P & D ENVIRONMENTAL

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accepted 3-16-95

ENVIRONMENTAL PROTECTION

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March 13, 1995
Work Plan 0063.W1

Mr. Scott Seery
Alameda County Department of Environmental Health
1131 Harbor Parkway
Alameda, CA 94502

SUBJECT: GROUNDWATER INVESTIGATION WORK PLAN
Former East Bay Scaffolding Facility
2552 San Carlos Avenue
Castro Valley, California

Dear Mr. Seery:

P&D Environmental (P&D) has been retained by Mr. Mel Kaufman to prepare a work plan for groundwater investigation at the subject site, in accordance with your request and P&D's proposals 081294.P1 dated August 12, 1994 and 021495.P1 dated February 14, 1995. To achieve this objective, P&D proposes to install one groundwater monitoring well; develop the well; and monitor and sample the well on a quarterly basis for one year. A Site Location Map is attached with this work plan as Figure 1, and a Site Plan Detail showing the proposed groundwater monitoring well location is attached as Figure 4.

All work will be performed under the direct supervision of an appropriately registered professional. This work plan is prepared in accordance with guidelines set forth in the document "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" dated August 10, 1990 and "Appendix A - Workplan for Initial Subsurface Investigation" dated August 20, 1991.

BACKGROUND

The site is presently not active. A Site Location Map showing the location of the site in Castro Valley is attached as Figure 1. A Site Plan is attached as Figure 2. A Site Plan Detail showing soil sample collection locations associated with the underground storage tank removal activities is attached as Figure 3. A Site Plan Detail showing soil gas vapor survey probe locations is attached as Figure 4.

It is P&D's understanding that on October 30, 1990 SEMCO removed a 550 gallon capacity gasoline tank. Three soil samples, designated as Soil-3'-W, Soil-4'-N, and Soil-Bottom were collected from the fuel tank pit following removal of the tank. The sample results are summarized in Table 1.

Review of a field report documenting tank removal prepared by Mr. Scott Seery of the Alameda County Department of Environmental Health (ACDEH) dated 8/30/90 shows that, "Groundwater was welling into the pit. Upon removal of the pea gravel backfill, substantial product-impacted H2O was evident, ie. floating brown product. A distinct high water mark was noted about 3' B.G. around the inside perimeter of the hole." Following removal of the tank, the tank pit was over-excavated. Mr. Seery's field report indicates that, "No H2O collected - hole dry @ 8.5'."

On November 20, 1990 Certified Environmental Consulting, Inc. (CEC) conducted a soil vapor survey at the site to investigate the lateral extent of petroleum hydrocarbons detected in the fuel tank pit by SEMCO. A total of seven probes, designated as 1 through 7, were reported to have been driven to a depth of approximately three feet. Soil conditions at the site as, "...a very heavy silty clay which is saturated with water at a shallow depth (4-6 feet)." A vacuum was applied to each probe and vapors extracted from the probes were

reported to have been analyzed with an organic vapor meter (OVM). In addition, one groundwater sample, designated as W-1, was reported to have been collected by CEC on November 20, 1990 from probe location 4. The soil gas survey probe locations are shown in Figure 4. The groundwater sample results are summarized in Table 2 and the soil gas sample results are summarized in Table 3.

A Work Plan dated March, 1992 was prepared by CEC for the excavation of petroleum hydrocarbon-impacted soil and for the installation of one groundwater monitoring well. The CEC Work Plan was subsequently approved by Mr. Scott Seery of the ACDEH in a letter dated March 20, 1992 addressed to Mr. Mel Kaufman at True Fit Manufacturing.

On February 6, 1995 Paul King of P&D met with Scott Seery of the ACDEH to review available information for depth to groundwater and groundwater flow direction at sites located in the vicinity of the subject site. Review of the files revealed three sites with groundwater monitoring wells at the following locations.

Site Location Number	Site Name	Site Address
1	Thrifty Oil Co.	2504 Castro Valley Blvd.
2	Castro Valley Autohaus	20697 Park Way
3	Former Shell Service Station	2724 Castro Valley Blvd.

Based upon review of reports for the different sites, the distance and direction of each site from the subject site, the depth to groundwater and the groundwater flow direction at the different sites are presented below.

Site Location Number	Distance From Subject Site (Ft.)		Depth to Groundwater (Ft.)	Groundwater Flow Direction
1	500	Southwest	Unknown	Easterly
2	400	East	7.0	Unknown (1 well at site)
3	600	Southeast	6.0 to 10.0	South to Southwesterly

Lake Chabot Creek is a north-south trending creek located approximately 500 feet to the east of the subject site. The Thrifty Oil Company and Castro Valley Autohaus sites are located to the west of the creek, and the former Shell station is located to the east of the creek. The easterly groundwater flow direction at the Thrifty Oil Company site and the south to southwesterly groundwater flow direction at the former Shell Service Station indicate that groundwater flow in the vicinity of the creek is towards the creek. Based upon the information obtained from the files for the sites in the vicinity of the subject site, the anticipated depth to water at the subject site is 6 to 10 feet, and the anticipated groundwater flow direction is to the southeast, towards Lake Chabot Creek.

Based upon recent conversations with Mr. Seery at the ACDEH, one groundwater monitoring well will be installed to evaluate groundwater quality at the site in the downgradient direction from the former tank pit and dispenser locations.

SCOPE OF WORK

To perform the groundwater quality investigation, P&D will perform the following tasks.

- Regulatory agency coordination.
- Installation of one groundwater monitoring well.
- Development of the monitoring well.
- Surveying of the well head.
- Purging and sampling of the monitoring well.
- Soil and groundwater sample analysis for Total Petroleum Hydrocarbons as Gasoline (TPH-G) and benzene, toluene, ethylbenzene and xylenes (BTEX).
- Report preparation documenting installation, development and sampling of the monitoring well.
- Purging and sampling of the monitoring well and groundwater sample analysis for three quarterly sampling events.
- Report preparation each quarter documenting the quarterly well monitoring and sampling results.

Each of these is discussed below in detail.

Regulatory Agency Coordination

Following approval of this work plan, a permit application will be submitted to the Alameda County Water Agency, Zone 7 office for the installation of the groundwater monitoring well.

After the permit has been approved, Underground Service Alert will be notified for underground utility location and a drilling date will be scheduled with an appropriately licensed drilling contractor. The drilling date will be set for the earliest possible date available, and the ACDEH will be notified of the drilling date by telephone as soon as it has been set. Prior to the beginning of field work, a health and safety plan will be prepared.

Installation of One Groundwater Monitoring Well

One groundwater monitoring well, designated as MW1, will be installed at the proposed location shown on Figure 4. Based upon the groundwater flow directions obtained for nearby sites (discussed above), the proposed location of MW1 is in the downgradient direction relative to the tank pit and fuel pump.

A ten-inch diameter borehole will be drilled using truck-mounted hollow stem augers. The hollow stem augers will be steam cleaned prior to use in the borehole. Soil samples will be collected from the borehole into brass tubes at a maximum of five foot intervals, at changes in lithology and at any areas of obvious contamination using a Modified California split-spoon sampler lined with brass tubes. Blow counts will be recorded every six inches. The soil samples will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System.

SCHEDULE

The following schedule addresses elements identified in this work plan.

Activity	Calendar Days
Work plan submittal	Day 0
Work plan approval	Day 7
Permit application submittal	Day 10
Permit application approval	Day 17
Set drill date with driller	Day 20
Well installation	Day 34
Well development	Day 36
Well sample collection and surveying	Day 38
Receipt of soil and groundwater sample results	Day 48
Submittal of draft report to Mel Kaufman for review	Day 62
Submittal of final well installation report to ACDEH	Day 76

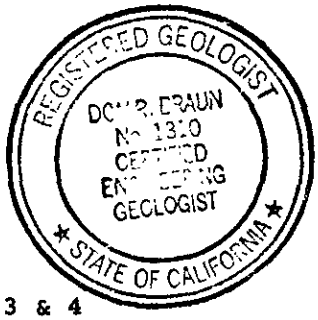
Quarterly monitoring, purging and sampling will be performed every 90 days after the initial well sampling for the next three quarters. Submittal of quarterly monitoring and sampling reports will be performed every 30 days after collection of the groundwater samples for the next three quarters.

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental

Paul H. King
Hydrogeologist



Don R. Braun
Certified Engineering Geologist
Registration No. : 1310
Expires: 6/30/94

Attachments: Tables 1,2,3 & 4
Site Vicinity Map - Figure 1
Site Plan - Figure 2
Site Plan Detail - Figure 3
Site Plan Detail - Figure 4

cc: Mr. Mel Kaufman, True Fit Manufacturing

PHK
0063.W1

TABLE 1
SUMMARY OF SOIL SAMPLE LABORATORY ANALYTICAL RESULTS

(Samples Collected
On October 30, 1990)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
Soil-3'-W	2000	5.4	3.7	2.0	81
Soil-4'-N	140	13	0.090	2.3	3.6
Soil-Bottom	1	0.009	0.015	0.035	0.041

NOTES:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
Results in parts per million (ppm), unless otherwise indicated.

TABLE 2
SUMMARY OF GROUNDWATER SAMPLE LABORATORY ANALYTICAL RESULTS

(Sample Collected
On November 30, 1990)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes
W-1	ND	ND	ND	ND	ND

NOTES:

TPH-G = Total Petroleum Hydrocarbons as Gasoline.
ND = Not Detected.

TABLE 3
SUMMARY OF SOIL VAPOR SURVEY RESULTS

Probe No.	Sample Depth (feet)	OVM Concentration (ppm)
1	3.0	319
2	3.0	13
3	3.0	3
4*	3.0	2
5	3.0	2
6	2.5	2.2
7	3.0	0

NOTES:

* Very wet zone reported to have been encountered at a depth of 4-6 feet.

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Base Map From:
U.S. Geological Survey
Hayward, Calif.
7.5 Minute Quadrangle
Photorevised 1980

Figure 1
SITE LOCATION MAP
Former East Bay
Scaffolding Facility
2552 San Carlos Avenue
Castro Valley, California

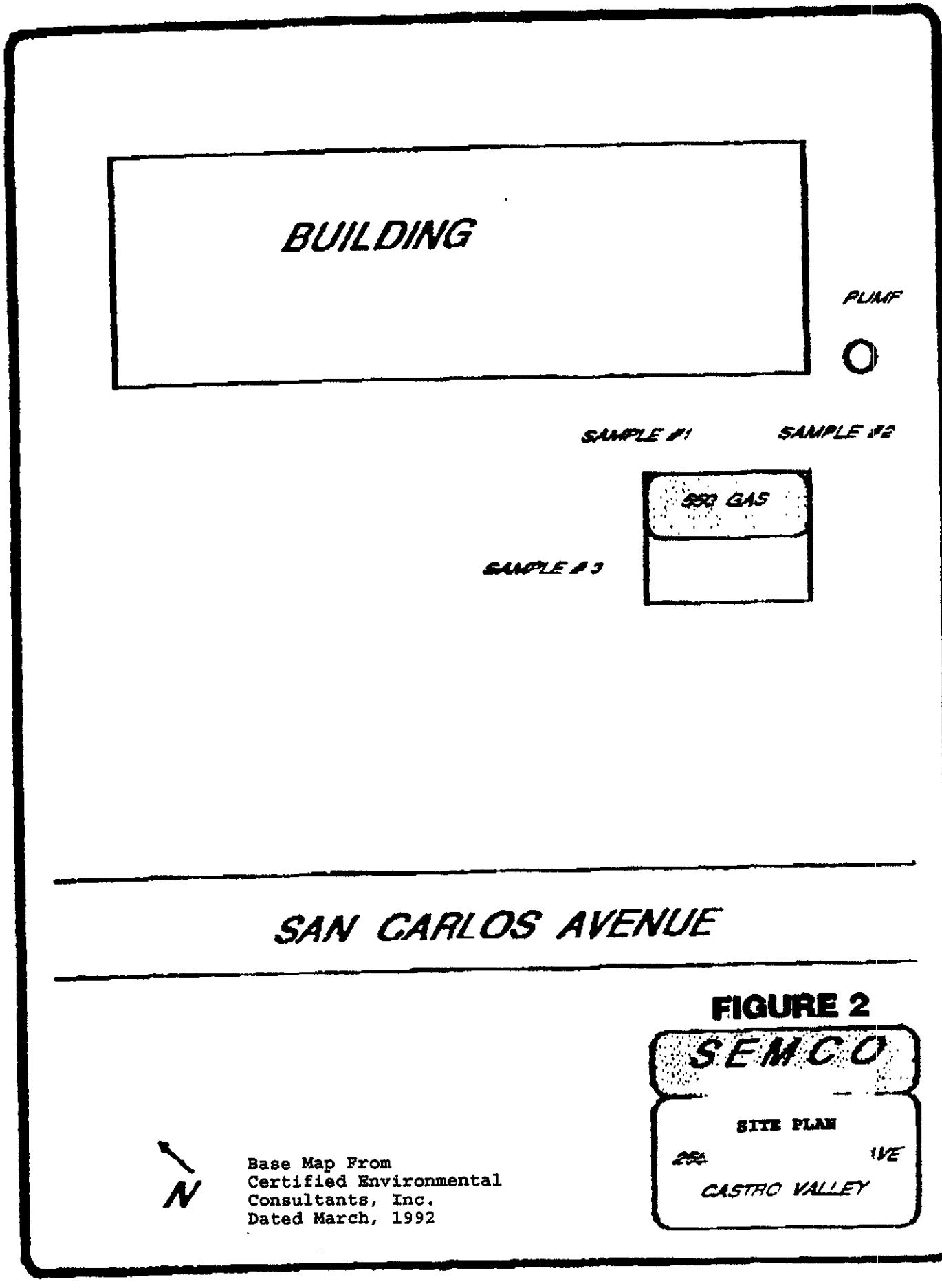

BUILDING
PUMP
SAMPLE #1
SAMPLE #2
550 GAS
SAMPLE #3
SAN CARLOS AVENUE
N
Base Map From
Certified Environmental
Consultants, Inc.
Dated March, 1992
SEMCO
SITE PLAN
CASTRO VALLEY

FIGURE 2

TANK AREA

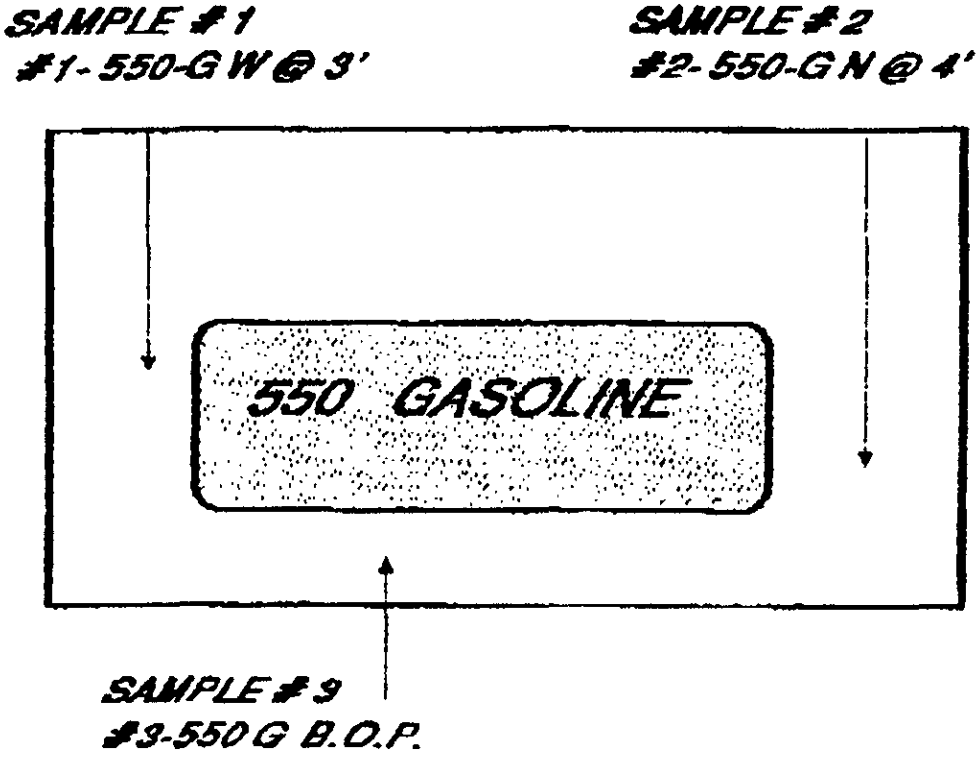


FIGURE 3

S E M C O

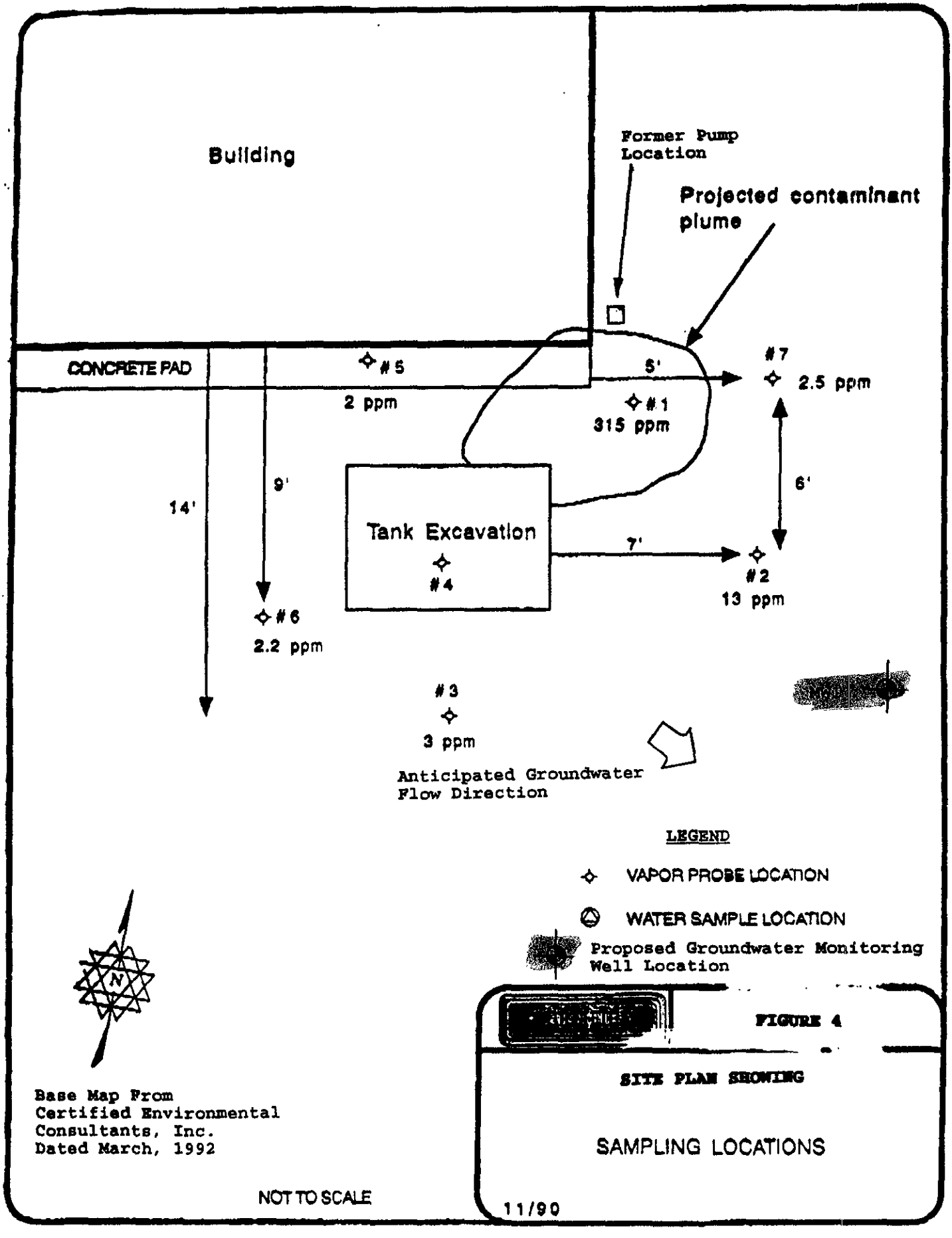
SITE PLAN DETAIL

2552 S[illegible] 'SAVE

CASTRO VALLEY

N

Base Map From
Certified Environmental
Consultants, Inc.
Dated March, 1992


Building
Former Pump Location
Projected contaminant plume
CONCRETE PAD
#5
2 ppm
5'
#7
2.5 ppm
#1
315 ppm
14'
9'
6'
Tank Excavation
#4
7'
#2
13 ppm
#6
2.2 ppm
#3
3 ppm
Anticipated Groundwater Flow Direction
LEGEND
VAPOR PROBE LOCATION
WATER SAMPLE LOCATION
Proposed Groundwater Monitoring Well Location
N
Base Map From
Certified Environmental
Consultants, Inc.
Dated March, 1992
NOT TO SCALE
FIGURE 4
SITE PLAN SHOWING
SAMPLING LOCATIONS
11/90