

TE

TOM EDWARDS & ASSOCIATES
ENVIRONMENTAL ENGINEERS

May 9, 1990

Ms Katherine Chesick
Senior Hazardous Materials Specialist
Alameda County Health Department
80 Swan Way, Room 200
Oakland, California 94621

Dear Ms. Chesick,

As per your request, enclosed please find an amendment to the Preliminary Site Investigation Workplan for Cavanaugh Motors, 1700 Park Street, Alameda, California. I will continue to keep you informed on the progress of work at this site. If you should have any questions, please do not hesitate to call.

Sincerely,



Chris Nielson-Cerquone
Associate

cc:

Mr. Dave Cavanaugh, Cavanaugh Motors
Mr. Lester Feldman, Regional Water Quality Control Board
Mr. Steve Mckinley, Alameda Fire Department

Enclosures

90 MAY 14 AM 11:55

P.O. Box 418 • Pinole, CA 94564 • (415) 724-7751

AMENDMENT TO THE PRELIMINARY SITE
INVESTIGATION WORKPLAN

Cavanaugh Motors
1700 Park Street
Alameda, California 94501

TEA Project No. 109001
May 9, 1990



TOM EDWARDS & ASSOCIATES

ENVIRONMENTAL ENGINEERS

1.0 INTRODUCTION

In November of 1989, Scott Corporation, under the direction of Mr. Dave Cavanaugh, removed a 550 gallon gasoline tank at Cavanaugh Motors in Alameda, California. Analytical results of soil samples collected beneath the former tank indicated that the soil was contaminated with gasoline constituents. About 15 cubic yards of soil was removed and stockpiled on site. Groundwater was not encountered. Analytical results and a detailed description of events pertaining to the tank removal are presented in the Preliminary Site Investigation Workplan, dated April 13, 1990.

The Preliminary Site Investigation Workplan was prepared by Tom Edwards & Associates (TEA) for the investigation of soil and groundwater gasoline contamination. Groundwater contamination was to be investigated by installing three monitoring wells, one well within ten feet of the tank excavation. Likewise, the vertical and lateral extent of soil contamination was to be investigated by excavating all the remaining contaminated soil below grade.

Ms. Katherine Chesick of the Alameda County Department of Environmental Services, has been notified on the progress of work performed at this site. The following amendments to the original Workplan are presented as requested by Ms. Chesick.

2.0 SOILS INVESTIGATION TO DATE

Tom Edwards & Associates and Gene L. Failing attempted to excavate the remaining contaminated soil below grade on April 26, 1990. Within a few minutes, it became clearly evident that a significant release of gasoline had occurred and that excavation of all the contaminated soil would not be possible. A layer of contaminated soil was found from four feet below grade to the depth of groundwater at seven feet. This layering of contamination found above the groundwater suggests that free product may have been present at some time. Free product floating on the groundwater can create a distinct layer of contaminated soil as it rises and falls with seasonal fluctuations of the water table. The contamination appeared worse along the northeastern and northwestern sidewalls. Free product was not encountered; however a visible sheen was present.

As illustrated in Figure 1, two trenches were dug in an attempt to find the lateral extent of contamination to the southeast and southwest of the tank excavation. Samples were collected at the locations shown in Figure 1. Analytical results are pending.

Trenches to the northeast and northwest were not attempted. The native soil, a fine to medium grained sand of the Merritt Sand Formation, is characteristically unstable and is susceptible to caving. In fear that excavation of soil within seven feet of the repair shop might cause structural damage to the building, excavation of soil to the northeast was not attempted. Soil was not excavated to the northwest because the main thoroughfare in which automobiles are brought into the repair shop had to remain open.

The magnitude of the release also made excavation of all the contaminated soil an impossibility. Soil in and around the repair shop cannot be removed without severely risking the structural integrity of the brick building. About 60 cubic yards of contaminated soil was excavated. However, at a minimum, 800 cubic yards may still remain below ground. An estimate of the extent of soil contamination is shown in Figure 1.

3.0 AMENDMENT TO THE WORKPLAN

Section 3.1, Soils Investigation

Differing from the original Workplan, the lateral extent of soil contamination will be determine by drilling at a minimum four soil borings around the tank excavation. The locations of the exploratory borings are shown in Figure 1. Soil samples will be collected at three and seven feet below grade. The samples will be analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline, Benzene, Toluene, Ethylbenzene, and Total Xylene (BTEX), and Total Lead. The soil borings will be converted to vapor extraction wells by placing a slotted PVC pipe from just above groundwater to ground surface. Vapor extraction may prove to be the best alternative for remediating the vadose zone soils.

Section 3.2, Groundwater Investigation

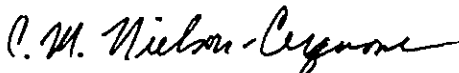
Groundwater gasoline contamination was to be evaluated by installing three monitoring wells. A well was to be installed within ten feet of the tank excavation. A second and third well was to be installed at the northwestern and southwestern boundaries of the property. Because it has become clear that groundwater has been impacted, a fourth well will be installed down gradient of the former tank, as shown in Figure 1. However,

if when drilling the exploratory boring in the building clean soil is encountered, the boring will be converted to a monitoring well.

4.0 REMARKS AND SIGNATURES


This amendment to the Preliminary Site Investigation Workplan was prepared in accordance with current industry standards and practice. All work performed at this site is performed under the direct supervision of a California Registered Geologist.

Prepared by:



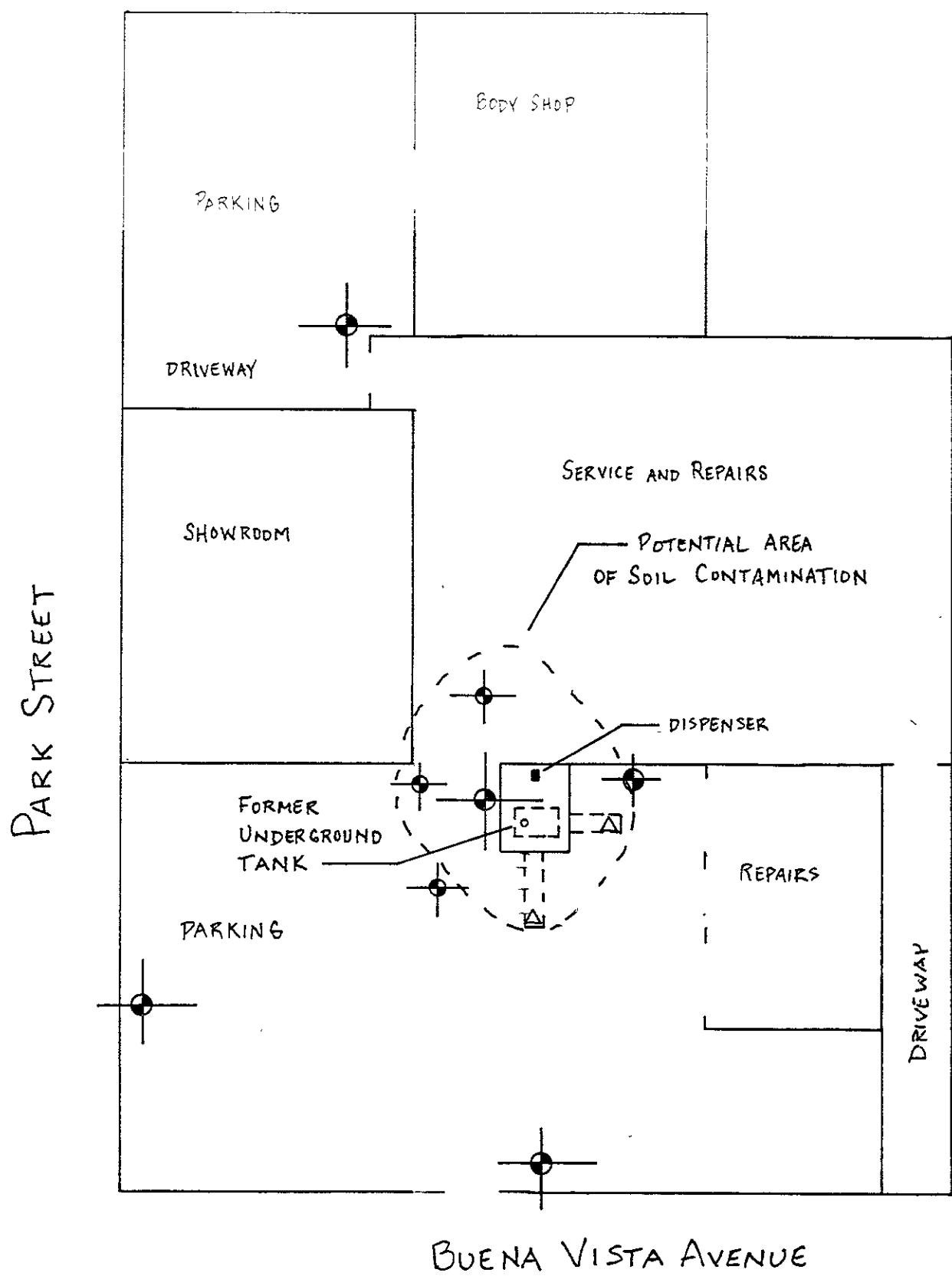
Chris Nielson-Cerquone
Associate

Approved by:



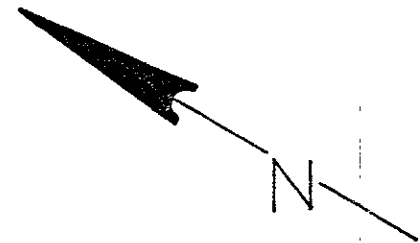
Mark Youngkin
California Registered
Geologist No. 3888

Figures



EXPLANATION

- + PROPOSED MONITORING WELL
- +△ PROPOSED SOIL BORING



△ SOIL SAMPLE COLLECTED 4/26/90

MONITORING WELL AND SOIL BORING LOCATION MAP		
SCALE: 1" = 25'	APPROVED BY:	DRAWN BY CNC
DATE: 5-7-90		REVISED
TOM EDWARDS & ASSOCIATES		
CAVANAGH MOTORS, ALAMEDA, CALIFORNIA		DRAWING NUMBER 01

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.#: 9009006
Matrix : SOIL
Date Sampled : 08/31/90

Project Number : 109001
Date Released : 09/18/90

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# SS1	Sample I.D.# 04B0910A
Benzene	0.005	0.70	ND
Toluene	0.005	16	ND
Ethylbenzene	0.005	6.6	ND
Total Xylenes	0.005	39	ND
TPH as Gasoline	0.5	730	ND
% Surrogate Rec.		119%	89%
Instrument #		HP4	HP4
Date Analyzed		09/11/90	09/10/90
RLMF		100	1

- ND - Not detected at or above the practical quantitation limit for the method.
 TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
 BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.
 RLMF - Reporting Limit Multiplication Factor.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Heath Vogt 9/10/90
Analyst Date

Charles E. ... 9/18/90
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBON AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.#: 9009006
Matrix : SOIL
Date Sampled : 08/31/90
Date Extracted : 09/07/90

Client Project# : 109001
Date released : 09/18/90
Instrument I.D. : HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9009006-01	SS-1	09/14/90	6400	ND
DSBL090790	METHOD BLANK	09/14/90	10	ND

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Garth Wright 9/18/90
Analyst Date

Charles Baumer 9/18/90
Supervisor Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TOM EDWARDS
TMC ENVIRONMENTAL
13908 SAN PABLO AVE
SAN PABLO, CA 94806

Workorder # : 9009006
Date Received : 09/04/90
Project ID : 109001
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9009006- 1	SS-1	SOIL	08/31/90	503D
9009006- 1	SS-1	SOIL	08/31/90	503E

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TOM EDWARDS
TMC ENVIRONMENTAL
13908 SAN PABLO AVE
SAN PABLO, CA 94806

Workorder # : 9009006
Date Received : 09/04/90
Project ID : 109001
Purchase Order: N/A
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.


Department Supervisor

Sept, 18th 1990
Date

Maria E. Durero 9/18/90
Chemist Date

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project # : 109001
 Matrix : SOIL
 Date sampled : 08/31/90
 Date ext. TOG: 09/10/90
 Date anl. TOG: 09/10/90

Anamatrix I.D. : 9009006
 Analyst : *MG*
 Supervisor : *MG*
 Date released : 09/18/90

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9009006-01	SS-1	30	17000

ND - Not detected at or above the practical quantitation limit for the method.

TOG - Total Oil & Grease is determined by Standard Method 503E.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project # : 109001
 Matrix : SOIL
 Date sampled : 08/31/90
 Date ext. TOG: 09/10/90
 Date anl. TOG: 09/10/90

Anametrix I.D. : 9009006
 Analyst : *me*
 Supervisor : *(signature)*
 Date released : 09/18/90

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9009006-01	SS-1	30	20000

ND - Not detected at or above the practical quantitation limit for the method.

TOG - Total Oil & Grease is determined by Standard Method 503D.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TOM EDWARDS
TMC ENVIRONMENTAL
13908 SAN PABLO AVE
SAN PABLO, CA 94806

Workorder # : 9009006
Date Received : 09/04/90
Project ID : 109001
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9009006- 1	SS-1	SOIL	08/31/90	6010

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. TOM EDWARDS
TMC ENVIRONMENTAL
13908 SAN PABLO AVE
SAN PABLO, CA 94806

Workorder # : 9009006
Date Received : 09/04/90
Project ID : 109001
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

QA/QC SUMMARY :

- Spikes for chromium and zinc are outside of control limits due to variable contributions from the sample.

Department Supervisor Date

Manny Lopez 9/17/90

Chemist Date

ANALYSIS DATA SHEET - INDIVIDUAL METALS
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix I.D.: 9009006
 Matrix : SOIL
 Date Sampled : 08/31/90
 Project Number: 109001

Date Prepared : 09/11/90
 Date Analyzed : 09/13/90
 Date Released : 09/17/90
 Instrument I.D.: ICP1

	EPA Method#	Reporting Limit	Sample I.D.# SS-1	Sample I.D.# BLANK
ELEMENTS		(mg/Kg)	-01	MB0911S
Cadmium (Cd)	6010	0.25	0.25	ND
Total Cr	6010	0.5	31.6	ND
Nickel (Ni)	6010	2.0	24.0	ND
Lead (Pb)	6010	2.0	1040	ND
Zinc (Zn)	6010	1.0	111	ND

ND : Not detected at or above the practical quantitation limit for the method.

All Metals by EPA Method 6010/7000, Test Methods for Evaluating Solid Waste, SW-846 3rd Edition November 1986.

Frank Guyer 9/17/90
 Chemist Date

Oleg Mendonck 09-17-90
 Chemist Date