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**PROPOSED WORKPLAN FOR
ACTIVE FUEL LEAK INVESTIGATION AND REMEDIATION
FORMER SERVICE STATION**

**800 FRANKLIN STREET
9/15/93 OAKLAND, CALIFORNIA**

for

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

September 15, 1993

File No: 93365-S1 WP

September 15, 1993
File No: 93365-S1/124571 WP

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

Subject: **PROPOSED WORKPLAN: ACTIVE FUEL LEAK REMEDIATION**
Former Service Station
800 Franklin Street
Oakland, California

Dear Mr. Chiu:

We are pleased to present to you with this letter the workplan for investigation and remediation of the fuel leak from the former service station at the project site. This workplan is in response to a letter from the Alameda County Health Care Services Agency dated September 1, 1993, which documented a meeting on July 23, 1993 attended by Ms. Jennifer Eberle of the Agency, Mr. Nick Tsai of Continental Homes, and myself, and subsequent conversations with Mr. Nick Tsai and myself.

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

Respectfully submitted,

FRANK LEE AND ASSOCIATES

Frank Lee
Frank Lee
President



9/15/93
YR 9/30/95

Distribution: 2 copies - Addressee
1 copy - Ms. Jennifer Eberle, Alameda County Health Care Services Agency
1 copy - Mr. Michael Burns, Tracy Federal Bank

DRILLING, SEALING AND SAMPLING PROTOCOL

SUBSURFACE INVESTIGATION AND TESTING

800 FRANKLIN STREET

OAKLAND, CALIFORNIA

what wells?

DRILLING AND SEALING

1. Frank Lee and Associates (FLA) will acquire the proper permits necessary to drill the proposed well(s). FLA will contact Underground Services Alert to locate and mark underground public utility lines. Well construction will follow standards contained in the Department of Water Resources Bulletin 74-81 and 74-90 and with the reporting provisions of Section 13750 and 13755 of the California Water Code.
2. The borings will be drilled with continuous-flight, hollow-stem augers of at least three inches ID and six to 12 inches OD, or a hand auger of four inches OD. All augers will be thoroughly steam cleaned at a location well away from the location of the proposed boring. This will be accomplished before drilling begins to prevent the introduction of contamination from off-site. Cleaned augers will be stored when not actually in use during drilling operations on steam-cleaned benches set-up for that purpose.
3. A geologic drilling log utilizing the Unified Soils Classification System will be maintained of the materials encountered in each boring. The log will include descriptions of the texture, color, moisture content, consistency, plasticity and any unusual characteristics noted, including any indications noted that might indicate the presence or absence of contamination.
4. The boring for the ground water monitoring well will be drilled to a depth of at least 15 feet below the top of the saturated zone, or to a depth of five feet into a perching layer encountered beneath the saturated zone, whichever is shallower. If

FRANK LEE AND ASSOCIATES

no perching layer is encountered after the boring has been advanced 15 feet into saturated materials, the boring will be terminated. If contaminants are present in earth samples from the bottom of the boring when the depth above is encountered during drilling, the Engineering Geologist will consult with the designated on-site representative as to the client's desire to complete the borings at that depth or to continue until no contamination is detected.

5. All PVC pipe used in the construction of the well will be thoroughly steam-cleaned or cleaned with trisodiumphosphate (TSP) and de-ionized water prior to being introduced into the bore hole.

6. A bentonite seal plug will be positioned as necessary as a base for the well casing, and two-inch ID schedule 40 PVC pipe, screened over the interval expected to be the saturated zone during wet and dry seasonal fluctuations, will be introduced into the boring. Sections may be either threaded or screwed together, and no PVC cement will be used. The annulus of the perforated sections will be packed with washed pea gravel or coarse sand for the length of the saturated zone, upon which will be placed a layer of washed fine sand as a transition zone between the gravel and the bentonite slurry or bentonite pellets. About 1/2-bag of bentonite slurry or bentonite pellets will be placed on top of the sand, upon which will be inserted a Class-A cement grout plug to the surface. Multiple aquifers encountered will be isolated from one another and from the surface by Class-A cement and bentonite grout plugs tremied or inserted into proper position. The top of the well casing will be locked to prevent contamination and tampering.

7. During drilling operations sufficient 55-gallon drums will be necessary on-site for proper storage of potentially contaminated earth cuttings. About three 55-gallon drums will be required for the proper disposal of potentially contaminated soils and waste water at a certified disposal site, if necessary.

SAMPLING

General

8. All chemical sampling, handling, and storage will be conducted under the direction of our Registered Environmental Assessor.

9. All sample containers will be properly tagged and identified in the field with a label containing the date, sample identification, and the FLA job number for the work being performed.

10. At no time will the time elapsed between sample acquisition and sample delivery to the outside laboratory be greater than three days.

11. Under no circumstances will preservatives be added to the samples.

12. At no time will sample containers be opened by other than laboratory personnel who will perform the specified chemical analyses.

13. FLA has been advised by our outside laboratory that the useful durations of soils and ground water samples for the appropriate chemical testing are one month and two weeks, respectively.

14. Ground water and soils samples will be disposed of in Class 1 or Class 2-1 sites as necessary after acceptance of our report or upon receipt of your authorization.

Soils Samples

16. Soils samples will be taken in the borings starting at the approximate depth of the bottom of tank excavations, if applicable, as best known or estimated, and at two- to five-foot intervals beneath that depth to the depth at which a saturated zone is encountered, or to the bottom of each boring if no saturated zone is encountered.

17. Soil sampler casings will be disassembled, and steam-cleaned or cleaned in soapy water, rinsed with tap water and de-ionized water and air-dried, just prior to taking each sample. The casings will then be re-assembled with similarly cleaned and dried brass sample liners and carefully lowered into the hollow stem of the auger string. At least one empty brass liner from each boring will be prepared in the same manner as those in the sample casings, but sealed directly after drying to be analyzed as a quality control sample blank.

18. The soils samples in the bottom of the three brass liners in the sample casings, if in good condition, will be taken as the samples to be tested. The samples will be labeled and sealed in the field in their original liners or in thoroughly cleaned Teflon-lined sample containers provided by the outside laboratory specifically for that purpose. Aluminum foil covers will be placed on the ends of the liners and held in place by clean plastic caps wrapped with aluminized duct tape.

19. The middle liners from the sampler will be extruded in the field and examined to help provide the detailed information recorded on the boring logs. The cuttings from the borings also will be examined during the drilling operations to provide a continuous log of the materials encountered. The soils from the top two liners and all cuttings from the drilling operations will be placed in 55-gallon drums.

20. All samples will be packed in ice in a covered cooler-box specifically designated for that purpose, for transport to the outside laboratory. The condition of the ice will be monitored and renewed as necessary.

21. The center core material will be extracted from the sample liners in the laboratory for testing purposes. The remaining soil materials will be kept stored at the lab in their original sample liners for 30 days after testing, or until authorized to dispose of the samples by FLA.

Ground Water Samples for Laboratory Testing

22. Ground water monitoring wells will be developed at least 48 hours after completion. Well development will be performed using well development equipment to alternatively swab and purge the well to remove suspended sediment and clear the well for subsequent ground water sampling. Water parameters such as turbidity will be monitored with field instruments during well development.

23. At least 72 hours after well development, FLA will sample ground water from the well. Initially, depth to water will be measured with a Solinst electronic water level sounder relative to the top of the well casing. Subjective evaluation will then follow and consist of gently lowering a pre-cleaned teflon bailer approximately half its length past the air-water interface. The bailer will be retrieved from the well and water examined for possible presence of floating product, sheen, and product odor.

24. If there is no floating product, then FLA will proceed with retrieving a sample of ground water for laboratory analyses. The well will be purged by hand using a bailer, and during purging, purged water will be monitored with a field instrument for temperature, conductivity, and pH. After purging at least five well volumes, and provided water parameters stabilized, water level in the well will be allowed to recover to at least 80% of static level. At this point a water sample will be retrieved from the well by gently lowering a pre-cleaned bailer approximately half its length past the air-water interface. The bailer will be retrieved from the well and water will be promptly transferred into standard 40-ml volatile organic analyses (VOA) glass vials. The vials will contain hydrochloric acid preservative. The vials will be topped-off to avoid air space, and the screw cap sealed. All vials will be inverted to check for air bubbles, and re-sampled as necessary if air bubbles are found. Samples will be kept refrigerated at all times. The vials will be promptly sealed with Teflon lined caps, labeled, and placed in iced storage for transport to a State-certified laboratory. A field log will be maintained of all evacuation procedures and parameter monitoring. Chain of custody protocol will be initiated and follow the samples to the laboratory. Samples taken in duplicate will have one

set of samples delivered to the laboratory for analysis, and one set kept under refrigeration in our laboratory.

25. Pump, hose, bailer and wire connectors will be thoroughly steam-cleaned, or rinsed in tap water and then in de-ionized water between samplings. Any rubber gloves worn for protection during sampling also will be cleaned in the same manner.

SAMPLE RECORDS AND CUSTODY

26. Sample records for each sample will contain information on sample type and source; our job number; the date of sampling; location; significant weather conditions; laboratory name; well data; and sampling method.

27. A chain of positive, signature custody and transference will be strictly maintained at all times.

REFERENCES

KDM Environmental, Inc., 1992, Quarterly monitoring of wells, third quarter 1992, 800 Franklin Street, Oakland, California: an unpublished report for Mr. Tommy Chiu of Continental Homes, Inc., Oakland, California.

_____, 1993a, Quarterly monitoring of wells, fourth quarter 1992, 800 Franklin Street, Oakland, California: an unpublished report for Mr. Tommy Chiu of Continental Homes, Inc., Oakland, California.

_____, 1993b, Quarterly monitoring of wells, first quarter 1993, 800 Franklin Street, Oakland, California: an unpublished report for Mr. Tommy Chiu of Continental Homes, Inc., Oakland, California.

Miller Environmental Company, 1992, Report on subsurface investigation related to well installation and borings, 800 Franklin Street, Oakland, CA: Richmond, California, an unpublished report for Mr. Tommy Chiu of the Montclair Valle Vista Partnership, Oakland California.

TABLE 1
COMPILATION OF
GROUNDWATER ELEVATIONS IN GROUNDWATER MONITORING WELLS
800 Franklin Street, Oakland, California

Well	Top of Casing	10/12/89**	11/06/91**	10/21/92	02/25/93	04/27/93
MW1	33.42*	10.55	-	-	-	-
MW2	33.66	10.40	9.64	11.24	12.16	12.40
MW3	34.23	10.21	10.71	10.91	11.72	11.86
MW4	33.64	-	10.32	11.54	12.51	12.90
MW5	33.56	-	9.56	10.32	11.16	11.41

* Top of casing destroyed between 10/12/89 and 11/6/91

** Reported by Miller Environmental Company (1992)

Datum is Mean Sea Level, based on surveying by LLS Jeffery D. Black, 11/05/91

TABLE 2
 COMPILATION OF
 COMPOUND CONCENTRATIONS (in ppm) IN GROUNDWATER SAMPLES
 800 Franklin Street, Oakland, California

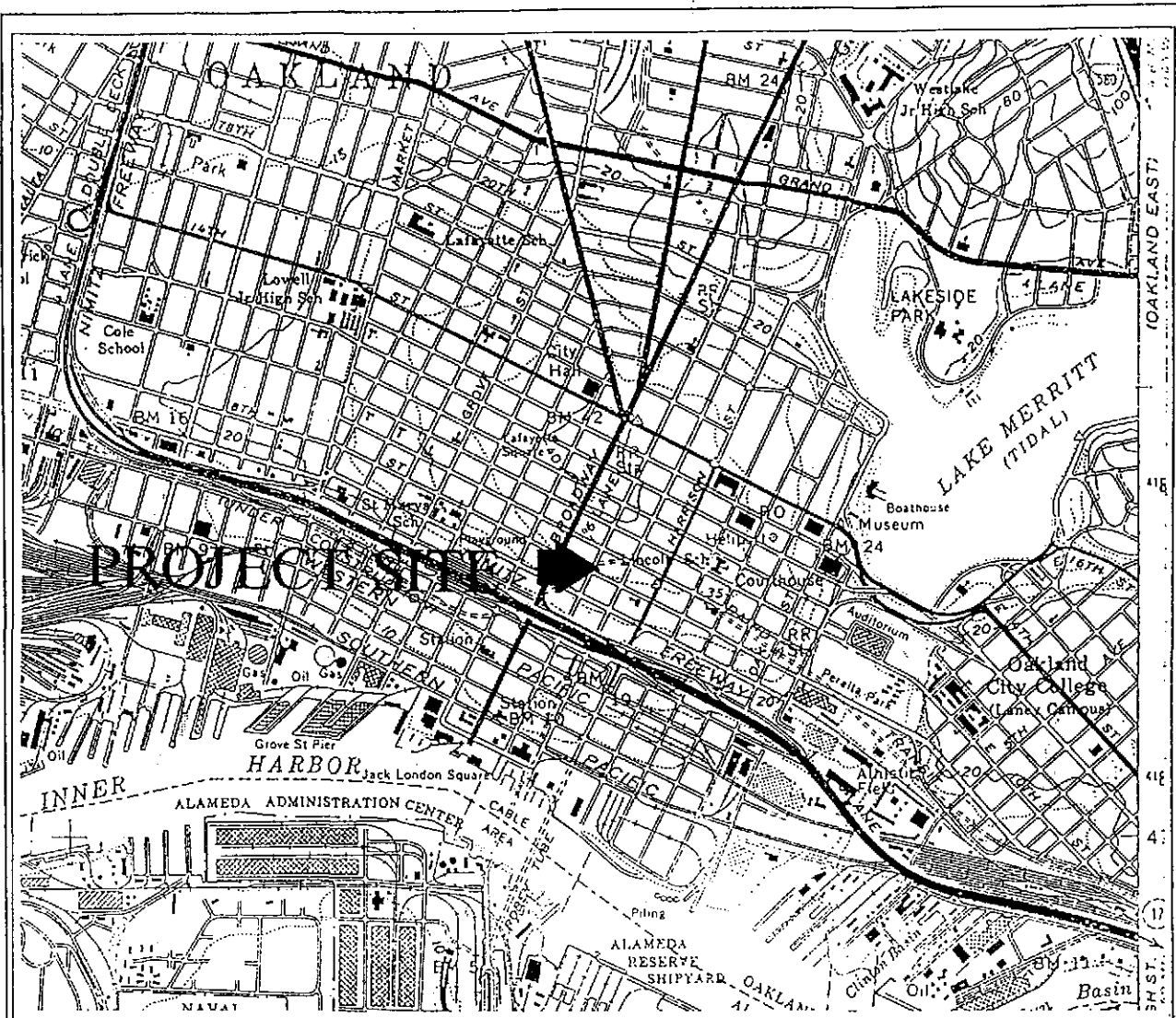
Well (Smpl Date)	TPHg	Wst Oil	TPHd	Benzene	Toluene	Eth Benz	Xylenes	DCA (ppb)
MW1								
10/12/89	ND	ND	-	ND	ND	ND	ND	8.6
10/31/91	0.630	1.7	0.96	0.003	ND	ND	0.130	0.0098
10/21/92	0.520	-	-	0.078	0.038	ND	0.120	ND
02/25/93	1.600	-	-	0.160	0.190	0.034	0.350	-
04/27/93	0.380	-	-	0.005	ND	ND	0.074	-
MW2								
10/12/89	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	-
MW3								
10/12/89	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	-
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	-
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	-

ND Not Detected

- Not Analyzed

Values rounded-off to three decimal places. See laboratory data sheets for exact reported values.

Testing 10/12/89 and 10/31/91 as reported by Miller Environmental Company.



Approximate scale: 1" = 2000';
Contour interval = 5'.



PROJECT SITE VICINITY MAP

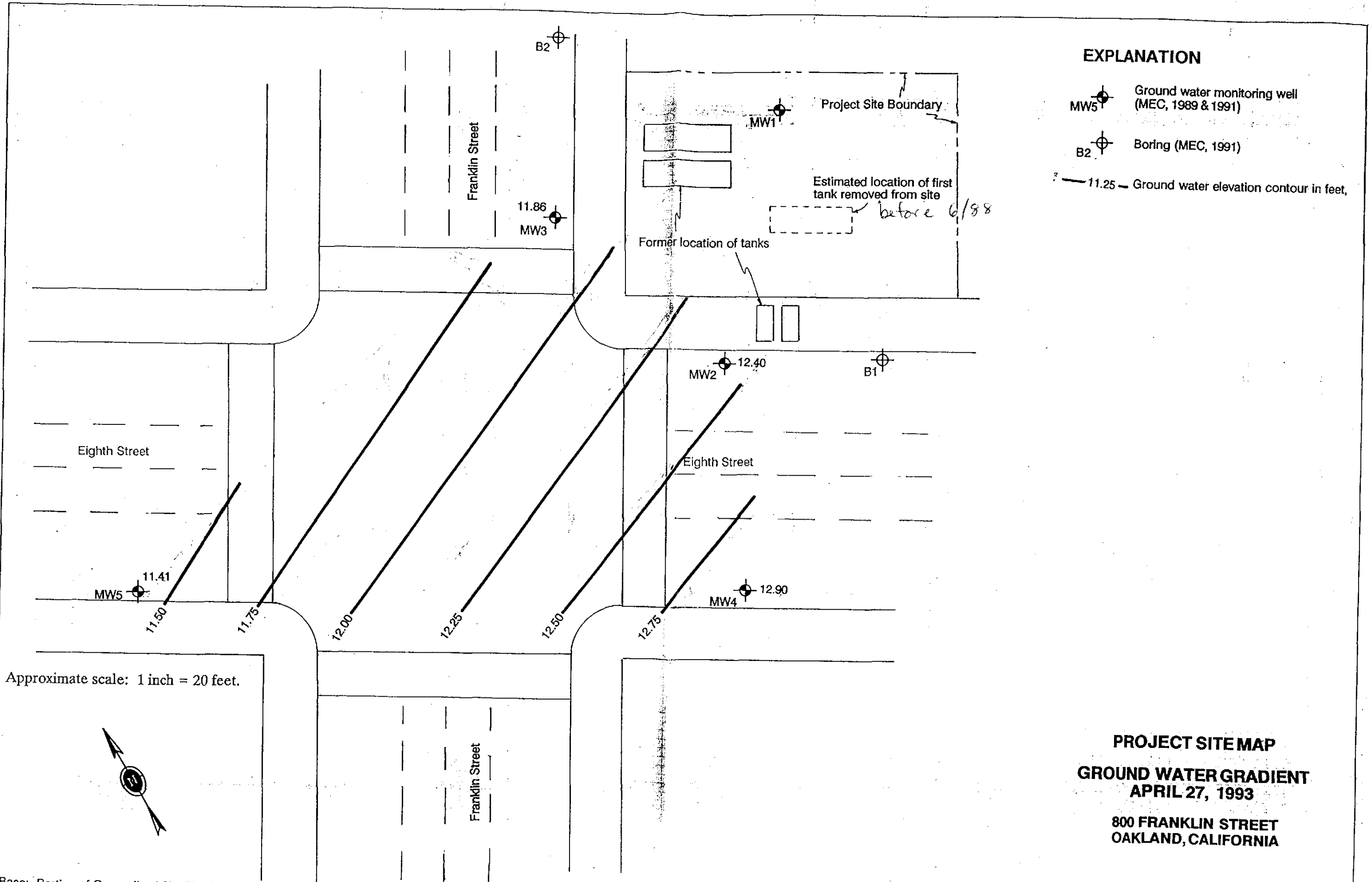
800 FRANKLIN STREET

OAKLAND, CALIFORNIA

BASE: Portion of the U.S.G.S., Oakland West 7.5 minute quadrangle, California, photorevised 1968.

EXPLANATION

- Ground water monitoring well (MEC, 1989 & 1991)
- Boring (MEC, 1991)
- 11.25 - Ground water elevation contour in feet.



Approximate scale: 1 inch = 20 feet.

PROJECT SITE MAP
GROUND WATER GRADIENT
APRIL 27, 1993
800 FRANKLIN STREET
OAKLAND, CALIFORNIA

Base: Portion of Generalized Site Plan by MEC, 1992.

Revised

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

Respectfully submitted,

FRANK LEE AND ASSOCIATES

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Frank Lee
President



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PROJECT BACKGROUND

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 attached "Project Site Vicinity Map", which is Plate 1 excerpted from KDM Environmental, Inc. (1993b). The site is bounded by Franklin Street on the west, Eighth Street on the south, and commercially-developed parcels on the east and north. There is a commercial structure on the site.

The site was formerly occupied by a service station, and is known to have had five underground storage tanks that contained petroleum product, solvents and waste oil. One of these tanks was removed from the project site before June 1988. No information was available to us to about the contents of the tank, the date of removal, or who removed the tank. The Miller Environmental Company (1992) reported that they believed that Monitoring Well MW1 is located near the original location of this excavated tank.

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 remaining underground storage tanks. It is our understanding that the Robert J. Miller Company subsequently removed two 6,000-gallon gasoline tanks, one 550-gallon waste oil tank, and one 1,000-gallon solvent tank in June 1989. Soils samples taken from the excavation for the removal of the two gasoline tanks, located along the western boundary of the project site, and the excavation of the waste oil and solvent tanks, located along the southern boundary, indicated elevated concentrations of TPHg and waste oil, and purgeable and semi-volatile organic compounds in concentrations all less than 1 ppm. The former tank excavations were subsequently over-excavated and additional contaminated soil was removed. Soils samples collected from the sidewalls and bottom of the excavation of the two gasoline tanks indicated residual concentrations of TPHg up to 2.3 ppm and waste oil up to 80 ppm. The majority of the contaminated soils in the excavation for the removal of the waste oil and solvent tanks could not, however, be excavated due to the presence of underground utility lines and the proximity of Eighth Street. Soils

samples taken from the sidewall of this excavation indicated concentrations of TPHg at 10,000 ppm, TPH as diesel ("TPHd") at 250 ppm, and waste oil at 400 ppm. The excavations were subsequently backfilled with clean imported and native fill.

The Miller Environmental Company (1992) constructed three groundwater monitoring wells (MW1 to MW3) in the vicinity of the project site in September 1989. Concentrations of TPHg in the water samples taken from these wells ranged from "Not Detected" in MW1 to 87 ppm in MW3. 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 the Agency in January 1990.

Two soils borings (B1 and B2) and two additional groundwater monitoring wells (MW4 and MW5) were drilled and constructed at the project site by the Miller Environmental Company from September to October 1991. The results of the groundwater testing of all five groundwater monitoring wells is included in Table 2.

A one year groundwater monitoring program consisting of quarterly monitoring of the five groundwater monitoring wells in the vicinity of the project site was required by the Agency and instituted. KDM Environmental was contracted in October 1992 to perform this monitoring, and 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 Report was completed on June 16, 1993. The results of the quarterly monitorings by KDM Environmental showed that petroleum hydrocarbons continued to be detected in the shallow ground water, that the gradient direction is to the northeast in the direction of the north corner of Franklin and Eighth Streets, and that the existing monitoring wells may not be evaluating the full extent of existing contamination.

PROPOSED INVESTIGATION

The proposed investigation will consist of the following:

- Task 1. Immediate sampling of the ^{all?} existing monitoring wells, and testing of the samples for the petroleum hydrocarbons previously detected at the site; *list them*
- Task 2. Measurement of water levels in the existing monitoring wells at the time of sampling, and subsequent measurements every two months for a period of six months; ✓
- Task 3. Determination of the gradient directions and magnitudes based on each set of water level measurements; ✓
- Task 4. Submission of the results of the immediate sampling, testing and gradient measurements to the Agency within three weeks of the sampling event. If existing ground water monitoring well MW4 *only* continues to show very low levels of the contaminants tested for, we will recommend a lower frequency of testing for this well; ?
- Task 5. Sampling of the existing monitoring wells at the end of the six month period, and testing of the samples for the petroleum hydrocarbons previously detected at the site; ?
- Task 6. Construction of a new ground water monitoring well directly down-gradient of the direction of movement of the petroleum hydrocarbon contamination, if indicated by the data as being necessary. This task will require permits from several agencies, and development of a Health and Safety Plan. Prior to the field work, FLA will secure from Agency the appropriate permits for installation of a ground water monitoring well. All new ground water monitoring wells will be developed and sampled, and stabilized water levels measured in

conjunction with all other wells on the site. This data will be analyzed and included in the technical report;

- Task 7. Preparation of a technical report for submission to the Agency, summarizing the data collected, the results of all testing to date, maps, diagrams, logs and tables, and conclusions and recommendations for further actions if necessary, which may include additional investigation and/or implementation of remediation measures.

WORKPLAN SCHEDULE

Upon approval of this proposed workplan by the Agency, FLA will implement the workplan. FLA anticipates submission of the immediate sampling report within three weeks of completion of sampling in the field. The technical report will be submitted within one month of completion of the work in the field noted above in Tasks 2 through 6 above.

when?
sample?
etc.

LIMITATIONS

This workplan was prepared on the basis of information provided by Mr. Chentso Chiu. Frank Lee and Associates reserves the right to amend or recommend changes in the proposed workplan before or during the course of the investigation. Unexpected conditions or changes in the scope of work may result in changes or implementation delays in the workplan.

Please call if you have questions. Thank you.

Respectfully submitted,

FRANK LEE AND ASSOCIATES



Frank Lee

Professional Engineer C34975

President

- Attachments:
- Site Map (Plate 1 from KDM Environmental, Inc., 1993b)
 - Groundwater Gradient Map (Plate 1 from KDM Environmental, Inc., 1993b)
 - Groundwater Elevations in Groundwater Monitoring Wells (Table 1 from KDM Environmental, Inc., 1993b)
 - Compound Concentrations in Groundwater Samples (Table 2 from KDM Environmental, Inc., 1993b)

DRILLING, SEALING AND SAMPLING PROTOCOL

SUBSURFACE INVESTIGATION AND TESTING

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FRANK LEE AND ASSOCIATES

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22. Ground water monitoring wells will be developed at least 48 hours after completion. Well development will be performed using well development equipment to alternatively swab and purge the well to remove suspended sediment and clear the well for subsequent ground water sampling. Water parameters such as turbidity will be monitored with field instruments during well development.

23. At least 72 hours after well development, FLA will sample ground water from the well. Initially, depth to water will be measured with a Solinst electronic water level sounder relative to the top of the well casing. Subjective evaluation will then follow and consist of gently lowering a pre-cleaned teflon bailer approximately half its length past the air-water interface. The bailer will be retrieved from the well and water examined for possible presence of floating product, sheen, and product odor.

24. If there is no floating product, then FLA will proceed with retrieving a sample of ground water for laboratory analyses. The well will be purged by hand using a bailer, and during purging, purged water will be monitored with a field instrument for temperature, conductivity, and pH. After purging at least five well volumes, and provided water parameters stabilized, water level in the well will be allowed to recover to at least 80% of static level. At this point a water sample will be retrieved from the well by gently lowering a pre-cleaned bailer approximately half its length past the air-water interface. The bailer will be retrieved from the well and water will be promptly transferred into standard 40-ml volatile organic analyses (VOA) glass vials. The vials will contain hydrochloric acid preservative. The vials will be topped-off to avoid air space, and the screw cap sealed. All vials will be inverted to check for air bubbles, and re-sampled as necessary if air bubbles are found. Samples will be kept refrigerated at all times. The vials will be promptly sealed with Teflon lined caps, labeled, and placed in iced storage for transport to a State-certified laboratory. A field log will be maintained of all evacuation procedures and parameter monitoring. Chain of custody protocol will be initiated and follow the samples to the laboratory. Samples taken in duplicate will have one

set of samples delivered to the laboratory for analysis, and one set kept under refrigeration in our laboratory.

25. Pump, hose, bailer and wire connectors will be thoroughly steam-cleaned, or rinsed in tap water and then in de-ionized water between samplings. Any rubber gloves worn for protection during sampling also will be cleaned in the same manner.

SAMPLE RECORDS AND CUSTODY

26. Sample records for each sample will contain information on sample type and source; our job number; the date of sampling; location; significant weather conditions; laboratory name; well data; and sampling method.

27. A chain of positive, signature custody and transference will be strictly maintained at all times.

REFERENCES

KDM Environmental, Inc., 1992, Quarterly monitoring of wells, third quarter 1992, 800 Franklin Street, Oakland, California: an unpublished report for Mr. Tommy Chiu of Continental Homes, Inc., Oakland, California.

_____, 1993a, Quarterly monitoring of wells, fourth quarter 1992, 800 Franklin Street, Oakland, California: an unpublished report for Mr. Tommy Chiu of Continental Homes, Inc., Oakland, California.

_____, 1993b, Quarterly monitoring of wells, first quarter 1993, 800 Franklin Street, Oakland, California: an unpublished report for Mr. Tommy Chiu of Continental Homes, Inc., Oakland, California.

Miller Environmental Company, 1992, Report on subsurface investigation related to well installation and borings, 800 Franklin Street, Oakland, CA: Richmond, California, an unpublished report for Mr. Tommy Chiu of the Montclair Valle Vista Partnership, Oakland California.

TABLE 1
COMPILATION OF
GROUNDWATER ELEVATIONS IN GROUNDWATER MONITORING WELLS
800 Franklin Street, Oakland, California

Well	Top of Casing	10/12/89**	11/06/91**	10/21/92	02/25/93	04/27/93
MW1	33.42*	10.55	-	-	-	-
MW2	33.66	10.40	9.64	11.24	12.16	12.40
MW3	34.23	10.21	10.71	10.91	11.72	11.86
MW4	33.64	-	10.32	11.54	12.51	12.90
MW5	33.56	-	9.56	10.32	11.16	11.41

* Top of casing destroyed between 10/12/89 and 11/6/91

** Reported by Miller Environmental Company (1992)

Datum is Mean Sea Level, based on surveying by LLS Jeffery D. Black, 11/05/91

TABLE 2
 COMPILATION OF
 COMPOUND CONCENTRATIONS (in ppm) IN GROUNDWATER SAMPLES
 800 Franklin Street, Oakland, California

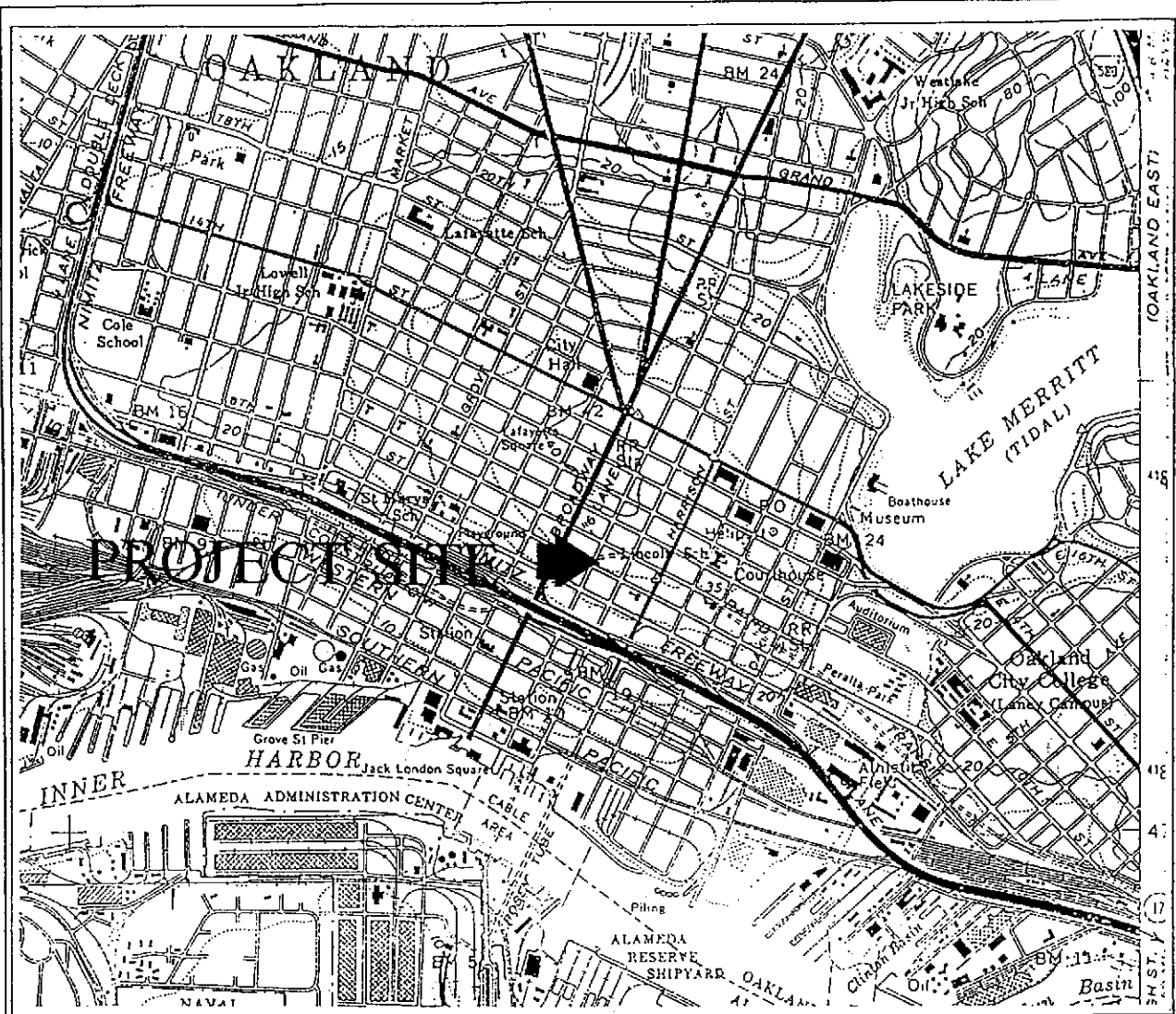
Well (Smpl Date)	TPHg	Wst Oil	TPHd	Benzene	Toluene	Eth Benz	Xylenes	DCA (ppb)
MW1								
10/12/89	ND	ND	-	ND	ND	ND	ND	8.6
10/31/91	0.630	1.7	0.96	0.003	ND	ND	0.130	0.0098
10/21/92	0.520	-	-	0.078	0.038	ND	0.120	ND
02/25/93	1.600	-	-	0.160	0.190	0.034	0.350	-
04/27/93	0.380	-	-	0.005	ND	ND	0.074	-
MW2								
10/12/89	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	-
MW3								
10/12/89	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	-
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	-
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	-

ND Not Detected

- Not Analyzed

Values rounded-off to three decimal places. See laboratory data sheets for exact reported values.

Testing 10/12/89 and 10/31/91 as reported by Miller Environmental Company.



Approximate scale: 1" = 2000';
Contour interval = 5'.

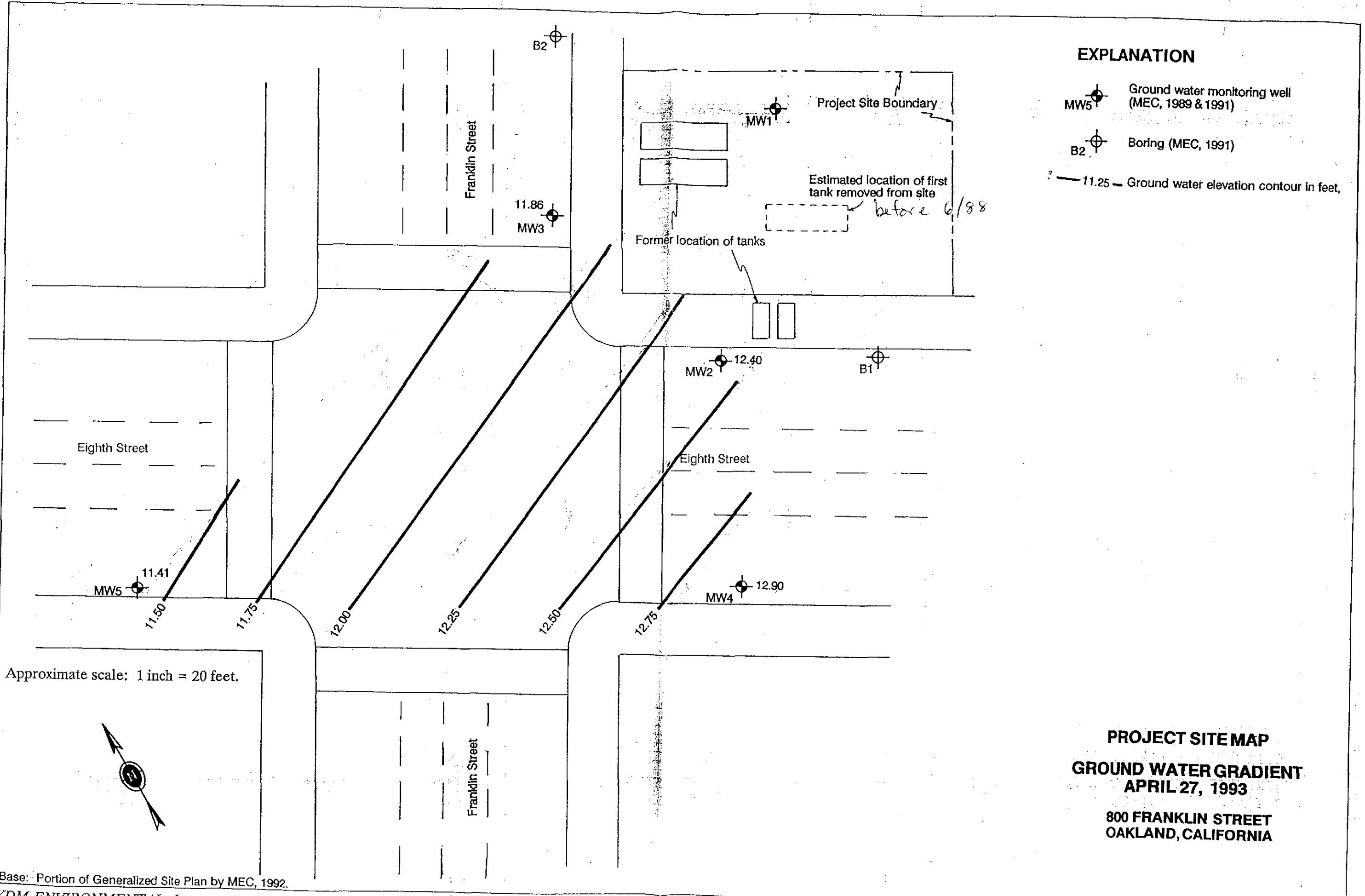


PROJECT SITE VICINITY MAP

800 FRANKLIN STREET

OAKLAND, CALIFORNIA

BASE: Portion of the U.S.G.S., Oakland West 7.5 minute quadrangle, California, photorevised 1968.



EXPLANATION

- Ground water monitoring well (MEC, 1989 & 1991)
- Boring (MEC, 1991)
- 11.25 - Ground water elevation contour in feet.

Approximate scale: 1 inch = 20 feet.

PROJECT SITE MAP
GROUND WATER GRADIENT
APRIL 27, 1993
800 FRANKLIN STREET
OAKLAND, CALIFORNIA

Base: Portion of Generalized Site Plan by MEC, 1992.