Noted E. P. SO. FEB 20 1992

RO554

GW DP = 10.3'

BLYMYER
ENGINEERS, INC.

February 14, 1992
BEI Job No. 91175

Mr. Barney Chan
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621

Subject: Work Plan for an Initial Subsurface Investigation
Lanaidor, Inc.
925 89th Avenue
Oakland, California

Dear Mr. Chan:

As I informed you in our telephone conversation today, the groundwater gradient shown on the Figure in Blymyer Engineers letter of February 6, 1992 for the subject site is incorrect. The correct groundwater gradient is shown on the attached Figure 1.

The groundwater gradient was determined by measuring the depth to groundwater in the three monitoring wells located at 910 89th Avenue, which is across the street form the subject site. The current groundwater gradient is 0.03 in a N 23° W direction. Those measurements, along with the top-of-casing (TOC) elevations surveyed by Terratech, and the computed groundwater elevations are presented in Table I. This gradient is almost 180° different than the gradient measured by Terratech at this site in August 1989.

Table I. Groundwater Data
January 28, 1992, 910 89th Avenue, Oakland, California

Well I.D. #	TOC Elevation (assumed datum) (feet)	Depth to Groundwater (feet)	Computed Groundwater Elevation (feet)
MW-2	100.72	11.20	89.52
MW-3	100.00 (assumed)	11.00	89.00
MW-4	100.69	10.34	90.35

(510) 521-3773 • 1829 Clement Avenue, Alameda, California 94501-1395 • FAX (510) 865-2594

Please note that Terratech's measurements were made in August and the current gradient was computed with measurements taken in January. The topographic map of the vicinity shows a buried stream channel just west of the site. Both of these factors may affect the local groundwater gradient.

Blymyer Engineers has arranged to measure the depths to groundwater in the three wells at 910 89th Avenue again to confirm the current gradient. Another measurement will be taken in March, prior to the initiation of field work at the site. During well installation Blymyer Engineers will survey the top-of-casing elevations of the wells at 910 89th Avenue to further clarify the local groundwater gradient calculations.

The ultimate goal of determining the local groundwater gradient is to locate the well at Lanaidor downgradient of the former tank emplacement to provide information that will lead to closure of this site. As you pointed out, if there is a question as to the downgradient direction at the site, or if the gradient varies seasonally, three on-site wells may be necessary to assure that sufficient downgradient groundwater information is collected to allow a decision on closure of the site to be made.

If you have any questions about the information presented, or any aspect of this project, please do not hesitate to call me at (510) 521 - 3773.

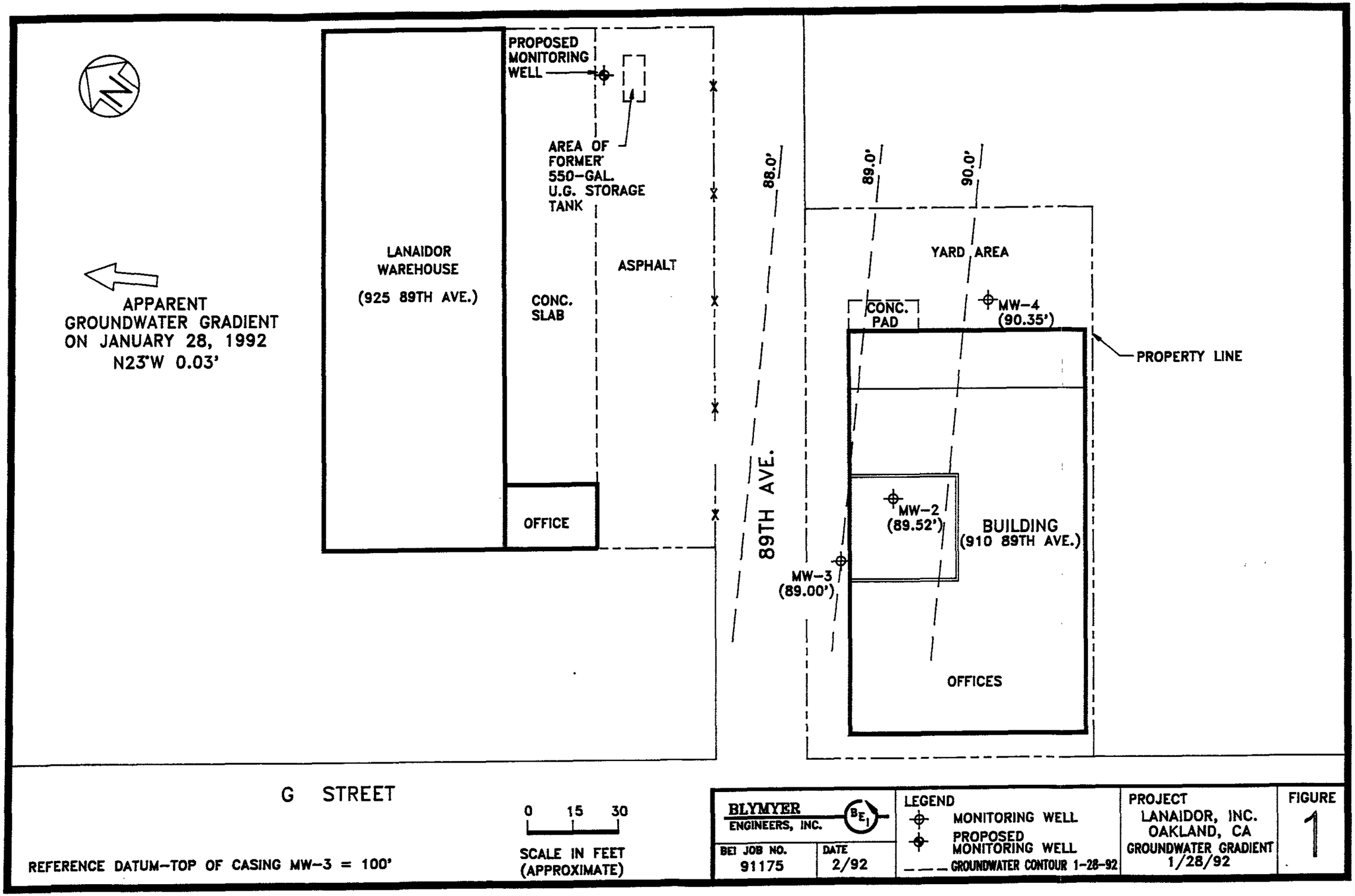
Cordially,

Blymyer Engineers, Inc.

Craig Drizin
Environmental Engineer

cc: Lester Feldman, San Francisco Bay Regional Water Quality Control Board
William Raymond, Lanaidor, Inc.

\cdrizin\91175\BC4


PROPOSED MONITORING WELL
AREA OF FORMER 550-GAL. U.G. STORAGE TANK
LANAIDOR WAREHOUSE
(925 89TH AVE.)
ASPHALT
CONC. SLAB
OFFICE
88.0'
89.0'
90.0'
YARD AREA
CONC. PAD
MW-4
(90.35')
PROPERTY LINE
MW-2
(89.52')
BUILDING
(910 89TH AVE.)
MW-3
(89.00')
89TH AVE.
OFFICES
APPARENT
GROUNDWATER GRADIENT
ON JANUARY 28, 1992
N23°W 0.03'
G STREET
REFERENCE DATUM-TOP OF CASING MW-3 = 100'
0 15 30
SCALE IN FEET
(APPROXIMATE)
BLYMYER ENGINEERS, INC.
BEI JOB NO. 91175
DATE 2/92
LEGEND
MONITORING WELL
PROPOSED MONITORING WELL
GROUNDWATER CONTOUR 1-28-92
PROJECT
LANAIDOR, INC.
OAKLAND, CA
GROUNDWATER GRADIENT
1/28/92
FIGURE
1

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

Noted E. P. SO. FEB 20 1992

February 11, 1992

Mr. Bill Raymond
925- 89th Ave.
Oakland CA 94621

Re: Comment on Work Plan for an Initial Subsurface Investigation at Lanaidor, Inc., 925- 89th Ave., Oakland 94621

Dear Mr. Raymond:

Our division has reviewed the work plan for initial subsurface investigation at the above referenced site. As you are aware, this investigation was requested after soil samples from the gasoline tank removal indicated a release of gasoline of 220 ppm (parts per million). To a large extent overexcavation has removed most of the petroleum hydrocarbon conatamination with the exception of the west wall of the pit which had residual benzene and xylenes at 0.018ppm and 0.011ppm respectively.

The work plan proposes the installation of one monitoring well in the downgradient location within 10 feet to the former tank pit. Monitoring well data from the property across the street, 910 89th Ave., was used to establish the expected gradient. Please be advised that this proposal is acceptable under the following conditions:

1. The monitoring well boring logs of 910 89th Ave. are made available to our agency. The subsurface soils, groundwater depth, slit width and perforation depth interval must be similar to the well proposed for you to use the ground water elevation data.

2. You must continue to take ground water elevation measurements on the offsite wells as well as on the proposed well until which time this agency agrees that gradient data is reliable and consistent.

3. You should monitor the well for total petroleum hydrocarbons as gasoline & BTEX (benzene,toluene,ethylbenzene and xylenes). The proposal to analyze the soil samples by Methods 413.1 and 418.1 is acceptable and may influence your future ground water sampling requirements.
You may contact me at (510) 271-4320 should you have any questions.

Sincerely,

Barney M. Chan, Hazardous Materials Specialist

cc: G. Jensen, Alameda County District Attorney Office
C. Drizin, Blymyer Engineers, Inc
E. So, RWQCB 925-89thWP

BLYMYER ENGINEERS, INC.

February 6, 1992
BEI Job No. 91175

Mr. Barney Chan
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621

Subject: Work Plan for an Initial Subsurface Investigation
Lanaidor, Inc.
925 89th Avenue
Oakland, California

Dear Mr. Chan:

On December 23, 1991, we discussed the information you considered necessary to establish the groundwater gradient at the subject site. On that occasion you indicated that the single measurement of the gradient at the facility across 89th Avenue (910 89th Avenue), conducted by Terratech in August 1989, was not sufficient to establish the local groundwater gradient. Details of this measurement were presented in Blymyer Engineers, Inc. Work Plan for an Initial Subsurface Investigation - Lanaidor, Inc., dated December 16, 1991.

Determining the local groundwater gradient is necessary before you will approve the installation of a single bore/groundwater monitoring well to define the extent of subsurface petroleum hydrocarbon contamination and determine if groundwater at the subject site is impacted by petroleum hydrocarbons.

In that conversation you also indicated that you will approve the installation of a single bore/groundwater monitoring well at the subject site if the local groundwater gradient can be confirmed by additional measurements. The alternatives for obtaining the additional measurements are:

- additional documented measurements of groundwater depth in the three wells at 910 89th Avenue either in existing reports or by a current round of measurements by Blymyer Engineers, or
- installing piezometers at the Lanaidor site to determine the groundwater gradient.

(510) 521-3773 • 1829 Clement Avenue, Alameda, California 94501-1395 • FAX (510) 865-2594

On January 28, 1992, the owners of 910 89th Avenue allowed a representative of Blymyer Engineers to measure the depth to groundwater in the three monitoring wells at their facility. Those measurements, along with the top-of-casing (TOC) elevations surveyed by Terratech, and the computed groundwater elevations are presented in Table I.

Table I. Groundwater Data
January 28, 1992, 910 89th Avenue, Oakland, California

Well I.D. #	TOC Elevation (assumed datum) (feet)	Depth to Groundwater (feet)	Computed Groundwater Elevation (feet)
MW-2	100.72	11.20	89.52
MW-3	100.00 (assumed)	11.00	89.00
MW-4	100.69	10.34	90.35

Using this data, groundwater contours for the area have been plotted on the attached Figure. If you compare this Figure with Figure 2 of the previously submitted Work Plan you will see that the groundwater flow direction is almost identical to that measured by Terratech in August 1989. The groundwater gradient computed from this data is 0.05 feet/foot in the direction shown on the attached Figure (approximately due south).

Blymyer Engineers believes that the information presented confirms the local groundwater gradient at the Lanaidor Inc. site. Blymyer Engineers request that you approve the proposed Work Plan for the Lanaidor site, which specifies the installation of a single downgradient soil bore/monitoring well to define the extent of subsurface petroleum hydrocarbon contamination and determine if groundwater at the subject site is impacted by petroleum hydrocarbons.

If you have any questions about the information presented, or any aspect of this project please do not hesitate to call me at (510) 521 - 3773.

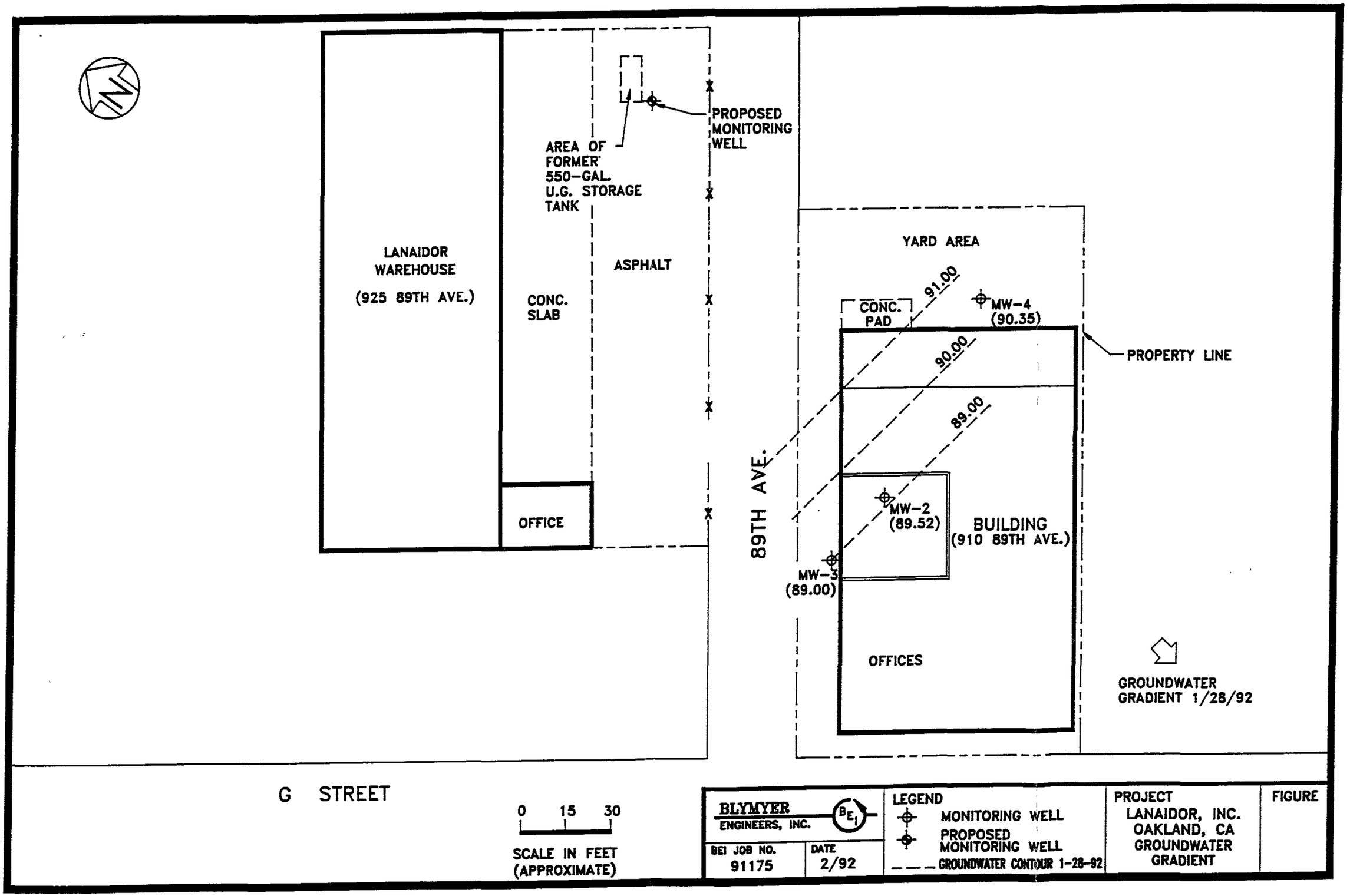
Cordially,

Blymyer Engineers, Inc.

Craig Drizin
Environmental Engineer

cc: Lester Feldman, San Francisco Bay Regional Water Quality Control Board
William Raymond, Lanaidor, Inc.

\cdrizin\91175\BC3


LANAIDOR
WAREHOUSE
(925 89TH AVE.)
CONC.
SLAB
ASPHALT
AREA OF
FORMER
550-GAL.
U.G. STORAGE
TANK
PROPOSED
MONITORING
WELL
OFFICE
YARD AREA
CONC.
PAD
91.00
MW-4
(90.35)
PROPERTY LINE
90.00
89.00
89TH AVE.
MW-2
(89.52)
BUILDING
(910 89TH AVE.)
MW-3
(89.00)
OFFICES
GROUNDWATER
GRADIENT 1/28/92
G STREET
0 15 30
SCALE IN FEET
(APPROXIMATE)
BLYMYER
ENGINEERS, INC.
BEI JOB NO.
91175
DATE
2/92
LEGEND
MONITORING WELL
PROPOSED
MONITORING WELL
GROUNDWATER CONTOUR 1-28-92
PROJECT
LANAIDOR, INC.
OAKLAND, CA
GROUNDWATER
GRADIENT
FIGURE

Noted E. P. SO. DEC 27 1991

BLYMYER ENGINEERS, INC.

December 23, 1991
BEI Job No. 91175

Mr. Barney Chan
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621

Subject: Work Plan for a Subsurface Investigation
Lanaidor, Inc.
925 89th Avenue
Oakland, California

Dear Mr. Chan:

Confirming our conversation regarding the establishment of the groundwater gradient at the subject site, you have indicated that the single measurement of the gradient at 910 89th Avenue is not sufficient to establish the local groundwater gradient. Hence, you will not approve the installation of a single bore/groundwater monitoring well at the subject site.

As we discussed, you will approve the installation of a single bore/groundwater monitoring well at the subject site if the local groundwater gradient can be confirmed by additional measurements. The alternatives for obtaining the additional measurements are:

- additional documented measurements of groundwater depth in the three wells at 910 89th Avenue either in existing reports or by a current round of measurements by Blymyer Engineers, or

- installing piezometers at the Lanaidor site to determine the groundwater gradient.

My notes indicate that the next closest site with information on groundwater depth is located at 8717 G Street. Only one groundwater well has been installed at this site.

(510) 521-3773 • 1829 Clement Avenue, Alameda, California 94501-1395 • FAX (510) 865-2594

If you have any questions about this project please do not hesitate to call me at (510) 521 - 3773.

Cordially,

Blymyer Engineers, Inc.

Craig Drizin
Environmental Engineer

cc: Lester Feldman, Regional Water Quality Control Board
William Raymond, Lanaidor, Inc.

\cdrizin\91175\BC2

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

Noted E. P. SO. ES AUG 6 1991

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

01

July 31, 1991

Mr. Bill Raymond
925 - 89th Avenue
Oakland, CA 94621

MXSL=330 ppm

Subject: Initial Soil and Groundwater Investigation at Lanaidor, 925 - 89th Avenue, Oakland, CA

Dear Mr. Raymond:

We have received and reviewed the Clayton Environmental reports of September 19, 1990, and January 30, 1991. These reports document the soil sampling activities that have occurred at the above referenced site. A 550 gallon underground fuel tank was removed from this facility on August 14, 1990. Soil samples taken from the tank pit at the time of the removal had values of 220 ppm total petroleum hydrocarbons as gasoline (TPH-g) and 48 ppm TPH-g. Further excavation was done on November 16, 1990. Four confirmation samples from the sidewalls at a depth of 10 to ~~10.5 feet~~ had total recoverable hydrocarbon values ranging from 20 to 330 ppm.

The next step in this process is to submit a work plan that describes an investigation to determine the lateral and vertical extent of any soil contamination and determine if groundwater has been impacted. This investigative work is to be done by a professional company knowledgeable in conducting underground tank investigations in California. The firm should be familiar with the following documents:

- Leaking Underground Fuel Tank Manual (more commonly known as the LUFT Manual), published by the State Water Resources Control Board; and
- Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites prepared by the North Coast, San Francisco Bay, and Central Valley Regional Water Quality Control Boards, dated August 10, 1990. This supplements the LUFT Manual.

All work and reports which require geologic or engineering expertise must be performed under the direction of an appropriately registered or certified professional. Examples of activities that require this expertise include borehole and monitoring well installation and logging, and impact assessments. The initial work plan is to include a site health and safety plan.

This workplan is to be submitted to our office within 45 days of the date of this letter. The workplan should address the items listed on the following pages.

Site History and Description

This shall include historic site use and ownership information, a description of past activities at the site, and history of the types and locations of any hazardous materials used on site. The date of the tank installation should be provided, and a description of the tank removal activities are to be included in the report. Include a site map and a description of the hydrogeologic setting of the site.

Determination of the vertical and lateral extent of soil contamination.

This shall describe the method(s) that will be used to investigate the extent of contamination.

Sampling is to follow the appropriate guidelines. Borings and wells are to be permitted through Alameda County Flood Control and Water Conservation District, Zone 7. Sample analyses are to be performed by a California certified laboratory. The samples are to be analyzed for the appropriate constituents as outlined in the Tri-Regional Recommendations.

Determination of Ground Water Quality.

Ground water quality must be characterized. To determine groundwater gradient, a minimum of three monitoring wells must be installed. One monitoring well must be installed within 10 feet of the tank in the down-gradient direction. If the verified down-gradient location has been established, then one monitoring well is to be installed; however, complete gradient data must be submitted for review and approval.

Monitoring wells shall be designed and constructed to be consistent with the RWQCB guidelines and to permit entrance of any free product into the wells. The well screen must be situated to intercept any floating product from both the highest and lowest ground water levels. All wells shall be surveyed to mean sea level to an established benchmark to 0.01 foot.

Water level and free product thickness measurements shall be made in all wells before sampling is begun. The wells must be sampled for dissolved nd floating constituents. Sample monitoring wells monthly for the first three consecutive months. Free product thicknesses and water levels shall be measured in all wells for each sampling event before any purging or sampling activities are begun.

A ground water gradient map shall be developed for every water level data set. If the gradient fluctuates, water level measurements must continue to be made monthly until a gradient pattern is established. Fluctuations in ground water levels due to tidal action must also be documented. After three

consecutive months of sampling, we may consider reducing the sampling frequency to every quarter for a minimum of one year, even if no contamination is identified. Water level contour maps showing ground water gradient direction, and free and dissolved product plume definition maps of each contaminant constituent should be prepared routinely and submitted with other sampling results in a technical report.

Reporting

A technical report must be submitted within 45 days of the completion of the investigation that presents and interprets the information generated during the initial subsurface site investigation. At a minimum, the report must include the following items:

* site history information;
* boring and well construction logs;
* records of field observations and data;
* chain-of-custody forms;
* water level data;
* water level contour map showing ground water gradient direction;
* contaminant plume maps;
* tabulations of soil and ground water contaminant concentrations;
* status of soil contamination characterization;
* description of any remedial work performed;
* laboratory-originated analytical results for all soil and ground water samples collected;
* copies of TSDF to Generator manifests for any hazardous wastes hauled off site; and
* any recommendations for additional investigative or remedial work.

The technical report should be submitted with a cover letter from Lanaidor and received in this office by the established due date. The letter must be signed by a principal executive officer or by an authorized representative of that person.

You should be aware that this Division is working in conjunction with the RWQCB and that this is a formal request for technical reports pursuant to California Water Code Section 13267 (b). All proposals, reports and analytical results pertaining to this investigation and remediation must be sent to our office and to:

Lester Feldman
RWQCB
2101 Webster Street, 5th Floor
Oakland, California 94612
(415) 464-1255

Any extensions of agreed-upon time deadlines must be confirmed in writing by either this Division or the RWQCB.

You also need to get information from the contractor who pulled the tank. This information should include a copy of the destruction certificate for the underground storage tank, manifests for any rinsate or other liquid in a tank, and a description of where the excavated soils were disposed.

To cover our costs for remediation oversight, please submit a check, payable to Alameda County, for $670.00. Please reference Account Number 1047A.

Should you have any questions concerning this letter, please contact me at (415) 271-4320.

Sincerely,

Cynthia Chapman

Cynthia Chapman
Hazardous Materials Specialist

c: Lester Feldman, RWQCB

lanaidor

cb

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Program
80 Swan Way, Rm. 200
Oakland, CA 94621
(415)

New

November 2, 1990

Mr. Richard Silva
Clayton Environmental Consultants
1252 Quarry Lane
Pleasanton, CA 94566

Dear Mr. Silva:

Lanaidor

The Alameda County Hazardous Materials Division has reviewed the proposed workplan for Lanaidor, 925 - 89th Avenue, Oakland. This workplan describes the analyses from removal of a 550-gallon underground storage tank. The two samples taken from the excavated pit area indicated TPH-gasoline levels were at 220 ppm and 48 ppm. Clayton proposes that soils around the tank area be excavated and that confirmation samples be collected. Excavated soils will then be aerated on-site.

Task 4 of the workplan describes aeration and monitoring activities that will occur at the site. The report states that one discrete confirmation soil sample will be taken per 50 cubic yards of aerated soil, and once the level of TPH in the soil reaches 100 ppm, the soil will be disposed of at a Class II facility or backfilled into the excavation.

Please be advised that TPH contaminated soils excavated during a tank removal are NOT to be placed back into the excavation unless the following criteria are met:

1. Discrete sampling is taken per 20 cubic yards of soil.

2. TPH values are less than 10 ppm for each analyzed sample.

The activities performed at this site should be modified to accommodate this requirement.

With the 220 ppm TPH value of sample 1A, it appears that an investigation needs to be performed to determine if groundwater has

been impacted. This issue should be addressed in the Final Report described in Task 5 of the workplan. Please include a site map in the final report, as I have no information at what depth the original samples were taken, or the size of the stockpile soils.

If you have any questions, please call me at 415/271-4320.

Sincerely,

Cynthia Chapman

Cynthia Chapman
Hazardous Materials Specialist

c: Steven LuQuire, RWQCB
Bill Raymond, Lanaidor
Tom Ramsey, Fuel Oil Polishing