auger ✓ Ditch Cores

FREQUENCY: Continuous 5' Foot Intervals

SCREEN TYPE: PVC Diameter: 4" Length: 30'

BOTTOM CLOSURE: Cast Concrete Plug Poured Concrete Plug PVC (SCREWED)

SETTING: ✓ Bottom Hole Placement Washed Down

Casing and Packer Placement.

FINISH: None ^{2" ABOVE SCREEN} Gravel Pack ^{1" ABOVE GRAVEL} Sand Pack Interval

CASING TYPE: PVC Diameter: 4" Length: 14'

Above Ground: 2' Cover:

GROUT: Neat 1/3 Sand

Placement: -7.5' above sand from bottom to top.
Grout Pipe From Top

DEVELOPMENT: ☐ Not Required ☐ Surge and Pump

☒ Air Sparge ☐ Water Sparge

Surging Period(s) 4 hrs (No Surging)

Pumping Period(s) _____

FINISH: ☐ Not Required ☐ Yellow Paint ☒ Fence

☒ Guard Posts

CREW ASSIGNED: D Appolonia

MATERIALS USED: ☐ Sacks Cement ☒ Sacks Sand 32 ^{pea Gravel} Gallons ~~Rock Chips~~

REMARKS: H2O TABLE = ~ 20.0'

ONLY Blaw air at bottom of well. Did not move
trimmer pipe up and down in screen area.

ENVIRODYNE ENGINEERS INC.

WELL CONSTRUCTION DETAILS

Date of Installation 1/11/84

Job No. 742B

Boring No. 21

Time Started 1/11/84

Time Completed 1/11/84

Ground Surface Elev. _____

⑤ 2:00

4.00

All depth measurements of well detail are from ground surface unless otherwise indicated.

- ① Height of Protective Casing Above Ground N/A
- ② Total Length of Protective Casing N/A
- ③ Height of Standpipe Above Ground 2"
- ④ Depth to First Coupling 15'
Coupling Interval 15' 10"
- ⑤ Total Length of Blank Pipe 15'
- ⑥ Type of Blank Pipe sch 20 PVC - 4"
- ⑦ Length of Screen 30'
- ⑧ Type of Screen slotted PVC - 4" - .018"
- ⑨ Total Depth of Boring 45' Hole Diam. 10"
- ⑩ Type of Material sand & clay
- ⑪ Depth to Bottom of Screen 45'
- ⑫ Type of Screen Filter pea gravel
Quantity Used 22 bags
- ⑬ Depth to Top of Filter 12'
- ⑭ Type of Seal white sand
Quantity Used 2 bags
- ⑮ Depth to Top of Seal 9'
- ⑯ Type of Seal Weight N/A
Quantity Used N/A
- ⑰ Depth to Top of Seal Weight N/A
- ⑱ Type of Grout Cement
Grout Mixture Cement & water
- ⑲ Type of Protective Casing N/A
Concrete Collar Mixture Cement & water

Remarks:

Everything went smooth

ENVIRODYNE ENGINEERS INC.

WELL CONSTRUCTION DETAILS

Date of Installation 1/12/84
Ground Surface Elev. _____

Job No. 740 G
Time Started 1/12/84
1100

Boring No. 2215K1
Time Completed 1/12/84
4:15

All depth measurements of well detail are from ground surface unless otherwise indicated.

- ① Height of Protective Casing Above Ground N/A
- ② Total Length of Protective Casing N/A
- ③ Height of Standpipe Above Ground 2'
- ④ Depth to First Coupling 15'
Coupling Interval 15' 10"
- ⑤ Total Length of Blank Pipe 15'
- ⑥ Type of Blank Pipe sch 10 PVC-4"
- ⑦ Length of Screen 30'
- ⑧ Type of Screen slotted PVC-4" - 018
- ⑨ Total Depth of Boring 45' Hole Diam. 10"
- ⑩ Type of Material SAND clay
- ⑪ Depth to Bottom of Screen 45'
- ⑫ Type of Screen Filter pea gravel
Quantity Used 16 bags
- ⑬ Depth to Top of Filter 25' 18"
- ⑭ Type of Seal white sand
Quantity Used 2 bags
- ⑮ Depth to Top of Seal 15'
- ⑯ Type of Seal Weight N/A
Quantity Used N/A
- ⑰ Depth to Top of Seal Weight N/A
- ⑱ Type of Grout cement
Grout Mixture cement & water
- ⑲ Type of Protective Casing N/A
Concrete Collar Mixture cement & water

Remarks:

Everything went smooth

ENVIRODYNE ENGINEERS INC.

WELL CONSTRUCTION DETAILS

Date of Installation 11/11/84

Job No. 740 G LFW

Boring No. 23

Ground Surface Elev. _____

Time Started 9:00

Time Completed 12:30

All depth measurements of well detail are from ground surface unless otherwise indicated.

- ① Height of Protective Casing Above Ground N/A
- ② Total Length of Protective Casing N/A
- ③ Height of Standpipe Above Ground 2'
- ④ Depth to First Coupling 15'
Coupling Interval 15', 10'
- ⑤ Total Length of Blank Pipe 15'
- ⑥ Type of Blank Pipe sch 40 PVC - 4"
- ⑦ Length of Screen 30'
- ⑧ Type of Screen slotted PVC - 4" - 0.18"
- ⑨ Total Depth of Boring 45' Hole Diam. 10"
- ⑩ Type of Material sand & clay
- ⑪ Depth to Bottom of Screen 45'
- ⑫ Type of Screen Filter pea gravel
Quantity Used 25 bags
- ⑬ Depth to Top of Filter ~~white sand~~ 13'
- ⑭ Type of Seal white sand
Quantity Used 2 bags
- ⑮ Depth to Top of Seal 10'
- ⑯ Type of Seal Weight N/A
Quantity Used N/A
- ⑰ Depth to Top of Seal Weight N/A
- ⑱ Type of Grout cement
Grout Mixture Cement & water
- ⑲ Type of Protective Casing N/A
Concrete Collar Mixture Cement & water

Remarks:

ENVIRODYNE ENGINEERS INC.

WELL CONSTRUCTION DETAILS

Date of Installation 1/12/84
Ground Surface Elev. _____

Job No. _____
Time Started 12:00
1/12/84

Boring No. 24 LEW
7406
Time Completed 4:15

All depth measurements of well detail are from ground surface unless otherwise indicated.

- ① Height of Protective Casing Above Ground N/A
- ② Total Length of Protective Casing N/A
- ③ Height of Standpipe Above Ground 2'
- ④ Depth to First Coupling 15'
Coupling Interval 15', 10'
- ⑤ Total Length of Blank Pipe 15'
- ⑥ Type of Blank Pipe sch 40 PIC - 4"
- ⑦ Length of Screen 30'
- ⑧ Type of Screen slotted PIC - 4" - .04
- ⑨ Total Depth of Boring 45' Hole Diam. 10"
- ⑩ Type of Material sand & clay
- ⑪ Depth to Bottom of Screen 45'
- ⑫ Type of Screen Filter pea gravel
Quantity Used 27 bags
- ⑬ Depth to Top of Filter 12'
- ⑭ Type of Seal white sand
Quantity Used 2 bags
- ⑮ Depth to Top of Seal 9'
- ⑯ Type of Seal Weight N/A
Quantity Used N/A
- ⑰ Depth to Top of Seal Weight N/A
- ⑱ Type of Grout cement
Grout Mixture cement & water
- ⑲ Type of Protective Casing N/A
Concrete Collar Mixture cement & water

Remarks:

ENVIRODYNE ENGINEERS INC.

WELL CONSTRUCTION DETAILS

Date of Installation 11/13/84

Job No. _____ Time Started 10:00

Boring No. LFW 25 7406

Time Completed 3:00

Ground Surface Elev. _____

All depth measurements of well detail are from ground surface unless otherwise indicated.

- ① Height of Protective Casing Above Ground N/A
- ② Total Length of Protective Casing N/A
- ③ Height of Standpipe Above Ground 2"
- ④ Depth to First Coupling 20'
Coupling Interval 20' 10"
- ⑤ Total Length of Blank Pipe 20'
- ⑥ Type of Blank Pipe Sch 40 PVC - 4"
- ⑦ Length of Screen 30'
- ⑧ Type of Screen Slotted PVC - 4" - 0.15"
- ⑨ Total Depth of Boring 50' Hole Diam. 10"
- ⑩ Type of Material SAND
- ⑪ Depth to Bottom of Screen 50'
- ⑫ Type of Screen Filter pea gravel
Quantity Used 18 bags
- ⑬ Depth to Top of Filter 15'
- ⑭ Type of Seal white sand
Quantity Used 2 bags
- ⑮ Depth to Top of Seal 11 1/2'
- ⑯ Type of Seal Weight N/A
Quantity Used N/A
- ⑰ Depth to Top of Seal Weight N/A
- ⑱ Type of Grout Cement
Grout Mixture Cement & water
- ⑲ Type of Protective Casing N/A
Concrete Collar Mixture Cement & water

Remarks:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LEW # 26

DATE OF INSTALLATION 10-29-86

1. Height of Casing above pad 3'
2. Depth to First Coupling 2', 10', 10', 10.5', 10.5', 5'
3. Total Length of Blank Pipe 22'
4. Type of Blank Pipe 4" schedule 40, PVC
5. Length of Screen 21'
6. Type of Screen 4" Stainless Steel Tri-loc
7. Length of Sump 5'5"
8. Total Depth of Boring 48' Hole Diameter 10"
9. Depth To Bottom of Screen 43'
10. Type of Screen Filter FX-65 Sand
Quantity Used 17 - 100# bags U/C
11. Depth To Top of Filter 19.5'
12. Type of Seal Fine Sand / Bentonite Pellets
Quantity Used 100# Fine Sand & 50# pellets
13. Depth To Top of Seal 15.5'
14. Type of Grout Cement
Grout Mixture Neat Cement & 6% Bentonite
Method of Placement Pumped from bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #22

DATE OF INSTALLATION 10-30-86

1. Height of Casing above pad 3'
2. Depth to first Coupling 6', 10', 10', 10.5', 10.5', 5'
3. Total Length of Blank Pipe 26'
4. Type of Blank Pipe 4" Schedule 40 PVC
5. Length of Screen 21'
6. Type of Screen 4" Stainless Steel Tri-Loc
7. Length of Sump 5' 5"
8. Total Depth of Boring 52' Hole Diameter 10"
9. Depth To Bottom of Screen 47'
10. Type of Screen Filter FX-65 Sand
Quantity Used 16-~100# bags U/C
11. Depth To Top of Filter 24'
12. Type of Seal Fine Sand / Bentonite Pellets
Quantity Used ~100# Fine Sand & 50# pellets
13. Depth To Top of Seal 20.5'
14. Type of Grout Cement
Grout Mixture Neat cement & 6% Bentonite
Method of Placement Pump from bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFN # 28

DATE OF INSTALLATION 10-28-86

1. Height of Casing above pad 3'
2. Depth to first Coupling 1', 10', 10', 10', 10.5', 10.5', 5'
3. Total Length of Blank Pipe 31'
4. Type of Blank Pipe 4" schedule 40, PVC
5. Length of Screen 21'
6. Type of Screen 4" stainless steel, Te-Loc
7. Length of Sump 5'5"
8. Total Depth of Boring 57' Hole Diameter 10"
9. Depth To Bottom of Screen 52'
10. Type of Screen Filter FX-65 sand
Quantity Used 14-~100# bags U/C
11. Depth To Top of Filter 29'
12. Type of Seal Fine sand/Bentonite pellets
Quantity Used ~100# Fine sand & 50# pellets
13. Depth To Top of Seal 25'
14. Type of Grout Cement
Grout Mixture Neat cement & 6% Bentonite
Method of Placement Pumped from bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFV #29

DATE OF INSTALLATION 10-28-86

1. Height of Casing above pad 3'
2. Depth to first Coupling 1', 10', 10', 10', 10.5', 10.5', 5'
3. Total Length of Blank Pipe 31'
4. Type of Blank Pipe 4" schedule 40, PVC
5. Length of Screen 21'
6. Type of Screen 4" stainless steel, Tri-loc
7. Length of Sump 5'5"
8. Total Depth of Boring 57' Hole Diameter 10"
9. Depth To Bottom of Screen 52'
10. Type of Screen Filter FX-65 Sand
Quantity Used 14-~100# bags U/C 1.6
11. Depth To Top of Filter 29'
12. Type of Seal Fine Sand / Bentonite Pellets
Quantity Used ~100# Fine Sand & 50# pellets
13. Depth To Top of Seal 25'
14. Type of Grout Cement
Grout Mixture Neat Cement & 6% Bentonite
Method of Placement Pump from bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #30

DATE OF INSTALLATION 12/31/86

1. Height of Casing above pad 3.5'

2. Depth to first Coupling 5'

3. Total Length of Blank Pipe 45'

4. Type of Blank Pipe 4" Sch. 40 PVC Tri-loc

5. Length of Screen 21'

6. Type of Screen 4" 0.16 slot stainless steel

7. Length of Sump 5.5'

→ 8. Total Depth of Boring 70' Hole Diameter 10"

9. Depth To Bottom of Screen 66'

10. Type of Screen Filter Fx 65 sand

Quantity Used 13.5 bags Size 6mm U/C 1-6

11. Depth To Top of Filter 43'

12. Type of Seal Fine sand / Bentonite

Quantity Used 2 bags 1 5gal bucket

13. Depth To Top of Seal 39.1'

14. Type of Grout Portland Cement

Grout Mixture Neat Cement + 6% Bentonite

Method of Placement Pumped from bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

→ #8 Total depth of boring is
from ground level

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #31

DATE OF INSTALLATION 10-27-86

- 1 Height of Casing Above Ground 3'
- 2 Depth To First Coupling 4'
Coupling Interval Depths 10', 10', 10', 10', 10', 10', 10.5', 10.5', 5'
- 3 Total Length of Blank Pipe 64'
- 4 Type of Blank Pipe 4"
- 5 Length of Screen 21'
- 6 Type of Screen 4" stainless steel,
- 7 Length of Sump 5' 5"
- 8 Total Depth of Boring 92' Hole Diameter 10"
- 9 Depth To Top of Screen 86'
- 10 Type of Screen Filter FX-65 Sand
Quantity Used 16-100 # bags U/C 1.6
- 11 Depth To Top of Filter 62'
- 12 Type of Seal Fine Sand & Bentonite Pellets
Quantity Used 100 # Fine sand & 50 # Pellets
- 13 Depth To Top of Seal 58'
- 14 Type of Grout Cement
Grout Mixture Neat cement & 6% Bentonite
Method of Placement Pump from bottom

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #32

DATE OF INSTALLATION 10-24-86

1. Height of Casing Above Ground 3'
2. Depth To First Coupling 9'
Coupling Interval Depths 10, 10, 10, 10, 10, 10.5, 10.5, 5'
3. Total Length of Blank Pipe 59
4. Type of Blank Pipe 4", Sch. 40, PVC
5. Length of Screen 21
6. Type of Screen 4", Stainless Steel, Tri-Loc
7. Length of Sump 5'5"
8. Total Depth of Boring 86' Hole Diameter 10"
Bottom
9. Depth To ~~Top~~ of Screen 80'
10. Type of Screen Filter FX-65 Sand
Quantity Used 18-100# bags U/C 1.6
11. Depth To Top of Filter 54'
12. Type of Seal Fine Sand/Bentonite Pellets
Quantity Used 100# Fine Sand/50# Pellets
13. Depth To Top of Seal 50'
14. Type of Grout Cement
Grout Mixture Neat Cement + 6% Bentonite
Method of Placement Pumped from bottom

COMMENTS ON INSTALLATION

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW#34

DATE OF INSTALLATION 10-22-86

1. Height of Casing Above Ground 3'
2. Depth To First Coupling 7'
Coupling Interval Depths 10', 10', 10', 10.5', 10.5', 5'
3. Total Length of Blank Pipe 37'
4. Type of Blank Pipe 4", Sch. 40, PVC
5. Length of Screen 21'
6. Type of Screen 4", Stainless Steel, Tri-Loc
7. Length of Sump 5'5"
8. Total Depth of Boring 62' Hole Diameter 10"
Bottom
9. Depth To ~~Top~~ of Screen 58'
10. Type of Screen Filler FX-65 Sand
Quantity Used 14-100# bags U/C 1.6
11. Depth To Top of Filter 33'
12. Type of Seal Fine Sand / Bentonite Pellets
Quantity Used 100# Fine Sand / 50# Pellets
13. Depth To Top of Seal 29'
14. Type of Grout Cement
Grout Mixture Neat cement + 6% Bentonite
Method of Placement Pumped from bottom

COMMENTS ON INSTALLATION

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #35

DATE OF INSTALLATION 10-21-86

1. Height of Casing Above Ground 3'
2. Depth To First Coupling 10'
Coupling Interval Depths 10', 10.5', 10.5', 5'
3. Total Length of Blank Pipe 20'
4. Type of Blank Pipe 4", Sch. 40, PVC
5. Length of Screen 21'
6. Type of Screen 4" Stainless Steel Tri-Loe
7. Length of Sump 7'
8. Total Depth of Boring 48' Hole Diameter 10"
9. Depth To ^{Bottom} of Screen 41'
10. Type of Screen Filter FX-65 Sand
Quantity Used 16-100# bags U/C _____
11. Depth To Top of Filter 18.5'
12. Type of Seal Fine sand / Bentonite Pellets
Quantity Used 100# Fine sand / 50# pellets
13. Depth To Top of Seal 15'
14. Type of Grout Cement
Grout Mixture Neat cement + 6% Bentonite
Method of Placement Pumped from bottom

COMMENTS ON INSTALLATION

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #36

DATE OF INSTALLATION 11/5/86

1. Height of Casing above pad 3'
2. Depth to first Coupling 10' (10, 10.5, 10.5, 5')
3. Total Length of Blank Pipe 20
4. Type of Blank Pipe 4" Schedule 40 PVC Tri Loc
5. Length of Screen 21'
6. Type of Screen 4" Stainless Steel Tri. Loc
7. Length of Sump 5' 5"
8. Total Depth of Boring 46' Hole Diameter 10"
9. Depth To Bottom of Screen 41'
10. Type of Screen Filter FX-65 sand
Quantity Used 17 100lb bags Size 0.6-0.7 U/C 1.6
11. Depth To Top of Filter 18'
12. Type of Seal Fine sd / Bentonite pellets
Quantity Used 2 5gal. buckets / 1 5gal bucket
13. Depth To Top of Seal 14.5'
14. Type of Grout Cement
Grout Mixture Neat cement + 6% bentonite
Method of Placement Pump from bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #37

DATE OF INSTALLATION 11/4/86

1. Height of Casing above pad 3'
2. Depth to first Coupling 10' (10', 10.5', 10.5', 5.5')
3. Total Length of Blank Pipe 20'
4. Type of Blank Pipe 4" Schedule 40 PVC Tri-loc
5. Length of Screen 21'
6. Type of Screen 4" Tri-loc Stainless Steel
7. Length of Sump 5.5"
8. Total Depth of Boring 46' Hole Diameter 10"
9. Depth To Bottom of Screen 41'
10. Type of Screen Filler FX-65 Sand
Quantity Used 19 100/lb bags Size 20-40 U/C 1.6
11. Depth To Top of Filter 18'
12. Type of Seal Fine Sd / Bentonite Pellets
Quantity Used 1 Bag sand / 1 5gal Bucket
13. Depth To Top of Seal 14.5
14. Type of Grout Cement
Grout Mixture Best Cement + 6% Bentonite
Method of Placement Pump From Bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #38

DATE OF INSTALLATION 11-3-86

1. Height of Casing above pad 3'
2. Depth to First Coupling 10' (10', 10.5', 10.5', 5')
3. Total Length of Blank Pipe 20'
4. Type of Blank Pipe 4" Schedule 40 PVC
5. Length of Screen 21'
6. Type of Screen 4" Tri. Loc Stainless Steel
7. Length of Sump 5' 5"
8. Total Depth of Boring 46' Hole Diameter 10"
9. Depth To Bottom of Screen 41'
10. Type of Screen Filter Fx-65 sand
Quantity Used 6-100# Size 20-40 U/C 1.6
11. Depth To Top of Filter 17'
12. Type of Seal Fine Sand / Bentonite pellets
Quantity Used 100 lbs Fine Sd / 50 lb pellets
13. Depth To Top of Seal 13.5'
14. Type of Grout Cement
Grout Mixture Neat Cement + 6% bentonite
Method of Placement Pump From Bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #39

DATE OF INSTALLATION 11-3-86

1. Height of Casing above pad 3'
2. Depth to First Coupling 10' (10', 10.5', 10.5', 5')
3. Total Length of Blank Pipe 20'
4. Type of Blank Pipe 4" Schedule 40 PVC
5. Length of Screen 21'
6. Type of Screen 4" Tri Loc Stainless Steel
7. Length of Sump 5' 5"
8. Total Depth of Boring 46' Hole Diameter 10"
9. Depth To Bottom of Screen 41'
10. Type of Screen Filter FX-65 Sand
Quantity Used 16~100# Size D.4-0.7 U/C 1.6
11. Depth To Top of Filter 18'
12. Type of Seal Fine Sand / Bentonite Pellets
Quantity Used ~100# Fine Sd / 50# pellets
13. Depth To Top of Seal 14.5'
14. Type of Grout Cement
Grout Mixture Neat Cement + 6% bentonite
Method of Placement Pump from Bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

Total well construction length 20' PVC Blank + 21' Screen + 5' 5" Sump
= 46' 5"

Total Hole Depth = 46'

Csg 3' above pad

$46 - 43.5 = 2.5$ hole beneath string (i.e. 8-#7)

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WELL CONSTRUCTION DETAILS

WELL NUMBER LEW #40

DATE OF INSTALLATION 10-31-86

1. Height of Casing above pad 3'
2. Depth to first Coupling 10', 10', 10.5', 10.5', 5'
3. Total Length of Blank Pipe 20'
4. Type of Blank Pipe 4" Schedule 40, PVC
5. Length of Screen 21'
6. Type of Screen 4" Stainless Steel, Tri-loc
7. Length of Sump 5' 5"
8. Total Depth of Boring 46' Hole Diameter 10"
9. Depth To Bottom of Screen 41'
10. Type of Screen Filter FX-65 Sand
Quantity Used 16-~100# Size 6-7mm U/C 1.6
11. Depth To Top of Filter 18'
12. Type of Seal Fine Sand / Bentonite Pellets
Quantity Used ~100# Fine Sand & 50# pellets
13. Depth To Top of Seal 15.5'
14. Type of Grout Cement
Grout Mixture Next cement & 6% Bentonite
Method of Placement Pump from bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LEW #41

DATE OF INSTALLATION 10-31-86

1. Height of Casing above pad 3'
2. Depth to first Coupling 10', 10', 10.5', 10.5', 5'
3. Total Length of Blank Pipe 20'
4. Type of Blank Pipe 4" Schedule 40, PVC
5. Length of Screen 21'
6. Type of Screen 4" Stainless Steel, Tri-Loc
7. Length of Sump 5' 5"
8. Total Depth of Boring 46' Hole Diameter 10"
9. Depth To Bottom of Screen 41'
10. Type of Screen Filter EX-65 Sand
Quantity Used 16 ~ 100# bags U/C
11. Depth To Top of Filter 17'
12. Type of Seal Fine Sand / Bentonite Pellets
Quantity Used ~100# Fine Sand & 50# pellets
13. Depth To Top of Seal 14.5'
14. Type of Grout Cement
Grout Mixture Neat cement & 6% Bentonite
Method of Placement Pump from bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

ENVIRODYNE
ENGINEERS

WELL CONSTRUCTION DETAILS

WELL NUMBER LFW #42

DATE OF INSTALLATION 10-30-86

1. Height of Casing above pad 3'
2. Depth to First Coupling 10', 10', 10.5', 10.5', 5'
3. Total Length of Blank Pipe 20'
4. Type of Blank Pipe 4" Schedule 40, PVC
5. Length of Screen 21
6. Type of Screen 4" Stainless Steel, Tri-loc
7. Length of Sump 5' 5"
8. Total Depth of Boring 47' Hole Diameter 10"
9. Depth To Bottom of Screen 41
10. Type of Screen Filter FX-65 sand
Quantity Used 16-100# bags U/C
11. Depth To Top of Filter 18'
12. Type of Seal Fine Sand / Bentonite Pellets
Quantity Used 100# Fine Sand ; 50# Pellets
13. Depth To Top of Seal 14'
14. Type of Grout Cement
Grout Mixture Neat Cement ; 6% Bentonite
Method of Placement Pumping from bottom

• ALL MEASUREMENTS ARE FROM TOP OF CASING

COMMENTS ON INSTALLATION:

APPENDIX C

GEOLOGIC LOGS FOR WELLS LFW 26 THROUGH LFW 42

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFN #26

DATE OF INSTALLATION 10-29-86

Sheet 1 of 1

FOR: <u>Savannah River Plant / E I Du Pont</u>						
LOCATION: _____						
JOB NUMBER: _____						
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrometer	Graphic Log
		0/6	12/18			
VISUAL FIELD CLASSIFICATION AND REMARKS						S.S. Dia. _____ Weight _____ Drop _____
						Brown F-M sand and organics
						Rust F-M sand Uniform
					5	
					10	
					15	Rust F-M sand and clay
					20	
					25	
					30	Tan F-C sand and clay
					35	
					40	
					45	
					50	Total Depth 48' Mud Rotary Drilling Field Classification using cuttings only

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FIELD BORING LOG

WELL NUMBER LFN # 27

DATE OF INSTALLATION 10-30-86

Sheet 1 of

FOR: <u>Savannah River Plant / E I P. Port</u>						
LOCATION: _____						
JOB NUMBER: _____						
Sample No.	Moisture	Blows On Sampler		Recovery	Penetration	Graphic Log
		0/6	12/18			
VISUAL FIELD CLASSIFICATION AND REMARKS						S.S. Dia. _____ Weight _____ Drop _____
						Brown F-M sand and organics
						Rust F-M sand uniform
					5	
					10	
					15	Rust F-M sand some clay
					20	Tan F-M sand and clay
					25	
					30	
					35	
					40	
					45	
					50	

T.O. at 52'
Mud Rotary Drilling Field Classification
using cuttings only

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FIELD BORING LOG

WELL NUMBER LFW #28

DATE OF INSTALLATION 10-28-86

Sheet 1 of 2

FOR: <u>Savannah River Plant / E.I. DuPont</u>						
LOCATION: _____						
JOB NUMBER: _____						
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrometer	Graphic Log
		0/6	12/18			
VISUAL FIELD CLASSIFICATION AND REMARKS						S.S. Dia. _____ Weight _____ Drop _____
						Brown F-M Sand and organics
						Rust F-M sand some clay
					5	
					10	
					15	
					20	Rust-tan F-M sand and clay
					25	
					30	Tan F-C sand some clay
					35	
					40	Tan F-C sand and clay
					45	
					50	Tan F-M sand and clay

WELL NUMBER LFW # 28

DATE OF INSTALLATION 10-28-86

Sheet 2 of 2

[illegible]

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FIELD BORING LOG

WELL NUMBER LFN # 29

DATE OF INSTALLATION 10-28-86

Sheet 1 of 2

FOR: Savannah River Plant / E.I. Dept

LOCATION: _____

JOB NUMBER: _____

Sample No.	Moisture	Blows On Sampler		Recovery	Penetrom	Graphic Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dia _____ Weight _____ Drop _____		
		0/6	12/18							
							Brown F-M sand and organics Rust F-M sand uniform			
						5				
						10	Rust F-M sand and clay			
						15				
						20	Rust F-C sand and clay			
						25	Tan F-C sand and clay			
						30				
						35				
						40				
						45				
						50

WELL NUMBER LEW #29

DATE OF INSTALLATION 10-28-86

Sheet 2 of 2

[illegible]

WELL LFV 20 COLLECTED ON 03/21/89 LABORATORY ANALYSES CONTINUED

MANGANESE	LT	2 ug/L	Env. Eng.
MANGANESE	LT	15 ug/L	W. A.
MANGANESE	LT	20 ug/L	Env. Lab.
SODIUM		899 ug/L	Env. Eng.
SODIUM	LT	5000 ug/L	W. A.
SODIUM		950 ug/L	Env. Lab.
AMMONIA NITROGEN	LT	100 ug/L	Env. Lab.
NICKEL	LT	40 ug/L	W. A.
NITROGEN BY KJELDAHL METHOD	LT	1000 ug/L	Env. Lab.
LEAD	LT	8 ug/L	Env. Eng.
LEAD	LT	5 ug/L	W. A.
LEAD	LT	100 ug/L	Env. Lab.
PHENOLS	LT	5 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	W. A.
PHENOLS	LT	5 ug/L	W. A.
PHENOLS	LT	5 ug/L	Env. Lab.
ANTIMONY	LT	60 ug/L	W. A.
SELENIUM	LT	5 ug/L	W. A.
SILICA		2280 ug/L	W. A.
SILVEX	LT	0.09 ug/L	Env. Eng.
SILVEX	LT	0.50 ug/L	W. A.
SILVEX	LT	0.50 ug/L	Env. Lab.
TIN	LT	100 ug/L	W. A.
SULFATE	LT	5000 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	W. A.
SULFATE	LT	5000 ug/L	Env. Lab.
1,1,2,2-TETRACHLOROETHANE	LT	1 ug/L	Env. Lab.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	W. A.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Lab.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	500 ug/L	W. A.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Lab.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	100 ug/L	W. A.
TOTAL ORGANIC NITROGEN	LT	1000 ug/L	Env. Lab.
TOTAL ORGANIC HALOGENS		9 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	20 ug/L	W. A.
TOTAL ORGANIC HALOGENS	LT	10 ug/L	Env. Lab.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	W. A.
TOTAL PHOSPHATES	LT	10 ug/L	Env. Lab.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	W. A.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Lab.
TOXAPHENE	LT	1 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	W. A.
TOXAPHENE	LT	0.05 ug/L	Env. Lab.
TRANS-1,2-DICHLOROETHENE	LT	1 ug/L	Env. Lab.
URANIUM		1360 ug/L	W. A.
XYLENES	LT	1 ug/L	Env. Lab.
1,1-DICHLOROETHYLENE	LT	1 ug/L	Env. Lab.
1,1-DICHLOROETHANE	LT	1 ug/L	Env. Lab.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.

CONTINUED

WELL LFW 20 COLLECTED ON 03/21/89 LABORATORY ANALYSES CONTINUED

1,1,1-TRICHLOROETHANE	LT	1 ug/L	W. A.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Lab.
1,1,2-TRICHLOROETHANE	LT	1 ug/L	Env. Lab.
1,2-DICHLOROBENZENE	LT	1 ug/L	Env. Lab.
1,2-DICHLOROETHANE	LT	1 ug/L	Env. Lab.
1,2-DICHLOROPROPANE	LT	1 ug/L	Env. Lab.
1,3-DICHLOROBENZENE	LT	1 ug/L	Env. Lab.
CIS-1,3-DICHLOROPROPENE	LT	1 ug/L	Env. Lab.
TRANS-1,3-DICHLOROPROPENE	LT	1 ug/L	Env. Lab.
1,4-DICHLOROBENZENE	LT	1 ug/L	Env. Lab.
2-CHLOROETHYL VINYL ETHER	LT	1 ug/L	Env. Lab.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	1 ug/L	W. A.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.50 ug/L	Env. Lab.
2,4,5-TRICHLOROPHENOXYACETIC ACID	LT	0.50 ug/L	W. A.
ZINC	LT	20 ug/L	W. A.
GROSS ALPHA		1.49+-0.60 pCi/L	Rad. Meas.
GROSS ALPHA		0.00+-5.00 pCi/L	W. A.
GROSS ALPHA		1.54+-0.64 pCi/L	Env. Lab.
NONVOLATILE BETA		4.02+-0.97 pCi/L	Rad. Meas.
NONVOLATILE BETA		0.00+-2.00 pCi/L	W. A.
NONVOLATILE BETA		2.58+-0.76 pCi/L	Env. Lab.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TOTAL RADIUM		1.50+-0.40 pCi/L	W. A.
TOTAL RADIUM		0.82+-0.25 pCi/L	Env. Lab.
TRITIUM		3.17+-0.25 pCi/mL	Rad. Meas.
TRITIUM		7.90+-0.90 pCi/mL	W. A.
TRITIUM		2.93+-0.37 pCi/mL	Env. Lab.

WELL LFW 20

SRS Grid N 85262.6 Latitude 33.288714 N
 Coordinates E 45582.9 Longitude 81.712395 W
 Screen Zone Elevation 164.5-134.5 ft msl
 Top of Casing Elevation 180.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 03/21/89 Time 1630
 Depth to water = 24.46 ft (7.46 m) below the TCC
 Water elevation = 156.44 ft (47.68 m) msl
 pH = 4.6 Alkalinity = 0 mg/L
 Specific Conductance = 14 umhos/cm
 Water Temperature = 19.2 degrees Celsius
 Water evacuated from the well prior to sampling = 75 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE	15.60 umh/cm	Env. Eng.
SPECIFIC CONDUCTANCE	13.60 umh/cm	Env. Eng.
PH	5.06 pH	Env. Eng.
PH	4.87 pH	Env. Eng.

CONTINUED

WELL LFW 21 COLLECTED ON 01/24/89 LABORATORY ANALYSES CONTINUED

TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE		46 ug/L	Env. Eng.
2,4-DICHLOROPHENOXACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		8.21+-2.65 pCi/L	Rad. Meas.
* GROSS ALPHA		16.50+-3.45 pCi/L	Rad. Meas.
NONVOLATILE BETA		6.32+-1.56 pCi/L	Rad. Meas.
NONVOLATILE BETA		8.56+-1.67 pCi/L	Rad. Meas.
* TOTAL RADIUM		7.78+-1.20 pCi/L	Rad. Meas.
* TOTAL RADIUM		5.13+-0.98 pCi/L	Rad. Meas.
TRITIUM		16.70+-0.43 pCi/mL	Rad. Meas.
TRITIUM		16.50+-0.42 pCi/mL	Rad. Meas.

WELL LFW 22

SRS Grid N 84223.6 Latitude 33.287628 N
 Coordinates E 46325.2 Longitude 81.708421 W
 Screen Zone Elevation 152.1-122.1 ft msl
 Top of Casing Elevation 174.20 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 1030
 Depth to water = 26.20 ft (7.99 m) below the TOC
 Water elevation = 148.00 ft (45.11 m) msl
 pH = 5.0 Alkalinity = 1 mg/L
 Specific Conductance = 19 umhos/cm
 Water Temperature = 19.4 degrees Celsius
 Water evacuated from the well prior to sampling = 67 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		21.30 umh/cm	Env. Eng.
PH		4.91 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		339 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		3000 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		103 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		345 ug/L	Env. Eng.
MANGANESE		2 ug/L	Env. Eng.
SODIUM		1420 ug/L	Env. Eng.
LEAD		17 ug/L	Env. Eng.

CONTINUED

WELL LFW 22 COLLECTED ON 01/24/89 LABORATORY ANALYSES CONTINUED

PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		64 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		61 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
* TRICHLOROETHYLENE		6.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE		7 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.90+-1.03 pCi/L	Rad. Meas.
NONVOLATILE BETA		3.08+-1.00 pCi/L	Rad. Meas.
TOTAL RADIUM		2.85+-0.82 pCi/L	Rad. Meas.
TRITIUM		4.49+-0.28 pCi/mL	Rad. Meas.

WELL LFW 23

SRS Grid N 84251.3 Latitude 33.287903 N
Coordinates E 46456.1 Longitude 81.708131 W
Screen Zone Elevation 154.8-124.8 ft msl
Top of Casing Elevation 171.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 955
Depth to water = 23.61 ft (7.20 m) below the TOC
Water elevation = 148.19 ft (45.17 m) msl
pH = 5.0 Alkalinity = 0 mg/L
Specific Conductance = 21 umhos/cm
Water Temperature = 19.0 degrees Celsius
Water evacuated from the well prior to sampling = 61 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		21.60 umh/cm	Env. Eng.
PH		4.76 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		815 ug/L	Env. Eng.
CALCIUM		723 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2700 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.

CONTINUED

WELL LFW 23 COLLECTED ON 01/24/89 LABORATORY ANALYSES CONTINUED

IRON		55 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		395 ug/L	Env. Eng.
MANGANESE		2 ug/L	Env. Eng.
SODIUM		1730 ug/L	Env. Eng.
LEAD		12 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		16 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA	LT	3 pCi/L	Rad. Meas.
NONVOLATILE BETA		2.65+-0.99 pCi/L	Rad. Meas.
TOTAL RADIUM		2.04+-0.78 pCi/L	Rad. Meas.
TRITIUM		3.94+-0.27 pCi/mL	Rad. Meas.

WELL LFW 24

SRS Grid N 84544.2 Latitude 33.288656 N
 Coordinates E 46520.8 Longitude 81.708530 W
 Screen Zone Elevation 154.2-124.2 ft msl
 Top of Casing Elevation 171.30 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 915
 Depth to water = 21.19 ft (6.46 m) below the TOC
 Water elevation = 150.11 ft (45.75 m) msl
 pH = 5.0 Alkalinity = 0 mg/L
 Specific Conductance = 18 umhos/cm
 Water Temperature = 18.4 degrees Celsius
 Water evacuated from the well prior to sampling = 67 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		22.40 umh/cm	Env. Eng.
PH		4.84 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.

CONTINUED

WELL LFW 24 COLLECTED ON 01/24/89 LABORATORY ANALYSES CONTINUED

CALCIUM		326 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2200 ug/L	Env. Eng.
CHLORIDE		2100 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUCRIDE	LT	100 ug/L	Env. Eng.
IRON		104 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		460 ug/L	Env. Eng.
MANGANESE		3 ug/L	Env. Eng.
SODIUM		1040 ug/L	Env. Eng.
LEAD		21 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		2.02+-1.15 pCi/L	Rad. Meas.
NONVOLATILE BETA		4.79+-1.11 pCi/L	Rad. Meas.
TOTAL RADIUM		2.21+-0.66 pCi/L	Rad. Meas.
TRITIUM		3.49+-0.27 pCi/mL	Rad. Meas.

WELL LFW 25

SRS Grid N 84967.2 Latitude 33.289436 N
 Coordinates E 46425.7 Longitude 81.709602 W
 Screen Zone Elevation 152.8-122.8 ft msl
 Top of Casing Elevation 174.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 845
 Depth to water = 22.15 ft (6.75 m) below the TOC
 Water elevation = 152.55 ft (46.50 m) msl
 pH = 5.0 Alkalinity = 0 mg/L
 Specific Conductance = 19 umhos/cm
 Water Temperature = 13.4 degrees Celsius
 Water evacuated from the well prior to sampling = 77 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		19.70 umh/cm	Env. Eng.
PH		4.69 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		342 ug/L	Env. Eng.
CALCIUM		296 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2600 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		89 ug/L	Env. Eng.
IRON		90 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		480 ug/L	Env. Eng.
MAGNESIUM		481 ug/L	Env. Eng.
MANGANESE		6 ug/L	Env. Eng.
MANGANESE		6 ug/L	Env. Eng.
SODIUM		1220 ug/L	Env. Eng.
SODIUM		1190 ug/L	Env. Eng.
LEAD		18 ug/L	Env. Eng.
LEAD		16 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.

CONTINUED

WELL LEW 25 COLLECTED ON 01/24/89 LABORATORY ANALYSES CONTINUED

TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		6.25+-1.44 pCi/L	Rad. Meas.
NONVOLATILE BETA		11.10+-1.37 pCi/L	Rad. Meas.
TOTAL RADIUM		2.71+-0.74 pCi/L	Rad. Meas.
TRITIUM		3.58+-0.26 pCi/mL	Rad. Meas.

WELL LEW 26

SRS Grid N 85654.6 Latitude 33.289663 N
 Coordinates E 45633.8 Longitude 81.713023 W
 Screen Zone Elevation 164.9-143.9 ft msl
 Top of Casing Elevation 186.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 03/21/89 Time 1735
 Depth to water = 28.65 ft (8.73 m) below the TCC
 Water elevation = 158.25 ft (48.24 m) msl
 pH = 4.6 Alkalinity = 0 mg/L
 Specific Conductance = 13 umhos/cm
 Water Temperature = 19.2 degrees Celsius
 Water evacuated from the well prior to sampling = 73 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		24.40 umh/cm	Env. Eng.
SPECIFIC CONDUCTANCE		8.70 umh/cm	W. A.
SPECIFIC CONDUCTANCE		12.00 umh/cm	Env. Lab.
PH		5.50 pH	Env. Eng.
PH		5.20 pH	W. A.
PH		5.30 pH	W. A.
PH		5.00 pH	Env. Lab.
SILVER	LT	10 ug/L	W. A.
ALUMINUM	LT	200 ug/L	W. A.
ARSENIC	LT	2 ug/L	Env. Eng.
ARSENIC	LT	10 ug/L	W. A.
ARSENIC	LT	5 ug/L	Env. Lab.
BARIUM	LT	200 ug/L	W. A.
BROMODICHLOROMETHANE	LT	1 ug/L	Env. Lab.
CALCIUM		439 ug/L	Env. Eng.
CALCIUM	LT	5000 ug/L	W. A.
CALCIUM		220 ug/L	Env. Lab.
TRICHLOROFLUOROMETHANE	LT	1 ug/L	Env. Lab.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	W. A.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Lab.
CADMIUM	LT	2 ug/L	Env. Eng.
CADMIUM	LT	5 ug/L	W. A.
CADMIUM	LT	10 ug/L	Env. Lab.
BROMOFORM	LT	1 ug/L	Env. Lab.

CONTINUED

WELL LFW 26 COLLECTED ON 03/21/89 LABORATORY ANALYSES CONTINUED

CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	W. A.
CHLOROFORM	LT	1 ug/L	Env. Lab.
METHYLENE CHLORIDE	LT	1 ug/L	Env. Lab.
BROMOMETHANE	LT	1 ug/L	Env. Lab.
CHLOROMETHANE	LT	1 ug/L	Env. Lab.
CHLORIDE		2200 ug/L	Env. Eng.
CHLORIDE	LT	5000 ug/L	W. A.
CHLORIDE		2000 ug/L	Env. Lab.
CHLOROBENZENE	LT	1 ug/L	Env. Lab.
COBALT	LT	50 ug/L	W. A.
CHROMIUM	LT	4 ug/L	Env. Eng.
CHROMIUM	LT	10 ug/L	W. A.
CHROMIUM	LT	50 ug/L	Env. Lab.
COPPER	LT	25 ug/L	W. A.
CYANIDE	LT	5 ug/L	Env. Eng.
CYANIDE	LT	10 ug/L	W. A.
CYANIDE	LT	20 ug/L	Env. Lab.
CHLOROETHENE (VINYL CHLORIDE)	LT	1 ug/L	Env. Lab.
CHLOROETHANE	LT	1 ug/L	Env. Lab.
BENZENE	LT	1 ug/L	Env. Lab.
DIBROMOCHLOROMETHANE	LT	1 ug/L	Env. Lab.
ENDRIN	LT	0.10 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	W. A.
ENDRIN	LT	0.05 ug/L	Env. Lab.
ETHYLBENZENE	LT	1 ug/L	Env. Lab.
FLUORIDE	LT	100 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	W. A.
FLUORIDE	LT	100 ug/L	Env. Lab.
IRON	LT	20 ug/L	Env. Eng.
IRON	LT	100 ug/L	W. A.
IRON	LT	50 ug/L	Env. Lab.
MERCURY	LT	0.20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	W. A.
MERCURY	LT	0.20 ug/L	Env. Lab.
POTASSIUM	LT	5000 ug/L	W. A.
LITHIUM	LT	100 ug/L	W. A.
LINDANE	LT	0.05 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	W. A.
LINDANE	LT	0.05 ug/L	Env. Lab.
TOLUENE	LT	1 ug/L	Env. Lab.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	W. A.
METHOXYCHLOR	LT	0.05 ug/L	Env. Lab.
MAGNESIUM		233 ug/L	Env. Eng.
MAGNESIUM	LT	5000 ug/L	W. A.
MAGNESIUM		270 ug/L	Env. Lab.
MANGANESE	LT	2 ug/L	Env. Eng.
MANGANESE	LT	15 ug/L	W. A.
MANGANESE	LT	20 ug/L	Env. Lab.
SODIUM		968 ug/L	Env. Eng.
SODIUM	LT	5000 ug/L	W. A.
SODIUM		970 ug/L	Env. Lab.

CONTINUED

WELL LFV 26 COLLECTED ON 03/21/89 LABORATORY ANALYSES CONTINUED

AMMONIA NITROGEN	LT	100 ug/L	Env. Lab.
NICKEL	LT	40 ug/L	W. A.
NITROGEN BY KJELDAHL METHOD	LT	1000 ug/L	Env. Lab.
LEAD	LT	6 ug/L	Env. Eng.
LEAD	LT	5 ug/L	W. A.
LEAD	LT	100 ug/L	Env. Lab.
PHENOLS	LT	5 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	W. A.
PHENOLS	LT	5 ug/L	Env. Lab.
ANTIMONY	LT	60 ug/L	W. A.
SELENIUM	LT	5 ug/L	W. A.
SILICA		2290 ug/L	W. A.
SILVEX	LT	0.09 ug/L	Env. Eng.
SILVEX	LT	0.50 ug/L	W. A.
SILVEX	LT	0.50 ug/L	Env. Lab.
TIN	LT	100 ug/L	W. A.
SULFATE	LT	5000 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	W. A.
SULFATE	LT	5000 ug/L	Env. Lab.
1,1,2,2-TETRACHLOROETHANE	LT	1 ug/L	Env. Lab.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	W. A.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Lab.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	500 ug/L	W. A.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Lab.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	100 ug/L	W. A.
TOTAL ORGANIC NITROGEN	LT	1000 ug/L	Env. Lab.
TOTAL ORGANIC HALOGENS		8 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		8 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	20 ug/L	W. A.
TOTAL ORGANIC HALOGENS	LT	10 ug/L	Env. Lab.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	W. A.
TOTAL PHOSPHATES	LT	20 ug/L	W. A.
TOTAL PHOSPHATES	LT	10 ug/L	Env. Lab.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	W. A.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Lab.
TOXAPHENE	LT	1 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	W. A.
TOXAPHENE	LT	0.05 ug/L	Env. Lab.
TRANS-1,2-DICHLOROETHENE	LT	1 ug/L	Env. Lab.
URANIUM		1360 ug/L	W. A.
XYLENES	LT	1 ug/L	Env. Lab.
1,1-DICHLOROETHYLENE	LT	1 ug/L	Env. Lab.
1,1-DICHLOROETHANE	LT	1 ug/L	Env. Lab.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	W. A.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Lab.
1,1,2-TRICHLOROETHANE	LT	1 ug/L	Env. Lab.

CONTINUED

WELL LFW 26 COLLECTED ON 03/21/89 LABORATORY ANALYSES CONTINUED

1,2-DICHLOROBENZENE	LT	1 ug/L	Env. Lab.
1,2-DICHLOROETHANE	LT	1 ug/L	Env. Lab.
1,2-DICHLOROPROPANE	LT	1 ug/L	Env. Lab.
1,3-DICHLOROBENZENE	LT	1 ug/L	Env. Lab.
CIS-1,3-DICHLOROPROPENE	LT	1 ug/L	Env. Lab.
TRANS-1,3-DICHLOROPROPENE	LT	1 ug/L	Env. Lab.
1,4-DICHLOROBENZENE	LT	1 ug/L	Env. Lab.
2-CHLOROETHYL VINYL ETHER	LT	1 ug/L	Env. Lab.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	1 ug/L	W. A.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.50 ug/L	Env. Lab.
2,4,5-TRICHLOROPHENOXYACETIC ACID	LT	0.50 ug/L	W. A.
ZINC	LT	20 ug/L	W. A.
GROSS ALPHA		1.10+-0.63 pCi/L	Rad. Meas.
GROSS ALPHA		0.00+-5.00 pCi/L	W. A.
GROSS ALPHA	LT	0.61 pCi/L	Env. Lab.
NONVOLATILE BETA		2.79+-0.93 pCi/L	Rad. Meas.
NONVOLATILE BETA		4.00+-2.00 pCi/L	W. A.
NONVOLATILE BETA	LT	1 pCi/L	Env. Lab.
TOTAL RADIUM		3.22+-2.60 pCi/L	Rad. Meas.
TOTAL RADIUM		1.50+-0.40 pCi/L	W. A.
TOTAL RADIUM	LT	1 pCi/L	Env. Lab.
TRITIUM		2.87+-0.25 pCi/mL	Rad. Meas.
TRITIUM		7.70+-0.90 pCi/mL	W. A.
TRITIUM		3.26+-0.37 pCi/mL	Env. Lab.

WELL LFW 26

SRS Grid N 85654.6 Latitude 33.289663 N
 Coordinates E 45633.8 Longitude 81.713023 W
 Screen Zone Elevation 164.9-143.9 ft msl
 Top of Casing Elevation 186.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 03/21/89 Time 1735
 Depth to water = 28.65 ft (8.73 m) below the TOC
 Water elevation = 158.25 ft (48.24 m) msl
 pH = 4.6 Alkalinity = 0 mg/L
 Specific Conductance = 13 umhos/cm
 Water Temperature = 19.2 degrees Celsius
 Water evacuated from the well prior to sampling = 73 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		15.00 umh/cm	Env. Eng.
SPECIFIC CONDUCTANCE		15.60 umh/cm	Env. Eng.
PH		5.00 pH	Env. Eng.
PH		4.85 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		235 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.

CONTINUED

WELL LFW 26 COLLECTED CN 03/21/89 LABORATORY ANALYSES CONTINUED

CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2200 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON	LT	20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		222 ug/L	Env. Eng.
MANGANESE	LT	2 ug/L	Env. Eng.
SODIUM		933 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.62+-0.57 pCi/L	Rad. Meas.
GROSS ALPHA		1.57+-0.61 pCi/L	Rad. Meas.
NONVOLATILE BETA		1.95+-0.82 pCi/L	Rad. Meas.
NONVOLATILE BETA		2.87+-0.97 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TRITIUM		2.89+-0.25 pCi/mL	Rad. Meas.
TRITIUM		3.22+-0.26 pCi/mL	Rad. Meas.

WELL LFW 27

SRS Grid N 85839.1 Latitude 33.290010 N
 Coordinates E 45596.1 Longitude 81.713481 W
 Screen Zone Elevation 163.6-142.6 ft msl
 Top of Casing Elevation 189.60 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1000
 Depth to water = 30.87 ft (9.41 m) below the TOC
 Water elevation = 158.73 ft (48.38 m) msl
 pH = 5.2 Alkalinity = 0 mg/L
 Specific Conductance = 16 umhos/cm
 Water Temperature = 18.2 degrees Celsius
 Water evacuated from the well prior to sampling = 45 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		17.50 umh/cm	Env. Eng.
PH		4.66 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		501 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2100 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUCRIDE	LT	100 ug/L	Env. Eng.
IRON		61 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		357 ug/L	Env. Eng.
MANGANESE		6 ug/L	Env. Eng.
SODIUM		1150 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		0.86+-0.59 pCi/L	Rad. Meas.
NONVOLATILE BETA		0.88+-0.81 pCi/L	Rad. Meas.
TOTAL RADIUM		0.71+-0.52 pCi/L	Rad. Meas.
TRITIUM		6.12+-0.30 pCi/mL	Rad. Meas.

WELL LFW 28

SRS Grid N 86079.6 Latitude 33.290475 N
 Coordinates E 45555.3 Longitude 81.714056 W
 Screen Zone Elevation 161.8-140.8 ft msl
 Top of Casing Elevation 192.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 1420
 Depth to water = 32.76 ft (9.99 m) below the TOC
 Water elevation = 160.04 ft (48.78 m) msl
 pH = 5.4 Alkalinity = 2 mg/L
 Specific Conductance = 26 umhos/cm
 Water Temperature = 18.8 degrees Celsius
 Water evacuated from the well prior to sampling = 12 gal
 The well went dry during purging.

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		27.40 umh/cm	Env. Eng.
PH		5.03 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		2600 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2600 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		78 ug/L	Env. Eng.
IRON		83 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		521 ug/L	Env. Eng.
MAGNESIUM		494 ug/L	Env. Eng.
MANGANESE		13 ug/L	Env. Eng.
MANGANESE		12 ug/L	Env. Eng.
SODIUM		1320 ug/L	Env. Eng.
SODIUM		1370 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.

CONTINUED

WELL LF28 COLLECTED ON 01/24/89 LABORATORY ANALYSES CONTINUED

TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.86+-1.09 pCi/L	Rad. Meas.
NONVOLATILE BETA		3.44+-1.03 pCi/L	Rad. Meas.
TOTAL RADIUM		2.05+-0.68 pCi/L	Rad. Meas.
TRITIUM		3.59+-0.27 pCi/mL	Rad. Meas.

WELL LF29

SRS Grid N 86372.7 Latitude 33.291038 N
 Coordinates E 45503.3 Longitude 81.714763 W
 Screen Zone Elevation 164.7-143.7 ft msl
 Top of Casing Elevation 195.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 930
 Depth to water = 34.40 ft (10.49 m) below the TOC
 Water elevation = 161.30 ft (49.16 m) msl
 pH = 5.0 Alkalinity = 0 mg/L
 Specific Conductance = 25 umhos/cm
 Water Temperature = 17.8 degrees Celsius
 Water evacuated from the well prior to sampling = 46 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		29.40 umh/cm	Env. Eng.
SPECIFIC CONDUCTANCE		27.50 umh/cm	Env. Eng.
PH		4.43 pH	Env. Eng.
PH		4.15 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		893 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2200 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		394 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		706 ug/L	Env. Eng.
MANGANESE		7 ug/L	Env. Eng.
SODIUM		783 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.

CONTINUED

WELL LFV 29 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		5.74+-1.23 pCi/L	Rad. Meas.
NONVOLATILE BETA		8.90+-1.23 pCi/L	Rad. Meas.
TOTAL RADIUM		3.90+-0.97 pCi/L	Rad. Meas.
TRITIUM		5.55+-0.29 pCi/mL	Rad. Meas.

WELL LFV 30

SRS Grid N 86318.4 Latitude 33.290375 N
 Coordinates E 45170.9 Longitude 81.715532 W
 Screen Zone Elevation 165.8-144.8 ft msl
 Top of Casing Elevation 210.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 905
 Depth to water = 49.26 ft (15.01 m) below the TOC
 Water elevation = 161.54 ft (49.24 m) msl
 pH = 6.1 Alkalinity = 7 mg/L
 Specific Conductance = 34 umhos/cm
 Water Temperature = 15.9 degrees Celsius
 Water evacuated from the well prior to sampling = 54 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		35.50 umh/cm	Env. Eng.
PH		5.43 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		3610 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		1300 ug/L	Env. Eng.
CHLORIDE		1400 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		22 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		390 ug/L	Env. Eng.
MANGANESE		8 ug/L	Env. Eng.

CONTINUED

WELL LFV 32 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

CALCIUM		500 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2900 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON	LT	20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		477 ug/L	Env. Eng.
MANGANESE		4 ug/L	Env. Eng.
SODIUM		1610 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.47+-0.98 pCi/L	Rad. Meas.
NONVOLATILE BETA		4.54+-1.08 pCi/L	Rad. Meas.
TOTAL RADIUM		2.47+-0.76 pCi/L	Rad. Meas.
TRITIUM		7.84+-0.32 pCi/mL	Rad. Meas.

WELL LFW 33

SRS Grid N 85633.8 Latitude 33.288538 N
 Coordinates E 44973.0 Longitude 81.714722 W
 Screen Zone Elevation 165.1-144.1 ft msl
 Top of Casing Elevation 214.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1240
 Depth to water = 56.10 ft (17.10 m) below the TOC
 Water elevation = 158.00 ft (48.16 m) msl
 pH = 5.1 Alkalinity = 0 mg/L
 Specific Conductance = 21 umhos/cm
 Water Temperature = 17.7 degrees Celsius
 Water evacuated from the well prior to sampling = 46 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		26.80 umh/cm	Env. Eng.
PH		4.69 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		906 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2600 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		37 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		343 ug/L	Env. Eng.
MANGANESE		2 ug/L	Env. Eng.
SODIUM		1600 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		2.29+-1.10 pCi/L	Rad. Meas.
NONVOLATILE BETA		8.10+-1.25 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TRITIUM		5.03+-0.29 pCi/mL	Rad. Meas.

WELL LFW 30 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

SODIUM		771 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.07+-0.57 pCi/L	Rad. Meas.
NONVOLATILE BETA		1.53+-0.82 pCi/L	Rad. Meas.
TOTAL RADIUM		0.77+-0.53 pCi/L	Rad. Meas.
TRITIUM		4.86+-0.28 pCi/mL	Rad. Meas.

WELL LFW 31

SRS Grid N 86262.2 Latitude 33.289758 N
 Coordinates E 44869.0 Longitude 81.716217 W
 Screen Zone Elevation 165.7-144.7 ft msl
 Top of Casing Elevation 229.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1335
 Depth to water = 68.75 ft (20.96 m) below the TOC
 Water elevation = 160.95 ft (49.06 m) msl
 pH = 5.5 Alkalinity = 2 mg/L
 Specific Conductance = 19 umhos/cm
 Water Temperature = 17.4 degrees Celsius
 Water evacuated from the well prior to sampling = 42 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		21.00 umh/cm	Env. Eng.
PH		4.89 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		3150 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2100 ug/L	Env. Eng.
* CHROMIUM		316 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		881 ug/L	Env. Eng.

CONTINUED

WELL LFW 31 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

MERCURY	LT	0.20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		404 ug/L	Env. Eng.
MANGANESE		106 ug/L	Env. Eng.
SODIUM		1750 ug/L	Env. Eng.
LEAD		7 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		8700 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		0.57+-0.53 pCi/L	Rad. Meas.
GROSS ALPHA		0.90+-0.54 pCi/L	Rad. Meas.
NONVOLATILE BETA		1.27+-0.86 pCi/L	Rad. Meas.
NONVOLATILE BETA		1.26+-0.72 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TOTAL RADIUM		0.47+-0.43 pCi/L	Rad. Meas.
TRITIUM		6.47+-0.31 pCi/mL	Rad. Meas.
TRITIUM		9.09+-0.34 pCi/mL	Rad. Meas.

WELL LFW 32

SRS Grid N 85836.8 Latitude 33.288927 N
 Coordinates E 44935.9 Longitude 81.715214 W
 Screen Zone Elevation 165.1-144.1 ft msl
 Top of Casing Elevation 224.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1310
 Depth to water = 65.02 ft (19.82 m) below the TCC
 Water elevation = 159.08 ft (48.49 m) msl
 pH = 5.2 Alkalinity = 0 mg/L
 Specific Conductance = 22 umhos/cm
 Water Temperature = 17.4 degrees Celsius
 Water evacuated from the well prior to sampling = 42 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		25.50 umh/cm	Env. Eng.
PH		4.79 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		506 ug/L	Env. Eng.

CONTINUED

WELL LFW 34

SRS Grid N 85409.5 Latitude 33.288114 N
 Coordinates E 45016.9 Longitude 81.714171 W
 Screen Zone Elevation 164.4-143.4 ft msl
 Top of Casing Elevation 201.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1215
 Depth to water = 44.59 ft (13.59 m) below the TOC
 Water elevation = 156.81 ft (47.80 m) msl
 pH = 5.2 Alkalinity = 1 mg/L
 Specific Conductance = 23 umhos/cm
 Water Temperature = 17.5 degrees Celsius
 Water evacuated from the well prior to sampling = 35 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		26.20 umh/cm	Env. Eng.
PH		4.74 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		2010 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		3100 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		23 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		474 ug/L	Env. Eng.
MAGNESIUM		388 ug/L	Env. Eng.
MANGANESE		7 ug/L	Env. Eng.
MANGANESE		4 ug/L	Env. Eng.
SODIUM		1990 ug/L	Env. Eng.
SODIUM		1740 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.

CONTINUED

WELL LFW 34 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.72+-1.04 pCi/L	Rad. Meas.
NONVOLATILE BETA		3.47+-1.03 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TRITIUM		4.46+-0.28 pCi/mL	Rad. Meas.

WELL LFW 35

SRS Grid N 85237.4 Latitude 33.288325 N
 Coordinates E 45378.8 Longitude 81.712883 W
 Screen Zone Elevation 164.1-143.1 ft msl
 Top of Casing Elevation 184.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1105
 Depth to water = 28.36 ft (8.64 m) below the TOC
 Water elevation = 155.74 ft (47.47 m) msl
 pH = 5.2 Alkalinity = 1 mg/L
 Specific Conductance = 16 umhos/cm
 Water Temperature = 19.0 degrees Celsius
 Water evacuated from the well prior to sampling = 36 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		20.80 umh/cm	Env. Eng.
PH		4.74 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		260 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2300 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON	LT	20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		371 ug/L	Env. Eng.
MANGANESE		4 ug/L	Env. Eng.
SODIUM		1140 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.

CONTINUED

WELL LFW 35 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		1600 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA	LT	3 pCi/L	Rad. Meas.
NONVOLATILE BETA		1.82+-0.95 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TRITIUM		4.12+-0.27 pCi/mL	Rad. Meas.

WELL LFW 36

SRS Grid N 83535.5 Latitude 33.284894 N
 Coordinates E 45582.3 Longitude 81.709040 W
 Screen Zone Elevation 150.4-129.4 ft msl
 Top of Casing Elevation 170.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 1150
 Depth to water = 25.79 ft (7.86 m) below the TOC
 Water elevation = 144.61 ft (44.08 m) msl
 pH = 6.2 Alkalinity = 64 mg/L
 Specific Conductance = 260 umhos/cm
 Water Temperature = 19.2 degrees Celsius
 Water evacuated from the well prior to sampling = 40 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		263.0 umh/cm	Env. Eng.
PH		5.98 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		6610 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		26200 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		196 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		15400 ug/L	Env. Eng.
MANGANESE		17 ug/L	Env. Eng.
SODIUM		30500 ug/L	Env. Eng.

CONTINUED

WELL LFW 36 COLLECTED ON 01/24/89 LABORATORY ANALYSES CONTINUED

LEAD		10 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE		7200 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		6500 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		350 ug/L	Env. Eng.
TOTAL PHOSPHATES		30 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA	LT	3 pCi/L	Rad. Meas.
NONVOLATILE BETA		5.06+-1.53 pCi/L	Rad. Meas.
TOTAL RADIUM		2.01+-0.65 pCi/L	Rad. Meas.
TRITIUM		18.30+-0.46 pCi/mL	Rad. Meas.

WELL LFW 37

SRS Grid N 83113.2 Latitude 33.284100 N
 Coordinates E 45667.7 Longitude 81.707994 W
 Screen Zone Elevation 149.9-128.9 ft msl
 Top of Casing Elevation 169.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1700
 Depth to water = 28.07 ft (8.56 m) below the TOC
 Water elevation = 141.83 ft (43.23 m) msl
 pH = 5.1 Alkalinity = 4 mg/L
 Specific Conductance = 89 umhos/cm
 Water Temperature = 18.2 degrees Celsius
 Water evacuated from the well prior to sampling = 37 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		58.10 umh/cm	Env. Eng.
PH		4.88 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		2230 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		11400 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.

CONTINUED

WELL LFW 20 COLLECTED ON 03/21/89 LABORATORY ANALYSES CONTINUED

ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		251 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2200 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		21 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		250 ug/L	Env. Eng.
MANGANESE	LT	2 ug/L	Env. Eng.
SODIUM		881 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.34+-0.64 pCi/L	Rad. Meas.
NONVOLATILE BETA		3.20+-0.92 pCi/L	Rad. Meas.
TOTAL RADIUM		1.28+-0.75 pCi/L	Rad. Meas.
TRITIUM		4.82+-0.30 pCi/mL	Rad. Meas.

WELL LFW 21

SRS Grid N 84178.3 Latitude 33.287241 N
 Coordinates E 46149.4 Longitude 81.708796 W
 Screen Zone Elevation 159.5-129.5 ft msl
 Top of Casing Elevation 176.20 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 1110
 Depth to water = 27.61 ft (8.42 m) below the TOC
 Water elevation = 148.59 ft (45.29 m) msl
 pH = 5.4 Alkalinity = 41 mg/L
 Specific Conductance = 230 umhos/cm
 Water Temperature = 19.6 degrees Celsius
 Water evacuated from the well prior to sampling = 50 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		221.0 umh/cm	Env. Eng.
PH		5.10 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		5160 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		24400 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		629 ug/L	Env. Eng.
IRON		591 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		12300 ug/L	Env. Eng.
MAGNESIUM		13000 ug/L	Env. Eng.
MANGANESE		7 ug/L	Env. Eng.
MANGANESE		6 ug/L	Env. Eng.
SODIUM		21600 ug/L	Env. Eng.
SODIUM		18100 ug/L	Env. Eng.
LEAD		9 ug/L	Env. Eng.
LEAD		7 ug/L	Env. Eng.
PHENOLS		20 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE		17900 ug/L	Env. Eng.
TETRACHLOROETHYLENE		37.0 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		12900 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		2043 ug/L	Env. Eng.
TOTAL PHOSPHATES		50 ug/L	Env. Eng.
* TRICHLOROETHYLENE		62.0 ug/L	Env. Eng.

CONTINUED

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFL # 30

DATE OF INSTALLATION 12/31/86

Sheet 1 of 2

FOR: _____						
LOCATION: <u>Landfill Sanitary</u>						
JOB NUMBER: _____						
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrom	Graphic Log
		0/6	12/18			
VISUAL FIELD CLASSIFICATION AND REMARKS						S.S. Dia _____ Weight _____ Drop _____
						Top soil Brown Rust F-M sand uniform
					5	
					10	Rust m-c sand so. fines
					15	Rust m-c sand & clay
					20	SAME
					25	SAME
					30	TAN F-C sand
					35	
					40	TAN F-M sand some clay
					45	
					50

WELL NUMBER _____

DATE OF INSTALLATION _____

Sheet 2 of 2

[illegible]

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW #30

DATE OF INSTALLATION _____

Sheet 1 of 2

FOR: Savannah River Plant / E.I. Du Pont

LOCATION: _____

JOB NUMBER: _____

Sample No.	Moisture	Blows On Sampler		Recovery	Penetrometer	Graph Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dia _____ Weight _____ Drop _____
		0/6	12/18					
							Top Soil Brown F-M sand so. organics. Rust F-M sand w/ iron	
						5		
						10	Rust M-L sand so. fines	
						15	Rust M-C sand and clay	
						20	Rust F-M sand and clay	
						25	Rust-Tan F-M sand and clay TAN F-C sand	
						30		
						35		
						40	Tan F-M sand some clay	
						45		
						50

WELL NUMBER LFW #30

DATE OF INSTALLATION

Sheet 2 of 2

[illegible]

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW # 31

DATE OF INSTALLATION 10-27-86

Sheet 1 of 2

FOR: Savannah River Plant / E.I. DuPont

LOCATION: _____

JOB NUMBER: _____

Sample No.	Moisture	Blows On Sampler		Recovery	Penetrometer	Grapho Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dia. _____		
		0/6	12/18					Weight _____	Drop _____	
							Brown F-M sand some organics			
						5	Rust F-C sand and clay			
						10				
						15				
						20	Rust F-C clayey sand and gravel			
						25				
						30				
						35	Rust stiff sandy clay			
						40				
						45				
						50	Tan F sand and yellow clay

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW #31

DATE OF INSTALLATION 10-27-86

Sheet 2 of 2

FOR: <u>Savannah River Plant / E.I. DuPont</u>						
LOCATION: _____						
JOB NUMBER: _____						
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrometer	Graphic Log
		0/6	12/18			
VISUAL FIELD CLASSIFICATION AND REMARKS						S.S. Dia _____ Weight _____ Drop _____
						Tan F sand and yellow clay
					55	
					60	
					65	Tan F sand and white & yellow clay
					70	
					75	Tan F-M sand
					80	
					85	
					90	
					95	
					100

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW #32

DATE OF INSTALLATION _____

Sheet 1 of 2

FOR: <u>Savannah River Plant / E.I. DuPont</u>						
LOCATION: _____						
JOB NUMBER: _____						
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrom	Grapho Log
		0/6	12/18			
VISUAL FIELD CLASSIFICATION AND REMARKS						S.S. Dia _____ Weight _____ Drop _____
						Rust F-M clayey sand
					5	
					10	
					15	Rust F-C sand and clay
					20	
					25	
					30	Rust Gravel and M-C sand
					35	
					40	Rust M-C sand and gravel
					45	
					50	Rust F-M sand uniform

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW # 32

DATE OF INSTALLATION _____

Sheet 2 of 2

FOR: Savannah River Plant / E.I. DuPont

LOCATION: _____

JOB NUMBER: _____

Sample No.	Moisture	Blows On Sampler		Recovery	Penetrometer	Graph Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dia _____ Weight _____ Drop _____		
		0/6	12/18							
							Rust F-M sand uniform			
					55		Rust-tan M-C Sand, gravel and yellow clay			
					60		Tan F-m sand and clay			
					65					
					70		Tan F-M sand			
					75					
					80					
					85		Total Depth 85'			
					90		Mud Rotary Drilling Field classification using cuttings only			
					95					
					100

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW #33

DATE OF INSTALLATION _____

Sheet 1 of 2

FOR: <u>Savannah River Plant / E. I. DuPont</u>						
LOCATION: _____						
JOB NUMBER: _____						
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrom.	Graphic Log
		0/6	12/18			
VISUAL FIELD CLASSIFICATION AND REMARKS						S.S. Dia _____ Weight _____ Drop _____
						Rust M-C clayey Sand and F gravel
					5	
					10	
					15	
					20	Rust M-C clayey Sand
					25	
					30	Rust M-C clayey Sand and yellow clay
					35	
					40	
					45	
					50	Rust to Tan M-C sand and F gravel with yellow clay

WELL NUMBER LFW# 33

DATE OF INSTALLATION _____

Sheet 2 of 2

[illegible]

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LEW # 34

DATE OF INSTALLATION _____

Sheet 1 of 2

FOR: <u>Savannah River Plant / E.I. DuPont</u>								
LOCATION: _____								
JOB NUMBER: _____								
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrom	Graphic Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dia. _____ Weight _____ Drop _____
		0/6	12/18					
							Rust F-M sand and clay	
					5			
					10			
					15			
					20		Rust M-C sand and clay	
					25			
					30		Rust M-C sand and clay some F gravel	
					35			
					40		Light Rust F-M sand	
					45			
					50

WELL NUMBER LFW # 34

DATE OF INSTALLATION _____

Sheet 2 of 2

FOR: Savannah River Plant / E.I. DuPont

LOCATION:

JOB NUMBER:

[illegible]

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW # 35

DATE OF INSTALLATION _____

Sheet 1 of 1

FOR: _____								
LOCATION: _____								
JOB NUMBER: _____								
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrom	Graphs Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dia _____ Weight _____ Drop _____
		0/6	12/18					
							Top soil Brown F-M sand some organics	
							Rust F-M sand uniform	
					5			
					10			
					15		Rust M-C sand some F gravel and yellow clay	
					20		Rust-Tan As Above	
							Tan A.A.	
					25			
					30		Tan M-C sand and clay some F gravel	
					35		Tan F-M sand and clay	
					40			
					45			
					50		Total Depth 47'	
							Mud Rotary Drilling Field Classification using cuttings only.

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW #36

DATE OF INSTALLATION 11/5/86

Sheet 1 of 1

FOR: Savannah River Plant / E.I. DuPont

LOCATION: Sanitary Landfill

JOB NUMBER: _____

Sample No.	Moisture	Blows On Sampler		Recovery	Penetrom	Graphic Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dia. _____		
		0/6	12/18					Weight _____	Drop _____	
							Organic Topsoil w/ Red Sand / silt			
							Red-Rust Sand F-M w/ tr silt			
					5					
					10					
					15					
					20		Rust-Tan sand, F-C w/ trace gravel			
					25		Tan Sand, F-C w/ tr gravel			
					30					
					35					
					40					
					45					
					50		Well TD @ 46' in Tan sd, F-C w/ trace gravel

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW # 37

DATE OF INSTALLATION 11/4/86

Sheet 1 of 1

FOR: Savannah River Plant / E.I. DuPont

LOCATION: Sanitary Landfill

JOB NUMBER: _____

Sample No.	Moisture	Blows On Sampler		Recovery	Penetrometer	Graphic Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dia _____ Weight _____ Drop _____
		0/6	12/18					
							Organic rich Topsoil w/ Red sand	
							Rust Sand, F-M gr w/ trace silt	
						5		
						10		
						15	Rust-Tan sd, F-M w/ silt	
						20	Tan sd F-C w/ trace gravel	
						25		
						30		
						35	Tan sd as above w/ slightly more gravel	
						40		
						45		
						50	Well TD @ 46' in Tan sd, F-C w/ tr. gravel	
						55

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW # 38

DATE OF INSTALLATION 11-3-86

Sheet 1 of 1

FOR: Savannah River Plant / E.I. DuPont

LOCATION: _____

JOB NUMBER: _____

Sample No.	Moisture	Blows Or Sampler		Recovery	Penetrom	Graphic Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dis _____		
		0/6	12/18					Weight _____	Drop _____	
							Brown Fine-Med sand / organics			
						5	Rust - Brown Fine - Med sand			
						10				
						15				
						20	Tan Fine - Coarse Sand, gravel w/ trace sil.			
						25				
						30				
						35	Tan Fine - Med sand, slightly more gravel			
						40				
						45				
						50				
						55				
						60				
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						70				
						75				
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						865				
						870				
						875				
						880				
						885				
						890				
						895				
						900				
						905				
						910				
						915				
						920				
						925				
						930				
						935				
						940				
						945				
						950				
						955				
						960				
						965				
						970				
						975				
						980				
						985				
						990				
						995				
						1000				

TD @ 46'

Mod Rotary Drilling Field Classification
Using Cuttings Only.

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW # 39

DATE OF INSTALLATION 11-3-86

Sheet 1 of 1

FOR: <u>Savannah River Plant / E. I. DuPont</u>						
LOCATION: _____						
JOB NUMBER: _____						
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrom	Graphic Log
		0/6	12/18			
VISUAL FIELD CLASSIFICATION AND REMARKS						S.S. Dia. _____ Weight _____ Drop _____
						Brown Fine-Med sand and organics
						Rust-Brown Fine-Med Sand
					5	
					10	
					15	
					20	Rust-Tan F-C sand, silt and gravel Tan F-C sand and gravel, minor silt/clay
					25	
					30	Tan M-C sand and gravel, silt
					35	
					40	Tan F-C sand w/ trace gravel
					45	
						TD @ 46'
						Mud Rotary Drilling Field Classification Using cuttings only.

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW #40

DATE OF INSTALLATION 10-30-86

Sheet 1 of 1

FOR: Savannah River Plant / E.I. Dupont

LOCATION: _____

JOB NUMBER: _____

Sample No.	Moisture	Blows On Sampler		Recovery	Penetration	Graphic Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dia		
		0/6	12/18					Weight	Drop	
							Brown F-M sand and organics			
							Rust F-M sand and clay			
					5					
					10					
					15					
					20		Rust-tan F-C sand & gravel			
					25		Tan F-C sand, gravel & yellow clay			
					30					
					35					
					40		Tan F-C sand			
					45					
					50					

Total Depth 46'

Mud Rotary Drilling Field Classification using Cuttings only

APPENDIX D

**1ST QUARTER THROUGH 4TH QUARTER 1989 ANALYTICAL DATA FOR THE
LANDFILL MONITORING WELLS**

WELL NUMBER LEW #41

DATE OF INSTALLATION 10-31-86

Sheet 1 of 1

FOR: <u>Savannah River Plant / E.I. O. Post</u>									
LOCATION: _____									
JOB NUMBER: _____									
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrometer	Graphs Log	VISUAL FIELD CLASSIFICATION AND REMARKS	S.S. Dis	
		0/6	12/18					Weight	Drop
							Brown F-M sand and organics		
							Rust F-M sand and clay		
						5			
						10			
						15			
						20	Tan F-C sand & gravel & yellow clay		
						25			
						30			
						35	Tan F-M sand		
						40			
						45			
						50			
							Total Depth 46'		
							Mud Rotary drilling field classification using cuttings only

ENVIRODYNE
ENGINEERS

FIELD BORING LOG

WELL NUMBER LFW # 42

DATE OF INSTALLATION 10-30-86

Sheet 1 of 1

FOR: <u>Savannah River Plant / E.I. Dupont</u>						
LOCATION: _____						
JOB NUMBER: _____						
Sample No.	Moisture	Blows On Sampler		Recovery	Penetrom	Graphic Log
		0/6	12/18			
VISUAL FIELD CLASSIFICATION AND REMARKS						
S.S. Dia _____ Weight _____ Drop _____						
						Brown F-M sand some organics.
						Rust F-M sand and clay
					5	
					10	
					15	Tan F-C sand some clay
					20	
					25	
					30	Tan F-M sand
					35	
					40	
					45	
					50	Total Depth 46'
						Mud Rotary Drilling Field Classification using cuttings only

WELL LEW 6

SRS Grid N 84537.8 Latitude 33.286553 N
 Coordinates E 45241.2 Longitude 81.711836 W
 Screen Zone Elevation 160.0-140.0 ft msl
 Top of Casing Elevation 171.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 1250
 Depth to water = 20.25 ft (6.17 m) below the TOC
 Water elevation = 151.45 ft (46.16 m) msl
 pH = 5.5 Alkalinity = 61 mg/L
 Specific Conductance = 167 umhos/cm
 Water Temperature = 18.8 degrees Celsius
 Water evacuated from the well prior to sampling = 30 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		54.00 umh/cm	Env. Eng.
PH		5.60 pH	Env. Eng.
ARSENIC		4 ug/L	Env. Eng.
CALCIUM		1630 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		3900 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		25400 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		3030 ug/L	Env. Eng.
MANGANESE		22 ug/L	Env. Eng.
SODIUM		4140 ug/L	Env. Eng.
LEAD	LT	8 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		1900 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		51 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA	LT	3 pCi/L	Rad. Meas.
NONVOLATILE BETA		2.66+-1.01 pCi/L	Rad. Meas.
TOTAL RADIUM		1.61+-0.61 pCi/L	Rad. Meas.
TRITIUM		5.44+-0.30 pCi/mL	Rad. Meas.

WELL LFW 7

SRS Grid N 84310.3 Latitude 33.286177 N
 Coordinates E 45318.9 Longitude 81.711239 W
 Screen Zone Elevation 159.3-139.3 ft msl
 Top of Casing Elevation 171.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 1220
 Depth to water = 21.35 ft (6.51 m) below the TOC
 Water elevation = 150.05 ft (45.74 m) msl
 pH = 6.7 Alkalinity = 264 mg/L
 Specific Conductance = 590 umhos/cm
 Water Temperature = 19.2 degrees Celsius
 Water evacuated from the well prior to sampling = 28 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		331.0 umh/cm	Env. Eng.
PH		5.99 pH	Env. Eng.
ARSENIC		31 ug/L	Env. Eng.
CALCIUM		19000 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		25500 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE		110 ug/L	Env. Eng.
IRON		71200 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		17100 ug/L	Env. Eng.
MANGANESE		27 ug/L	Env. Eng.
SODIUM		28800 ug/L	Env. Eng.
LEAD		12 ug/L	Env. Eng.
PHENOLS		16 ug/L	Env. Eng.
PHENOLS		16 ug/L	Env. Eng.
SILVEX		0.33 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		7700 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		421 ug/L	Env. Eng.
TOTAL PHOSPHATES		40 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
* GROSS ALPHA		17.10+-4.17 pCi/L	Rad. Meas.
NONVOLATILE BETA		15.60+-2.75 pCi/L	Rad. Meas.
* TOTAL RADIUM		7.20+-1.31 pCi/L	Rad. Meas.
TRITIUM		9.88+-0.36 pCi/mL	Rad. Meas.

WELL LFW 8

SRS Grid N 84032.6 Latitude 33.285720 N
 Coordinates E 45415.3 Longitude 81.710445 W
 Screen Zone Elevation 158.8-138.8 ft msl
 Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 02/14/89 Time 1615
 Depth to water = 22.46 ft (6.85 m) below the TOC
 Water elevation = 148.04 ft (45.12 m) msl
 pH = 6.9 Alkalinity = 214 mg/L
 Specific Conductance = 455 umhos/cm
 Water Temperature = 18.8 degrees Celsius
 Water evacuated from the well prior to sampling = 26 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		259.0 umh/cm	Env. Eng.
SPECIFIC CONDUCTANCE		248.0 umh/cm	Env. Eng.
PH		6.10 pH	Env. Eng.
PH		6.14 pH	Env. Eng.
ARSENIC		12 ug/L	Env. Eng.
CALCIUM		7600 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		95800 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE		410 ug/L	Env. Eng.
IRON		61200 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		1420 ug/L	Env. Eng.
MANGANESE		46 ug/L	Env. Eng.
SODIUM		23200 ug/L	Env. Eng.
LEAD		8 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		9600 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		302 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		302 ug/L	Env. Eng.
TOTAL PHOSPHATES		34 ug/L	Env. Eng.
TRICHLOROETHYLENE		2.20 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		4.14+-1.81 pCi/L	HP, 735A
GROSS ALPHA		3.44+-1.91 pCi/L	Rad. Meas.

CONTINUED

WELL LFW 8 COLLECTED ON 02/14/89 LABORATORY ANALYSES CONTINUED

NONVOLATILE BETA	7.67+-2.16 pCi/L	HP, 735A
NONVOLATILE BETA	8.70+-2.37 pCi/L	Rad. Meas.
TOTAL RADIUM	2.64+-0.71 pCi/L	Rad. Meas.
TRITIUM	13.70+-0.93 pCi/mL	HP, 735A
TRITIUM	14.00+-0.39 pCi/mL	Rad. Meas.

WELL LFW 10A

SRS Grid N 84369.6 Latitude 33.287315 N
 Coordinates E 45935.6 Longitude 81.709731 W
 Screen Zone Elevation 158.5-128.5 ft msl
 Top of Casing Elevation 175.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 03/22/89 Time 1050
 Depth to water = 25.47 ft (7.76 m) below the TOC
 Water elevation = 150.03 ft (45.73 m) msl
 pH = 4.8 Alkalinity = 1 mg/L
 Specific Conductance = 20 umhos/cm
 Water Temperature = 18.8 degrees Celsius
 Water evacuated from the well prior to sampling = 125 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		29.20 umh/cm	Env. Eng.
SPECIFIC CONDUCTANCE		13.50 umh/cm	W. A.
SPECIFIC CONDUCTANCE		19.00 umh/cm	Env. Lab.
PH		5.09 pH	Env. Eng.
PH		5.00 pH	W. A.
PH		5.00 pH	Env. Lab.
SILVER	LT	10 ug/L	W. A.
ALUMINUM	LT	200 ug/L	W. A.
ARSENIC	LT	2 ug/L	Env. Eng.
ARSENIC	LT	100 ug/L	W. A.
ARSENIC	LT	5 ug/L	Env. Lab.
BARIUM	LT	200 ug/L	W. A.
BROMODICHLOROMETHANE	LT	3 ug/L	Env. Lab.
CALCIUM		754 ug/L	Env. Eng.
CALCIUM	LT	5000 ug/L	W. A.
CALCIUM		530 ug/L	Env. Lab.
TRICHLOROFLUOROMETHANE		71 ug/L	Env. Lab.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	W. A.
CARBON TETRACHLORIDE	LT	2.50 ug/L	Env. Lab.
CADMIUM	LT	2 ug/L	Env. Eng.
CADMIUM	LT	5 ug/L	W. A.
CADMIUM	LT	10 ug/L	Env. Lab.
BROMOFORM	LT	3 ug/L	Env. Lab.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	W. A.
CHLOROFORM	LT	3 ug/L	Env. Lab.

CONTINUED

WELL LFW 10A COLLECTED ON 03/22/89 LABORATORY ANALYSES CONTINUED

CIS-1,3-DICHLOROPROPENE	LT	3 ug/L	Env. Lab.
TRANS-1,3-DICHLOROPROPENE	LT	3 ug/L	Env. Lab.
1,4-DICHLOROBENZENE	LT	3 ug/L	Env. Lab.
2-CHLOROETHYL VINYL ETHER	LT	3 ug/L	Env. Lab.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	1 ug/L	W. A.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.50 ug/L	Env. Lab.
2,4,5-TRICHLOROPHENOXYACETIC ACID	LT	0.50 ug/L	W. A.
ZINC	LT	20 ug/L	W. A.
GROSS ALPHA		2.24+-0.76 pCi/L	Rad. Meas.
GROSS ALPHA		3.00+-2.00 pCi/L	W. A.
GROSS ALPHA		1.51+-0.67 pCi/L	Env. Lab.
NONVOLATILE BETA		4.06+-1.00 pCi/L	Rad. Meas.
NONVOLATILE BETA		3.00+-2.00 pCi/L	W. A.
NONVOLATILE BETA		3.50+-0.81 pCi/L	Env. Lab.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TOTAL RADIUM		2.20+-0.50 pCi/L	W. A.
TOTAL RADIUM		0.88+-0.23 pCi/L	Env. Lab.
TRITIUM		3.25+-0.26 pCi/mL	Rad. Meas.
TRITIUM		9.70+-0.90 pCi/mL	W. A.
TRITIUM	LT	1 pCi/mL	Env. Lab.

WELL LFW 10A

SRS Grid N 84369.6 Latitude 33.287315 N
 Coordinates E 45935.6 Longitude 81.709731 W
 Screen Zone Elevation 158.5-128.5 ft msl
 Top of Casing Elevation 175.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 03/22/89 Time 1050
 Depth to water = 25.47 ft (7.76 m) below the TOC
 Water elevation = 150.03 ft (45.73 m) msl
 pH = 4.8 Alkalinity = 1 mg/L
 Specific Conductance = 20 umhos/cm
 Water Temperature = 18.8 degrees Celsius
 Water evacuated from the well prior to sampling = 125 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		27.50 umh/cm	Env. Eng.
PH		5.07 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		827 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		3000 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.

CONTINUED

WELL LEW 10A COLLECTED ON 03/22/89 LABORATORY ANALYSES CONTINUED

CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		34 ug/L	Env. Eng.
IRON		26 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		580 ug/L	Env. Eng.
MAGNESIUM		548 ug/L	Env. Eng.
MANGANESE	LT	2 ug/L	Env. Eng.
MANGANESE	LT	2 ug/L	Env. Eng.
SODIUM		962 ug/L	Env. Eng.
SODIUM		977 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE		3.11 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		25 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE		3.61 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE		15 ug/L	Env. Eng.
2,4-DICHLOROPHOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.94+-0.67 pCi/L	Rad. Meas.
NONVOLATILE BETA		4.10+-0.97 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TRITIUM		4.36+-0.27 pCi/mL	Rad. Meas.

WELL LFW 10A COLLECTED ON 03/22/89 LABORATORY ANALYSES CONTINUED

METHYLENE CHLORIDE	LT	3 ug/L	Env. Lab.
BROMOMETHANE	LT	3 ug/L	Env. Lab.
CHLOROMETHANE	LT	3 ug/L	Env. Lab.
CHLORIDE		3100 ug/L	Env. Eng.
CHLORIDE	LT	5000 ug/L	W. A.
CHLORIDE		9000 ug/L	Env. Lab.
CHLOROETHENE (VINYL CHLORIDE)	LT	3 ug/L	Env. Lab.
COBALT	LT	50 ug/L	W. A.
CHROMIUM	LT	4 ug/L	Env. Eng.
CHROMIUM	LT	10 ug/L	W. A.
CHROMIUM	LT	50 ug/L	Env. Lab.
COPPER	LT	25 ug/L	W. A.
CYANIDE	LT	5 ug/L	Env. Eng.
CYANIDE	LT	10 ug/L	W. A.
CYANIDE	LT	20 ug/L	Env. Lab.
CHLOROETHANE	LT	3 ug/L	Env. Lab.
CHLOROETHANE	LT	3 ug/L	Env. Lab.
BENZENE		3 ug/L	Env. Lab.
DIBROMOCHLOROMETHANE	LT	3 ug/L	Env. Lab.
ENDRIN	LT	0.10 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	W. A.
ENDRIN	LT	0.05 ug/L	Env. Lab.
ETHYLBENZENE	LT	3 ug/L	Env. Lab.
FLUORIDE	LT	100 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	W. A.
FLUORIDE	LT	100 ug/L	Env. Lab.
IRON		25 ug/L	Env. Eng.
IRON	LT	100 ug/L	W. A.
IRON		70 ug/L	Env. Lab.
MERCURY	LT	0.20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	W. A.
MERCURY	LT	0.20 ug/L	Env. Lab.
POTASSIUM	LT	5000 ug/L	W. A.
LITHIUM	LT	100 ug/L	W. A.
LINDANE	LT	0.05 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	W. A.
LINDANE	LT	0.05 ug/L	Env. Lab.
TOLUENE	LT	3 ug/L	Env. Lab.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	W. A.
METHOXYCHLOR	LT	0.05 ug/L	Env. Lab.
MAGNESIUM		533 ug/L	Env. Eng.
MAGNESIUM	LT	5000 ug/L	W. A.
MAGNESIUM		680 ug/L	Env. Lab.
MANGANESE	LT	2 ug/L	Env. Eng.
MANGANESE	LT	15 ug/L	W. A.
MANGANESE	LT	20 ug/L	Env. Lab.
SODIUM		929 ug/L	Env. Eng.
SODIUM	LT	5000 ug/L	W. A.
SODIUM		1100 ug/L	Env. Lab.
AMMONIA NITROGEN	LT	100 ug/L	Env. Lab.
NICKEL	LT	40 ug/L	W. A.
NITROGEN BY KJELDAHL METHOD	LT	1000 ug/L	Env. Lab.

CONTINUED

WELL LFW 10A COLLECTED ON 03/22/89 LABORATORY ANALYSES CONTINUED

LEAD	LT	6 ug/L	Env. Eng.
LEAD	LT	5 ug/L	W. A.
LEAD	LT	100 ug/L	Env. Lab.
PHENOLS	LT	5 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	W. A.
PHENOLS	LT	5 ug/L	Env. Lab.
ANTIMONY	LT	60 ug/L	W. A.
SELENIUM	LT	100 ug/L	W. A.
SILICA		4090 ug/L	W. A.
SILVEX	LT	0.09 ug/L	Env. Eng.
SILVEX	LT	0.50 ug/L	W. A.
SILVEX	LT	0.50 ug/L	Env. Lab.
TIN	LT	100 ug/L	W. A.
SULFATE	LT	5000 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	W. A.
SULFATE	LT	5000 ug/L	Env. Lab.
1,1,2,2-TETRACHLOROETHANE	LT	3 ug/L	Env. Lab.
TETRACHLOROETHYLENE		3.45 ug/L	Env. Eng.
TETRACHLOROETHYLENE		2.30 ug/L	W. A.
TETRACHLOROETHYLENE		4.00 ug/L	Env. Lab.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	500 ug/L	W. A.
TOTAL ORGANIC CARBON		1780 ug/L	Env. Lab.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	100 ug/L	W. A.
TOTAL ORGANIC NITROGEN	LT	1000 ug/L	Env. Lab.
TOTAL ORGANIC HALOGENS		15 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		63 ug/L	W. A.
TOTAL ORGANIC HALOGENS		64 ug/L	W. A.
TOTAL ORGANIC HALOGENS	LT	10 ug/L	Env. Lab.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	W. A.
TOTAL PHOSPHATES	LT	10 ug/L	Env. Lab.
TRICHLOROETHYLENE		3.09 ug/L	Env. Eng.
TRICHLOROETHYLENE		2.70 ug/L	W. A.
TRICHLOROETHYLENE	LT	2.50 ug/L	Env. Lab.
TOXAPHENE	LT	1 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	W. A.
TOXAPHENE	LT	0.05 ug/L	Env. Lab.
TRANS-1,2-DICHLOROETHENE	LT	3 ug/L	Env. Lab.
URANIUM	LT	1000 ug/L	W. A.
VANADIUM	LT	50 ug/L	W. A.
XYLENES	LT	3 ug/L	Env. Lab.
1,1-DICHLOROETHYLENE	LT	3 ug/L	Env. Lab.
1,1-DICHLOROETHANE		7 ug/L	Env. Lab.
1,1,1-TRICHLOROETHANE		14 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE		13 ug/L	W. A.
1,1,1-TRICHLOROETHANE		15 ug/L	Env. Lab.
1,1,2-TRICHLOROETHANE	LT	3 ug/L	Env. Lab.
1,2-DICHLOROBENZENE	LT	3 ug/L	Env. Lab.
1,2-DICHLOROETHANE	LT	3 ug/L	Env. Lab.
1,2-DICHLOROPROPANE	LT	3 ug/L	Env. Lab.
1,3-DICHLOROBENZENE	LT	3 ug/L	Env. Lab.

CONTINUED

WELL LFW 16

SRS Grid N 84748.9 Latitude 33.288018 N
 Coordinates E 45852.6 Longitude 81.710687 W
 Screen Zone Elevation 160.9-130.9 ft msl
 Top of Casing Elevation 178.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1025
 Depth to water = 26.74 ft (8.15 m) below the TOC
 Water elevation = 152.06 ft (46.35 m) msl
 pH = 4.9 Alkalinity = 0 mg/L
 Specific Conductance = 23 umhos/cm
 Water Temperature = 19.7 degrees Celsius
 Water evacuated from the well prior to sampling = 62 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		33.40 umh/cm	Env. Eng.
PH		4.62 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		453 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		3300 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		66 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		820 ug/L	Env. Eng.
MANGANESE	LT	2 ug/L	Env. Eng.
SODIUM		1100 ug/L	Env. Eng.
LEAD		12 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE		2.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		18 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE		4 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.72+-0.78 pCi/L	Rad. Meas.
NONVOLATILE BETA		3.75+-0.98 pCi/L	Rad. Meas.
TOTAL RADIUM		1.04+-0.65 pCi/L	Rad. Meas.
TRITIUM		4.68+-0.28 pCi/mL	Rad. Meas.

WELL LEW 17

SRS Grid N 84602.8 Latitude 33.287295 N
 Coordinates E 45607.3 Longitude 81.711048 W
 Screen Zone Elevation 153.1-128.1 ft msl
 Top of Casing Elevation 177.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 1400
 Depth to water = 25.89 ft (7.89 m) below the TOC
 Water elevation = 151.91 ft (46.30 m) msl
 pH = 6.8 Alkalinity = 58 mg/L
 Specific Conductance = 260 umhos/cm
 Water Temperature = 19.8 degrees Celsius
 Water evacuated from the well prior to sampling = 62 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		155.0 umh/cm	Env. Eng.
PH		5.84 pH	Env. Eng.
ARSENIC		12 ug/L	Env. Eng.
CALCIUM		2800 ug/L	Env. Eng.
CALCIUM		2580 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		9600 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE		110 ug/L	Env. Eng.
IRON		30100 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		5060 ug/L	Env. Eng.
MANGANESE		20 ug/L	Env. Eng.
SODIUM		11100 ug/L	Env. Eng.
LEAD		9 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX		1 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		3500 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		98 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GRCS ALPHA		4.29+-2.38 pCi/L	Rad. Meas.
NONVOLATILE BETA		3.17+-1.40 pCi/L	Rad. Meas.
TOTAL RADIUM		0.67+-0.44 pCi/L	Rad. Meas.
TRITIUM		5.25+-0.29 pCi/mL	Rad. Meas.

WELL LFW 18

SRS Grid N 84577.3 Latitude 33.286997 N
 Coordinates E 45459.4 Longitude 81.711388 W
 Screen Zone Elevation 159.6-129.6 ft msl
 Top of Casing Elevation 175.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/24/89 Time 1325
 Depth to water = 23.12 ft (7.05 m) below the TOC
 Water elevation = 152.28 ft (46.42 m) msl
 pH = 6.8 Alkalinity = 61 mg/L
 Specific Conductance = 186 umhos/cm
 Water Temperature = 19.9 degrees Celsius
 Water evacuated from the well prior to sampling = 59 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		106.0 umh/cm	Env. Eng.
PH		5.81 pH	Env. Eng.
ARSENIC		10 ug/L	Env. Eng.
CALCIUM		2650 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		14200 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE		130 ug/L	Env. Eng.
IRON		26300 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		5000 ug/L	Env. Eng.
MANGANESE		46 ug/L	Env. Eng.
SODIUM		9470 ug/L	Env. Eng.
LEAD		8 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		3400 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		104 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.

CONTINUED

WELL LFW 18 COLLECTED ON 01/24/89 LABORATORY ANALYSES CONTINUED

GROSS ALPHA	1.53+-1.51 pCi/L	Rad. Meas.
NONVOLATILE BETA	3.74+-1.08 pCi/L	Rad. Meas.
TOTAL RADIUM	1.92+-0.63 pCi/L	Rad. Meas.
* TRITIUM	34.90+-0.79 pCi/mL	Rad. Meas.

WELL LFW 19

SRS Grid N 84817.2 Latitude 33.286998 N
 Coordinates E 45135.4 Longitude 81.712707 W
 Screen Zone Elevation 159.7-129.7 ft msl
 Top of Casing Elevation 176.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1145
 Depth to water = 23.50 ft (7.16 m) below the TOC
 Water elevation = 153.20 ft (46.70 m) msl
 pH = 5.2 Alkalinity = 1 mg/L
 Specific Conductance = 18 umhos/cm
 Water Temperature = 17.8 degrees Celsius
 Water evacuated from the well prior to sampling = 61 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		22.30 umh/cm	Env. Eng.
PH		4.76 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		648 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2900 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		68 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		553 ug/L	Env. Eng.
MANGANESE		5 ug/L	Env. Eng.
SODIUM		1400 ug/L	Env. Eng.
LEAD		14 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.

CONTINUED

WELL LFW 19 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES		20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
2,4-DICHLOROPHOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		2.76+-0.89 pCi/L	Rad. Meas.
NONVOLATILE BETA		3.84+-0.98 pCi/L	Rad. Meas.
TOTAL RADIUM		1.87+-0.74 pCi/L	Rad. Meas.
TRITIUM		16.90+-0.43 pCi/mL	Rad. Meas.

WELL LFW 20

SRS Grid N 85262.6 Latitude 33.288714 N
 Coordinates E 45582.9 Longitude 81.712395 W
 Screen Zone Elevation 164.5-134.5 ft msl
 Top of Casing Elevation 180.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 03/21/89 Time 1630
 Depth to water = 24.46 ft (7.46 m) below the TOC
 Water elevation = 156.44 ft (47.68 m) msl
 pH = 4.6 Alkalinity = 0 mg/L
 Specific Conductance = 14 umhos/cm
 Water Temperature = 19.2 degrees Celsius
 Water evacuated from the well prior to sampling = 75 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		24.30 umh/cm	Env. Eng.
SPECIFIC CONDUCTANCE		9.10 umh/cm	W. A.
SPECIFIC CONDUCTANCE		8.90 umh/cm	W. A.
SPECIFIC CONDUCTANCE		11.00 umh/cm	Env. Lab.
PH		5.36 pH	Env. Eng.
PH		5.00 pH	W. A.
PH		5.00 pH	Env. Lab.
SILVER	LT	10 ug/L	W. A.
ALUMINUM	LT	200 ug/L	W. A.
ARSENIC	LT	2 ug/L	Env. Eng.
ARSENIC	LT	10 ug/L	W. A.
ARSENIC	LT	5 ug/L	Env. Lab.
BARIUM	LT	200 ug/L	W. A.
BROMODICHLOROMETHANE	LT	1 ug/L	Env. Lab.
CALCIUM		607 ug/L	Env. Eng.
CALCIUM	LT	5000 ug/L	W. A.
CALCIUM		230 ug/L	Env. Lab.
TRICHLOROFLUOROMETHANE	LT	1 ug/L	Env. Lab.

CONTINUED

WELL LEW 20 COLLECTED ON 03/21/89 LABORATORY ANALYSES CONTINUED

CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	W. A.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Lab.
CADMIUM	LT	2 ug/L	Env. Eng.
CADMIUM	LT	5 ug/L	W. A.
CADMIUM	LT	10 ug/L	Env. Lab.
BROMOFORM	LT	1 ug/L	Env. Lab.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	W. A.
CHLOROFORM	LT	1 ug/L	Env. Lab.
METHYLENE CHLORIDE	LT	1 ug/L	Env. Lab.
BROMOMETHANE	LT	1 ug/L	Env. Lab.
CHLOROMETHANE	LT	1 ug/L	Env. Lab.
CHLORIDE		2200 ug/L	Env. Eng.
CHLORIDE	LT	5000 ug/L	W. A.
CHLORIDE		2000 ug/L	Env. Lab.
CHLOROBENZENE	LT	1 ug/L	Env. Lab.
COBALT	LT	50 ug/L	W. A.
CHROMIUM	LT	4 ug/L	Env. Eng.
CHROMIUM	LT	10 ug/L	W. A.
CHROMIUM	LT	50 ug/L	Env. Lab.
COPPER	LT	25 ug/L	W. A.
CYANIDE	LT	5 ug/L	Env. Eng.
CYANIDE	LT	10 ug/L	W. A.
CYANIDE	LT	20 ug/L	Env. Lab.
CHLOROETHENE (VINYL CHLORIDE)	LT	1 ug/L	Env. Lab.
CHLOROETHANE	LT	1 ug/L	Env. Lab.
BENZENE	LT	1 ug/L	Env. Lab.
DIBROMOCHLOROMETHANE	LT	1 ug/L	Env. Lab.
ENDRIN	LT	0.10 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	W. A.
ENDRIN	LT	0.05 ug/L	Env. Lab.
ETHYLBENZENE	LT	1 ug/L	Env. Lab.
FLUORIDE	LT	100 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	W. A.
FLUORIDE	LT	100 ug/L	Env. Lab.
IRON		29 ug/L	Env. Eng.
IRON	LT	100 ug/L	W. A.
IRON		60 ug/L	Env. Lab.
MERCURY	LT	0.20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	W. A.
MERCURY	LT	0.20 ug/L	Env. Lab.
POTASSIUM	LT	5000 ug/L	W. A.
LITHIUM	LT	100 ug/L	W. A.
LINDANE	LT	0.05 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	W. A.
LINDANE	LT	0.05 ug/L	Env. Lab.
TOLUENE	LT	1 ug/L	Env. Lab.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	W. A.
METHOXYCHLOR	LT	0.05 ug/L	Env. Lab.
MAGNESIUM		233 ug/L	Env. Eng.
MAGNESIUM	LT	5000 ug/L	W. A.
MAGNESIUM		280 ug/L	Env. Lab.

CONTINUED

WELL LFW 37 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

IRON		24 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		2160 ug/L	Env. Eng.
MANGANESE		2 ug/L	Env. Eng.
SODIUM		7660 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
SILVEX		0.14 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON		2200 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		152 ug/L	Env. Eng.
TOTAL PHOSPHATES		30 ug/L	Env. Eng.
* TRICHLOROETHYLENE		12.0 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE		6 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		4.79+-1.62 pCi/L	Rad. Meas.
NONVOLATILE BETA		7.98+-1.26 pCi/L	Rad. Meas.
TOTAL RADIUM		2.04+-0.98 pCi/L	Rad. Meas.
TRITIUM		3.89+-0.27 pCi/mL	Rad. Meas.

WELL LFW 38

SRS Grid N 83172.3 Latitude 33.284803 N
 Coordinates E 46018.5 Longitude 81.707185 W
 Screen Zone Elevation 150.3-129.3 ft msl
 Top of Casing Elevation 170.30 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1640
 Depth to water = 28.46 ft (8.67 m) below the TOC
 Water elevation = 141.84 ft (43.23 m) msl
 pH = 4.9 Alkalinity = 0 mg/L
 Specific Conductance = 37 umhos/cm
 Water Temperature = 18.7 degrees Celsius
 Water evacuated from the well prior to sampling = 33 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		37.70 umh/cm	Env. Eng.
PH		4.66 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		1230 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM		5 ug/L	Env. Eng.
CHLOROFORM		5 ug/L	Env. Eng.

CONTINUED

WELL LEW 38 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

CHLORIDE		6600 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUCRIDE	LT	100 ug/L	Env. Eng.
IRON		38 ug/L	Env. Eng.
MERCURY		0.49 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		851 ug/L	Env. Eng.
MANGANESE		6 ug/L	Env. Eng.
SODIUM		3820 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENCLS	LT	5 ug/L	Env. Eng.
PHENCLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		99 ug/L	Env. Eng.
TOTAL PHOSPHATES		30 ug/L	Env. Eng.
* TRICHLOROETHYLENE		19.0 ug/L	Env. Eng.
* TRICHLOROETHYLENE		19.0 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE		10 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE		11 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA	LT	3 pCi/L	Rad. Meas.
NONVOLATILE BETA		1.43+-0.93 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TRITIUM		4.71+-0.29 pCi/mL	Rad. Meas.

WELL LFW 10A COLLECTED ON 06/13/89 LABORATORY ANALYSES CONTINUED

CHROMIUM	LT	10 ug/L	W. A.
CHROMIUM	LT	8 ug/L	Enw. Lab.
COPPER	LT	25 ug/L	W. A.
FLUORIDE	LT	250 ug/L	MetaTrace
FLUORIDE	LT	100 ug/L	Gen. Eng.
FLUORIDE	LT	100 ug/L	W. A.
FLUORIDE	LT	100 ug/L	Enw. Lab.
IRON		17 ug/L	MetaTrace
IRON		12 ug/L	Gen. Eng.
IRON	LT	100 ug/L	W. A.
IRON	LT	30 ug/L	Enw. Lab.
MERCURY	LT	0.20 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	W. A.
MERCURY	LT	0.20 ug/L	Enw. Lab.
POTASSIUM	LT	5000 ug/L	MetaTrace
POTASSIUM	LT	500 ug/L	Gen. Eng.
POTASSIUM	LT	5000 ug/L	W. A.
POTASSIUM	LT	500 ug/L	Enw. Lab.
LITHIUM	LT	100 ug/L	W. A.
MAGNESIUM		678 ug/L	MetaTrace
MAGNESIUM		700 ug/L	Gen. Eng.
MAGNESIUM	LT	5000 ug/L	W. A.
MAGNESIUM		738 ug/L	Enw. Lab.
MANGANESE	LT	10 ug/L	MetaTrace
MANGANESE	LT	2 ug/L	Gen. Eng.
MANGANESE	LT	15 ug/L	W. A.
MANGANESE	LT	15 ug/L	Enw. Lab.
SODIUM		1061 ug/L	MetaTrace
SODIUM		1160 ug/L	Gen. Eng.
SODIUM	LT	5000 ug/L	W. A.
SODIUM		1300 ug/L	Enw. Lab.
NICKEL	LT	5 ug/L	MetaTrace
NICKEL	LT	4 ug/L	Gen. Eng.
NICKEL	LT	40 ug/L	W. A.
NITRATE AS NITROGEN		1700 ug/L	MetaTrace
NITRATE AS NITROGEN		400 ug/L	Gen. Eng.
NITRATE AS NITROGEN		360 ug/L	W. A.
NITRATE AS NITROGEN		400 ug/L	Enw. Lab.
LEAD	LT	2 ug/L	MetaTrace
LEAD		7 ug/L	Gen. Eng.
LEAD		6 ug/L	W. A.
LEAD	LT	5 ug/L	Enw. Lab.
PHENOLS	LT	5 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	Gen. Eng.
PHENOLS	LT	5 ug/L	Enw. Lab.
ANTIMONY	LT	60 ug/L	W. A.
SELENIUM	LT	3 ug/L	MetaTrace
SELENIUM	LT	2 ug/L	Gen. Eng.
SELENIUM		8 ug/L	W. A.
SELENIUM	LT	10 ug/L	Enw. Lab.
SILICA		3819 ug/L	MetaTrace
SILICA		8690 ug/L	Gen. Eng.
SILICA		2520 ug/L	W. A.

CONTINUED

WELL LFV 10A COLLECTED ON 06/13/89 LABORATORY ANALYSES CONTINUED

SILICA		7970 ug/L	Enw. Lab.
TIN	LT	100 ug/L	W. A.
SULFATE	LT	1000 ug/L	MetaTrace
SULFATE	LT	5000 ug/L	Gen. Eng.
SULFATE	LT	5000 ug/L	W. A.
SULFATE	LT	5000 ug/L	Enw. Lab.
TOTAL DISSOLVED SOLIDS		43000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		32000 ug/L	Gen. Eng.
TOTAL DISSOLVED SOLIDS		17000 ug/L	W. A.
TOTAL DISSOLVED SOLIDS		30000 ug/L	Enw. Lab.
THALLIUM	LT	10 ug/L	W. A.
TOTAL ORGANIC CARBON		1700 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	Gen. Eng.
TOTAL ORGANIC CARBON	LT	500 ug/L	W. A.
TOTAL ORGANIC CARBON		2000 ug/L	Enw. Lab.
TOTAL ORGANIC HALOGENS		27 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		120 ug/L	Gen. Eng.
TOTAL ORGANIC HALOGENS		89 ug/L	W. A.
TOTAL ORGANIC HALOGENS		64 ug/L	W. A.
TOTAL ORGANIC HALOGENS		130 ug/L	Enw. Lab.
TOTAL PHOSPHATES	LT	10000 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	50 ug/L	Gen. Eng.
TOTAL PHOSPHATES	LT	50 ug/L	W. A.
TOTAL PHOSPHATES	LT	50 ug/L	W. A.
TOTAL PHOSPHATES	LT	10 ug/L	Enw. Lab.
URANIUM	LT	1000 ug/L	W. A.
VANADIUM	LT	50 ug/L	W. A.
ZINC		26 ug/L	W. A.
GROSS ALPHA	LT	3 pCi/L	MetaTrace
GROSS ALPHA	LT	3 pCi/L	Gen. Eng.
GROSS ALPHA		10.00+-3.00 pCi/L	W. A.
GROSS ALPHA		5.20+-1.60 pCi/L	Enw. Lab.
NONVOLATILE BETA		7.80+-3.30 pCi/L	MetaTrace
NONVOLATILE BETA	LT	2 pCi/L	Gen. Eng.
NONVOLATILE BETA		9.00+-4.00 pCi/L	W. A.
NONVOLATILE BETA		8.60+-1.60 pCi/L	Enw. Lab.
TOTAL RADIUM		1.10+-0.30 pCi/L	MetaTrace
TOTAL RADIUM		1.59+-3.00 pCi/L	Gen. Eng.
TOTAL RADIUM		1.70+-0.70 pCi/L	W. A.
TOTAL RADIUM		1.40+-0.40 pCi/L	Enw. Lab.
TRITIUM		4.40+-0.50 pCi/mL	MetaTrace
TRITIUM		4.75+-0.35 pCi/mL	Gen. Eng.
TRITIUM		6.50+-0.60 pCi/mL	W. A.
TRITIUM		2.80+-0.20 pCi/mL	Enw. Lab.

WELL LFW 10A

SRS Grid N 84369.6 Latitude 33.287315 N
 Coordinates E 45935.6 Longitude 81.709731 W
 Screen Zone Elevation 158.5-128.5 ft msl
 Top of Casing Elevation 175.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 06/13/89 Time 1010
 Depth to water = 24.92 ft (7.60 m) below the TOC
 Water elevation = 150.58 ft (45.90 m) msl
 pH = 4.0 Alkalinity = 0 mg/L
 Specific Conductance = 20 umhos/cm
 Water Temperature = 20.4 degrees Celsius
 Water evacuated from the well prior to sampling = 57 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		18.40 umh/cm	MetaTrace
PH		5.16 pH	MetaTrace
SILVER	LT	2 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		3 ug/L	MetaTrace
CALCIUM		627 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2800 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		25 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		660 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1065 ug/L	MetaTrace
NICKEL	LT	5 ug/L	MetaTrace
LEAD	LT	2 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3695 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		16000 ug/L	MetaTrace
GROSS ALPHA		3.40+-2.30 pCi/L	MetaTrace
NONVOLATILE BETA		5.90+-2.80 pCi/L	MetaTrace
TOTAL RADIUM		1.40+-0.30 pCi/L	MetaTrace
TRITIUM		4.10+-0.50 pCi/mL	MetaTrace
TRITIUM		4.70+-0.50 pCi/mL	MetaTrace

WELL LFW 16

SRS Grid N 84748.9 Latitude 33.288018 N
 Coordinates E 45852.6 Longitude 81.710687 W
 Screen Zone Elevation 160.9-130.9 ft msl
 Top of Casing Elevation 178.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1215
 Depth to water = 25.13 ft (7.66 m) below the TOC
 Water elevation = 153.67 ft (46.84 m) msl
 pH = 4.8 Alkalinity = 0 mg/L
 Specific Conductance = 28 umhos/cm
 Water Temperature = 19.2 degrees Celsius
 Water evacuated from the well prior to sampling = 59 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		21.00 umh/cm	MetaTrace
PH		5.04 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		7 ug/L	MetaTrace
CALCIUM		1211 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2900 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		64 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		914 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1851 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		700 ug/L	MetaTrace
LEAD		13 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3569 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		17000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		16 ug/L	MetaTrace
TOTAL PHOSPHATES		39 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		5.50+-0.60 pCi/mL	MetaTrace

WELL LEW 17

SRS Grid N 84602.8 Latitude 33.287295 N
 Coordinates E 45607.3 Longitude 81.711048 W
 Screen Zone Elevation 158.1-128.1 ft msl
 Top of Casing Elevation 177.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1600
 Depth to water = 24.49 ft (7.46 m) below the TOC
 Water elevation = 153.31 ft (46.73 m) msl
 pH = 6.7 Alkalinity = 64 mg/L
 Specific Conductance = 390 umhos/cm
 Water Temperature = 19.1 degrees Celsius
 Water evacuated from the well prior to sampling = 66 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		216.3 umh/cm	MetaTrace
PH		6.29 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC		14 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		7526 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		30700 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		28740 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5800 ug/L	MetaTrace
MAGNESIUM		6875 ug/L	MetaTrace
MANGANESE		19 ug/L	MetaTrace
SODIUM		15420 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		200 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS		15 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		4015 ug/L	MetaTrace
SULFATE		1100 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		107000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		6000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		242 ug/L	MetaTrace
TOTAL PHOSPHATES		31 ug/L	MetaTrace
GROSS ALPHA	LT	3 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		11.00+-2.00 pCi/mL	MetaTrace

WELL LFW 18

SRS Grid N 84577.3 Latitude 33.286997 N
 Coordinates E 45459.4 Longitude 81.711388 W
 Screen Zone Elevation 159.6-129.6 ft msl
 Top of Casing Elevation 175.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1630
 Depth to water = 21.97 ft (6.70 m) below the TOC
 Water elevation = 153.43 ft (46.77 m) msl
 pH = 6.8 Alkalinity = 76 mg/L
 Specific Conductance = 280 umhos/cm
 Water Temperature = 18.8 degrees Celsius
 Water evacuated from the well prior to sampling = 62 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		132.6 umh/cm	MetaTrace
PH		6.38 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC		11 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		3150 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		16600 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE		300 ug/L	MetaTrace
IRON		31240 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		6309 ug/L	MetaTrace
MANGANESE		40 ug/L	MetaTrace
SODIUM		13310 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		900 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3643 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		73000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		4000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		189 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA		3.10+-2.10 pCi/L	MetaTrace
NONVOLATILE BETA		5.70+-3.60 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
* TRITIUM		33.00+-4.00 pCi/mL	MetaTrace

WELL LFW 19

SRS Grid N 84817.2 Latitude 33.286998 N
 Coordinates E 45135.4 Longitude 81.712707 W
 Screen Zone Elevation 159.7-129.7 ft msl
 Top of Casing Elevation 176.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1625
 Depth to water = 22.68 ft (6.91 m) below the TOC
 Water elevation = 154.02 ft (46.95 m) msl
 pH = 5.3 Alkalinity = 2 mg/L
 Specific Conductance = 21 umhos/cm
 Water Temperature = 17.8 degrees Celsius
 Water evacuated from the well prior to sampling = 63 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		16.50 umh/cm	MetaTrace
PH		5.29 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		14 ug/L	MetaTrace
CALCIUM		16190 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2200 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		101 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		821 ug/L	MetaTrace
MANGANESE		20 ug/L	MetaTrace
SCDIUM		1276 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		400 ug/L	MetaTrace
LEAD		14 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2751 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		3000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES		41 ug/L	MetaTrace
GROSS ALPHA		2.30+-1.80 pCi/L	MetaTrace
NONVOLATILE BETA		5.40+-3.20 pCi/L	MetaTrace
TOTAL RADIUM		1.60+-0.40 pCi/L	MetaTrace
TRITIUM		4.00+-0.40 pCi/mL	MetaTrace

WELL LFW 20

SRS Grid N 85262.6 Latitude 33.288714 N
 Coordinates E 45582.9 Longitude 81.712395 W
 Screen Zone Elevation 164.5-134.5 ft msl
 Top of Casing Elevation 180.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1235
 Depth to water = 23.69 ft (7.22 m) below the TOC
 Water elevation = 157.21 ft (47.92 m) msl
 pH = 5.2 Alkalinity = 1 mg/L
 Specific Conductance = 15 umhos/cm
 Water Temperature = 18.5 degrees Celsius
 Water evacuated from the well prior to sampling = 59 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		15.72 umh/cm	MetaTrace
PH		4.23 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		1520 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		1900 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		38 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		372 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1190 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		1200 ug/L	MetaTrace
LEAD		8 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2825 ug/L	MetaTrace
SULFATE		1200 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		27000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA		2.30+-1.70 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM		1.40+-0.30 pCi/L	MetaTrace
TOTAL RADIUM		1.20+-0.30 pCi/L	MetaTrace
TRITIUM		5.00+-0.50 pCi/mL	MetaTrace

WELL LFW 21 COLLECTED ON 06/13/89 LABORATORY ANALYSES CONTINUED

TOTAL PHOSPHATES	LT	50 ug/L	Gen. Eng.
TOTAL PHOSPHATES	LT	50 ug/L	W. A.
TOTAL PHOSPHATES		10 ug/L	Env. Lab.
URANIUM	LT	1000 ug/L	W. A.
VANADIUM	LT	50 ug/L	W. A.
ZINC		44 ug/L	W. A.
* GROSS ALPHA		35.00+-7.00 pCi/L	MetaTrace
GROSS ALPHA		13.80+-4.20 pCi/L	Gen. Eng.
NONVOLATILE BETA		13.00+-4.00 pCi/L	MetaTrace
NONVOLATILE BETA		7.68+-4.50 pCi/L	Gen. Eng.
TOTAL RADIUM		3.60+-0.60 pCi/L	MetaTrace
TOTAL RADIUM		4.22+-1.30 pCi/L	Gen. Eng.
* TRITIUM		130+- 20 pCi/mL	MetaTrace
* TRITIUM		153+-1.24 pCi/mL	Gen. Eng.
* TRITIUM		167+-1.38 pCi/mL	Gen. Eng.
* TRITIUM		168+-2.00 pCi/mL	W. A.
* TRITIUM		107+-1.00 pCi/mL	Env. Lab.

WELL LFW 21

SRS Grid N 84178.3 Latitude 33.287241 N
 Coordinates E 46149.4 Longitude 81.708796 W
 Screen Zone Elevation 159.5-129.5 ft msl
 Top of Casing Elevation 176.20 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 06/13/89 Time 915
 Depth to water = 26.37 ft (8.04 m) below the TOC
 Water elevation = 149.83 ft (45.67 m) msl
 pH = 5.4 Alkalinity = 28 mg/L
 Specific Conductance = 209 umhos/cm
 Water Temperature = 19.4 degrees Celsius
 Water evacuated from the well prior to sampling = 53 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		215.1 umh/cm	MetaTrace
PH		5.68 pH	MetaTrace
SILVER	LT	2 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		12 ug/L	MetaTrace
CALCIUM		9661 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		14800 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		564 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		11140 ug/L	MetaTrace
MANGANESE		69 ug/L	MetaTrace

CONTINUED

WELL LF21 COLLECTED ON 06/13/89 LABORATORY ANALYSES CONTINUED

SODIUM		11880 ug/L	MetaTrace
NICKEL	LT	5 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	100 ug/L	MetaTrace
LEAD	LT	2 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		6344 ug/L	MetaTrace
SULFATE		40200 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		145000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		5300 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		348 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10000 ug/L	MetaTrace
* GROSS ALPHA		30.00+-6.00 pCi/L	MetaTrace
NONVOLATILE BETA		8.90+-3.60 pCi/L	MetaTrace
TOTAL RADIUM		4.00+-0.60 pCi/L	MetaTrace
* TRITIUM		130+- 20 pCi/mL	MetaTrace

WELL LF22

SRS Grid N 84223.6 Latitude 33.287628 N
 Coordinates E 46325.2 Longitude 81.708421 W
 Screen Zone Elevation 152.1-122.1 ft msl
 Top of Casing Elevation 174.20 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1835
 Depth to water = 24.48 ft (7.46 m) below the TOC
 Water elevation = 149.72 ft (45.64 m) msl
 pH = 4.3 Alkalinity = 0 mg/L
 Specific Conductance = 20 umhos/cm
 Water Temperature = 18.5 degrees Celsius
 Water evacuated from the well prior to sampling = 72 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		21.58 umh/cm	MetaTrace
PH		4.54 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		728 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2700 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		147 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		474 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		2059 ug/L	MetaTrace

CONTINUED

WELL LEW 21

SRS Grid N 84178.3 Latitude 33.287241 N
 Coordinates E 46149.4 Longitude 81.708796 W
 Screen Zone Elevation 159.5-129.5 ft msl
 Top of Casing Elevation 176.20 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 06/13/89 Time 915
 Depth to water = 26.37 ft (8.04 m) below the TOC
 Water elevation = 149.83 ft (45.67 m) msl
 pH = 5.4 Alkalinity = 28 mg/L
 Specific Conductance = 209 umhos/cm
 Water Temperature = 19.4 degrees Celsius
 Water evacuated from the well prior to sampling = 53 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		183.2 umh/cm	MetaTrace
SPECIFIC CONDUCTANCE		212.0 umh/cm	Gen. Eng.
SPECIFIC CONDUCTANCE		220.0 umh/cm	W. A.
SPECIFIC CONDUCTANCE		218.0 umh/cm	W. A.
SPECIFIC CONDUCTANCE		190.0 umh/cm	Env. Lab.
PH		5.61 pH	MetaTrace
PH		5.50 pH	Gen. Eng.
SILVER	LT	2 ug/L	MetaTrace
SILVER	LT	2 ug/L	Gen. Eng.
SILVER	LT	10 ug/L	W. A.
ALUMINUM	LT	200 ug/L	W. A.
ARSENIC	LT	3 ug/L	MetaTrace
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	10 ug/L	W. A.
BARIUM		12 ug/L	MetaTrace
BARIUM		12 ug/L	Gen. Eng.
BARIUM	LT	200 ug/L	W. A.
BERYLLIUM	LT	5 ug/L	W. A.
CALCIUM		9501 ug/L	MetaTrace
CALCIUM		9300 ug/L	Gen. Eng.
CALCIUM		9810 ug/L	W. A.
CALCIUM		10200 ug/L	Env. Lab.
CADMIUM	LT	4 ug/L	MetaTrace
CADMIUM	LT	2 ug/L	Gen. Eng.
CADMIUM	LT	5 ug/L	W. A.
CHLORIDE		14800 ug/L	MetaTrace
CHLORIDE		16000 ug/L	Gen. Eng.
COBALT	LT	50 ug/L	W. A.
CHROMIUM	LT	10 ug/L	MetaTrace
CHROMIUM	LT	4 ug/L	Gen. Eng.
CHROMIUM	LT	10 ug/L	W. A.
COPPER	LT	25 ug/L	W. A.
FLUORIDE	LT	250 ug/L	MetaTrace
FLUORIDE	LT	100 ug/L	Gen. Eng.
IRON		524 ug/L	MetaTrace
IRON		497 ug/L	Gen. Eng.
IRON		513 ug/L	W. A.

CONTINUED

WELL LFW 21 COLLECTED ON 06/13/89 LABORATORY ANALYSES CONTINUED

MERCURY	LT	0.20 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	W. A.
POTASSIUM	LT	5000 ug/L	MetaTrace
POTASSIUM	LT	500 ug/L	Gen. Eng.
POTASSIUM	LT	5000 ug/L	W. A.
POTASSIUM	LT	500 ug/L	Env. Lab.
LITHIUM	LT	100 ug/L	W. A.
MAGNESIUM		10910 ug/L	MetaTrace
MAGNESIUM		10490 ug/L	Gen. Eng.
MAGNESIUM		11200 ug/L	W. A.
MAGNESIUM		11800 ug/L	Env. Lab.
MANGANESE		69 ug/L	MetaTrace
MANGANESE		62 ug/L	Gen. Eng.
MANGANESE		69 ug/L	W. A.
SODIUM		11650 ug/L	MetaTrace
SODIUM		11600 ug/L	Gen. Eng.
SODIUM		11800 ug/L	W. A.
NICKEL	LT	5 ug/L	MetaTrace
NICKEL	LT	4 ug/L	Gen. Eng.
NICKEL	LT	40 ug/L	W. A.
NICKEL	LT	50 ug/L	Env. Lab.
NITRATE AS NITROGEN	LT	100 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	50 ug/L	Gen. Eng.
LEAD	LT	2 ug/L	MetaTrace
LEAD	LT	6 ug/L	Gen. Eng.
LEAD	LT	5 ug/L	W. A.
PHENOLS	LT	5 ug/L	MetaTrace
PHENOLS		10 ug/L	Gen. Eng.
ANTIMONY	LT	60 ug/L	W. A.
SELENIUM	LT	3 ug/L	MetaTrace
SELENIUM	LT	2 ug/L	Gen. Eng.
SELENIUM	LT	5 ug/L	W. A.
SILICA		6260 ug/L	MetaTrace
SILICA		13900 ug/L	Gen. Eng.
SILICA		4320 ug/L	W. A.
SILICA		13400 ug/L	Env. Lab.
TIN	LT	100 ug/L	W. A.
SULFATE		39600 ug/L	MetaTrace
SULFATE		34000 ug/L	Gen. Eng.
TOTAL DISSOLVED SOLIDS		150000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		140000 ug/L	Gen. Eng.
TOTAL DISSOLVED SOLIDS		136000 ug/L	W. A.
TOTAL DISSOLVED SOLIDS		160000 ug/L	Env. Lab.
THALLIUM	LT	10 ug/L	W. A.
TOTAL ORGANIC CARBON		5500 ug/L	MetaTrace
TOTAL ORGANIC CARBON		24000 ug/L	Gen. Eng.
TOTAL ORGANIC CARBON		5500 ug/L	W. A.
TOTAL ORGANIC CARBON		14000 ug/L	Env. Lab.
TOTAL ORGANIC HALOGENS		210 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		954 ug/L	Gen. Eng.
TOTAL ORGANIC HALOGENS		500 ug/L	W. A.
TOTAL ORGANIC HALOGENS		710 ug/L	Env. Lab.
TOTAL PHOSPHATES		23900 ug/L	MetaTrace

CONTINUED

WELL LFW 39

SRS Grid N 83213.1 Latitude 33.285220 N
 Coordinates E 46218.5 Longitude 81.706738 W
 Screen Zone Elevation 151.4-130.4 ft msl
 Top of Casing Elevation 171.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1605
 Depth to water = 29.47 ft (8.98 m) below the TOC
 Water elevation = 141.93 ft (43.26 m) msl
 pH = 5.2 Alkalinity = 0 mg/L
 Specific Conductance = 14 umhos/cm
 Water Temperature = 18.5 degrees Celsius
 Water evacuated from the well prior to sampling = 40 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		16.70 umh/cm	Env. Eng.
PH		4.88 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		463 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2300 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON		103 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		308 ug/L	Env. Eng.
MANGANESE	LT	2 ug/L	Env. Eng.
SODIUM		1400 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE		344 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		97 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		109 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE		2.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA	LT	3 pCi/L	Rad. Meas.
NONVOLATILE BETA	LT	2 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TRITIUM		3.17+-0.27 pCi/mL	Rad. Meas.

WELL LFW 40

SRS Grid N 83248.8 Latitude 33.285587 N
 Coordinates E 46395.1 Longitude 81.706343 W
 Screen Zone Elevation 151.0-130.0 ft msl
 Top of Casing Elevation 171.00 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1530
 Depth to water = 29.62 ft (9.03 m) below the TOC
 Water elevation = 141.33 ft (43.09 m) msl
 pH = 5.3 Alkalinity = 1 mg/L
 Specific Conductance = 16 umhos/cm
 Water Temperature = 18.4 degrees Celsius
 Water evacuated from the well prior to sampling = 33 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		17.40 umh/cm	Env. Eng.
SPECIFIC CONDUCTANCE		17.80 umh/cm	Env. Eng.
PH		5.04 pH	Env. Eng.
PH		5.03 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		1640 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2800 ug/L	Env. Eng.
CHLORIDE		2600 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON	LT	20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		267 ug/L	Env. Eng.
MANGANESE	LT	2 ug/L	Env. Eng.
SODIUM		1960 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE		1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		21 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS		19 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE		5 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.

CONTINUED

WELL LFW 40 COLLECTED ON 05/08/89 LABORATORY ANALYSES CONTINUED

SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2677 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		3000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		59 ug/L	MetaTrace
TOTAL PHOSPHATES		76 ug/L	MetaTrace
GROSS ALPHA		2.70+-1.90 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		9.90+-1.00 pCi/mL	MetaTrace

WELL LFW 41

SRS Grid N 83304.9 Latitude 33.286089 N
 Coordinates E 46626.9 Longitude 81.705841 W
 Screen Zone Elevation 150.5-129.5 ft msl
 Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1305
 Depth to water = 26.49 ft (8.07 m) below the TOC
 Water elevation = 144.01 ft (43.89 m) msl
 pH = 5.0 Alkalinity = 0 mg/L
 Specific Conductance = 28 umhos/cm
 Water Temperature = 18.1 degrees Celsius
 Water evacuated from the well prior to sampling = 47 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		21.00 umh/cm	MetaTrace
PH		5.03 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		10640 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2300 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		24 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		695 ug/L	MetaTrace
MANGANESE		14 ug/L	MetaTrace
SODIUM		1648 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		1300 ug/L	MetaTrace
LEAD		4 ug/L	MetaTrace
PHENOLS		7 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace

CONTINUED

WELL LFW 41 COLLECTED ON 05/08/89 LABORATORY ANALYSES CONTINUED

SILICA		3271 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		14000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		2000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		19 ug/L	MetaTrace
TOTAL PHOSPHATES		56 ug/L	MetaTrace
GROSS ALPHA		2.30+-1.80 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		5.50+-0.60 pCi/mL	MetaTrace

WELL LFW 42

SRS Grid N 83776.2 Latitude 33.236978 N
 Coordinates E 46532.9 Longitude 81.707005 W
 Screen Zone Elevation 150.1-129.1 ft msl
 Top of Casing Elevation 170.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1240
 Depth to water = 23.85 ft (7.27 m) below the TOC
 Water elevation = 146.25 ft (44.58 m) msl
 pH = 5.1 Alkalinity = 1 mg/L
 Specific Conductance = 18 umhos/cm
 Water Temperature = 17.8 degrees Celsius
 Water evacuated from the well prior to sampling = 53 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		17.00 umh/cm	MetaTrace
PH		5.16 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		4 ug/L	MetaTrace
CALCIUM		369 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2200 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		24 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		444 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1172 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		500 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS		8 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2751 ug/L	MetaTrace

CONTINUED

WELL LFV 22 COLLECTED ON 05/07/89 LABORATORY ANALYSES CONTINUED

NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		1800 ug/L	MetaTrace
LEAD		8 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3420 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		36000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		38 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA		5.70+-3.10 pCi/L	MetaTrace
TOTAL RADIUM		1.80+-0.30 pCi/L	MetaTrace
TRITIUM		4.20+-0.50 pCi/mL	MetaTrace

WELL LFV.23

SRS Grid N 84251.3 Latitude 33.287903 N
 Coordinates E 46456.1 Longitude 81.708131 W
 Screen Zone Elevation 154.8-124.8 ft msl
 Top of Casing Elevation 171.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1810
 Depth to water = 21.57 ft (6.57 m) below the TOC
 Water elevation = 150.23 ft (45.79 m) msl
 pH = 4.4 Alkalinity = 0 mg/L
 Specific Conductance = 21 umhos/cm
 Water Temperature = 18.5 degrees Celsius
 Water evacuated from the well prior to sampling = 66 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		22.30 umh/cm	MetaTrace
PH		4.27 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		2805 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2600 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		30 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		482 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		2082 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace

CONTINUED

WELL LFW 23 COLLECTED ON 05/07/89 LABORATORY ANALYSES CONTINUED

NITRATE AS NITROGEN		1700 ug/L	MetaTrace
LEAD		9 ug/L	MetaTrace
PHENOLS		14 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3271 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		61000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		26 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA		2.30+-1.70 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM		1.10+-0.20 pCi/L	MetaTrace
TRITIUM		4.50+-0.50 pCi/mL	MetaTrace

WELL LFW 24

SRS Grid N 84544.2 Latitude 33.288656 N
 Coordinates E 46520.8 Longitude 81.708530 W
 Screen Zone Elevation 154.2-124.2 ft msl
 Top of Casing Elevation 171.30 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1745
 Depth to water = 18.92 ft (5.77 m) below the TOC
 Water elevation = 152.38 ft (46.45 m) msl
 pH = 4.3 Alkalinity = 0 mg/L
 Specific Conductance = 17 umhos/cm
 Water Temperature = 18.0 degrees Celsius
 Water evacuated from the well prior to sampling = 73 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		23.89 umh/cm	MetaTrace
PH		3.95 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		10 ug/L	MetaTrace
BARIUM		4 ug/L	MetaTrace
CALCIUM		396 ug/L	MetaTrace
CALCIUM		284 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		1900 ug/L	MetaTrace
CHLORIDE		1800 ug/L	MetaTrace
COBALT	LT	10 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
COPPER	LT	10 ug/L	MetaTrace

CONTINUED

WELL LFW 40 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

GROSS ALPHA	LT	3 pCi/L	Rad. Meas.
NONVOLATILE BETA		0.91+-0.89 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TRITIUM		3.93+-0.28 pCi/mL	Rad. Meas.

WELL LFW 41

SRS Grid N 83304.9 Latitude 33.286089 N
 Coordinates E 46626.9 Longitude 81.705341 W
 Screen Zone Elevation 150.5-129.5 ft msl
 Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1505
 Depth to water = 28.33 ft (8.64 m) below the TOC
 Water elevation = 142.17 ft (43.33 m) msl
 pH = 5.2 Alkalinity = 0 mg/L
 Specific Conductance = 18 umhos/cm
 Water Temperature = 18.7 degrees Celsius
 Water evacuated from the well prior to sampling = 42 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		20.20 umh/cm	Env. Eng.
PH		4.93 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		157 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2800 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON	LT	20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		342 ug/L	Env. Eng.
MANGANESE	LT	2 ug/L	Env. Eng.
SODIUM		1880 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
PHENOLS	LT	5 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.

CONTINUED

WELL LEW 41 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		1.81+-1.12 pCi/L	Rad. Meas.
GROSS ALPHA	LT	3 pCi/L	Rad. Meas.
NONVOLATILE BETA		2.11+-0.97 pCi/L	Rad. Meas.
NONVOLATILE BETA		2.40+-0.98 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TOTAL RADIUM	LT	1 pCi/L	Rad. Meas.
TRITIUM		4.00+-0.28 pCi/mL	Rad. Meas.
TRITIUM		4.32+-0.28 pCi/mL	Rad. Meas.

WELL LEW 42

SRS Grid N 83776.2 Latitude 33.286978 N
 Coordinates E 46532.9 Longitude 81.707005 W
 Screen Zone Elevation 150.1-129.1 ft msl
 Top of Casing Elevation 170.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 01/21/89 Time 1435
 Depth to water = 25.56 ft (7.79 m) below the TOC
 Water elevation = 144.54 ft (44.06 m) msl
 pH = 5.2 Alkalinity = 0 mg/L
 Specific Conductance = 15 umhos/cm
 Water Temperature = 19.1 degrees Celsius
 Water evacuated from the well prior to sampling = 40 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		18.60 umh/cm	Env. Eng.
PH		4.98 pH	Env. Eng.
ARSENIC	LT	2 ug/L	Env. Eng.
CALCIUM		1670 ug/L	Env. Eng.
CARBON TETRACHLORIDE	LT	1.00 ug/L	Env. Eng.
CADMIUM	LT	2 ug/L	Env. Eng.
CHLOROFORM	LT	1 ug/L	Env. Eng.
CHLORIDE		2300 ug/L	Env. Eng.
CHLORIDE		2300 ug/L	Env. Eng.
CHROMIUM	LT	4 ug/L	Env. Eng.
CYANIDE	LT	5 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
ENDRIN	LT	0.10 ug/L	Env. Eng.
FLUORIDE	LT	100 ug/L	Env. Eng.
IRON	LT	20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
MERCURY	LT	0.20 ug/L	Env. Eng.
LINDANE	LT	0.05 ug/L	Env. Eng.

CONTINUED

WELL LFW 42 COLLECTED ON 01/21/89 LABORATORY ANALYSES CONTINUED

LINDANE	LT	0.05 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
METHOXYCHLOR	LT	0.50 ug/L	Env. Eng.
MAGNESIUM		429 ug/L	Env. Eng.
MANGANESE		2 ug/L	Env. Eng.
SODIUM		1200 ug/L	Env. Eng.
LEAD	LT	6 ug/L	Env. Eng.
SILVEX	LT	0.09 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
SULFATE	LT	5000 ug/L	Env. Eng.
TETRACHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Env. Eng.
TOTAL ORGANIC NITROGEN	LT	5000 ug/L	Env. Eng.
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Env. Eng.
TOTAL PHOSPHATES	LT	20 ug/L	Env. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
TOXAPHENE	LT	1 ug/L	Env. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Env. Eng.
2,4-DICHLOROPHENOXYACETIC ACID	LT	0.30 ug/L	Env. Eng.
GROSS ALPHA		2.75+-1.08 pCi/L	Rad. Meas.
NONVOLATILE BETA		3.52+-1.02 pCi/L	Rad. Meas.
TOTAL RADIUM		1.53+-0.85 pCi/L	Rad. Meas.
TRITIUM		4.39+-0.28 pCi/mL	Rad. Meas.

WELL LFW 6

SRS Grid N 84537.8 Latitude 33.286553 N
 Coordinates E 45241.2 Longitude 81.711886 W
 Screen Zone Elevation 160.0-140.0 ft msl
 Top of Casing Elevation 171.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/09/89 Time 1620
 Depth to water = 19.32 ft (5.89 m) below the TOC
 Water elevation = 152.38 ft (46.45 m) msl
 pH = 5.9 Alkalinity = 124 mg/L
 Specific Conductance = 322 umhos/cm
 Water Temperature = 18.3 degrees Celsius
 Water evacuated from the well prior to sampling = 32 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		179.2 umh/cm	MetaTrace
PH		6.08 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC		3 ug/L	MetaTrace
BARIUM		8 ug/L	MetaTrace
CALCIUM		3731 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		21400 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		3916 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		9607 ug/L	MetaTrace
MANGANESE		21 ug/L	MetaTrace
SODIUM		14690 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	100 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS		17 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		4758 ug/L	MetaTrace
SULFATE		1400 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		97000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		7000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		153 ug/L	MetaTrace
TOTAL PHOSPHATES		43 ug/L	MetaTrace
GROSS ALPHA		3.20+-2.20 pCi/L	MetaTrace
NONVOLATILE BETA		11.00+-4.00 pCi/L	MetaTrace
TOTAL RADIUM		1.80+-0.40 pCi/L	MetaTrace
TRITIUM		12.00+-2.00 pCi/mL	MetaTrace

WELL LEW 6

SRS Grid N 84537.8 Latitude 33.286553 N
 Coordinates E 45241.2 Longitude 81.711886 W
 Screen Zone Elevation 160.0-140.0 ft msl
 Top of Casing Elevation 171.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/17/89 Time 1630
 Depth to water = 19.38 ft (5.91 m) below the TOC
 Water elevation = 152.32 ft (46.43 m) msl
 pH = 5.8 Alkalinity = 122 mg/L
 Specific Conductance = 313 umhos/cm
 Water Temperature = 19.0 degrees Celsius
 Water evacuated from the well prior to sampling = 40 gal

LABORATORY ANALYSES

BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLOROETHENE	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE		3 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE		200 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace

WELL LFW 7

SRS Grid N 84310.3 Latitude 33.286177 N
 Coordinates E 45318.9 Longitude 81.711239 W
 Screen Zone Elevation 159.3-139.3 ft msl
 Top of Casing Elevation 171.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1505
 Depth to water = 20.43 ft (6.23 m) below the TOC
 Water elevation = 150.97 ft (46.02 m) msl
 pH = 6.8 Alkalinity = 144 mg/L
 Specific Conductance = 480 umhos/cm
 Water Temperature = 17.9 degrees Celsius
 Water evacuated from the well prior to sampling = 30 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		287.7 umh/cm	MetaTrace
PH		6.63 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC		22 ug/L	MetaTrace
BARIUM		19 ug/L	MetaTrace
CALCIUM		11970 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		28400 ug/L	MetaTrace
CHLORIDE		28400 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		36200 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		13410 ug/L	MetaTrace
MANGANESE		11 ug/L	MetaTrace
SODIUM		31390 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	100 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	100 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS		17 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3271 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		167000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		9000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		280 ug/L	MetaTrace
TOTAL PHOSPHATES		88 ug/L	MetaTrace
GROSS ALPHA		5.80+-2.70 pCi/L	MetaTrace
NONVOLATILE BETA		10.00+-4.00 pCi/L	MetaTrace
TOTAL RADIUM		2.80+-0.60 pCi/L	MetaTrace
* TRITIUM		24.00+-3.00 pCi/mL	MetaTrace

WELL LFW 7

SRS Grid N 84310.3 Latitude 33.286177 N
 Coordinates E 45318.9 Longitude 81.711239 W
 Screen Zone Elevation 159.3-139.3 ft msl
 Top of Casing Elevation 171.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/19/89 Time 1205
 Depth to water = 20.48 ft (6.24 m) below the TOC
 Water elevation = 150.92 ft (46.00 m) msl
 pH = 6.1 Alkalinity = 159 mg/L
 Specific Conductance = 334 umhos/cm
 Water Temperature = 19.0 degrees Celsius
 Water evacuated from the well prior to sampling = 30 gal

LABORATORY ANALYSES

BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		19 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLOROETHENE	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE		3 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
ETHYLBENZENE		15 ug/L	MetaTrace
TOLUENE		6 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE		260 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE		39 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace

WELL LFW 8

SRS Grid N 84032.6 Latitude 33.285720 N
 Coordinates E 45415.3 Longitude 81.710445 W
 Screen Zone Elevation 153.8-133.8 ft msl
 Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/09/89 Time 1645
 Depth to water = 21.39 ft (6.52 m) below the TOC
 Water elevation = 149.11 ft (45.45 m) msl
 pH = 6.2 Alkalinity = 191 mg/L
 Specific Conductance = 440 umhos/cm
 Water Temperature = 18.1 degrees Celsius
 Water evacuated from the well prior to sampling = 27 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		240.8 umh/cm	MetaTrace
PH		6.44 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC		12 ug/L	MetaTrace
BARIUM	LT	3 ug/L	MetaTrace
CALCIUM		8906 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		21900 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE		260 ug/L	MetaTrace
IRON		62660 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		13480 ug/L	MetaTrace
MANGANESE		44 ug/L	MetaTrace
SODIUM		21720 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	100 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS		8 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		4164 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		127000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		7000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		247 ug/L	MetaTrace
TOTAL PHOSPHATES		43 ug/L	MetaTrace
GROSS ALPHA		6.20+-2.80 pCi/L	MetaTrace
NONVOLATILE BETA		9.40+-3.80 pCi/L	MetaTrace
TOTAL RADIUM		1.50+-0.40 pCi/L	MetaTrace
* TRITIUM		22.00+-3.00 pCi/mL	MetaTrace

WELL LEW 8

SRS Grid N 84032.6 Latitude 33.285720 N
 Coordinates E 45415.3 Longitude 81.710445 W
 Screen Zone Elevation 158.8-133.8 ft msl
 Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/20/89 Time 935
 Depth to water = 21.48 ft (6.55 m) below the TOC
 Water elevation = 149.02 ft (45.42 m) msl
 pH = 6.1 Alkalinity = 174 mg/L
 Specific Conductance = 393 umhos/cm
 Water Temperature = 19.7 degrees Celsius
 Water evacuated from the well prior to sampling = 27 gal

LABORATORY ANALYSES

BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		7 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLOROETHENE	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
ETHYLBENZENE		7 ug/L	MetaTrace
TOLUENE		5 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE		210 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace

WELL LFW 10A

SRS Grid N 84369.6 Latitude 33.287315 N
 Coordinates E 45935.6 Longitude 81.709731 W
 Screen Zone Elevation 158.5-128.5 ft msl
 Top of Casing Elevation 175.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 06/13/89 Time 1010
 Depth to water = 24.92 ft (7.60 m) below the TOC
 Water elevation = 150.58 ft (45.90 m) msl
 pH = 4.0 Alkalinity = 0 mg/L
 Specific Conductance = 20 umhos/cm
 Water Temperature = 20.4 degrees Celsius
 Water evacuated from the well prior to sampling = 57 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		20.50 umh/cm	MetaTrace
SPECIFIC CONDUCTANCE		20.00 umh/cm	Gen. Eng.
SPECIFIC CONDUCTANCE		19.00 umh/cm	W. A.
SPECIFIC CONDUCTANCE		19.00 umh/cm	Env. Lab.
PH		5.16 pH	MetaTrace
PH		5.08 pH	Gen. Eng.
PH		5.00 pH	W. A.
PH		5.40 pH	Env. Lab.
SILVER	LT	2 ug/L	MetaTrace
SILVER	LT	2 ug/L	Gen. Eng.
SILVER	LT	10 ug/L	W. A.
SILVER	LT	5 ug/L	Env. Lab.
ALUMINUM	LT	200 ug/L	W. A.
ARSENIC		6 ug/L	MetaTrace
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	10 ug/L	W. A.
ARSENIC	LT	5 ug/L	Env. Lab.
BARIUM		4 ug/L	MetaTrace
BARIUM		5 ug/L	Gen. Eng.
BARIUM	LT	200 ug/L	W. A.
BARIUM	LT	5 ug/L	Env. Lab.
BERYLLIUM	LT	5 ug/L	W. A.
CALCIUM		559 ug/L	MetaTrace
CALCIUM		520 ug/L	Gen. Eng.
CALCIUM	LT	5000 ug/L	W. A.
CALCIUM		532 ug/L	Env. Lab.
CADMIUM	LT	4 ug/L	MetaTrace
CADMIUM	LT	2 ug/L	Gen. Eng.
CADMIUM	LT	5 ug/L	W. A.
CADMIUM	LT	5 ug/L	Env. Lab.
CHLORIDE		2300 ug/L	MetaTrace
CHLORIDE		2800 ug/L	Gen. Eng.
CHLORIDE	LT	5000 ug/L	W. A.
CHLORIDE		4000 ug/L	Env. Lab.
COBALT	LT	50 ug/L	W. A.
CHROMIUM	LT	10 ug/L	MetaTrace
CHROMIUM	LT	4 ug/L	Gen. Eng.

CONTINUED

WELL LF24 COLLECTED ON 05/07/89 LABORATORY ANALYSES CONTINUED

FLUORIDE	LT	250 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		24 ug/L	MetaTrace
IRON		21 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		412 ug/L	MetaTrace
MAGNESIUM		401 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1621 ug/L	MetaTrace
SODIUM		1370 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		2000 ug/L	MetaTrace
NITRATE AS NITROGEN		2000 ug/L	MetaTrace
LEAD		7 ug/L	MetaTrace
LEAD		7 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
ANTIMONY	LT	60 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2974 ug/L	MetaTrace
SILICA		2974 ug/L	MetaTrace
SULFATE		2500 ug/L	MetaTrace
SULFATE		2500 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		30000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		2100 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
VANADIUM	LT	10 ug/L	MetaTrace
ZINC		23 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA		5.60+-3.10 pCi/L	MetaTrace
TOTAL RADIUM		2.30+-0.40 pCi/L	MetaTrace
TRITIUM		3.50+-0.40 pCi/mL	MetaTrace

WELL LFW 25

SRS Grid N 84967.2 Latitude 33.289436 N
 Coordinates E 46425.7 Longitude 81.709602 W
 Screen Zone Elevation 152.8-122.8 ft msl
 Top of Casing Elevation 174.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1900
 Depth to water = 20.03 ft (6.11 m) below the TOC
 Water elevation = 154.67 ft (47.14 m) msl
 pH = 4.2 Alkalinity = 0 mg/L
 Specific Conductance = 18 umhos/cm
 Water Temperature = 18.3 degrees Celsius
 Water evacuated from the well prior to sampling = 83 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		19.90 umh/cm	MetaTrace
PH		4.23 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		8 ug/L	MetaTrace
CALCIUM		1784 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2300 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		29 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		563 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1322 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		2400 ug/L	MetaTrace
LEAD		7 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2974 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		34000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA		4.00+-2.00 pCi/L	MetaTrace
NONVOLATILE BETA		12.00+-4.00 pCi/L	MetaTrace
TOTAL RADIUM		4.00+-0.50 pCi/L	MetaTrace
TRITIUM		4.00+-0.40 pCi/mL	MetaTrace

WELL LEW 26

SRS Grid N 85654.6 Latitude 33.289663 N
 Coordinates E 45633.8 Longitude 81.713023 W
 Screen Zone Elevation 164.9-143.9 ft msl
 Top of Casing Elevation 186.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1210
 Depth to water = 27.69 ft (8.44 m) below the TOC
 Water elevation = 159.21 ft (48.53 m) msl
 pH = 5.1 Alkalinity = 3 mg/L
 Specific Conductance = 15 umhos/cm
 Water Temperature = 18.5 degrees Celsius
 Water evacuated from the well prior to sampling = 48 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		16.50 umh/cm	MetaTrace
PH		4.18 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		4 ug/L	MetaTrace
CALCIUM		714 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		1900 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		15 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		312 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1047 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		1100 ug/L	MetaTrace
LEAD		4 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2379 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		28000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA		2.20+-1.70 pCi/L	MetaTrace
NONVOLATILE BETA		4.70+-3.10 pCi/L	MetaTrace
TOTAL RADIUM		1.00+-0.20 pCi/L	MetaTrace
TRITIUM		4.30+-0.40 pCi/mL	MetaTrace

WELL LFW 27

SRS Grid N 85839.1 Latitude 33.290010 N
 Coordinates E 45596.1 Longitude 81.713481 W
 Screen Zone Elevation 163.6-142.6 ft msl
 Top of Casing Elevation 189.60 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1130
 Depth to water = 29.80 ft (9.08 m) below the TOC
 • Water elevation = 159.80 ft (48.71 m) msl
 pH = 5.0 Alkalinity = 1 mg/L
 Specific Conductance = 18 umhos/cm
 Water Temperature = 17.4 degrees Celsius
 Water evacuated from the well prior to sampling = 45 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		15.60 umh/cm	MetaTrace
PH		4.43 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		6 ug/L	MetaTrace
CALCIUM		1395 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		1900 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON	LT	10 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		386 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1343 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		1300 ug/L	MetaTrace
LEAD		9 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3420 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		81000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		7 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		4.40+-0.50 pCi/mL	MetaTrace

WELL LFW 30

SRS Grid N 86318.4 Latitude 33.290375 N
 Coordinates E 45170.9 Longitude 81.715532 W
 Screen Zone Elevation 165.8-144.8 ft msl
 Top of Casing Elevation 210.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1440
 Depth to water = 48.67 ft (14.83 m) below the TOC
 Water elevation = 162.13 ft (49.42 m) msl
 pH = 5.9 Alkalinity = 6 mg/L
 Specific Conductance = 29 umhos/cm
 Water Temperature = 17.8 degrees Celsius
 Water evacuated from the well prior to sampling = 45 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		28.10 umh/cm	MetaTrace
PH		5.84 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		2635 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		920 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		17 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		280 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		748 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		1100 ug/L	MetaTrace
LEAD		4 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2825 ug/L	MetaTrace
SULFATE		1300 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		53000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA		2.40+-1.80 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		2.60+-0.30 pCi/mL	MetaTrace

WELL LFW 31

SRS Grid N 86262.2 Latitude 33.289758 N
 Coordinates E 44869.0 Longitude 81.716217 W
 Screen Zone Elevation 165.7-144.7 ft msl
 Top of Casing Elevation 229.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1415
 Depth to water = 68.22 ft (20.79 m) below the TOC
 Water elevation = 161.48 ft (49.22 m) msl
 pH = 5.2 Alkalinity = 1 mg/L
 Specific Conductance = 16 umhos/cm
 Water Temperature = 17.8 degrees Celsius
 Water evacuated from the well prior to sampling = 44 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		14.90 umh/cm	MetaTrace
PH		5.21 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		990 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		1500 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		29 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		398 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		985 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		1300 ug/L	MetaTrace
LEAD		7 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3271 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		55000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES		28 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		1.40+-0.20 pCi/mL	MetaTrace
TRITIUM		1.30+-0.20 pCi/mL	MetaTrace

WELL LFW 28

SRS Grid N 86079.6 Latitude 33.290475 N
 Coordinates E 45555.3 Longitude 81.714056 W
 Screen Zone Elevation 161.8-140.8 ft msl
 Top of Casing Elevation 192.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1640
 Depth to water = 31.88 ft (9.72 m) below the TOC
 Water elevation = 160.92 ft (49.05 m) msl
 pH = 5.3 Alkalinity = 3 mg/L
 Specific Conductance = 26 umhos/cm
 Water Temperature = 19.2 degrees Celsius
 Water evacuated from the well prior to sampling = 13 gal
 The well went dry during purging.

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		19.20 umh/cm	MetaTrace
PH		5.31 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		9 ug/L	MetaTrace
CALCIUM		1118 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2200 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		199 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		372 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1346 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		400 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2974 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		4000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		3.20+-0.40 pCi/mL	MetaTrace

WELL LFW 29

SRS Grid N 86372.7 Latitude 33.291038 N
 Coordinates E 45503.3 Longitude 81.714763 W
 Screen Zone Elevation 164.7-143.7 ft msl
 Top of Casing Elevation 195.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1515
 Depth to water = 33.76 ft (10.29 m) below the TOC
 Water elevation = 161.94 ft (49.36 m) msl
 pH = 4.8 Alkalinity = 1 mg/L
 Specific Conductance = 29 umhos/cm
 Water Temperature = 18.0 degrees Celsius
 Water evacuated from the well prior to sampling = 47 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		26.90 umh/cm	MetaTrace
PH		4.41 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		10 ug/L	MetaTrace
CALCIUM		814 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		1900 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		48 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		738 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1102 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		5400 ug/L	MetaTrace
LEAD		5 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3271 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		27000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		2100 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA		4.50+-2.10 pCi/L	MetaTrace
NONVOLATILE BETA		5.90+-3.10 pCi/L	MetaTrace
TOTAL RADIUM		2.80+-0.40 pCi/L	MetaTrace
TRITIUM		2.20+-0.30 pCi/mL	MetaTrace

WELL LFW 34

SRS Grid N 85409.5 Latitude 33.288114 N
 Coordinates E 45016.9 Longitude 81.714171 W
 Screen Zone Elevation 164.4-143.4 ft msl
 Top of Casing Elevation 201.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 06/13/89 Time 1100
 Depth to water = 44.07 ft (13.43 m) below the TOC
 Water elevation = 157.33 ft (47.95 m) msl
 pH = 4.4 Alkalinity = 0 mg/L
 Specific Conductance = 18 umhos/cm
 Water Temperature = 20.0 degrees Celsius
 Water evacuated from the well prior to sampling = 36 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		20.40 umh/cm	MetaTrace
SPECIFIC CONDUCTANCE		18.00 umh/cm	Gen. Eng.
SPECIFIC CONDUCTANCE		18.00 umh/cm	W. A.
SPECIFIC CONDUCTANCE		17.00 umh/cm	Enw. Lab.
PH		5.11 pH	MetaTrace
PH		5.20 pH	Gen. Eng.
PH		5.20 pH	W. A.
PH		5.10 pH	Enw. Lab.
SILVER	LT	2 ug/L	MetaTrace
SILVER	LT	2 ug/L	Gen. Eng.
SILVER	LT	10 ug/L	W. A.
SILVER	LT	5 ug/L	Enw. Lab.
ALUMINUM	LT	200 ug/L	W. A.
ARSENIC	LT	3 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	10 ug/L	W. A.
ARSENIC	LT	5 ug/L	Enw. Lab.
BARIUM		4 ug/L	MetaTrace
BARIUM		4 ug/L	MetaTrace
BARIUM		5 ug/L	Gen. Eng.
BARIUM	LT	200 ug/L	W. A.
BARIUM	LT	5 ug/L	Enw. Lab.
BERYLLIUM	LT	5 ug/L	W. A.
CALCIUM		465 ug/L	MetaTrace
CALCIUM		466 ug/L	MetaTrace
CALCIUM		430 ug/L	Gen. Eng.
CALCIUM	LT	5000 ug/L	W. A.
CALCIUM		220 ug/L	Enw. Lab.
CADMIUM	LT	4 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CADMIUM	LT	2 ug/L	Gen. Eng.
CADMIUM	LT	5 ug/L	W. A.
CADMIUM	LT	5 ug/L	Enw. Lab.
CHLORIDE		2700 ug/L	MetaTrace
CHLORIDE		2700 ug/L	Gen. Eng.
CHLORIDE	LT	5000 ug/L	W. A.

CONTINUED

WELL LFW 34 COLLECTED ON 06/13/89 LABORATORY ANALYSES CONTINUED

CHLORIDE		3000 ug/L	Env. Lab.
COBALT	LT	50 ug/L	W. A.
CHROMIUM	LT	10 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
CHROMIUM	LT	4 ug/L	Gen. Eng.
CHROMIUM	LT	10 ug/L	W. A.
CHROMIUM	LT	8 ug/L	Env. Lab.
COPPER		30 ug/L	W. A.
FLUORIDE	LT	250 ug/L	MetaTrace
FLUORIDE	LT	100 ug/L	Gen. Eng.
FLUORIDE	LT	100 ug/L	W. A.
FLUORIDE	LT	100 ug/L	Env. Lab.
IRON		22 ug/L	MetaTrace
IRON		83 ug/L	MetaTrace
IRON		32 ug/L	Gen. Eng.
IRON	LT	100 ug/L	W. A.
IRON	LT	30 ug/L	Env. Lab.
MERCURY	LT	0.20 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	W. A.
MERCURY	LT	0.20 ug/L	Env. Lab.
POTASSIUM	LT	5000 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
POTASSIUM	LT	500 ug/L	Gen. Eng.
POTASSIUM	LT	5000 ug/L	W. A.
POTASSIUM	LT	500 ug/L	Env. Lab.
LITHIUM	LT	100 ug/L	W. A.
MAGNESIUM		375 ug/L	MetaTrace
MAGNESIUM		376 ug/L	MetaTrace
MAGNESIUM		360 ug/L	Gen. Eng.
MAGNESIUM	LT	5000 ug/L	W. A.
MAGNESIUM		185 ug/L	Env. Lab.
MANGANESE	LT	10 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
MANGANESE		4 ug/L	Gen. Eng.
MANGANESE	LT	15 ug/L	W. A.
MANGANESE	LT	15 ug/L	Env. Lab.
SODIUM		1272 ug/L	MetaTrace
SODIUM		1285 ug/L	MetaTrace
SODIUM		1250 ug/L	Gen. Eng.
SODIUM	LT	5000 ug/L	W. A.
SODIUM		683 ug/L	Env. Lab.
NICKEL	LT	5 ug/L	MetaTrace
NICKEL	LT	4 ug/L	Gen. Eng.
NICKEL	LT	40 ug/L	W. A.
NICKEL	LT	50 ug/L	Env. Lab.
NITRATE AS NITROGEN		1600 ug/L	MetaTrace
NITRATE AS NITROGEN		370 ug/L	Gen. Eng.
NITRATE AS NITROGEN		330 ug/L	W. A.
NITRATE AS NITROGEN		400 ug/L	Env. Lab.
LEAD	LT	2 ug/L	MetaTrace
LEAD		18 ug/L	Gen. Eng.
LEAD	LT	5 ug/L	W. A.
LEAD	LT	5 ug/L	Env. Lab.

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WELL LFW 32

SRS Grid N 85836.8 Latitude 33.288927 N
 Coordinates E 44935.9 Longitude 81.715214 W
 Screen Zone Elevation 165.1-144.1 ft msl
 Top of Casing Elevation 224.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1340
 Depth to water = 64.34 ft (19.61 m) below the TOC
 Water elevation = 159.76 ft (48.70 m) msl
 pH = 5.3 Alkalinity = 1 mg/L
 Specific Conductance = 23 umhos/cm
 Water Temperature = 18.0 degrees Celsius
 Water evacuated from the well prior to sampling = 41 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		20.10 umh/cm	MetaTrace
PH		5.11 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		1928 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2300 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		39 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		428 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1629 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		2000 ug/L	MetaTrace
LEAD		3 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2974 ug/L	MetaTrace
SULFATE		1100 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		37000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES		24 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM		1.00+-0.20 pCi/L	MetaTrace
TRITIUM		3.60+-0.40 pCi/mL	MetaTrace

WELL LFW 33

SRS Grid N 85633.8 Latitude 33.288538 N
 Coordinates E 44973.0 Longitude 81.714722 W
 Screen Zone Elevation 165.1-144.1 ft msl
 Top of Casing Elevation 214.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1320
 Depth to water = 55.39 ft (16.88 m) below the TOC
 Water elevation = 158.71 ft (48.38 m) msl
 pH = 4.9 Alkalinity = 1 mg/L
 Specific Conductance = 20 umhos/cm
 Water Temperature = 18.4 degrees Celsius
 Water evacuated from the well prior to sampling = 62 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		16.70 umh/cm	MetaTrace
PH		5.00 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		5 ug/L	MetaTrace
CALCIUM		1932 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2400 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		17 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		369 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1817 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		1600 ug/L	MetaTrace
LEAD		4 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2974 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		39000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		6 ug/L	MetaTrace
TOTAL PHOSPHATES		12 ug/L	MetaTrace
GROSS ALPHA		2.50+-1.80 pCi/L	MetaTrace
NONVOLATILE BETA		8.20+-3.30 pCi/L	MetaTrace
TOTAL RADIUM		1.90+-0.80 pCi/L	MetaTrace
TRITIUM		3.20+-0.40 pCi/mL	MetaTrace

WELL LFW 34 COLLECTED ON 06/13/89 LABORATORY ANALYSES CONTINUED

PHENOLS	LT	5 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	Gen. Eng.
PHENOLS	LT	5 ug/L	Env. Lab.
ANTIMONY	LT	60 ug/L	W. A.
SELENIUM	LT	3 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SELENIUM	LT	2 ug/L	Gen. Eng.
SELENIUM	LT	5 ug/L	W. A.
SELENIUM	LT	10 ug/L	Env. Lab.
SILICA		2766 ug/L	MetaTrace
SILICA		2788 ug/L	MetaTrace
SILICA		5690 ug/L	Gen. Eng.
SILICA		1790 ug/L	W. A.
SILICA		5790 ug/L	Env. Lab.
TIN	LT	100 ug/L	W. A.
SULFATE	LT	1000 ug/L	MetaTrace
SULFATE	LT	5000 ug/L	Gen. Eng.
SULFATE	LT	5000 ug/L	W. A.
SULFATE	LT	5000 ug/L	Env. Lab.
TOTAL DISSOLVED SOLIDS		20000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		26000 ug/L	Gen. Eng.
TOTAL DISSOLVED SOLIDS		14000 ug/L	W. A.
TOTAL DISSOLVED SOLIDS		23000 ug/L	W. A.
TOTAL DISSOLVED SOLIDS		22000 ug/L	Env. Lab.
THALLIUM		29 ug/L	W. A.
TOTAL ORGANIC CARBON		2200 ug/L	MetaTrace
TOTAL ORGANIC CARBON		2000 ug/L	Gen. Eng.
TOTAL ORGANIC CARBON	LT	500 ug/L	W. A.
TOTAL ORGANIC CARBON		2000 ug/L	Env. Lab.
TOTAL ORGANIC HALOGENS		5 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	Gen. Eng.
TOTAL ORGANIC HALOGENS	LT	20 ug/L	W. A.
TOTAL ORGANIC HALOGENS	LT	10 ug/L	Env. Lab.
TOTAL PHOSPHATES	LT	10000 ug/L	MetaTrace
TOTAL PHOSPHATES		160 ug/L	Gen. Eng.
TOTAL PHOSPHATES	LT	50 ug/L	W. A.
TOTAL PHOSPHATES	LT	10 ug/L	Env. Lab.
URANIUM	LT	1000 ug/L	W. A.
VANADIUM	T	50 ug/L	W. A.
ZINC	LT	20 ug/L	W. A.
GROSS ALPHA	LT	2 pCi/L	MetaTrace
GROSS ALPHA		4.67+-2.30 pCi/L	Gen. Eng.
GROSS ALPHA		1.00+-1.00 pCi/L	W. A.
GROSS ALPHA		1.40+-0.80 pCi/L	Env. Lab.
NONVOLATILE BETA	LT	4 pCi/L	MetaTrace
NONVOLATILE BETA		4.73+-2.60 pCi/L	Gen. Eng.
NONVOLATILE BETA		8.00+-4.00 pCi/L	W. A.
NONVOLATILE BETA		5.00+-1.00 pCi/L	Env. Lab.
TOTAL RADIUM		1.40+-0.40 pCi/L	MetaTrace
TOTAL RADIUM		1.70+-0.40 pCi/L	MetaTrace
TOTAL RADIUM		1.12+-2.50 pCi/L	Gen. Eng.
TOTAL RADIUM		1.30+-0.50 pCi/L	W. A.
TOTAL RADIUM		1.40+-0.40 pCi/L	Env. Lab.
TRITIUM		3.20+-0.40 pCi/mL	MetaTrace

CONTINUED

WELL LEW 34 COLLECTED ON 06/13/89 LABORATORY ANALYSES CONTINUED

TRITIUM	3.60+-0.34 pCi/mL	Gen. Eng.
TRITIUM	4.40+-0.60 pCi/mL	W. A.
TRITIUM	2.30+-0.20 pCi/mL	Env. Lab.

WELL LEW 34

SRS Grid N 85409.5 Latitude 33.288114 N
 Coordinates E 45016.9 Longitude 81.714171 W
 Screen Zone Elevation 164.4-143.4 ft msl
 Top of Casing Elevation 201.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 06/13/89 Time 1100
 Depth to water = 44.07 ft (13.43 m) below the TOC
 Water elevation = 157.33 ft (47.95 m) msl
 pH = 4.4 Alkalinity = 0 mg/L
 Specific Conductance = 18 umhos/cm
 Water Temperature = 20.0 degrees Celsius
 Water evacuated from the well prior to sampling = 36 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		18.60 umh/cm	MetaTrace
PH		5.23 pH	MetaTrace
SILVER	LT	2 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		4 ug/L	MetaTrace
CALCIUM		431 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2700 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		32 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		348 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1201 ug/L	MetaTrace
NICKEL	LT	5 ug/L	MetaTrace
NITRATE AS NITROGEN		1700 ug/L	MetaTrace
LEAD		3 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2559 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		15000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1200 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10000 ug/L	MetaTrace
GROSS ALPHA		4.00+-2.30 pCi/L	MetaTrace
NONVOLATILE BETA	LT	4 pCi/L	MetaTrace

CONTINUED

WELL LFW 34 COLLECTED ON 06/13/89 LABORATORY ANALYSES CONTINUED

TOTAL RADIUM	1.50+-0.40 pCi/L	MetaTrace
TRITIUM	3.30+-0.40 pCi/mL	MetaTrace

WELL LFW 35

SRS Grid N 85237.4 Latitude 33.288325 N
 Coordinates E 45378.8 Longitude 81.712833 W
 Screen Zone Elevation 164.1-143.1 ft msl
 Top of Casing Elevation 184.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/07/89 Time 1300
 Depth to water = 27.16 ft (8.28 m) below the TOC
 Water elevation = 156.94 ft (47.84 m) msl
 pH = 5.2 Alkalinity = 2 mg/L
 Specific Conductance = 17 umhos/cm
 Water Temperature = 18.6 degrees Celsius
 Water evacuated from the well prior to sampling = 36 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		18.60 umh/cm	MetaTrace
PH		4.82 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		4 ug/L	MetaTrace
CALCIUM		894 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		1900 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		24 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		392 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1157 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		2300 ug/L	MetaTrace
LEAD		5 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		2825 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		32000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		4000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA		2.20+-1.70 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM		2.40+-0.40 pCi/L	MetaTrace
TRITIUM		4.30+-0.50 pCi/mL	MetaTrace

WELL LEW 36

SRS Grid N 83535.5 Latitude 33.284894 N
 Coordinates E 45582.3 Longitude 81.709040 W
 Screen Zone Elevation 150.4-129.4 ft msl
 Top of Casing Elevation 170.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1435
 Depth to water = 24.93 ft (7.60 m) below the TOC
 Water elevation = 145.47 ft (44.34 m) msl
 pH = 8.1 Alkalinity = 95 mg/L
 Specific Conductance = 305 umhos/cm
 Water Temperature = 17.8 degrees Celsius
 Water evacuated from the well prior to sampling = 43 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		236.7 umh/cm	MetaTrace
PH		6.22 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		8 ug/L	MetaTrace
CALCIUM		10610 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		28500 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUCRIDE	LT	250 ug/L	MetaTrace
IRON		981 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		16080 ug/L	MetaTrace
MANGANESE		73 ug/L	MetaTrace
SODIUM		27130 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	100 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		4610 ug/L	MetaTrace
SULFATE		6700 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		133000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		5000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		303 ug/L	MetaTrace
TOTAL PHOSPHATES		18 ug/L	MetaTrace
GROSS ALPHA	LT	3 pCi/L	MetaTrace
NONVOLATILE BETA		8.10+-3.70 pCi/L	MetaTrace
TOTAL RADIUM		1.20+-0.40 pCi/L	MetaTrace
TRITIUM		18.00+-2.00 pCi/mL	MetaTrace

WELL LFW 36

SRS Grid N 83535.5 Latitude 33.284894 N
 Coordinates E 45582.3 Longitude 81.709040 W
 Screen Zone Elevation 150.4-129.4 ft msl
 Top of Casing Elevation 170.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/23/89 Time 1405
 Depth to water = 25.05 ft (7.64 m) below the TOC
 Water elevation = 145.35 ft (44.30 m) msl
 pH = 5.8 Alkalinity = 99 mg/L
 Specific Conductance = 307 umhos/cm
 Water Temperature = 19.6 degrees Celsius
 Water evacuated from the well prior to sampling = 41 gal

LABORATORY ANALYSES

BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		9 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLOROETHENE	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
* BENZENE		8 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
* TRICHLOROETHYLENE		5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE		270 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE		110 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace

WELL LEW 37

SRS Grid N 83113.2 Latitude 33.284100 N
 Coordinates E 45667.7 Longitude 81.707994 W
 Screen Zone Elevation 149.9-128.9 ft msl
 Top of Casing Elevation 169.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1415
 Depth to water = 27.43 ft (8.36 m) below the TOC
 Water elevation = 142.47 ft (43.43-m) msl
 pH = 5.2 Alkalinity = 4 mg/L
 Specific Conductance = 91 umhos/cm
 Water Temperature = 17.9 degrees Celsius
 Water evacuated from the well prior to sampling = 35 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		77.90 umh/cm	MetaTrace
PH		5.32 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		11 ug/L	MetaTrace
BARIUM		13 ug/L	MetaTrace
CALCIUM		7114 ug/L	MetaTrace
CALCIUM		8967 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		16300 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		46 ug/L	MetaTrace
IRON		89 ug/L	MetaTrace
MERCURY		0.31 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		2549 ug/L	MetaTrace
MAGNESIUM		2595 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
MANGANESE		10 ug/L	MetaTrace
SCDIUM		10060 ug/L	MetaTrace
SODIUM		9875 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		900 ug/L	MetaTrace
LEAD		5 ug/L	MetaTrace
LEAD		4 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
ANTIMONY	LT	60 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		5279 ug/L	MetaTrace

CONTINUED

WELL LFV 37 COLLECTED ON 05/08/89 LABORATORY ANALYSES CONTINUED

SILICA	5204 ug/L	MetaTrace
SULFATE	1200 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS	62000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	3000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	173 ug/L	MetaTrace
TOTAL PHOSPHATES	17 ug/L	MetaTrace
TOTAL PHOSPHATES	17 ug/L	MetaTrace
VANADIUM	LT 10 ug/L	MetaTrace
ZINC	143 ug/L	MetaTrace
GROSS ALPHA	2.50+-1.90 pCi/L	MetaTrace
NONVOLATILE BETA	8.20+-3.50 pCi/L	MetaTrace
TOTAL RADIUM	1.70+-0.40 pCi/L	MetaTrace
TRITIUM	17.77+-2.00 pCi/mL	MetaTrace
TRITIUM	15.00+-2.00 pCi/mL	MetaTrace

WELL LFV 37

SRS Grid N 83113.2 Latitude 33.284100 N
 Coordinates E 45667.7 Longitude 81.707994 W
 Screen Zone Elevation 149.9-128.9 ft msl
 Top of Casing Elevation 169.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/24/89 Time 1220
 Depth to water = 27.50 ft (8.38 m) below the TOC
 Water elevation = 142.40 ft (43.40 m) msl
 pH = 4.8 Alkalinity = 0 mg/L
 Specific Conductance = 95 umhos/cm
 Water Temperature = 19.9 degrees Celsius
 Water evacuated from the well prior to sampling = 35 gal

LABORATORY ANALYSES

BROMDICHLOROMETHANE	LT	5 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE		18 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		65 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLOROETHENE	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
* TRICHLOROETHYLENE		21.0 ug/L	MetaTrace

CONTINUED

WELL LFW 37 COLLECTED ON 05/24/89 LABORATORY ANALYSES CONTINUED

TRANS-1,2-DICHLOROETHENE		100 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE		69 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace

WELL LFW 38

SRS Grid N 83172.3 Latitude 33.284803 N
 Coordinates E 46018.5 Longitude 81.707185 W
 Screen Zone Elevation 150.3-129.3 ft msl
 Top of Casing Elevation 170.30 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1350
 Depth to water = 27.43 ft (8.36 m) below the TOC
 Water elevation = 142.87 ft (43.55 m) msl
 pH = 4.9 Alkalinity = 1 mg/L
 Specific Conductance = 43 umhos/cm
 Water Temperature = 18.7 degrees Celsius
 Water evacuated from the well prior to sampling = 35 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		32.30 umh/cm	MetaTrace
PH		4.94 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM		8 ug/L	MetaTrace
CALCIUM		3667 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		7200 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		29 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		876 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		2774 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		1200 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace
SELENIUM	LT	3 ug/L	MetaTrace
SILICA		4758 ug/L	MetaTrace

CONTINUED

WELL LEW 38 COLLECTED ON 05/08/89 LABORATORY ANALYSES CONTINUED

SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		28000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		125 ug/L	MetaTrace
TOTAL PHOSPHATES		28 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		13.00+-2.00 pCi/mL	MetaTrace

WELL LEW 39

SRS Grid N 83213.1 Latitude 33.285220 N
 Coordinates E 46218.5 Longitude 81.706738 W
 Screen Zone Elevation 151.4-130.4 ft msl
 Top of Casing Elevation 171.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/09/89 Time 1710
 Depth to water = 28.47 ft (8.68 m) below the TOC
 Water elevation = 142.93 ft (43.57 m) msl
 pH = 4.2 Alkalinity = 0 mg/L
 Specific Conductance = 17 umhos/cm
 Water Temperature = 18.9 degrees Celsius
 Water evacuated from the well prior to sampling = 50 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		13.40 umh/cm	MetaTrace
PH		5.04 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM	LT	3 ug/L	MetaTrace
CALCIUM		233 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2100 ug/L	MetaTrace
CHLORIDE		2100 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		63 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		343 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1150 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		600 ug/L	MetaTrace
NITRATE AS NITROGEN		600 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS		8 ug/L	MetaTrace

CONTINUED

WELL LFW 39 COLLECTED ON 05/09/89 LABORATORY ANALYSES CONTINUED

SELENIUM	LT	3 ug/L	MetaTrace
SILICA		3123 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		2000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		227 ug/L	MetaTrace
TOTAL PHOSPHATES		31 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		11.00+-2.00 pCi/mL	MetaTrace

WELL LFW 40

SRS Grid N 83248.8 Latitude 33.285587 N
 Coordinates E 46395.1 Longitude 81.706343 W
 Screen Zone Elevation 151.0-130.0 ft msl
 Top of Casing Elevation 171.00 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 05/08/89 Time 1325
 Depth to water = 23.47 ft (8.68 m) below the TOC
 Water elevation = 142.53 ft (43.44 m) msl
 pH = 5.2 Alkalinity = 0 mg/L
 Specific Conductance = 18 umhos/cm
 Water Temperature = 18.0 degrees Celsius
 Water evacuated from the well prior to sampling = 39 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		15.00 umh/cm	MetaTrace
PH		5.20 pH	MetaTrace
SILVER	LT	10 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BARIUM	LT	3 ug/L	MetaTrace
CALCIUM		4220 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		2800 ug/L	MetaTrace
CHROMIUM	LT	10 ug/L	MetaTrace
FLUORIDE	LT	250 ug/L	MetaTrace
IRON		12 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
POTASSIUM	LT	5000 ug/L	MetaTrace
MAGNESIUM		454 ug/L	MetaTrace
MANGANESE	LT	10 ug/L	MetaTrace
SODIUM		1806 ug/L	MetaTrace
NICKEL	LT	30 ug/L	MetaTrace
NITRATE AS NITROGEN		200 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
PHENOLS	LT	5 ug/L	MetaTrace

CONTINUED

WELL LEW 42 COLLECTED ON 05/08/89 LABORATORY ANALYSES CONTINUED

SULFATE	LT	1000 ug/L	MetaTrace
TOTAL DISSOLVED SOLIDS		10000 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL PHOSPHATES	LT	10 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
NONVOLATILE BETA		5.00+-3.20 pCi/L	MetaTrace
TOTAL RADIUM		1.50+-0.40 pCi/L	MetaTrace
TRITIUM		4.20+-0.50 pCi/mL	MetaTrace

WELL LFW 6

SRS Grid N 84537.8 Latitude 33.286553 N
 Coordinates E 45241.2 Longitude 81.711886 W
 Screen Zone Elevation 160.0-140.0 ft msl
 Top of Casing Elevation 171.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 1140
 Depth to water - 19.49 ft (5.94 m) below the TOC
 Water elevation - 152.21 ft (46.39 m) msl
 pH - 6.3 Alkalinity - 95 mg/L
 Specific conductance - 344 umhos/cm
 Water temperature - 20.3 degrees Celsius
 Water evacuated from the well prior to sampling - 38 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		210.3 umh/cm	MetaTrace
PH		6.25 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	4 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	B	6 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		25000 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE		0.06 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	J	9 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	LT	10 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		39340 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	J	2 ug/L	MetaTrace
MANGANESE		31 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace

CONTINUED

WELL LFW 10A COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	150 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		27 ug/L	MetaTrace
MERCURY		0.23 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE	LT	2 ug/L	MetaTrace
NITRATE AS NITROGEN		360 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	J	3.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		41 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
* 1,1-DICHLOROETHYLENE		8 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE		26 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		5.20+-2.50 pCi/L	MetaTrace
TOTAL RADIUM		2.10+-0.40 pCi/L	MetaTrace
• TRITIUM		110+- 20 pCi/mL	MetaTrace

WELL LFW 16

SRS Grid N 84748.9 Latitude 33.288018 N
Coordinates E 45852.6 Longitude 81.710687 W
Screen Zone Elevation 160.9-130.9 ft msl
Top of Casing Elevation 178.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1230
Depth to water - 24.92 ft (7.60 m) below the TOC
Water elevation - 153.88 ft (46.90 m) msl
pH - 4.6 Alkalinity - 0 mg/L
Specific conductance - 30 umhos/cm
Water temperature - 21.2 degrees Celsius
Water evacuated from the well prior to sampling - 60 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE 25.00 umh/cm Gen. Eng.
CONTINUED

WELL LFW 16 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

SPECIFIC CONDUCTANCE		28.90 umh/cm	MetaTrace
PH		4.56 pH	Gen. Eng.
PH		4.26 pH	MetaTrace
ALPHA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
ACROLEIN	LT	20 ug/L	Gen. Eng.
ACRYLONITRILE	LT	20 ug/L	Gen. Eng.
ALPHA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
ALDRIN	LT	10 ug/L	Gen. Eng.
ACENAPHTHENE	LT	10 ug/L	Gen. Eng.
ACENAPHTHYLENE	LT	10 ug/L	Gen. Eng.
ANTHRACENE	LT	10 ug/L	Gen. Eng.
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	3 ug/L	MetaTrace
BENZO(A)ANTHRACENE	LT	10 ug/L	Gen. Eng.
BENZO(A)PYRENE	LT	10 ug/L	Gen. Eng.
BENZO(B)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BETA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
BUTYLBENZYL PHTHALATE	LT	10 ug/L	Gen. Eng.
BIS(CHLOROMETHYL)ETHER	LT	10 ug/L	Gen. Eng.
BETA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
BENZIDINE	LT	10 ug/L	Gen. Eng.
BENZO(G,H,I)PERYLENE	LT	10 ug/L	Gen. Eng.
BENZO(K)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	1 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-CHLOROETHOXY) METHANE	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROISOPROPYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROETHYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	1 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	1.00 ug/L	Gen. Eng.
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	2 ug/L	Gen. Eng.
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	1 ug/L	Gen. Eng.
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	1 ug/L	Gen. Eng.
CHLOROFORM	LT	5 ug/L	MetaTrace
CHRYSENE	LT	10 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	1 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	1 ug/L	Gen. Eng.
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	1 ug/L	Gen. Eng.
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		3200 ug/L	Gen. Eng.
CHLORIDE		10300 ug/L	MetaTrace
CHLOROBENZENE	LT	1 ug/L	Gen. Eng.
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLORDANE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBENZENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROCYCLOPENTADIENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROETHANE	LT	10 ug/L	Gen. Eng.

CONTINUED

WELL LFW 8

SRS Grid N 84032.6 Latitude 33.285720 N
 Coordinates E 45415.3 Longitude 81.710445 W
 Screen Zone Elevation 158.8-138.8 ft msl
 Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 1100
 Depth to water = 21.63 ft (6.59 m) below the TOC
 Water elevation = 148.87 ft (45.38 m) msl
 Inaccessibility or pump failure prevented sample collection.

WELL LFW 8

SRS Grid N 84032.6 Latitude 33.285720 N
 Coordinates E 45415.3 Longitude 81.710445 W
 Screen Zone Elevation 158.8-138.8 ft msl
 Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/28/89 Time 1035
 Depth to water = 21.53 ft (6.56 m) below the TOC
 Water elevation = 148.97 ft (45.41 m) msl
 pH = 6.6 Alkalinity = 122 mg/L
 Specific conductance = 368 umhos/cm
 Water temperature = 19.9 degrees Celsius
 Water evacuated from the well prior to sampling = 36 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		242.0 umh/cm	MetaTrace
PH		6.39 pH	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC		11 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	JB	2 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
CHLORIDE		25700 ug/L	MetaTrace
CHLORIDE		25500 ug/L	MetaTrace
CHROMIUM		5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIETHYL PHTHALATE		34 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	LT	10 ug/L	MetaTrace
IRON		39490 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
MANGANESE		32 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace

CONTINUED

WELL LFW 8 COLLECTED ON 09/28/89 LABORATORY ANALYSES CONTINUED

SULFATE	1700 ug/L	MetaTrace
SULFATE	1700 ug/L	MetaTrace
TOTAL ORGANIC CARBON	4990 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	242 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	218 ug/L	MetaTrace
GROSS ALPHA	LT 9 pCi/L	MetaTrace
TOTAL RADIUM	2.90+-0.60 pCi/L	MetaTrace
TRITIUM	16.00+-2.00 pCi/mL	MetaTrace

WELL LFW 10A

SRS Grid N 84369.6 Latitude 33.287315 N
 Coordinates E 45935.6 Longitude 81.709731 W
 Screen Zone Elevation 158.5-128.5 ft msl
 Top of Casing Elevation 175.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1200
 Depth to water = 24.67 ft (7.52 m) below the TOC
 Water elevation = 150.83 ft (45.97 m) msl
 pH = 5.0 Alkalinity = 0 mg/L
 Specific conductance = 26 umhos/cm
 Water temperature = 21.4 degrees Celsius
 Water evacuated from the well prior to sampling = 58 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE	30.80 umh/cm	MetaTrace
PH	5.30 pH	MetaTrace
ACROLEIN	LT 5 ug/L	MetaTrace
ACRYLONITRILE	LT 5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT 0.05 ug/L	MetaTrace
ARSENIC	LT 3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT 0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT 5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B 160 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	200 ug/L	MetaTrace
• CARBON TETRACHLORIDE	24.0 ug/L	MetaTrace
CADMIUM	LT 4 ug/L	MetaTrace
BROMOFORM	LT 5 ug/L	MetaTrace
CHLOROFORM	LT 5 ug/L	MetaTrace
METHYLENE CHLORIDE	39 ug/L	MetaTrace
BROMOMETHANE	LT 10 ug/L	MetaTrace
CHLOROMETHANE	LT 10 ug/L	MetaTrace
CHLORIDE	3600 ug/L	MetaTrace
CHLOROBENZENE	LT 5 ug/L	MetaTrace
CHROMIUM	LT 5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT 5 ug/L	MetaTrace
CHLOROETHANE	LT 10 ug/L	MetaTrace
BENZENE	LT 5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT 0.05 ug/L	MetaTrace

CONTINUED

WELL LFW 6 COLLECTED ON 09/17/89 LABORATORY ANALYSES CONTINUED

SULFATE		1700 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON		2550 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		178 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	J	3 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE		13 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
* GROSS ALPHA		18.00+-6.00 pCi/L	MetaTrace
* TOTAL RADIUM		5.40+-1.20 pCi/L	MetaTrace
TRITIUM		10.00+-1.00 pCi/mL	MetaTrace

WELL LFW 7

SRS Grid N 84310.3 Latitude 33.286177 N
 Coordinates E 45318.9 Longitude 81.711239 W
 Screen Zone Elevation 159.3-139.3 ft msl
 Top of Casing Elevation 171.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 1115
 Depth to water - 20.67 ft (6.30 m) below the TOC
 Water elevation - 150.73 ft (45.94 m) msl
 pH - 6.6 Alkalinity - 153 mg/L
 Specific conductance - 466 umhos/cm
 Water temperature - 20.7 degrees Celsius
 Water evacuated from the well prior to sampling - 31 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		335.0 umh/cm	MetaTrace
PH		6.54 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.10 ug/L	MetaTrace
ARSENIC		21 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.10 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	140 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace

CONTINUED

WELL LFW 7 COLLECTED ON 09/17/89 LABORATORY ANALYSES CONTINUED

BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		60 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		32000 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE		0.10 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE		40 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	JB	7 ug/L	MetaTrace
ETHYLBENZENE	J	15 ug/L	MetaTrace
IRON		40500 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.10 ug/L	MetaTrace
TOLUENE	J	10 ug/L	MetaTrace
MANGANESE		13 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		198 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	J	15 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
• GROSS ALPHA		17.00+-6.00 pCi/L	MetaTrace
• TOTAL RADIUM		6.80+-0.80 pCi/L	MetaTrace
TRITIUM		15.00+-2.00 pCi/mL	MetaTrace

WELL LFW 16 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

CHROMIUM	LT	4 ug/L	Gen. Eng.
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	1 ug/L	Gen. Eng.
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	1 ug/L	Gen. Eng.
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	1 ug/L	Gen. Eng.
BENZENE	LT	5 ug/L	MetaTrace
DIBENZ(A,H)ANTHRACENE	LT	10 ug/L	Gen. Eng.
DELTA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	1 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DIELDRIN	LT	10 ug/L	Gen. Eng.
DIMETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-BUTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-OCTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
ENDRIN ALDEHYDE	LT	10 ug/L	Gen. Eng.
ENDRIN	LT	10.0 ug/L	Gen. Eng.
ENDOSULFAN SULFATE	LT	10 ug/L	Gen. Eng.
ETHYLBENZENE	LT	1 ug/L	Gen. Eng.
ETHYLBENZENE	LT	5 ug/L	MetaTrace
FLUORANTHENE	LT	10 ug/L	Gen. Eng.
IRON		35 ug/L	Gen. Eng.
IRON		38 ug/L	MetaTrace
FLUORENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBTADIENE	LT	10 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY		0.27 ug/L	MetaTrace
HEPTACHLOR	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
INDENO(1,2,3-C,D)PYRENE	LT	10 ug/L	Gen. Eng.
ISOPHORONE	LT	10 ug/L	Gen. Eng.
LINDANE	LT	10 ug/L	Gen. Eng.
TOLUENE	LT	1 ug/L	Gen. Eng.
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE	LT	2 ug/L	Gen. Eng.
MANGANESE		3 ug/L	MetaTrace
NAPHTHALENE	LT	10 ug/L	Gen. Eng.
NITROBENZENE	LT	10 ug/L	Gen. Eng.
N-NITROSODIMETHYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODI-PROPYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODIPHENYLAMINE	LT	10 ug/L	Gen. Eng.
NITRATE AS NITROGEN		860 ug/L	Gen. Eng.
NITRATE AS NITROGEN		1000 ug/L	MetaTrace
LEAD		14 ug/L	Gen. Eng.
LEAD		10 ug/L	MetaTrace
PCB 1016	LT	150 ug/L	Gen. Eng.
PCB 1221	LT	150 ug/L	Gen. Eng.
PCB 1232	LT	150 ug/L	Gen. Eng.
PCB 1242	LT	150 ug/L	Gen. Eng.
PCB 1248	LT	150 ug/L	Gen. Eng.
PCB 1254	LT	150 ug/L	Gen. Eng.
PCB 1260	LT	150 ug/L	Gen. Eng.

CONTINUED

WELL LFW 16 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

PHENANTHRENE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCLE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1,1-TCE	LT	10 ug/L	Gen. Eng.
PYRENE	LT	10 ug/L	Gen. Eng.
SULFATE	LT	5000 ug/L	Gen. Eng.
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE		3.00 ug/L	Gen. Eng.
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	Gen. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		90 ug/L	Gen. Eng.
TRICHLOROETHYLENE		2.00 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOXAPHENE	LT	10 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	1 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	2 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE		7 ug/L	Gen. Eng.
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE		7 ug/L	Gen. Eng.
1,1,1-TRICHLOROETHANE		8 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
1,2-DIPHENYL HYDRAZINE	LT	10 ug/L	Gen. Eng.
1,2,4-TRICHLOROBENZENE	LT	10 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	10 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
2-CHLORONAPHTHALENE	LT	10 ug/L	Gen. Eng.
2,4-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
2,6-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
3,3-DICHLOROBENZIDENE	LT	10 ug/L	Gen. Eng.
4-BROMOPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
4-CHLOROPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
GROSS ALPHA		3.41+-0.70 pCi/L	Gen. Eng.
GROSS ALPHA		5.20+-2.40 pCi/L	MetaTrace
TOTAL RADIUM		4.50+-1.50 pCi/L	Gen. Eng.
TOTAL RADIUM		2.80+-0.60 pCi/L	MetaTrace
TRITIUM		4.91+-0.40 pCi/mL	Gen. Eng.
TRITIUM		3.60+-0.40 pCi/mL	MetaTrace

WELL LFW 16

SRS Grid N 84748.9 Latitude 33.288018 N
 Coordinates E 45852.6 Longitude 81.710687 W
 Screen Zone Elevation 160.9-130.9 ft msl
 Top of Casing Elevation 178.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1230
 Depth to water = 24.92 ft (7.60 m) below the TOC
 Water elevation = 153.88 ft (46.90 m) msl
 pH = 4.6 Alkalinity = 0 mg/L
 Specific conductance = 30 umhos/cm
 Water temperature = 21.2 degrees Celsius
 Water evacuated from the well prior to sampling = 60 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		24.00 umh/cm	Gen. Eng.
SPECIFIC CONDUCTANCE		28.91 umh/cm	MetaTrace
PH		4.81 pH	Gen. Eng.
PH		4.27 pH	MetaTrace
ALPHA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
ACROLEIN	LT	20 ug/L	Gen. Eng.
ACRYLONITRILE	LT	20 ug/L	Gen. Eng.
ALPHA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
ALDRIN	LT	10 ug/L	Gen. Eng.
ACENAPHTHENE	LT	10 ug/L	Gen. Eng.
ACENAPHTHYLENE	LT	10 ug/L	Gen. Eng.
ANTHRACENE	LT	10 ug/L	Gen. Eng.
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	3 ug/L	MetaTrace
BENZO(A)ANTHRACENE	LT	10 ug/L	Gen. Eng.
BENZO(A)PYRENE	LT	10 ug/L	Gen. Eng.
BENZO(B)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BETA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
BUTYLBENZYL PHTHALATE	LT	10 ug/L	Gen. Eng.
BIS(CHLOROMETHYL)ETHER	LT	10 ug/L	Gen. Eng.
BETA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
BENZIDINE	LT	10 ug/L	Gen. Eng.
BENZO(G,H,I)PERYLENE	LT	10 ug/L	Gen. Eng.
BENZO(K)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	1 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-CHLOROETHOXY) METHANE	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROISOPROPYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROETHYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	1 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	1.00 ug/L	Gen. Eng.
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	2 ug/L	Gen. Eng.
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	1 ug/L	Gen. Eng.

CONTINUED

WELL LFV 16 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	1 ug/L	Gen. Eng.
CHLOROFORM	LT	5 ug/L	MetaTrace
CHRYSENE	LT	10 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	1 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	1 ug/L	Gen. Eng.
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	1 ug/L	Gen. Eng.
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		3400 ug/L	Gen. Eng.
CHLORIDE		3100 ug/L	MetaTrace
CHLOROBENZENE	LT	1 ug/L	Gen. Eng.
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLORDANE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBENZENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROCYCLOPENTADIENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROETHANE	LT	10 ug/L	Gen. Eng.
CHROMIUM	LT	4 ug/L	Gen. Eng.
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	1 ug/L	Gen. Eng.
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	1 ug/L	Gen. Eng.
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	1 ug/L	Gen. Eng.
BENZENE	LT	5 ug/L	MetaTrace
DIBENZ(A,H)ANTHRACENE	LT	10 ug/L	Gen. Eng.
DELTA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	1 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DIELDRIN	LT	10 ug/L	Gen. Eng.
DIMETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-BUTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-OCTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
ENDRIN ALDEHYDE	LT	10 ug/L	Gen. Eng.
ENDRIN	LT	10.0 ug/L	Gen. Eng.
ENDOSULFAN SULFATE	LT	10 ug/L	Gen. Eng.
ETHYLBENZENE	LT	1 ug/L	Gen. Eng.
ETHYLBENZENE	LT	5 ug/L	MetaTrace
FLUORANTHENE	LT	10 ug/L	Gen. Eng.
IRON		31 ug/L	Gen. Eng.
IRON		40 ug/L	MetaTrace
FLUORENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBUTADIENE	LT	10 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY		0.24 ug/L	MetaTrace
HEPTACHLOR	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
INDENO(1,2,3-C,D)PYRENE	LT	10 ug/L	Gen. Eng.
ISOPHORONE	LT	10 ug/L	Gen. Eng.
LINDANE	LT	10 ug/L	Gen. Eng.
TOLUENE	LT	1 ug/L	Gen. Eng.
TOLUENE	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFW 16 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

MANGANESE	LT	2 ug/L	Gen. Eng.
MANGANESE		3 ug/L	MetaTrace
NAPHTHALENE	LT	10 ug/L	Gen. Eng.
NITROBENZENE	LT	10 ug/L	Gen. Eng.
N-NITROSODIMETHYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODI-PROPYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODIPHENYLAMINE	LT	10 ug/L	Gen. Eng.
NITRATE AS NITROGEN		880 ug/L	Gen. Eng.
NITRATE AS NITROGEN		1000 ug/L	MetaTrace
LEAD		13 ug/L	Gen. Eng.
LEAD		12 ug/L	MetaTrace
PCB 1016	LT	150 ug/L	Gen. Eng.
PCB 1221	LT	150 ug/L	Gen. Eng.
PCB 1232	LT	150 ug/L	Gen. Eng.
PCB 1242	LT	150 ug/L	Gen. Eng.
PCB 1248	LT	150 ug/L	Gen. Eng.
PCB 1254	LT	150 ug/L	Gen. Eng.
PCB 1260	LT	150 ug/L	Gen. Eng.
PHENANTHRENE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1,1-TCE	LT	10 ug/L	Gen. Eng.
PYRENE	LT	10 ug/L	Gen. Eng.
SULFATE	LT	5000 ug/L	Gen. Eng.
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE		3.00 ug/L	Gen. Eng.
TETRACHLOROETHYLENE	J	2.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	Gen. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		86 ug/L	Gen. Eng.
TRICHLOROETHYLENE		2.00 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOXAPHENE	LT	10 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	1 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	2 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE		7 ug/L	Gen. Eng.
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE		7 ug/L	Gen. Eng.
1,1,1-TRICHLOROETHANE		8 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
1,2-DIPHENYL HYDRAZINE	LT	10 ug/L	Gen. Eng.
1,2,4-TRICHLOROBENZENE	LT	10 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.

CONTINUED

WELL LFW 16 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	10 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
2-CHLORONAPHTHALENE	LT	10 ug/L	Gen. Eng.
2,4-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
2,6-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
3,3-DICHLOROBENZIDENE	LT	10 ug/L	Gen. Eng.
4-BROMOPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
4-CHLOROPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
GROSS ALPHA	LT	3 pCi/L	Gen. Eng.
GROSS ALPHA		3.50+-2.30 pCi/L	MetaTrace
* TOTAL RADIUM		5.10+-2.50 pCi/L	Gen. Eng.
TOTAL RADIUM		3.30+-0.60 pCi/L	MetaTrace
TRITIUM		4.52+-0.39 pCi/mL	Gen. Eng.
TRITIUM		3.80+-0.40 pCi/mL	MetaTrace

WELL LFW 17

SRS Grid N 84602.8 Latitude 33.287295 N
 Coordinates E 45607.3 Longitude 81.711048 W
 Screen Zone Elevation 158.1-128.1 ft msl
 Top of Casing Elevation 177.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 1235
 Depth to water - 24.71 ft (7.53 m) below the TOC
 Water elevation - 153.09 ft (46.66 m) msl
 pH - 6.4 Alkalinity - 95 mg/L
 Specific conductance - 352 umhos/cm
 Water temperature - 20.3 degrees Celsius
 Water evacuated from the well prior to sampling - 65 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		246.0 umh/cm	MetaTrace
PH		6.23 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC		22 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		8 ug/L	MetaTrace

CONTINUED

WELL LFV 17 COLLECTED ON 09/17/89 LABORATORY ANALYSES CONTINUED

BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		28100 ug/L	MetaTrace
CHLOROBENZENE	J	3 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE		0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE		62 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	LT	10 ug/L	MetaTrace
ETHYLBENZENE	J	3 ug/L	MetaTrace
IRON		39330 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	J	2 ug/L	MetaTrace
MANGANESE		23 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE		1500 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		146 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES		8 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA	LT	4 pCi/L	MetaTrace
TOTAL RADIUM		2.20+-0.50 pCi/L	MetaTrace
TRITIUM		6.30+-0.70 pCi/mL	MetaTrace

WELL LFW 18

SRS Grid N 84577.3 Latitude 33.286997 N
 Coordinates E 45459.4 Longitude 81.711388 W
 Screen Zone Elevation 159.6-129.6 ft msl
 Top of Casing Elevation 175.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 1210
 Depth to water = 22.14 ft (6.75 m) below the TOC
 Water elevation = 153.26 ft (46.71 m) msl
 pH = 6.6 Alkalinity = 94 mg/L
 Specific conductance = 309 umhos/cm
 Water temperature = 21.0 degrees Celsius
 Water evacuated from the well prior to sampling = 32 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		204.7 umh/cm	MetaTrace
PH		6.28 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC		13 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	41 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		8 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	J	6 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE		0.06 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE		21 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	54 ug/L	MetaTrace
ETHYLBENZENE		13 ug/L	MetaTrace
IRON		36050 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE		22 ug/L	MetaTrace
MANGANESE		34 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace

CONTINUED

WELL LFW 18 COLLECTED ON 09/17/89 LABORATORY ANALYSES CONTINUED

TOTAL ORGANIC CARBON		6710 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		202 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES		39 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE		32 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		11.00+-7.00 pCi/L	MetaTrace
* TOTAL RADIUM		5.00+-0.60 pCi/L	MetaTrace
TRITIUM		7.40+-0.80 pCi/mL	MetaTrace

WELL LFW 19

SRS Grid N 84S17.2 Latitude 33.286998 N
 Coordinates E 45135.4 Longitude 81.712707 W
 Screen Zone Elevation 159.7-129.7 ft msl
 Top of Casing Elevation 176.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 1305
 Depth to water = 22.70 ft (6.92 m) below the TOC
 Water elevation = 154.00 ft (46.94 m) msl
 pH = 4.9 Alkalinity = 1 mg/L
 Specific conductance = 17 umhos/cm
 Water temperature = 19.2 degrees Celsius
 Water evacuated from the well prior to sampling = 63 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		24.30 umh/cm	MetaTrace
PH		5.32 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	17 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFW 19 COLLECTED ON 09/17/89 LABORATORY ANALYSES CONTINUED

BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2200 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	36 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		67 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	J	1 ug/L	MetaTrace
MANGANESE		3 ug/L	MetaTrace
NITRATE AS NITROGEN		360 ug/L	MetaTrace
LEAD		6 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		5.20+-2.70 pCi/L	MetaTrace
TOTAL RADIUM		2.90+-0.50 pCi/L	MetaTrace
TOTAL RADIUM		3.70+-0.60 pCi/L	MetaTrace
TRITIUM		3.60+-0.40 pCi/mL	MetaTrace

WELL LFW 21 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

IRON		921 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
TOLUENE	J	1 ug/L	MetaTrace
MANGANESE		52 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE		7000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE		150 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		568 ug/L	MetaTrace
* TRICHLOROETHYLENE		37.0 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES		48 ug/L	MetaTrace
* 1,1-DICHLOROETHYLENE		13 ug/L	MetaTrace
1,1-DICHLOROETHANE		50 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE		10 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
* GROSS ALPHA		28.00+-8.00 pCi/L	MetaTrace
* TOTAL RADIUM		5.20+-0.70 pCi/L	MetaTrace
TRITIUM		9.90+-1.00 pCi/mL	MetaTrace

WELL LFW 22

SRS Grid N 84223.6 Latitude 33.287628 N
 Coordinates E 46325.2 Longitude 81.708421 W
 Screen Zone Elevation 152.1-122.1 ft msl
 Top of Casing Elevation 174.20 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1315
 Depth to water - 24.61 ft (7.50 m) below the TOC
 Water elevation - 149.59 ft (45.60 m) msl
 pH - 4.7 Alkalinity - 0 mg/L
 Specific conductance - 19 umhos/cm
 Water temperature - 21.3 degrees Celsius
 Water evacuated from the well prior to sampling - 71 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		20.90 umh/cm	MetaTrace
PH		5.04 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
CONTINUED			

WELL LFW 22 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	410 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE		120 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2100 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	34 ug/L	MetaTrace
ETHYLBENZENE		1 ug/L	MetaTrace
IRON		49 ug/L	MetaTrace
MERCURY		0.26 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	J	1 ug/L	MetaTrace
MANGANESE	LT	2 ug/L	MetaTrace
NITRATE AS NITROGEN		430 ug/L	MetaTrace
LEAD		6 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		35 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE		6 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		4.10+-2.10 pCi/L	MetaTrace
TOTAL RADIUM		2.30+-0.50 pCi/L	MetaTrace
TRITIUM		3.70+-0.40 pCi/mL	MetaTrace

WELL LFW 20

SRS Grid N 85262.6 Latitude 33.288714 N
 Coordinates E 45582.9 Longitude 81.712395 W
 Screen Zone Elevation 164.5-134.5 ft msl
 Top of Casing Elevation 180.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1720
 Depth to water = 23.57 ft (7.18 m) below the TOC
 Water elevation = 157.33 ft (47.95 m) msl
 pH = 4.8 Alkalinity = 0 mg/L
 Specific conductance = 14 umhos/cm
 Water temperature = 21.2 degrees Celsius
 Water evacuated from the well prior to sampling = 59 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		14.88 umh/cm	MetaTrace
PH		3.70 pH	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2000 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		71 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE	LT	2 ug/L	MetaTrace
NITRATE AS NITROGEN		450 ug/L	MetaTrace
LEAD		3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFW 20 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		3.30+-2.10 pCi/L	MetaTrace
TOTAL RADIUM		1.80+-0.40 pCi/L	MetaTrace
TRITIUM		4.10+-0.50 pCi/mL	MetaTrace

WELL LFW 21

SRS Grid N 84178.3 Latitude 33.287241 N
 Coordinates E 46149.4 Longitude 81.708796 W
 Screen Zone Elevation 159.5-129.5 ft msl
 Top of Casing Elevation 176.20 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1340
 Depth to water = 26.26 ft (8.00 m) below the TOC
 Water elevation = 149.94 ft (45.70 m) msl
 pH = 5.1 Alkalinity = 15 mg/L
 Specific conductance = 161 umhos/cm
 Water temperature = 21.3 degrees Celsius
 Water evacuated from the well prior to sampling - 57 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		170.2 umh/cm	MetaTrace
PH		5.44 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	13 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE		170 ug/L	MetaTrace
* CARBON TETRACHLORIDE		9.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		280 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		24900 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	J	3 ug/L	MetaTrace
BENZENE	J	3 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE		19 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	20 ug/L	MetaTrace
ETHYLBENZENE	J	2 ug/L	MetaTrace

CONTINUED

WELL LFW 23

SRS Grid N 84251.3 Latitude 33.287903 N
 Coordinates E 46456.1 Longitude 81.708131 W
 Screen Zone Elevation 154.8-124.8 ft msl
 Top of Casing Elevation 171.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1250
 Depth to water = 21.62 ft (6.59 m) below the TOC
 Water elevation = 150.18 ft (45.78 m) msl
 pH = 4.7 Alkalinity = 0 mg/L
 Specific conductance = 18 umhos/cm
 Water temperature = 21.8 degrees Celsius
 Water evacuated from the well prior to sampling = 66 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		18.17 umh/cm	MetaTrace
PH		5.11 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE		27 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	J	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2100 ug/L	MetaTrace
CHLORIDE		2100 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	LT	10 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		67 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		3 ug/L	MetaTrace
NITRATE AS NITROGEN		320 ug/L	MetaTrace
NITRATE AS NITROGEN		320 ug/L	MetaTrace
LEAD		8 ug/L	MetaTrace

CONTINUED

WELL LFW 23 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

SULFATE	LT	1000 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		11 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA	LT	5 pCi/L	MetaTrace
TOTAL RADIUM		1.80+-0.40 pCi/L	MetaTrace
TRITIUM		3.70+-0.40 pCi/mL	MetaTrace
TRITIUM		3.30+-0.40 pCi/mL	MetaTrace

WELL LFW 24

SRS Grid N 84544.2 Latitude 33.288656 N
 Coordinates E 46520.8 Longitude 81.708530 W
 Screen Zone Elevation 154.2-124.2 ft msl
 Top of Casing Elevation 171.30 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1225
 Depth to water - 18.92 ft (5.77 m) below the TOC
 Water elevation - 152.38 ft (46.45 m) msl
 pH - 4.7 Alkalinity - 0 mg/L
 Specific conductance - 15 umhos/cm
 Water temperature - 20.1 degrees Celsius
 Water evacuated from the well prior to sampling - 73 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		16.27 umh/cm	MetaTrace
PH		5.14 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	40 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace

CONTINUED

WELL LF2 24 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		1500 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	40 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		46 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		4 ug/L	MetaTrace
NITRATE AS NITROGEN		500 ug/L	MetaTrace
LEAD		7 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		6.40+-2.70 pCi/L	MetaTrace
TOTAL RADIUM		2.60+-0.50 pCi/L	MetaTrace
TRITIUM		3.40+-0.40 pCi/mL	MetaTrace

WELL LFW 25 .

SRS Grid N 84967.2 Latitude 33.289436 N
 Coordinates E 46425.7 Longitude 81.709602 W
 Screen Zone Elevation 152.8-122.8 ft msl
 Top of Casing Elevation 174.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1110
 Depth to water = 20.03 ft (6.11 m) below the TOC
 Water elevation = 154.67 ft (47.14 m) msl
 pH = 4.8 Alkalinity = 0 mg/L
 Specific conductance = 16 umhos/cm
 Water temperature = 20.1 degrees Celsius
 Water evacuated from the well prior to sampling = 83 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		18.10 umh/cm	MetaTrace
SPECIFIC CONDUCTANCE		14.64 umh/cm	MetaTrace
PH		5.11 pH	MetaTrace
PH		5.09 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	22 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		1900 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	19 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		48 ug/L	MetaTrace
MERCURY		0.23 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	J	2 ug/L	MetaTrace
MANGANESE		3 ug/L	MetaTrace
NITRATE AS NITROGEN		500 ug/L	MetaTrace
LEAD		6 ug/L	MetaTrace

CONTINUED

WELL LFW 25 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		14.00+-4.00 pCi/L	MetaTrace
TOTAL RADIUM		4.50+-0.60 pCi/L	MetaTrace
TRITIUM		3.70+-0.40 pCi/mL	MetaTrace

WELL LFW 26

SRS Grid N 85654.6 Latitude 33.289663 N
 Coordinates E 45633.8 Longitude 81.713023 W
 Screen Zone Elevation 164.9-143.9 ft msl
 Top of Casing Elevation 186.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1035
 Depth to water = 27.54 ft (8.39 m) below the TOC
 Water elevation = 159.36 ft (48.57 m) msl
 pH = 4.9 Alkalinity = 0 mg/L
 Specific conductance = 13 umhos/cm
 Water temperature = 19.8 degrees Celsius
 Water evacuated from the well prior to sampling = 45 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		15.98 umh/cm	MetaTrace
PH		5.16 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	13 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace

CONTINUED

WELL LFW 26 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		1800 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	14 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		32 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE	LT	2 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		4.00+-2.10 pCi/L	MetaTrace
TOTAL RADIUM		1.40+-0.40 pCi/L	MetaTrace
TRITIUM		3.50+-0.40 pCi/mL	MetaTrace

WELL LFW 28 COLLECTED ON 09/17/89 LABORATORY ANALYSES CONTINUED

CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		1800 ug/L	MetaTrace
CHLORIDE		1800 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM		6 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	150 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		60 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		8 ug/L	MetaTrace
NITRATE AS NITROGEN		380 ug/L	MetaTrace
NITRATE AS NITROGEN		360 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA	LT	3 pCi/L	MetaTrace
TOTAL RADIUM		2.00+-0.40 pCi/L	MetaTrace
TRITIUM		3.00+-0.30 pCi/mL	MetaTrace
TRITIUM		3.10+-0.30 pCi/mL	MetaTrace

WELL LFW 29

SRS Grid N 86372.7 Latitude 33.291038 N
 Coordinates E 45503.3 Longitude 81.714763 W
 Screen Zone Elevation 164.7-143.7 ft msl
 Top of Casing Elevation 195.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 940
 Depth to water - 33.14 ft (10.10 m) below the TOC
 Water elevation - 162.56 ft (49.55 m) msl
 pH - 4.7 Alkalinity - 0 mg/L
 Specific conductance - 24 umhos/cm
 Water temperature - 18.8 degrees Celsius
 Water evacuated from the well prior to sampling - 49 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		24.10 umh/cm	MetaTrace
PH		4.95 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	36 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	JB	3 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		1800 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	68 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		81 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
TOLUENE	J	2 ug/L	MetaTrace
MANGANESE		12 ug/L	MetaTrace
NITRATE AS NITROGEN		1200 ug/L	MetaTrace
LEAD		4 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace

CONTINUED

WELL LFW 27

SRS Grid N 85839.1 Latitude 33.290010 N
 Coordinates E 45596.1 Longitude 81.713481 W
 Screen Zone Elevation 163.6-142.6 ft msl
 Top of Casing Elevation 189.60 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1005
 Depth to water = 29.54 ft (9.00 m) below the TOC
 Water elevation = 160.06 ft (48.79 m) msl
 pH = 5.0 Alkalinity = 0 mg/L
 Specific conductance = 13 umhos/cm
 Water temperature = 19.5 degrees Celsius
 Water evacuated from the well prior to sampling = 45 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		14.66 umh/cm	MetaTrace
PH		5.25 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	24 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2000 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	JB	5 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		28 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		4 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFW 27 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA	LT	3 pCi/L	MetaTrace
TOTAL RADIUM		1.10+-0.30 pCi/L	MetaTrace
TRITIUM		2.60+-0.30 pCi/mL	MetaTrace

WELL LFW 28

SRS Grid N 86079.6 Latitude 33.290475 N
 Coordinates E 45555.3 Longitude 81.714056 W
 Screen Zone Elevation 161.8-140.8 ft msl
 Top of Casing Elevation 192.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 900
 Depth to water = 31.44 ft (9.58 m) below the TOC
 Water elevation = 161.36 ft (49.18 m) msl
 pH = 5.2 Alkalinity = 1 mg/L
 Specific conductance = 22 umhos/cm
 Water temperature = 19.3 degrees Celsius
 Water evacuated from the well prior to sampling = 13 gal
 The well went dry during purging.

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		25.80 umh/cm	MetaTrace
PH		5.40 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFW 31

SRS Grid N 86262.2 Latitude 33.289758 N
 Coordinates E 44869.0 Longitude 81.716217 W
 Screen Zone Elevation 165.7-144.7 ft msl
 Top of Casing Elevation 229.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1130
 Depth to water = 67.65 ft (20.62 m) below the TOC
 Water elevation = 162.05 ft (49.39 m) msl
 pH = 5.1 Alkalinity = 1 mg/L
 Specific conductance = 21 umhos/cm
 Water temperature = 20.5 degrees Celsius
 Water evacuated from the well prior to sampling = 45 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		16.00 umh/cm	Gen. Eng.
SPECIFIC CONDUCTANCE		15.00 umh/cm	Gen. Eng.
SPECIFIC CONDUCTANCE		18.52 umh/cm	MetaTrace
PH		5.03 pH	Gen. Eng.
PH		5.09 pH	Gen. Eng.
PH		4.59 pH	MetaTrace
ACROLEIN	LT	20 ug/L	Gen. Eng.
ACROLEIN	LT	20 ug/L	Gen. Eng.
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	20 ug/L	Gen. Eng.
ACRYLONITRILE	LT	20 ug/L	Gen. Eng.
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
ALDRIN	LT	10 ug/L	Gen. Eng.
ACENAPHTHENE	LT	10 ug/L	Gen. Eng.
ACENAPHTHYLENE	LT	10 ug/L	Gen. Eng.
ANTHRACENE	LT	10 ug/L	Gen. Eng.
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	3 ug/L	MetaTrace
BENZO(A)PYRENE	LT	10 ug/L	Gen. Eng.
BUTYLBENZYL PHTHALATE	LT	10 ug/L	Gen. Eng.
BIS(CHLOROMETHYL)ETHER	LT	10 ug/L	Gen. Eng.
BETA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
BENZIDINE	LT	10 ug/L	Gen. Eng.
BENZO(G,H,I)PERYLENE	LT	10 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	1 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	1 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-CHLOROETHOXY) METHANE	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROISOPROPYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROETHYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	1 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	1 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	1.00 ug/L	Gen. Eng.

CONTINUED

WELL LFW 31 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

CARBON TETRACHLORIDE	LT	1.00 ug/L	Gen. Eng.
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	2 ug/L	Gen. Eng.
CADMIUM	LT	2 ug/L	Gen. Eng.
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	1 ug/L	Gen. Eng.
BROMOFORM	LT	1 ug/L	Gen. Eng.
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	1 ug/L	Gen. Eng.
CHLOROFORM	LT	1 ug/L	Gen. Eng.
CHLOROFORM	LT	5 ug/L	MetaTrace
CHRYSENE	LT	10 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	1 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	1 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	1 ug/L	Gen. Eng.
BROMOMETHANE	LT	1 ug/L	Gen. Eng.
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	1 ug/L	Gen. Eng.
CHLOROMETHANE	LT	1 ug/L	Gen. Eng.
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2100 ug/L	Gen. Eng.
CHLORIDE		2300 ug/L	Gen. Eng.
CHLORIDE		1800 ug/L	MetaTrace
CHLOROBENZENE	LT	1 ug/L	Gen. Eng.
CHLOROBENZENE	LT	1 ug/L	Gen. Eng.
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLORDANE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBENZENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROCYCLOPENTADIENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROETHANE	LT	10 ug/L	Gen. Eng.
CHROMIUM	LT	4 ug/L	Gen. Eng.
CHROMIUM	LT	4 ug/L	Gen. Eng.
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	1 ug/L	Gen. Eng.
CHLOROETHENE (VINYL CHLORIDE)	LT	1 ug/L	Gen. Eng.
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	1 ug/L	Gen. Eng.
CHLOROETHANE	LT	1 ug/L	Gen. Eng.
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	1 ug/L	Gen. Eng.
BENZENE	LT	1 ug/L	Gen. Eng.
BENZENE	LT	5 ug/L	MetaTrace
DIBENZ(A,H)ANTHRACENE	LT	10 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	1 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	1 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DIELDRIN	LT	10 ug/L	Gen. Eng.
DIMETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-BUTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-OCTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
ENDOSULFAN SULFATE	LT	10 ug/L	Gen. Eng.
ENDOSULFAN SULFATE	LT	10 ug/L	Gen. Eng.

CONTINUED

WELL LFW 29 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		5.50+-2.50 pCi/L	MetaTrace
TOTAL RADIUM		4.50+-0.60 pCi/L	MetaTrace
TRITIUM		2.10+-0.30 pCi/mL	MetaTrace

WELL LFW 30

SRS Grid N 86318.4 Latitude 33.290375 N
 Coordinates E 45170.9 Longitude 81.715532 W
 Screen Zone Elevation 165.8-144.8 ft msl
 Top of Casing Elevation 210.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 910
 Depth to water = 47.73 ft (14.55 m) below the TOC
 Water elevation = 163.07 ft (49.70 m) msl
 pH = 5.6 Alkalinity = 5 mg/L
 Specific conductance = 20 umhos/cm
 Water temperature = 18.3 degrees Celsius
 Water evacuated from the well prior to sampling = 55 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		20.10 umh/cm	MetaTrace
PH		5.89 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.95 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	JB	2 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		990 ug/L	MetaTrace

CONTINUED

WELL LFW 30 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	LT	10 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		29 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	J	2 ug/L	MetaTrace
MANGANESE		9 ug/L	MetaTrace
NITRATE AS NITROGEN		380 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
TOTAL RADIUM		1.20+-0.40 pCi/L	MetaTrace
TRITIUM		3.30+-0.40 pCi/mL	MetaTrace

WELL LFW 31 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

ENDOSULFAN SULFATE	LT	10 ug/L	Gen. Eng.
ETHYLBENZENE	LT	1 ug/L	Gen. Eng.
ETHYLBENZENE	LT	1 ug/L	Gen. Eng.
ETHYLBENZENE	LT	5 ug/L	MetaTrace
FLUORANTHENE	LT	10 ug/L	Gen. Eng.
IRON		72 ug/L	Gen. Eng.
IRON		65 ug/L	Gen. Eng.
IRON		37 ug/L	MetaTrace
FLUORENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBUTADIENE	LT	10 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	150 ug/L	Gen. Eng.
INDENO(1,2,3-C,D)PYRENE	LT	10 ug/L	Gen. Eng.
ISOPHORONE	LT	10 ug/L	Gen. Eng.
TOLUENE	LT	1 ug/L	Gen. Eng.
TOLUENE	LT	1 ug/L	Gen. Eng.
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		5 ug/L	Gen. Eng.
MANGANESE		5 ug/L	Gen. Eng.
MANGANESE		5 ug/L	MetaTrace
NAPHTHALENE	LT	10 ug/L	Gen. Eng.
NITROBENZENE	LT	10 ug/L	Gen. Eng.
N-NITROSODIMETHYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODI-PROPYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODIPHENYLAMINE	LT	10 ug/L	Gen. Eng.
NITRATE AS NITROGEN		220 ug/L	Gen. Eng.
NITRATE AS NITROGEN		230 ug/L	Gen. Eng.
NITRATE AS NITROGEN		450 ug/L	MetaTrace
LEAD		6 ug/L	Gen. Eng.
LEAD		7 ug/L	Gen. Eng.
LEAD		5 ug/L	MetaTrace
PCB 1221	LT	150 ug/L	Gen. Eng.
PCB 1232	LT	150 ug/L	Gen. Eng.
PCB 1242	LT	150 ug/L	Gen. Eng.
PCB 1248	LT	150 ug/L	Gen. Eng.
PCB 1254	LT	150 ug/L	Gen. Eng.
PCB 1260	LT	150 ug/L	Gen. Eng.
PHENANTHRENE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCLE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1,1-TCE	LT	10 ug/L	Gen. Eng.
PYRENE	LT	10 ug/L	Gen. Eng.
SULFATE	LT	5000 ug/L	Gen. Eng.
SULFATE	LT	5000 ug/L	Gen. Eng.
SULFATE		1600 ug/L	MetaTrace

CONTINUED

WELL LF# 31 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

1,1,2,2-TETRACHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2,2-TETRACHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TEETRACHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.
TEETRACHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.
TEETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	Gen. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	Gen. Eng.
TOTAL ORGANIC HALOGENS		23 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	29 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	1 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	1 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	Gen. Eng.
XYLENES	LT	2 ug/L	Gen. Eng.
XYLENES	LT	2 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	2 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROPROPANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROPROPANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
1,2-DIPHENYL HYDRAZINE	LT	10 ug/L	Gen. Eng.
1,2,4-TRICHLOROENZENE	LT	10 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
TRANS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
2-CHLORONAPHTHALENE	LT	10 ug/L	Gen. Eng.
2,4-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
2,6-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
3,3-DICHLOROENZIDENE	LT	10 ug/L	Gen. Eng.
4-BROMOPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.

CONTINUED

WELL LFW 31 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

4-CHLOROPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
GROSS ALPHA	LT	3 pCi/L	Gen. Eng.
GROSS ALPHA	LT	3 pCi/L	Gen. Eng.
GROSS ALPHA	LT	6 pCi/L	MetaTrace
TOTAL RADIUM		1.40+-1.20 pCi/L	Gen. Eng.
TOTAL RADIUM	LT	1 pCi/L	Gen. Eng.
TOTAL RADIUM		1.40+-0.40 pCi/L	MetaTrace
TRITIUM		2.38+-0.36 pCi/mL	Gen. Eng.
TRITIUM		2.46+-0.36 pCi/mL	Gen. Eng.
TRITIUM		1.70+-0.20 pCi/mL	MetaTrace

WELL LFW 31

SRS Grid N 86262.2 Latitude 33.289758 N
 Coordinates E 44869.0 Longitude 81.716217 W
 Screen Zone Elevation 165.7-144.7 ft msl
 Top of Casing Elevation 229.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1130
 Depth to water = 67.65 ft (20.62 m) below the TOC
 Water elevation = 162.05 ft (49.39 m) msl
 pH = 5.1 Alkalinity = 1 mg/L
 Specific conductance = 21 umhos/cm
 Water temperature = 20.5 degrees Celsius
 Water evacuated from the well prior to sampling = 45 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		15.00 umh/cm	Gen. Eng.
SPECIFIC CONDUCTANCE		18.86 umh/cm	MetaTrace
PH		5.22 pH	Gen. Eng.
PH		4.32 pH	MetaTrace
ALPHA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
ACROLEIN	LT	20 ug/L	Gen. Eng.
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	20 ug/L	Gen. Eng.
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
ALDRIN	LT	10 ug/L	Gen. Eng.
ACENAPHTHENE	LT	10 ug/L	Gen. Eng.
ACENAPHTHYLENE	LT	10 ug/L	Gen. Eng.
ANTHRACENE	LT	10 ug/L	Gen. Eng.
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	3 ug/L	MetaTrace
BENZO(A)ANTHRACENE	LT	10 ug/L	Gen. Eng.
BENZO(A)PYRENE	LT	10 ug/L	Gen. Eng.
BENZO(B)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BETA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
BUTYLBENZYL PHTHALATE	LT	10 ug/L	Gen. Eng.
BIS(CHLOROMETHYL)ETHER	LT	10 ug/L	Gen. Eng.

CONTINUED

WELL LFW 31 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

BETA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
BENZIDINE	LT	10 ug/L	Gen. Eng.
BENZO(G,H,I)PERYLENE	LT	10 ug/L	Gen. Eng.
BENZO(K)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	1 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-CHLOROETHOXY) METHANE	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROISOPROPYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROETHYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-ETHYLHEXYL) PHTHALATE		22 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	1 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	1.00 ug/L	Gen. Eng.
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	2 ug/L	Gen. Eng.
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	1 ug/L	Gen. Eng.
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	1 ug/L	Gen. Eng.
CHLOROFORM	LT	5 ug/L	MetaTrace
CHRYSENE	LT	10 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	1 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	1 ug/L	Gen. Eng.
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	1 ug/L	Gen. Eng.
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2200 ug/L	Gen. Eng.
CHLORIDE		1700 ug/L	MetaTrace
CHLOROBENZENE	LT	1 ug/L	Gen. Eng.
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLORDANE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBENZENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROCYCLOPENTADIENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROETHANE	LT	10 ug/L	Gen. Eng.
CHROMIUM	LT	4 ug/L	Gen. Eng.
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	1 ug/L	Gen. Eng.
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	1 ug/L	Gen. Eng.
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	1 ug/L	Gen. Eng.
BENZENE	LT	5 ug/L	MetaTrace
DIBENZ(A,H)ANTHRACENE	LT	10 ug/L	Gen. Eng.
DELTA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	1 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DIELDRIN	LT	10 ug/L	Gen. Eng.
DIMETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-BUTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-OCTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
ENDRIN ALDEHYDE	LT	10 ug/L	Gen. Eng.
ENDRIN	LT	10.0 ug/L	Gen. Eng.

CONTINUED

WELL LFW 31 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

ENDOSULFAN SULFATE	LT	10 ug/L	Gen. Eng.
ETHYLBENZENE	LT	1 ug/L	Gen. Eng.
ETHYLBENZENE	LT	5 ug/L	MetaTrace
FLUORANTHENE	LT	10 ug/L	Gen. Eng.
IRON		9 ug/L	Gen. Eng.
IRON		54 ug/L	MetaTrace
FLUORENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBUTADIENE	LT	10 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY		0.20 ug/L	MetaTrace
HEPTACHLOR	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
INDENO(1,2,3-C,D)PYRENE	LT	10 ug/L	Gen. Eng.
ISOPHORONE	LT	10 ug/L	Gen. Eng.
LINDANE	LT	10 ug/L	Gen. Eng.
TOLUENE	LT	1 ug/L	Gen. Eng.
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		5 ug/L	Gen. Eng.
MANGANESE		5 ug/L	MetaTrace
NAPHTHALENE	LT	10 ug/L	Gen. Eng.
NITROBENZENE	LT	10 ug/L	Gen. Eng.
N-NITROSODIMETHYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODI-PROPYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODIPHENYLAMINE	LT	10 ug/L	Gen. Eng.
NITRATE AS NITROGEN		220 ug/L	Gen. Eng.
NITRATE AS NITROGEN		380 ug/L	MetaTrace
LEAD		6 ug/L	Gen. Eng.
LEAD		5 ug/L	MetaTrace
PCB 1016	LT	150 ug/L	Gen. Eng.
PCB 1221	LT	150 ug/L	Gen. Eng.
PCB 1232	LT	150 ug/L	Gen. Eng.
PCB 1242	LT	150 ug/L	Gen. Eng.
PCB 1248	LT	150 ug/L	Gen. Eng.
PCB 1254	LT	150 ug/L	Gen. Eng.
PCB 1260	LT	150 ug/L	Gen. Eng.
PHENANTHRENE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1,1-TCE	LT	10 ug/L	Gen. Eng.
PYRENE	LT	10 ug/L	Gen. Eng.
SULFATE	LT	5000 ug/L	Gen. Eng.
SULFATE		1500 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	Gen. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		45 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOXAPHENE	LT	10 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	1 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFW 31 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	2 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
1,2-DIPHENYL HYDRAZINE	LT	10 ug/L	Gen. Eng.
1,2,4-TRICHLOROBENZENE	LT	10 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	10 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
2-CHLORONAPHTHALENE	LT	10 ug/L	Gen. Eng.
2,4-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
2,6-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
3,3-DICHLOROBENZIDENE	LT	10 ug/L	Gen. Eng.
4-BROMOPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
4-CHLOROPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
GROSS ALPHA	LT	3 pCi/L	Gen. Eng.
GROSS ALPHA	LT	3 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	Gen. Eng.
TOTAL RADIUM		1.20+-0.40 pCi/L	MetaTrace
TRITIUM		2.01+-0.35 pCi/mL	Gen. Eng.
TRITIUM		2.00+-0.20 pCi/mL	MetaTrace

WELL LFW 32

SRS Grid N 85836.8 Latitude 33.288927 N
 Coordinates E 44935.9 Longitude 81.715214 W
 Screen Zone Elevation 165.1-144.1 ft msl
 Top of Casing Elevation 224.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1610
 Depth to water = 63.79 ft (19.44 m) below the TOC
 Water elevation = 160.31 ft (48.86 m) msl
 pH = 4.8 Alkalinity = 0 mg/L
 Specific conductance = 21 umhos/cm
 Water temperature = 20.9 degrees Celsius
 Water evacuated from the well prior to sampling = 44 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		20.33 umh/cm	MetaTrace
PH		4.59 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2800 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		12 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		5 ug/L	MetaTrace
NITRATE AS NITROGEN		590 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFW 32 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA	LT	1 pCi/L	MetaTrace
TOTAL RADIUM		2.00+-0.40 pCi/L	MetaTrace
TRITIUM		3.30+-0.40 pCi/mL	MetaTrace
TRITIUM		3.20+-0.40 pCi/mL	MetaTrace

WELL LFW 33

- SRS Grid N 85633.8 Latitude 33.288538 N
- Coordinates E 44973.0 Longitude 81.714722 W
- Screen Zone Elevation 165.1-144.1 ft msl
- Top of Casing Elevation 214.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1635
 Depth to water = 54.97 ft (16.76 m) below the TOC
 Water elevation = 159.13 ft (48.50 m) msl
 pH = 4.7 Alkalinity = 0 mg/L
 Specific conductance = 17 umhos/cm
 Water temperature = 21.5 degrees Celsius
 Water evacuated from the well prior to sampling = 46 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		20.98 umh/cm	MetaTrace
PH		5.05 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2000 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFW 33 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

IRON		20 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		3 ug/L	MetaTrace
NITRATE AS NITROGEN		500 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		3.20+-2.30 pCi/L	MetaTrace
TOTAL RADIUM		2.30+-0.50 pCi/L	MetaTrace
TRITIUM		3.30+-0.40 pCi/mL	MetaTrace

WELL LFW 34

SRS Grid N 85409.5 Latitude 33.288114 N
 Coordinates E 45016.9 Longitude S1.714171 W
 Screen Zone Elevation 164.4-143.4 ft msl
 Top of Casing Elevation 201.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1655
 Depth to water - 43.40 ft (13.23 m) below the TOC
 Water elevation - 158.00 ft (48.16 m) msl
 pH - 4.8 Alkalinity - 0 mg/L
 Specific conductance - 20 umhos/cm
 Water temperature - 20.0 degrees Celsius
 Water evacuated from the well prior to sampling - 40 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		18.51 umh/cm	MetaTrace
PH		4.50 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace

CONTINUED

WELL LFV 34 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2500 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		40 ug/L	MetaTrace
MERCURY		0.23 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		7 ug/L	MetaTrace
NITRATE AS NITROGEN		610 ug/L	MetaTrace
LEAD		4 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		2.50+-1.80 pCi/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
TOTAL RADIUM		1.80+-0.50 pCi/L	MetaTrace
TRITIUM		3.50+-0.40 pCi/mL	MetaTrace

WELL LFW 35

SRS Grid N 85237.4 Latitude 33.288325 N
 Coordinates E 45378.8 Longitude 81.712883 W
 Screen Zone Elevation 164.1-143.1 ft msl
 Top of Casing Elevation 184.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1325
 Depth to water = 27.03 ft (8.24 m) below the TOC
 Water elevation = 157.07 ft (47.88 m) msl
 pH = 4.9 Alkalinity = 0 mg/L
 Specific conductance = 16 umhos/cm
 Water temperature = 20.8 degrees Celsius
 Water evacuated from the well prior to sampling = 36 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		13.00 umh/cm	Gen. Eng.
SPECIFIC CONDUCTANCE		15.85 umh/cm	MetaTrace
PH		5.14 pH	Gen. Eng.
PH		4.60 pH	MetaTrace
ALPHA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
ACROLEIN	LT	20 ug/L	Gen. Eng.
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	20 ug/L	Gen. Eng.
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
ALDRIN	LT	10 ug/L	Gen. Eng.
ACENAPHTHENE	LT	10 ug/L	Gen. Eng.
ACENAPHTHYLENE	LT	10 ug/L	Gen. Eng.
ANTHRACENE	LT	10 ug/L	Gen. Eng.
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	3 ug/L	MetaTrace
BENZO(A)ANTHRACENE	LT	10 ug/L	Gen. Eng.
BENZO(A)PYRENE	LT	10 ug/L	Gen. Eng.
BENZO(B)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BETA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
BUTYLBENZYL PHTHALATE	LT	10 ug/L	Gen. Eng.
BIS(CHLOROMETHYL)ETHER	LT	10 ug/L	Gen. Eng.
BETA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
BENZIDINE	LT	10 ug/L	Gen. Eng.
BENZO(G,H,I)PERYLENE	LT	10 ug/L	Gen. Eng.
BENZO(K)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	1 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-CHLOROETHOXY) METHANE	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROISOPROPYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROETHYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	1 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	1.00 ug/L	Gen. Eng.
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	2 ug/L	Gen. Eng.

CONTINUED

WELL LFW 35 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	1 ug/L	Gen. Eng.
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	1 ug/L	Gen. Eng.
CHLOROFORM	LT	5 ug/L	MetaTrace
CHRYSENE	LT	10 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	1 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	1 ug/L	Gen. Eng.
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	1 ug/L	Gen. Eng.
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2500 ug/L	Gen. Eng.
CHLORIDE		2100 ug/L	MetaTrace
CHLOROBENZENE	LT	1 ug/L	Gen. Eng.
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLORDANE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBENZENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROCYCLOPENTADIENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROETHANE	LT	10 ug/L	Gen. Eng.
CHROMIUM	LT	4 ug/L	Gen. Eng.
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	1 ug/L	Gen. Eng.
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	1 ug/L	Gen. Eng.
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	1 ug/L	Gen. Eng.
BENZENE	LT	5 ug/L	MetaTrace
DIBENZ(A,H)ANTHRACENE	LT	10 ug/L	Gen. Eng.
DELTA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	1 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DIELDRIN	LT	10 ug/L	Gen. Eng.
DIMETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-BUTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-OCTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
ENDRIN ALDEHYDE	LT	10 ug/L	Gen. Eng.
ENDRIN	LT	10.0 ug/L	Gen. Eng.
ENDOSULFAN SULFATE	LT	10 ug/L	Gen. Eng.
ETHYLBENZENE	LT	1 ug/L	Gen. Eng.
ETHYLBENZENE	LT	5 ug/L	MetaTrace
FLUORANTHENE	LT	10 ug/L	Gen. Eng.
IRON		10 ug/L	Gen. Eng.
IRON		16 ug/L	MetaTrace
FLUORENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBUTADIENE	LT	10 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
INDENO(1,2,3-C,D)PYRENE	LT	10 ug/L	Gen. Eng.
ISOPHORONE	LT	10 ug/L	Gen. Eng.
LINDANE	LT	10 ug/L	Gen. Eng.

CONTINUED

WELL LFW 35 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

TOLUENE	LT	1 ug/L	Gen. Eng.
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		2 ug/L	Gen. Eng.
MANGANESE		3 ug/L	MetaTrace
NAPHTHALENE	LT	10 ug/L	Gen. Eng.
NITROBENZENE	LT	10 ug/L	Gen. Eng.
N-NITROSODIMETHYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODI-PROPYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODIPHENYLAMINE	LT	10 ug/L	Gen. Eng.
NITRATE AS NITROGEN		320 ug/L	Gen. Eng.
NITRATE AS NITROGEN		470 ug/L	MetaTrace
LEAD	LT	6 ug/L	Gen. Eng.
LEAD	LT	3 ug/L	MetaTrace
PCB 1016	LT	150 ug/L	Gen. Eng.
PCB 1221	LT	150 ug/L	Gen. Eng.
PCB 1232	LT	150 ug/L	Gen. Eng.
PCB 1242	LT	150 ug/L	Gen. Eng.
PCB 1248	LT	150 ug/L	Gen. Eng.
PCB 1254	LT	150 ug/L	Gen. Eng.
PCB 1260	LT	150 ug/L	Gen. Eng.
PHENANTHRENE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DICL	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1,1-TCE	LT	10 ug/L	Gen. Eng.
PYRENE	LT	10 ug/L	Gen. Eng.
SULFATE	LT	5000 ug/L	Gen. Eng.
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	Gen. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		27 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOXAPHENE	LT	10 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	1 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	2 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
4,2-DIPHENYL HYDRAZINE	LT	10 ug/L	Gen. Eng.

CONTINUED

WELL LFW 35 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

1,2,4-TRICHLOROBENZENE	LT	10 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	10 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
2-CHLORONAPHTHALENE	LT	10 ug/L	Gen. Eng.
2,4-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
2,6-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
3,3-DICHLOROBENZIDENE	LT	10 ug/L	Gen. Eng.
4-BROMOPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
4-CHLOROPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
GROSS ALPHA	LT	3 pCi/L	Gen. Eng.
GROSS ALPHA	LT	3 pCi/L	MetaTrace
TOTAL RADIUM		1.20+-1.80 pCi/L	Gen. Eng.
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		4.80+-0.40 pCi/mL	Gen. Eng.
TRITIUM		4.00+-0.40 pCi/mL	MetaTrace

WELL LFW 35

SRS Grid N 85237.4 Latitude 33.288325 N
 Coordinates E 45378.8 Longitude 81.712883 W
 Screen Zone Elevation 164.1-143.1 ft msl
 Top of Casing Elevation 184.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/08/89 Time 1325
 Depth to water = 27.03 ft (8.24 m) below the TOC
 Water elevation = 157.07 ft (47.88 m) msl
 pH = 4.9 Alkalinity = 0 mg/L
 Specific conductance = 16 umhos/cm
 Water temperature = 20.8 degrees Celsius
 Water evacuated from the well prior to sampling = 36 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		13.00 umh/cm	Gen. Eng.
SPECIFIC CONDUCTANCE		16.02 umh/cm	MetaTrace
PH		5.09 pH	Gen. Eng.
PH		4.79 pH	MetaTrace
ALPHA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
ACROLEIN	LT	20 ug/L	Gen. Eng.
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	20 ug/L	Gen. Eng.
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
ALDRIN	LT	10 ug/L	Gen. Eng.
ACENAPHTHENE	LT	10 ug/L	Gen. Eng.
ACENAPHTHYLENE	LT	10 ug/L	Gen. Eng.

CONTINUED

WELL LFW 35 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

ANTHRACENE	LT	10 ug/L	Gen. Eng.
ARSENIC	LT	2 ug/L	Gen. Eng.
ARSENIC	LT	3 ug/L	MetaTrace
BENZO(A)ANTHRACENE	LT	10 ug/L	Gen. Eng.
BENZO(A)PYRENE	LT	10 ug/L	Gen. Eng.
BENZO(B)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BETA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.
BUTYLBENZYL PHTHALATE	LT	10 ug/L	Gen. Eng.
BIS(CHLOROMETHYL)ETHER	LT	10 ug/L	Gen. Eng.
BETA-ENDOSULFAN	LT	10 ug/L	Gen. Eng.
BENZIDINE	LT	10 ug/L	Gen. Eng.
BENZO(G,H,I)PERYLENE	LT	10 ug/L	Gen. Eng.
BENZO(K)FLUORANTHENE	LT	10 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	1 ug/L	Gen. Eng.
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-CHLOROETHOXY) METHANE	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROISOPROPYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-CHLOROETHYL) ETHER	LT	10 ug/L	Gen. Eng.
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	1 ug/L	Gen. Eng.
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	1.00 ug/L	Gen. Eng.
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	2 ug/L	Gen. Eng.
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	1 ug/L	Gen. Eng.
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	1 ug/L	Gen. Eng.
CHLOROFORM	LT	5 ug/L	MetaTrace
CHRYSENE	LT	10 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	1 ug/L	Gen. Eng.
METHYLENE CHLORIDE	LT	5 ug/L	MetaTrace
BROMOMETHANE	LT	1 ug/L	Gen. Eng.
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	1 ug/L	Gen. Eng.
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2500 ug/L	Gen. Eng.
CHLORIDE		2000 ug/L	MetaTrace
CHLOROBENZENE	LT	1 ug/L	Gen. Eng.
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHLORDANE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBENZENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROCYCLOPENTADIENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROETHANE	LT	10 ug/L	Gen. Eng.
CHROMIUM	LT	4 ug/L	Gen. Eng.
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	1 ug/L	Gen. Eng.
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	1 ug/L	Gen. Eng.
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	1 ug/L	Gen. Eng.
BENZENE	LT	5 ug/L	MetaTrace
DIBENZ(A,H)ANTHRACENE	LT	10 ug/L	Gen. Eng.
DELTA-BENZENEHEXACHLORIDE	LT	10 ug/L	Gen. Eng.

CONTINUED

WELL LFV 35 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

DIBROMOCHLOROMETHANE	LT	1 ug/L	Gen. Eng.
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DIELDRIN	LT	10 ug/L	Gen. Eng.
DIMETHYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-BUTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
DI-N-OCTYL PHTHALATE	LT	10 ug/L	Gen. Eng.
ENDRIN ALDEHYDE	LT	10 ug/L	Gen. Eng.
ENDRIN	LT	10.0 ug/L	Gen. Eng.
ENDOSULFAN SULFATE	LT	10 ug/L	Gen. Eng.
ETHYLBENZENE	LT	1 ug/L	Gen. Eng.
ETHYLBENZENE	LT	5 ug/L	MetaTrace
FLUORANTHENE	LT	10 ug/L	Gen. Eng.
IRON		11 ug/L	Gen. Eng.
IRON		24 ug/L	MetaTrace
FLUORENE	LT	10 ug/L	Gen. Eng.
HEXACHLOROBUTADIENE	LT	10 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	Gen. Eng.
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	10 ug/L	Gen. Eng.
HEPTACHLOR EPOXIDE	LT	10 ug/L	Gen. Eng.
INDENO(1,2,3-C,D)PYRENE	LT	10 ug/L	Gen. Eng.
ISOPHORONE	LT	10 ug/L	Gen. Eng.
LINDANE	LT	10 ug/L	Gen. Eng.
TOLUENE	LT	1 ug/L	Gen. Eng.
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		3 ug/L	Gen. Eng.
MANGANESE		5 ug/L	MetaTrace
NAPHTHALENE	LT	10 ug/L	Gen. Eng.
NITROBENZENE	LT	10 ug/L	Gen. Eng.
N-NITROSODIMETHYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODI-PROPYLAMINE	LT	10 ug/L	Gen. Eng.
N-NITROSODIPHENYLAMINE	LT	10 ug/L	Gen. Eng.
NITRATE AS NITROGEN		290 ug/L	Gen. Eng.
NITRATE AS NITROGEN		560 ug/L	MetaTrace
LEAD		7 ug/L	Gen. Eng.
LEAD	LT	3 ug/L	MetaTrace
PCB 1016	LT	150 ug/L	Gen. Eng.
PCB 1221	LT	150 ug/L	Gen. Eng.
PCB 1232	LT	150 ug/L	Gen. Eng.
PCB 1242	LT	150 ug/L	Gen. Eng.
PCB 1248	LT	150 ug/L	Gen. Eng.
PCB 1254	LT	150 ug/L	Gen. Eng.
PCB 1260	LT	150 ug/L	Gen. Eng.
PHENANTHRENE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCLE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1-DCE	LT	10 ug/L	Gen. Eng.
2,2-BIS(4-CHLOROPHENYL)-1,1,1-TCE	LT	10 ug/L	Gen. Eng.
PYRENE	LT	10 ug/L	Gen. Eng.
SULFATE	LT	5000 ug/L	Gen. Eng.
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.

CONTINUED

WELL LFW 36 COLLECTED ON 09/17/89 LABORATORY ANALYSES CONTINUED

TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE		40 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	J	3 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		4.00+-3.00 pCi/L	MetaTrace
TOTAL RADIUM		2.40+-0.50 pCi/L	MetaTrace
TRITIUM		9.70+-1.00 pCi/mL	MetaTrace

WELL LFW 37

SRS Grid N 83113.2 Latitude 33.284100 N
 Coordinates E 45667.7 Longitude 81.707994 W
 Screen Zone Elevation 149.9-128.9 ft msl
 Top of Casing Elevation 169.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 1010
 Depth to water - 27.65 ft (8.43 m) below the TOC
 Water elevation - 142.25 ft (43.36 m) msl
 pH - 5.0 Alkalinity - 4 mg/L
 Specific conductance - 89 umhos/cm
 Water temperature - 18.8 degrees Celsius
 Water evacuated from the well prior to sampling - 41 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		78.60 umh/cm	MetaTrace
PH		5.25 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE		75 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		71 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		18300 ug/L	MetaTrace

CONTINUED

WELL LFW 37 COLLECTED ON 09/17/89 LABORATORY ANALYSES CONTINUED

CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE		17 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	J	2 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		51 ug/L	MetaTrace
MERCURY		0.21 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		7 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE		1300 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		154 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		122 ug/L	MetaTrace
• TRICHLOROETHYLENE		18.0 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	J	2 ug/L	MetaTrace
* 1,1-DICHLOROETHYLENE		6 ug/L	MetaTrace
1,1-DICHLOROETHANE		52 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE		5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		6.80+-3.00 pCi/L	MetaTrace
TOTAL RADIUM		4.40+-0.60 pCi/L	MetaTrace
TRITIUM		12.00+-2.00 pCi/mL	MetaTrace
TRITIUM		13.00+-2.00 pCi/mL	MetaTrace

WELL LF# 35 COLLECTED ON 09/08/89 LABORATORY ANALYSES CONTINUED

TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON		1000 ug/L	Gen. Eng.
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		5 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	1.00 ug/L	Gen. Eng.
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TONAPHENE	LT	10 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHYLENE	LT	1 ug/L	Gen. Eng.
TRANS-1,2-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	2 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	1 ug/L	Gen. Eng.
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	1 ug/L	Gen. Eng.
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	10 ug/L	Gen. Eng.
1,2-DIPHENYL HYDRAZINE	LT	10 ug/L	Gen. Eng.
1,2,4-TRICHLOROBENZENE	LT	10 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	1 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	10 ug/L	Gen. Eng.
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
2-CHLORONAPHTHALENE	LT	10 ug/L	Gen. Eng.
2,4-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
2,6-DINITROTOLUENE	LT	10 ug/L	Gen. Eng.
3,3-DICHLOROBENZIDENE	LT	10 ug/L	Gen. Eng.
4-BROMOPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
4-CHLOROPHENYLPHENYL ETHER	LT	10 ug/L	Gen. Eng.
GROSS ALPHA	LT	3 pCi/L	Gen. Eng.
GROSS ALPHA		2.70+-2.10 pCi/L	MetaTrace
TOTAL RADIUM		1.00+-1.70 pCi/L	Gen. Eng.
TOTAL RADIUM		1.50+-0.40 pCi/L	MetaTrace
TRITIUM		4.80+-0.39 pCi/mL	Gen. Eng.
TRITIUM		3.90+-0.40 pCi/mL	MetaTrace

WELL LFW 36

SRS Grid N 83535.5 Latitude 33.284894 N
 Coordinates E 45582.3 Longitude 81.709040 W
 Screen Zone Elevation 150.4-129.4 ft msl
 Top of Casing Elevation 170.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 1040
 Depth to water = 25.28 ft (7.71 m) below the TOC
 Water elevation = 145.12 ft (44.23 m) msl
 pH = 6.1 Alkalinity = 54 mg/L
 Specific conductance = 226 umhos/cm
 Water temperature = 21.1 degrees Celsius
 Water evacuated from the well prior to sampling = 41 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		183.9 umh/cm	MetaTrace
PH		6.28 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	130 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE		12 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		18900 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE		25 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	280 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		10440 ug/L	MetaTrace
MERCURY		0.33 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		39 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE		2600 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		180 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace

CONTINUED

WELL LFW 40 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE		19 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		2.60+-2.10 pCi/L	MetaTrace
TOTAL RADIUM		1.70+-0.40 pCi/L	MetaTrace
TRITIUM		3.70+-0.40 pCi/mL	MetaTrace

WELL LFW 41

SRS Grid N 83304.9 Latitude 33.286089 N
 Coordinates E 46626.9 Longitude 81.705841 W
 Screen Zone Elevation 150.5-129.5 ft msl
 Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1435
 Depth to water = 26.64 ft (8.12 m) below the TOC
 Water elevation = 143.86 ft (43.85 m) msl
 pH = 4.8 Alkalinity = 0 mg/L
 Specific conductance = 15 umhos/cm
 Water temperature = 19.4 degrees Celsius
 Water evacuated from the well prior to sampling = 46 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		15.74 umh/cm	MetaTrace
PH		5.25 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	290 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE		12 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	JB	3 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		1700 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFV 41 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	59 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		.22 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE	LT	2 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		2.70+-2.10 pCi/L	MetaTrace
TOTAL RADIUM		2.00+-0.50 pCi/L	MetaTrace
TRITIUM		4.00+-0.40 pCi/mL	MetaTrace

WELL LFW 39 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	240 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		20 ug/L	MetaTrace
MERCURY		0.32 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		3 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		113 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	J	4 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA	LT	2 pCi/L	MetaTrace
TOTAL RADIUM	LT	1 pCi/L	MetaTrace
TRITIUM		4.50+-0.50 pCi/mL	MetaTrace

WELL LFW 40

SRS Grid N 83248.8 Latitude 33.285587 N
 Coordinates E 46395.1 Longitude 81.706343 W
 Screen Zone Elevation 151.0-130.0 ft msl
 Top of Casing Elevation 171.00 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1500
 Depth to water = 28.81 ft (8.78 m) below the TOC
 Water elevation = 142.19 ft (43.34 m) msl
 pH = 4.8 Alkalinity = 0 mg/L
 Specific conductance = 26 umhos/cm
 Water temperature = 21.2 degrees Celsius
 Water evacuated from the well prior to sampling = 38 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		31.10 umh/cm	MetaTrace
PH		4.33 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	JB	2 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE		450 ug/L	MetaTrace
* CARBON TETRACHLORIDE		17.0 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	B	12 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		2600 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE		5 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	JB	5 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		25 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE	LT	2 ug/L	MetaTrace
NITRATE AS NITROGEN		1200 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE		1100 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		79 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace

CONTINUED

WELL LFW 38

SRS Grid N 83172.3 Latitude 33.284803 N
 Coordinates E 46018.5 Longitude 81.707185 W
 Screen Zone Elevation 150.3-129.3 ft msl
 Top of Casing Elevation 170.30 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/17/89 Time 935
 Depth to water = 27.69 ft (8.44 m) below the TOC
 Water elevation = 142.61 ft (43.47 m) msl
 pH = 4.8 Alkalinity = 0 g/L
 Specific conductance = 45 umhos/cm
 Water temperature = 19.4 degrees Celsius
 Water evacuated from the well prior to sampling = 35 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		46.00 umh/cm	MetaTrace
PH		5.07 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	LT	10 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE		120 ug/L	MetaTrace
* CARBON TETRACHLORIDE		9.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM		7 ug/L	MetaTrace
METHYLENE CHLORIDE		27 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		8100 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	J	6 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	LT	10 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		30 ug/L	MetaTrace
MERCURY		0.40 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		8 ug/L	MetaTrace
NITRATE AS NITROGEN	LT	230 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace
TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS		166 ug/L	MetaTrace
* TRICHLOROETHYLENE		19.0 ug/L	MetaTrace

CONTINUED

WELL LFW 38 COLLECTED ON 09/17/89 LABORATORY ANALYSES CONTINUED

TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
* 1,1-DICHLOROETHYLENE		11 ug/L	MetaTrace
1,1-DICHLOROETHANE		27 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE		9 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
* 1,2-DICHLOROETHANE		9 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA	LT	7 pCi/L	MetaTrace
TOTAL RADIUM		1.20+-0.40 pCi/L	MetaTrace
TRITIUM		5.50+-0.60 pCi/mL	MetaTrace

WELL LFW 39

SRS Grid N 83213.1 Latitude 33.285220 N
 Coordinates E 46218.5 Longitude 81.706738 W
 Screen Zone Elevation 151.4-130.4 ft msl
 Top of Casing Elevation 171.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1525
 Depth to water - 28.67 ft (8.74 m) below the TOC
 Water elevation - 142.73 ft (43.50 m) msl
 pH - 4.7 Alkalinity - 0 mg/L
 Specific conductance - 13 umhos/cm
 Water temperature - 19.9 degrees Celsius
 Water evacuated from the well prior to sampling - 40 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		16.43 umh/cm	MetaTrace
PH		5.19 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	110 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE		76 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	JB	2 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		1900 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace

CONTINUED

WELL LFW 42

SRS Grid N 83776.2 Latitude 33.286978 N
 Coordinates E 46532.9 Longitude 81.707005 W
 Screen Zone Elevation 150.1-129.1 ft msl
 Top of Casing Elevation 170.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 09/16/89 Time 1405
 Depth to water = 24.20 ft (7.38 m) below the TOC
 Water elevation = 145.90 ft (44.47 m) msl
 pH = 4.8 Alkalinity = 0 mg/L
 Specific conductance = 16 umhos/cm
 Water temperature = 20.3 degrees Celsius
 Water evacuated from the well prior to sampling = 51 gal

LABORATORY ANALYSES

SPECIFIC CONDUCTANCE		18.73 umh/cm	MetaTrace
PH		5.32 pH	MetaTrace
ACROLEIN	LT	5 ug/L	MetaTrace
ACRYLONITRILE	LT	5 ug/L	MetaTrace
ALPHA-ENDOSULFAN	LT	0.05 ug/L	MetaTrace
ARSENIC	LT	3 ug/L	MetaTrace
BETA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
BROMODICHLOROMETHANE	LT	5 ug/L	MetaTrace
BIS(2-ETHYLHEXYL) PHTHALATE	B	52 ug/L	MetaTrace
TRICHLOROFLUOROMETHANE	LT	5 ug/L	MetaTrace
CARBON TETRACHLORIDE	LT	5.00 ug/L	MetaTrace
CADMIUM	LT	4 ug/L	MetaTrace
BROMOFORM	LT	5 ug/L	MetaTrace
CHLOROFORM	LT	5 ug/L	MetaTrace
METHYLENE CHLORIDE	B	8 ug/L	MetaTrace
BROMOMETHANE	LT	10 ug/L	MetaTrace
CHLOROMETHANE	LT	10 ug/L	MetaTrace
CHLORIDE		1700 ug/L	MetaTrace
CHLOROBENZENE	LT	5 ug/L	MetaTrace
CHROMIUM	LT	5 ug/L	MetaTrace
CHLOROETHENE (VINYL CHLORIDE)	LT	5 ug/L	MetaTrace
CHLOROETHANE	LT	10 ug/L	MetaTrace
BENZENE	LT	5 ug/L	MetaTrace
DELTA-BENZENEHEXACHLORIDE	LT	0.05 ug/L	MetaTrace
DIBROMOCHLOROMETHANE	LT	5 ug/L	MetaTrace
DIETHYL PHTHALATE	LT	10 ug/L	MetaTrace
DI-N-OCTYL PHTHALATE	B	52 ug/L	MetaTrace
ETHYLBENZENE	LT	5 ug/L	MetaTrace
IRON		32 ug/L	MetaTrace
MERCURY	LT	0.20 ug/L	MetaTrace
HEPTACHLOR	LT	0.05 ug/L	MetaTrace
TOLUENE	LT	5 ug/L	MetaTrace
MANGANESE		3 ug/L	MetaTrace
NITRATE AS NITROGEN		410 ug/L	MetaTrace
LEAD	LT	3 ug/L	MetaTrace
SULFATE	LT	1000 ug/L	MetaTrace
1,1,2,2-TETRACHLOROETHANE	LT	5 ug/L	MetaTrace

CONTINUED

WELL LEW 42 COLLECTED ON 09/16/89 LABORATORY ANALYSES CONTINUED

TETRACHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TOTAL ORGANIC CARBON	LT	1000 ug/L	MetaTrace
TOTAL ORGANIC HALOGENS	LT	5 ug/L	MetaTrace
TRICHLOROETHYLENE	LT	5.00 ug/L	MetaTrace
TRANS-1,2-DICHLOROETHENE	LT	5 ug/L	MetaTrace
TRANS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
XYLENES	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHYLENE	LT	5 ug/L	MetaTrace
1,1-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,1-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,1,2-TRICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROETHANE	LT	5 ug/L	MetaTrace
1,2-DICHLOROPROPANE	LT	5 ug/L	MetaTrace
CIS-1,3-DICHLOROPROPENE	LT	5 ug/L	MetaTrace
2-CHLOROETHYL VINYL ETHER	LT	5 ug/L	MetaTrace
GROSS ALPHA		5.30+-2.90 pCi/L	MetaTrace
TOTAL RADIUM		3.50+-0.60 pCi/L	MetaTrace
TRITIUM		3.80+-0.40 pCi/mL	MetaTrace

WELL LFW 16

SRS Grid N 84748.9 Latitude 33.288018 N
Coordinates E 45852.6 Longitude 81.710687 W
Screen Zone Elevation 160.9-130.9 ft msl
Top of Casing Elevation 178.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1300
Depth to water - 25.15 ft (7.67 m) below the TOC
Water elevation - 153.65 ft (46.83 m) msl
pH - 4.7 Alkalinity - 0 mg/L
Specific conductance - 30 umhos/cm
Water temperature - 17.6 degrees Celsius
Water evacuated from the well prior to sampling - 59 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 17

SRS Grid N 84602.8 Latitude 33.287295 N
Coordinates E 45607.3 Longitude 81.711048 W
Screen Zone Elevation 158.1-128.1 ft msl
Top of Casing Elevation 177.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1005
Depth to water - 24.47 ft (7.46 m) below the TOC
Water elevation - 153.33 ft (46.74 m) msl
pH - 6.9 Alkalinity - 91 mg/L
Specific conductance - 334 umhos/cm
Water temperature - 17.6 degrees Celsius
Water evacuated from the well prior to sampling - 66 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 18

SRS Grid N 84577.3 Latitude 33.286997 N
Coordinates E 45459.4 Longitude 81.711388 W
Screen Zone Elevation 159.6-129.6 ft msl
Top of Casing Elevation 175.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1030
Depth to water = 21.74 ft (6.63 m) below the TOC
Water elevation = 153.66 ft (46.84 m) msl
pH = 6.9 Alkalinity = 95 mg/L
Specific conductance = 294 umhos/cm
Water temperature = 18.6 degrees Celsius
Water evacuated from the well prior to sampling = 63 gal

LABORATORY ANALYSES

URANIUM	LT	84 ug/L	MetaTrace
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WELL LFW 19

SRS Grid N 84817.2 Latitude 33.286998 N
Coordinates E 45135.4 Longitude 81.712707 W
Screen Zone Elevation 159.7-129.7 ft msl
Top of Casing Elevation 176.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1140
Depth to water = 22.53 ft (6.87 m) below the TOC
Water elevation = 154.17 ft (46.99 m) msl
pH = 5.1 Alkalinity = 2 mg/L
Specific conductance = 18 umhos/cm
Water temperature = 16.7 degrees Celsius
Water evacuated from the well prior to sampling = 64 gal

LABORATORY ANALYSES

URANIUM	LT	84 ug/L	MetaTrace
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WELL LFW 6

SRS Grid N 84537.8 Latitude 33.286553 N
Coordinates E 45241.2 Longitude 81.711886 W
Screen Zone Elevation 160.0-140.0 ft msl
Top of Casing Elevation 171.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1115
Depth to water - 19.17 ft (5.84 m) below the TOC
Water elevation - 152.53 ft (46.49 m) msl
pH - 6.5 Alkalinity - 101 mg/L
Specific conductance - 343 umhos/cm
Water temperature - 18.1 degrees Celsius
Water evacuated from the well prior to sampling - 35 gal

LABORATORY ANALYSES

URANIUM	LT	84 ug/L	MetaTrace
URANIUM	LT	84 ug/L	MetaTrace

WELL LFW 7

SRS Grid N 84310.3 Latitude 33.286177 N
Coordinates E 45318.9 Longitude 81.711239 W
Screen Zone Elevation 159.3-139.3 ft msl
Top of Casing Elevation 171.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1100
Depth to water - 20.29 ft (6.18 m) below the TOC
Water elevation - 151.11 ft (46.06 m) msl
pH - 6.9 Alkalinity - 180 mg/L
Specific conductance - 474 umhos/cm
Water temperature - 18.2 degrees Celsius
Water evacuated from the well prior to sampling - 31 gal

LABORATORY ANALYSES

URANIUM	LT	84 ug/L	MetaTrace
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WELL LFW 8

SRS Grid N 84032.6 Latitude 33.285720 N
Coordinates E 45415.3 Longitude 81.710445 W
Screen Zone Elevation 158.8-138.8 ft msl
Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1545
Depth to water = 21.40 ft (6.52 m) below the TOC
Water elevation = 149.10 ft (45.45 m) msl
pH = 6.8 Alkalinity = 117 mg/L
Specific conductance = 313 umhos/cm
Water temperature = 18.4 degrees Celsius
Water evacuated from the well prior to sampling = 32 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 10A

SRS Grid N 84369.6 Latitude 33.287315 N
Coordinates E 45935.6 Longitude 81.709731 W
Screen Zone Elevation 158.5-128.5 ft msl
Top of Casing Elevation 175.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1320
Depth to water = 24.62 ft (7.50 m) below the TOC
Water elevation = 150.88 ft (45.99 m) msl
pH = 5.0 Alkalinity = 0 mg/L
Specific conductance = 34 umhos/cm
Water temperature = 18.5 degrees Celsius
Water evacuated from the well prior to sampling = 58 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 20

SRS Grid N 85262.6 Latitude 33.288714 N
Coordinates E 45582.9 Longitude 81.712395 W
Screen Zone Elevation -164.5-134.5 ft msl
Top of Casing Elevation 180.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1345
Depth to water = 23.73 ft (7.23 m) below the TOC
Water elevation = 157.17 ft (47.91 m) msl
pH = 4.8 Alkalinity = 0 mg/L
Specific conductance = 15 umhos/cm
Water temperature = 15.5 degrees Celsius
Water evacuated from the well prior to sampling = 59 gal

LABORATORY ANALYSES

URANIUM	LT	84 ug/L	MetaTrace
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WELL LFW 21

SRS Grid N 84178.3 Latitude 33.287241 N
Coordinates E 46149.4 Longitude 81.708796 W
Screen Zone Elevation 159.5-129.5 ft msl
Top of Casing Elevation 176.20 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/12/89 Time 1420
Depth to water = 26.37 ft (8.04 m) below the TOC
Water elevation = 149.83 ft (45.67 m) msl
pH = 5.5 Alkalinity = 27 mg/L
Specific conductance = 213 umhos/cm
Water temperature = 19.0 degrees Celsius
Water evacuated from the well prior to sampling = 53 gal

LABORATORY ANALYSES

URANIUM	LT	84 ug/L	MetaTrace
URANIUM	LT	84 ug/L	MetaTrace

WELL LFW 22

SRS Grid N 84223.6 Latitude 33.287628 N
Coordinates E 46325.2 Longitude 81.708421 W
Screen Zone Elevation 152.1-122.1 ft msl
Top of Casing Elevation 174.20 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/12/89 Time 1400
Depth to water = 24.71 ft (7.53 m) below the TOC
Water elevation = 149.49 ft (45.57 m) msl
pH = 4.8 Alkalinity = 0 mg/L
Specific conductance = 27 umhos/cm
Water temperature = 18.9 degrees Celsius
Water evacuated from the well prior to sampling = 71 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 23

SRS Grid N 84251.3 Latitude 33.287903 N
Coordinates E 46456.1 Longitude 81.708131 W
Screen Zone Elevation 154.8-124.8 ft msl
Top of Casing Elevation 171.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/12/89 Time 1335
Depth to water = 21.69 ft (6.61 m) below the TOC
Water elevation = 150.11 ft (45.75 m) msl
pH = 4.8 Alkalinity = 0 mg/L
Specific conductance = 20 umhos/cm
Water temperature = 19.0 degrees Celsius
Water evacuated from the well prior to sampling = 66 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 24

SRS Grid N 84544.2 Latitude 33.288656 N
Coordinates E 46520.8 Longitude 81.708530 W
Screen Zone Elevation 154.2-124.2 ft msl
Top of Casing Elevation 171.30 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/12/89 Time 1310
Depth to water = 18.91 ft (5.76 m) below the TOC
Water elevation = 152.39 ft (46.45 m) msl
pH = 4.9 Alkalinity = 0 mg/L
Specific conductance = 18 umhos/cm
Water temperature = 18.8 degrees Celsius
Water evacuated from the well prior to sampling = 73 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 25

SRS Grid N 84967.2 Latitude 33.289436 N
Coordinates E 46425.7 Longitude 81.709602 W
Screen Zone Elevation 152.8-122.8 ft msl
Top of Casing Elevation 174.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/12/89 Time 1235
Depth to water = 20.01 ft (6.10 m) below the TOC
Water elevation = 154.69 ft (47.15 m) msl
pH = 4.9 Alkalinity = 0 mg/L
Specific conductance = 17 umhos/cm
Water temperature = 18.4 degrees Celsius
Water evacuated from the well prior to sampling = 83 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 26

SRS Grid N 85654.6 Latitude 33.289663 N
Coordinates E 45633.8 Longitude 81.713023 W
Screen Zone Elevation 164.9-143.9 ft msl
Top of Casing Elevation 186.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1325
Depth to water = 27.78 ft (8.47 m) below the TOC
Water elevation = 159.12 ft (48.50 m) msl
pH = 4.9 Alkalinity = 0 mg/L
Specific conductance = 15 umhos/cm
Water temperature = 16.0 degrees Celsius
Water evacuated from the well prior to sampling = 43 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 27

SRS Grid N 85839.1 Latitude 33.290010 N
Coordinates E 45596.1 Longitude 81.713481 W
Screen Zone Elevation 163.6-142.6 ft msl
Top of Casing Elevation 189.60 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1310
Depth to water = 29.70 ft (9.05 m) below the TOC
Water elevation = 159.90 ft (48.74 m) msl
pH = 5.0 Alkalinity = 0 mg/L
Specific conductance = 17 umhos/cm
Water temperature = 16.2 degrees Celsius
Water evacuated from the well prior to sampling = 45 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 28

SRS Grid N 86079.6 Latitude 33.290475 N
Coordinates E 45555.3 Longitude 81.714056 W
Screen Zone Elevation 161.8-140.8 ft msl
Top of Casing Elevation 192.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1455
Depth to water = 31.57 ft (9.62 m) below the TOC
Water elevation = 161.23 ft (49.14 m) msl
pH = 5.0 Alkalinity = 0 mg/L
Specific conductance = 24 umhos/cm
Water temperature = 16.2 degrees Celsius
Water evacuated from the well prior to sampling = 11 gal
The well went dry during purging.

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 29

SRS Grid N 86372.7 Latitude 33.291038 N
Coordinates E 45503.3 Longitude 81.714763 W
Screen Zone Elevation 164.7-143.7 ft msl
Top of Casing Elevation 195.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1445
Depth to water = 33.25 ft (10.13 m) below the TOC
Water elevation = 162.45 ft (49.52 m) msl
pH = 4.7 Alkalinity = 0 mg/L
Specific conductance = 26 umhos/cm
Water temperature = 16.5 degrees Celsius
Water evacuated from the well prior to sampling = 49 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 30

SRS Grid N 86318.4 Latitude 33.290375 N
Coordinates E 45170.9 Longitude 81.715532 W
Screen Zone Elevation 165.8-144.8 ft msl
Top of Casing Elevation 210.80 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1425
Depth to water - 47.99 ft (14.63 m) below the TOC
Water elevation - 162.81 ft (49.63 m) msl
pH - 5.7 Alkalinity - 4 mg/L
Specific conductance - 22 umhos/cm
Water temperature - 15.9 degrees Celsius
Water evacuated from the well prior to sampling - 47 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 31

SRS Grid N 86262.2 Latitude 33.289758 N
Coordinates E 44869.0 Longitude 81.716217 W
Screen Zone Elevation 165.7-144.7 ft msl
Top of Casing Elevation 229.70 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1250
Depth to water - 67.68 ft (20.63 m) below the TOC
Water elevation - 162.02 ft (49.38 m) msl
pH - 5.2 Alkalinity - 0 mg/L
Specific conductance - 19 umhos/cm
Water temperature - 16.5 degrees Celsius
Water evacuated from the well prior to sampling - 45 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 32

SRS Grid N 85836.8 Latitude 33.288927 N
Coordinates E 44935.9 Longitude 81.715214 W
Screen Zone Elevation 165.1-144.1 ft msl
Top of Casing Elevation 224.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1235
Depth to water = 63.97 ft (19.50 m).below the TOC
Water elevation = 160.13 ft (48.81 m) msl
pH = 5.0 Alkalinity = 0 mg/L
Specific conductance = 25 umhos/cm
Water temperature = 16.4 degrees Celsius
Water evacuated from the well prior to sampling = 42 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 33

SRS Grid N 85633.8 Latitude 33.288538 N
Coordinates E 44973.0 Longitude 81.714722 W
Screen Zone Elevation 165.1-144.1 ft msl
Top of Casing Elevation 214.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1220
Depth to water = 55.14 ft (16.81 m) below the TOC
Water elevation = 158.96 ft (48.45 m) msl
Inaccessibility or pump failure prevented sample collection.

WELL LFW 34

SRS Grid N 85409.5 Latitude 33.288114 N
Coordinates E 45016.9 Longitude 81.714171 W
Screen Zone Elevation 164.4-143.4 ft msl
Top of Casing Elevation 201.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1205
Depth to water = 43.59 ft (13.29 m) below the TOC
Water elevation = 157.81 ft (48.10 m) msl
pH = 5.1 Alkalinity = 0 mg/L
Specific conductance = 22 umhos/cm
Water temperature = 15.6 degrees Celsius
Water evacuated from the well prior to sampling = 38 gal

LABORATORY ANALYSES

URANIUM	LT	84 ug/L	MetaTrace
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WELL LFW 35

SRS Grid N 85237.4 Latitude 33.288325 N
Coordinates E 45378.8 Longitude 81.712883 W
Screen Zone Elevation 164.1-143.1 ft msl
Top of Casing Elevation 184.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/17/89 Time 1400
Depth to water = 27.17 ft (8.28 m) below the TOC
Water elevation = 156.93 ft (47.83 m) msl
pH = 4.9 Alkalinity = 0 mg/L
Specific conductance = 17 umhos/cm
Water temperature = 16.1 degrees Celsius
Water evacuated from the well prior to sampling = 36 gal

LABORATORY ANALYSES

URANIUM	LT	84 ug/L	MetaTrace
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WELL LFW 36

SRS Grid N 83535.5 Latitude 33.284894 N
Coordinates E 45582.3 Longitude 81.709040 W
Screen Zone Elevation 150.4-129.4 ft msl
Top of Casing Elevation 170.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1530
Depth to water = 25.13 ft (7.66 m) below the TOC
Water elevation = 145.27 ft (44.28 m) msl
pH = 6.3 Alkalinity = 67 mg/L
Specific conductance = 246 umhos/cm
Water temperature = 18.1 degrees Celsius
Water evacuated from the well prior to sampling = 46 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 37

SRS Grid N 83113.2 Latitude 33.284100 N
Coordinates E 45667.7 Longitude 81.707994 W
Screen Zone Elevation 149.9-128.9 ft msl
Top of Casing Elevation 169.90 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1510
Depth to water = 27.38 ft (8.35 m) below the TOC
Water elevation = 142.52 ft (43.44 m) msl
pH = 5.1 Alkalinity = 3 mg/L
Specific conductance = 97 umhos/cm
Water temperature = 16.8 degrees Celsius
Water evacuated from the well prior to sampling = 36 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 38

SRS Grid N 83172.3 Latitude 33.284803 N
Coordinates E 46018.5 Longitude 81.707185 W
Screen Zone Elevation 150.3-129.3 ft msl
Top of Casing Elevation 170.30 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1455
Depth to water = 27.53 ft (8.39 m) below the TOC
Water elevation = 142.77 ft (43.52 m) msl
pH = 4.8 Alkalinity = 0 mg/L
Specific conductance = 41 umhos/cm .
Water temperature = 16.8 degrees Celsius
Water evacuated from the well prior to sampling = 35 gal

LABORATORY ANALYSES

URANIUM

170 ug/L

MetaTrace

WELL LFW 39

SRS Grid N 83213.1 Latitude 33.285220 N
Coordinates E 46218.5 Longitude 81.706738 W
Screen Zone Elevation 151.4-130.4 ft msl
Top of Casing Elevation 171.40 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1435
Depth to water = 28.54 ft (8.70 m) below the TOC
Water elevation = 142.86 ft (43.54 m) msl
pH = 5.0 Alkalinity = 0 mg/L
Specific conductance = 17 umhos/cm
Water temperature = 17.8 degrees Celsius
Water evacuated from the well prior to sampling = 35 gal

LABORATORY ANALYSES

URANIUM

LT

84 ug/L

MetaTrace

WELL LFW 40

SRS Grid N 83248.8 Latitude 33.285587 N
Coordinates E 46395.1 Longitude 81.706343 W
Screen Zone Elevation 151.0-130.0 ft msl
Top of Casing Elevation 171.00 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1415
Depth to water = 28.50 ft (8.69 m) below the TOC
Water elevation = 142.50 ft (43.43 m) msl
pH = 4.8 Alkalinity = 0 mg/L
Specific conductance = 31 umhos/cm
Water temperature = 16.9 degrees Celsius
Water evacuated from the well prior to sampling = 35 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 41

SRS Grid N 83304.9 Latitude 33.286089 N
Coordinates E 46626.9 Longitude 81.705841 W
Screen Zone Elevation 150.5-129.5 ft msl
Top of Casing Elevation 170.50 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1400
Depth to water = 26.49 ft (8.07 m) below the TOC
Water elevation = 144.01 ft (43.89 m) msl
pH = 4.8 Alkalinity = 0 mg/L
Specific conductance = 20 umhos/cm
Water temperature = 16.9 degrees Celsius
Water evacuated from the well prior to sampling = 42 gal

LABORATORY ANALYSES

URANIUM LT 84 ug/L MetaTrace

WELL LFW 42

SRS Grid N 83776.2 Latitude 33.286978 N
Coordinates E 46532.9 Longitude 81.707005 W
Screen Zone Elevation 150.1-129.1 ft msl
Top of Casing Elevation 170.10 ft msl

MEASUREMENTS CONDUCTED IN THE FIELD

Sample date 12/16/89 Time 1345
Depth to water = 24.00 ft (7.32 m) below the TOC
Water elevation = 146.10 ft (44.53 m) msl
pH = 5.0 Alkalinity = 0 mg/L
Specific conductance = 21 umhos/cm
Water temperature = 17.3 degrees Celsius
Water evacuated from the well prior to sampling = 49 gal

LABORATORY ANALYSES

URANIUM

LT

84 ug/L

MetaTrace

APPENDIX E

SAVANNAH RIVER SITE SAMPLING AND ANALYSIS PLAN

MONITORING WELL SAMPLING

1.0 PURPOSE

The purpose of this document is to establish procedures for the collection of groundwater samples from monitoring wells at the Savannah River Site (SRS).

2.0 SCOPE

The procedures and specifications contained in this document are applicable to any Department, Organization, Group, or Person planning to collect groundwater samples from a monitoring well located within the Savannah River Site.

3.0 TERMS/DEFINITIONS

Table of Acronyms

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
RCRA	Resource Conservation and Recovery Act
CFR	Code of Federal Regulations
US-DOT	United States Department of Transportation

Additional terms/definitions may be found in the Glossary.

4.0 RESPONSIBILITIES

- Prior to initiating any new groundwater sampling program at the Savannah River Site (SRS), the Groundwater Sampling Program Description Form, Attachment 1, shall be completed by the Westinghouse Project Manager (WPM) and submitted to the Site Groundwater Coordinator's (SGC's) office for review.
- The Contract Technical Liaison (CTL) will provide safety, security, and environmental orientations for the Sampling Personnel (sampling subcontractor) prior to the startup of work.

MONITORING WELL SAMPLING

- The Sampling Personnel will prepare all required documentation verifying that the specifications and procedures outlined in this document have been followed. The Sampling Personnel must ensure that all sampling equipment is properly maintained and calibrated.
- It shall be the responsibility of the Sampling Personnel to ensure that the sample identification number used by SRS is properly maintained. The field data collected during sampling will be recorded on standard SRS forms, or as described in the site-specific sampling plan.
- All personnel involved with the sampling must be familiar with and follow the procedures outlined in Chapter 2, Project Safety, and the site-specific Health and Safety Plan. Special procedures and precautions are required in regulated areas.
- The Sampling Personnel and the subcontract laboratories must properly maintain the Custody Transfer Record (Attachment 6). This document will be returned to the CTL.

5.0 PROCEDURE

5.1 Sample Containerization, Preservation, and Analytical Procedures

The sample containers, preservatives, and holding times will be based upon the analytical parameters and methods. Attachment 2 is intended to serve as a guide. Specific parameter lists and analytical procedures will be dictated by the regulatory programs under which the sampling is performed (i.e.: RCRA, CERCLA, etc.). Appropriate containers and sample preservatives are listed on the Custody Transfer Record/Laboratory Work Request form.

5.2 Sample Order

Samples should be collected and containerized in the order specified below:

- Volatile organics (VOA)
- Purgeable organic carbon (POC)
- Purgeable organic halogens (POX)
- Total organic halogens (TOX)

MONITORING WELL SAMPLING

- Total organic carbon (TOC)
- Extractable organics
- Total metals
- Dissolved metals
- Phenols
- Cyanide
- Sulfate and chloride
- Turbidity
- Nitrate and ammonia
- Radionuclides.

Sample order may vary based on the site-specific sampling plan.

5.3 Sampling Equipment Required

The following equipment is required:

- SRS Data Forms (if required)
- Field Logbooks (if needed)
- Custody Transfer Record/Laboratory Work Request Forms
- Stainless steel, Teflon™, or PVC bailer(s) wrapped in aluminum foil or plastic (for bailer sampling)
- New nylon rope (for bailer sampling)
- Generator (Fueled with unleaded gasoline only for pump sampling)
- Aluminum foil
- Plastic sheeting (4 mil)
- Wooden expandable or metal measuring tape, 200 foot steel tape, or electric water level indicator
- Calculator
- Tape, one roll, filament
- Markers, pens, one with indelible ink and other ballpoint
- Other safety equipment as specified
- Thermometer
- Conductivity and pH meters
 - calibration standards, buffer solutions
 - rinse bottle
 - beakers
 - laboratory wipes, etc.
- Preservatives
- Section lift pump, centrifugal pump, or submersible pump
- Filtering apparatus
 - 0.45 micron single-use disposable filters
 - vacuum pump, etc.

MONITORING WELL SAMPLING

- Sample containers
- Coolers: received from laboratory and containing sample containers
- Eyewash station, portable
- Personal protective equipment (as required by the site-specific Health and Safety Plan and Project Safety, Chapter 2):
 - safety glasses
 - disposable gloves
 - eyewash solution
- Decontamination solvents (see Attachment 3)
 - deionized water
 - isopropanol

5.4 Sampling Equipment and Container Preparation

5.4.1 Sample Container Preparation

- 1) If sample containers are not pre-cleaned, they shall be cleaned in accordance with the procedure in Attachment 3.
- 2) Sample containers shall be pre-marked with indelible ink showing the sample parameter, well number, and preservative if required.
- 3) Line sample cooler(s) with plastic.
- 4) Place empty sample container(s) in cooler(s).
- 5) Sample bottles must be under the control of sampling personnel at all times. Sample bottles are not to be left unattended unless secured within a locked storage space.

5.4.2 Sampling Equipment Preparation

- 1) Submersible pumps and bailers must be steam cleaned before use. The steam cleaner must have an operating range of 800 to 1500 psi and 180 to 212 degrees Fahrenheit. Site specific sampling plans may specify additional decontamination requirements.
- 2) Pumps and bailers must be wrapped in aluminum foil or plastic sheeting after decontamination and prior to use.

- 3) Water level measurement equipment must be rinsed with deionized water prior to and after each use.
- 4) Proceed to section 5.5.1 if the well has a submersible pump or Section 5.1.2 if the well is to be bailed.

5.5 Sampling Procedure

Field data will be recorded on SRS data forms or as described in the site-specific sampling plan.

5.5.1 Submersible Pump Sampling

- 1) Gloves worn by sampling personnel are to be changed for each sampling episode and after handling any tools and equipment. Gloves should be changed with adequate frequency to minimize the possibility of cross-contamination during handling of sampling equipment.
- 2) Calibrate pH meter at each sampling site. Calibrate the pH meter using calibration instructions supplied by the manufacturer. Use standard buffer solutions of pH 4, 7 and 10. Use fresh buffer solutions, out-of-date solutions shall not be used.
- 3) Calibrate conductivity meter using calibration instructions provided by the manufacturer at each sample location. Calibrate the meter daily using standard KCl solution.
- 4) Rinse pH, temperature and conductivity probes and sample cups used when measuring pH and conductivity with deionized water prior to and after sampling each well.
- 5) Measure and record the depth to water in the well.
- 6) Well purge volume calculation
 - Calculate 4 well volumes. The table in Attachment 4 presents the number of gallons required to evacuate four well volumes from a 4-inch well. The following formula shall be used to calculate the volume of water in a well if it is not 4 inches in diameter.

MONITORING WELL SAMPLING

$V = 0.041d^2h$ where

h=depth of water in feet

d=diameter in inches

V=volume of water in gallons

multiply $V \times 4$ for gallons of water for 4 well volumes.

- Determine purge completion flow meter reading by: 1) noting flow meter reading; 2) add the evacuation volume as determined above to the meter reading; 3) the sum will be the meter reading when purging is complete.
- 7) If required, prepare containers to dispose of purged water. The Environmental Monitoring Section (EMS) maintains a list of monitoring wells that require the purged water to be saved or returned to the basin.
- 8) Purge well
- The generator must be placed down wind of the well being sampled.
 - Open gate valve on the well
 - Connect the pump to the power source
 - Check that the circuit breaker on the generator is in the OFF position
 - Start generator
 - Turn circuit breaker to the ON position
- 9) As purging continues:
- Keep a check on the volume purged
 - Record any water color or odors detected.
 - Thoroughly rinse and fill the sample cup with purged water
 - Periodically measure and record the pH, conductivity, and temperature of sample
 - The well is ready to sample when the evacuation volume has been removed and the above parameters have stabilized.
 - Record any water color or odors detected.
 - Record final pH, conductivity, temperature, and the amount of water purged.

MONITORING WELL SAMPLING

- 10) If the well goes dry during purging, allow the well to recover and sample within 24 hours. This time will vary depending on the ability of the well to recover. Measure pH, conductivity, and temperature again at the time the samples are taken.
- 11) Sample well
 - When evacuation is complete, adjust the flow rate using the gate valve to achieve non-turbulent flow from the sample port.
 - Fill sample containers from the sampling port being careful to avoid contact between the sample containers and the sampling port.

Samples for metals analyses must be filtered in accordance with the procedure in Attachment 5, (Enhanced Pressure Filtrator to Remove Settled and/or Suspended Particles for Liquid Samples.

Samples for volatile organic analyses must be free of air bubbles. Bottles must be gently filled to overflowing, tightly capped, inverted, and inspected. When a bubble free sample has been obtained, it must be immediately chilled.

- 12) When all sample containers are filled, turn the generator circuit breaker to the OFF position, disconnect the generator from the pump, drain all lines, close the gate valve and sampling port, replace the end cap on the sample port, and lock the well.
- 13) Preserve samples as required.
- 14) Pack samples in the cooler after ensuring that the sample containers are labeled correctly and capped tightly. Each sample label shall include the sample ID number and the date and time the sample was taken.
- 15) Place ice or ice packs contained in clean plastic bags in the cooler(s).

- 16) Samples are to be packed in accordance with the procedures "Packaging Non-Radioactive Water Samples for Off-Site Shipment" and "Packaging Radioactive Water Samples for Off-Site Shipment" (Attachments 7 and 8).
- 17) Refer to Section 5.7 for procedures on shipping samples.

5.5.2. Bailer Sampling

- 1) Gloves worn by sampling personnel are to be changed for each sampling episode and after handling any tools and equipment.
- 2) Measure and record the depth to water in the well.
- 3) Calibrate pH meter at each sampling site. Calibrate the pH meter using calibration instructions supplied by the manufacturer. Use standard buffer solutions of pH 4, 7, and 10. Do not use buffer solutions which are out of date.
- 4) Calibrate conductivity meter using calibration instructions provided by the manufacturer at each sample location. Calibrate the meter daily using standard KCl solution.
- 5) Rinse pH, temperature and conductivity probes and sample cups used when measuring pH and conductivity with deionized water prior to and after sampling each well.
- 6) Well purge volume calculation
 - Calculate 4 well volumes. The table in Attachment 4 presents the number of gallons required to evacuate four well volumes from a 4-inch well. The following formula shall be used to calculate the volume of water in a well if it is not 4 inches in diameter.
$$V = 0.041d^2h$$
 where
h=depth of water in feet
d=diameter in inches
V=volume of water in gallons
multiply V x 4 for gallons of water for 4 well volumes.
- 7) Place the nylon rope and bailer on a sheet of plastic.

MONITORING WELL SAMPLING

- 8) Attach a new nylon rope to the bailer. The rope or bailer must not touch the ground.
- 9) If required, prepare containers to dispose of purged water. The Environmental Monitoring Section (EMS) maintains a list of monitoring wells that require the purged water to be saved or returned to the basin.
- 10) Purge well by lowering the bailer into the well until the top is below the water surface. Keep hands over the well, not to the side of the well while lowering or raising the bailer. Remove the bailer from the well and make note of any contaminants within or floating on the water.
- 11) As purging continues:
 - Keep a check on the volume purged
 - Thoroughly rinse and fill the sample cup with purged water
 - Periodically measure and record the pH, conductivity, and temperature of sample
 - The well is ready to sample when the evacuation volume has been removed and the above parameters have stabilized.
 - Record any water color or odors detected.
 - Record final pH, conductivity, temperature, and the amount of water purged.
- 12) If the well goes dry during purging, allow the well to recover and sample within 24 hours. This time will vary depending on the ability of the well to recover. Measure pH, temperature and conductivity again at the time the samples are taken.
- 13) Sample well
 - Collect water samples by lowering the bailer slowly into the water so as not to cause any unnecessary disturbance. Remove the bailer and transfer the water to the sample container. Be careful not to cause excessive cascading, particularly for samples requiring volatile organic analyses.

MONITORING WELL SAMPLING

Samples for metals analyses must be filtered in accordance with the procedure in Attachment 5, (Enhanced Pressure Filtrator to Remove Settled and/or Suspended Particles for Liquid Samples).

Samples for volatile organic analyses must be free of air bubbles. Bottles must be gently filled to overflowing, tightly capped, inverted, and inspected. When a bubble free sample has been obtained, it must be immediately chilled.

- 14) Preserve samples as required.
- 15) Pack samples in the cooler after ensuring that the sample containers are labeled correctly and capped tightly. Each sample label shall include the sample ID number and the date and time the sample was taken.
- 16) Place ice or ice packs contained in clean plastic bags in the cooler(s).
- 17) Samples are to be packed in accordance with the procedures "Packaging Non-Radioactive Water Samples for Off-Site Shipment" and "Packaging Radioactive Water Samples for Off-Site Shipment" (Attachments 7 and 8).
- 18) Refer to Section 5.7 for procedures on shipping samples.

5.6 Field and Laboratory Quality Assurance/Quality Control

When a contract laboratory is used to conduct analyses of environmental samples, the laboratory must ensure that a proper Quality Assurance/Quality Control (QA/QC) program will be exercised.

5.6.1 Field Quality Control Samples

QC samples include: duplicates, rinsates, trip blanks, field splits, and field blanks. The frequency of QC samples shall be included in the site-specific sampling plan.

QA/QC samples are defined as follows:

MONITORING WELL SAMPLING

- Duplicate Samples - these are blind quality control samples which are duplicates of field samples, and which are submitted to the contractor laboratory.
- Trip Blank Samples - these samples, prepared by the contractor laboratory, are used for volatile organic samples and other compounds of interest. The samples are submitted blind to the contractor laboratory.
- Split Samples - these samples are the same as duplicate samples, except that they are submitted to a second laboratory.
- Rinsate Samples - these samples will consist of deionized rinse water which has been poured over decontaminated sampling equipment such as a bailer or submersible pump.
- Field Blank Samples - these samples will consist of deionized water.
- Spiked Samples - these samples will consist of a known amount of a compound in a mixture of abnormal composition.

5.6.2 Laboratory Quality Control Samples

The site-specific sampling plan should provide for the use of standards, laboratory blanks, duplicates, and spiked samples for calibration and identification of potential matrix interferences. Data from QC samples should not be used to alter or correct analytical data.

5.7 Sample Shipping Procedures

5.7.1. Sample Screening

All samples from new wells are held for shipping clearance the first time they are sampled. Samples are screened using the procedure described in WSRC 3Q1-4-2620. As per DOT regulations all samples with a total activity equal to or greater than 2000 pCi/ml are shipped as radioactive. All samples with total activity less than 2000 pCi/ml are shipped as non-radioactive.

MONITORING WELL SAMPLING

5.7.2 Sample Classification

Samples collected must be classified prior to shipping as either environmental or hazardous material samples. In general, environmental samples include drinking water, ambient ground and surface water, background/control soils, sediment, treated municipal and industrial wastewater effluents, biological specimens or any samples not expected to be contaminated with high levels of hazardous materials. The shipment of samples designated as environmental samples is not regulated by the U.S. Department of Transportation (US-DOT). However, these samples must be transported in such a manner as to preserve their integrity.

Samples collected from areas suspected of being highly contaminated may need to be shipped as a hazardous material. Regulations for packing, marking, labeling and shipping of hazardous materials and wastes are promulgated by the US-DOT and are described in the Code of Federal Regulations (49 CFR 171 through 177). The guidance for complying with US-DOT regulations in shipping environmental laboratory samples is given in the "National Guidance Package for Compliance with Department of Transportation Regulations in the Shipment of Environmental Laboratory Samples". Additional guidance is given in a letter to M.D. Lair, P.E., from Thomas J. Charlton, P.E., Chief Standards Division, Office of Hazardous Materials Regulation, Materials Transportation Bureau, US-DOT. Refer to Section 6.0 for a complete reference of the above documentation and paper.

5.7.3 Shipment of Environmental Samples

Samples collected as environmental samples shall be shipped using the method described below. If the environmental samples are preserved, the amount of preservative used must not exceed the amounts indicated in 49 CFR 172.101. If the amount of preservative added to the sample exceeds that listed, then that sample may be considered a hazardous material and shall be shipped in accordance with procedures described in 49 CFR 171 through 177. In addition, the shipment of pre-preserved sample containers or bottles of preservatives (i.e., NaOH pellets, HCl pellets, etc.) which are designated as hazardous under the US-DOT, Hazardous Materials Tables, 49 CFR 172.101, must be in accordance with the appropriate US-DOT regulations.

MONITORING WELL SAMPLING

Environmental samples shall be packed prior to shipment by air using the following procedures:

- 1) If samples are to be stored overnight, they must be secured such that only the person who has custody may have access to the samples.
- 2) Samples that are to be analyzed off-plant must be adequately cooled to ensure they arrive at the off-plant laboratory at the required temperature.
- 3) Package samples in accordance with procedures outlined in Attachments 7 and 8.
- 4) Coolers should be delivered to the SRS shipping department by 3:00 p.m. on the day of shipment.
- 5) The off-plant laboratory will notify SRS upon receipt of samples, record any irregularities, and return the completed Custody Transfer Records to SRS. Soiled or contaminated sample containers are to be cleaned with a mild alkaline detergent and rinsed with deionized water before being shipped to SRS for re-use.

6.0 REFERENCES

- "Final Regulation Package for Compliance with DOT Regulations in the Shipment of Environmental Laboratory Samples", Memo from David Weitzman, Work Group Chairperson, Office of Occupational Health and Safety (PM-273), USEPA, April 13, 1981.
- Letter from Thomas J. Charlton, P.E., Chief, Standards Division, Office of Hazardous Materials Transportation Bureau, US-DOT to Myron D. Lair, P.E., Chief, Hazardous Waste Section, ESB, ESD, Region IV, USEPA, March 22, 1985.
- Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, USEPA Region IV Environmental Services Division, April 1, 1986.

MONITORING WELL SAMPLING

7.0 ATTACHMENTS

- 1 Groundwater Sampling Description Form
- 2 Recommended Sample Containers, Preservatives, and Holding Times
- 3 Decontamination of Sampling Equipment and Containers
- 4 Table for Pumping Four Well Volumes
- 5 Enhanced Pressure Filtration to Remove Settled and/or Suspended Particles from Liquid Samples
- 6 Custody Transfer Record
- 7 Packaging Non-Radioactive Water Samples for Off-Site Shipment
- 8 Packaging Radioactive Water Samples for Off-Site Shipment

**ATTACHMENT I. GROUNDWATER SAMPLING PROGRAM
DESCRIPTION FORM**

1. Safety Considerations _____

1.1 Equipment
Type _____ Number _____
Type _____ Number _____
Type _____ Number _____
1.2 Safety Meeting: _____ Time _____
2. Sampling Equipment
2.1 Samplers
Type _____ Number _____ Dedicated? _____
Type _____ Number _____ Dedicated? _____
Type _____ Number _____ Dedicated? _____
Type _____ Number _____ Dedicated? _____
2.2 Sample Containers
Type _____ Volume _____ Number _____
Type _____ Volume _____ Number _____
Type _____ Volume _____ Number _____
Type _____ Volume _____ Number _____
3. Field Testing
3.1 pH (Method) _____
3.2 Specific Conductivity (Method) _____
3.3 Temperature (Method) _____
4. Decontamination Procedures _____

4.1 Disposal of Waste Water _____
4.2 Supplies _____
5. Data Formatting, Analytical Requests _____
6. Documentation Procedures (Chain of Custody) _____

7. Sample Shipment _____
8. Data Reporting Format _____

Signed _____
Company _____
Date _____

ATTACHMENT 2. RECOMMENDED SAMPLE CONTAINERS, SAMPLE PRESERVATIVES, AND HOLDING TIMES

Parameter	Container	Preservative	Holding Time	Permissible Sample Type	Reference
<u>Concentrated Waste Samples</u>					
Organic Compounds	8-oz, widemouth glass with Teflon liner	None	ASAP	G or C	A
Metals and Other Inorganic Compounds	8-oz, widemouth glass with Teflon liner	None	ASAP	G or C	A
EP Toxicity	8-oz, widemouth glass with Teflon liner	None	ASAP-NS	G or C	B
Flash Point and/or Heat Content	8-oz, widemouth glass with Teflon liner	None	ASAP-NS	G	B
<u>Fish Samples</u>					
Organic Compounds	Wrap in aluminum foil	Freeze	ASAP	G or C	A
Metals and Other Inorganic Compounds	Place in plastic zip-lock bag	Freeze	ASAP	G or C	A
<u>Liquid - Low to Medium Concentration Samples</u>					
Alkalinity	500-ml or 1-liter poly-1 ethylene with polyethylene or polyethylene lined closure	Cool, 4° C	14 days	G or C	C
Acidity	500-ml or 1-liter poly-1 ethylene with polyethylene or polyethylene lined closure	Cool, 4° C	14 days	G or C	C

Parameter	Container	Preservative	Holding Time	Permissible Sample Type	Reference
<u>Liquid - Low to Medium Concentration Samples</u> (Continued)					
Bacteriological	250-ml glass with glass closure or plastic capable of being autoclaved	Cool, 4° C	14 days	G or C	C
Static Bioassay	1-gal, amber glass (not solvent rinsed)	Cool, 4° C	48 hrs	G or C	D
Biochemical Oxygen Demand (BOD)	1/2-gal, polyethylene ¹ with polyethylene closure	Cool, 4° C	48 hrs	G or C	C
Chloride	500-ml or 1-liter poly- ¹ ethylene with polyethylene or polyethylene lined closure	None	28 days	G or C	C
Chlorine Residual	In-situ, beaker or bucket	None	Analyze Immediately	G	C
Color	500-ml or 1-liter poly- ¹ ethylene with polyethylene or polyethylene lined closure	Cool, 4° C	48 hrs	G or C	C
Conductivity	500-ml or 1-liter poly- ¹ ethylene with polyethylene or polyethylene lined closure	Cool, 4° C	28 days (determine on site if possible)	G or C	C
Chromium, Hexavalent	1 liter polyethylene with polyethylene closure	Cool, 4° C	24 hrs	G	C

Parameter	Container	Preservative	Holding Time	Permissible Sample Type	Reference
<u>Liquid - Low to Medium Concentration Samples</u> (Continued)					
Cyanide	1-liter or 1/2-gallon polyethylene with polyethylene or polyethylene lined closure	Ascorbic Acid ^{2,3} Sodium Hydroxide, pH >12; Cool, 4° C	14 days	G	C
Dissolved Oxygen (Probe)	In-situ, beaker or bucket	None	Determine On Site	G	C
Dissolved Oxygen (Winkler)	300-ml glass, BOD bottle	Fix on site, store in dark	8 hrs (determine on site if possible)	G	C
EP Toxicity	1-gal glass (amber) with Teflon liner	Cool, 4° C	ASAP-NS	G or C	B
Fluoride	1-liter polyethylene or 1 1/2-gal, polyethylene with polyethylene or polyethylene lined closure	None	28 days	G or C	C
Hardness	500-ml or 1-liter poly-ethylene with polyethylene or polyethylene lined closure	50% Nitric ² Acid, pH <2	6 months	G or C	C
LAS	500-ml or 1-liter poly-ethylene with polyethylene or polyethylene lined closure	Cool, 4° C	48 hrs	G or C	C

Parameter	Container	Preservative	Holding Time	Permissible Sample Type	Reference
<u>Liquid - Low to Medium Concentration Samples</u> (Continued)					
Metals	1-liter polyethylene with polyethylene lined closure	50% Nitric ² Acid, pH <2	6 months	G or C	C
Metals, Dissolved	1-liter polyethylene with polyethylene lined closure	Filter-on-site ² 50% Nitric Acid, pH <2	6 months	G	C
Nutrients ⁴	1-liter polyethylene or 1/2-gal polyethylene with polyethylene or polyethylene lined closure	50% Sulfuric ² Acid, pH <2; Cool, 4° C	28 days	G or C	C
Oil and grease	1 liter widemouth glass with Teflon liner	50% Sulfuric ² Acid, pH <2; Cool, 4° C	28 days	G	C
Organic Compounds-Extractable and Pesticide Scan					C
No Residual Chlorine Present	1-gal amber glass or 2 1/2-gal amber glass with Teflon liner	Cool, 4° C	47 days ⁵	G or C	C
Residual Chlorine Present	1-gal amber glass or 2 1/2-gal amber glass with Teflon liner	Add 3 ml 10% Sodium Thiosulfate per gallon; Cool, 4° C	47 days ⁵	G or C	C

Parameter	Container	Preservative	Holding Time	Permissible Sample Type	Reference
<u>Liquid - Low to Medium Concentration Samples</u> (Continued)					
Organic Compounds-Purgeable (VOA)					
No Residual Chlorine Present	2 40-ml vials with Teflon lined septum caps	4 drops conc. hydrochloric acid; Cool, 4° C	14 days	G	C
No Residual Chlorine Present	2 40-ml vials with Teflon lined septum caps	Cool, 4° C	7 days	G	C
Residual Chlorine Present	2 40-ml vials with Teflon lined septum caps	Footnote 6	14 days	G	C
Organic Compounds-Specified and Pesticides (Non-Priority Pollutants such as Herbicides)	1-gal amber glass or 2 1/2-gal amber glass with Teflon liner	Footnote 7	47 days ⁷	G or C	C
Organic Halides-Total (TOX)	250-ml amber glass with Teflon lined septum closure	Cool, 4° C	ASAP-NS	G	E
pH	In-situ, beaker or bucket	None	Analyze Immediately	G	C
Phenols	1-liter amber glass with Teflon lined closure	50% Sulfuric Acid, pH <2; Cool, 4° C	28 days	G	C

ATTACHMENT 3. DECONTAMINATION PROCEDURES FOR SAMPLING EQUIPMENT AND CONTAINERS

1 GENERAL

1.1 Introduction

The procedures outlined in this attachment are to serve as guidelines to cleaning sampling field equipment and sample containers prior to and during field use. Laboratory field cleaning procedures are included to cover these special problem areas.

The procedures in this attachment were adapted from the EPA Region IV Standard Operating Procedures and Quality Control Manual and is intended to be used as a guide. Specific analytical and sampling regulations may dictate different procedures.

1.2 Cleaning Materials

The laboratory detergent shall be a standard brand of phosphate-free laboratory detergent such as AlconoxTM or LiquinoxTM.

The nitric acid solution (10 percent) shall be made from reagent-grade nitric acid and deionized water.

The preferred standard cleaning solution shall be pesticide-grade isopropanol. Other solutions may be substituted for a particular investigation if needed. Pesticide-grade acetone or methanol are both acceptable. However, it should be noted that if pesticide-grade acetone is used, the detection of acetone in samples collected with acetone rinsed equipment is suspect. Also, pesticide-grade methanol is much more hazardous to use than either pesticide-grade isopropanol or acetone; its use therefore is discouraged. Neither pesticide-grade hexane nor petroleum ether are miscible with water; therefore, these two solvents are not effective rinsing agents unless equipment is dry.

Tap water may be used from any potable water supply system.

Deionized water is defined as tap water that has been treated by passing through a standard deionizing resin column. A 5-micron pre-filter followed by a mixed bed deionization unit should be utilized to produce deionized water. The deionized water should contain no heavy metals or other inorganic compounds (i.e., at or above analytical detection limits). Organic-free water is defined as tap water that has been treated with activated carbon and deionizing units. A 5-micron prefilter, activated carbon unit, two mixed bed deionizing units (in series), a 0.2 micron post filter, and a post-carbon

filter should be utilized to produce organic-free water. The Milli-Q™ system also produces organic-free water. Organic-free water should contain no pesticides, herbicides, extractable organic compounds, and less than 50 µg/l of purgeable organic compounds as measured by a low level GC/MS scan.

During cleaning operations, the substitution of a higher grade water (i.e., deionized or organic-free water for tap water) is permitted and need not be noted as a variation. However, the deionized and organic-free water utilized must be subjected to the specific quality control procedures as outlined in Section 2.2.

The solutions used to clean equipment shall not be reused, except as specifically permitted in the footnote for Step 3, Section 3.

1.3 Marking of Cleaned Sampling Equipment and Containers

All equipment and sample containers that are cleaned utilizing these procedures shall be tagged, labeled, or marked with the date that the equipment was cleaned. Also, if there was a deviation from the standard cleaning procedures outlined in this attachment, this fact should be noted on the label.

1.4 Marking and Segregation of Used Field Equipment

Field equipment or reusable sample containers needing cleaning or repairs shall not be stored with clean equipment, sample tubing, or sample containers. Field equipment, reusable sample containers, disposable sample containers, and sample tubing that are not used during the course of an investigation may not be replaced in storage, without being recleaned, if these materials were taken to a location where herbicides, pesticides, organic compounds, or other toxic materials are present.

1.5 Decontamination of Equipment Used to Collect Samples of Toxic or Hazardous Waste

Equipment that is used to collect samples of hazardous materials or toxic wastes or materials from hazardous waste sites, RCRA facilities, or in-process waste streams shall be decontaminated before it is returned from the field. At a minimum, this decontamination procedure shall consist of washing with laboratory detergent and rinsing with tap water. More stringent decontamination procedures may be required.

1.6 Use of Safety Procedures to be Utilized During Cleaning Operations

The materials used to implement the cleaning procedures outlined in this attachment can be dangerous if improperly handled. Caution

Parameter	Container	Preservative	Holding Time	Permissible Sample Type	Reference
<u>Liquid - Low to Medium Concentration Samples</u> (Continued)					
Phosphorus, Total Dissolved	500-ml or 1-liter polyethylene with polyethylene or polyethylene lined closure	Filter-on-site 50% Sulfuric Acid, pH <2; Cool, 4° C	28 days	G	C
Solids, Settleable	1/2-gal, polyethylene with polyethylene closure	Cool, 4° C	48 hrs	G or C	C
Solids (Total and Suspended, etc.)	500-ml or 1-liter polyethylene with poly- ¹ ethylene or polyethylene lined closure	Cool, 4° C	7 days	G or C	C
Sulfates	500-ml or 1-liter polyethylene with poly- ¹ ethylene or polyethylene lined closure	Cool, 4° C	28 days	G or C	C
Sulfides	500-ml or 1-liter polyethylene with poly- ² ethylene or polyethylene lined closure	2 ml Zinc Acetate ² Conc. Sodium Hydroxide to pH >9; Cool, 4° C	7 days	G	C
Temperature	In-situ, beaker or bucket	None	Determine On Site	G	C

Parameter	Container	Preservative	Holding Time	Permissible Sample Type	Reference
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Liquid - Low to Medium Concentration Samples
(Continued)

Turbidity	500-ml or 1-liter polyethylene with poly-1 ethylene or polyethylene lined closure	Cool, 4° C	48 hrs	G or C	C
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Soil, Sediment or Sludge Samples - Low to Medium Concentration

E. P. Toxicity	8-oz. widemouth glass with Teflon® lined closure	Cool, 4° C	ASAP-NS	G or C	B
Metals	8-oz. widemouth glass with Teflon® lined closure	Cool, 4° C	6 months	G or C	A
Nutrients Including: Nitrogen, Phosphorus, Chemical Oxygen Demand	500-ml polyethylene with polyethylene closure or 8 oz. widemouth glass with Teflon lined closure	Cool, 4° C	ASAP	G or C	A
Organics-Extractable	8-oz widemouth glass with Teflon liner	Cool, 4° C	ASAP	G or C	A
Organics-Purgeable (VOA)	4-oz.(120 ml) widemouth glass with Teflon liner	Cool, 4° C	ASAP	G or C	A
Other Inorganic Compounds- Including Cyanide	500-ml polyethylene with polyethylene closure or 8 oz. widemouth glass with Teflon lined closure	Cool, 4° C	ASAP	G or C	A

must be exercised by all personnel and all applicable safety procedures shall be followed. At a minimum, the following precautions shall be taken in a washroom and in the field during these cleaning operations:

1. Safety glasses with splash shields or goggles, neoprene gloves, and a neoprene laboratory apron will be worn during all cleaning operations.
2. All solvent rinsing operations will be conducted under a fume hood or in the open (never in a closed room).
3. No eating, smoking, drinking, chewing, or any hand to mouth contact shall be permitted during cleaning operations.

1.7 Storage of Field Equipment and Sample Containers

All field equipment and sample containers shall be stored in a contaminant free environment after being cleaned using the procedures outlined in this attachment.

2 SPECIFIC QUALITY CONTROL PROCEDURES FOR CLEANING OPERATIONS

2.1 General

This section establishes guidelines for specific quality control procedures to monitor the effectiveness of the sampling equipment and sample container cleaning procedures outlined in this attachment. These procedures shall be carried out and the results monitored by the Sampling Personnel. Upon receipt of quality control data, the Sampling Personnel shall review these data to identify any abnormalities or contamination of sampling equipment or sample containers. If problems are detected, the Sampling Personnel shall immediately initiate an investigation to determine the cause of the problem(s) and institute immediate corrective action.

2.2 Rinse Water

The quality of the deionized and organic-free water used shall be monitored by collecting samples once per quarter in pre-cleaned sample containers and submitting them for a standard ICP scan. Organic-free water will also be submitted for low level pesticide, herbicide, extractable and purgeable compounds analyses. When field deionizing and/or organic-free water units are utilized, more frequent quality control samples will be collected. An initial sample and samples at weekly intervals are the minimum number considered acceptable.

2.3 Sampling Equipment Cleaned in a Washroom

The effectiveness of the equipment cleaning procedures used in a washroom shall be monitored by rinsing cleaned equipment (equipment used to collect samples for trace organics and metals analyses) with organic-free or Milli-Q™ water and submitting the rinse water for low level analysis of extractable organic compounds including pesticides and a standard ICP scan. At least one piece of field equipment shall be selected for this procedure each time equipment is washed. An attempt should be made to select different pieces of equipment for this procedure, each time equipment is washed, so that a representative sampling of all equipment is obtained.

2.4 Sampling Equipment Cleaned in the Field

The effectiveness of field cleaning procedures shall be monitored by rinsing field cleaned equipment with organic-free water and submitting the rinse water in pre-cleaned sample containers for analysis as outlined in Section 2.3. Any time equipment is cleaned in

4 CLEANING PROCEDURES FOR STAINLESS STEEL OR METAL SAMPLING EQUIPMENT USED FOR THE COLLECTION OF SAMPLES FOR TRACE ORGANIC COMPOUNDS AND/OR METALS ANALYSES*

- 1) Wash equipment thoroughly with laboratory detergent and hot tap water using a brush to remove any particulate matter or surface film.
- 2) Rinse equipment thoroughly with hot tap water.
- 3) Rinse equipment thoroughly with deionized water.
- 4) Rinse equipment twice with solvent and allow to air dry.
- 5) Wrap equipment completely with aluminum foil to prevent contamination during storage and/or transport to the field.
- 6) Rinse the stainless steel or metal sampling equipment thoroughly with tap water in the field as soon as possible after use.

* When this sampling equipment is used to collect samples that contain oil, grease or other hard to remove materials, it may be necessary to rinse the equipment several times with pesticide-grade acetone or hexane to remove the materials before proceeding with Step 1. In extreme cases, when equipment is painted, badly rusted, or coated with materials that are difficult to remove, it may be necessary to steam clean, wire brush, or sandblast the equipment before proceeding with Step 1. Any stainless steel sampling equipment that cannot be cleaned using these procedures should be discarded.

5 CLEANING PROCEDURES FOR AUTOMATIC WASTEWATER SAMPLING EQUIPMENT

5.1 Reusable Glass Composite Sample Containers*

- 1) Wash containers thoroughly with hot tap water and laboratory detergent, using a bottle brush to remove particulate matter and surface film.
- 2) Rinse containers thoroughly with hot tap water.
- 3) Rinse containers with at least 10 percent nitric acid.
- 4) Rinse containers thoroughly with tap water.
- 5) Rinse containers thoroughly with deionized water.
- 6) Rinse twice with solvent and allow to air dry.
- 7) Cap with aluminum foil or Teflon™ film.
- 8) After using, rinse with tap water in the field, seal with aluminum foil to keep the interior of the container wet, and return to the laboratory.

* When these containers are used to collect samples that contain oil, grease or other hard to remove materials, it may be necessary to rinse the container several times with pesticide-grade acetone before proceeding with Step 1. If these materials cannot be removed with acetone, the container should be discarded. Glass reusable composite containers used to collect samples as pesticide, herbicide, or other chemical manufacturing facilities that produce toxic or noxious compounds shall be disposed of "properly" (preferably at the facility) at the conclusion of sampling activities and shall not be returned for cleaning. Also, glass composite containers used to collect in-process wastewater samples at industrial facilities shall be discarded after sampling. Any bottles that have a visible film, scale, or discoloration remaining after this cleaning procedure shall also be discarded.

the field at least one such quality control sample shall be collected. No more than five percent of the equipment cleaned during large scale field studies shall be subjected to these procedures.

Additional samples may be required to document quality assurance of field cleaning procedures. Any time a source of cleaning materials or rinse water is used other than that specified in Section 1.2, a sample of that cleaning material or rinse water shall be submitted in pre-cleaned sample containers as specified in Section 2.2.

2.5 Glass Disposable Sample Containers for Organic Compounds and Plastic Containers for Metals Analyses and Other Specified Organic Compounds

The sample containers will be submitted for analysis utilizing the same low level analytical techniques as outlined in Section 2.3. The sample containers will be supplied at the rate of one percent of each kind of container used.

2.6 Plastic Disposable Sample Containers for Oxygen Demand, Nutrients, and General Inorganics

These containers will be filled with deionized or organic-free water, preserved as required, and submitted for the designated parameters for each sample container. These sample containers will be selected at random at the rate of approximately one percent of each kind of container of the total used.

2.7 Reusable Composite Sample and Organic-Free Water Containers

These containers will be rinsed with organic-free water and the rinse water will be submitted as outlined in Section 2.3. Approximately one percent of all such containers cleaned will be subjected to this procedure.

3 CLEANING PROCEDURES FOR TEFLON™ OR GLASS FIELD SAMPLING EQUIPMENT USED FOR THE COLLECTION OF SAMPLES FOR TRACE ORGANIC COMPOUNDS AND/OR METALS ANALYSES*

- 1) Equipment will be washed thoroughly with laboratory detergent and hot tap water using a brush to remove any particulate matter or surface film.
- 2) The equipment will be rinsed thoroughly with hot tap water.
- 3) Rinse equipment with at least a 10 percent nitric acid solution.**
- 4) Rinse equipment thoroughly with tap water.
- 5) Rinse equipment thoroughly with deionized water.
- 6) Rinse equipment twice with solvent and allow to air dry.
- 7) Wrap equipment completely with aluminum foil to prevent contamination during storage and/or transport to the field.
- 8) Rinse the Teflon™ or glass sampling equipment thoroughly with tap water in the field as soon as possible after use.

* When this sampling equipment is used to collect samples that contain oil, grease or other hard to remove materials, it may be necessary to rinse the equipment several times with pesticide-grade acetone or hexane to remove the materials before proceeding with Step 1. In extreme cases, it may be necessary to steam clean the field equipment before proceeding with Step 1. If the field equipment cannot be cleaned utilizing these procedures, it should be discarded.

** Small and awkward equipment such as vacuum bottle inserts and well bailers may be soaked in the nitric acid solution instead of being rinsed with it. Fresh nitric acid solution should be prepared for each cleaning session.

5.2 Plastic Reusable Composite Sample Containers*

1. Proceed with the cleaning procedures as outlined in 5.5 but omit the solvent rinse.

5.3 ISCO 1680 and 2100 Glass Sequential Sample Bottles Automatic Sampler Base for Sequential Mode**

- 1) Rinse with 10 percent nitric acid.
- 2) Rinse thoroughly with tap water.
- 3) Dishwasher, wash cycle, using laboratory detergent cycle, followed by tap and deionized water rinse cycles.
- 4) Replace bottles in covered, automatic sampler base; cover with aluminum foil for storage.
- 5) Rinse bottles in covered, automatic sampler base; cover with aluminum foil for storage.

5.4 ISCO 2100 Glass Sequential Sample Bottles (Automatic Sampler Base For Sequential Mode) to be Used for Collecting Samples for Organic Compounds Analyses

- 1) Proceed as outlined in Steps 1-4 in Section 5.7.
- 2) Rinse twice with solvent and allow to air dry for at least 24 hours.
- 3) Replace in covered, automatic sampler base; cover with aluminum foil for storage and mark the base as follows: "Cleaned for organic analyses."

* Plastic reusable sample containers used to collect samples from areas containing toxic or noxious compounds or are used to collect in-process waste stream samples will be disposed of properly at the conclusion of the sampling activities and will not be returned for cleaning. Any plastic composite sample containers that have a visible film, scale, or other discoloration remaining after this cleaning procedure will be discarded.

** These ISCO 1680 glass sequential sample bottles are not to be used for collecting samples for organic compounds analyses. The ISCO 2100 bottles also are not to be used for collecting samples for organic compounds analyses unless the cleaning procedures outlined in 5.8 are used.

5.5 Bottle Siphons Used to Transfer Sample From Composite Container

- 1) Use a new siphon for each sampling location.
- 2) Use 3/8-inch TeflonTM tubing for samples collected for organic compounds analyses. The tubing should be rinsed with solvent and dried in a drying oven overnight before use. The ends of the siphon should be capped with aluminum foil and/or TeflonTM film for storage. The siphon should be flushed with sample thoroughly before use.
- 3) The 3/8-inch PVC tubing utilized for samples, other than those collected for organic compounds analyses, should be thoroughly flushed with sample before use.

5.6 Reusable TeflonTM Composite Mixer Rods

- 1) Follow procedure outlined in Section 3.
- 2) Wrap rod in aluminum foil for storage.

6 CLEANING PROCEDURES FOR SAMPLE TUBING

6.1 Silastic Rubber Pump Tubing Used in Automatic Samplers and Other Peristaltic Pumps

New pre-cleaned tubing must be used for each automatic sampler set-up. The silastic rubber pump tubing need not be replaced in peristaltic pumps where the sample does not contact the tubing or where the pump is being used for purging purposes (i.e., not being used to collect samples).

The silastic tubing shall be pre-cleaned as follows:

- 1) Flush tubing with hot tap water and phosphate-free laboratory detergent.
- 2) Rinse tubing thoroughly with hot tap water.
- 3) Rinse tubing with deionized water.
- 4) Install tubing in automatic sampler or peristaltic pump.
- 5) Cap both ends of tubing with aluminum foil.

6.2 TeflonTM Sample Tubing

Use only new TeflonTM tubing pre-cleaned as follows for collection of samples for organic compounds analyses:

- 1) TeflonTM tubing shall be pre-cut in convenient lengths before cleaning.
- 2) Rinse outside of tubing with solvent.
- 3) Flush interior of tubing with solvent.
- 4) Dry overnight in a drying oven.
- 5) Wrap tubing and cap ends with aluminum foil to prevent contamination during storage.

6.3 Polyvinyl Chloride (PVC) Sample Tubing (1/8, 1/4, or 3/8 Inch)

- 1) Use only new tubing.
- 2) The tubing will be flushed with sample immediately before use to remove any residues from the manufacturing or extruding process.

- 3) PVC tubing will be used selectively where organic compounds are not of concern.
- 4) Tubing should be stored in original container and not removed from this container until needed.

6.4 Stainless Steel Tubing

- 1) Wash with laboratory detergent and hot tap water using a long, narrow, bottle brush.
- 2) Proceed with Steps 2-6 as outlined in Section 4 (footnote applied).

6.5 Glass Tubing

Use new glass tubing, pre-cleaned as follows:

- 1) Rinse thoroughly with solvent.
- 2) Air dry.
- 3) Wrap tubing completely with aluminum foil to prevent contamination during storage.
- 4) Discard tubing after use.

7 MISCELLANEOUS EQUIPMENT CLEANING PROCEDURES

7.1 Well Sounders or Tapes Used to Measure Groundwater Levels

- 1) Rinse with deionized water before and after each use.

7.2 Miscellaneous Sampling and Flow Measuring Equipment

Miscellaneous flow measuring and sampling equipment shall be washed with laboratory detergent, rinsed with hot tap water, followed by a thorough deionized water rinse, and dried before being stored. This procedure is not used for any equipment utilized for the collection of samples for trace organic compounds or metals analyses.

7.3 Field Filtration Apparatus

- 1) Disassemble field filtration apparatus.
- 2) Rinse all components which will come into contact with the sample with de-ionited water.
- 3) Replace the filter and reassemble the unit.
- 4) Flush 100 milliliters of purge water through the unit before filtering the sample.
- 5) Filter sample.

7.4 Organic-Free Milli-Q™ Water Storage Containers

- 1) These containers will be used only for storing organic-free or Milli-Q™ water.
- 2) New containers shall be prepared as outlined in Section 5.5, Steps 1-5, then rinsed thoroughly with organic-free or Milli-Q™ water, filled with Milli-Q™ water and capped.
- 3) Used containers shall be capped with aluminum foil immediately after being used in the field.
- 4) The exterior of the container will be washed with laboratory detergent and rinsed with deionized water if necessary.
- 5) The interior of the container shall be rinsed twice with solvent.

- 6) The interior of the container will be thoroughly rinsed with organic-free or Milli-QTM water. The container will be filled with organic-free or Milli-QTM water and capped with aluminum foil for storage.

8 PREPARATION OF DISPOSABLE SAMPLE CONTAINERS

8.1 General

No sample container (with the exception of the glass and plastic compositing containers) will ever be reused. All disposable sample containers will be stored in their original packing containers. When packages of uncapped sample containers are opened, they will be placed in new plastic garbage bags and sealed to prevent contamination during storage. Specific pre-cleaning instructions for disposable sample containers are given in the following sections. These instructions apply to pre-cleaned disposable sample containers whether they are purchased from a contractor or are pre-cleaned at SRS.

8.2 One-Pint Storemore, One-Quart Storemore, One-Half Gallon, and One-Gallon Plastic Containers for Oxygen Demand, Nutrients, Classic Inorganic, Sulfide, and Cyanide Analyses

- 1) Only new containers will be used.

8.3 One-Half and One-Gallon Amber Glass Bottles (Water Samples), 8; 16; and 32-Ounce Clear Widemouth Jars (Soil, Sediment, Sludge, and Concentrated Waste) With Teflon™ Lined Caps for Organic Compounds (Excluding Purgeables) and Metals Analysis

- 1) Wash bottles and jars, Teflon™ liners, and caps in hot tap water and laboratory detergent.
- 2) Rinse three times with tap water.
- 3) Rinse with nitric acid solution.*
- 4) Rinse three times with deionized water.
- 5) Rinse bottles, jars, and liners (not caps) with solvent.*
- 6) Oven dry bottles, jars, and liners at 125° C. Allow to cool.
- 7) Place liners in caps and cap containers.
- 8) Store containers in contaminant-free area.

* For the purpose of cleaning sample containers as outlined in Sections 8.3 and 8.5, both pesticide-grade methylene chloride and 1:1 reagent-grade nitric acid which are deviations from the information contained in Section 1.2 are permitted.

8.4 40 ml Glass Vials for Water Samples (Purgeable Organic Compounds Analysis) and 250 ml Amber Glass Narrow Necked Bottles for Water Samples (TOX Analysis) with Teflon™ Lined Septa; and 4-Ounce (120 ml) Clear Widemouth Glass Jars with Teflon™ Liner for Soil Samples (Purgeable Organic Compounds Analysis)

- 1) Wash vials, bottles and jars, Teflon™ liners and septa, and caps in hot tap water and laboratory detergent.
- 2) Rinse all items with deionized water.
- 3) Oven dry at 125° C.
- 4) Allow all vials, bottles, jars, liners, and septa to cool in an enclosed contaminant-free environment.
- 5) Seal vials, bottles, and jars with liners or septa as appropriate and cap.
- 6) Store vials, bottles, and jars in a contaminant free area.

8.5 One Liter Polyethylene Bottle for Metals and General Inorganics

- 1) Wash polyethylene bottles and caps in hot tap water with laboratory detergent.
- 2) Rinse both with nitric acid solution.
- 3) Rinse three times with deionized water.
- 4) Invert bottles and dry in contaminant free environment.
- 5) Cap bottles.
- 6) Store in contaminant free area.

Custody Transfer Record Laboratory Work Request Form	Well:	Ship To:	
Savannah River Site, Aiken, SC 29808	Date:		Sampled By:
	Time:		Duplicate Id:

[illegible]

[illegible]

ATTACHMENT 7
PACKAGING NON-RADIOACTIVE WATER SAMPLES
FOR OFF-SITE SHIPMENT

PURPOSE

The purpose of this procedure is to provide instructions for packaging glass and plastic water containers of non-radioactive samples prior to shipment off plant.

SCOPE

Health Protection, Environmental Collections is responsible for the collection, packaging and shipment of water samples to off site laboratories for analyses.

SAFETY

1. Comply with applicable Departmental and Plant safety rules.
2. Wear rubber gloves and safety glasses when handling samples.
3. Wear leather gloves and safety glasses when handling broken glass.

SAMPLE PACKAGING PROCEDURE

1. Use insulated coolers. Clean coolers of all tape, labels, etc.
2. Line bottom of cooler with "Bubble Pac".
3. Line cooler with plastic bag.
4. Seal cap and bottle top with parafilm to prevent leakage.
5. Sufficient space (outage, ullage) must be provided to prevent liquid contents from completely filling the bottle at 130°F.
6. Completely wrap all glass bottles with "Bubble Pac" to prevent breakage.

Procedure

1. Remove the Enhanced Pressure Filtrator from its cans and set it up. The case serves as a base for the unit and protects the finished sample from contamination. Install Teflon^R sample drain hose.
2. Make sure unit is clean, if not clean as per Procedure Step #10B.
3. Install a new filter membrane.
 - a. Loosen and remove the lower set of threaded "dogs".
 - b. Remove the upper of the two white plates and place a filter membrane on the disk that is between the two plates. The disk has a smooth and a rough side; the smooth side goes up.
[NOTE: Item 2 under IMPORTANT NOTES]
 - c. Replace the upper plate and retighten the "dogs".
4. Loosen and remove the top set of "dogs"; remove top of unit. Pour the sample to be filtered into the plastic cup. Replace top and secure.
5. Place a bottle in the case to collect the liquid from the discharge tube.
NOTE: RINSE THE BOTTLE WITH THE FIRST 20-30 ml of water that leaves the filter. Discard the rinse water and then collect the sample to be analyzed.
6. Attach the pressure supply, via the connector, to the side of the unit. To connect, merely push the nozzle in using the snap connector as a grip. To remove, pull the snap connector away from the unit and it will release; if action binds, oil sparingly.
7. Experience will tell how much pressure must be applied to a sample. Start with just a quick flick of the valve on the connector. Do not leave the valve on; it does not take extended pressure to filter a sample.
8. Remove liquid sample from case; store as required.
9. Compare approximate amounts of sample in lower cup to amount put in upper chamber. If there is a difference, the filter membrane may be clogged.
 - a. First try applying more pressure, if this fails...
 - b. Carefully loosen the top "dogs"; do slowly to release any excess pressure.
 - c. Replace the filter membrane as outlined in Procedures Step #2, then continue from Step #5.

10. Clean-up

- a. Remove filter membrane (Procedures Step #2) and save or dispose of properly as necessary.
- b. Rinse with deionized water all parts of the unit that may contaminate a new sample. These will include: the plastic sample cup, the two white plates, the disk and drain tube.

11. Remove unit from top of case and store properly.

Important Notes

1. A 2-liter Teflon^R bottle with the bottom half removed is inverted and the neck of the bottle screwed into the pressure chamber to hold the sample in the chamber.
2. The filter membranes are packaged with a paper separating each; use the membrane, not the paper.
3. To install a filter membrane, it is usually easier to install the paper and the filter membrane, then remove the paper. These filter membranes will remove particles larger than 0.45u so they are very flimsy.

ATTACHMENT 4. TABLE FOR PUMPING FOUR WELL VOLUMES

FOUR VOLUMES (GAL.) OF H₂O IN 4" CASING WELLS

Water Column (Ft.)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	0	0	1	1	1	1	2	2	2	2
1	3	3	3	3	4	4	4	4	5	5
2	5	6	6	6	6	6	7	7	7	8
3	8	8	8	9	9	9	9	10	10	10
4	11	11	11	11	12	12	12	12	13	13
5	13	13	14	14	14	14	15	15	15	15
6	16	16	16	17	17	17	17	18	18	18
7	18	19	19	19	19	20	20	20	20	21
8	21	21	22	22	22	22	23	23	23	23
9	24	24	24	24	25	25	25	26	26	26
10	26	27	27	27	27	27	28	28	28	29
11	29	29	29	30	30	30	31	31	31	31
12	32	32	32	32	33	33	33	33	34	34
13	34	35	35	35	35	36	36	36	36	37
14	34	37	37	38	38	38	38	39	39	39
15	39	40	40	40	40	41	41	41	42	42
16	42	42	43	43	43	43	44	44	44	44
17	45	45	45	45	46	46	46	47	47	47
18	47	48	48	48	48	49	49	49	49	50
19	50	50	50	51	51	51	52	52	52	52
20	53	53	53	53	54	54	54	54	55	55
21	55	56	56	56	56	57	57	57	57	57
22	58	58	58	59	59	59	59	60	60	60
23	60	61	61	61	61	62	62	62	63	63
24	63	64	64	64	64	64	65	65	65	65
25	66	66	66	67	67	67	67	68	68	68
26	68	69	69	69	69	70	70	70	70	71
27	71	71	72	72	72	72	73	73	73	73
28	74	74	74	74	75	75	75	75	76	76
29	76	77	77	77	77	77	78	78	78	79
30	79	79	79	80	80	80	80	81	81	81
31	82	82	82	82	83	83	83	83	83	84
32	84	84	84	85	85	85	86	86	86	86
33	87	87	87	88	88	88	88	89	89	89
34	89	90	90	90	90	90	91	91	92	92
35	92	92	93	93	93	93	94	94	94	94

ENHANCED PRESSURE FILTRATOR TO REMOVE SETTLED AND/OR
SUSPENDED PARTICLES FROM LIQUID SAMPLES

Purpose

To provide instruction to Environmental Monitoring Personnel for the use of the Enhanced Pressure Filtrator.

General Information

This device was developed by (SRL) Savannah River Laboratory.

The Enhanced Pressure Filtrator is designed to separate the settled and/or suspended solid fraction from the liquid fraction of a given sample. The advantage of this device is that by increasing the pressure in the sample chamber, the time needed for filtration of the sample is greatly reduced.

Safety

1. Comply with all applicable plant safety rules.
2. Exercise care and storage of filtrator because of elevated pressures used.
 - a. After use, always open the sample chamber slowly to gradually release any remaining pressure (there should not be any remaining pressure but an especially "muddy" sample may clog the filter and prevent the evacuation of the chamber).
 - b. The chamber is charged using disposable cans of Freon^R 12 or equivalent. Read the label and follow the information listed under the WARNING section. Be sure to keep the valve on the Freon^R clean, -- free of sand and grit that may interfere with the operation of the valve.

Equipment Required

1. Enhanced Pressure Filtrator - including the connector to transfer pressure from can to the unit.
2. A sufficient supply of Freon^R 12 (14 oz.) cans or other acceptable pressure source (for example, "Texwipe Micro Duster" - also a 14 oz. can).

General Information Per Procedure

1. In sampling a well, follow all steps as per Procedure DPSOL 2454-12000, Well Ground Water Sampling Procedure for Selected Physical and Chemical Parameters.

7. Pack all glass bottles in polyflam packers, DO734A or equivalent to prevent breakage. Seal with filament tape. Place "CAUTION RADIOACTIVE MATERIAL" tape on outside of packer.
8. Place all sample containers in inner plastic bag, place ice packs around samples.
9. Place layer of 1" "Bubble Pac" on top. Seal inner bag with tape. Seal outer bag with tape.
10. Transport coolers to shipping.
11. Get designated shipping personnel to sign Chain of Custody forms.
12. Make two photo copies of Chain of Custody forms. Retain one copy for HP records. Second copy is to be given to shipping personnel.
13. Separate original Chain of Custody forms to correspond to each individual cooler. Seal custody forms in plastic bags and place inside cooler.
14. Weigh each cooler separately and report individual weights to shipping.
15. Appropriate SRS staff must inspect interior of each cooler before sealing.
16. Close cooler lid and seal with 2" fiberglass tape. Place tape over drain plug.
17. Place Custody Seal appropriately on cooler.
18. Call receiving laboratory and give them the carrier, air bill number, number of coolers shipped and date shipped.

7. Place all sample containers in plastic bag, place ice packs around samples.
8. Place layer of "Bubble Pac" on top. Seal plastic bag with tape.
9. Transport coolers to shipping.
10. Get designated shipping personnel to sign Chain of Custody forms.
11. Make two photo copies of Chain of Custody forms. Retain one copy for HP records. Second copy is to be given to shipping personnel.
12. Separate original Chain of Custody forms to correspond to each individual cooler. Seal custody forms in plastic bags and place inside cooler.
13. Weigh all coolers and report total weight to shipping.
14. Close cooler lid and seal with fiberglass tape. Place tape over drain plug.
15. Place Custody Seal appropriately on cooler.
16. Call receiving laboratory and give them the carrier, air bill number, number of coolers shipped and date shipped.

ATTACHMENT 8

PACKAGING RADIOACTIVE WATER SAMPLES FOR OFF-SITE SHIPMENT

PURPOSE

The purpose of this procedure is to provide instructions for packaging glass and plastic water containers to meet Department of Transportation guideline 49 CFR 173.6 (b) prior to shipment off plant.

SCOPE

Health Protection, Environmental Collections is responsible for the collection, packaging and shipment of water samples to off site laboratories for analyses.

SAFETY

1. Comply with applicable Departmental and Plant safety rules.
2. Wear rubber gloves and safety glasses when handling samples.
3. Wear leather gloves and safety glasses when handling broken glass.

SAMPLE PACKAGING PROCEDURE

1. Use Coleman metal insulated coolers only. Clean coolers of all tape, labels, etc. Inspect cooler interior... do not use if cracked.
2. Line bottom of cooler with 1" "Bubble Pac".
3. Line cooler with two (2) plastic bags (place second bag inside of first bag).
4. Seal cap and bottle top with parafilm to prevent leakage.
5. Place "CAUTION RADIOACTIVE MATERIAL" tape on each bottle.
6. Sufficient space (outage, ullage) must be provided to prevent liquid contents from completely filling the bottle at 130°F.