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DECEMBER 1994
WATER LEVEL AND QUALITY REPORT
BEAUMONT TEST SITE FACILITY No. 1
BEAUMONT, CA
Volume 1

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May 19, 1995

DCN: BP-0395-006

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1.0 INTRODUCTION

This report presents results of water level measurements and water quality sampling analyses from the December 1994 sampling round at the Lockheed Propulsion Company facility located near Beaumont, California, hereinafter referred to as Beaumont Site No. 1 (Figure 1).

Ongoing groundwater monitoring is being conducted to evaluate changes in the previously identified contaminant plume in the alluvial aquifer and the underlying Mt. Eden Formation on Site No. 1. This is being done in accordance with the June 14, 1989 consent order between Lockheed and the California Department of Health Services. In addition, the sampling is an integral part of the remediation program required to allow site development by Lockheed. The contaminant plume, containing chlorinated volatile organic contaminants (VOCs) originates at the burn pit and rocket motor production areas (Figure 2) and extends approximately 2 miles down gradient to the west. In the area of the burn pits, vadose zone monitoring has demonstrated that there is still a soil gas plume extending down to the vadose/water table interface (Radian, 1992a).

1.1 PURPOSE AND SCOPE

The purpose of this report is to present field and laboratory data obtained during water level measurement and ongoing sampling of monitoring wells during December, 1994.

Groundwater samples were collected and water level determinations were made from 34 monitor wells during the December, 1994 sampling event as part of the ongoing groundwater monitoring program. Table 1 lists construction data on the sampled groundwater monitoring wells including well depth, screened interval, and the water bearing zone in which each well is completed. A permanent well sampling schedule is under development, and will be included in future reports as Table 2 .

The field data collected during the sampling round are presented in Appendix A. Groundwater samples were sent to the Lockheed Analytical Services laboratory (LAS) and analyzed for VOCs by U.S. Environmental Protection Agency (EPA) Method 8010; these data are presented in Table 3. Ten percent of the samples were analyzed as split samples on a Gas Chromatograph in an on-site laboratory, the results of which are discussed in Section 5.1. The results of the data assessment and data validation process for LAS analyses are presented in Appendix B. Soil gas sampling results are included in Table 4.

Seven additional well samples were collected in March because of an inadvertent omission of four wells in the previous December sampling round and as a later concern regarding plume containment. These sample results are included separately in Appendix F.

2.0 BACKGROUND

2.1 STUDY AREA LOCATION

Site No. 1 is located south of the town of Beaumont, California, about 70 miles east of Los Angeles (Figure 1). The site covers 9100 acres in the San Jacinto Nuevo y Potrero Valley, which is drained primarily by Potrero Creek. The site lies immediately north of the Colorado River Aqueduct Tunnel, which has impacted local groundwater conditions since its construction in the 1930s (Radian 1990, 1992b).

2.2 STUDY AREA HISTORY

Site No. 1 was purchased from the Grand Central Rocket Company and various ranchers in 1960 by the Lockheed Aircraft Company (LAC). From 1960 to 1963 the site was operated by the LAC. In 1963 the Lockheed Propulsion Company, a division of LAC became the primary operator, and used the site for the mixing and testing of solid rocket motor propellant, ballistics testing, motor casing washout, materials disposal, and waste propellant burning.

Radian Corporation conducted an historical investigation to identify areas of concern in 1986; three areas of concern were identified (Radian, 1986). A one-time radioactive waste burial site has already been investigated and remediated. A permitted sanitary landfill has been investigated and shown not to be a source of any contaminants (Radian, 1990). The third area, containing the rocket motor production site and the burn pits (Figure 2) is the subject of the ongoing sampling and remediation. The primary areas of contamination are considered to be the burn pits and the Rocket Motor Production Area. A contaminant plume has moved down gradient from these source areas.

2.3 GROUNDWATER SAMPLING HISTORY

Initial water quality samples were collected from nine wells at Beaumont Site No. 1 in October 1986 as a part of a site history review (Radian, 1986). These data are of limited quality, for, although strict sampling protocol was followed, the wells sampled were not designed for groundwater quality monitoring, and insufficient data on their construction is available to make a determination as to their applicability for this purpose. Of these nine wells, five were former water production wells (W-1, W-2, W-3, W-5, W-6); two of these

five water production wells predate Lockheed ownership of the area, the other three water wells were installed by Lockheed. The remaining four wells (OW-1, OW-2, OW-3, and OW-8) were observation wells installed by Leighton and Associates in 1983.

Based on the results of the 1986 Radian study, 19 additional wells (MW-1 to MW-19) were installed and sampled in 1989. Seven of the original nine wells were also resampled (W-6 and OW-1 were not resampled), to determine what changes had occurred in water quality since 1986. Radian, 1990 recommended evaluation of potential treatment methods to remediate the groundwater and soil vapor plumes, as a result of the sampling in 1989 which indicated that the site geology was more complex than originally anticipated. The results of the various treatment evaluations are contained in the Lockheed Beaumont No. 1 Treatability Study (Radian, 1992).

Continued site characterization work included installation of additional monitoring wells, MW-20 to MW-40, between October 1990 and April 1991. In September-October 1991, a third round of sampling was conducted utilizing the MW wells and the seven wells sampled in 1989.

Following the September-October 1991 sampling round, MW-29 and MW-41 to MW-50 were installed and sampled in December 1991. From August through October, 1992, additional monitoring wells (MW-51 to MW-62), and extraction wells (EW-01, EW-02, EW-08 to 16) were installed. During February, 1993, MW-63 to MW-66, and EW-18 were installed.

Baseline groundwater sampling was then performed on 111 wells during February and March, 1993. Additional sampling rounds for selected wells were initiated and completed in April and December, 1994.

2.4 SOIL GAS SAMPLING HISTORY

Three soil samples and 14 shallow soil gas samples were collected from the burn pit area in November 1990 and 14 more shallow soil gas probe samples were collected in April 1991. Another round of soil gas measurements were made in August 1991.

Soil gas samples were collected from various depths during drilling for EW-15 and EW-16 and from VMW-1, VMW-2, VMW-4, VMW-10 to VMW-14, VEW-8, MW-58C, EW-13, EW-9 during September 1992.

Soil gas samples were collected during October 1992 from the following extraction wells: EW-2, EW-8 to EW-15, VEW-10, VEW-11, and VMW-15 to VMW-20. The Radian weekly report of October 5, 1992 refers to wells VEW-1 to VEW-5, VEW-7, and VEW-9 as pending sampling based on previous sampling results. VEW-6 and VEW-8 were installed and sampled in September. Radian weekly reports document that the dual phase well[1] sampling was completed by about mid-November, 1992.

Radian completed another round of sampling in mid-April, 1993. The results are included in the Extraction System Installation Completion Report Beaumont Site No. 1 (Radian, 1993), and are intended to evaluate alternative extraction system designs.

Between October 1990 and April 1991 soil gas recovery wells (VRW-1 to VRW-3), and vapor monitoring wells (VMW-1 to VMW-14) were installed. By the end of October 1992 the following additional wells were installed: VMW-15 to VMW-20, and vapor extraction wells VEW-6, 8, 10, and 11. By April of 1993, VMW-21 and 22 were installed. All of these wells are in the burn pit area, where the contamination is most severe.

3.0 GEOLOGIC AND HYDROGEOLOGIC CONDITIONS

3.1 GEOLOGIC CONDITIONS

The geology of the site has been described in detail in reports by Radian (1990, 1992b). The basement consists of late Paleozoic to middle Mesozoic metasedimentary rocks and Mesozoic granitic rocks, overlain by the Pliocene to Pleistocene age sediments of the Mount Eden Formation. In the northern portion of the area, the Mount Eden is locally overlain by the San Timoteo Formation, which consists of sandstones, siltstones, and shales of Pliocene or Pleistocene age. Everywhere else, the Mount Eden is overlain by Quaternary alluvium, which is subdivided into Older and Recent Alluviums. A simplified geologic map is presented in Figure 3-1.

The metasediments are foliated, gray, micaceous schists and pink to gray gneiss. Marble and quartzite occur locally. The granitic rocks, referred to as the San Jacinto Granodiorite, were intruded into the metasediments.

Except in the northern and northeastern portions of the study area, the Mount Eden Formation overlies the basement complex. The Mount Eden is primarily a conglomeratic sandstone, containing minor clay and caliche. It is generally massive with isolated conglomerate lenses or beds. Across the site, it ranges from not present where the

[1]Dual phase wells are four inch diameter, high vacuum wells designed for extraction of both the ground water and soil gas contaminant components.

crystalline bedrock outcrops, to 170 feet in thickness in the burnpit area, to over 400 feet thick near the rocket motor production area, to 650 feet in the vicinity of piezometer P-5. The Mount Eden was exposed to weathering prior to the deposition of the alluvium, and the surface morphology of the Mount Eden continues into the subsurface. Variable cementation and weathering characteristics of the Mount Eden add complexity to the subsurface geology.

The Older Alluvium, of Pleistocene age, is composed of interbedded sands and gravels filling channels in the underlying Mount Eden. The Younger Alluvium is Recent in age, and consists of interbedded sands, gravels, silts, and clays. The maximum thickness of alluvium encountered while drilling is 134 feet in MW-28.

Additionally, two major faults trending west-northwest appear to cross the area of interest. These faults are assumed to have caused fracturing and jointing in the basement complex. Movement on the more southwesterly fault may have caused the deposition of an extensive layer of silt in the central portion of the valley, near the junction of Bedsprings and Potrero Creeks. This silt layer creates confining conditions in the alluvial aquifer.

3.2 HYDROGEOLOGIC CONDITIONS

Surface water is present in ephemeral streams draining the valley and in a pond in the center of the site, across Potrero Creek from the site of the former Betatron building. The pond was constructed by the International Union of Operating Equipment Engineers in an area of shallow groundwater in the mid-70s to provide water for dust and fire control (Radian, 1992b).

Groundwater at the Beaumont No. 1 site flows generally to the west, following the slope of the valley floor, and is present in the Quaternary Alluvium, the Mount Eden Formation, and the granitic rocks. Recharge is generally through the eastern end of the valley, where coarse, more permeable sediments are present at the surface. Subsurface inflow from adjacent or underlying units may also recharge the alluvial aquifer, however, this is thought to be minor. In the vicinity of the pond the groundwater table is at ground. Groundwater decreases to as much as 85 feet below ground surface in the area of the burn pit. Groundwater in the alluvium and the Mount Eden is unconfined, except in the vicinity of the pond in the center of the valley, where a silty layer acts as a confining layer. Wells OW-02, MW-45, and MW-47, screened below the silty layer have been or still are artesian (Radian, 1992b). Studies conducted by Ransome, 1932 for the Southern California Metropolitan Water District indicated that significant artesian pressures existed in the underlying granitic rocks prior to excavating the San Jacinto Tunnel south of Site No. 1. However, after the tunnel was completed, most of the natural springs in the area dried up (Radian, 1990), indicating that the artesian pressure in the crystalline aquifer had been released.

The contaminants have been detected only in the Quaternary alluvium and the upper, weathered portion of the Mount Eden formation. The Mount Eden formation is an adequate barrier to prevent migration of the contaminants to the deeper crystalline aquifer.

4.0 FIELD AND LABORATORY METHODS

4.1 FIELD WORK

The December, 1994 groundwater sampling was performed by Radian Corporation and Lockheed Environmental Systems & Technologies Company personnel during the period from December 12 to December 20. Sampling activities were conducted following the Lockheed Beaumont No. 1 Operations and Maintenance Health and Safety Plan, and the Radian Corporation Beaumont Sampling Procedures (Appendix C) on 34 wells shown on Figures 4 through 9.

Activities performed during the groundwater sampling included measuring static water levels (Figure 3) prior to purging the wells, monitoring water quality parameters (pH, conductivity, and temperature [Appendix A]) during purging, collecting samples for analysis, and decontaminating the sampling equipment. Groundwater samples were preserved as specified by the analytical method, packed in ice, and submitted with chain-of-custody records to the Lockheed Analytical Services laboratory (LAS) in Las Vegas, Nevada for analysis. Equipment blanks were taken for the first few days and periodically thereafter, and analyzed on a gas chromatograph in the field laboratory following EPA Method 8010 to establish the effectiveness of the decontamination procedures. Furthermore, four wells were designated as QA wells and split samples were taken and analyzed in the field laboratory as well as at LAS.

Soil gas samples were collected from 19 wells (Table 4; Figures 10 through 12) and analyzed in the field laboratory by personnel from Radian Corporation and Lockheed Environmental Systems and Technologies.

In addition to the December sampling, six additional wells were sampled during March, 1995, and one well, MW-17, was resampled. The reasons for the March sampling are twofold: four wells were inadvertently omitted during the December sampling round, and because of later concerns regarding plume containment. Data from the six new wells are added to the maps, but the later data on MW-17 were not used because data validation for the December sample is more complete. The analytical results for the March samples are contained in Appendix F.

4.2 LABORATORY METHODS

Lockheed Analytical Services (California State Certification No. 1392), located in Las Vegas, Nevada, analyzed the groundwater samples obtained in fourth quarter 1994 following Method 8010 as documented by the United States Environmental Protection Agency (EPA, 1982, 1983). These analytical results are contained in Table 3 and select analytes of interest are contoured in Figures 4 through 9. The entire laboratory package is included as Appendix G.

5.0 FIELD RESULTS

5.1 GROUNDWATER ANALYSES

The field laboratory was equipped with Hewlett Packard Gas Chromatograph (GC) (see specifications below) for the analysis of split samples analyzed by the field and the Lockheed laboratories, and for monitoring the efficiency of the decontamination procedure for field sampling equipment.

Using a modified 8010 method, the field laboratory analyzed for five analytes: dichloroethylene, trichloroethane, dichloroethane, trichloroethylene, and tetrachloroethylene (dichloroethylene, dichloroethane, and trichloroethane as sums of the isomers). Detection limits for the analytes ranged from 0.3 to 0.9 ppb.

Twelve equipment rinsate blanks were analyzed during the first four days of sampling. All of the equipment blank results were non-detects for all analytes, thus confirming the effectiveness of the decontamination procedure for the sampling equipment.

Ten wells had split sample analyses on the field laboratory GC and on the LAS GC. When generating chemical data in the field and comparing them to data generated in a commercial laboratory, discrepancies between the data sets are expected, though not to the degree seen from this sampling round (see box on next page).

	Field Laboratory	Lockheed Laboratory
Analytical Method	8010(Modified)	8010
Gas Chromatograph	HP 5890	HP 5890
Detector	Electron Capture	Electron Capture
Column	Supelco 2581	RTX 502.2
Purge and Trap	Tekmar 2000	Tekmar 2000
Trap	Tekmar No. 3	VOCARB 3000

DECEMBER 1994 SPLIT SAMPLE RESULTS

Well No.	DCE: Dichlorethylene (ppb)		TCA: Trichloroethane (ppb)		DCA: Dichloroethane (ppb)		TCE: Trichloroethylene (ppb)		PCE: Tetrachloroethylene (ppb)	
	Radian	Lockheed	Radian	Lockheed	Radian	Lockheed	Radian	Lockheed	Radian	Lockheed
MW-58C	ND	65	13	8.5	21	1.89	13	94	0.26	<0.5
MW-58D	68	320	ND	24	17	8.1	19	310	0.11	0.65
MW-26	333	9400	ND	460	105	480	7.9	6300	2.4	12
MW-4	410	170	134	18	175.5	6.5	101	210	7.7	0.52
EW-14	445	680	112	150	210	18.7	119	600	0.2	1.9
MW-62B	91	410	ND	18	22	5.7	25	430	0.012	0.58
MW-50	321	9.9	126	3.5	29	1.6	18	12	0.1	<0.5
MW-41	50	250	ND	8.2	20	3.19	27	300	0.075	<0.5
MW-57A	371	190	127	13	136	3.8	49	260	2.6	<0.5
MW-56B	0.09	75	ND	5.5	2.6	1.3	6.8	73	0.09	<0.5

Table duplicated from a letter dated 4/17/95 from Christina Hong (Radian, El Segundo, CA) to Bob Simpson.

There are numerous phenomena that can cause discrepancies between field and laboratory data:

- Natural sample variability, which in this case is potentially very high because the groundwater at Site No. 1 can be very silty even after pumping three well volumes.

- Variability in methodologies and equipment can also introduce discrepancies. In this case the field laboratory used a modified version of Method 8010, and there were some differences in analytical equipment (see box below).

- Differing levels of quality control can also introduce discrepancies. LAS employed a higher level of QC than the field laboratory.

- Multiple analysts on the same instrument can also create discrepancies. Two analysts ran the split samples in the field laboratory.

With no further information such as blind laboratory control samples submitted to each laboratory during the sampling round, the only reasonable assumption is that a combination of several of the above phenomena exacerbated the discrepancies seen between the field laboratory split sample results and those of LAS.

5.2 SOIL GAS ANALYSES

Vapor samples collected from selected wells in the field were transported to a central facility for immediate analysis on a Scentex Scentograph. Results of December, 1994 vapor sample analyses are listed in Table 4, and are plotted on Figures 10 to 12. DCE, TCA, and TCE show values in excess of their respective MCL. The elevated values are concentrated in the eastern and southern burn pit area, with minor elevated values in the western portion of the burn pit area. PCE results show only one value in excess of the MCL (VEW-11), and DCA sampling produced no samples above the MCL.

5.3 WATER LEVEL MEASUREMENTS

Water level measurements were taken by Lockheed personnel during the December, 1994 sampling round as the individual wells were sampled. The results are listed in Table 5 and are plotted and contoured on Figure 3.

Previous water level elevation mapping suggested that the water elevation contours were more or less perpendicular to drainage axes. The December, 1994 data suggest a somewhat different pattern, at least in the burn pit area. The perceived difference may be due in part to simply having many more data points, but may also be influenced to an unknown degree by the extraction and injection wells, when they are in operation.

6.0 LABORATORY RESULTS

Analytical results for the groundwater samples collected during December, 1994 are given in Table 3. Concentrations of the analytes of interest are plotted and contoured on Figures 4 to 9.

The highest VOC results encountered were 1,1-Dichloroethylene, ranging from non-detect up to 14,000 ppb (California MCL is 6 ppb). Trichloroethylene is present up to 6300 ppb (MCL is 5 ppb), 1,1,1-Trichloroethane and Tetrachloroethane are also present at elevated levels, ranging up to 670 and 650 ppb respectively (MCLs are 200 and 4 ppb respectively.) Elevated levels of 1,1-Dichloroethane and 1,2-Dichloroethane ranging up to 310 ppb for each compound (MCLs are 5 ppb and 0.5 ppb respectively) were also detected.

The highest values detected for each contaminant were in the area of the burn pits (see Figures 4 to 9). High values of the same contaminants in the former rocket motor production area are usually about an order of magnitude lower. Determining continuity of the contamination between the two areas, suggested by the values in MW-4, is hampered by the lack of information. The up gradient extent of contamination at either subsite is also undetermined, although it probably does not extend very far since the chemicals tend not to travel up the hydrologic gradient. Existing wells could provide much, if not all, of the data required to resolve these questions.

7.0 LOCKHEED DATA QUALITY

The quality of LAS analytical data obtained from the December, 1994 sampling was reviewed using procedures outlined in the Quality Assurance Project Plan Study Area Characterization, Burbank Operable Unit (Lockheed Environmental Systems & Technologies Co. [LESAT], 1993). Data quality was assessed according to the quality assurance/quality control (QA/QC) parameters of precision, accuracy, representativeness, comparability and completeness. The results of the data assessment are presented in Appendix B.

8.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Based on the results of this and previous investigations, the following conclusions can be made:

- To properly design a remediation system at Beaumont Site No. 1, the vertical and lateral extent of the contaminant plume must be defined. Thirty-four wells were sampled during the December, 1994 sampling round for volatile organics by EPA Method 8010 but this apparently was not sufficient to properly characterize the extent of contamination. In the burn pit area, the eastern and southern extent of the contamination is not delimited. Future sampling rounds should add the following wells: a) MW-36, MW-27, MW-22, MW-60; b) an alluvium well and a Mount Eden well from the MW-1,

MW-7, and MW-32 cluster; and c) the deepest of MW-2, MW-3, or MW-55. To better define the extent of contamination around the former rocket motor production area, the following wells should be considered in future sampling efforts: MW-34, MW-39, MW-64 or 65, MW-5 or 6, MW-19, and MW-49.

- Trichloroethylene and 1,1-Dichloroethylene are present far in excess of MCLs in every well sampled. 1,2-Dichloroethane is in excess of the MCL in every well in the burn pit area, and in all but three wells (MW-50 and 51, and OW-3) in the rocket motor production area. 1,1-Dichloroethane exceeds the MCL in all but two wells (MW-59 and EW-08) in the burn pit area, but only two wells exceed MCL in the rocket motor production area (MW-17 and MW-58). Tetrachloroethylene is in excess of the MCL in only three wells (EW-12, MW-61, and MW-26) in the burn pit area, and in no wells in the rocket motor production area. 1,1-Trichloroethane exceeds the MCL in two wells (MW-61 and MW-26) in the burn pit area, and in no wells in the rocket motor production area.

Strategies have been proposed for negotiating relaxed ARARs where the cleanup to drinking water standards may be excessive, but to date MCLs are the remediation limits at Beaumont Site No. 1.

9.0 REFERENCES

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TABLE 1

WELL CONSTRUCTION

TABLE 1

MONITOR WELL AND DEDICATED SYSTEM CONSTRUCTION DATA SUMMARY

WELL ID	MEASURING POINT ELEVATION (feet msl)	DATE COMPLETED	HYDROSTRATIGRAPHIC UNIT SCREENED	TOTAL DEPTH DRILLED	UPPER BLANK CASING INTERVAL (FBLS)		SCREENED INTERVAL (fbls)		FILTER PACK INTERVAL (fbls)		BOTTOM BLANK CASING INTERVAL (fbls)	
EW-01	2142.64	22SEP92	QA	85	0	35	35	76	34	78	76	85
EW-02	2125.06	22OCT92	QA	70	0	25	25	66	24	70	66	70
EW-08	2175.13	21OCT92	ME	115	0	61	61	112	59	115	112	115
EW-09	2176.39	23SEP92	ME	122	0	69	69	120	69	122	120	122
EW-10	2176.94	20OCT92	ME	115	0	61	61	112	59	115	112	115
EW-11	2178.74	07OCT92	ME	105	0	61	61	101	58	105	101	105
EW-12	2176.79	12OCT92	ME	115	0	61	61	111	57	115	111	115
EW-14	2181.40	08OCT92	QA/ME	105	0	60	60	101	58	105	101	105
MW-04	2157.39	09DEC92	QA	85	0	62	62	82	58	85	82	85
MW-17	2137.72	11DEC89	QA	65	0	44	44	64	38	65	64	65
MW-26	2179.93	30JAN91	ME	129	0	88	88	128	83	129	128	129
MW-41	2131.28	10DEC91	QA/ME	55	0	35	35	55	31	55	55	55
MW-50	2148.76	19DEC91	QA	74	0	54	54	74	50	74	74	74
MW-51	2135.71	14AUG92	QA	67	0	39	39	60	37	67	60	67
MW-52	2133.53	17AUG92	QA	65	0	37	37	57	35	65	57	65
MW-56A	2140.44	27AUG92	ME	183	0	176	176	178	174	183	178	183
MW-56B	2139.93	27AUG92	QA	96	0	89	89	91	86	96	91	96
MW-56C	2140.14	31AUG92	QA	64	0	48	48	58	45	64	58	64
MW-56D	2139.85	11SEP92	QA	75	0	72	72	74	70	75	74	75
MW-57A	2143.34	08SEP92	QA	75	0	59	59	69	56	75	69	75
MW-57B	2143.58	09SEP92	QA	98	0	94	94	96	91	98	96	98
MW-57C	2143.38	10SEP92	QA	85	0	81	81	85	80	85	85	85
MW-57D	2143.48	10SEP92	QA	57	0	46	46	56	45	57	56	57
MW-58A	2138.06	14SEP92	QA	89	0	78	78	81	76	89	81	89

TABLE 1 (continued)

MONITOR WELL AND DEDICATED SYSTEM CONSTRUCTION DATA SUMMARY

WELL ID	MEASURING POINT ELEVATION (feet msl)	DATE COMPLETED	HYDROSTRATIGRAPHIC UNIT SCREENED	TOTAL DEPTH DRILLED	UPPER BLANK CASING INTERVAL (FBLS)		SCREENED INTERVAL (fbls)		FILTER PACK INTERVAL (fbls)		BOTTOM BLANK CASING INTERVAL (fbls)	
MW-58B	2138.13	14SEP92	QA	50	0	40	40	50	37	50	50	50
MW-58C	2138.36	15SEP92	QA	60	0	57	57	60	54	60	60	60
MW-58D	2138.31	15SEP92	QA	70	0	68	68	70	66	70	70	70
MW-59A	2176.95	26AUG92	ME	144	0	138	138	140	137	144	140	144
MW-59C	2176.71	10SEP92	ME	136	0	132	132	134	130	136	134	136
MW-61A	2183.74	01SEP92	ME	155	0	148	148	150	147	155	150	155
MW-61B	2183.59	02SEP92	ME	105	0	92	92	102	89	105	102	105
MW-62A	2128.82	20OCT92	QA	45	0	38	38	41	35	45	41	45
MW-62B	2128.86	20OCT92	QA	65	0	62	62	65	60	65	65	65
OW-03	2141.01	26MAY83	QA	70	0	46	46	56	-	70	56	70

FOOTNOTE:

fbls = feet below land surface
feet msl= feet above mean sea level
ME = Mount Eden formation
QA = Quaternary Alluvium formation
- = Unknown

TABLE 2

WELL SAMPLING SCHEDULE (Table 2b under construction)

TABLE 2a

SAMPLING AND ANALYSIS SCHEDULE
DECEMBER 1994

WELL	SAMPLE DATE	ORGAINIC COMPOUNDS		
		EPA 8260	EPA 8010	EPA 8020
EW-1	17DEC94		X	
EW-10	14DEC94		X	
EW-11	14DEC94		X	
EW-12	14DEC94		X	
EW-14	17DEC94		X	
EW-2	17DEC94		X	
EW-8	14DEC94		X	
EW-9	13DEC94		X	
MW-17	17DEC94		X	
MW-26	16DEC94		X	
MW-4	16DEC94		X	
MW-41	16DEC94		X	
MW-50	17DEC94		X	
MW-51	13DEC94		X	
MW-52	17DEC94		X	
MW-56A	13DEC94		X	
MW-56B	14DEC94		X	
MW-56C	14DEC94		X	
MW-56D	14DEC94		X	
MW-57A	17DEC94		X	
MW-57B	19DEC94		X	
MW-57C	19DEC94		X	
MW-57D	19DEC94		X	
MW-58A	13DEC94		X	

TABLE 2a (continued)

SAMPLING AND ANALYSIS SCHEDULE
DECEMBER 1994

WELL	SAMPLE DATE	ORGAINIC COMPOUNDS		
		EPA 8260	EPA 8010	EPA 8020
MW-58B	15DEC94		X	
MW-58C	15DEC94		X	
MW-58D	15DEC94		X	
MW-59A	15DEC94		X	
MW-59C	15DEC94		X	
MW-61A	17DEC94		X	
MW-61B	17DEC94		X	
MW-62A	16DEC94		X	
MW-62B	16DEC94		X	
OW-3	12DEC94		X	

TABLE 3

LABORATORY GROUNDWATER SAMPLE ANALYTICAL DATA

TABLE 3-1

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-01

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	24-SEP-92 QA	06-OCT-92 QA	07-OCT-92 QA	31-MAR-93 QA
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 60.000	< 120.00	< 60.000	---
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	360.00	360.00	340.00	101.60
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	60.000	80.000	71.000	---
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	1000.0	1100.0	1200.0	646.00
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 32.000	< 64.000	< 32.000	---
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-1 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-01

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	17-DEC-94 QA
Bromodichloromethane	< 1.0000 E
Bromoform	< 2.0000 E
Bromomethane	< 5.0000 E
Carbon tetrachloride	0.6800 E
Chlorobenzene	< 2.0000 E
Chloroethane	< 2.0000 E
Chloroform	< 1.0000 E
Chloromethane	< 2.0000 E
cis-1,2-Dichloroethylene	< 1.0000 E
cis-1,3-Dichloropropylene	< 0.5000 E
Dibromochloromethane	< 1.0000 E
Dichlorodifluoromethane	< 5.0000 E
Methylene chloride	< 2.0000 E
Tetrachloroethylene	< 0.5000 E
trans-1,2-Dichloroethylene	< 1.0000 E
trans-1,3-Dichloropropylene	< 0.5000 E
Trichloroethylene	110.00
Trichlorofluoromethane	< 5.0000 E
Vinyl chloride	< 0.5000 E
1,1,1-Trichloroethane	14.000
1,1,2,2-Tetrachloroethane	< 1.0000 E
1,1,2-Trichloroethane	< 0.5000 E
1,1-Dichloroethane	1.9000 E
1,1-Dichloroethylene	86.000 E
1,2-Dichlorobenzene	< 3.0000 E
1,2-Dichloroethane	1.2000 E
1,3-Dichlorobenzene	< 2.0000 E
1,4-Dichlorobenzene	< 2.0000 E
2-Chloroethylvinyl ether	< 2.0000 E
1,2-Dichloropropane	< 1.0000 E
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-2

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-02

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	22-OCT-92 QA	03-NOV-92 QA	04-NOV-92 QA	12-MAR-93 QA
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 100.00	< 100.00	< 200.00	---
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	100.00	110.00	120.00	86.800
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	44.000	< 300.00	< 600.00	39.900
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	910.00	1000.0	1000.0	595.80
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 100.00	< 100.00	< 200.00	---
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

(<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-2 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-02

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	17-DEC-94 QA
Bromodichloromethane	< 1.0000 E
Bromoform	< 2.0000 E
Bromomethane	< 5.0000 E
Carbon tetrachloride	1.4000 E
Chlorobenzene	< 2.0000 E
Chloroethane	< 2.0000 E
Chloroform	3.1000 E
Chloromethane	< 2.0000 E
cis-1,2-Dichloroethylene	< 1.0000 E
cis-1,3-Dichloropropylene	< 0.5000 E
Dibromochloromethane	< 1.0000 E
Dichlorodifluoromethane	< 5.0000 E
Methylene chloride	< 2.0000 E
Tetrachloroethylene	< 0.5000 E
trans-1,2-Dichloroethylene	< 1.0000 E
trans-1,3-Dichloropropylene	< 0.5000 E
Trichloroethylene	250.00
Trichlorofluoromethane	< 5.0000 E
Vinyl chloride	< 0.5000 E
1,1,1-Trichloroethane	29.000
1,1,2,2-Tetrachloroethane	< 1.0000 E
1,1,2-Trichloroethane	< 0.5000 E
1,1-Dichloroethane	4.6000 E
1,1-Dichloroethylene	260.00 E
1,2-Dichlorobenzene	< 3.0000 E
1,2-Dichloroethane	0.9900 E
1,3-Dichlorobenzene	< 2.0000 E
1,4-Dichlorobenzene	< 2.0000 E
2-Chloroethylvinyl ether	< 2.0000 E
1,2-Dichloropropane	< 1.0000 E
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

) = Less than; numerical value is the limit of detection for that analyte
---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-3

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-08

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	20-OCT-92 ME	29-OCT-92 ME	09-MAR-93 ME	14-APR-94 ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 2.0000	< 20.000	---	---
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	< 4.0000	< 40.000	1.2700	16.400
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	1.8000	< 60.000	---	---
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	34.000	0.1700	20.000	15.400
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 2.0000	< 20.000	---	6.1000
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

:) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-3 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-08

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	14-DEC-94 ME
Bromodichloromethane	< 1.0000
Bromoform	< 2.0000
Bromomethane	< 5.0000
Carbon tetrachloride	< 0.5000
Chlorobenzene	< 2.0000
Chloroethane	< 2.0000
Chloroform	< 1.0000
Chloromethane	< 2.0000
cis-1,2-Dichloroethylene	< 1.0000
cis-1,3-Dichloropropylene	< 0.5000
Dibromochloromethane	< 1.0000
Dichlorodifluoromethane	< 5.0000
Methylene chloride	< 2.0000
Tetrachloroethylene	< 0.5000
trans-1,2-Dichloroethylene	< 1.0000
trans-1,3-Dichloropropylene	< 0.5000
Trichloroethylene	6.3000
Trichlorofluoromethane	< 5.0000
Vinyl chloride	< 0.5000
1,1,1-Trichloroethane	< 1.6000
1,1,2,2-Tetrachloroethane	< 1.0000
1,1,2-Trichloroethane	< 0.5000
1,1-Dichloroethane	< 1.0000
1,1-Dichloroethylene	15.000
1,2-Dichlorobenzene	< 3.0000
1,2-Dichloroethane	0.5100
1,3-Dichlorobenzene	< 2.0000
1,4-Dichlorobenzene	< 2.0000
2-Chloroethylvinyl ether	< 2.0000
1,2-Dichloropropane	< 1.0000
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-4

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-09

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	18-SEP-92 ME	29-SEP-92 ME	05-OCT-92 ME	04-MAR-93 ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 15.000	< 15.000	< 3.0000	---
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	50.000	98.000	8.4300	54.300
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	7.0000	22.000	1.6700	59.700
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	170.00	660.00	26.570	1023.0
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 8.0000	< 8.0000	< 1.6000	58.700
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-4 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-09

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	18-APR-94 ME	18-APR-94 ME	13-DEC-94 ME
Bromodichloromethane	---	---	< 1.0000
Bromoform	---	---	< 2.0000
Bromomethane	---	---	< 5.0000 E
Carbon tetrachloride	---	---	0.5000 E
Chlorobenzene	---	---	< 2.0000 E
Chloroethane	---	---	< 2.0000 E
Chloroform	---	---	1.9000 E
Chloromethane	---	---	< 2.0000 E
cis-1,2-Dichloroethylene	---	---	1.7000 E
cis-1,3-Dichloropropylene	---	---	< 0.5000 E
Dibromochloromethane	---	---	< 1.0000
Dichlorodifluoromethane	---	---	< 5.0000 E
Methylene chloride	---	---	< 2.0000
Tetrachloroethylene	80.000	---	1.5000 E
trans-1,2-Dichloroethylene	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	< 0.5000
Trichloroethylene	---	272.00	300.00
Trichlorofluoromethane	---	---	< 5.0000 E
Vinyl chloride	---	---	< 0.5000 E
1,1,1-Trichloroethane	65.000	84.000	16.000 E
1,1,2,2-Tetrachloroethane	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	1.4000 E
1,1-Dichloroethane	---	---	11.000 E
1,1-Dichloroethylene	220.00	262.00	350.00
1,2-Dichlorobenzene	---	---	< 3.0000
1,2-Dichloroethane	170.00	40.060	17.000 E
1,3-Dichlorobenzene	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	< 2.0000
1,2-Dichloropropane	---	---	< 1.0000
Quality Assurance Code	FDA	FDB	ORG
Laboratory	Radian	Radian	Lockheed Analytical

) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-5

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-10

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	19-OCT-92 ME	29-OCT-92 ME	18-MAR-93 ME	19-APR-94 ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 200.00	< 200.00	< 30.000	---
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	170.00	2.2000	188.00	---
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	< 600.00	< 600.00	192.40	86.500
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	1400.0	20.000	1972.0	405.50
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 200.00	< 200.00	87.000	205.00
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-5 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-10

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	14-DEC-94 ME
Bromodichloromethane	< 1.0000
Bromoform	< 2.0000
Bromomethane	< 5.0000
Carbon tetrachloride	0.9200
Chlorobenzene	< 2.0000
Chloroethane	< 2.0000
Chloroform	1.8000
Chloromethane	< 2.0000
cis-1,2-Dichloroethylene	1.9000
cis-1,3-Dichloropropylene	< 0.5000
Dibromochloromethane	< 1.0000
Dichlorodifluoromethane	< 5.0000
Methylene chloride	< 2.0000
Tetrachloroethylene	1.2000
trans-1,2-Dichloroethylene	< 1.0000
trans-1,3-Dichloropropylene	< 0.5000
Trichloroethylene	280.00
Trichlorofluoromethane	< 5.0000
Vinyl chloride	< 0.5000
1,1,1-Trichloroethane	25.000 E
1,1,2,2-Tetrachloroethane	< 1.0000
1,1,2-Trichloroethane	2.4000
1,1-Dichloroethane	12.000
1,1-Dichloroethylene	510.00
1,2-Dichlorobenzene	< 3.0000
1,2-Dichloroethane	20.000
1,3-Dichlorobenzene	< 2.0000
1,4-Dichlorobenzene	< 2.0000
2-Chloroethylvinyl ether	< 2.0000
1,2-Dichloropropane	< 1.0000
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-6

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-11

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	12-OCT-92 ME	15-MAR-93 ME	19-APR-94 ME	14-DEC-94 ME
Bromodichloromethane	---	---	---	< 1.0000
Bromoform	---	---	---	< 2.0000
Bromomethane	---	---	---	< 5.0000
Carbon tetrachloride	---	---	---	1.3000
Chlorobenzene	---	---	---	< 2.0000
Chloroethane	---	---	---	< 2.0000
Chloroform	---	---	---	1.9000
Chloromethane	---	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	---	2.7000
cis-1,3-Dichloropropylene	---	---	---	< 0.5000
Dibromochloromethane	---	---	---	< 1.0000
Dichlorodifluoromethane	---	---	---	< 5.0000
Methylene chloride	---	---	---	< 2.0000
Tetrachloroethylene	< 50.000	< 10.000	57.000	1.7000
trans-1,2-Dichloroethylene	---	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	---	< 0.5000
Trichloroethylene	---	104.00	---	540.00
Trichlorofluoromethane	---	---	---	< 5.0000
Vinyl chloride	---	---	---	< 0.5000
1,1,1-Trichloroethane	< 40.000	79.200	174.00	35.000 E
1,1,2,2-Tetrachloroethane	---	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	---	1.8000
1,1-Dichloroethane	---	---	---	12.000
1,1-Dichloroethylene	340.00	1890.0	755.00	1200.0
1,2-Dichlorobenzene	---	---	---	< 3.0000
1,2-Dichloroethane	< 50.000	< 10.000	400.00	16.000
1,3-Dichlorobenzene	---	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	---	< 2.0000
1,2-Dichloropropane	---	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Lockheed Analytical

:) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-7

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-12

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	12-OCT-92 ME	13-OCT-92 ME	15-OCT-92 ME	12-NOV-92 ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 300.00	< 100.00	< 1000.0	< 200.00
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	1000.0	< 200.00	270.00	< 400.00
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	290.00	< 300.00	< 3000.0	< 600.00
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	3300.0	< 1300.0	3100.0	340.00
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	210.00	< 100.00	< 1000.0	< 200.00
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

(<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-7 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-12

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	22-MAR-93 ME	14-APR-94 ME	14-APR-94 ME	14-DEC-94 ME
Bromodichloromethane	---	---	---	< 1.0000
Bromoform	---	---	---	< 2.0000
Bromomethane	---	---	---	< 5.0000
Carbon tetrachloride	---	---	---	4.7000
Chlorobenzene	---	---	---	< 2.0000
Chloroethane	---	---	---	< 2.0000
Chloroform	---	---	---	12.000
Chloromethane	---	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	---	23.000
cis-1,3-Dichloropropylene	---	---	---	< 0.5000
Dibromochloromethane	---	---	---	< 1.0000
Dichlorodifluoromethane	---	---	---	< 5.0000
Methylene chloride	---	---	---	2.9000
Tetrachloroethylene	< 3.0000	4.1300	---	650.00
trans-1,2-Dichloroethylene	---	---	---	1.3000
trans-1,3-Dichloropropylene	---	---	---	< 0.5000
Trichloroethylene	20.090	9687.0	15400.	1400.0
Trichlorofluoromethane	---	---	---	< 5.0000
Vinyl chloride	---	---	---	< 0.5000
1,1,1-Trichloroethane	2.3300	125.00	243.00	120.00 E
1,1,2,2-Tetrachloroethane	---	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	---	41.000 E
1,1-Dichloroethane	---	---	---	48.000 E
1,1-Dichloroethylene	15.000	530.00	702.00	3700.0
1,2-Dichlorobenzene	---	---	---	< 3.0000
1,2-Dichloroethane	< 1.6000	79.300	693.00	88.000 E
1,3-Dichlorobenzene	---	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	---	< 2.0000
1,2-Dichloropropane	---	---	---	< 1.0000
Quality Assurance Code	ORG	FDA	FDB	ORG
Laboratory	Radian	Radian	Radian	Lockheed Analytical

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-8

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-14

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	07-OCT-92 QA/ME	12-OCT-92 QA/ME	11-NOV-92 QA/ME	18-MAR-93 QA/ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 300.00	< 1000.0	< 200.00	< 300.00
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	560.00	< 2000.0	160.00	365.00
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	400.00	< 3000.0	190.00	< 100.00
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	7900.0	1600.0	2000.0	2390.0
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 160.00	< 1000.0	< 200.00	< 160.00
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-8 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL EW-14

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	21-APR-94 QA/ME	17-DEC-94 QA/ME	17-DEC-94 QA/ME
Bromodichloromethane	---	< 1.0000	< 1.0000
Bromoform	---	< 2.0000	< 2.0000
Bromomethane	---	< 5.0000	< 5.0000
Carbon tetrachloride	---	0.8600	0.8300
Chlorobenzene	---	< 2.0000	< 2.0000
Chloroethane	---	< 2.0000	< 2.0000
Chloroform	---	2.2000	2.2000
Chloromethane	---	< 2.0000	< 2.0000
cis-1,2-Dichloroethylene	---	3.5000	3.3000
cis-1,3-Dichloropropylene	---	< 0.5000	< 0.5000
Dibromochloromethane	---	< 1.0000	< 1.0000
Dichlorodifluoromethane	---	< 5.0000	< 5.0000
Methylene chloride	---	< 2.0000	< 2.0000
Tetrachloroethylene	210.00	2.1000	1.9000
trans-1,2-Dichloroethylene	---	< 1.0000	< 1.0000
trans-1,3-Dichloropropylene	---	< 0.5000	< 0.5000
Trichloroethylene	---	800.00 E	600.00 E
Trichlorofluoromethane	---	< 5.0000	< 5.0000
Vinyl chloride	---	< 0.5000	< 0.5000
1,1,1-Trichloroethane	1160.0	180.00	150.00
1,1,2,2-Tetrachloroethane	---	< 1.0000	< 1.0000
1,1,2-Trichloroethane	---	2.9000	2.6000
1,1-Dichloroethane	---	7.7000	7.7000
1,1-Dichloroethylene	4960.0	1100.0 E	680.00 E
1,2-Dichlorobenzene	---	< 3.0000	< 3.0000
1,2-Dichloroethane	1890.0	11.000	11.000
1,3-Dichlorobenzene	---	< 2.0000	< 2.0000
1,4-Dichlorobenzene	---	< 2.0000	< 2.0000
2-Chloroethylvinyl ether	---	< 2.0000	< 2.0000
1,2-Dichloropropane	---	< 1.0000	< 1.0000
Quality Assurance Code	ORG	FD	ORG
Laboratory	Radian	Lockheed Analytical	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-9

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-04

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION	
	01-MAR-93 QA	16-DEC-94 QA
Bromodichloromethane	---	< 1.0000
Bromoform	---	< 2.0000
Bromomethane	---	< 5.0000
Carbon tetrachloride	---	1.2000
Chlorobenzene	---	< 2.0000
Chloroethane	---	< 2.0000
Chloroform	---	2.8000
Chloromethane	---	< 2.0000
cis-1,2-Dichloroethylene	---	< 1.0000
cis-1,3-Dichloropropylene	---	< 0.5000
Dibromochloromethane	---	< 1.0000
Dichlorodifluoromethane	---	< 5.0000
Methylene chloride	---	< 2.0000
Tetrachloroethylene	< 10.000	0.5200
trans-1,2-Dichloroethylene	---	< 1.0000
trans-1,3-Dichloropropylene	---	< 0.5000
Trichloroethylene	61.700	210.00
Trichlorofluoromethane	---	< 5.0000
Vinyl chloride	---	< 0.5000
1,1,1-Trichloroethane	< 30.000	23.000
1,1,2,2-Tetrachloroethane	---	< 1.0000
1,1,2-Trichloroethane	---	< 0.5000
1,1-Dichloroethane	---	3.5000
1,1-Dichloroethylene	< 130.00	170.00 E
1,2-Dichlorobenzene	---	< 3.0000
1,2-Dichloroethane	< 10.000	3.0000
1,3-Dichlorobenzene	---	< 2.0000
1,4-Dichlorobenzene	---	< 2.0000
2-Chloroethylvinyl ether	---	< 2.0000
1,2-Dichloropropane	---	< 1.0000
Quality Assurance Code	ORG	ORG
Laboratory	Radian	Lockheed Analytical

(<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-10

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-17

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION	
	09-MAR-93 QA	17-DEC-94 QA
Bromodichloromethane	---	< 1.0000
Bromoform	---	< 2.0000
Bromomethane	---	< 5.0000
Carbon tetrachloride	---	2.4000
Chlorobenzene	---	< 2.0000
Chloroethane	---	< 2.0000
Chloroform	---	3.7000
Chloromethane	---	< 2.0000
cis-1,2-Dichloroethylene	---	4.8000
cis-1,3-Dichloropropylene	---	< 0.5000
Dibromochloromethane	---	< 1.0000
Dichlorodifluoromethane	---	< 5.0000
Methylene chloride	---	< 2.0000
Tetrachloroethylene	< 1.0000	3.0000
trans-1,2-Dichloroethylene	---	1.2000
trans-1,3-Dichloropropylene	---	< 0.5000
Trichloroethylene	5.6000	800.00
Trichlorofluoromethane	---	< 5.0000
Vinyl chloride	---	< 0.5000
1,1,1-Trichloroethane	9.5000	94.000
1,1,2,2-Tetrachloroethane	---	< 1.0000
1,1,2-Trichloroethane	---	5.5000
1,1-Dichloroethane	---	27.000
1,1-Dichloroethylene	30.500	1100.0 E
1,2-Dichlorobenzene	---	< 3.0000
1,2-Dichloroethane	< 1.0000	70.000
1,3-Dichlorobenzene	---	< 2.0000
1,4-Dichlorobenzene	---	< 2.0000
2-Chloroethylvinyl ether	---	< 2.0000
1,2-Dichloropropane	---	< 1.0000
Quality Assurance Code	ORG	ORG
Laboratory	Radian	Lockheed Analytical

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-11

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-26

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	24-MAR-93 ME	21-APR-94 ME	16-DEC-94 ME
Bromodichloromethane	---	---	< 1.0000
Bromoform	---	---	< 2.0000
Bromomethane	---	---	< 5.0000
Carbon tetrachloride	---	---	6.3000
Chlorobenzene	---	---	< 2.0000
Chloroethane	---	---	< 2.0000
Chloroform	---	---	20.000
Chloromethane	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	66.000
cis-1,3-Dichloropropylene	---	---	< 0.5000
Dibromochloromethane	---	---	< 1.0000
Dichlorodifluoromethane	---	---	< 5.0000
Methylene chloride	---	---	< 2.0000
Tetrachloroethylene	< 1500.0	57.200	12.000
trans-1,2-Dichloroethylene	---	---	3.5000
trans-1,3-Dichloropropylene	---	---	< 0.5000
Trichloroethylene	6110.0	---	6300.0 E
Trichlorofluoromethane	---	---	< 5.0000
Vinyl chloride	---	---	< 0.5000
1,1,1-Trichloroethane	< 500.00	388.00	460.00
1,1,2,2-Tetrachloroethane	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	27.000
1,1-Dichloroethane	---	---	170.00
1,1-Dichloroethylene	15630.	1368.0	9400.0 E
1,2-Dichlorobenzene	---	---	< 3.0000
1,2-Dichloroethane	< 800.00	998.00	310.00
1,3-Dichlorobenzene	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	< 2.0000
1,2-Dichloropropane	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG
Laboratory	Radian	Radian	Lockheed Analytical

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-12

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-41

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	07-OCT-92 QA/ME	01-MAR-93 QA/ME	16-DEC-94 QA/ME
Bromodichloromethane	---	---	< 1.0000
Bromoform	---	---	< 2.0000
Bromomethane	---	---	< 5.0000
Carbon tetrachloride	---	---	1.5000
Chlorobenzene	---	---	< 2.0000
Chloroethane	---	---	< 2.0000
Chloroform	---	---	3.4000
Chloromethane	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	< 0.5000
Dibromochloromethane	---	---	< 1.0000
Dichlorodifluoromethane	---	---	< 5.0000
Methylene chloride	---	---	< 2.0000
Tetrachloroethylene	< 60.000	< 10.000	< 0.5000
trans-1,2-Dichloroethylene	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	< 0.5000
Trichloroethylene	180.00	65.800	300.00 E
Trichlorofluoromethane	---	---	< 5.0000
Vinyl chloride	---	---	< 0.5000
1,1,1-Trichloroethane	30.000	< 30.000	8.2000
1,1,2,2-Tetrachloroethane	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	< 0.5000
1,1-Dichloroethane	---	---	2.5000
1,1-Dichloroethylene	480.00	326.00	250.00 E
1,2-Dichlorobenzene	---	---	< 3.0000
1,2-Dichloroethane	< 32.000	< 10.000	0.6900 E
1,3-Dichlorobenzene	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	< 2.0000
1,2-Dichloropropane	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG
Laboratory	Radian	Radian	Lockheed Analytical

:) = Less than; numerical value is the limit of detection for that analyte
,---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-13

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-50

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	07-OCT-92 QA	02-MAR-93 QA	17-DEC-94 QA
Bromodichloromethane	---	---	< 1.0000
Bromoform	---	---	< 2.0000
Bromomethane	---	---	< 5.0000
Carbon tetrachloride	---	---	< 0.5000
Chlorobenzene	---	---	< 2.0000
Chloroethane	---	---	< 2.0000
Chloroform	---	---	< 1.0000
Chloromethane	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	< 0.5000
Dibromochloromethane	---	---	< 1.0000
Dichlorodifluoromethane	---	---	< 5.0000
Methylene chloride	---	---	< 2.0000
Tetrachloroethylene	< 60.000	< 15.000	< 0.5000
trans-1,2-Dichloroethylene	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	< 0.5000
Trichloroethylene	140.00	149.80	12.000 E
Trichlorofluoromethane	---	---	< 5.0000
Vinyl chloride	---	---	< 0.5000
1,1,1-Trichloroethane	66.000	120.00	3.5000
1,1,2,2-Tetrachloroethane	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	< 0.5000
1,1-Dichloroethane	---	---	< 1.0000
1,1-Dichloroethylene	700.00	1980.0	9.9000 E
1,2-Dichlorobenzene	---	---	< 3.0000
1,2-Dichloroethane	< 32.000	< 8.0000	< 0.5000
1,3-Dichlorobenzene	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	< 2.0000
1,2-Dichloropropane	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG
Laboratory	Radian	Radian	Lockheed Analytical

) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-14

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-51

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	20-AUG-92 QA	31-AUG-92 QA	31-AUG-92 QA	28-SEP-92 QA
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 60.000	< 60.000	< 60.000	< 60.000
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	600.00	220.00	480.00	200.00
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	< 20.000	< 20.000	44.000	64.000
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	2300.0	450.00	1900.0	970.00
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 32.000	< 32.000	< 32.000	< 32.000
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	FDA	FDB	ORG
Laboratory	Radian	Radian	Radian	Radian

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-14 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-51

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	15-OCT-92 QA	12-MAR-93 QA	13-DEC-94 QA
Bromodichloromethane	---	---	< 1.0000
Bromoform	---	---	< 2.0000
Bromomethane	---	---	< 5.0000 E
Carbon tetrachloride	---	---	< 0.5000 E
Chlorobenzene	---	---	< 2.0000 E
Chloroethane	---	---	< 2.0000 E
Chloroform	---	---	1.6000 E
Chloromethane	---	---	< 2.0000 E
cis-1,2-Dichloroethylene	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	< 0.5000 E
Dibromochloromethane	---	---	< 1.0000
Dichlorodifluoromethane	---	---	< 5.0000 E
Methylene chloride	---	---	< 2.0000
Tetrachloroethylene	< 100.00	< 30.000	< 0.5000 E
trans-1,2-Dichloroethylene	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	< 0.5000
Trichloroethylene	87.000	162.70	57.000
Trichlorofluoromethane	---	---	< 5.0000 E
Vinyl chloride	---	---	< 0.5000 E
1,1,1-Trichloroethane	52.000	27.000	18.000 E
1,1,2,2-Tetrachloroethane	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	< 0.5000
1,1-Dichloroethane	---	---	1.3000 E
1,1-Dichloroethylene	1100.0	1292.0	47.000
1,2-Dichlorobenzene	---	---	< 3.0000
1,2-Dichloroethane	< 100.00	< 16.000	< 0.5000
1,3-Dichlorobenzene	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	< 2.0000
1,2-Dichloropropane	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG
Laboratory	Radian	Radian	Lockheed Analytical

(<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-15

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-52

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	21-AUG-92 QA	28-SEP-92 QA	15-OCT-92 QA	19-MAR-93 QA
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 120.00	< 120.00	< 200.00	< 30.000
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	510.00	460.00	190.00	334.00
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	< 40.000	92.000	98.000	219.00
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	1100.0	1700.0	2200.0	3235.0
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 64.000	< 64.000	< 200.00	< 16.000
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-15 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-52

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	17-DEC-94 QA
Bromodichloromethane	< 1.0000 E
Bromoform	< 2.0000 E
Bromomethane	< 5.0000 E
Carbon tetrachloride	1.3000 E
Chlorobenzene	< 2.0000 E
Chloroethane	< 2.0000 E
Chloroform	2.0000 E
Chloromethane	< 2.0000 E
cis-1,2-Dichloroethylene	< 1.0000 E
cis-1,3-Dichloropropylene	< 0.5000 E
Dibromochloromethane	< 1.0000 E
Dichlorodifluoromethane	< 5.0000 E
Methylene chloride	< 2.0000 E
Tetrachloroethylene	0.5200 E
trans-1,2-Dichloroethylene	< 1.0000 E
trans-1,3-Dichloropropylene	< 0.5000 E
Trichloroethylene	370.00 E
Trichlorofluoromethane	< 5.0000 E
Vinyl chloride	< 0.5000 E
1,1,1-Trichloroethane	19.000 E
1,1,2,2-Tetrachloroethane	< 1.0000 E
1,1,2-Trichloroethane	< 0.5000 E
1,1-Dichloroethane	3.4000 E
1,1-Dichloroethylene	300.00 E
1,2-Dichlorobenzene	< 3.0000 E
1,2-Dichloroethane	1.9000 E
1,3-Dichlorobenzene	< 2.0000 E
1,4-Dichlorobenzene	< 2.0000 E
2-Chloroethylvinyl ether	< 2.0000 E
1,2-Dichloropropane	< 1.0000 E
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

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.---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-16

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-56A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	24-AUG-92 ME	14-SEP-92 ME	10-MAR-93 ME	12-APR-94 ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 120.00	< 3.0000	< 1.0000	4.1000
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	1300.0	< 2.0000	< 2.0000	---
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	< 40.000	< 1.0000	< 3.0000	11.800
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	2700.0	< 3.0000	< 13.000	10.400
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 64.000	< 1.6000	< 1.0000	48.000
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-16 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-56A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	13-DEC-94 ME
Bromodichloromethane	< 1.0000
Bromoform	< 2.0000
Bromomethane	< 5.0000
Carbon tetrachloride	< 0.5000
Chlorobenzene	< 2.0000
Chloroethane	< 2.0000
Chloroform	< 1.0000
Chloromethane	< 2.0000
cis-1,2-Dichloroethylene	< 1.0000
cis-1,3-Dichloropropylene	< 0.5000
Dibromochloromethane	< 1.0000
Dichlorodifluoromethane	< 5.0000
Methylene chloride	< 2.0000
Tetrachloroethylene	< 0.5000
trans-1,2-Dichloroethylene	< 1.0000
trans-1,3-Dichloropropylene	< 0.5000
Trichloroethylene	1.2000
Trichlorofluoromethane	< 5.0000
Vinyl chloride	< 0.5000
1,1,1-Trichloroethane	< 1.0000
1,1,2,2-Tetrachloroethane	< 1.0000
1,1,2-Trichloroethane	< 0.5000
1,1-Dichloroethane	< 1.0000
1,1-Dichloroethylene	0.6200
1,2-Dichlorobenzene	< 3.0000
1,2-Dichloroethane	< 0.5000
1,3-Dichlorobenzene	< 2.0000
1,4-Dichlorobenzene	< 2.0000
2-Chloroethylvinyl ether	< 2.0000
1,2-Dichloropropane	< 1.0000
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

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Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-17

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-56B

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	15-SEP-92 QA	16-MAR-93 QA	14-APR-94 QA	14-DEC-94 QA
Bromodichloromethane	---	---	---	< 1.0000
Bromoform	---	---	---	< 2.0000
Bromomethane	---	---	---	< 5.0000 E
Carbon tetrachloride	---	---	---	< 0.5000 E
Chlorobenzene	---	---	---	< 2.0000 E
Chloroethane	---	---	---	< 2.0000 E
Chloroform	---	---	---	< 1.0000
Chloromethane	---	---	---	< 2.0000 E
cis-1,2-Dichloroethylene	---	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	---	< 0.5000 E
Dibromochloromethane	---	---	---	< 1.0000
Dichlorodifluoromethane	---	---	---	< 5.0000 E
Methylene chloride	---	---	---	< 2.0000
Tetrachloroethylene	< 12.000	< 10.000	---	< 0.5000 E
trans-1,2-Dichloroethylene	---	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	---	< 0.5000
Trichloroethylene	44.000	26.200	58.600	73.000
Trichlorofluoromethane	---	---	---	< 5.0000 E
Vinyl chloride	---	---	---	< 0.5000 E
1,1,1-Trichloroethane	< 4.0000	< 30.000	---	< 5.5000 E
1,1,2,2-Tetrachloroethane	---	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	---	< 0.5000
1,1-Dichloroethane	---	---	---	1.3000 E
1,1-Dichloroethylene	190.00	149.00	48.000	75.000
1,2-Dichlorobenzene	---	---	---	< 3.0000
1,2-Dichloroethane	< 6.4000	< 10.000	46.200	< 0.5000
1,3-Dichlorobenzene	---	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	---	< 2.0000
1,2-Dichloropropane	---	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-18

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-56C

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	14-SEP-92 QA	15-MAR-93 QA	18-APR-94 QA	14-DEC-94 QA
Bromodichloromethane	---	---	---	< 1.0000
Bromoform	---	---	---	< 2.0000
Bromomethane	---	---	---	< 5.0000 E
Carbon tetrachloride	---	---	---	0.9800 E
Chlorobenzene	---	---	---	< 2.0000 E
Chloroethane	---	---	---	< 2.0000 E
Chloroform	---	---	---	1.5000 E
Chloromethane	---	---	---	< 2.0000 E
cis-1,2-Dichloroethylene	---	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	---	< 0.5000 E
Dibromochloromethane	---	---	---	< 1.0000
Dichlorodifluoromethane	---	---	---	< 5.0000 E
Methylene chloride	---	---	---	< 2.0000
Tetrachloroethylene	< 3.0000	< 10.000	52.750	< 0.5000 E
trans-1,2-Dichloroethylene	---	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	---	< 0.5000
Trichloroethylene	400.00	87.300	---	190.00
Trichlorofluoromethane	---	---	---	< 5.0000 E
Vinyl chloride	---	---	---	< 0.5000 E
1,1,1-Trichloroethane	< 1.0000	40.400	64.500	18.000 E
1,1,2,2-Tetrachloroethane	---	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	---	< 0.5000
1,1-Dichloroethane	---	---	---	3.0000 E
1,1-Dichloroethylene	800.00	549.00	135.25	180.00
1,2-Dichlorobenzene	---	---	---	< 3.0000
1,2-Dichloroethane	< 1.6000	< 10.000	132.75	1.5000 E
1,3-Dichlorobenzene	---	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	---	< 2.0000
1,2-Dichloropropane	---	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Lockheed Analytical

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Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-19

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-56D

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	14-SEP-92 QA	16-MAR-93 QA	15-APR-94 QA	14-DEC-94 QA
Bromodichloromethane	---	---	---	< 10.000
Bromoform	---	---	---	< 20.000
Bromomethane	---	---	---	< 5.0000
Carbon tetrachloride	---	---	---	0.9500 E
Chlorobenzene	---	---	---	< 2.0000
Chloroethane	---	---	---	< 2.0000 E
Chloroform	---	---	---	< 1.0000 E
Chloromethane	---	---	---	< 2.0000 E
cis-1,2-Dichloroethylene	---	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	---	< 0.5000
Dibromochloromethane	---	---	---	< 10.000
Dichlorodifluoromethane	---	---	---	< 5.0000 E
Methylene chloride	---	---	---	< 2.0000
Tetrachloroethylene	< 60.000	< 10.000	---	< 5.0000
trans-1,2-Dichloroethylene	---	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	---	< 0.5000
Trichloroethylene	260.00	53.400	---	130.00
Trichlorofluoromethane	---	---	---	< 5.0000 E
Vinyl chloride	---	---	---	< 0.5000
1,1,1-Trichloroethane	< 20.000	< 30.000	---	< 33.000
1,1,2,2-Tetrachloroethane	---	---	---	< 10.000
1,1,2-Trichloroethane	---	---	---	< 0.5000
1,1-Dichloroethane	---	---	---	2.6000 E
1,1-Dichloroethylene	1100.0	270.00	56.400	140.00
1,2-Dichlorobenzene	---	---	---	< 30.000
1,2-Dichloroethane	< 32.000	< 10.000	52.900	0.8300 E
1,3-Dichlorobenzene	---	---	---	< 20.000
1,4-Dichlorobenzene	---	---	---	< 20.000
2-Chloroethylvinyl ether	---	---	---	< 2.0000
1,2-Dichloropropane	---	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG	FD
Laboratory	Radian	Radian	Radian	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-19 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-56D

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	14-DEC-94 QA
Bromodichloromethane	< 1.0000
Bromoform	< 2.0000
Bromomethane	< 5.0000 E
Carbon tetrachloride	0.8300 E
Chlorobenzene	< 2.0000 E
Chloroethane	< 2.0000 E
Chloroform	2.3000 E
Chloromethane	< 2.0000 E
cis-1,2-Dichloroethylene	< 1.0000
cis-1,3-Dichloropropylene	< 0.5000 E
Dibromochloromethane	< 1.0000
Dichlorodifluoromethane	< 5.0000 E
Methylene chloride	< 2.0000
Tetrachloroethylene	< 0.5000 E
trans-1,2-Dichloroethylene	< 1.0000
trans-1,3-Dichloropropylene	< 0.5000
Trichloroethylene	130.00
Trichlorofluoromethane	< 5.0000 E
Vinyl chloride	< 0.5000 E
1,1,1-Trichloroethane	11.000 E
1,1,2,2-Tetrachloroethane	< 1.0000
1,1,2-Trichloroethane	< 0.5000
1,1-Dichloroethane	2.4000 E
1,1-Dichloroethylene	140.00
1,2-Dichlorobenzene	< 3.0000
1,2-Dichloroethane	0.7900 E
1,3-Dichlorobenzene	< 2.0000
1,4-Dichlorobenzene	< 2.0000
2-Chloroethylvinyl ether	< 2.0000
1,2-Dichloropropane	< 1.0000
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
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Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-20

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-57A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	18-SEP-92 QA	16-MAR-93 QA	17-DEC-94 QA
Bromodichloromethane	---	---	< 1.0000
Bromoform	---	---	< 2.0000
Bromomethane	---	---	< 5.0000
Carbon tetrachloride	---	---	0.6200
Chlorobenzene	---	---	< 2.0000
Chloroethane	---	---	< 2.0000
Chloroform	---	---	< 1.0000
Chloromethane	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	< 0.5000
Dibromochloromethane	---	---	< 1.0000
Dichlorodifluoromethane	---	---	< 5.0000
Methylene chloride	---	---	< 2.0000
Tetrachloroethylene	< 120.00	< 100.00	< 0.5000
trans-1,2-Dichloroethylene	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	< 0.5000
Trichloroethylene	350.00	103.00	260.00 E
Trichlorofluoromethane	---	---	< 5.0000
Vinyl chloride	---	---	< 0.5000
1,1,1-Trichloroethane	76.000	47.600	13.000
1,1,2,2-Tetrachloroethane	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	< 0.5000
1,1-Dichloroethane	---	---	2.2000
1,1-Dichloroethylene	1500.0	688.00	190.00 E
1,2-Dichlorobenzene	---	---	< 3.0000
1,2-Dichloroethane	< 64.000	< 100.00	1.6000 E
1,3-Dichlorobenzene	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	< 2.0000
1,2-Dichloropropane	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG
Laboratory	Radian	Radian	Lockheed Analytical

) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-21

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-57B

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	17-SEP-92 QA	15-MAR-93 QA	19-DEC-94 QA
Bromodichloromethane	---	---	< 1.0000
Bromoform	---	---	< 2.0000
Bromomethane	---	---	< 5.0000
Carbon tetrachloride	---	---	< 0.5000
Chlorobenzene	---	---	< 2.0000
Chloroethane	---	---	< 2.0000
Chloroform	---	---	< 1.0000
Chloromethane	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	< 0.5000
Dibromochloromethane	---	---	< 1.0000
Dichlorodifluoromethane	---	---	< 5.0000
Methylene chloride	---	---	< 2.0000
Tetrachloroethylene	< 15.000	< 10.000	< 0.5000
trans-1,2-Dichloroethylene	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	< 0.5000
Trichloroethylene	54.000	49.600	140.00 E
Trichlorofluoromethane	---	---	< 5.0000
Vinyl chloride	---	---	< 0.5000
1,1,1-Trichloroethane	9.0000	< 30.000	6.3000
1,1,2,2-Tetrachloroethane	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	< 0.5000
1,1-Dichloroethane	---	---	1.2000
1,1-Dichloroethylene	180.00	239.00	150.00 E
1,2-Dichlorobenzene	---	---	< 3.0000
1,2-Dichloroethane	< 8.0000	< 10.000	0.7100 E
1,3-Dichlorobenzene	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	< 2.0000
1,2-Dichloropropane	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG
Laboratory	Radian	Radian	Lockheed Analytical

:) = Less than; numerical value is the limit of detection for that analyte
.---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-22

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-57C

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	17-SEP-92 QA	10-MAR-93 QA	19-DEC-94 QA
Bromodichloromethane	---	---	< 1.0000
Bromoform	---	---	< 2.0000
Bromomethane	---	---	< 5.0000
Carbon tetrachloride	---	---	< 0.5000
Chlorobenzene	---	---	< 2.0000
Chloroethane	---	---	< 2.0000
Chloroform	---	---	< 1.0000
Chloromethane	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	< 0.5000
Dibromochloromethane	---	---	< 1.0000
Dichlorodifluoromethane	---	---	< 5.0000
Methylene chloride	---	---	< 2.0000
Tetrachloroethylene	< 60.000	< 10.000	< 0.5000
trans-1,2-Dichloroethylene	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	< 0.5000
Trichloroethylene	180.00	69.800	88.000 E
Trichlorofluoromethane	---	---	< 5.0000
Vinyl chloride	---	---	< 0.5000
1,1,1-Trichloroethane	28.000	< 30.000	10.000
1,1,2,2-Tetrachloroethane	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	< 0.5000
1,1-Dichloroethane	---	---	1.8000
1,1-Dichloroethylene	730.00	328.00	73.000 E
1,2-Dichlorobenzene	---	---	< 3.0000
1,2-Dichloroethane	< 32.000	< 10.000	1.5000 E
1,3-Dichlorobenzene	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	< 2.0000
1,2-Dichloropropane	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG
Laboratory	Radian	Radian	Lockheed Analytical

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-23

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-57D

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	22-SEP-92 QA	16-MAR-93 QA	19-DEC-94 QA
Bromodichloromethane	---	---	< 1.0000
Bromoform	---	---	< 2.0000
Bromomethane	---	---	< 5.0000
Carbon tetrachloride	---	---	0.5200
Chlorobenzene	---	---	< 2.0000
Chloroethane	---	---	< 2.0000
Chloroform	---	---	1.2000
Chloromethane	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	< 0.5000
Dibromochloromethane	---	---	< 1.0000
Dichlorodifluoromethane	---	---	< 5.0000
Methylene chloride	---	---	< 2.0000
Tetrachloroethylene	< 120.00	< 100.00	< 0.5000
trans-1,2-Dichloroethylene	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	< 0.5000
Trichloroethylene	640.00	122.00	140.00 E
Trichlorofluoromethane	---	---	< 5.0000
Vinyl chloride	---	---	< 0.5000
1,1,1-Trichloroethane	72.000	50.600	11.000
1,1,2,2-Tetrachloroethane	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	< 0.5000
1,1-Dichloroethane	---	---	2.1000
1,1-Dichloroethylene	1500.0	710.00	110.00 E
1,2-Dichlorobenzene	---	---	< 3.0000
1,2-Dichloroethane	< 64.000	< 100.00	1.2000 E
1,3-Dichlorobenzene	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	< 2.0000
1,2-Dichloropropane	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG
Laboratory	Radian	Radian	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
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Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-24

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-58A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	14-SEP-92 QA	17-SEP-92 QA	04-MAR-93 QA	15-APR-94 QA
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 60.000	< 120.00	< 1.0000	---
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	330.00	190.00	76.000	57.400
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	76.000	< 40.000	9.2000	6.0800
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	1200.0	660.00	152.90	40.800
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 32.000	< 64.000	< 1.0000	42.400
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-24 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-58A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	13-DEC-94 QA
Bromodichloromethane	< 10.000
Bromoform	< 20.000
Bromomethane	< 5.0000
Carbon tetrachloride	< 5.0000
Chlorobenzene	< 2.0000
Chloroethane	< 2.0000 E
Chloroform	< 1.0000
Chloromethane	< 2.0000 E
cis-1,2-Dichloroethylene	< 1.0000
cis-1,3-Dichloropropylene	< 0.5000
Dibromochloromethane	< 10.000
Dichlorodifluoromethane	< 5.0000 E
Methylene chloride	< 2.0000
Tetrachloroethylene	< 5.0000
trans-1,2-Dichloroethylene	< 1.0000
trans-1,3-Dichloropropylene	< 0.5000
Trichloroethylene	59.000
Trichlorofluoromethane	< 5.0000 E
Vinyl chloride	< 0.5000
1,1,1-Trichloroethane	< 13.000
1,1,2,2-Tetrachloroethane	< 10.000
1,1,2-Trichloroethane	< 0.5000
1,1-Dichloroethane	1.0000 E
1,1-Dichloroethylene	56.000
1,2-Dichlorobenzene	< 30.000
1,2-Dichloroethane	0.6300 E
1,3-Dichlorobenzene	< 20.000
1,4-Dichlorobenzene	< 20.000
2-Chloroethylvinyl ether	< 2.0000
1,2-Dichloropropane	< 1.0000
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-25

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-58B

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	22-SEP-92 QA	22-SEP-92 QA	15-MAR-93 QA	15-DEC-94 QA
Bromodichloromethane	---	---	---	< 1.0000
Bromoform	---	---	---	< 2.0000
Bromomethane	---	---	---	< 5.0000 E
Carbon tetrachloride	---	---	---	0.5600 E
Chlorobenzene	---	---	---	< 2.0000 E
Chloroethane	---	---	---	< 2.0000 E
Chloroform	---	---	---	< 1.0000
Chloromethane	---	---	---	< 2.0000 E
cis-1,2-Dichloroethylene	---	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	---	< 0.5000 E
Dibromochloromethane	---	---	---	< 1.0000
Dichlorodifluoromethane	---	---	---	< 5.0000 E
Methylene chloride	---	---	---	< 2.0000
Tetrachloroethylene	< 120.00	< 120.00	< 5.0000	< 0.5000 E
trans-1,2-Dichloroethylene	---	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	---	< 0.5000
Trichloroethylene	350.00	350.00	46.700	130.00
Trichlorofluoromethane	---	---	---	< 5.0000 E
Vinyl chloride	---	---	---	< 0.5000 E
1,1,1-Trichloroethane	56.000	< 40.000	24.400	15.000 E
1,1,2,2-Tetrachloroethane	---	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	---	< 0.5000
1,1-Dichloroethane	---	---	---	1.8000 E
1,1-Dichloroethylene	900.00	860.00	344.50	110.00
1,2-Dichlorobenzene	---	---	---	< 3.0000
1,2-Dichloroethane	< 64.000	< 64.000	< 5.0000	0.9800 E
1,3-Dichlorobenzene	---	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	---	< 2.0000
1,2-Dichloropropane	---	---	---	< 1.0000
Quality Assurance Code	FDA	FDB	ORG	ORG
Laboratory	Radian	Radian	Radian	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
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Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-26

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-58C

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	22-SEP-92 QA	16-MAR-93 QA	15-APR-94 QA	15-DEC-94 QA
Bromodichloromethane	---	---	---	< 1.0000
Bromoform	---	---	---	< 2.0000
Bromomethane	---	---	---	< 5.0000
Carbon tetrachloride	---	---	---	< 0.5000
Chlorobenzene	---	---	---	< 2.0000
Chloroethane	---	---	---	< 2.0000
Chloroform	---	---	---	< 1.0000
Chloromethane	---	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	---	< 0.5000
Dibromochloromethane	---	---	---	< 1.0000
Dichlorodifluoromethane	---	---	---	< 5.0000
Methylene chloride	---	---	---	< 2.0000
Tetrachloroethylene	< 120.00	< 10.000	---	< 0.5000
trans-1,2-Dichloroethylene	---	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	---	< 0.5000
Trichloroethylene	370.00	< 20.000	265.00	94.000
Trichlorofluoromethane	---	---	---	< 5.0000
Vinyl chloride	---	---	---	< 0.5000
1,1,1-Trichloroethane	60.000	52.000	22.900	8.5000 E
1,1,2,2-Tetrachloroethane	---	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	---	< 0.5000
1,1-Dichloroethane	---	---	---	1.1000
1,1-Dichloroethylene	1200.0	538.00	128.00	65.000
1,2-Dichlorobenzene	---	---	---	< 3.0000
1,2-Dichloroethane	< 64.000	< 10.000	129.00	0.7900
1,3-Dichlorobenzene	---	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	---	< 2.0000
1,2-Dichloropropane	---	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Lockheed Analytical

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Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-27

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-58D

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	18-SEP-92 QA	15-MAR-93 QA	19-APR-94 QA	15-DEC-94 QA
Bromodichloromethane	---	---	---	< 1.0000
Bromoform	---	---	---	< 2.0000
Bromomethane	---	---	---	< 5.0000
Carbon tetrachloride	---	---	---	2.1000
Chlorobenzene	---	---	---	< 2.0000
Chloroethane	---	---	---	< 2.0000
Chloroform	---	---	---	3.7000
Chloromethane	---	---	---	< 2.0000
cis-1,2-Dichloroethylene	---	---	---	< 1.0000
cis-1,3-Dichloropropylene	---	---	---	< 0.5000
Dibromochloromethane	---	---	---	< 1.0000
Dichlorodifluoromethane	---	---	---	< 5.0000
Methylene chloride	---	---	---	< 2.0000
Tetrachloroethylene	< 120.00	< 3.0000	---	0.6500
trans-1,2-Dichloroethylene	---	---	---	< 1.0000
trans-1,3-Dichloropropylene	---	---	---	< 0.5000
Trichloroethylene	250.00	564.50	---	310.00
Trichlorofluoromethane	---	---	---	< 5.0000
Vinyl chloride	---	---	---	< 0.5000
1,1,1-Trichloroethane	53.000	56.010	101.50	24.000 E
1,1,2,2-Tetrachloroethane	---	---	---	< 1.0000
1,1,2-Trichloroethane	---	---	---	< 0.5000
1,1-Dichloroethane	---	---	---	5.8000
1,1-Dichloroethylene	960.00	1053.0	324.00	320.00
1,2-Dichlorobenzene	---	---	---	< 3.0000
1,2-Dichloroethane	< 64.000	< 1.6000	260.50	2.3000
1,3-Dichlorobenzene	---	---	---	< 2.0000
1,4-Dichlorobenzene	---	---	---	< 2.0000
2-Chloroethylvinyl ether	---	---	---	< 2.0000
1,2-Dichloropropane	---	---	---	< 1.0000
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-28

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-59A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	24-AUG-92 ME	28-AUG-92 ME	18-SEP-92 ME	10-MAR-93 ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 60.000	< 12.000	< 3.0000	< 1.0000
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	200.00	37.000	4.8000	5.4000
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	< 20.000	< 4.0000	0.8600	< 3.0000
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	< 60.000	< 12.000	13.000	28.610
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 32.000	< 6.4000	< 1.6000	2.5500
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-28 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-59A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION	
	15-APR-94 ME	15-DEC-94 ME
Bromodichloromethane	---	< 1.0000
Bromoform	---	< 2.0000
Bromomethane	---	< 5.0000
Carbon tetrachloride	---	< 0.5000
Chlorobenzene	---	< 2.0000
Chloroethane	---	< 2.0000
Chloroform	---	< 1.0000
Chloromethane	---	< 2.0000
cis-1,2-Dichloroethylene	---	< 1.0000
cis-1,3-Dichloropropylene	---	< 0.5000
Dibromochloromethane	---	< 1.0000
Dichlorodifluoromethane	---	< 5.0000
Methylene chloride	---	< 2.0000
Tetrachloroethylene	---	< 0.5000
trans-1,2-Dichloroethylene	---	< 1.0000
trans-1,3-Dichloropropylene	---	< 0.5000
Trichloroethylene	41.800	6.8000
Trichlorofluoromethane	---	< 5.0000
Vinyl chloride	---	< 0.5000
1,1,1-Trichloroethane	---	< 1.0000
1,1,2,2-Tetrachloroethane	---	< 1.0000
1,1,2-Trichloroethane	---	< 0.5000
1,1-Dichloroethane	---	< 1.0000
1,1-Dichloroethylene	8.2700	9.6000
1,2-Dichlorobenzene	---	< 3.0000
1,2-Dichloroethane	4.8500	< 0.5000
1,3-Dichlorobenzene	---	< 2.0000
1,4-Dichlorobenzene	---	< 2.0000
2-Chloroethylvinyl ether	---	< 2.0000
1,2-Dichloropropane	---	< 1.0000
Quality Assurance Code	ORG	ORG
Laboratory	Radian	Lockheed Analytical

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Historic data undergoing verification

TABLE 3-29

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-59C

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	16-SEP-92 ME	22-SEP-92 ME	25-FEB-93 ME	19-APR-94 ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 3.0000	< 3.0000	< 3.0000	27.200
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	< 2.0000	< 2.0000	65.950	---
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	< 1.0000	< 1.0000	6.8700	24.800
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	< 3.0000	< 3.0000	302.90	69.600
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 1.6000	< 1.6000	1.7800	48.600
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-29 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-59C

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION	
	15-DEC-94 ME	15-DEC-94 ME
Bromodichloromethane	< 1.0000	< 1.0000
Bromoform	< 2.0000	< 2.0000
Bromomethane	< 5.0000	< 5.0000
Carbon tetrachloride	< 0.5000	< 0.5000
Chlorobenzene	< 2.0000	< 2.0000
Chloroethane	< 2.0000	< 2.0000
Chloroform	< 1.0000	< 1.0000
Chloromethane	< 2.0000	< 2.0000
cis-1,2-Dichloroethylene	< 1.0000	< 1.0000
cis-1,3-Dichloropropylene	< 0.5000	< 0.5000
Dibromochloromethane	< 1.0000	< 1.0000
Dichlorodifluoromethane	< 5.0000	< 5.0000
Methylene chloride	< 2.0000	< 2.0000
Tetrachloroethylene	< 0.5000	< 0.5000
trans-1,2-Dichloroethylene	< 1.0000	< 1.0000
trans-1,3-Dichloropropylene	< 0.5000	< 0.5000
Trichloroethylene	39.000	41.000
Trichlorofluoromethane	< 5.0000	< 5.0000
Vinyl chloride	< 0.5000	< 0.5000
1,1,1-Trichloroethane	< 4.1000 E	< 4.6000
1,1,2,2-Tetrachloroethane	< 1.0000	< 1.0000
1,1,2-Trichloroethane	< 0.5000	< 0.5000
1,1-Dichloroethane	2.3000	2.4000
1,1-Dichloroethylene	41.000	44.000
1,2-Dichlorobenzene	< 3.0000	< 3.0000
1,2-Dichloroethane	4.3000	4.9000 E
1,3-Dichlorobenzene	< 2.0000	< 2.0000
1,4-Dichlorobenzene	< 2.0000	< 2.0000
2-Chloroethylvinyl ether	< 2.0000	< 2.0000
1,2-Dichloropropane	< 1.0000	< 1.0000
Quality Assurance Code	FD	ORG
Laboratory	Lockheed Analytical	Lockheed Analytical

:) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-30

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-61A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	31-AUG-92 ME	22-OCT-92 ME	11-MAR-93 ME	20-APR-94 ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 300.00	< 10.000	< 3.0000	---
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	1200.0	< 20.000	329.72	---
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	< 100.00	< 30.000	24.950	36.329
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	39000.	65.000	2090.0	98.323
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 160.00	< 10.000	7.2800	84.991
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-30 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-61A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	17-DEC-94 ME
Bromodichloromethane	< 1.0000 E
Bromoform	< 2.0000 E
Bromomethane	< 5.0000 E
Carbon tetrachloride	< 0.5000 E
Chlorobenzene	< 2.0000 E
Chloroethane	< 2.0000 E
Chloroform	2.2000 E
Chloromethane	< 2.0000 E
cis-1,2-Dichloroethylene	< 1.0000 E
cis-1,3-Dichloropropylene	< 0.5000 E
Dibromochloromethane	< 1.0000 E
Dichlorodifluoromethane	< 5.0000 E
Methylene chloride	< 2.0000 E
Tetrachloroethylene	< 0.5000 E
trans-1,2-Dichloroethylene	< 1.0000 E
trans-1,3-Dichloropropylene	< 0.5000 E
Trichloroethylene	52.000
Trichlorofluoromethane	< 5.0000 E
Vinyl chloride	< 0.5000 E
1,1,1-Trichloroethane	4.5000 E
1,1,2,2-Tetrachloroethane	< 1.0000 E
1,1,2-Trichloroethane	< 0.5000 E
1,1-Dichloroethane	1.3000 E
1,1-Dichloroethylene	200.00 E
1,2-Dichlorobenzene	< 3.0000 E
1,2-Dichloroethane	< 0.5000 E
1,3-Dichlorobenzene	< 2.0000 E
1,4-Dichlorobenzene	< 2.0000 E
2-Chloroethylvinyl ether	< 2.0000 E
1,2-Dichloropropane	< 1.0000 E
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-31

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-61B

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	02-SEP-92 ME	16-SEP-92 ME	25-MAR-93 ME	21-APR-94 ME
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 600.00	< 6000.0	< 1500.0	228.00
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	2200.0	4300.0	1885.0	---
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	800.00	< 2000.0	< 500.00	2206.0
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	60000.	40000.	15860.	8520.0
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 320.00	< 3200.0	< 800.00	1956.0
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-31 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-61B

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	17-DEC-94 ME
Bromodichloromethane	< 1.0000
Bromoform	< 2.0000
Bromomethane	< 5.0000
Carbon tetrachloride	13.000
Chlorobenzene	< 2.0000
Chloroethane	< 2.0000
Chloroform	93.000
Chloromethane	< 2.0000
cis-1,2-Dichloroethylene	78.000
cis-1,3-Dichloropropylene	< 0.5000
Dibromochloromethane	< 1.0000
Dichlorodifluoromethane	< 5.0000
Methylene chloride	8.3000
Tetrachloroethylene	15.000
trans-1,2-Dichloroethylene	7.4000
trans-1,3-Dichloropropylene	< 0.5000
Trichloroethylene	3300.0 E
Trichlorofluoromethane	< 5.0000
Vinyl chloride	0.6300
1,1,1-Trichloroethane	670.00
1,1,2,2-Tetrachloroethane	< 1.0000
1,1,2-Trichloroethane	19.000
1,1-Dichloroethane	310.00
1,1-Dichloroethylene	14000. E
1,2-Dichlorobenzene	< 3.0000
1,2-Dichloroethane	190.00
1,3-Dichlorobenzene	< 2.0000
',4-Dichlorobenzene	< 2.0000
2-Chloroethylvinyl ether	< 2.0000
1,2-Dichloropropane	< 1.0000
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-32

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-62A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	19-OCT-92 QA	22-OCT-92 QA	04-MAR-93 QA	18-APR-94 QA
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 200.00	< 5.0000	< 10.000	---
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	< 400.00	65.000	80.000	---
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	< 600.00	---	37.290	102.00
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	500.00	730.00	515.25	828.00
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 200.00	< 5.0000	< 10.000	866.00
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

(<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-32 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-62A

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION	
	16-DEC-94 QA	16-DEC-94 QA
Bromodichloromethane	< 1.0000	< 1.0000
Bromoform	< 2.0000	< 2.0000
Bromomethane	< 5.0000	< 5.0000 E
Carbon tetrachloride	2.1000	2.1000 E
Chlorobenzene	< 2.0000	< 2.0000 E
Chloroethane	< 2.0000	< 2.0000 E
Chloroform	5.7000	5.4000 E
Chloromethane	< 2.0000	< 2.0000 E
cis-1,2-Dichloroethylene	< 1.0000	< 1.0000 E
cis-1,3-Dichloropropylene	< 0.5000	< 0.5000 E
Dibromochloromethane	< 1.0000	< 1.0000
Dichlorodifluoromethane	< 5.0000	< 5.0000 E
Methylene chloride	< 2.0000	< 2.0000 E
Tetrachloroethylene	< 0.5000	< 0.5000 E
trans-1,2-Dichloroethylene	< 1.0000	< 1.0000 E
trans-1,3-Dichloropropylene	< 0.5000	< 0.5000 E
Trichloroethylene	590.00 E	380.00 E
Trichlorofluoromethane	< 5.0000	< 5.0000 E
Vinyl chloride	< 0.5000	< 0.5000 E
1,1,1-Trichloroethane	22.000	22.000 E
1,1,2,2-Tetrachloroethane	< 1.0000	< 1.0000 E
1,1,2-Trichloroethane	< 0.5000	< 0.5000 E
1,1-Dichloroethane	4.1000	4.2000 E
1,1-Dichloroethylene	800.00 E	360.00 E
1,2-Dichlorobenzene	< 3.0000	< 3.0000
1,2-Dichloroethane	1.6000 E	1.6000 E
1,3-Dichlorobenzene	< 2.0000	< 2.0000 E
1,4-Dichlorobenzene	< 2.0000	< 2.0000 E
2-Chloroethylvinyl ether	< 2.0000	< 2.0000 E
1,2-Dichloropropane	< 1.0000	< 1.0000 E
Quality Assurance Code	FD	ORG
Laboratory	Lockheed Analytical	Lockheed Analytical

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(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-33

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-62B

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION			
	20-OCT-92 QA	22-OCT-92 QA	15-MAR-93 QA	18-APR-94 QA
Bromodichloromethane	---	---	---	---
Bromoform	---	---	---	---
Bromomethane	---	---	---	---
Carbon tetrachloride	---	---	---	---
Chlorobenzene	---	---	---	---
Chloroethane	---	---	---	---
Chloroform	---	---	---	---
Chloromethane	---	---	---	---
cis-1,2-Dichloroethylene	---	---	---	---
cis-1,3-Dichloropropylene	---	---	---	---
Dibromochloromethane	---	---	---	---
Dichlorodifluoromethane	---	---	---	---
Methylene chloride	---	---	---	---
Tetrachloroethylene	< 100.00	< 100.00	< 10.000	35.000
trans-1,2-Dichloroethylene	---	---	---	---
trans-1,3-Dichloropropylene	---	---	---	---
Trichloroethylene	86.000	110.00	89.300	---
Trichlorofluoromethane	---	---	---	---
Vinyl chloride	---	---	---	---
1,1,1-Trichloroethane	< 300.00	---	46.600	71.250
1,1,2,2-Tetrachloroethane	---	---	---	---
1,1,2-Trichloroethane	---	---	---	---
1,1-Dichloroethane	---	---	---	---
1,1-Dichloroethylene	950.00	1200.0	604.00	185.00
1,2-Dichlorobenzene	---	---	---	---
1,2-Dichloroethane	< 100.00	< 100.00	< 10.000	186.25
1,3-Dichlorobenzene	---	---	---	---
1,4-Dichlorobenzene	---	---	---	---
2-Chloroethylvinyl ether	---	---	---	---
1,2-Dichloropropane	---	---	---	---
Quality Assurance Code	ORG	ORG	ORG	ORG
Laboratory	Radian	Radian	Radian	Radian

(<) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification

TABLE 3-33 (continued)

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL MW-62B

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION
	16-DEC-94 QA
Bromodichloromethane	< 1.0000
Bromoform	< 2.0000
Bromomethane	< 5.0000
Carbon tetrachloride	2.2000
Chlorobenzene	< 2.0000
Chloroethane	< 2.0000
Chloroform	5.0000
Chloromethane	< 2.0000
cis-1,2-Dichloroethylene	< 1.0000
cis-1,3-Dichloropropylene	< 0.5000
Dibromochloromethane	< 1.0000
Dichlorodifluoromethane	< 5.0000
Methylene chloride	< 2.0000
Tetrachloroethylene	0.5800
trans-1,2-Dichloroethylene	< 1.0000
trans-1,3-Dichloropropylene	< 0.5000
Trichloroethylene	430.00 E
Trichlorofluoromethane	< 5.0000
Vinyl chloride	< 0.5000
1,1,1-Trichloroethane	18.000
1,1,2,2-Tetrachloroethane	< 1.0000
1,1,2-Trichloroethane	< 0.5000
1,1-Dichloroethane	4.1000
1,1-Dichloroethylene	410.00 E
1,2-Dichlorobenzene	< 3.0000
1,2-Dichloroethane	1.6000 E
1,3-Dichlorobenzene	< 2.0000
1,4-Dichlorobenzene	< 2.0000
2-Chloroethylvinyl ether	< 2.0000
1,2-Dichloropropane	< 1.0000
Quality Assurance Code	ORG
Laboratory	Lockheed Analytical

:) = Less than; numerical value is the limit of detection for that analyte
.---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 3-34

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS ANALYZED BY EPA METHOD 8010 IN SAMPLES COLLECTED FROM MONITOR WELL OW-03

CONSTITUENT (Micrograms per liter)	DATE SAMPLED/FORMATION		
	23-MAR-93 QA	23-MAR-93 QA	12-DEC-94 QA
Bromodichloromethane	---	---	< 1.0000 E
Bromoform	---	---	< 2.0000 E
Bromomethane	---	---	< 5.0000 E
Carbon tetrachloride	---	---	< 0.5000 E
Chlorobenzene	---	---	< 2.0000 E
Chloroethane	---	---	< 2.0000 E
Chloroform	---	---	< 1.0000 E
Chloromethane	---	---	< 2.0000 E
cis-1,2-Dichloroethylene	---	---	< 1.0000 E
cis-1,3-Dichloropropylene	---	---	< 0.5000 E
Dibromochloromethane	---	---	< 1.0000 E
Dichlorodifluoromethane	---	---	< 5.0000 E
Methylene chloride	---	---	< 2.0000 E
Tetrachloroethylene	---	---	< 0.5000 E
trans-1,2-Dichloroethylene	---	---	< 1.0000 E
trans-1,3-Dichloropropylene	---	---	< 0.5000 E
Trichloroethylene	310.30	280.00	130.00
Trichlorofluoromethane	---	---	< 5.0000 E
Vinyl chloride	---	---	< 0.5000 E
1,1,1-Trichloroethane	220.00	54.000	8.5000 E
1,1,2,2-Tetrachloroethane	---	---	< 1.0000 E
1,1,2-Trichloroethane	---	---	< 0.5000 E
1,1-Dichloroethane	---	---	1.1000 E
1,1-Dichloroethylene	2549.0	430.00	110.00
1,2-Dichlorobenzene	---	---	< 3.0000 E
1,2-Dichloroethane	---	1.4000	< 0.5000 E
1,3-Dichlorobenzene	---	---	< 2.0000 E
1,4-Dichlorobenzene	---	---	< 2.0000 E
2-Chloroethylvinyl ether	---	---	< 2.0000 E
1,2-Dichloropropane	---	---	< 1.0000 E
Quality Assurance Code	FDA	FDB	ORG
Laboratory	Radian	Radian	Lockheed Analytical

:) = Less than; numerical value is the limit of detection for that analyte
(---) = Not analyzed/reported; (ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample
Trailing zeros may be computer generated and do not necessarily reflect the laboratory degree of accuracy
Historic data undergoing verification
E = Estimated; selected quality control data not within criteria limited use determined by data quality objective

TABLE 4

SOIL GAS SAMPLE ANALYTICAL RESULTS

TABLE 4
SOIL GAS SAMPLE ANALYTICAL RESULTS
DECEMBER 1994

CONSTITUENT (Micrograms per liter)	BLANK IDENTIFIER/DATE SAMPLED		
	EB-101 12/13/94	EB-102 12/14/94	FB-100 12/12/94
total Dichloroethane	< 0.09	< 0.09	< 0.09
total Dichloroethylene	0.03	< 0.03	< 0.03
Tetrachloroethlene	< 0.08	< 0.08	< 0.08
total Tetrachloroethane	< 0.03	< 0.03	< 0.03
Trichloroethylene	0.05	0.05	< 0.05
Laboratory	Radian	Radian	Radian
Quanlity Assurance Code	EB	EB	FB

CONSTITUENT (Micrograms per liter)	MONITOR WELL IDENTIFIER/DATE SAMPLED						
	EW-9 12/12/94	EW-9 12/12/94	EW-08 12/12/94	EW-10 12/12/94	EW-11 12/13/94	EW-12 12/13/94	EW-14 12/13/94
total Dichloroethane	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
total Dichloroethylene	0.03	0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Tetrachloroethlene	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
total Tetrachloroethane	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Trichloroethylene	0.05	0.05	< 0.05	< 0.05	< 0.05	0.05	0.05
Laboratory	Radian	Radian	Radian	Radian	Radian	Radian	Radian
Quanlity Assurance Code	ORG	FD	ORG	ORG	ORG	ORG	ORG

(<) = Less than; numerical value is the limit of detection for that analyte

(ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample; (EB) = equipment blank sample; (FB) = field blank sample

TABLE 4 (continued)
SOIL GAS SAMPLE ANALYTICAL RESULTS
DECEMBER 1994

CONSTITUENT (Micrograms per liter)	MONITOR WELL IDENTIFIER/DATE SAMPLED							
	VEW-11 12/13/94	VMW-3 12/13/94	VMW-6 12/13/94	VMW-8 12/14/94	VMW-8 12/14/94	VMW-13 12/14/94	VMW-16 12/13/94	VMW-20 12/14/94
total Dichloroethane	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.09	< 0.09	< 0.09
total Dichloroethylene	0.03	0.03	0.03	< 0.03	< 0.03	0.03	0.03	< 0.03
Tetrachloroethlene	0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.08	< 0.08	< 0.08
total Tetrachloroethane	0.03	0.03	0.03	0.05	0.03	0.03	0.03	< 0.03
Trichloroethylene	0.05	0.05	0.05	0.03	0.05	0.05	0.05	< 0.05
Laboratory	Radian	Radian	Radian	Radian	Radian	Radian	Radian	Radian
Quanlity Assurance Code	ORG	ORG	ORG	ORG	FD	ORG	ORG	ORG

CONSTITUENT (Micrograms per liter)	MONITOR WELL IDENTIFIER/DATE SAMPLED						
	VRW-1 12/13/94	VRW-1 12/13/94	VRW-2 12/13/94	VRW-3 12/13/94	VRW-6 12/13/94	VRW-8 12/13/94	VRW-10 12/13/94
total Dichloroethane	0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
total Dichloroethylene	< 0.03	< 0.03	< 0.03	0.03	0.03	0.03	0.03
Tetrachloroethlene	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
total Tetrachloroethane	< 0.03	< 0.03	< 0.03	0.03	< 0.03	0.03	0.03
Trichloroethylene	0.05	< 0.05	< 0.05	0.05	0.05	0.05	0.05
Laboratory	Radian	Radian	Radian	Radian	Radian	Radian	Radian
Quanlity Assurance Code	ORG	FD	ORG	ORG	ORG	ORG	ORG

(<) = Less than; numerical value is the limit of detection for that analyte
(ORG) = original sample; (FD) = field duplicate sample; (SPT) = split sample

TABLE 5

WATER LEVEL DATA

TABLE 5

WATER LEVEL ELEVATION DATA
LOCKHEED MARTIN MONITORING WELLS
DECEMBER 1995

WELL IDENTIFIER	FORMATION UNIT	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet)	WATER LEVEL ELEVATION (feet msl)	COMMENTS
EW-01	QA	12/02/94	2142.64	48.16	2094.48	
EW-02	QA	12/02/94	2125.06	46.84	2078.22	
EW-08	ME	12/02/94	2175.13	52.30	2122.83	
		12/14/94		53.06	2122.07	
EW-09	ME	12/02/94	2176.39	54.60	2121.79	
		12/13/94		54.54	2121.85	
EW-10	ME	12/02/94	2176.94	54.28	2122.66	
		12/14/94		54.36	2122.58	
EW-11	ME	12/02/94	2178.74	-----	------	TWO PHASE WELLHEADS ARE IN PLACE UNABLE TO MEASURE
		12/14/94		54.48	2124.26	
EW-12	ME	12/14/94	2176.79	57.08	2119.71	
EW-14	QA/ME	12/02/94	2181.40	57.46	2123.94	
		12/17/94		57.92	2123.48	
IW-01	QA	12/02/94	2158.30	6.50	2151.80	
IW-02	QA	12/02/94	2152.52	5.84	2146.68	
IW-03	QA	12/02/94	2129.94	3.80	2126.14	
IW-04	QA	12/02/94	2132.49	9.16	2123.33	
IW-05	QA	12/02/94	2134.07	3.88	2130.19	
MW-04	QA	12/02/94	2157.39	36.80	2120.59	
		12/16/94		37.00	2120.39	
MW-05	QA	12/02/94	2118.71	8.66	2110.05	
MW-06	QA/ME	12/02/94	2119.11	9.86	2109.25	
MW-17	QA	12/17/94	2137.72	56.54	2081.18	
MW-26	ME	12/02/94	2179.93	-----	------	TWO PHASE WELLHEADS ARE IN PLACE UNABLE TO MEASURE
		12/16/94		58.40	2121.53	
MW-35	QA	12/02/94	2168.34	48.84	2119.50	
MW-39	QA	12/02/94	2141.54	22.62	2118.92	
MW-41	QA/ME	12/02/94	2131.28	16.72	2114.56	
		12/16/94		16.78	2114.50	
MW-44	QA	12/02/94	2124.42	17.90	2106.52	
MW-50	QA	12/02/94	2148.76	30.16	2118.60	
		12/17/94		30.26	2118.50	
MW-51	QA	12/13/94	2135.71	17.84	2117.87	
MW-52	QA	12/17/94	2133.53	16.29	2117.24	
MW-53	QA	12/02/94	2150.60	31.92	2118.68	
MW-56A	ME	12/02/94	2140.44	36.38	2104.06	
		12/13/94		36.50	2103.94	

See footnotes on page 2

TABLE 5 (continued)

WATER LEVEL ELEVATION DATA
LOCKHEED MARTIN MONITORING WELLS
DECEMBER 1995

WELL IDENTIFIER	FORMATION UNIT	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet)	WATER LEVEL ELEVATION (feet msl)	COMMENTS
MW-56B	QA	12/02/94	2139.93	21.70	2118.23	
		12/14/94		21.34	2118.59	
MW-56C	QA	12/02/94	2140.14	21.96	2118.18	
		12/14/94		21.80	2118.34	
MW-56D	QA	12/02/94	2139.85	23.16	2116.69	
		12/14/94		21.34	2118.51	
MW-57A	QA	12/02/94	2143.34	25.10	2118.24	
		12/17/94		24.55	2118.79	
MW-57B	QA	12/02/94	2143.58	24.96	2118.62	
		12/19/94		24.84	2118.74	
MW-57C	QA	12/02/94	2143.38	24.90	2118.48	
		12/19/94		24.64	2118.74	
MW-57D	QA	12/02/94	2143.48	24.72	2118.76	
		12/19/94		24.78	2118.70	
MW-58A	QA	12/02/94	2138.06	20.52	2117.54	
		12/13/94		20.20	2117.86	
MW-58B	QA	12/02/94	2138.13	20.18	2117.95	
		12/15/94		20.15	2117.98	
MW-58C	QA	12/02/94	2138.36	20.56	2117.80	
		12/15/94		20.47	2117.89	
MW-58D	QA	12/02/94	2138.31	20.76	2117.55	
		12/15/94		20.42	2117.89	
MW-59A	ME	12/02/94	2176.95	61.20	2115.75	
		12/13/94		61.02	2115.93	
MW-59B	ME	12/02/94	2177.18	55.68	2121.50	
MW-59C	ME	12/02/94	2176.71	57.86	2118.85	
		12/13/94		57.68	2119.03	
MW-59D	ME	12/02/94	2177.32	57.80	2119.52	
MW-61A	ME	12/02/94	2183.74	72.96	2110.78	
		12/15/94		64.29	2119.45	
MW-61B	ME	12/02/94	2183.59	92.48	2091.11	
		12/16/94		62.58	2121.01	
MW-61C	ME	12/02/94	2183.68	72.56	2111.12	
MW-61D	ME	12/02/94	2183.65	73.80	2109.85	
MW-62A	QA	12/02/94	2128.82	12.88	2115.94	
		12/16/94		12.83	2115.99	
MW-62B	QA	12/02/94	2128.86	13.20	2115.66	
		12/16/94		11.75	2117.11	
MW-64	QA	12/02/94	2125.76	13.08	2112.68	DTW ON HARDCOPY
MW-65	QA	12/02/94	2126.27	14.04	2112.23	

See footnotes on page 2

TABLE 5 (continued)

WATER LEVEL ELEVATION DATA
LOCKHEED MARTIN MONITORING WELLS
DECEMBER 1995

WELL IDENTIFIER	FORMATION UNIT	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet)	WATER LEVEL ELEVATION (feet msl)	COMMENTS
OW-03	QA	12/02/94	2141.01	22.62	2118.39	
		12/12/94		22.53	2118.48	
P-03	QA	12/02/94	2137.58	35.08	2102.50	

FOOTNOTES
msl = Mean sea level
--- = not measured
ME = Mount Eden formation
QA = Quaternary Alluvium formation

Historic data undergoing validation.

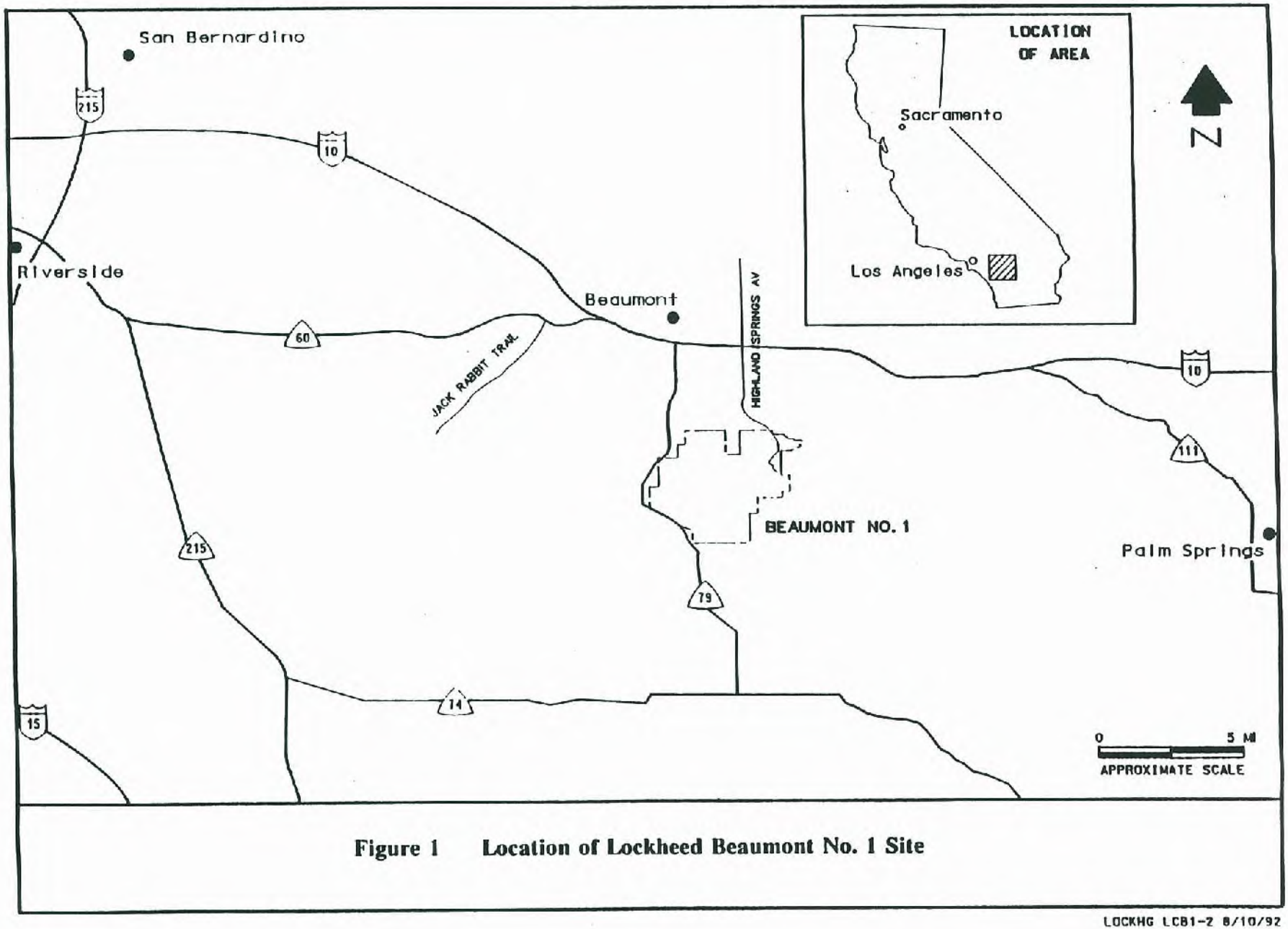


Figure 1 Location of Lockheed Beaumont No. 1 Site

LOCKHG LC81-2 8/10/92

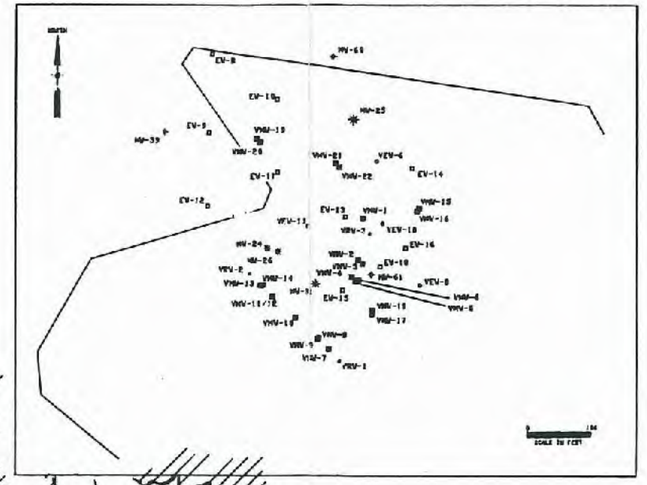
LEGEND

Alluvium/Bedrock contact - ~~~~
Mt. Eden above water table - ——
Stream boundary - - - -
Burn Pit fencing - ——

EW Extraction Well
MW Monitor Well
OW Observation Well
QA Quaternary Alluvium
ME Mt. Eden

Notes:

Additional data was collected from a sampling of EW-13, EW-15, EW-16, EW-18, MW-17, MW-19, and MW-49 in March 1995. The data from all but MW-17 are posted on this map. MW-17 was resampled and the data are not comparable with that resulting from the December sampling. Data validation for the December round is better, so that value is posted on the map.

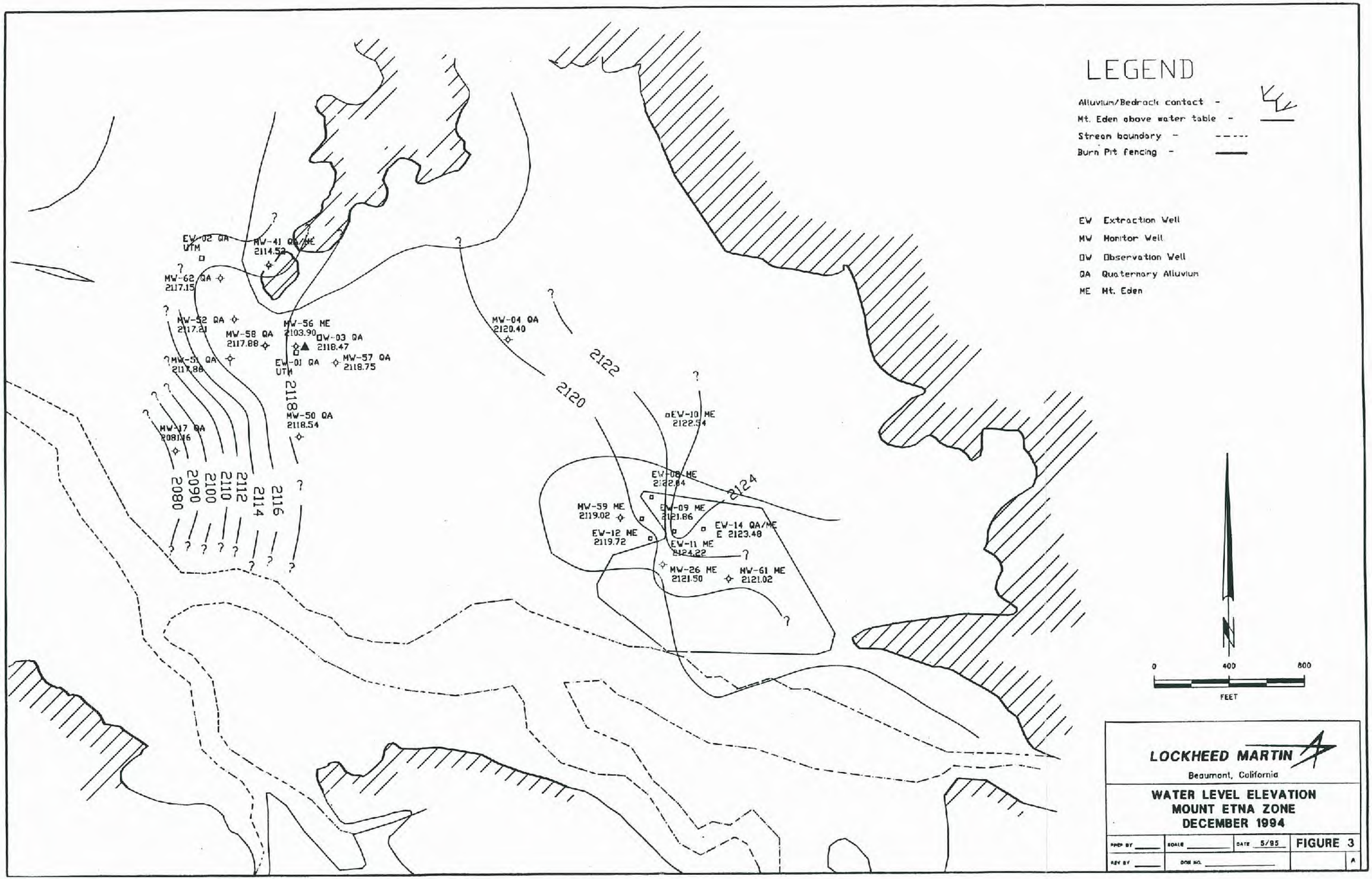


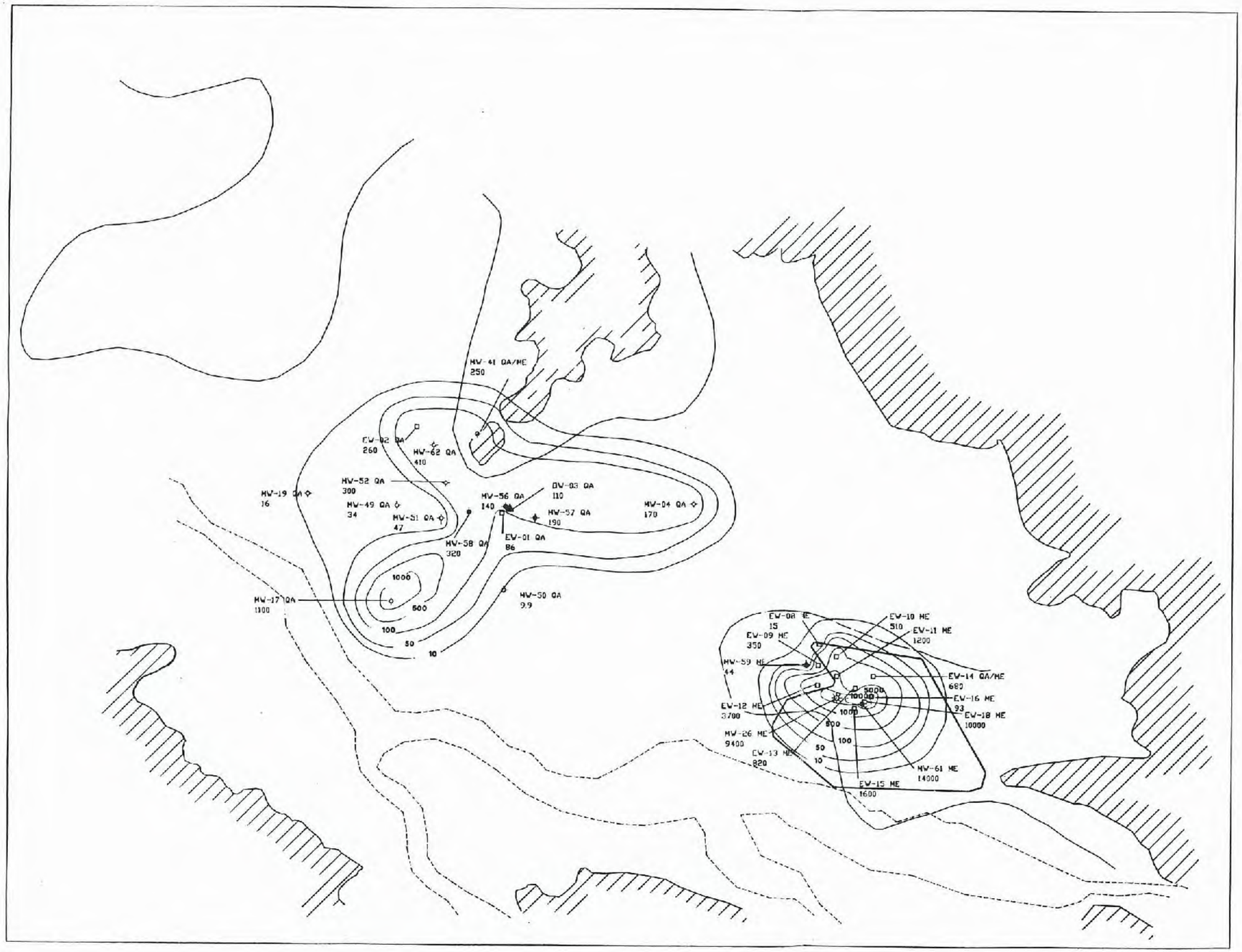
LOCKHEED MARTIN
Beaumont, California

Well Locations
BEAUMONT, CALIFORNIA
December 1994

PREP BY	SCALE	DATE 6/95	FIGURE 2
REV BY	DOS NO.		A

CADD FILE: LOCK16 LOCKWELL/LOCKWP SAC VRL 12:21/95


LEGEND
Alluvium/Bedrock contact -
Mt. Eden above water table -
Stream boundary -
Burn Pit fencing -
EW Extraction Well
MW Monitor Well
OW Observation Well
QA Quaternary Alluvium
ME Mt. Eden
EW-02 QA UTM
MW-41 QA/ME 2114.52
MW-62 QA 2117.15
MW-52 QA 2117.21
MW-58 QA 2117.88
MW-56 ME 2103.90
OW-03 QA 2118.47
MW-51 QA 2117.88
EW-01 QA UTM
MW-57 QA 2118.75
MW-50 QA 2118.54
MW-17 QA 2081.46
MW-04 QA 2120.40
EW-10 ME 2122.54
EW-08 ME 2122.84
MW-59 ME 2119.02
EW-09 ME 2121.86
EW-14 QA/ME E 2123.48
EW-12 ME 2119.72
EW-11 ME 2124.22
MW-26 ME 2121.50
MW-61 ME 2121.02
2080
2090
2100
2110
2112
2114
2116
2118
2120
2122
2124
0
400
800
FEET
LOCKHEED MARTIN
Beaumont, California
WATER LEVEL ELEVATION
MOUNT ETNA ZONE
DECEMBER 1994
PREP BY
SCALE
DATE 5/95
FIGURE 3
REV BY
DOE NO.
A



LEGEND

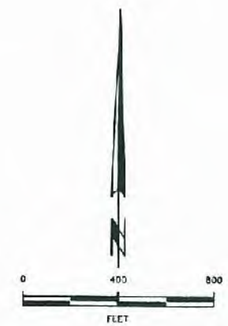
Alluvium/Bedrock contact -
Mt. Eden above water table -
Stream boundary - -----
Burn Pit fencing -

Well Type:
EW Extraction Well
MW Monitor Well
OW Observation Well

Well Screening Interval:
QA Quaternary Alluvium
ME Mt. Eden

Notes:

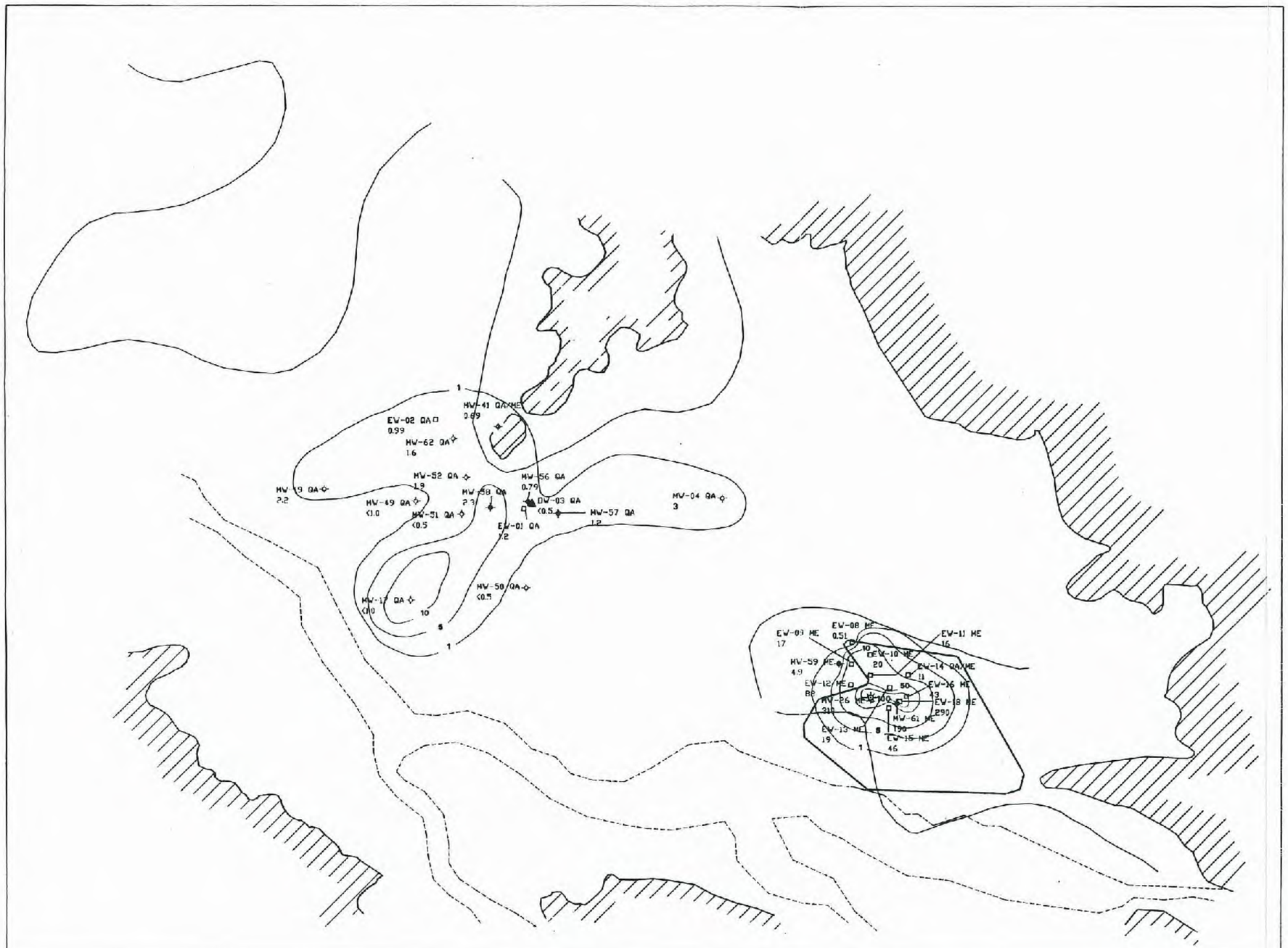
Additional data was collected from a sampling of EW-13, EW-15, EW-16, EW-18, MW-17, MW-19, and MW-49 in March 1995. The data from all but MW-17 are posted on this map.
MW-17 was resampled and the data are not comparable with that resulting from the December sampling. Data validation for the December round is better, so that value is posted on the map.
The EW-16 value is not honored, as it is beyond the instrument calibration range. This commonly leads to underestimation, which appears to be the case here.



LOCKHEED MARTIN
Beaumont, California

1,1 Dichloroethylene (DCE) In Ground Water, in ppb December 1994

PREP BY	SCALE	DATE 5/95	FIGURE 4
REV BY	DGN NO.		A



LEGEND

Alluvium/Bedrock contact -
Mt. Eden above water table - ——
Stream boundary - -----
Burn Pit fencing - ——

Well Type:
EW Extraction Well
MW Monitor Well
OW Observation Well

Well Screening Interval:
QA Quaternary Alluvium
ME Mt. Eden

Notes:

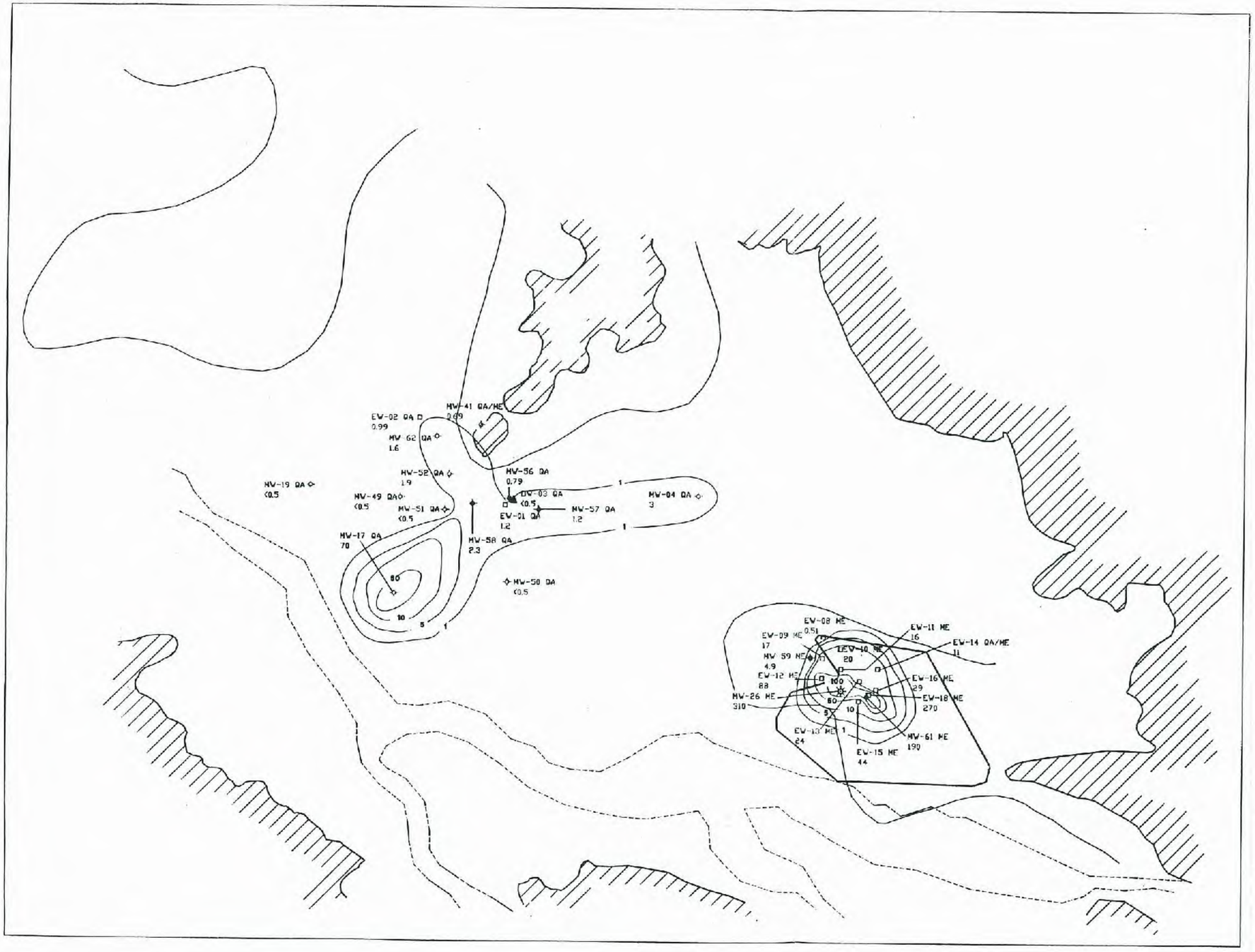
Additional data was collected from a sampling of EW-13, Ew-15, EW-16, EW-18, MW-17, MW-19, and MW-49 in March 1995. The data from all but MW-17 are posted on this map.
MW-17 was resampled and the data are not comparable with that resulting from the December sampling. Data validation for the December round is better, so that value is posted on the map.

The EW-16 value is not honored, as it is beyond the instrument calibration range. This commonly leads to underestimation, which appears to be the case here.

LOCKHEED MARTIN
Beaumont, California

1,1 Dichloroethane (DCA)
In Ground Water, in ppb
December 1994

PREP BY ____ | CHKD ____ | DATE 6/95 | FIGURE 5
PET BY ____ | DGN NO. ____ | A



LEGEND

Alluvium/Bedrock contact –
Mt. Eden above water table –
Stream boundary – -----
Burn Pit fencing –

Well Type:

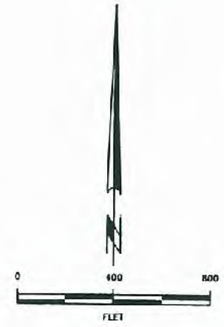
EW Extraction Well
MW Monitor Well
OW Observation Well

Well Screening Interval:

QA Quaternary Alluvium
ME Mt. Eden

Notes:

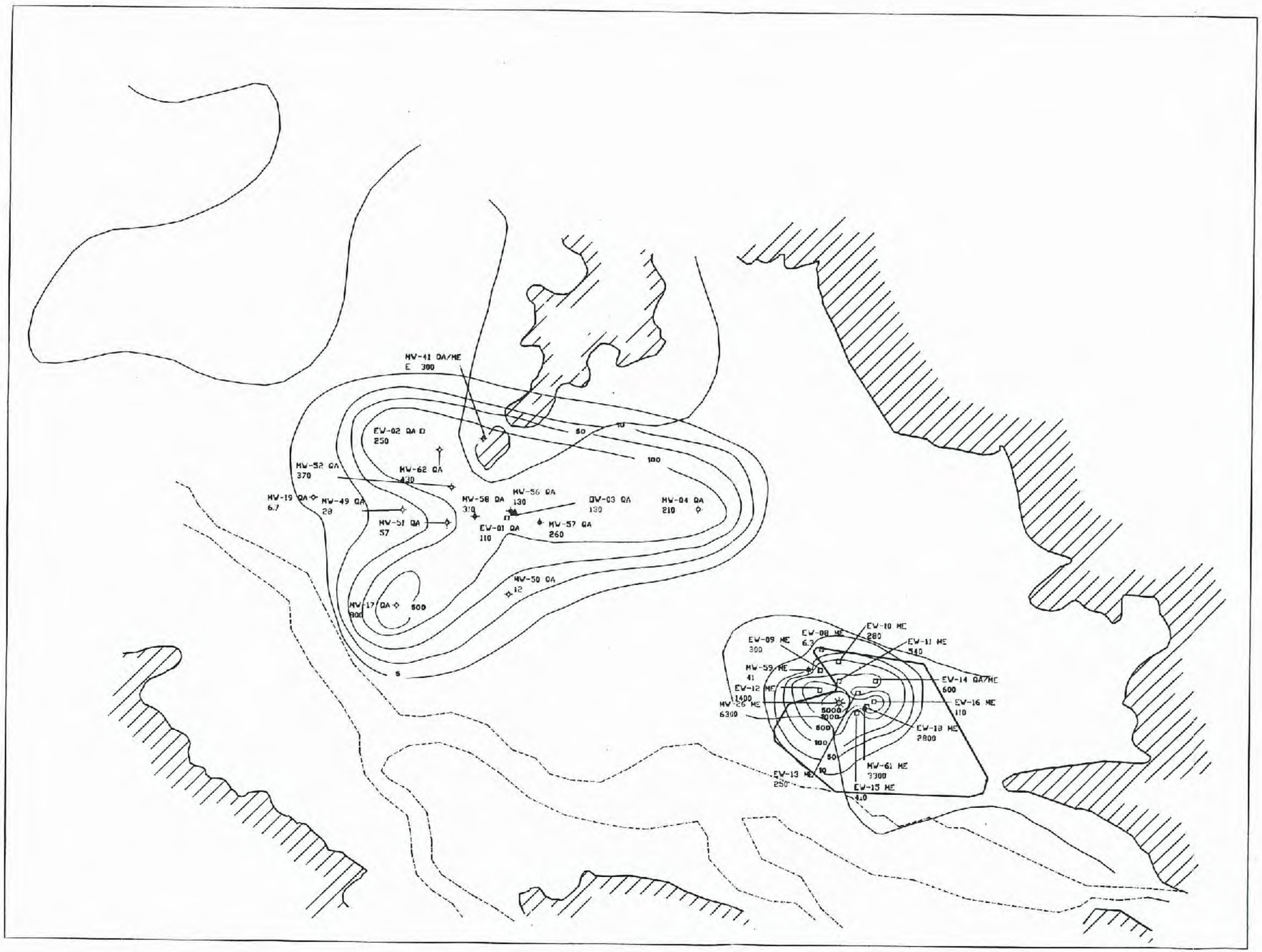
Additional data was collected from a sampling of EW-13, Ew-15, EW-16, EW-18, MW-17, MW-19, and MW-49 in March 1995. The data from all but MW-17 are posted on this map.
MW-17 was resampled and the data are not comparable with that resulting from the December sampling. Data validation for the December round is better, so that value is posted on the map.



LOCKHEED MARTIN
Beaumont, California

1,2 Dichloroethane (DCA) In Groundwater, in ppb December 1994

DRAFT BY | SCALE | DATE 6/95 | FIGURE 6
REV BY | DGN NO. | A



LEGEND

Alluvium/Bedrock contact - ⌇⌇

Mt. Eden above water table - ——

Stream boundary - -----

Burn Pit fencing - ——

Well Type:

EW Extraction Well
MW Monitor Well
OW Observation Well

Well Screening Interval:

QA Quaternary Alluvium
ME Mt. Eden

Notes:

Additional data was collected from a sampling of EW-13, Ew-15, EW-16, EW-18, MW-17, MW-19, and MW-49 in March 1995. The data from all bu MW-17 are posted on this map.
MW-17 was resampled and the data are not comparable with that resulting from the December sampling. Data validation for the December round is better, so that value is posted on the map.

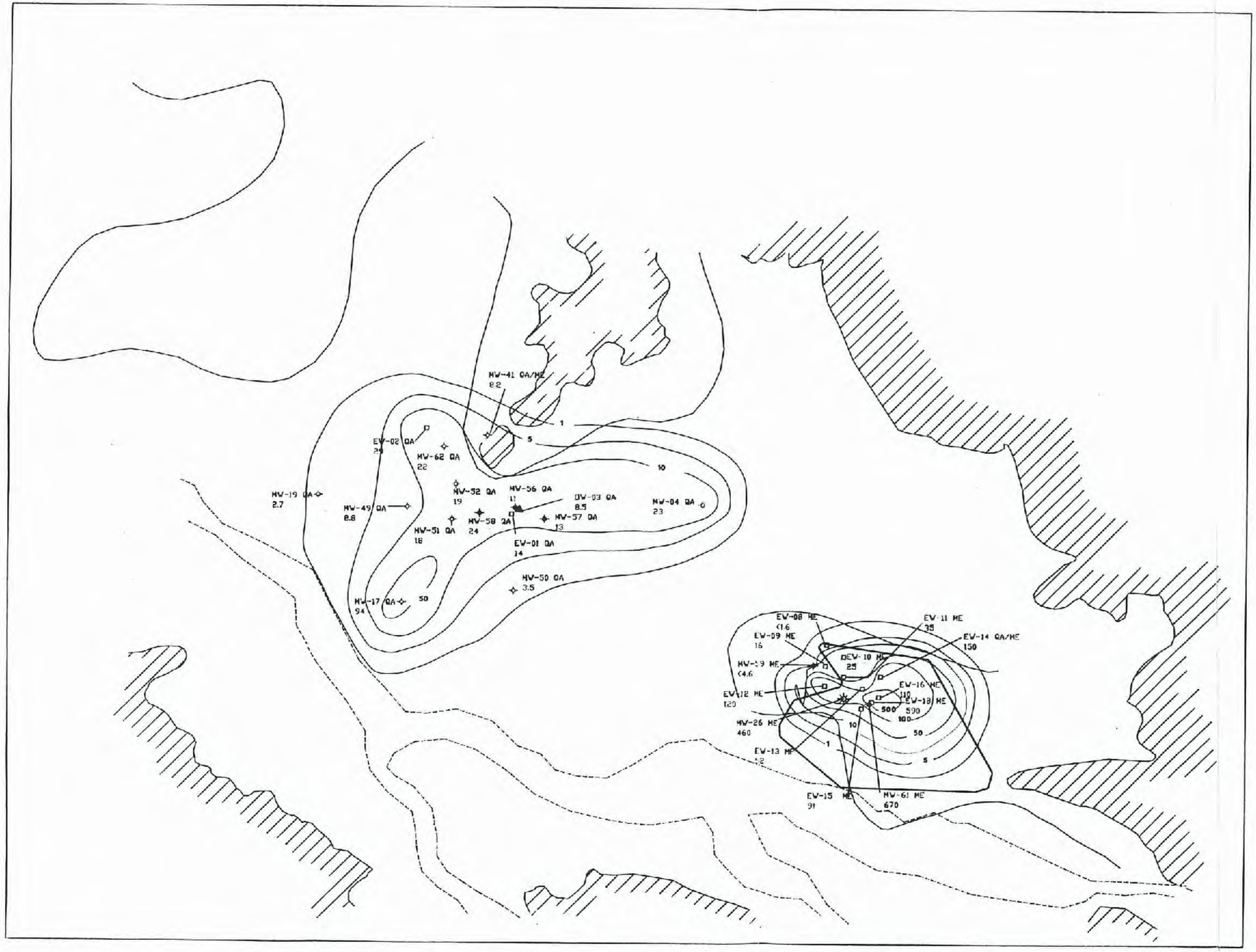
The EW-16 value is not honored, as it is beyond the instrument calibration range. This commonly leads to underestimation, which appears to be the case here.

LOCKHEED MARTIN

Beaumont, California

Trichloroethylene (TCE) In Ground Water, in ppb December 1994

PREP BY	SCALE	DATE 5/95	FIGURE 7
REV BY	SUB NO.		A



LEGEND

Alluvium/Bedrock contact - ~~~~

Mt. Eden above water table - ——

Stream boundary - -----

Burn Pit fencing - ——

Well Type:

EW Extraction Well
MW Monitor Well
DW Observation Well

Well Screening Interval:

QA Quaternary Alluvium
ME Mt. Eden

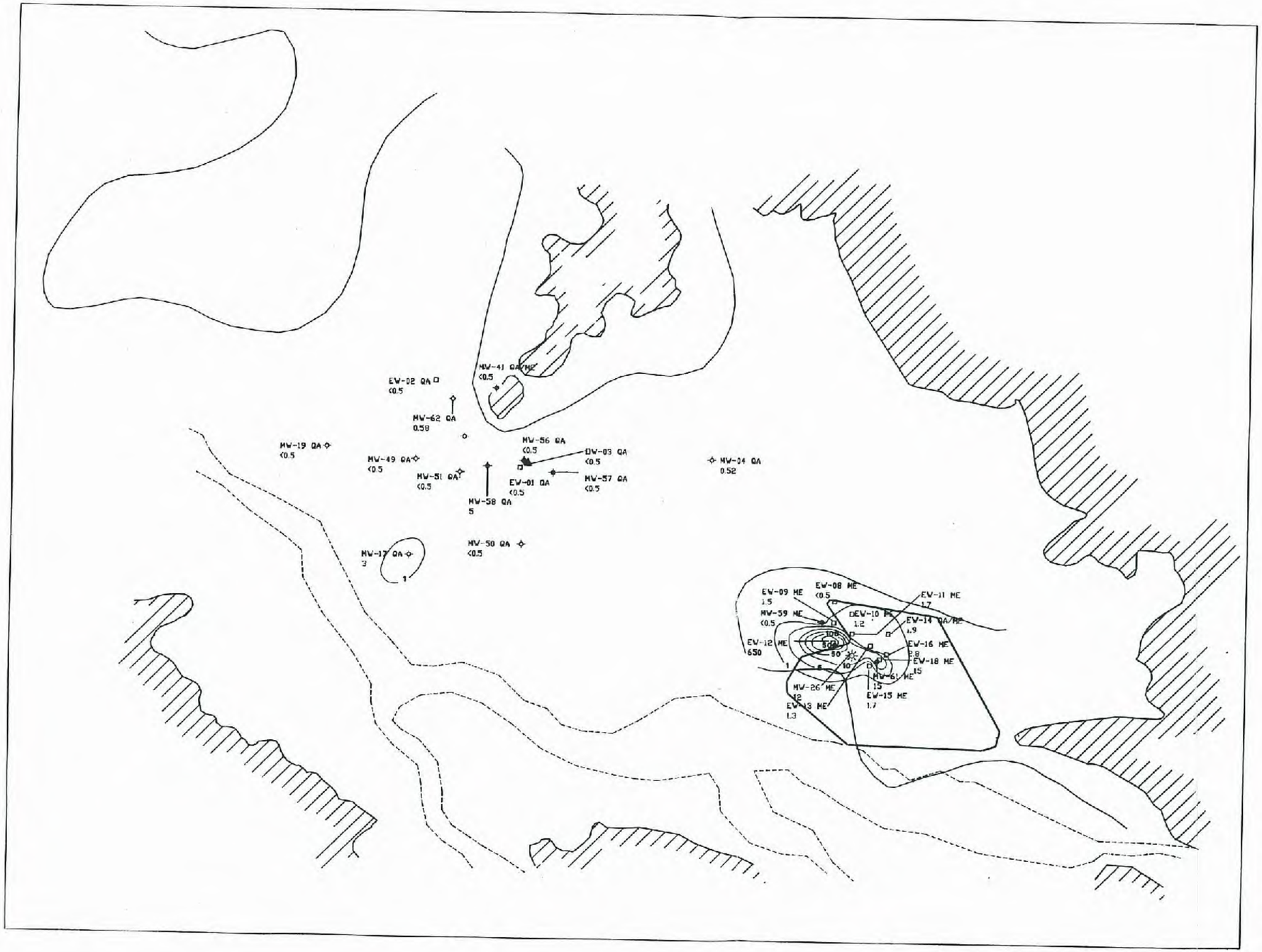
Notes:

Additional data was collected from a sampling of EW-13, Ew-15, EW-16, EW-18, MW-17, MW-19, and MW-49 in March 1995. The data from all but MW-17 are posted on this map.
MW-17 was resampled and the data are not comparable with that resulting from the December sampling. Data validation for the December round is better, so that value is posted on the map.
The EW-16 value is not honored, as it is beyond the instrument calibration range. This commonly leads to underestimation, which appears to be the case here.

LOCKHEED MARTIN
Beaumont, California

1,1,1 Trichloroethane (TCA) In Ground Water, in ppb December 1994

PREP BY	SCALE	DATE 5/95	FIGURE 8
APP BY	JOB NO.		A



LEGEND

Alluvium/Bedrock contact - K/Kv
Mt. Eden above water table - ——
Stream boundary - -----
Burn Pit fencing - ——

Well Type:

EW Extraction Well
MW Monitor Well
DW Observation Well

Well Screening Interval:

QA Quaternary Alluvium
ME Mt. Eden

Notes:

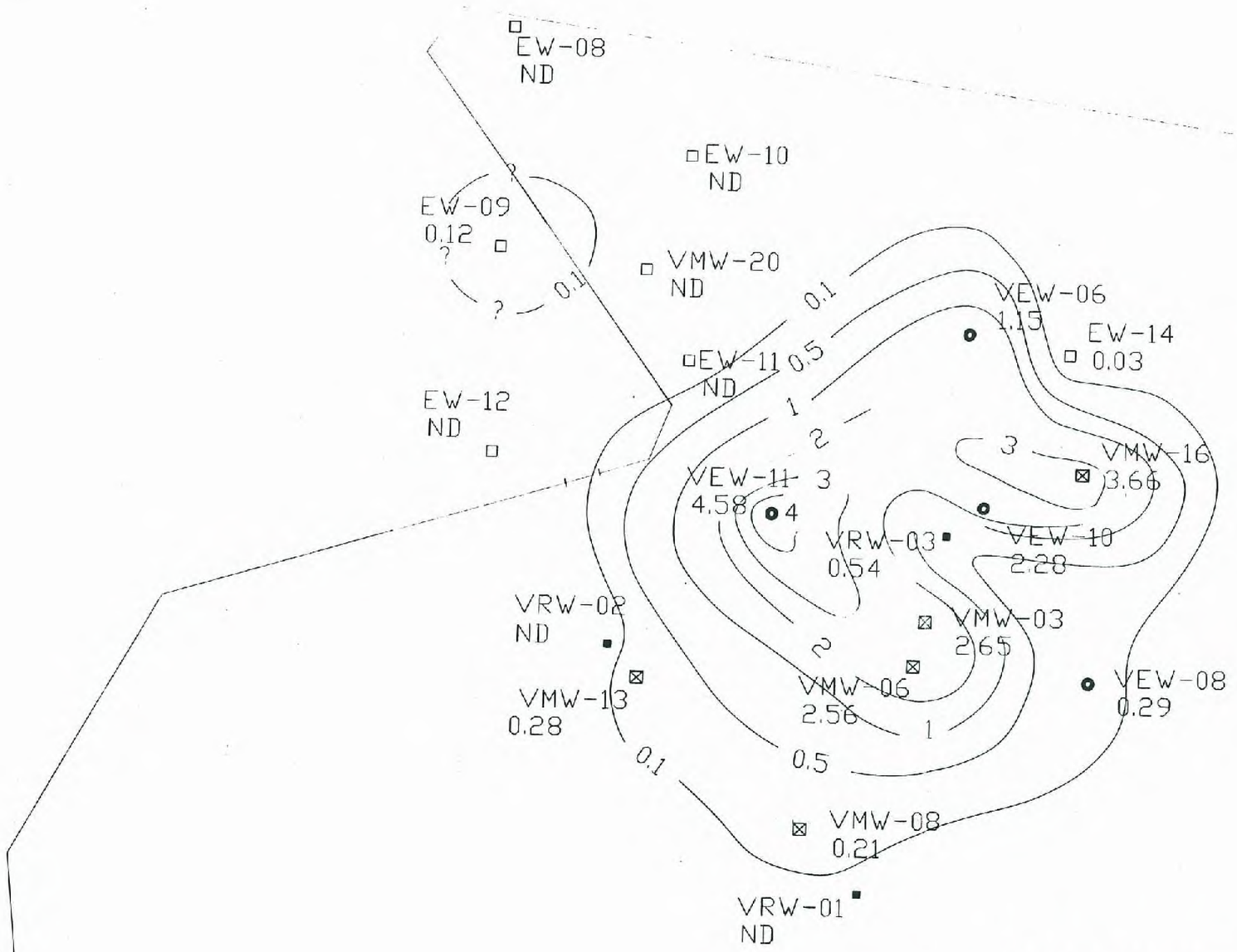
Additional data was collected from a sampling of EW-13, Ew-15, EW-16, EW-18, MW-17, MW-19, and MW-49 in March 1995. The data from all but MW-17 are posted on this map. MW-17 was resampled and the data are not comparable with that resulting from the December sampling. Data validation for the December round is better, so that value is posted on the map.

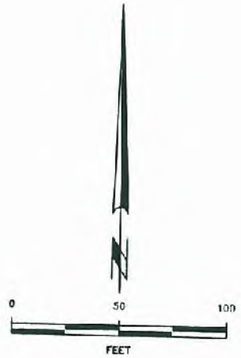
0 600 800
FEET

LOCKHEED MARTIN
Beaumont, California

Tetrachloroethylene (PCE) in Ground Water, in ppb December 1994

PREP BY	SCALE	DATE 5/96	FIGURE 9
REV BY	DGN NO.		A





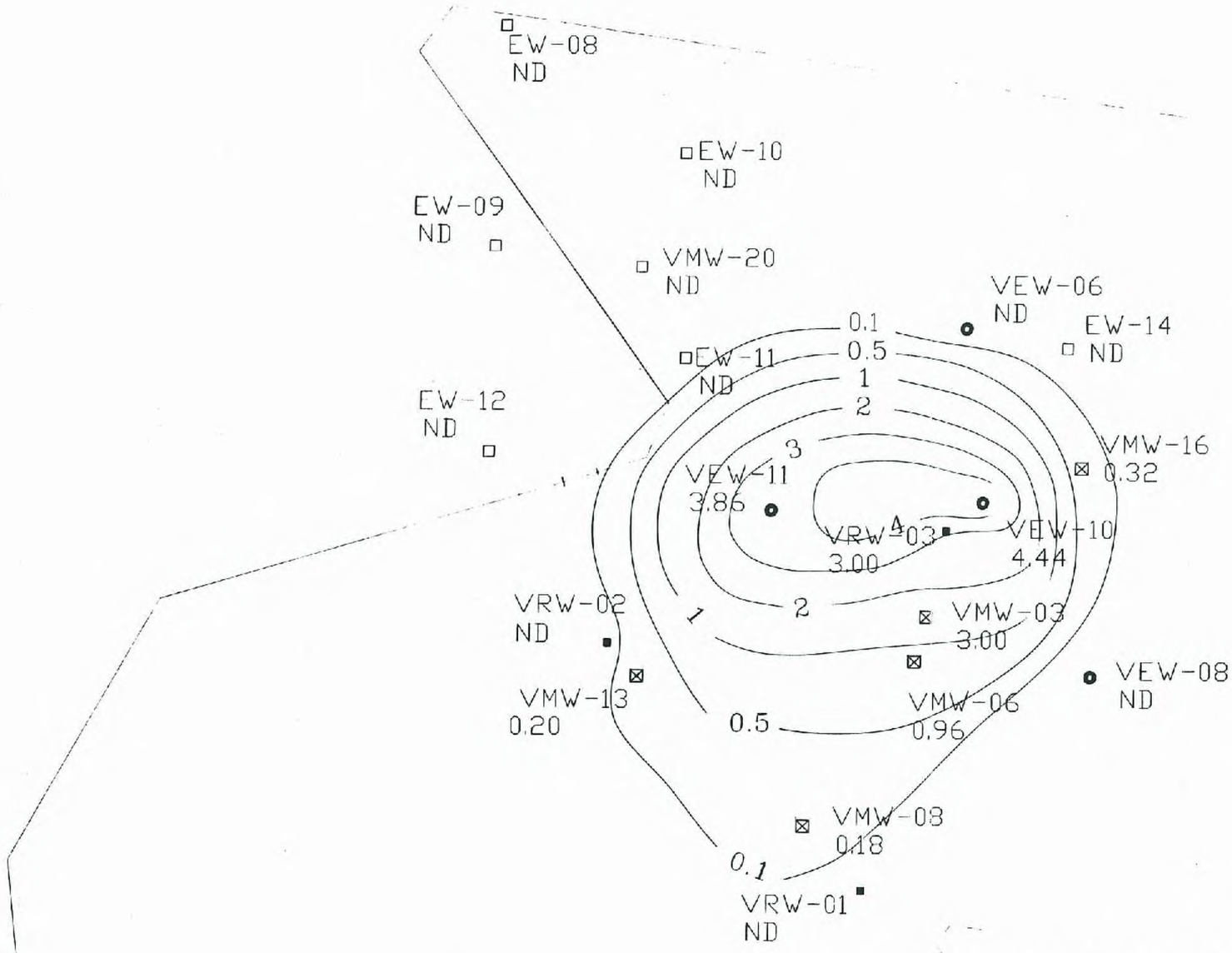
. Burn Pit Perimeter
EW Extraction Well
VEW Vapor Extraction Well
VMW Vapor Monitoring Well
VRW Vapor Recovery Well

*NOTE NON-SAMPLED WELLS HAVE BEEN REMOVED FOR CLARITY
VALUES REPORTED IN PPB

LOCKHEED MARTIN
Beaumont, California

Trichloroethylene (TCE)
Burn Pit Soil Gas Concentrations
First Quarter 1995

PREP BY	SCALE	DATE 5/95	FIGURE 11
REV BY	DCN NO.		A



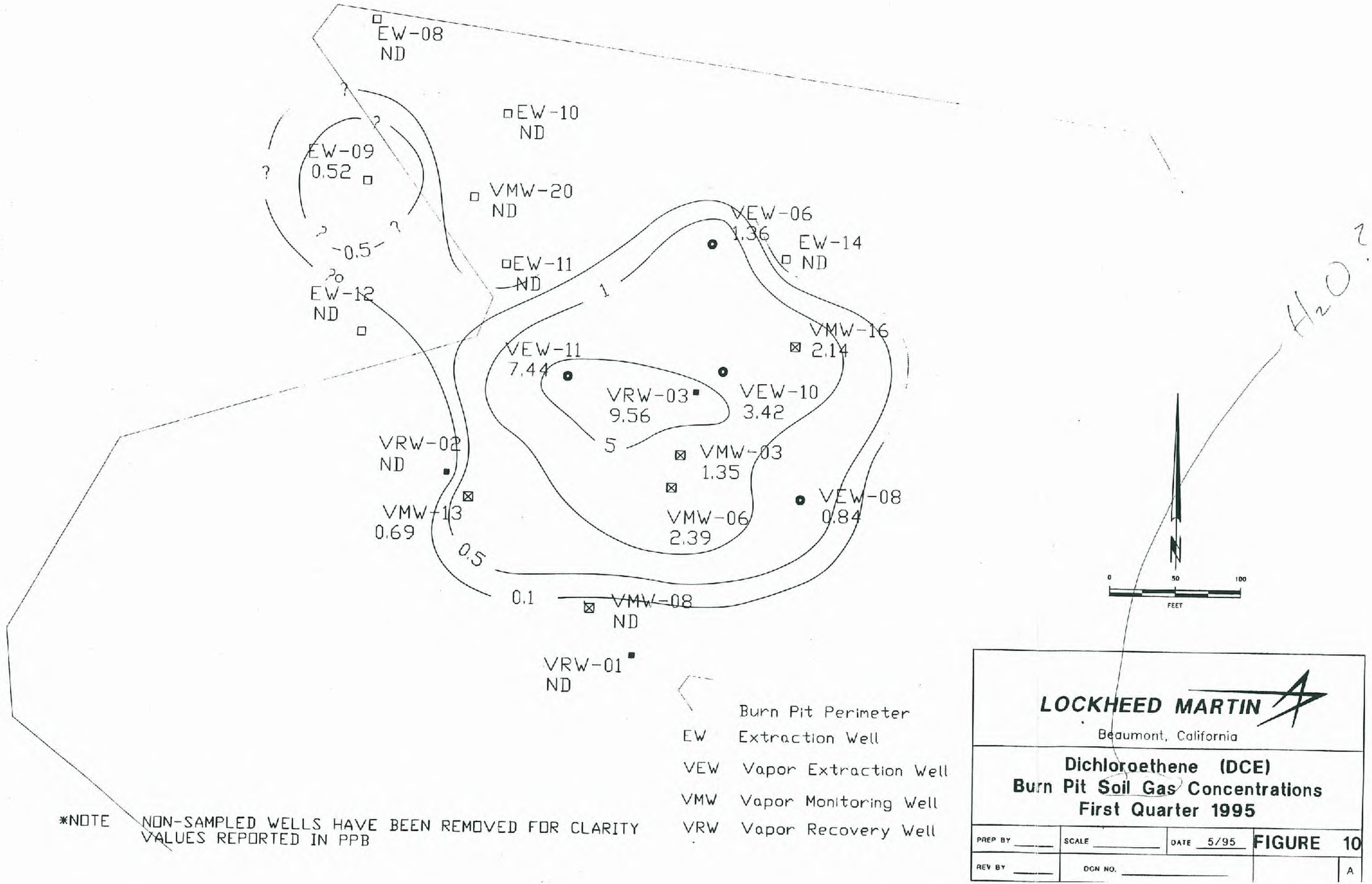
*NOTE NON-SAMPLED WELLS HAVE BEEN REMOVED FOR CLARITY
VALUES REPORTED IN PPB

Burn Pit Perimeter
EW Extraction Well
VEW Vapor Extraction Well
VMW Vapor Monitoring Well
VRW Vapor Recovery Well

LOCKHEED MARTIN
Beaumont, California

Trichloroethane (TCA)
Burn Pit Soil Gas Concentrations
First Quarter 1995

PREP BY	SCALE	DATE 5/95	FIGURE 12
REV BY	DGN NO.		A


EW-08
ND
EW-10
ND
EW-09
0.52
VMW-20
ND
VEW-06
1.36
EW-14
ND
EW-11
ND
EW-12
ND
VMW-16
2.14
VEW-11
7.44
VRW-03
9.56
VEW-10
3.42
VMW-03
1.35
VRW-02
ND
VMW-13
0.69
VMW-06
2.39
VEW-08
0.84
VMW-08
ND
VRW-01
ND
?
-0.5-
1
5
0.5
0.1
0
50
100
FEET
Burn Pit Perimeter
EW Extraction Well
VEW Vapor Extraction Well
VMW Vapor Monitoring Well
VRW Vapor Recovery Well
*NOTE NON-SAMPLED WELLS HAVE BEEN REMOVED FOR CLARITY
VALUES REPORTED IN PPB
LOCKHEED MARTIN
Beaumont, California
Dichloroethene (DCE)
Burn Pit Soil Gas Concentrations
First Quarter 1995
PREP BY
SCALE
DATE 5/95
FIGURE 10
REV BY
DGN NO.
A

APPENDIX A

FIELD DATA SHEETS

WELL ID: EW-8

Page 1 of 1

Date: 12/14/94

TD OF CASING 111.24 ft

STATIC DTW (-) 53.06 ft @ _____ hr

FT WATER (=) 58.18

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ - _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

Team No: 1

Samplers' Initials: WLC / MPC

CAP OF CASING (x) 1.02 gal / ft (=) 9.8 gal / 1 CASING VOL (x3 =) 29.4 gal / 3 CASING VOL (+) INIT FLOWMETER READING 58590.5 (-58620.5 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
0832	PUMP ON			58590.5					
0837	18.1	229	*	58600.5			1		SILTY
0839	18.4	224	|	58605.0			1		
0841	18.6	217	|	58609.5			1		CLEARING
0844	18.8	195	|	58616.1			1		EXTREMELY EFFERVESCENT
0846	18.9	184	|	58620.3			1		
0848	18.9	184	↓	58624.5			1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ 0857 Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 8:30 TEMP 40°F

SKIES CLEAR

WIND (mph) 0 from

AIR MONITORING (PID) / FID (ppm)

VAULT 2.2 BKGD 2.2

BREATHING ZONE 2.2

DISCHARGE WATER 0

HEALTH & SAFETY EQUIPMENT

(GLOVES) / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010	3	40mL / HCl

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

* COULDN'T CALIB. pH → READINGS RANGED FROM -11.5 TO 5.0 WHILE TRYING TO CALIB pH 4.0 BUFFER → MAY BE DUE TO COLD TEMP?

Verified by: _____ Date: _____

Page 1 of 1

WELL ID: EW-9

Date: 12/13/94

TD OF CASING 113.54 ft

STATIC DTW (-) 54.54 ft @ 0830 hr

FT WATER (=) 64. 42.5 for 6" cs / 4" bore

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

Team No: 1

Samplers' Initials: WHC / WHC

CAP OF CASING (x) 1.02 gal / ft (=) ~~10.7~~ gal / 1 CASING VOL (x3 =) 127.5 gal / 3 CASING VOL (+) INIT FLOWMETER READING 165190.2 (=) 165317.7 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
0856	PUMP ON			165190.2					
0902	15.6	257	8.74	165101.2	17.0		17 / 6	2.8	
0904	15.8	278	8.60	165113.5	23.3		6.5 / 2	3.15	CLEAR, EFFERVESCENT
0912	15.9	314	8.94	165135.0	44.3	~1	21.5 / 8	2.68	REDUCED PUMP RATE
				FLOW METER STOPPED			WORKING		
9:25				ASSUMING 2.5 GAL / MIN			1	34 MIN	FROM 0925
				→ WILL	SAMPLE @		1	10:00	
9:34	15.9	255	7.96				1		
9:57	19.1	257	7.45				1		
959	17.0	269	7.36				1		
1001	15.9	279	7.27				1		
							1		
	SAMPLED			@ 10:31			1		
							1		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL _____ ft @ _____ Hrs

START SAMPLING @ 1031 Hrs

STOP SAMPLING @ 1034 Hrs

WEATHER CONDITIONS

TIME _____ TEMP _____

SKIES _____

WIND (mph) _____ from _____

AIR MONITORING (PID) / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER 0

HEALTH & SAFETY EQUIPMENT

(GLOVES) / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8011	3	50 ml / HCl

DUP / MS/MSD / TB / FB Y (N)

If "Y", c[illegible]e appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

Verified by: _____ Date: _____

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WELL ID: EW-10 ( )

Date: 12/14/94

Team No: 1

Samplers' Initials: WRC / MGC

TD OF CASING 110.24 ft

STATIC DTW (-) 54.36 ft @ 1023 hr

FT WATER (=) 55.88

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 40 gal / 1 CASING VOL (x3 =) 120 gal / 3 CASING VOL (+) INIT FLOWMETER READING 58632.5 (=) 58 752.5 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1035	PUMP ON			58632.5					
1041	19.2	293	*	58657.5			1		SILTY
1044	19.4	260		58670.5			1		CLEARING; TEPER DESCENT
1047	19.4	240		58683.8			1		4.5 GAL/min
1050	19.4	250		58696.5			1		
1052	19.4	250		58704.9			1		
1101	19.4	278		58743.6			1		
1104	19.4	262		58756.5			1		
1106	19.4	260		58765.2			1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ 1108 Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1023 TEMP 60

SKIES CLEAR

WIND (mph) 2 from N

AIR MONITORING (PID) / FID (ppm)

VAULT 0.8 BKGD 0

BREATHING ZONE 0.1

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010	3	50mL / HCl

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

pH 7.98 @ 12.8

* UNABLE TO CALIBRATE pH

Verified by: _____ Date: _____

DNAPL

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WELL ID: EW-11 ( )

Date: 12/14/94

TD OF CASING 99.92 ft

STATIC DTW (-) 54.48 ft @ 1330 hr

FT WATER (=) 45.44

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ - _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

Team No: 1

Samplers' Initials: WHC / MHC

CAP OF CASING (x) 1.02 gal / ft (=) 32.7 gal / 1 CASING VOL (x3 =) 98.1 gal / 3 CASING VOL (+) INIT FLOWMETER READING 58769.6 (=) 58869.6 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1338	PUMP ON			58769.6			/		
~~1339~~	~~—~~	WHC					/		
1341	18.6	275	*	58777.5			/		VERY SILTY (ORANGE)
1347	19.3	316		58794.6			/		
1353	19.4	330		58803.8			/		SILTY & EFFERVESCENT
1400	19.5	292		58840.4			/		~4 GAL/MIN
1411	19.6	260		58874.0			/		
1413	19.5	270		58878.4			/		
							/		
							/		
							/		
							/		
							/		
							/		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL _____ ft @ _____ Hrs

START SAMPLING @ 1420 Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1330 TEMP 65

SKIES CLOUDY

WIND (mph) 2 from S

AIR MONITORING PID / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER 0

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010	3	50 mL / HCl

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

* UNABLE TO CALIBRATE pH

Verified by: _____ Date: _____

Page _ of 1

WELL ID: EW-12 ( )

Date: 12/14/94

Team No: 1

Samplers' Initials: WHE / MBC

TD OF CASING 100.90 ft

STATIC DTW (-) 57.08 ft @ _____ hr

FT WATER (=) 43.82

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 26.2 gal / 1 CASING VOL (x3 =) 78.6 gal / 3 CASING VOL (+) INIT FLOWMETER READING 58887.8 (=) 58967.8 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1525	PUMP ON			58887.8					
1540	18.8	388	*	58916.5			1		
1542	18.8	373	|	58922.9			1		
1549	19.0	379	|	58951.2			1		
1551	19.0	382	|	58959.8			1		
1554	19.0	374	|	58972.0			1		
			|				1		
			|				1		
			|				1		
			|				1		
			|				1		
			|				1		
			|				1		
			|				1		
			↓						

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ 1600 Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1542 TEMP 60

SKIES CLEAR

WIND (mph) 15 from S

AIR MONITORING (PID) / FID (ppm)

VAULT 0.2 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER 0

HEALTH & SAFETY EQUIPMENT

(GLOVES) / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010	3	5 ml G/HCl

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

* pH WOULDN'T CALIBRATE

Verified by: _____ Date: _____

Pg. ___ of ___

WELL ID: EW-14 (   )

QA WELL

Date: 12/17/94

TD OF CASING 100.53 ft

STATIC DTW (-) 57.92 ft @ ______ hr

FT WATER (=) 42.46

SAMPLE PUMP INTAKE @ ______ ft

SCREEN INTERVAL: ______ - ______ ft

SPURGE PUMP: ______ (hp) ______ (volts) 30 (amps)

Team No: 1

Samplers' Initials: [illegible]

CAP OF CASING (x) 1.02 gal / ft (=) 29.4 gal / 1 CASING VOL (x3 =) 88.2 gal / 3 CASING VOL (+) INIT FLOWMETER READING 59355.2 (=) 59475.2 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
0856	PUMP ON			59355.2					
0902	18.9	285	7.30	59403.2			/		THICK ORANGE [illegible]
0908	19.1	271	7.20	59421.4	36.2	1.23	18.2 / 6	3.03	DTW = 61.32 ALMOST CLEAR
0914	19.2	267	7.13	59434.2			/		DTW = 61.82
0918	19.2	266	7.13	59454.5	69.3	2.36	15.3 / 4	3.82	
0925	19.3	260	7.10	59475.2	93.0	3.16	/		DTW = 62.34
							/		
							/		
							/		
							/		
							/		
							/		
							/		
							/		

PUMP ON @ ______ Hrs

PUMP OFF @ ______ Hrs

GALLONS PURGED ______

CASING VOLS. PURGED ______

AVERAGE Q: ______ GPM

FINAL PURGE PUMPING WL ______ ft @ ______ Hrs

START SAMPLING @ 0932 Hrs

STOP SAMPLING @ ______ Hrs

WEATHER CONDITIONS

TIME ______ TEMP ______

SKIES ______

WIND (mph) ______ from ______

AIR MONITORING (PID / FID (ppm))

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER 0

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010	3/5	50mL/HCl

+ EQUIPMENT BLANK

DUP / MS/MSD / TB / FB   Y   N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

Verified by: ______ Date: ______

Pg 1 of 1

WELL ID: MW-4 ( )

4" WELLBORE

Date: 12/16/94

Team No: 1

Samplers' Initials: WLE / MMC

TD OF CASING 87.60 ft

STATIC DTW (-) 37.00 ft @ _____ hr

FT WATER (=) 50.60

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps) PUMP ON

CAP OF CASING (x) 1.02 gal / ft (=) ~39.5 gal / 1 CASING VOL (x3 =) 123.5 gal / 3 CASING VOL (+) INIT FLOWMETER READING 59250.0 TOTAL (=) 59353.5 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
515	PUMP ON			59250.0					
1518	19.9	3.09	7.13	59254.3			1		CLEAR
1521	20.1	327	7.14	59259.2			1		DTW 39.54
1528	20.1	265	7.07	59278.3			1		DTW 42.96
1533	20.2	296	7.05	59296.6			1		DTW 45.96
1543	20.2	296	7.03	59334.1			1		DTW 49.96
1549	20.2	297	7.09	59360.0			1		DTW 51.38
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ 1552 Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1502 TEMP 65

SKIES CLEAR

WIND (mph) 20-30 from S

AIR MONITORING PID / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER 0

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
BOLD	3	50mL/HCl

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

Verified by: _____ Date: _____

Page ___ of ___

WELL ID: ~~EW-08~~ MW-17 (4" well bore)

Date: 12/07/94

TD OF CASING 109.68 ft

SAMPLE PUMP INTAKE @ _____ ft

Team No: 1

STATIC DTW (-) 56.54 ft @ 1426 hr

SCREEN INTERVAL: ?. . ft

Samplers' Initials: WYC/MGK

FT WATER (=) 55.14

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 35.9 gal / 1 CASING VOL (x3 =) 107.7 gal / 3 CASING VOL (+) INIT FLOWMETER READING 59449.0 (=) 59609.0 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1435	PUMP ON			59449					
1442	18.8	345	8.20	59505.9	~~32.5~~	~~0.31~~	1		DTW 63.84 RED SILT
1447	18.9	301	8.86	59531.5	~~25.6~~	~~0.24~~	25.6 / 5	5.12	DTW 67.02 CLAY
1452	18.7	315	8.72	59546.6	47.6	1.32	15.1 / 5	3.02	DTW 68.68 ↑Q
1459	18.8	313	8.58	59570.2	71.2	1.98	23.6 / 12	2.0	DTW 72.20
1506	18.8	326	8.06	59594.3			1		DTW 75.36
1512	SAMPLED			59613.5			1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ _____ Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1440 TEMP 65

SKIES CLEAR

WIND (mph) 25 from SE

AIR MONITORING PID / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER 0

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010	3	50mL/HCl

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

Verified by: _____ Date: _____

80' } AT - 1 min @ 11:32   3/4 [illegible] WELL DRY

Page ___ of ___

WELL ID: MW-6 ( )

Date: 12/16/94

Team No: 1

Samplers' Initials: ______

TD OF CASING 126.6 ft

STATIC DTW (-) 58.4 ft @ ______ hr

FT WATER (=) 68.2   69.6

CAP OF CASING (x) 1.02 gal / ft (= [illegible] gal / 1 CASING VOL (x3 = [illegible] gal / 3 CASING VOL (+) INIT FLOWMETER READING [illegible] (=) 59826.2 TARGET

SAMPLE PUMP INTAKE @ ______ ft

SCREEN INTERVAL: ______ - ______ ft

SPURGE PUMP: ______ (hp) ______ (volts) 30 (amps)   59017.5   2

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1108	PUMP ON			59017.5					
1114	18.2	454	7.44	59047.2	29.7		29.7/6	4.95	CLEAR
1119	18.3	440	7.82	59052.4	5.2		5.2/5	1.04	DTW 79
11:30	18.5	450	9.47	59083.2	30.8		30.8/11	2.8	CLEAR
11:48	18.5	479	7.20	59142.5	125.0	1.8	/		DTW 97.1
11:59	18.5	537	7.56	59176.4	33.9	2.4	33.9/11	3.08	VERY SILTY *
1206	18.5	541	7.92	59213.0			/		DTW 117
1210				59226.5	AT	3 WELL	VOLUMES		+ WELL IS
					NEARLY	DRY ⇒	PUMPING		UP MUCK FROM
					BOTTOM	OF	WELL	*2	
1335		RE PUMP		WELL +	SAMPLE		← / →		DTW = 70.68
				AFTER ~	5 minutes		OF PUMPING		
							/		
							/		

PUMP ON @ ______ Hrs

PUMP OFF @ ______ Hrs

GALLONS PURGED ______

CASING VOLS. PURGED ______

AVERAGE Q: ______ GPM

FINAL PURGE PUMPING WL ______ ft @ ______ Hrs

START SAMPLING @ 1345 Hrs

STOP SAMPLING @ ______ Hrs

WEATHER CONDITIONS

TIME 1103 TEMP 65

SKIES CLEAR

WIND (mph) 40+ from NE

AIR MONITORING (PID) / FID (ppm)

VAULT Ø BKGD Ø

BREATHING ZONE Ø

DISCHARGE WATER Ø

HEALTH & SAFETY EQUIPMENT

(GLOVES) / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
5010	3	50ml / HCl

DUP / MS/MSD / TB / FB   Y   (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

* [illegible] THRASHING + PUMPING UP SILT IN BOT OF WELL

*2 PUMPED TO 3 WELL VOLUMES - WAS GETTING SILT FROM BOTTOM OF WELL SO PULLED PUMP UP ~10' + LET WELL REBOUND FOR 1 HR 25 MINUTES, THEN RE PUMP + SAMPLED.

Verified by: ______ Date: ______

WELL ID: MW-41 ( )

Page ____ of ____

Date: 12/16/94

TD OF CASING 56.35 ft

STATIC DTW (-) 16.78 ft @ 1434 hr

FT WATER (=) 39.57

SAMPLE PUMP INTAKE @ [redacted] ft

SCREEN INTERVAL: ____ ft

SPURGE PUMP: ____ (hp) ____ (volts) 30 (amps)

Team No: 2

Samplers' Initials: LJP / CED

CAP OF CASING (x) 1.02 gal / ft (=) 26 gal / 1 CASING VOL (x3 =) 72 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68623.8 (=) 68695.8 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characterfetics of the discharge water)
1458	PUMP ON			68623.8	0	0	0		
1501	19.7	.553	7.11	68628.2	4.5	.13	1		CLOUDY
1504	20.0	.535	7.25	68636.9	13.0	.5	1		22.5 DTW
1513	20.0	.550	7.22	68650.0	26.2	#	1		CLEAR, EFFERVESCENT
1521	20.2	.549	7.21	68664.1	40.3	<2	1		" "
1526	20.1	.540	7.21	68677.5	54	2	1		" "
1531	20.1	.536	7.20	68688.2	65	2.5	1		" "
1534	20.1	.516	7.19	68695.8	72	3	1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP DN @ 1458 Hrs

PUMP OFF @ 1533 Hrs

GALLONS PURGED 72

CASING VOLS. PURGED ____

AVERAGE Q: 2-3 GPM

FINAL PURGE PUMPING WL ____ ft @ ____ Hrs

START SAMPLING @ ____ Hrs

STOP SAMPLING @ ____ Hrs

WEATHER CONDITIONS

TIME 1430 TEMP 65

SKIES CLEAR

WIND (mph) 5-30 from S

AIR MONITORING PID / FID (ppm)

VAULT 7.1 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER ____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
EC, CL, SO4	3	40ML / HCl
EC, CL, SO4	1	40ML / HCl - LS

DUP / MS/MSD / TB / FB Y N

If "Y", co[illegible] appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

" No equipment blank " per Bob D.

~20.0 @ 1501 ; 22.5 at 1504 , 23.25 @ 1513 ; 24.5 F @ 1521 ; 24.9 @ 1526

Verified by: ____ Date: ____

Pa ( ) of ( )

WELL ID: MW-2 [ ]

Date: 12/17/94

TD OF CASING 78.1 ft

STATIC DTW (-) 30.24 ft @ 8:09 hr

FT WATER (=) 47.84

SAMPLE PUMP INTAKE @ ( ) ft

SCREEN INTERVAL: ( ) ft

SPURGE PUMP: ( ) (hp) ( ) (volts) 30 (amps)

Team No: 2

Samplers' Initials: LJF/RG

CAP OF CASING (x) 1.02 gal / ft (=) 31.5 gal / 1 CASING VOL (x3 =) 94.5 gal / 3 CASING VOL (+) INIT FLOWMETER READING 6897.1 (=) 6791.6 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	[ ] APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
0850	PUMP ON			6897.1	0	0	0		
0900	18.6	.106	7.35	6898.0	1	—	1		CLOUDY
—	—	—	—	STOP	—	—	1		LEAK
0907	19.1	0.92	7.17	6870.5	4	.12	1		RESTART; CLEAR
0916	18.9	1133	6.84	6872.0	24	.75	1		CLEAR, EFFERVESCENT
0926	19.0	.138	6.83	6876.5	46	1.5	1		" "
0934	19.0	.141	6.85	6877.6	67	2	1		" "
0945	19.0	.134	6.84	6879.0.5	93	<3	1		" "
0947	19.0	.156	6.84	6879.5.6	98	3	1		" "
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 0856 Hrs

PUMP OFF @ 0950 Hrs

GALLONS PURGED 98

CASING VOLS. PURGED ≈ 3

AVERAGE Q: ( ) GPM

FINAL PURGE PUMPING WL ( ) ft @ ( ) Hrs

START SAMPLING @ ( ) Hrs

STOP SAMPLING @ ( ) Hrs

WEATHER CONDITIONS

TIME 0800 TEMP 60

SKIES CLEAR, SUNNY

WIND (mph) 0-5 from

AIR MONITORING PID / FID (ppm)

VAULT 2.4 BKGD 1.5

BREATHING ZONE 1.5

DISCHARGE WATER ( )

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010/20	3	40ML/HCL
8010/20	1	40ML/HCL-LS

DUP / MS/MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

31.39 @ 900

30.50 @ 916

30.44 @ 928

Verified by: ( ) Date: ( )

WELL ID: MW 5(1)

Page ____ of ____

Date: 12/13/94

Team No: 2

Samplers' Initials: LJP/

TD OF CASING 60.2 ft

STATIC DTW (-) 17.84 ft @ 14:42 hr

FT WATER (=) 42.36

SAMPLE PUMP INTAKE @ ____ ft

SCREEN INTERVAL: ____ - ____ ft

SPURGE PUMP: ____ (hp) ____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 26.2 gal / 1 CASING VOL (x3 =) 78.6 gal / 3 CASING VOL (+) INIT FLOWMETER READING 681980 (=) 682058.6 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
0837	PUMP ON			681980					
0847							1		Sat. P.P DO = 18.4
0855	18.0	.271	6.17	682040	2		1		
0859	18.4	.243	6.32	682040	6		1		CLEAR, EFFERVESCENT
0906	18.3	.276	6.33	682111	13		1		" "
0916	18.4	.286	6.33	682250	27	1	1		" "
0930	18.5	.286	6.41	682416	43	2	1		" "
0947	18.8	.282	6.38	682642	66	2.7	1		" "
0958	18.6	.292	6.40	682791	81	3	1		" "
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 08:37 Hrs

PUMP OFF @ ____ Hrs

GALLONS PURGED ____

CASING VOLS. PURGED ____

AVERAGE Q: ____ GPM

FINAL PURGE PUMPING WL

____ ft @ ____ Hrs

START SAMPLING @ ____ Hrs

STOP SAMPLING @ ____ Hrs

WEATHER CONDITIONS

TIME 0858 TEMP 35 - CLOUDY

SKIES Partly Cloudy

WIND (mph) 0-3 from SW

AIR MONITORING PID / FID (ppm)

VAULT ____ BKGD 0

BREATHING ZONE 0

DISCHARGE WATER ____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID

DUP / MS / MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

0.7 C.U

Verified by: ____ Date: ____

Pg ___ of ___

WELL ID: MW-52

Date: 12/17/97

TD OF CASING 59.0 ft

SAMPLE PUMP INTAKE @ ___ ft

Team No: 2

STATIC DTW (-) 16.79 ft @ 1114 hr

SCREEN INTERVAL: ___ - ___ ft

Samplers' Initials: RG, LSP

FT WATER (=) 42.71

SPURGE PUMP: ___ (hp) ___ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 28.2 gal / 1 CASING VOL (x3 =) 84.6 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68797.9 (=) 68882.5 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1134	PUMP ON			68797.9	0	0	0		
1137	22.0	.208	7.14	68801.6	4	.10	1		CLEAR
1145	20.5	.236	6.54	68821.5	24	< 1	1		CLEAR, EFFERVESCENT
1152	20.7	.073	6.61	68835.6	38	< 1.5	1		" "
1157	20.6	0.88	6.64	68847.8	50	< 2	1		" "
1206	20.7	0.78	6.61	68865.1	68	2.25	1		" "
1213	20.7	0.65	6.61	68882.5	85	3	1		" "
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 1134 Hrs

PUMP OFF @ 1215 Hrs

GALLONS PURGED 85

CASING VOLS. PURGED ___

AVERAGE Q: ___ GPM

FINAL PURGE PUMPING WL ___ ft @ ___ Hrs

START SAMPLING @ ___ Hrs

STOP SAMPLING @ ___ Hrs

WEATHER CONDITIONS

TIME 1114 TEMP 75°

SKIES clear

WIND (mph) 0-4 from S

AIR MONITORING PID / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE ___

DISCHARGE WATER ___

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010/8020	3	40mL - HCl
8010/8020	1	40mL/HCl-4C

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

17.17 @ 1138

17.26 @ 1146

Verified by: ___ Date: ___

Page ____ of ____

WELL ID: MW-56 A ( )

Date: 12/13/5

Team No: 2

Samplers' Initials: RC/LTP

TD OF CASING 182.1 ft

STATIC DTW (-) 36.5 ft @ 1242 hr

FT WATER (=) 145.6

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

CAP OF CASING (x) 0.02 gal / ft (=) 24 gal / 1 CASING VOL (x3 =) [illegible] gal / 3 CASING VOL (+) INIT FLOWMETER READING 68284.5 (=) 68356 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1252	PUMP ON			68284.5	—	—	1	—	—
1332	19.4	.231	8.95	68287.2	5		1		DUSTY
1338	19.3	.280	8.79	68300.2	16	0.67	1		CLEAR, EFFERVESCENT
1346	19.5	.246	8.57	68311.3	27	1	1		" "
1356	19.3	.292	8.56	68326.5	42	1.75	1		" "
1406	19.3	.299	8.75	68341.5	57	2.37	1		" "
1417	19.2	.300	8.56	68357.0	73	3	1		" "
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ _____ Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1215 TEMP 7

SKIES Partly cloudy

WIND (mph) 05 from SW

AIR MONITORING PID / FID (ppm)

VAULT _____ BKGD _____

BREATHING ZONE _____

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010/8021	3	40 ML / HCL
8010/8021	1	E.B. / 40 ML / HCL

DUP / MS/MSD / TB / FB Y N

If "Y", co[illegible] appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

#44,6 @ 13:38

50 @ 13:56

53,7 @ 14:17

Verified by: _____ Date: _____

WELL ID: MW-56B

Page ____ of ____

Date: 12/14/94

Team No: 2

Samplers' Initials: LJP/CED

TD OF CASING 935 ft

STATIC DTW (-) 21.34 ft @ 1310 hr

FT WATER (=) 72.16

SAMPLE PUMP INTAKE @ ____ ft

SCREEN INTERVAL: ____ ft

SPURGE PUMP: ____ (hp) ____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 12 gal / 1 CASING VOL (x3 =) 36 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68434.3 (-) 68470.3 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1326	PUMP ON			68434.3	0	0			
1330	18.0	.021	7.16	68439.0	5	0.5	1		CLEAR, EFFERVESCENT,
1334	19.7	.260	6.79	68447.0	13	1	1		SL. CLOUDY, EFFER,
1340	19.9	.271	6.70	68460.2	26	2	1		
1342	19.8	.250	6.65		31	2.5	1		
1347	19.8	.270	6.62		38	3.0+	1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 1325 Hrs

PUMP OFF @ ____ Hrs

GALLONS PURGED ____

CASING VOLS. PURGED ____

AVERAGE Q: ____ GPM

FINAL PURGE PUMPING WL

____ ft @ ____ Hrs

START SAMPLING @ ____ Hrs

STOP SAMPLING @ ____ Hrs

WEATHER CONDITIONS

TIME 1330 TEMP 55

SKIES LT. CLOUDS

WIND (mph) 0-10 from W

AIR MONITORING PID / FID (ppm)

VAULT 0.0 BKGD 0.0

BREATHING ZONE 0.0

DISCHARGE WATER ____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
EC.C/EC.D	3	40ML/HCL
EC.C/EC.D	1	40ML/HCL - L.S.
EC.C/EC.D	1	40ML/HCL - EB

DUP / MS/MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

3300 @ 1331 CUM = 0.0

3396 @ 1336

Verified by: ____ Date: ____

WELL ID: MW-56C.1

Page ____ of ____

Date: 12/14/94

Team No: 2

Samplers' Initials: CJP/CED

TD OF CASING 59.55 ft

STATIC DTW (-) 21.80 ft @ 1511 hr

FT WATER (=) 37.75

SAMPLE PUMP INTAKE @ ____ ft

SCREEN INTERVAL: ____ ft

SPURGE PUMP: ____ (hp) ____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 6.3 gal / 1 CASING VOL (x3 =) 19 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68491.1 (=) 68510.1 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1520	PUMP ON			68491.1	←	←			
1522	14.6	.026	8.54	68492.9	2	0.3	1		RUSTY
1525	18.9	.240	6.87	68497.8	6.7	1	1		CLEAR, EFFERVESCENT
1529	19.3	.240	6.77	68505.1	14	2	1		" "
1534	19.5	.246	6.76	68512.1	21	3	1		" "
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 1520 Hrs

PUMP OFF @ 1535 Hrs

GALLONS PURGED 21

CASING VOLS. PURGED 3

AVERAGE Q: ____ GPM

FINAL PURGE PUMPING WL

____ ft @ ____ Hrs

START SAMPLING @ 1535 Hrs

STOP SAMPLING @ 1600 Hrs

WEATHER CONDITIONS

TIME 1515 TEMP 50

SKIES CLEAR

WIND (mph) 0-5 from W

AIR MONITORING PID / FID (ppm)

VAULT 2.6 BKGD 0.4

BREATHING ZONE 0.1

DISCHARGE WATER ____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
Explosives	3	40ML/HCL
Explosives	1	40ML/HCL - EB

DUP / MS/MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

25.90 @ 15:24

25.95 @ 15:29

25.97 @ 15:34

Verified by: ____ Date: ____

WELL ID: MW-56 D ( )

Page ____ of ____

Date: 12/14/94

Team No: 2

Samplers' Initials: LTP / CED

TD OF CASING 75.14 ft

STATIC DTW (-) 21.34 ft @ 0834 hr

FT WATER (=) 53.8

SAMPLE PUMP INTAKE @ ____ ft

SCREEN INTERVAL: ____ - ____ ft

SPURGE PUMP: ____ (hp) ____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 9.2 gal / 1 CASING VOL (x3 =) 27.5 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68399.4 (=) 68426.9 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
9:29	PUMP ON			68399.4	0	0			
9:35	18.9	.280	6.74	68406.5	7	0.75	1		CLEAR, EFFERVESCENT
9:41	19.9	.279	6.92	68417.0	18	2	1		" "
9:44	20.2	.280	6.94	68424.0	25	2.5	1		
9:52	19.7	.119	6.93	68431.2	32	3.5	1		CONDUCTIVITY VARIANCE
9:56	19.4	2.69	6.91	68434.0	35	4	1		DUE TO CHANGING PUMP SPEED
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 9:29 Hrs

PUMP OFF @ ____ Hrs

GALLONS PURGED ____

CASING VOLS. PURGED ____

AVERAGE Q: ____ GPM

FINAL PURGE PUMPING WL

____ ft @ ____ Hrs

START SAMPLING @ ____ Hrs

STOP SAMPLING @ ____ Hrs

WEATHER CONDITIONS

TIME ____ TEMP ____

SKIES ____

WIND (mph) ____ from ____

AIR MONITORING PID / FID (ppm)

VAULT 0.6 BKGD 0.6

BREATHING ZONE 0.6

DISCHARGE WATER ____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8015/8020	3	40ML/HCL - FB
8015/8020	6	40ML/HCL/MS/MSD/DUP
8015/8020	3	40ML/HCL - FD
8015/8020	3	40ML/HCL - LS
8015/8020	3	40ML/HCL - ER

DUP / MS/MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

21.9 @ 9:35 CUM = 0.6 - FOGGY

22 I @ 9:40

Verified by: ____ Date: ____

Pa ___ of ___

WELL ID: MW-7A

Date: 12/17/84

Team No: 2

Samplers' Initials: LJP/RG

D OF CASING 69.14 ft

TATIC DTW (-) 24.55 ft @ 1355 hr

T WATER (=) 44.59

SAMPLE PUMP INTAKE @ ___ ft

SCREEN INTERVAL: ___ ft

SPURGE PUMP: ___ (hp) ___ (volts) 30 (amps)

AP OF CASING (x) 1.02 gal / ft (=) 7.5 gal / 1 CASING VOL (x3 =) 22.5 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68884.0 (=) 68906.5 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME (TOTALIZER FLOWMETER READING)	VOLUME [APPROX. GALS PURGED]	VOLUME APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	DISCHARGE RATE Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1423	PUMP ON			68884.0	0	0	0		/
1427	25.3	.047	8.36	68884.9	1	—	1		V. SILTY
1430	22.0	.211	6.97	68886.7	[illegible]	[illegible]	1		" "
1436	21.4	.218	6.61	68890.0	6	< 1	1		CLEARING
1442	21.4	.215	6.31	68895.8	12	1.5	1		SL. CLOUDY, EFFER.
1447	21.9	.061	6.26	68903.5	20	< 3	1		" " ADT. FLOW
1448	21.6	.069	6.28	68906.5	22.5	3	1		SL. CLOUDY, EFFER.
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 1423 Hrs

PUMP OFF @ 1450 Hrs

GALLONS PURGED 23

CASING VOLS. PURGED 3

AVERAGE Q: ___ GPM

FINAL PURGE PUMPING WL ___ ft @ ___ Hrs

START SAMPLING @ ___ Hrs

STOP SAMPLING @ ___ Hrs

WEATHER CONDITIONS

TIME 1355 TEMP 75

SKIES CLEAR, SUNNY

WIND (mph) 0-5 from ___

AIR MONITORING PID / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER ___

HEALTH & SAFETY EQUIPMENT

(GLOVES / GOGGLES) / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010/20	3	40ML/HCL
8010/20	1	40ML/HCL - LJ

DUP / MS/MSD / TB / FB Y N

If "Y", complete [illegible]priate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

24.76 @ 1428

24.68 @ 1431

24.64 @ 1434

Verified by: ___ Date: ___

Pa ___ of ___

WELL ID: MW-57( ) Date: 12-19-94

TD OF CASING 97.12 ft | SAMPLE PUMP INTAKE @ ___ ft | Team No: 2

STATIC DTW (-) 24.84 ft @ 8:15 hr | SCREEN INTERVAL: ___ ft | Samplers' Initials: MHC / RG

FT WATER (=) 72.28 | SPURGE PUMP: ___ (hp) ___ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 12.3 gal / 1 CASING VOL (x3 =) 36.9 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68910.2 (=) 68947.1 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
839	PUMP ON			68910.2					
843	19.5	290	6.7	68915.1	4.9	0.3	11.2		Clear
848	19.5	295	6.9	68917.6	7.4	0.6	0.5/5	1.4	
852	19.6	297	6.7				/		60.31 DTW
854	19.7	295	6.5				/		61.14 DTW
858	20.0	303	6.3	68919.7	9.5	0.7	2.7/7	1.05	64.31 DTW
908	20.1	295	6.1	68923.3	13.1	1.06	3.6/10	.34	
915	20.2	314	6.9	68926.4	16.1	1.3	3.3/37		Pump off
							/		
							/		
							/		
							/		
							/		
							/		

PUMP ON @ 839 Hrs
PUMP OFF @ ___ Hrs
GALLONS PURGED ___
CASING VOLS. PURGED ___
AVERAGE Q: ___ GPM
FINAL PURGE PUMPING WL ___ ft @ ___ Hrs
START SAMPLING @ ___ Hrs
STOP SAMPLING @ ___ Hrs

WEATHER CONDITIONS
TIME 8:25 TEMP 65°
SKIES Clear
WIND (mph) 0 from

AIR MONITORING PID / FID (ppm)
VAULT 0 BKGD 0
BREATHING ZONE ___
DISCHARGE WATER ___

HEALTH & SAFETY EQUIPMENT
GLOVES / GOGGLES / HARDHAT
RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010/8020	3	40 mL HCl
	2	

DUP / MS/MSD (N) / FB (N) N
If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:
(Factors possibly affecting samples, condition of sampling equipment, etc.)
LTB121994-2 = 8020, (1) Pump 57B close to Dry w/ 30-40 min 80% Re-charge. Started Pump up at 940hrs. Purged 3-6 min and Sampled at 944

Verified by: ___ Date: ___

P: ___ of ___

WELL ID: MW-57C ( )

Date: 12-19-94

TD OF CASING 84.72 ft

STATIC DTW (-) 24.64 ft @ 10:25 hr

FT WATER (=) 60.08

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ - _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

Team No: 2

Samplers' Initials: MHC/RG

CAP OF CASING (x) 1.02 gal / ft (=) 9.8 gal / 1 CASING VOL (x3 =) 29.4 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68926.6 (=) 68956.0 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
0937	PUMP ON			68926.6					
1042	19.8	223	6.9	68933.1	6.5	0.6	6.5 / 5	1.3	
1045	20.2	220	6.7	68935.1	8.5	0.8	2.1 / 3	0.6	
1050	20.5	230	6.7	68941			/		Pump @ 1046 = 68946
1134	21.5	230	6.9	68938.2	11.6	1.1	31 / 44	0.7	Start Sampling
							/		
							/		
							/		
							/		
							/		
							/		
							/		
							/		
							/		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL _____ ft @ _____ Hrs

START SAMPLING @ _____ Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1032 TEMP Clear

SKIES 70°

WIND (mph) 05 from SE

AIR MONITORING PID / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010/8021	3	40 mL HCl

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

Pump off at 1049 w. pumped 57C Purity clear. Dry is about FD. 10-25 min Re-charge. Pumped 15 min Sampled at 11:34

Verified by: _____ Date: _____

P: _ of _

WELL ID: MW-97-3 ( )

Date: 12/19/94

Team No: 7

Samplers' Initials: RG / MLC

TD OF CASING 57.49 ft

STATIC DTW (-) 24.78 ft @ 1200 hr

FT WATER (=) 32.71

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 6.3 gal / 1 CASING VOL (x3 =) 18.9 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68938.4 (=) 68957.3 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor; sand & silt content & other characteristics of the discharge water)
1218	PUMP ON			68938.4					
1222	22.4	480	8.0	[redacted]	[redacted]		1		
1225	20.4	390	6.9	68941.3	2.9	0.4	2.9 / 7	.4	DTW = 24.82 @ 1232
1230	21.2	390	6.7	68944.5	6.1	0.9	3.2 / 5	0.64	
1240	21.9	360	6.7	68950.8	12.4	1.9	6.3 / 10	.63	Cloudy
1245	22.1	340	6.7	68954.5	16.1	2.5	3.7 / 5	.74	Clearing
1251	22.1	340	6.7	68958.3	19.9	3.1	3.8 / 1	0.63	
/	/	/	/	Last Rdg	/	/	/ 1		
							/ 1		
							/ 1		
							/ 1		
							/ 1		
							/ 1		

PUMP ON @ 1210 Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ _____ Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1205 TEMP 70°

SKIES Clear

WIND (mph) 0-7 from SE

AIR MONITORING PID / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
BOIO	3	40 ML HCL

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

Verified by: _____ Date: _____

Page ____ of ____

WELL ID: MW-58A ( )

Date: 12/13/94

TD OF CASING 82.40 ft

STATIC DTW (-) 20.20 ft @ 15:32 hr

FT WATER (=) 62.20

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ - _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

Team No: 2

Samplers' Initials: LTF / RG

CAP OF CASING (x) ~~1.02~~ gal / ft (=) 10.2 gal / 1 CASING VOL (x3 =) 31 gal / 3 CASING VOL (+) INIT FLOWMETER READING 6,E362.E (=) 6E,393.E TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
15:47	PUMP ON			6E362.E	0	0	1		
15:49	13.5	.180	7.63	6,E364.0	1		1		RUSTY
15:55	18.1	.179	5.74	6,E373.0	10.2	1	1		SL. CLOUDY, EFFERVESCENT
16:12	18.4	.183	5.87	6,E392.7	30	2	1		CLEAR, EFFERVESCENT
16:27	18.2	.181	6.06	6,E394.5	32	3	1		CLEAR, EFFERVESCENT
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 15:47 Hrs

PUMP OFF @ 16:30 Hrs

GALLONS PURGED 32

CASING VOLS. PURGED 3

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ 16:30 Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 3:30 TEMP 45

SKIES CLOUDY, OVERCAST

WIND (mph) 10-15 from W

AIR MONITORING PID / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
EDB/DBCP	3	40 mL / HCl
CHLORIDE	1	40 mL / HCl
		T.B.

DUP / MS/MSD / TB / FB Y N

If "Y", co[illegible] appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

27.20 @ 15:50

27.74 @ 15:52

28.26 @ 16:01

27.77 @ 16:11

27.90 @ 16:26

Verified by: _____ Date: _____

WELL ID: MW-EB1

Page ___ of ___

Date: 12/15/94

TD OF CASING 50.85 ft

STATIC DTW (-) 20.15 ft @ 900 hr

FT WATER (=) ~~30.7~~ 30.7

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ - _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

Team No: 2

Samplers' Initials: LJP/CED

CAP OF CASING (x) 1.02 gal / ft (=) 5.1 gal / 1 CASING VOL (x3 =) 15.3 gal / 3 CASING VOL (+) INIT FLOWMETER READING 6852.7 (=) 6858.0 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
0934	PUMP ON			6852.7	0	0			
0936	10.9	.105	6.13	6854.4	2	.5	1		CLEAR, EFFERVESCENT
0938	17.5	.200	6.58	6858.5	6	1	1		" CLOUDY
0944	19.0	.198	6.68	6526.5	14	2.5	1		" "
0946	19.0	.206	6.70	6530.0	18	3.5	1		CLOUDY
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 0934 Hrs

PUMP OFF @ 0950 Hrs

GALLONS PURGED 18

CASING VOLS. PURGED 3.5

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL _____ ft @ _____ Hrs

START SAMPLING @ 935 Hrs

STOP SAMPLING @ 950 Hrs

WEATHER CONDITIONS

TIME 830 TEMP 55

SKIES CLEAR, SL. FOGGY

WIND (mph) _____ from

AIR MONITORING PID / FID (ppm)

VAULT 22.0 BKGD 2.0

BREATHING ZONE 2.0

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010/8020	1	40 ML/HCL - EB
8010/8020	3	40 ML/HCL -
8010/8020	1	40 ML/HCL - LS

DUP / MS/MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

21.68 @ 937

23.46 @ 943

Verified by: _____ Date: _____

WELL ID: MW-5E C ( )

Date: 12/15/94

Team No: 2

Samplers' Initials: LTP/CED

TD OF CASING 60.20 ft

STATIC DTW (-) 20.47 ft @ 1043 hr

FT WATER (=) 39.73

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ - _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 6.6 gal / 1 CASING VOL (x3 =) 19.8 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68531.9 (=) 68551.70 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1103	PUMP ON			68531.9	0	0			
1105	13.7	.098	7.49	68534.9	3	0.5	1		CLEAR, EFFERVESCENT
1108	18.6	.180	6.65	68540.0	9	1.5	1		" "
1112	19.1	.175	6.41	68545.6	14	2	1		" "
1115	19.1	.187	6.37	68552.2	21	3	1		" "
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 1103 Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ _____ Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1045 TEMP 60

SKIES CLEAR

WIND (mph) 0-5 from S

AIR MONITORING PID / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
EC 10/20	1	40 ML / HCL - EB
EC 10/20	3	40 ML / HCL
EC 10/20	1	40 ML / HCL - LS

DUP / MS/MSD / TB / FB Y N

If "Y", complete appriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

21.02 @ 1107

21.01 @ 1111

Verified by: _____ Date: _____

WELL ID: MW-5D

Date: 12/15/94

TD OF CASING 71.18 ft

STATIC DTW (-) 20.42 ft @ 1322 hr

FT WATER (=) 50.76

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ - _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

Team No: 2

Samplers' Initials: LJP/CED

CAP OF CASING (x) 1.02 gal / ft (=) 8.4 gal / 1 CASING VOL (x3 =) 25.2 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68553.8 (=) 68579.0 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1343	PUMP ON			68553.8	0	0			
1345	19.6	.601	7.27	68555.8	2	0.25	1		CLEAR, SL. EFFER.
1359	18.4	.289	6.80	68556.8	7	0.75	1		V. CLOUDY
1404	19.3	.273	6.64	68564.8	11	1.5	1		
1435	—	—	—	68564.8	—	—	1		RESTART
1437	17.8	.174	7.01	68567.1	13	1.5	1		CLOUDY
1442	18.5	.319	6.66	68569.2	15	1.75	1		"
1446	18.6	.318	6.58	68570.4	17	2	1		"
1509	19.1	.309	6.55	68576.6	23	2.75	1		CLEAR, EFFERVESCENT
1517	19.4	.310	6.56	68579.0	25	3	1		
							1		
							1		
							1		
							1		

PUMP ON @ 1343 Hrs

PUMP OFF @ 1521 Hrs

GALLONS PURGED 25

CASING VOLS. PURGED 3

AVERAGE Q: <0.5 GPM

FINAL PURGE PUMPING WL _____ ft @ _____ Hrs

START SAMPLING @ _____ Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1320 TEMP 60

SKIES HAZY

WIND (mph) 5-10 from S

AIR MONITORING PID / FID (ppm)

VAULT 4.5 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

(GLOVES / GOGGLES) HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
EDB/120	1	40ML/HCl-EB
ECHC/2C	3	40ML/HCl-
EDC/2C	1	40ML/HCl-LS

DUP / MS/MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

41.0 @ 1342 DROP PUMP TO 66'

27.62 @ 1352

55.50 - 1402

54.66 @ 1405 PUMP OFF; RECHARGE TO TOC

Verified by: _____ Date: _____

Page 1 of ?

WELL ID: MW-59A

Date: 12-13-94

TD OF CASING 112.10 ft

SAMPLE PUMP INTAKE @ _____ ft

Team No: 1

STATIC DTW (-) 61.02 ft @ _____ hr

SCREEN INTERVAL: 138.0 - 140.0 ft

Samplers' Initials: WHC / MHC

FT WATER (=) 80.98

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) _____ gal / 1 CASING VOL (x3 =) 301.3 gal / 3 CASING VOL (+) INIT FLOWMETER READING 58579.0 (=) 58618.3 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1503	PUMP ON			58579.0					
1509	18.2	451	7.99	58588.0			1		<1 gal
1510	19.2	460	7.27	58589.0			1		
1514	18.4	467	11.26	58591.0			1		
							1		
				PUMPED WELL DRY; WILL SAMPLE					
				AFTER 80% RECOVERED					
							1		
							TD = 143.10		
	RETURNED	TO	PUMP	12/15/94			DTW = 62.70		
							1		
		PUMPED	WELL	TO	25	OF	1 DRAW	DOWN (~87' STATIC)	
				DEPTH TO WATER; SAMPLED @ 0905			1		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL _____ ft @ _____ Hrs

START SAMPLING @ _____ Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME _____ TEMP _____

SKIES _____

WIND (mph) _____ from _____

AIR MONITORING PID / FID (ppm)

VAULT _____ BKGD _____

BREATHING ZONE _____

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID

DUP / MS / MSD / TB / EB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

- Slow discharge

Verified by: _____ Date: _____

MW-79C

QA WELL WELL ID: [illegible]

Page ____ of ____

Date: 12/13/94

TD OF CASING 125.36 ft

STATIC DTW (-) 57.68 ft @ ____ hr

FT WATER (=) 77.68

SAMPLE PUMP INTAKE @ ____ ft

SCREEN INTERVAL: ____ - ____ ft

SPURGE PUMP: ____ (hp) ____ (volts) 30 (amps)

Team No: 1

Samplers' Initials: WHC / MWC

CAP OF CASING (x) 1.02 gal / ft (=) 13.1 gal / 1 CASING VOL (x3 =) 39.3 gal / 3 CASING VOL (+) INIT FLOWMETER READING 58554.5 (=) 98.3 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1311	PUMP ON			58554.5					
1329	19.3	563	10.38	58570.1			/		
							/		
				PUMPED WELL DRY; PULLED					
				OUT + WILL SAMPLE AFTER					
				80% RECOVERED			/		
							/		
				RETURNED TO SAMPLE WELL			/		12/15/94
							/		
					DTW = 64.00		/		
							/		
	12/15/94 →			DREW DOWN WELL			TO 180' STATIC + SAMPLED;		
				WELL	WENT DRY		+ UNABLE TO GET LAST		
				2	VIALS		/		

PUMP ON @ ____ Hrs

PUMP OFF @ ____ Hrs

GALLONS PURGED ____

CASING VOLS. PURGED ____

AVERAGE Q: ____ GPM

FINAL PURGE PUMPING WL ____ ft @ ____ Hrs

START SAMPLING @ ____ Hrs

STOP SAMPLING @ ____ Hrs

WEATHER CONDITIONS

TIME ____ TEMP ____

SKIES ____

WIND (mph) ____ from ____

AIR MONITORING PID / FID (ppm)

VAULT ____ BKGD ____

BREATHING ZONE ____

DISCHARGE WATER ____

HEALTH & SAFETY EQUIPMENT

(GLOVES) / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8310	13	40mL / HCl
	1 EQUIP.	BLANK

DUP / MS/MSD / TB / (FB) (Y) N

If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

Verified by: ____ Date: ____

Pg 1 of 1

WELL ID: MW-61A

SCREEN INTERVAL IS SILTED IN

Date: 12/15/94

TD OF CASING 148.88 ft

SAMPLE PUMP INTAKE @ _____ ft

Team No: 1

STATIC DTW (-) 64.29 ft @ 1350 hr

SCREEN INTERVAL: 148 . 158 ft

Samplers' Initials: WHC / MGE

FT WATER (=) 84.59

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 13.9 gal / 1 CASING VOL (x3 =) 38.7 gal / 3 CASING VOL (+) INIT FLOWMETER READING 58984.7 (=) 59024.7 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1404	PUMP ON								
1407	18.3	327	9.41	58991.0			/		
1411	18.8	354	9.34	58993.8			/		
1416	19.4	355	9.25	58996.0			/		
1421	20.0	372	9.31	58998.5			/		MURKY DTW = 122
				58998.6			/		
							/		
				PUMPED WELL DRY; NO/MINIMAL RECHARGE			/		
			WELL	RETURNED WITH 80% RECOVERED			/		
							/		
		12/17		DTW @	1022 = 66.24		/		
					PUMP		/		
				LOWERED	TO ~100; PUMPED FOR ~5 MIN				
				+ TOOK	SAMPLES		/		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ 1040 Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 1400 TEMP 65

SKIES CLEAR

WIND (mph) 5 from S

AIR MONITORING (PID) / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER 0

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010	3	40mL / HCl

DUP / MS/MSD / TB / FB Y (N)

If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

Verified by: _____ Date: _____

Page ___ of ___

WELL ID: MW-61B ( )

Date: 12/16/94

Team No: 1

Samplers' Initials: WHC / [illegible] C

TD OF CASING 102.20 ft

STATIC DTW (-) 62.58 ft @ _____ hr

FT WATER (=) 39.62

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: 92 - 102 ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 6.6 gal / 1 CASING VOL (x3 =) 19.8 gal / 3 CASING VOL (+) INIT FLOWMETER READING 59000.0 (=) 59020.0 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
0914	PUMP ON								
0914	18.0	785	8.7	59006.0			/		
0918	18.9	856	8.68	59008.1			/		
				PUMPED WELL DRY; WAITING ON RECOVERY			/		
0956	RESTART	PUMP		59010.2			/		DTW = 68'
1052	—	—	—	59017.9	PUMPED	WELL	DRY	AGAIN	
							/		
				WILL RETURN		AFTER	FULL	RECOVERY	
				TO SAMPLE WELL					
							/	/	
			12/17	DTW @	1025	= 62.46	/		
							/		
				LOWERED PUMP @ ~90'; PUMPED ~5 min			/		
				& ROCK SAMPLE			/		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ 1125 Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 0905 TEMP 60

SKIES CLEAR

WIND (mph) 35 from E

AIR MONITORING PID / FID (ppm)

VAULT _____ BKGD _____

BREATHING ZONE _____

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID

DUP / MS/MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

Verified by: _____ Date: _____

WELL ID: MW-62A ( )

Page ____ of ____

Date: 12/16/94

Team No: 2

Samplers' Initials: LTP/CED

TD OF CASING 42.12 ft

STATIC DTW (-) 12.83 ft @ 1025 hr

FT WATER (=) 29.29

SAMPLE PUMP INTAKE @ ____ ft

SCREEN INTERVAL: ____ - ____ ft

SPURGE PUMP: ____ (hp) ____ (volts) 30 (amps)

CAP OF CASING (x) 1.02 gal / ft (=) 4.9 gal / 1 CASING VOL (x3 =) 14.7 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68607.0 (=) 68621.7 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1046	PUMP ON			68607.0	0	0	0		
1052	19.9	.253	6.91	68612.0	5	1	1		V. CLOUDY
1059	20.5	.303	6.92	68614.2	7.2	1.5	1		" , EFFERVESCENT
1108	21.1	.318	6.96	68617.8	10.8	2	1		V. DK & CLOUDY
1125	—	—	—	—	—	—	1		RESTART PUMP
1128	21.7	.212	6.97	DOESN'T MOVE	15	3	1		V. SILTY
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ ____ Hrs

PUMP OFF @ ____ Hrs

GALLONS PURGED ____

CASING VOLS. PURGED ____

AVERAGE Q: ____ GPM

FINAL PURGE PUMPING WL

____ ft @ ____ Hrs

START SAMPLING @ ____ Hrs

STOP SAMPLING @ ____ Hrs

WEATHER CONDITIONS

TIME 1020 TEMP 55

SKIES CLEAR

WIND (mph) 25-45 from S

AIR MONITORING PID / FID (ppm)

VAULT 0.5 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER ____

HEALTH & SAFETY EQUIPMENT

(GLOVES / GOGGLES) / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010/20	3	40ML/HCL-EB
"	3	40ML/HCL-FB
"	3	40ML/HCL-
"	3	40ML/HCL-MS/MSD
"	3	40 ML/HCL-FD
"	2	40 ML/HCL-LS

(DUP) (MS/MSD) (TB) (FB) Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly effecting samples, condition of sampling equipment, etc.)

26.66 @ 10:30

~30 @ 10:52

STOP PUMPING AT 1108 DUE TO SILTING

~15 @ 1125 AFTER RECHARGE

Verified by: ____ Date: ____

WELL ID: MW 62B1

Date: 12/16/94

TD OF CASING 64.65 ft

STATIC DTW (-) 11.75 ft @ 0842 hr

FT WATER (=) 52.9

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps)

Team No: 2

Samplers' Initials: LJP/CEJ

CAP OF CASING (x) 1.02 gal / ft (=) 8.7 gal / 1 CASING VOL (x3 =) 26.1 gal / 3 CASING VOL (+) INIT FLOWMETER READING 68580.0 (=) 68606.1 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME TOTALIZER FLOWMETER READING	APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
0853	PUMP ON			68580.0	0	0			
0855	13.3	.249	6.89	68582.3	2	0.25	1		CLOUDY, EFFERVESCENT
0858	19.2	.341	6.73	68587.4	7.5	<1	1		" "
0902	19.5	.140	6.81	68591.7	12	<1.5	1		" "
0906	19.7	.120	6.82	68595.4	15	<2	1		" "
0910	19.9	.341	6.78	68598.0	18	2	1		" "
0916	20.1	.307	6.82	68602.5	22.5	2.5	1		SL. CLOUDY & EFFER.
0922	20.2	.300	6.84	68606.1	26	3	1		CLEAR, EFFERVESCENT
							1		
							1		
							1		
							1		
							1		
							1		
							1		

PUMP ON @ 0853 Hrs

PUMP OFF @ 0937 Hrs

GALLONS PURGED 26

CASING VOLS. PURGED 3

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ _____ Hrs

STOP SAMPLING @ _____ Hrs

WEATHER CONDITIONS

TIME 0850 TEMP 60

SKIES CLEAR

WIND (mph) ~~E~~ 5 from E

AIR MONITORING PID / FID (ppm)

VAULT 10.0 BKGD 9.4

BREATHING ZONE 9.4

DISCHARGE WATER _____

HEALTH & SAFETY EQUIPMENT

GLOVES / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
EC10/20	1	40mL/HCL - EB
"	3	" "
"	1	" " - CC

DUP / MS/MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: FLOWMETER / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

23.5 @ 0854

~41 @ 0858

~50 @ 0906

Verified by: _____ Date: _____

WELL ID: OW-3

Page 1 of 1

Date: 12/12/94

Team No: 1

Samplers' Initials: WHE/MPC

TD OF CASING 58.50 ft

STATIC DTW (-) 22.53 ft @ 1125 hr

FT WATER (=) 35.97

SAMPLE PUMP INTAKE @ _____ ft

SCREEN INTERVAL: _____ ft

SPURGE PUMP: _____ (hp) _____ (volts) 30 (amps) 720

CAP OF CASING (x) ~~1.02~~ gal / ft (=) _____ gal / 1 CASING VOL (x3 =) 17.4 gal / 3 CASING VOL (+) INIT FLOWMETER READING 165071.1 (=) 165091.1 TARGET

TIME	FIELD PARAMETERS T°C	EC	pH	VOLUME ( ) TOTALIZER FLOWMETER READING	( ) APPROX. GALS PURGED	APPROX. CASING VOLS PURGED	DISCHARGE RATE VOLUME / TIME (min)	Q (GPM)	NOTES (Color, odor, sand & silt content & other characteristics of the discharge water)
1316	PUMP ON			165071.1					
1320	18.7	256	5.95	165075.6			1		VERY SILTY
—	—	—	—	[illegible] COST FLOW TO			DRAWDOWN *		—
1328	19.3	279	6.93	165077.7			1		VERY SILTY
—	—	—	—	— COST FLOW AGAIN *			—		—
1338	19.6	256	5.77	165080.1			1		
1340	19.8	293	6.90	165081.2			1		
—	—	—	—	— COST FLOW → ALLOWING REBOUND *			—		—
1425	19.2	292	6.9	165093.8			1		
—	—	—	—	— COST FLOW → ALLOWING REBOUND *			—		—
1548				165090.0	STARTED		SAMPLING		BEFORE
						LOSS OF	FLOW		
							1		
							1		

PUMP ON @ _____ Hrs

PUMP OFF @ _____ Hrs

GALLONS PURGED _____

CASING VOLS. PURGED _____

AVERAGE Q: _____ GPM

FINAL PURGE PUMPING WL

_____ ft @ _____ Hrs

START SAMPLING @ 1548 Hrs

STOP SAMPLING @ 1550 Hrs

WEATHER CONDITIONS

TIME _____ TEMP _____

SKIES _____

WIND (mph) _____ from _____

AIR MONITORING (PID) / FID (ppm)

VAULT 0 BKGD 0

BREATHING ZONE 0

DISCHARGE WATER 0

HEALTH & SAFETY EQUIPMENT

(GLOVES) / GOGGLES / HARDHAT

RESPIRATORS / TYVEK / VEST

SAMPLE COLLECTION

ANALYSIS	QUANTITY	CONTAINER / ACID
8010	3	50 mL / HCl
EQUIPMENT BLANK BEFORE PUMP DOWN HOLE TO FIELD	MADE DROPPED → TURNED IN	

DUP / MS/MSD / TB / FB Y N

If "Y", complete appropriate forms

MEASUREMENT METHOD: (FLOWMETER) / BUCKET

OTHER NOTES & COMMENTS:

(Factors possibly affecting samples, condition of sampling equipment, etc.)

pH 7 BUFFER = 7.46 @ 13.1°C

* SHUT OFF PUMP TO ALLOW REBOUND → PUMPING @ MINIMUM

Verified by: _____ Date: _____

APPENDIX B

RESULTS OF DATA ASSESSMENT AND DATA VALIDATION

TABLE OF CONTENTS

TABLE

ACRONYMS AND ABBREVIATIONS

COC	chain-of-custody
CRWQCB	California Regional Water Quality Control Board
DVP	data validation package
1,2-DCA	1,2-dichloroethane
DCE	dichloroethylene
EPA	U.S. Environmental Protection Agency
LAS	Lockheed Analytical Services
LESAT	Lockheed Environmental Systems and Technologies Co.
MS	matrix spike
MSD	matrix spike duplicate
PCE	tetrachloroethylene
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
RDL	reportable detection limit
RPD	relative percent difference
SOP	standard operating procedure
TCE	trichloroethylene
VOC	volatile organic compound

APPENDIX B

RESULTS OF DATA ASSESSMENT AND DATA VALIDATION

1.0 INTRODUCTION

The quality of analytical data obtained during the fourth quarter 1994 sampling activities was reviewed using procedures outlined in the Quality Assurance Project Plan Study Area Characterization, Burbank Operable Unit (Lockheed Environmental Systems & Technologies Co. [LESAT], 1993). Data quality was assessed according to the quality assurance/quality control (QA/QC) parameters of precision, accuracy, representativeness, comparability and completeness.

Precision is calculated during both internal and external QA/QC procedures using laboratory and field duplicate samples and is a measure of the agreement of reproducibility among replicate measurements. Precision is reported as the relative percent difference (RPD) between duplicates of the same sample.

Accuracy is the degree of agreement of a measured value with an accepted reference or true value. Accuracy is estimated during internal laboratory QA/QC procedures by comparing reported concentrations from analysis of matrix spikes and surrogates to known concentrations in laboratory standards, and is reported as a percentage, as in percent recovery. The calculated percent recovery is taken as a measure of the accuracy of the total analytical method.

Representativeness is a qualitative parameter expressing the reliability with which a measurement or measurement system reflects the true conditions under investigation. Representativeness is influenced by the number and location of sampling points, sampling

timing and frequency of monitoring efforts, and by field and laboratory sampling procedures. Representativeness is evaluated by determining adherence to standard operating procedures (SOPs) and by comparing the data to historic trends.

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another. Comparability is dependent upon consistency in sampling conditions and selection of sampling procedures, sample preservation methods, analytical methods, and units of data expression. The comparability requirements for field measurements, sampling activities, and analytical methods are met by complying with SOPs during sample collection and analysis.

Completeness is defined as the comparison of the number of valid data obtained from a measurement effort to the total number needed to meet the project goals. Analytical data completeness is described as the ratio of acceptable analytical results to the total number of results requested. Criteria for incomplete or unacceptable results may include vials broken in shipment or at the laboratory and data qualified as unusable during data assessment and validation.

QA/QC analyses monitor the analytical measurement process in order to evaluate analytical data quality. Both internal and external QC results are utilized during data assessment. Internal laboratory QC samples used for quarterly sampling events typically include analysis of laboratory duplicates, matrix spikes (MS), matrix spike duplicates (MSD), surrogates, and organic-free water reagent blanks. External QC samples typically collected and analyzed include field duplicates, field blanks, and trip blanks. The purpose of the review of internal and external QC samples is to assess the data quality by reviewing laboratory precision results for laboratory sample duplicate and MSD analyses; laboratory accuracy results for MS and surrogate analyses; laboratory, field, and trip blank results for potential sample contamination due to laboratory conditions, ambient field conditions, or sample collection, handling, and transport procedures, respectively; field precision results for field duplicate samples.

In order to assess the validity of the reported analytical results, data validation procedures are utilized for selected samples representing approximately 10 percent of the samples collected. Analytical data validation packages (DVPs) are routinely requested from the primary laboratory and are evaluated as a check on the quality of the analytical data beyond data assessment procedures. Data validation procedures include assessing the integrity and stability of the samples analyzed, the performance of the instruments used for analysis, and the identification and quantitation of the compounds in the sample analyzed. Data validation criteria have been established which conform to specified analytical method procedures.

Results of data assessment procedures for all samples collected and of data validation procedures for approximately 10 percent of the samples collected are then used to determine data qualifiers, which indicate the quality and the appropriate use of the analytical data. Data qualifiers assigned during data assessment and data validation are described in Sections 2.0 and are summarized in Table B-1. Incidence of data qualification are noted in the computerized database and in memoranda to the file.

2.0 DATA ASSESSMENT AND DATA VALIDATION RESULTS

The quality and appropriate use of data is determined based on data assessment of all samples and on data validation on approximately 10 percent of the data. Data assessment includes the review of data reduction and the analysis of internal and external QA/QC results. Data validation includes the evaluation of method and performance QC data in DVPs. A DVP consists of Contract Laboratory Program level of documentation that contains data forms, QC summary forms, and the associated raw data. In addition, the data reviewers used professional judgement to both qualify the data and integrate any additive effects of the findings.

Results on the groundwater samples collected from the 34 monitor wells sampled during the fourth quarter 1994 were assessed and validated. Data qualifiers assigned to the evaluated analytical data are "E" for data estimated - limited use determined by data quality objectives, or "U" for data unusable - data not suitable for any purpose". An "E" designation does not disqualify the data in terms of contributing to data completeness. The "E" and "U" data qualifiers are equivalent to the definition of the "J" and "R", respectively, used by the U.S. Environmental Protection Agency (EPA, 1987) in their validation guidelines. Data which were qualified as a result of data assessment and data validation have been summarized (Table B -1).

2.1 DATA REDUCTION

The assessment on the quality of the groundwater data consists of the review and reduction of the field and analytical data obtained during sampling. Project data are reviewed for completeness, representativeness, and comparability in accordance with procedures outlined in the QAPP (LESAT, 1993). Supporting data such as chain-of-custody (COC) records are also reviewed for adherence to the sampling schedule, and preservation requirements.

The review of COCs and analytical reports found that the method-specific holding times were met for all samples. One sample, MW-52, collected for the analysis of volatile organic compounds (VOCs) was found to contain headspace in the vials upon arrival at the analytical laboratory. All the results associated with this well were flagged as "E".

Representativeness and comparability are addressed by evaluating any deviations from the sampling procedures contained in Appendix B. The procedure prepared for the study area groundwater sample collection was followed during the fourth quarter 1994 sampling event. In addition, a sampling schedule was prepared prior to the sampling activities that specified sample locations, quantity, and type of samples to be collected.

In summary, review of the data reduction QA/QC results during data assessment indicated that 30 of the 1020 reported analysis results required qualification of "E" and none of the reported analysis required qualification as "U".

2.2 INTERNAL LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

Level III analytical procedures utilize laboratory QA/QC analyses to monitor the measurement process. Internal laboratory QC samples include laboratory duplicate analyses, MS analyses, surrogate analyses, laboratory reagent blank analyses, and instrument/method performance analyses. QC results are initially reviewed by the laboratory analyst during sample analysis. The results of the laboratory QA review are independently checked during data assessment and data validation and compared to method-specific QC criteria. Review of the resultant analytical data ensures that statistical control has been achieved and maintained in the laboratory and provides estimates of the laboratory's precision and accuracy to assess the quality of the laboratory-generated data. Laboratory duplicate analyses allow the determination of precision parameters. Laboratory MS and surrogate analyses allow the determination of accuracy parameters. These parameters are also evaluated during selected external QA/QC procedures.

Laboratory reagent blank results measure contamination resulting from the analytical process during sample analysis. Instrument/method performance results assure the method performance.

Internal laboratory precision and accuracy for this sampling event was reviewed. The RPD values and percent recoveries are compared to the project-specific precision and acceptance criteria, respectively. These precision and accuracy comparison tables can be provided upon request.

The internal laboratory precision and accuracy performed by LAS for Volatile Organic Compounds (VOC) analyses using Methods 8010 indicated that all the matrix spike and matrix spike duplicate analyses met the data assessment acceptance criteria. Surrogate recoveries analyses also met the acceptance criteria, except for 5 monitor wells: EW-1, EW-2, MW-56D, MW-61A, and OW-3. The associated results were flagged as "E".

Internal laboratory reagent blank results were reviewed for evidence of laboratory contamination during analysis of analytical samples. Review of laboratory reagent blank results indicated that no contamination was present at or above the reportable detection limits (RDL) with the exception of 1,1,1-Trichloroethane. The reportable detection limits for two of the affected sample results were raised accordingly.

>>>> Instrument/method performance results were reviewed to ensure that acceptable quantitative data are being produced. Multiple point initial calibration curves with quadratic fits were used for quantitation of all analyses and the raw data were provided to document the validity of analyses. The initial and continuing calibration validation criteria were met for most compounds with several exceptions. Four VOC compounds, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,2-Dichloroethane were found to have exceeded the calibration range. Continuing calibration criteria were exceeded for various compounds in different analytical batches. These compounds

included 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2-Chloroethylvinyl ether, Bromomethane, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, Dichlorodifluoromethane, Methylene Chloride, Tetrachloroethylene, Trichloroethylene, Trichlorofluoromethane, Vinyl Chloride, cis-1,2-Dichloroethene, cis-1,3-Dichloropropylene, trans-1,2-Dichloroethylene, and trans-1,3-Dichloropropylene. All the affected results were flagged as "E". All three of the laboratory control standard (LCS) compounds met validation criteria which indicated that they were not affected significantly by the calibration to fall outside the criteria.

In summary, review of internal QA/QC results during data assessment and data validation indicated that approximately 169 of the 1020 reported analyses required qualification as "E" and none of the reported analyses required qualification as "U".

2.3 EXTERNAL QUALITY ASSURANCE/QUALITY CONTROL

In addition to the internal laboratory controls established to assess the quality of the data generated, several QA/QC checks are use to provide external evidence of the quality of the data measurement process. External QA/QC procedures include field duplicate analysis, and field and trip blank analysis.

Field duplicate sample analyses provide for field sampling precision estimates. These data assessment parameters were defined in the previous sections, and the methods of calculating laboratory precision also pertain to field sampling. Field and trip blank analyses allow for the characterization of ambient field conditions, sampling and handling procedures, transport conditions and laboratory conditions that may affect the accuracy of compound identification.

Precision values for field duplicate results were reviewed for this sampling event. This review consisted of calculation of RPDs. External precision criteria of 20% RPD were applied. Based on this criteria, all field duplicates met acceptable limits with the exception of 1,1-Dichloroethylene, Chloroform and Trichloroethylene. The 1,1,1-Trichloroethane field duplicate for MW-56D was also out of criteria but was determined to have no impact on the data due to reagent blank contamination during the field duplicate analysis. All field duplicates met the method-specific holding times.

Trip and field blank sample results were reviewed to determine the potential for contamination during the sampling event and during shipment. This data review consisted of a comparison of detected VOCs in blanks and in samples potentially affected by contamination. Review of trip and field blank samples indicated that no notable contamination was found in the blank sample with the exception of 1,1,1-Trichloroethane.

In summary, review of external QA/QC results during data assessment indicated that 5 of the approximately 1020 reported analyses results required qualification as "E" and none of the reported analyses required qualification as "U".

3.0 SUMMARY

Results of data assessment and data validation were used to qualify the analytical data generated during the fourth quarter 1994 sampling event (Table B-1). Approximately 28.8 percent of the analyses performed for the fourth quarter 1994 sampling event required qualification and all the qualified data were flagged as "estimated." All the "estimated" data are counted in the estimates of completeness since these data are acceptable for the data quality objectives established for study area characterization. Analytical data completeness for the fourth quarter 1994 sampling event was 100 percent.

4.0 REFERENCES CITED

Lockheed Environmental Systems and Technologies Co. (LESAT), 1993. Phase 1, Quality Assurance Project Plan, Remedial Design, Burbank Operable Unit. May 15, 1993.

The USEPA Data Review Work Group, 1988. Laboratory Data Validation Functional Guidelines For Evaluating Inorganic Analyses. Prepared for Hazardous Site Evaluation Division U.S. Environmental Protection Agency (EPA), July 1, 1988.

The USEPA Data Review Work Group, 1988. Laboratory Data Validation Functional Guidelines For Evaluating Organic Analyses. Prepared for Hazardous Site Evaluation Division U.S. EPA, February 1988.

U.S. EPA, 1987. Data Quality Objectives for Remedial Response Activities. Washington, D.C.: EPA Office of Solid Waste and Emergency Response (OSWER). EPA 540/6-87/003A; OSWER Directive 9335.0-78; March 1987.

TABLE B-1
SUMMARY OF QUALIFIED DATA

EPA METHOD	AFFECTED RESULTS	QUALIFIER	NUMBER OF POINTS QUALIFIED
PROCEDURAL ADHERENCE			
EPA-8010	Analysis at 1 Monitor Wells	E	30
SURROGATE ACCURACY			
EPA-8010	Analysis at 4 Monitor Wells	E	110
EXCEEDED CALIBRATION RANGE			
EPA-8010	1,1,1-Trichloroethane	E	2
EPA-8010	1,1,2-Trichloroethane	E	1
EPA-8010	1,1-Dichloroethane	E	1
EPA-8010	1,2-Dichloroethane	E	1
REAGENT BLANK CONTAMINATION			
EPA-8010	1,1,1-Trichloroethane	<	2
INSTRUMENT/METHOD PERFORMANCE*			
EPA-8010	1,1,1-Trichloroethane	E	14
EPA-8010	1,1,2,2-Tetrachloroethane	E	1
EPA-8010	1,1,2-Trichloroethane	E	2
EPA-8010	1,1-Dichloroethane	E	9
EPA-8010	1,1-Dichloroethylene	E	17
EPA-8010	1,2-Dichloroethane	E	14
EPA-8010	1,2-Dichloropropane	E	1
EPA-8010	1,3-Dichlorobenzene	E	1
EPA-8010	1,4-Dichlorobenzene	E	1
EPA-8010	2-Chloroethylvinyl ether	E	1
EPA-8010	Bromomethane	E	8
EPA-8010	Carbon Tetrachloride	E	8
EPA-8010	Chlorobenzene	E	8
EPA-8010	Chloroethane	E	9
EPA-8010	Chloroform	E	5
EPA-8010	Chloromethane	E	9

E Data estimated - limited use determined by data quality objectives.
< Detection limit was raised to reflect the contamination.
* Results obtained from validation of 10% of the data.

TABLE B-1
SUMMARY OF QUALIFIED DATA (continued)

EPA METHOD	AFFECTED RESULTS	QUALIFIER	NUMBER OF POINTS QUALIFIED
INSTRUMENT/METHOD PERFORMANCE* (continued)			
EPA-8010	Dichlorodifluoromethane	E	9
EPA-8010	Methylene Chloride	E	1
EPA-8010	Tetrachloroethylene	E	8
EPA-8010	Trichloroethylene	E	11
EPA-8010	Trichlorofluoromethane	E	9
EPA-8010	Vinyl Chloride	E	8
EPA-8010	cis-1,2-Dichloroethene	E	2
EPA-8010	cis-1,3-Dichloropropylene	E	8
EPA-8010	trans-1,2-Dichloroethylene	E	1
EPA-8010	trans-1,3-Dichloropropylene	E	1
FIELD DUPLICATE PRECISION			
EPA-8010	1,1-Dichloroethylene	E	2
EPA-8010	Chloroform	E	1
EPA-8010	Trichloroethylene	E	2
TRIP BLANK CONTAMINATION			
EPA-8010	1,1,1-Trichloroethane	<	3

E Data estimated - limited use determined by data quality objectives.
< Detection limit was raised to reflect the contamination.
* Results obtained from validation of 10% of the data.