ASSOCIATED TERRA CONSULTANTS, Inc.
ENVIRONMENTAL SERVICES ENGINEERING GEOLOGY HYDROGEOLOGY

ENVIRONMENTAL MONITORING REPORT

SECOND QUARTER 1994

800 FRANKLIN STREET (STID #37)

OAKLAND, CALIFORNIA

7-15-94

for

Mr. Tommy Chiu
Continental Homes, Inc.
812 5th Avenue
Oakland, California

July 15, 1994

File No: 124573 94Q2

15039 Downing Oak Court, Suite 3, Los Gatos, California 95032 (408) 377-9094 (408) 377-1810 fax

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Mr. Tommy Chiu
Continental Homes, Inc.
812 5th Avenue
Oakland, California

Subject: **ENVIRONMENTAL MONITORING REPORT, SECOND QUARTER 1994**
800 Franklin Street (STID #37)
Oakland, California

Dear Mr. Chiu:

We are pleased to present to you with this letter the results to date of the quarterly monitoring of the five monitoring wells at the project site. This monitoring and report are required by the Alameda County, Department of Environmental Health, Hazardous Materials Division. This report also includes the results of a review of existing reports and other available data.

Please do not hesitate to call us if you have any questions. Thank you.

Respectfully submitted,

ASSOCIATED TERRA CONSULTANTS, Inc.

Rick Haltenhoff
President

Distribution:
3 copies - Addressee
1 copy - Ms. Jennifer Eberle, Alameda County, Department of Environmental Health, Hazardous Materials Division
1 copy - Mr. Michael Burns, Tracy Federal Bank

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File No: 124573 94Q2 July 15, 1994

ENVIRONMENTAL MONITORING REPORT

SECOND QUARTER 1994

800 FRANKLIN STREET (STID #37)
OAKLAND, CALIFORNIA

INTRODUCTION

This Second Quarter 1994 report presents the data from the first half 1994 monitoring of the five existing groundwater monitoring wells at and in the vicinity of 800 Franklin Street in Oakland, California. This report is required pursuant to a work plan dated February 7, 1994 and approved in a letter addressed to Mr. Tommy Chiu dated February 10, 1994, and as modified by verbally in agreement with Ms. Jennifer Eberle of the Alameda County Department of Environmental Health, Hazardous Materials Division ("ACDEHHMD"). The scope of this work consists of:

1. Refurbishing the wellhead of Well MW1, as necessary, and surveying it with respect to the other wells and evaluate historical ground water elevation data;

2. Measuring the ground water levels in all the wells and calculating ground water flow direction and gradient on a monthly schedule for a year;

3. Sampling all wells, and again six months later for a semi-annual sampling program, and testing the water samples for total petroleum hydrocarbons as gasoline, with benzene, toluene, ethylbenzene and xylenes distinction;

4. Reviewing existing files and evaluating the field and laboratory analyses with respect to known tank locations, underground utilities, and possible off-site contamination sources; and

5. Providing quarterly letter reports and semi-annual technical reports of project activities, results, and recommendations.

The first quarterly letter report was dated April 8, 1994.

SITE DESCRIPTION

Physical Description

The project site is located on the northeastern corner of Franklin and Eighth Streets in Oakland, California. The location of the site is shown on the "Project Site Vicinity Map" (Plate 1). The site is bounded by Franklin Street on the northwest, Eighth Street on the southwest, and commercially-developed parcels on the northeast and southeast. There is a two-story commercial structure on the site.

The project site is approximately flat at an elevation of about 35 feet above Mean Sea Level. Drainage of the site is to the south and west to existing storm drainage systems on Franklin and Eighth Streets. Lake Merritt and the Oakland Inner Harbor are located approximately 3,000 feet to the east and 2,500 feet to the southwest of the project site, respectively.

Stratigraphy

Holocene and Older Pleistocene alluvial fan deposits of fine- to coarse-grained sand and Bay muds underlie the project site. Subsurface exploration by Woodward-Clyde-Sherard & Associates (1963) for the design of the BART system included three borings in the site vicinity. The logs of these borings up to 70 feet deep show that ground water was first encountered by them at approximately 22 feet deep in a dense, medium-grained sand under water table conditions. The borings by Miller Environmental Company (1989 and 1992) to a maximum of 35 feet deep are consistent with the earlier borings, except that they show the aquifer to be primarily

fine-grained sand. The Woodward-Clyde-Sherard & Associates borings show the aquifer to extend from about 18 feet deep down to about 40 feet deep in the site vicinity, and to be underlain by Bay muds to the depths drilled by them. The borings by Miller Environmental Company showed the aquifer to extend essentially from the surface, and their borings were not deep enough to determine its depth.

SITE HISTORY

Number of Tanks at the Site

The project site was formerly occupied by a service station. The County's project file for this site contains a single-page diagram showing six tanks on the site. This diagram shows two 6,000-gallon gasoline tanks at the approximate location of two gasoline tanks removed in 1989, two 550-gallon waste oil tanks in the sidewalk along Eighth Street at the approximate location from which a 500-gallon waste oil tank and a 1,000-gallon solvent tank were removed in 1989, and two additional 550-gallon gasoline tanks in the sidewalk to the northwest of the 6,000-gallon tanks. The diagram has a notation indicating that it is drawn to scale, but it is not dated and the source of this diagram is not indicated.

The Miller Environmental Company (1992) reported that this site is 'known' to have had five underground storage tanks. These tanks reportedly variously contained petroleum product, solvents and waste oil. One of these tanks was reported by them to have been removed from the project site before June 1988. No information was available to Miller Environmental Company or to us to about the exact location of that tank, its contents, the date of removal, or who removed it. Miller Environmental Company stated that they believed that Monitoring Well MW1 is located near the former location of this tank.

An Alameda County "Hazardous Waste Generator Inspection and Compliance Report" dated July 1986 states that there were two 6,000-gallon gasoline tanks and

one 500-gallon waste oil tank on the site. It indicates also that used Safety Kleen parts cleaner solvent was exchanged by Bill Louie's Auto Service, and that they sold kerosene for heater fuel. The Permit Applications for the site filed by Bill Louie's Texaco on October 23, 1987 indicate the presence at that time of three tanks. They consisted of two 6,000-gallon tanks installed in 1970, and a 550-gallon waste oil tank, year of installation unknown.

All subsequent documentation, including Alameda County Department of Environmental Health "Hazardous Materials Inspection Form"s filled-in in 1989 at the time of removal of the tanks, refer to four tanks as having been removed from the site in 1989. These included the three acknowledged by Bill Louie's Auto Service (aka Bill Louie's Texaco), plus a 1,000-gallon solvent tank.

Tank Removals and Soil Sampling and Testing

Miller Environmental Company (1989) reported that a soils investigation performed at the project site by LW Environmental Services, Inc. in August 1988 discovered concentrations of Total Petroleum Hydrocarbons as gasoline ("TPHg") at 1,580 and 8,340 parts per million ("ppm") near the four underground storage tanks. Miller Environmental Company (1989) also reported that in June 1989 the Robert J. Miller Company removed two 6,000-gallon gasoline tanks, one 550-gallon waste oil tank, and one 1,000-gallon solvent tank. Soils samples reported to have been taken by the Traverse Group, Inc. from the excavation for the removal of the two gasoline tanks ("Excavation 1") along Franklin Street, and the excavation of the waste oil and solvent tanks ("Excavation 2") along Eighth Street, indicated elevated concentrations of TPHg and waste oil, and concentrations of purgeable and semi-volatile organic compounds in concentrations less than 1 ppm. The most contaminated soils from these excavations were separated from the cleaner soils and disposed of in a Class I disposal site. The excavations were then temporarily backfilled with a combination of the remaining soils and imported clean fill. Neither the LW Environmental Services, Inc. nor the Traverse Group, Inc. reports were available to us for this report.

Excavations 1 and 2 were subsequently over-excavated in late 1991 by Miller Environmental Company (1992) and additional contaminated soil was removed. Soils samples collected from the bottom of Excavation 1 (15 feet) indicated residual concentrations of TPHg up to 2.3 ppm and waste oil up to 80 ppm. The majority of the contaminated soils in Excavation 2 could not, however, be excavated due to the presence of underground utility lines and the proximity of Eighth Street. Soils samples from the bottom of this excavation (15 feet) indicated concentrations of TPHg at 10,000 ppm, TPH as diesel ("TPHd") at 250 ppm, and waste oil ("WO") at 400 ppm. The excavations were backfilled with clean imported and native fill.

Ground Water Monitoring Wells and Soil Borings

The Miller Environmental Company (1989) drilled three soils borings and constructed groundwater monitoring wells in each of the borings (MW1 to MW3) on and in the vicinity of the project site in September 1989. Hydrocarbons were detected in some of the soils samples, and in the water samples taken from these wells. The groundwater gradient measured in these wells appeared to them to be to the west-northwest. Approval to proceed with the construction of a new commercial structure at the project site was granted by Alameda County Health Care Services Agency in January 1990. Two soils borings (B1 and B2) and two additional groundwater monitoring wells (MW4 and MW5) were later drilled and constructed at the project site by the Miller Environmental Company (1992) from September to October 1991. The results of the groundwater testing of all five groundwater monitoring wells is included in Table 2, "Compilation of Compound Concentrations (in ppm) in Groundwater Samples", and all the results of the soils testing are presented in Table 3, "Compilation of Compound Concentrations (in ppm) in Soil Samples".

A one-year groundwater monitoring program consisting of quarterly monitoring of the five groundwater monitorings wells at the project site was required by ACDEHHMD and instituted. KDM Environmental, Inc. completed the Third Quarter 1992 Monitoring Report on November 13, 1992. The Fourth Quarter 1992

Monitoring Report was completed on March 8, 1993. The First Quarter 1993 Monitoring Report was completed on June 16, 1993. Sampling and ground water level measurements were next done on the site by Frank Lee & Associates, and reported in letters dated October 22, 1993 and January 6, 1994.

METHODS, PROCEDURES AND RESULTS

Groundwater Elevations

The depths to the stabilized groundwater levels were measured in all the wells since the start of the year of monitoring on March 28, April 29, June 10, and July 8, 1994, (see Table 1 and Plates 2 through 5). The elevations of the groundwater in wells MW2 through MW5 were then calculated based on the elevations of the tops of the casings of the wells reported on the plat of survey provided by Miller Environmental Company (1992). The top of the casing of MW1, which is inside the existing building, was cut-off during construction of the building. The top of this casing was repaired and the elevation of the repaired top of casing was surveyed on March 28, 1994. This surveying was done by Geotopo of Oakland, California.

Groundwater Gradient

Based on topographical features and information generally available, the regional groundwater is believed to flow generally in a southwesterly direction toward San Francisco Bay, however, variations in the gradient direction can occur and have been reported in the vicinity of the project site.

The calculated gradient directions and magnitudes to date are summarized in the table below:

Date	Gradient Direction	Gradient Magnitude	Comments
10/12/89	N 72° W	.011 ft/ft	Three wells
11/06/91	N 82° W	.001 ft/ft	Trough
10/21/92	N 41° W	.009 ft/ft	
02/25/93	N 37° W	.009 ft/ft	
04/27/93	N 32° W	.011 ft/ft	
10/07/93	N 81° W	.010 ft/ft	Trough
03/28/94	N 42° W	.010 ft/ft	
04/29/94	N 79° W	.007 ft/ft	Ridge
06/10/94	N 49° W	.006 ft/ft	
07/08/94	Varies	Varies	Complex

The gradient direction on 10/12/89 is based on a three-point solution using the three wells that existed at that time, MW1, MW2, and MW3. The gradient direction on 11/06/91 is based on contouring of the groundwater elevations the four wells from which it was possible to obtain elevation data on that date. This contouring produces a very long and narrow trough plunging in the direction N 82° W. The three-point solution for that date using just wells MW3, MW4, and MW5 shows a gradient direction of S 25° W with a magnitude of .009 ft/ft. The gradient directions listed above for 10/21/92, 02/25/93 and 04/27/93 are each based upon three-point solutions for the three largest triangles using the four wells from which it was possible to obtain elevation information on those dates.

The gradient direction measured at the site on 04/29/94 shows a ridge plunging in the N 79° W direction. The gradient on that day appears to be affected by a relatively high groundwater elevation in MW2. The gradient on 07/08/94 is complex in the sense that it forms a shallow trough in the direction N 83° W from MW2, and a subdued ridge in the direction N 67° W from MW3.

Chemical Testing

Groundwater Sampling - Groundwater samples were taken from all five groundwater monitoring wells on March 28, 1994. All sampling procedures were performed in accordance with the "Standard Sampling Protocol" used in all previous samplings by KDM Environmental, Inc. (1992, 1993a, and 1993b) and Frank Lee and Associates (1993), and Associated Terra Consultants, Inc. (1994), and is not repeated here. The water from groundwater monitoring wells MW1 through MW4 was noted to be cloudy, and that in MW5 was noted to be brownish-orange in color. There was a sheen of petroleum product in the water withdrawn from MW2, and both MW2 and MW3, and to a lessor extent, MW1, had noticeable odors.

Laboratory Testing - Laboratory testing was performed to help determine the presence and quantity of contamination in the groundwater samples recovered. All the groundwater samples were analyzed for TPHg with BTEX. For this testing we used Chromalab in San Ramon, California, which is EPA-certified for these analyses. All samples were tracked under chain-of-custody documentation from sample collection to receipt by the laboratory. All laboratory testing of the samples was performed within the specified holding times. For the laboratory analyses of the samples, spike recoveries were considered acceptable. The laboratory analyses, including the quality control results, and the "Chain of Custody" documents are included in Appendix B. Table 2 shows the analytical results of all the previous groundwater samplings known to us and the most recent sampling at the project site.

Results of Chemical Testing - Detectable concentrations of TPHg in the most recent round of sampling (March 28, 1994) were noted only in groundwater monitoring wells MW1, -2, and -3, ranging from 0.460 ppm in MW1 to 53 ppm in MW3. The ratios of TPHg in MW1:MW2:MW3 were .01:.38:1. The distribution of BTEX in the wells was similar that of the TPHg, ranging from 0.092 ppm in MW1 to 11.710 ppm in MW3. The ratios of BTEX in these wells were .01:.31:1.

Benzene was 0.014 ppm in MW1, 0.360 ppm in MW2, and 3.9 ppm in MW3 (yielding a ratio of .004:.09:1). TPHg and BTEX were not detected in MW4 and MW5.

Known Vicinity Contamination Sites

The known contamination sites in the site vicinity include the sites shown on Plate 1, which map was provided us by Ms. Jennifer Eberle of ACDEHHMD. The following information about these sites is from the "Leaking Underground Storage Tank Information System" ("LUSTIS") list prepared by the California Environmental Protection Agency, last updated March 5, 1994. Please note that the names assigned to these cases may or may not reflect actual present site ownership or activity.

Unocal, 800 Harrison Street: gasoline; groundwater is impacted and benzene is present.

Pacific Renaissance Plaza, 1000 Franklin Street: waste oil, gasoline; groundwater is impacted and benzene is present.

Oakland Auto Parts & Tires, 706 Harrison Street: Gasoline, miscellaneous motor fuel; groundwater not known to be impacted. FP now

Exxon, 250 Eighth Street: gasoline, diesel; groundwater is not known to be impacted.

Fire Station #2, 822 Alice Street: waste oil, diesel; groundwater is not known to be impacted.

Vic's Automotive Service, 245 Eighth Street: gasoline; groundwater is not known to be impacted. FP (gasoline)

This data indicates that the only sites up-gradient of the site that are potential sources for or contributors to the contamination in the groundwater at the site are 800 Harrison Street and 1000 Franklin Street. The 800 Harrison Street location is approximately 700 feet from the project site, and the known extent of hydrocarbon contamination remaining in-place at the 1000 Franklin Street location is approximately 500 feet from the project site. Both sites have hydrocarbon contamination.

BART Tubes built late 1960s

The southwest edge of the Bay Area Rapid Transit District's ("BART") right-of way easement for the KBL and KBR lines passes through the extreme north corner of the project site as shown on Plates 2 through 5. The KBR tube is eight feet inside this easement. **The tops of the KBR and KBL tubes** are at the same approximate depth beneath the centerline of Franklin Street, at **about 35 feet beneath the surface of the street.** The KBR tube rises to the west at about 4% and the KBL tube falls to the west at the same inclination, to the point at which they join the approximately north-south running KR and KL tubes. The tubes are 18 feet OD, with no annular drainage system; any void spaces around them were filled with grout under pressure after construction of the tubes. These tubes, lacking annular drainage, are, then, not conductors of groundwater, but rather, barriers to its flow that are a factor in the size, shape and migration potential of the contaminated groundwater.

too deep to impede gw flow?

INTERPRETATION OF DATA

Number of Tanks at the Site

1. Four tanks were removed from the site in 1989, and there are reports that a fifth had been removed in 1988. However, no documentation was found in the County's files concerning this fifth tank.

2. The validity of the map in the County's files showing six tanks at the site cannot be established, nor is it corroborated by any of the other data available. Given the data at hand, it is reasonable to conclude that with the removal of the four tanks in 1989 there are no more tanks at the site.

Extent of Contamination - Soils

3. It is clear from the results of the testing after the over-excavation of the two excavations by Miller Environmental Company (1992) in late 1991 that only trace hydrocarbon contamination - but no TPHd - remained in the soils at the bottom of Excavation 1. The only remaining significant soils contamination above the aquifer is indicated by the results of one of the two samples from Excavation 2 (EX2-A) on the southwest side of the site.

what about MW2 at 33 (at 20' bgs), DTW is 22'

4. TPHd was detected on the southwest side of the site (along Eighth Street) in soils samples from the bottom of Excavation 2 (15 feet), from 20 and 25 feet deep in the boring for MW2, and from 25 feet deep in Boring B1 (Miller Environmental Company, 1989) (Table 3). The soils testing results by Miller Environmental Company (1989 and 1992) and the report by Miller Environmental Company of the sampling and testing previously done by Transverse Group, Inc. show that TPHd was not detected in any of the samples taken from Excavation 1 at the time the tanks were removed or when subsequently re-sampled by Miller Environmental Company. TPHd also was not detected in the soils samples from the boring for MW1. However, it was detected in the soils sample from 25 feet deep in Boring B2 along the northeast edge (up-gradient or cross-gradient side) of the site. The detection of TPHd in Boring B2 is an areally isolated event with respect to the other detections, which are all along the southwest side of the site.

Hydrogeology

5. The groundwater gradient direction and magnitude over time is complex. The historic gradient direction in the project site area is towards the southwest and likely

the one that prevailed at the site until influenced by changes in subsurface hydrological conditions occasioned by the construction of the BART tubes (1967), and later by dewatering and construction of the Pacific Renaissance Plaza.

6. The BART tubes are at the such a depth as to affect the groundwater gradient and act as a barrier influence to the migration of the contaminant plume. The groundwater gradient direction on the east side of the Pacific Renaissance Plaza northeast of the BART tubes is towards the northwest, which is consistent with control of the groundwater flow by the tubes.

7. Significant differential water level elevations exist across the BART tubes in the groundwater monitoring wells at the Pacific Renaissance Plaza, and flow lines plotted by Harding Lawson Associates (1993a and 1993b) curve towards the site along both Franklin Street and Eighth Street. Site gradients measured to date appear to be influenced by and reflect the existence of differential groundwater levels across the BART tubes. The best way to properly evaluate this is to simultaneously measure groundwater levels in wells completed in the same aquifer on both side of the tubes. Any remedial activities at the site must take this into account, not only with respect to the effects of a barrier at this location but also possible effects increased differential groundwater levels will have on the tubes.

8. Most of the groundwater elevation measurements to date were taken during or just after the rainy winter months. There were late rains this year, such that only the two most recent measurements (early June and early July) can be characterized as 'dry' month measurements. Evaluation of variations in groundwater gradient direction and magnitude associated with seasonal changes should not be attempted until after the fourth quarter's data is available.

9. The groundwater gradient on April 29, 1994 shows a relatively high groundwater elevation in MW2, and that on July 8, 1994 shows a shallow trough and a low ridge. However, there is no obvious indication in the groundwater elevation data that the gradient at the site is being affected by a point source of either

discharge or recharge, and it is premature to draw other conclusions about the groundwater direction and magnitude.

Extent of Contamination - Groundwater

10. Table 2 shows that the highest levels of contamination have thus far consistently been measured in MW2 and MW3. Overall, the levels of TPHg, benzene and total BTEX in MW2 have been decreasing steadily from of 270 ppm TPHg, 9.7 ppm benzene, and 79.84 ppm total BTEX reported in October 1992, to 20 ppm TPHg, .36 ppm benzene, and 3.68 ppm total BTEX in the last sampling. The levels in MW3 also have declined significantly, but have shown a moderate rise in the last samplings.

11. It is not clear at this point that the full extent of the contamination in the groundwater has been evaluated by the existing wells.

Source(s) of Contamination

12. It is reasonable that most if not all of the hydrocarbon contamination in MW2 is from the waste oil tank and/or gasoline tank that were removed from Excavation 2, as the contaminants are similar and the excavation location is within 20 feet of and directly up-gradient of MW2. However, all of the contamination thus far measured in the groundwater monitoring wells may not entirely be from the project site, but may be from one or more of the several petroleum hydrocarbon releases reported in the site area or from a heretofore undiscovered source.

13. The Oil and Grease, TPHg, and TPHd detected in the samples from 15 feet deep in Excavation 2 would have had to flow approximately 30 feet up-gradient to be detected in the soil sample from 25 feet deep in Boring B1. This is not impossible, but it is also possible that this contamination may be coming from up-gradient, either the Unocal station at 800 Harrison Street if the gradient from that location is from the southeast as frequently measured at the project site, or from the

Pacific Renaissance Plaza or up-gradient of the Pacific Renaissance Plaza, if the gradient is as shown by Harding Lawson Associates (1993a and 1993b) to curve from the Pacific Renaissance Plaza towards the site.

14. The soil sample from 25 feet deep in Boring 2 contained TPHd, but this boring is not close to or down-gradient of any known site source of TPHd. The hydrocarbon contamination source at the Pacific Renaissance Plaza site is directly to the northeast of Boring B2, and may have been the source of or contributed to the contamination detected in B2 while the gradient was towards the southwest.

15. It is not known to what extent the recent excavation dewatering and construction of the Pacific Renaissance Plaza may have affected the extent of contamination at the project site. It is probable that even with the existence of the BART tubes that the dewatering wells as close as 200 feet to the site caused a measurable drawdown at the site, producing a temporary gradient towards the northeast, potentially drawing contamination from the vicinity of Excavation 2 and spreading it towards the northeast to MW3 and Boring 2.

RECOMMENDATIONS FOR NEXT ACTION

1. We recommend that the gradient direction and magnitude at the project site continue to be measured monthly as planned, which will produce information for other seasons of the year. Future site activities should be based upon that information.

2. We recommend continued sampling and testing of the groundwater in the groundwater monitoring wells for TPHg and BTEX at least semi-annually in accordance with County requirements and guidelines to help monitor the groundwater contamination at the project site. The next and ground water level measurements should take place in July 1994, and the next sampling and testing in August 1994.

LIMITATIONS

1. This report has been prepared in accordance with generally accepted Engineering Geologic practices. The conclusions and recommendations contained in this report have resulted from Engineering Geologic and Hydrogeologic analyses based upon our interpretations of the surface and subsurface soils and geologic conditions reported by others in their borings at locations chosen by them at the project site, and that the soils conditions and geologic conditions at the project site do not deviate from those reported. No warranty, expressed or implied, is made.

2. The migration of contaminants in vadose zone soils and shallow aquifers is somewhat irregular and poorly understood, and the state-of-the-art in environmental investigation does not provide the means to completely evaluate such conditions. However, every reasonable effort has been made within the scope of work agreed to between the Client and Consultant to characterize the extent of the contamination at the project site based upon location of the wells and the well head elevations reported by others, and the groundwater elevations in the monitoring wells and the chemical testing results from this quarterly monitoring program. It remains, however, that it cannot be stated with certainty that all locations and the full extent of contamination in the groundwater at the project site have been discovered and evaluated.

3. The findings of this report are valid as of the present time. However, the passing of time will change conditions on the existing property due to natural processes or the works of man. In addition, legislation or the broadening of knowledge may require other recommendations. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond our control.

Very truly yours,

ASSOCIATED TERRA CONSULTANTS, Inc.

Rick Haltenhoff
Engineering Geologist 1038
Registered Environmental Assessor 1614

Attachments as shown on "Table of Contents".

REFERENCES

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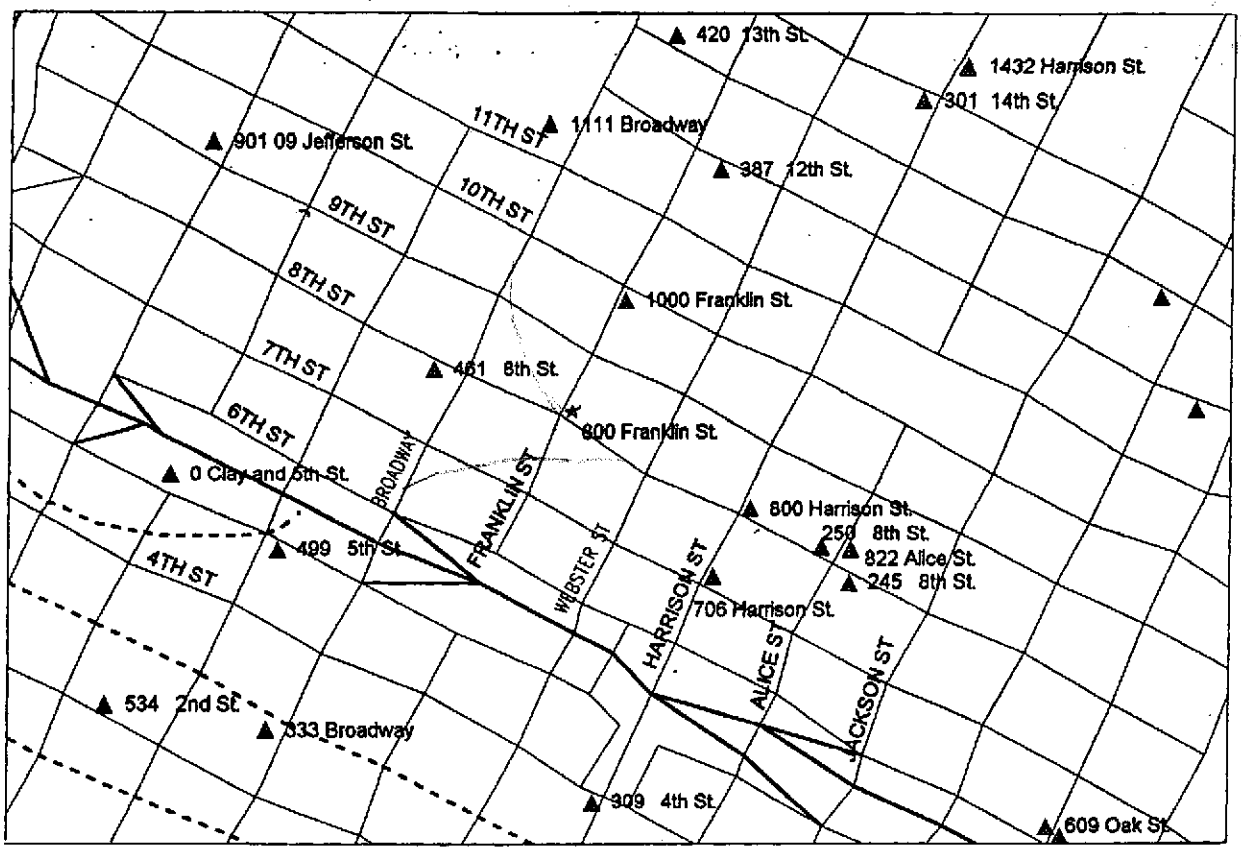
File No: 124573 94Q2



DRAFT
to pencil

Approximate scale: 1" = 700'

★ = site

SITE VICINITY MAP

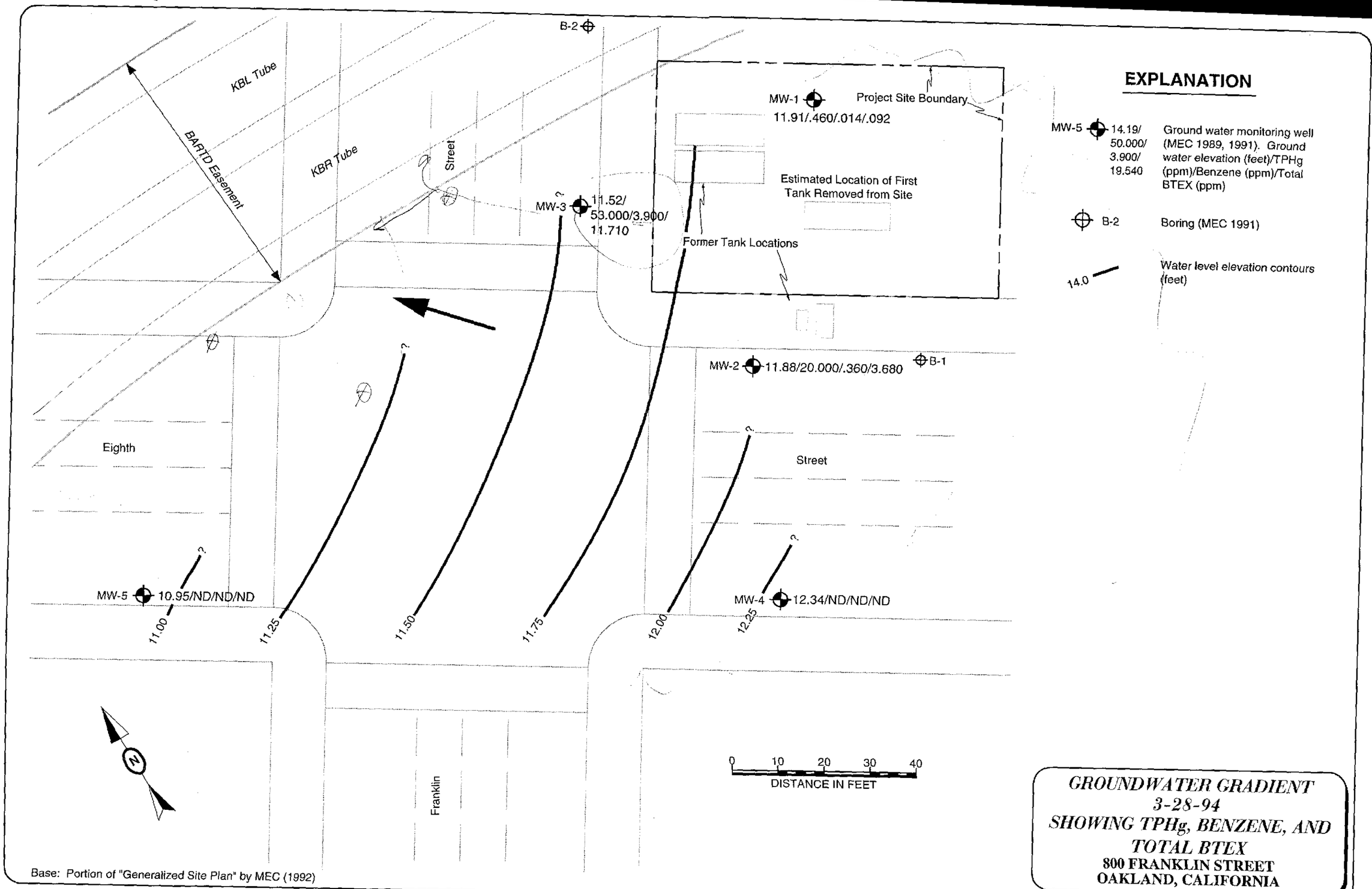
SHOWING LOCATIONS OF VICINITY CONTAMINATION CASES

800 FRANKLIN STREET

OAKLAND, CALIFORNIA

BASE: Computer graphic provided by ACDEHHMD.

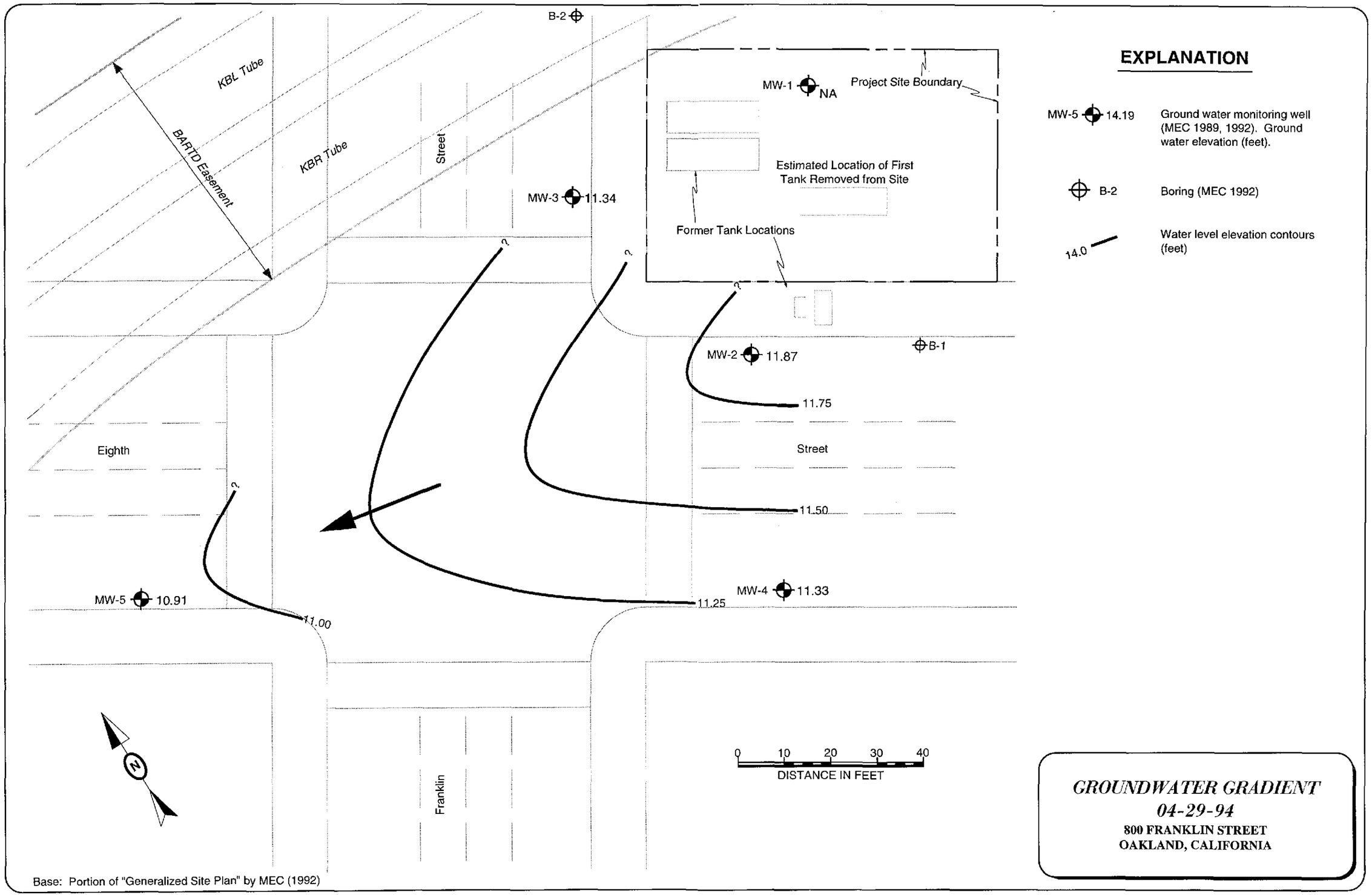
File No. 124373 94Q2



Base: Portion of "Generalized Site Plan" by MEC (1992)

GROUNDWATER GRADIENT
3-28-94
SHOWING TPHg, BENZENE, AND
TOTAL BTEX
800 FRANKLIN STREET
OAKLAND, CALIFORNIA

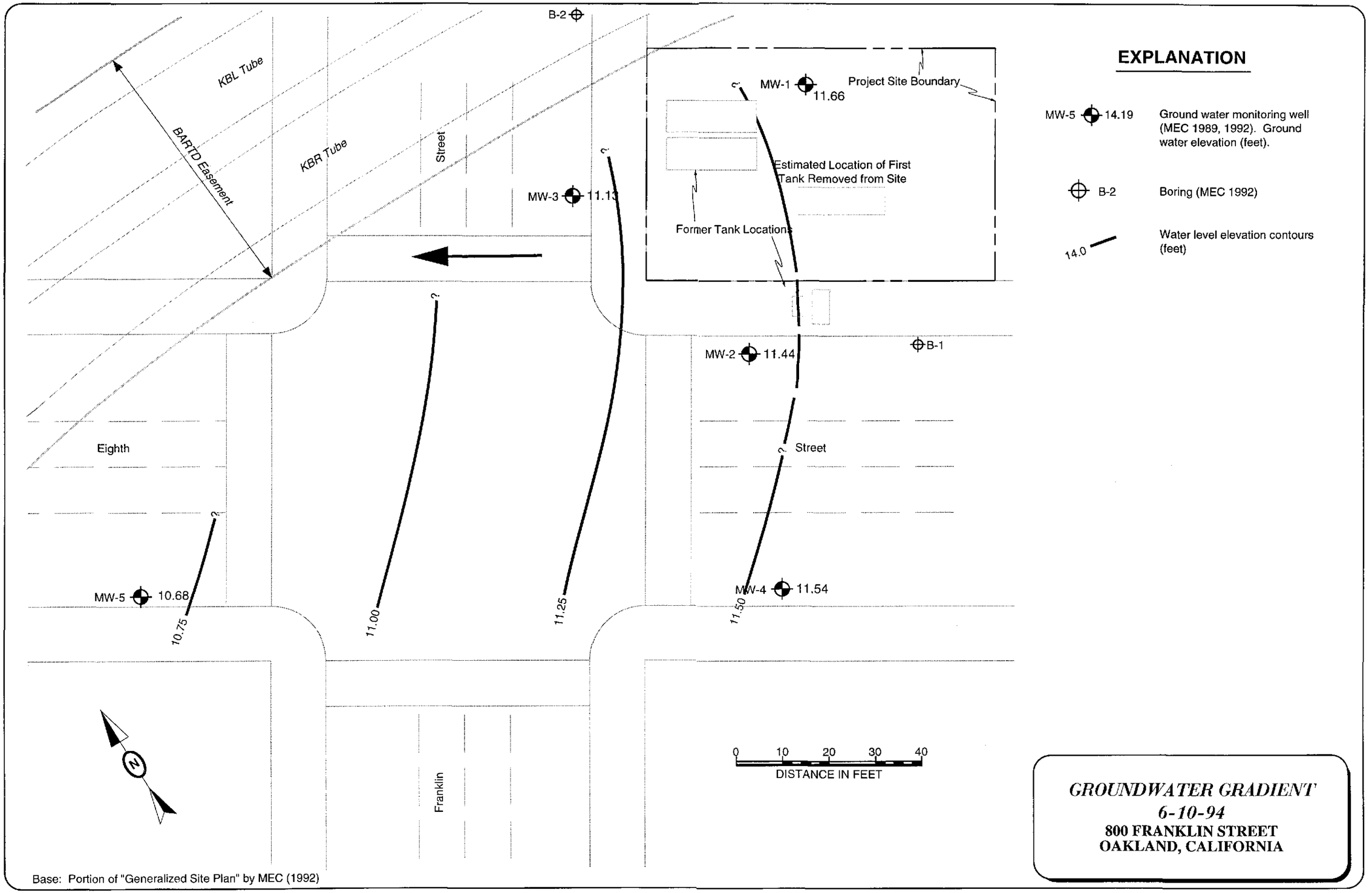
File No: 124573 94Q2



Base: Portion of "Generalized Site Plan" by MEC (1992)

GROUNDWATER GRADIENT
04-29-94
800 FRANKLIN STREET
OAKLAND, CALIFORNIA

File No: 124573 94Q2



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GROUNDWATER GRADIENT
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800 FRANKLIN STREET
OAKLAND, CALIFORNIA

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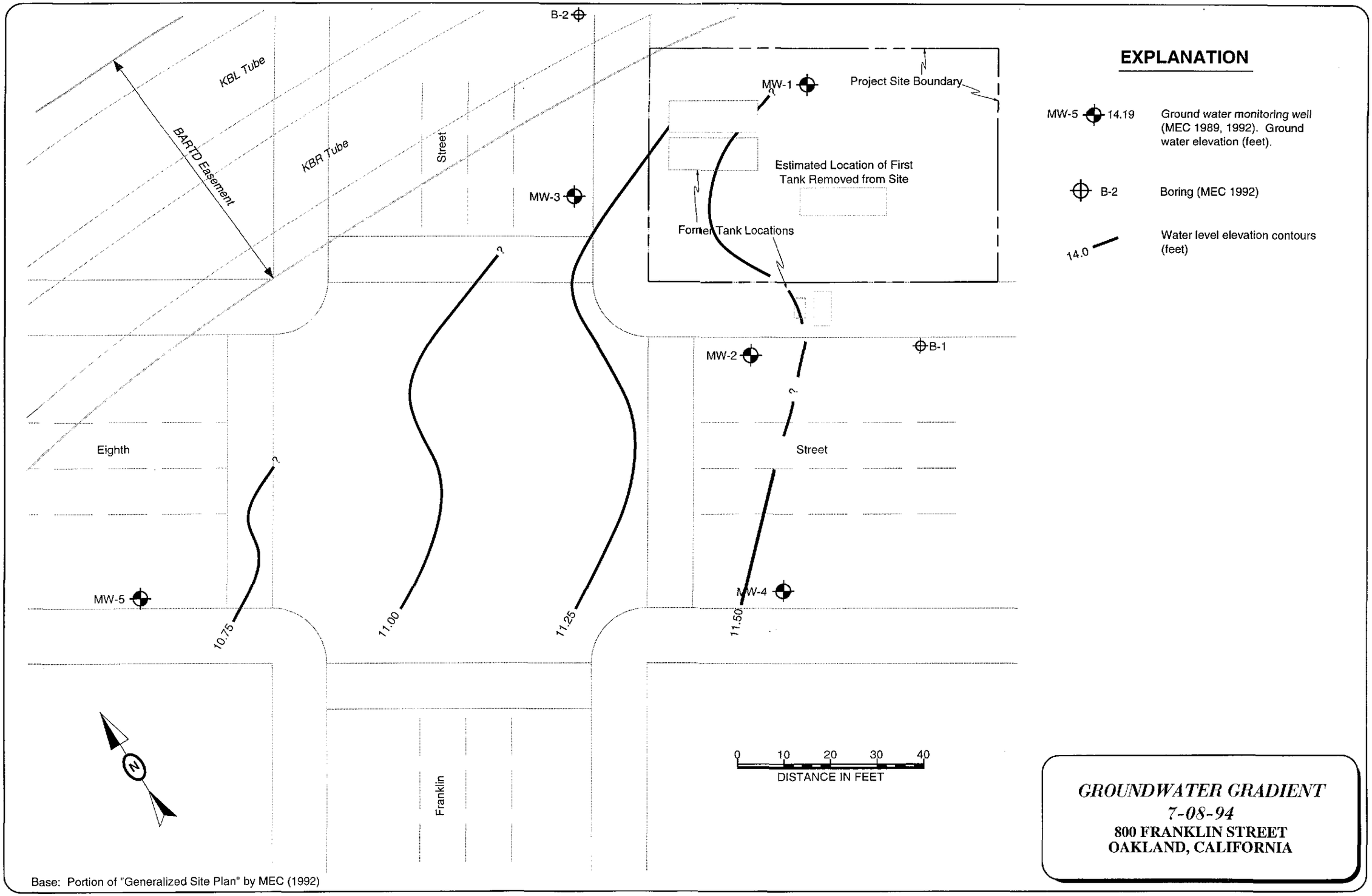

Base: Portion of "Generalized Site Plan" by MEC (1992)

GROUNDWATER GRADIENT
7-08-94
800 FRANKLIN STREET
OAKLAND, CALIFORNIA

TABLE 1

COMPILATION OF

GROUNDWATER ELEVATIONS IN GROUNDWATER MONITORING WELLS

800 Franklin Street, Oakland, California

DTW ≈ 22'

Well	Top of Casing	10/12/89	11/6/91*	10/21/92	02/25/93	04/27/93	10/07/93	03/28/94	04/29/94	06/10/94	07/08/94
MW1	33.42	10.55	NA	-	-	-	-	-	-	-	-
	34.89#	-	-	11.41	12.38	12.53	12.10		-	-	-
	33.98	-	-	-	-	-	-	11.91	NA	11.66	11.62
MW2	33.66	10.40	9.64	11.24	12.16	12.40	12.04	11.88	11.87	11.44	11.42
MW3	34.23	10.21	10.71	10.91	11.72	11.86	14.19	11.52	11.34	11.13	11.09
MW4	33.64	-	10.32	11.54	12.51	12.90	12.52	12.34	11.33	11.55	11.54
MW5	33.56	-	9.56	10.32	11.16	11.41	11.06	10.95	10.91	10.68	10.60

NA - Not available "-" - Does not exist

* MW-1 top of casing destroyed between 10/12/89 and 11/6/91. Repaired on 03/28/94.

\# Top of slab next to MW1.

10/12/89 and 11/06/91 data from Miller Environmental Company. 10/21/92 through 04/27/93 data from KDM Environmental. 10/07/93 data from Frank Lee & Associates.

Datum is Mean Sea Level, based on surveying by LLS Jeffery D. Black, 11/05/91; Existing wellhead, top of slab, and repaired wellhead of MW1 re-surveyed on 03/28/94 by Geotopo, Oakland, California.

TABLE 2

COMPILATION OF

COMPOUND CONCENTRATIONS (in ppm) IN GROUNDWATER SAMPLES

800 Franklin Street, Oakland, California

Well (Smpl Date)		TPHg	Wst Oil	TPHd	Benzene	Toluene	Eth Benz	Xylenes	DCA (ppb)
MW1	09/21/89	ND	ND	-	ND	ND	ND	ND	8.6
	10/31/91	0.630	1.7	0.96	0.003	ND	ND	0.130	0.0098
	10/21/92	0.520	-	-	0.078	0.038	ND	0.120	ND
	02/25/93	1.600	-	-	0.160	0.190	0.034	0.350	-
	04/27/93	0.380	-	-	0.005	ND	ND	0.074	-
	10/07/93	1.000	-	-	0.081	0.150	0.047	0.230	-
	03/28/94	0.460	-	-	0.014	0.025	0.014	0.039	-
MW2	09/21/89	38.000	3.9	-	1.300	1.200	ND	4.700	ND
	10/31/91	10.000	ND	1.5	1.800	1.200	0.270	0.960	0.17
	10/21/92	270.000	-	-	9.700	4.540	9.600	56.000	15.4
	02/25/93	49.000	-	-	4.300	11.000	1.300	9.100	-
	04/27/93	39.000	-	-	1.400	4.000	0.220	5.200	-
	10/07/93	50.000	-	-	2.700	8.100	0.940	7.800	-
	03/28/94	20.000	-	-	0.360	1.300	0.220	1.800	-
MW3	09/21/89	87.000	4.5	-	3.200	8.800	ND	6.500	70
	10/31/91	310.000	ND	25	9.300	25.000	5.600	27.000	0.058
	10/21/92	22.000	-	-	10.000	4.300	0.790	2.100	ND
	02/25/93	29.000	-	-	8.400	5.400	1.300	3.300	-
	04/27/93	50.000	-	-	8.200	8.700	1.000	5.400	-
	10/07/93	1.700	-	-	3.100	3.700	0.400	1.700	-
	03/28/94	53.000	-	-	3.900	4.600	0.710	2.500	-
MW4	10/31/91	ND	ND	ND	ND	ND	ND	ND	ND
	10/21/92	0.410	-	-	0.003	0.029	0.007	0.047	ND
	02/25/93	0.170	-	-	ND	ND	ND	ND	-
	04/27/93	0.100	-	-	ND	ND	ND	0.001	-
	10/07/93	0.240	-	-	ND	ND	ND	ND	-
	03/28/94	ND	-	-	ND	ND	ND	ND	-
MW5	10/31/91	ND	ND	ND	ND	ND	ND	ND	ND
	10/21/92	0.840	-	-	0.017	0.120	0.039	0.180	ND
	02/25/93	ND	-	-	ND	ND	ND	ND	-
	04/27/93	0.260	-	-	0.053	0.019	0.001	0.002	-
	10/07/93	ND	-	-	ND	ND	ND	ND	-
	03/28/94	ND	-	-	ND	ND	ND	ND	-

Also: MW1 - .8 ppb chloroform on 09/21/89; MW3 - .68 ppb dichloropropane and 1.4 ppb TCA, MW4 - 2.6 ppb chloroform, and MW5 - 1.1 ppb chloroform, on 10/31/94.

ND - Not Detected "-" - Not Analyzed

Values rounded-off to three decimal places where necessary. See laboratory data sheets for exact reported values. Testing 10/12/89 and 10/31/91 as reported by Miller Environmental Company. Testing 10/21/92, 2/25/93, and 4/27/93 reported by KDM Environmental. Testing 10/07/93 reported by Frank Lee & Associates.

File No: 124573 94Q2

TABLE 3

COMPILATION OF
COMPOUND CONCENTRATIONS (in ppm) IN SOIL SAMPLES
800 Franklin Street, Oakland, California

Depth (feet)	Compound	Well/Boring/Excavation (arranged in approximate order west to east)											
		MW5	MW4	MW2	B1	EX2-A	EX2-B	MW3	EX1-A	EX1-B	EX1-C	MW1	B2
Date: Lab:		10-03-91 (NET)	10-02-91 (NET)	09-12-89 (ACCULAB)	09-11-91 (ACCULAB)	09-08-89 (ACCULAB)	09-08-89 (ACCULAB)	09-13-89 (ACCULAB)	09-07-89 (ACCULAB)	09-07-89 (ACCULAB)	09-07-89 (ACCULAB)	09-12-89 (ACCULAB)	10-02-91 (NET)
5 ("A")	Oil and Grease	ND	ND	ND	ND	-	-	ND	-	-	-	30	ND
	TPHg	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	Benzene	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	Toluene	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	Ethylbenzene	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	Xylenes	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	TPHd	ND	ND	ND	ND	-	-	ND	-	-	-	23	ND
	Motor Oil	ND	ND	-	-	-	-	-	-	-	-	-	ND
	TRPH	-	-	-	ND	-	-	-	-	-	-	-	-
10 ("B")	Oil and Grease	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	TPHg	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	Benzene	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	Toluene	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	Ethylbenzene	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	Xylenes	ND	ND	ND	ND	-	-	ND	-	-	-	ND	ND
	TPHd	ND	ND	ND	ND	-	-	25	-	-	-	ND	ND
	Motor Oil	ND	ND	-	-	-	-	-	-	-	-	-	ND
	TRPH	-	-	-	ND	-	-	-	-	-	-	-	-
15 ("C")	Oil and Grease	ND	ND	ND	ND	400	ND	ND	ND	40	80	ND	ND
	TPHg	ND	ND	ND	ND	10,000	4.1	ND	ND	ND	2.3	ND	ND
	Benzene	ND	ND	ND	ND	50.0	ND	ND	ND	ND	ND	ND	ND
	Toluene	ND	ND	ND	ND	210.0	ND	ND	ND	ND	0.050	ND	ND
	Ethylbenzene	ND	ND	ND	ND	54.0	ND	ND	ND	ND	ND	ND	ND
	Xylenes	ND	ND	ND	ND	270.0	0.15	0.070	ND	ND	0.14	ND	ND
	TPHd	ND	ND	ND	ND	250	ND	ND	ND	ND	ND	ND	ND
	Motor Oil	ND	ND	-	-	-	-	-	-	-	-	-	ND
	TRPH	-	-	-	ND	-	-	-	-	-	-	-	-
20 ("D")	Oil and Grease	ND	ND	50	ND	-	-	40	-	-	-	ND	ND
	TPHg	ND	ND	1,900	ND	-	-	2,200	-	-	-	52.0	ND
	Benzene	ND	ND	7.4	ND	-	-	7.5	-	-	-	0.12	ND
	Toluene	ND	ND	51.0	ND	-	-	42.3	-	-	-	0.700	ND
	Ethylbenzene	ND	ND	24.0	ND	-	-	16.0	-	-	-	0.53	ND
	Xylenes	ND	ND	180.0	ND	-	-	180.0	-	-	-	4.5	ND
	TPHd	ND	ND	110	ND	-	-	160	-	-	-	ND	ND
	Motor Oil	ND	ND	-	-	-	-	-	-	-	-	-	ND
	TRPH	-	-	-	ND	-	-	-	-	-	-	-	-
25 ("E")	Oil and Grease	ND	ND	30	ND	-	-	ND	-	-	-	ND	ND
	TPHg	ND	ND	7,800	*2,900	-	-	24	-	-	-	ND	120
	Benzene	ND	ND	52.0	ND	-	-	0.60	-	-	-	ND	ND
	Toluene	ND	ND	220.0	60	-	-	1.10	-	-	-	ND	0.210
	Ethylbenzene	ND	ND	77.0	ND	-	-	0.17	-	-	-	ND	0.310
	Xylenes	ND	ND	400.0	ND	-	-	1.40	-	-	-	ND	0.600
	TPHd	ND	ND	170	160	-	-	ND	-	-	-	ND	83
	Motor Oil	ND	ND	-	-	-	-	-	-	-	-	-	ND
	TRPH	-	-	-	190	-	-	-	-	-	-	-	-

Notes: Results compiled from laboratory reports provided in Miller Environmental Company (1989 and 1992), and shown to the degree of accuracy reported by the laboratories. ACCULAB in Petaluma, California; location of NET Pacific, Inc. laboratory not reported by Miller Environmental Company.

* - Laboratory results sheet contains notation : "Sample chromatograph for sample ID R1[sic]-25 was not representative of a gasoline pattern".

CHROMALAB, INC.

Environmental Services (SDB)

April 6, 1994 ChromaLab File#: 9403399

ASSOCIATED TERRA CONSULTANTS

Atten: Rick Haltenhoff

Project: CHIU **Project#:** 124573
Received: March 29, 1994

re: 5 samples for Gasoline and BTEX analysis.

Matrix: WATER
Sampled on: March 28, 1994 *Analyzed on:* April 4, 1994
Method: EPA 5030/8015/602 *Run#:* 2588

Lab # SAMPLE ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
47811 MW1-1	460	14	25	14	39
47812 MW2-1	20000	360	1300	220	1800
47813 MW3-1	53000	3900	4600	710	2500
47814 MW4-1	N.D.	N.D.	N.D.	N.D.	N.D.
47815 MW5-1	N.D.	N.D.	N.D.	N.D.	N.D.
DETECTION LIMITS	50	0.5	0.5	0.5	0.5
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK SPIKE RECOVERY(%)	97	90	100	102	103

ChromaLab, Inc.

Billy Thach
Chemist

Eric Tam
Laboratory Director

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Federal ID #68-0140157

CHAIN OF CUSTODY RECORD

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15777

399/47811-21

ASSOCIATED TERRA CONSULTANTS, Inc.
15039 Downing Oak Court, Suite 3
Los Gatos, CA 95032 (408) 377-9094

Sampler (s): Rick Hultenhoff

Job Name: Chiu

Job Number: 124573

Sampling Round Number:

ANAL

SUBM #: 9403399
CLIENT: ASSTER
DUE: 04/06/94
REF: 15777

Well or Sample Id.	Date	Time	Matrix	Sample Container	Pre serv	Turn @ Time	TPHg w/ BTEX	Hold
	3-28-94							
MW1-1		1429		VOA Vial	HCl		✓	
MW2-1		1157					✓	
MW3-1		1522					✓	
MW4-1		1054					✓	
MW5-1		0958					✓	
MW1-2		1430						✓
MW2-2		1154						✓
MW3-2		1524						✓
MW4-2		1056						✓
MW5-2		0959						✓
Boiler Blank		1450						✓

Relinquished by: (signature/date/time) (1)	Relinquished by: (signature/date/time) (2)	Relinquished by: (signature/date/time) (3)
Received by: (signature)	Received by: (signature) 3-28-94 12:30	Received by: (signature)

SAMPLE RECEIPT- FLD. TO OFF.		SAMPLE RECEIPT - LAB.		COMMENTS:
TOTAL NO. OF CONTAINERS	11	TOTAL NO. OF CONTAINERS		
HEAD SPACE	0	HEAD SPACE		
REC'D GOOD CONDITION/COLD	OK	REC'D GOOD CONDITION/COLD		
CONFORMS TO RECORD	OK	CONFORMS TO RECORD		
INITIAL/DATE	3-28-94	INITIAL/DATE		