R0824
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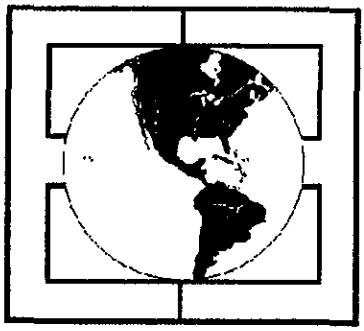
STID 3578

DK

QUARTERLY
GROUNDWATER MONITORING
WITH CHEMISTRY TESTING
1616-1618-1620 DOOLITTLE DRIVE
SAN LEANDRO, CALIFORNIA

Prepared by:



Prepared for:

DALZIEL TRUSTS

February 4, 1997

Earth Engineers

P.O. Box 1051, Alturas, CA 96101

tel (916) 233-2068
fax (916) 233-2068

February 4, 1997

Mr. Alec H. Dalziel
Dalziel Trusts
Law Offices of Cullen and Wood
490 2nd Street, Suite 300
San Francisco, CA 94107

Subject: Quarterly Groundwater Monitoring with Chemistry Testing: 1616-1618-1620 Doolittle Drive, San Leandro, California (Earth Engineers file reference 1087.002)

Dear Mr. Dalziel:

Enclosed is the Quarterly Groundwater Monitoring with Chemistry Testing report prepared by Earth Engineers for the above-referenced property. This report was prepared in conformance with accepted practices for such studies and Earth Engineers in-house quality assurance program. The undersigned pledges that the facts presented herein are based upon available information discovered by Earth Engineers and represent existing conditions at the subject site up to the present time.

The findings of this report indicate that groundwater on-site was slightly impacted with Total Petroleum Hydrocarbons as gasoline (TPHg) in the location of monitoring well EE-1. The concentration of TPHg in a groundwater sample taken from EE-1 was .1 part per billion (ppb). Benzene, Ethylbenzene, and Xylenes were also present in the sample at concentrations of 93 ppb, 18 ppb, and 5.1 ppb, respectively. Laboratory analyses of groundwater revealed monitoring well EE-1 did contain 2.6 ppm TPHd. Groundwater from EE-2, EE-3, and EE-4 did not contain detectable quantities of TPHg with BTEX, or TPHd in laboratory analyses.

If you have any questions concerning this project, please call me at any time.

Sincerely,

R. Mark Armstrong, RG, RPG, REA
Principal

QUARTERLY

GROUNDWATER MONITORING

WITH CHEMISTRY TESTING

1616-1618-1620 DOOLITTLE DRIVE

SAN LEANDRO, CALIFORNIA

Prepared for:

DALZIEL TRUSTS

February 4, 1997

Prepared by:

EARTH ENGINEERS
P.O. Box 1051
Alturas, CA 96101
(800) 692-0787

1087.002

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EXECUTIVE SUMMARY

Earth Engineers was retained by Dalziel Trusts to perform quarterly groundwater monitoring with chemistry testing at 1616-1618-1620 Doolittle Drive, San Leandro, California (the subject site) (see Figures 1 and 2). The objectives of this groundwater monitoring with chemistry testing were to assess groundwater quality and direction at the subject site in order to detect potential contamination emanating from a reported unauthorized release at the subject site.

One groundwater sample was collected from each of four on-site monitoring wells (EE-1, EE-2, EE-3, and EE-4) on January 2, 1997. These samples were submitted to Shasta Analytical Laboratory in Redding for analyses of Total Petroleum Hydrocarbons as gasoline (TPHg) with Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) by California Department of Health Services (DHS) Method 8015 Modified and U.S. Environmental Protection Agency (EPA) Method 8020, and Total Petroleum Hydrocarbons as diesel (TPHd) by California DHS Method 8015 Modified.

Groundwater from EE-1 did contain detectable quantities of TPHg with BTEX, but no TPHd. The concentration of TPHg in a groundwater sample taken from EE-1 was .1 part per billion (ppb). Benzene, Ethylbenzene, and Xylenes were also present in the sample at concentrations of 93 ppb, 18 ppb, and 5.1 ppb, respectively. The State of California's maximum contaminant level (MCL) for Benzene is 1 ppb. The concentrations of Ethylbenzene and Xylenes found in the groundwater sample taken from EE-1 were found to be below the State of California MCL of 680 ppb and 1,750 ppb, respectively. Groundwater from EE-2, EE-3, and EE-4 did not contain detectable quantities of TPHg with BTEX, or TPHd in laboratory analyses.

Groundwater flow direction at the subject site was determined to be toward the west. Earth Engineers recommends that monitoring of wells EE-1, EE-2, EE-3, and EE-4 continue for one year.

1. INTRODUCTION

This report presents the methods and findings of quarterly groundwater monitoring with chemistry testing conducted by Earth Engineers for Dalziel Trusts at 1616-1618-1620 Doolittle Drive, San Leandro, California. This investigation, performed during the month of January 1997, was to purge and sample the four monitoring wells and obtain a depth-to-water measurement in the four monitoring wells.

The investigation presented in this report was conducted by Earth Engineers on behalf of, and for the exclusive use of, Dalziel Trusts, solely for the purpose of an environmental evaluation of the subject site.

The purpose of this investigation was to assess on-site groundwater quality conditions in order to detect potential contamination that may have resulted from an unauthorized release of petroleum products reported during the tank removal in July of 1990.

SCOPE OF WORK

The scope of this investigation included the following:

1. Preparing a Site-Specific Health and Safety Plan (as required by OSHA 29 CFR Part 1910) for Earth Engineers personnel and subcontractors prior to obtaining entry to the subject site for the proposed subsurface work.

2. Coordinating with the client for the monitoring of four wells on the subject site.

3. Collecting groundwater samples after purging and sampling the wells and having the groundwater samples analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) with Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), and Total Petroleum Hydrocarbons as diesel (TPHd).

2. DESCRIPTION OF INVESTIGATION

The monitoring wells were investigated as described below.

2.1 WATER LEVEL MEASUREMENTS

All four monitoring wells were measured for total depth and depth to groundwater using an electrical water level indicator and a fiberglass measuring tape. The same water level indicator and measuring tape were used for all measurements. The water level indicator and measuring tape were decontaminated before and after each well measurement using a soap and water wash and a tap water rinse, followed by a reagent-grade methanol rinse, followed finally by a distilled deionized water rinse to prevent potential cross-contamination of the monitoring wells. All well measurements were taken from the top of the PVC casing. Depth to groundwater was measured on January 2, 1997.

2.2 GROUNDWATER FLOW DIRECTION

On January 2, 1997, Earth Engineers performed a preliminary ground survey on-site to determine the approximate location and approximate elevation of each newly installed monitoring well relative to the elevation of a selected benchmark. Earth Engineers used a construction level transit to determine the relative elevation of the tops of the casings. In general, water table elevation data indicates a groundwater flow direction toward the west.

2.3 GROUNDWATER SAMPLING

Groundwater samples were collected from groundwater monitoring wells EE-1, EE-2, EE-3, and EE-4 on January 2, 1997. Prior to sampling, the standing volume was calculated from each monitoring well using the depth-to-water and total well depth measurements. A minimum of three standing volumes of water were purged from each groundwater monitoring well prior to sampling. To prevent cross-contamination of samples, each groundwater monitoring well was purged using dedicated disposable bailers.

The temperature and pH of the water were monitored, and purging was continued until the temperature and pH stabilized. When a sufficient quantity of water was purged from each well, the well was allowed to recover to 80 percent of the well volume, and then a water sample was obtained using the same dedicated bailer.

	MONITORING DATA			
	Purge Volume	Temp. (°F)	pH	Conductivity
01/02/97				
EE-1	0	67	7.4	--
	5gal	66	7.3	--
	10gal	66	7.3	--
	15gal	64	7.2	--
	20gal	64	7.2	--
	30gal	64	7.2	--
EE-2	0	66	7.1	--
	5gal	66	7.0	--
	10gal	66	6.9	--
	15gal	64	7.1	--
	20gal	64	7.2	--
	30gal	64	7.1	--
EE-3	0	66	7.1	--
	5gal	66	7.0	--
	10gal	66	6.9	--
	15gal	64	7.1	--
	20gal	64	7.2	--
	30gal	64	7.1	--
EE-4	0	66	7.1	--
	5gal	66	7.0	--
	10gal	66	6.9	--
	15gal	64	7.1	--
	20gal	64	7.2	--
	30gal	64	7.1	--

3. RESULTS OF ANALYTICAL DATA

This section presents results of the field screening program and laboratory analyses. Laboratory analytical reports from samples collected during the field investigation are presented in Appendix A.

GROUNDWATER ANALYSES

Groundwater samples analyzed by Shasta Analytical Laboratory in Redding were collected in accordance with the procedures and requirements set forth in Section 2 of this report. The laboratory analytical reports are included in Appendix A and are summarized in Table 1.

TABLE 1. ANALYTICAL RESULTS OF GROUNDWATER SAMPLING, 1616-1618-1620 DOOLITTLE DRIVE, SAN LEANDRO

Sample ID	TPHd (ppm)	TPHg (ppm)	Ben (ppb)	Tol (ppb)	Eth (ppb)	Xyl (ppb)
January 1997:						
(EE-1)	N.D.	0.1	93	N.D.	18	5.1
(EE-2)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
(EE-3)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
(EE-4)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

TPHd = Total Petroleum Hydrocarbons as diesel by 8015 Mod.
TPHg = Total Petroleum Hydrocarbons as gasoline by 8015 Mod.
Ben = Benzene by Method 8020
Tol = Toluene by Method 8020
Eth = Ethylbenzene by Method 8020
Xyl = Xylenes by Method 8020
ppm = parts per million
ppb = parts per billion
N.D. = below the reporting limits of the analysis

4. QUALITY ASSURANCE/QUALITY CONTROL

This section provides information on sampling and analytical methodologies, sample documentation, and site-specific sample quality assurance procedures.

Samples were collected as described in Section 2.

All water samples were collected with dedicated disposable single-sample bailers manufactured by Voss Technologies. The containers used for samples were as follows:

- TPHd: one-liter amber glass jar equipped with plastic- or teflon-lined closure, and preserved with sulfuric acid.

- TPHg: two 40-ml. glass vials equipped with teflon-lined septum caps, and preserved with hydrochloric acid.

All samples were placed on ice immediately after collection and were delivered to the laboratory. Chain-of-custody protocol was maintained from sample collection to delivery to the laboratory. Field information was recorded in a bound field notebook and/or sampling log sheets. Full documentation was made as to the location and depth of all samples collected. Each sample was labeled with Earth Engineers project number, the sample location and depth interval, the date and time, the initials of the sampler, and the requested analysis.

5. SUMMARY OF FINDINGS, OPINIONS, AND RECOMMENDATIONS

The following is a summary of Earth Engineers findings, opinions, and recommendations, based on the limited subsurface investigation:

1. Based on Earth Engineers limited survey, the groundwater flow direction at the subject site was determined to be toward the west. Monitoring wells EE-1, EE-2, EE-3, and EE-4 are less than 10 feet from the reported release in the downgradient direction.

2. Earth Engineers collected groundwater samples from monitoring wells EE-1, EE-2, EE-3, and EE-4.

In summary:

- Groundwater from EE-1 did contain detectable quantities of TPHg with BTEX, but no TPHd. The concentration of TPHg in a groundwater sample taken from EE-1 was .1 part per billion (ppb). Benzene, Ethylbenzene, and Xylenes were also present in the sample at concentrations of 93 ppb, 18 ppb, and 5.1 ppb, respectively. The State of California's maximum contaminant level (MCL) for Benzene is 1 ppb. The concentrations of Ethylbenzene and Xylenes found in the groundwater sample taken from EE-1 were found to be below the State of California MCL of 680 ppb and 1,750 ppb, respectively. Groundwater from EE-2, EE-3, and EE-4 did not contain detectable quantities of TPHg with BTEX, or TPHd in laboratory analyses.

Earth Engineers recommends:

- Further positive delineation of the source area for TPH constituents does not appear to be necessary.

- Monitoring and sampling of the groundwater in EE-1, EE-2, EE-3, and EE-4 should continue on a quarterly basis for at least one year. Samples should be analyzed for TPHg with BTEX, and TPHd.

- Evaluate direction of groundwater flow each quarter.

- The levels of TPHg with BTEX are not high enough to warrant remedial action, and closure should occur after one year of monitoring.

The research presented herein constitutes a sufficient basis for the above conclusion.

LIMITATIONS

All the findings set forth in this Quarterly Groundwater Monitoring with Chemistry Testing report are strictly limited in time and scope to the date of the evaluation(s). The conclusions

presented in the report are limited by the time and budget constraints imposed by the client and are based solely on the services described in the report, and not on scientific tasks or procedures beyond the agreed-upon Statement of Work.

This Quarterly Groundwater Monitoring with Chemistry Testing report may contain recommendations that are partially based on the analysis of data accumulated through subsurface exploration. However, further investigations may reveal additional data or variations from the current data that may require the recommendations to be reevaluated.

Limited chemical analyses were performed during the course of this site assessment. No further conjecture can be made regarding groundwater contamination other than from analytical data obtained from specific locations on the subject site.

Some of the findings of this investigation are based on data provided by others. No warranty is expressed or implied with the usage of such data.

This report was prepared in accordance with generally accepted standards of environmental geological practice at the time the investigation was performed. This investigation was conducted solely as a tool in evaluating environmental conditions of the groundwater with respect to contamination at the subject site. No soil engineering or geotechnical recommendations are implied or should be inferred. Evaluation of the geologic conditions at the subject site for the purpose of this investigation is made from a limited number of observation points. Subsurface conditions may vary away from the data points available. Additional work, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of investigation.

SERVICE CONSTRAINTS

Much of the information provided in this report is based upon personal interviews and research of available documents, records, and maps held by the appropriate government and private agencies. The report is therefore subject to the limitations of historical documentation, availability and accuracy of pertinent records, and the personal recollection of those persons contacted.

The initial site investigation took into account the natural and manmade features of the subject site, including any unusual or suspect phenomena. These factors, combined with the subject site's geology, hydrology, topography, and past and present land uses, served as a basis for conclusions and recommendations.

The presence of radioactive materials and biological hazards was not investigated.

6. REFERENCES

Alameda, County of, Department of Environmental Health, telephone communication (1997).

California Regional Water Quality Control Board, San Francisco Bay Area Region List of Fuel Leaks, Alameda County (1993).

California, State of, California Waste Management Board, Solid Waste Information System (SWIS) Active Landfills (1993).

California, State of, California Waste Management Board, Solid Waste Information System (SWIS) Closed and Inactive Landfills (1992).

California, State of, California Waste Management Board, Solid Waste Information System (SWIS) Transfer Stations (1993).

California, State of, Department of Health Services, Abandoned Site Program Information System, computer printout (revised 1993).

California, State of, Department of Health Services, Toxic Substance Control Division, personal communication (1997).

California, State of, State Water Resources Control Board, Solid Waste Assessment Test (SWAT) Program (1991).

California State Office of Planning and Research, Hazardous Wastes and Substances Sites List Pursuant to AB 3750 (CORTESE) (revised 1992).

Jang, John M., Staff Engineer, California Regional Water Quality Control Board, written and telephone communications (1997).

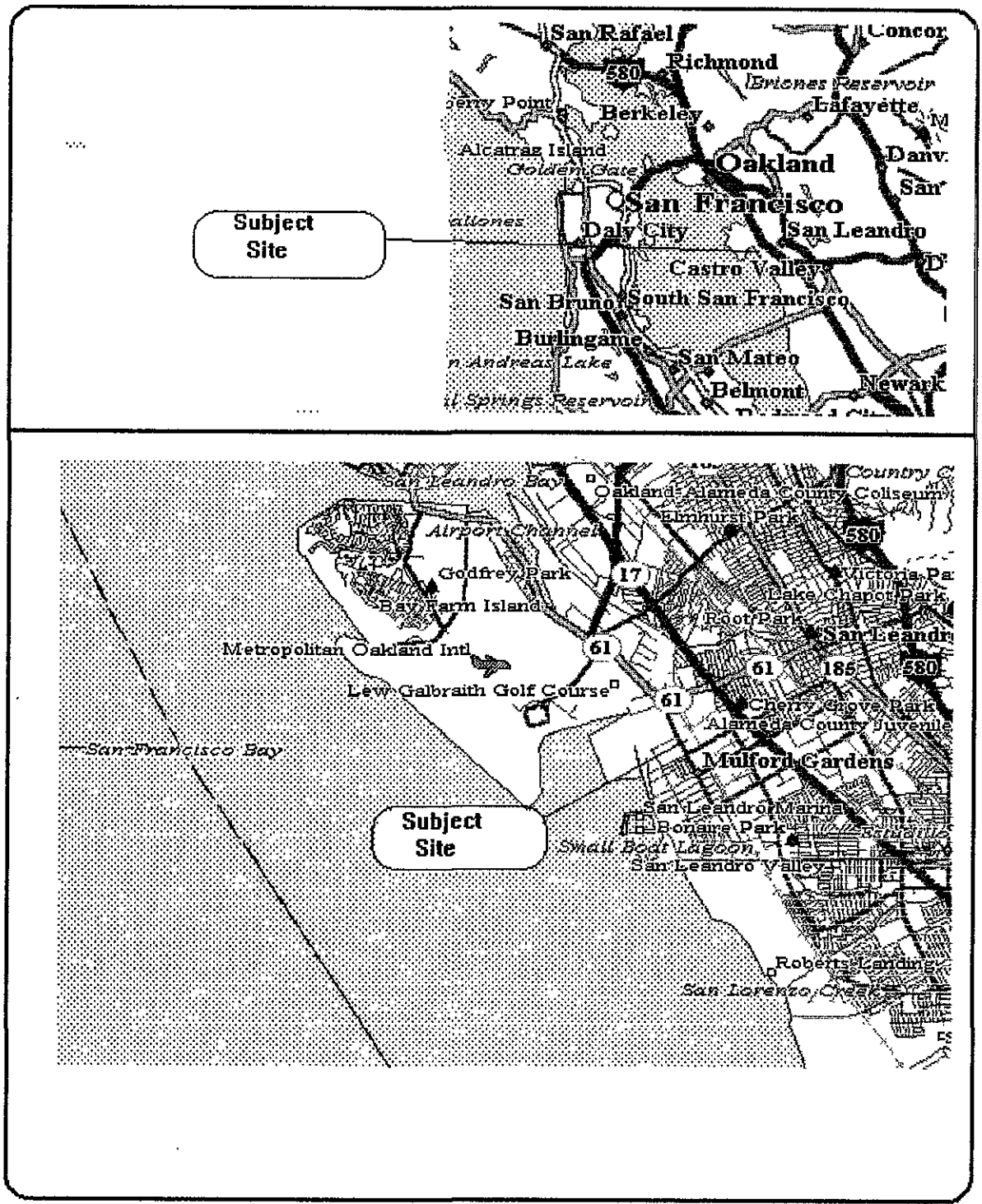
Klettke, Dale, Hazardous Materials Specialist, Waste Management Division, County of Alameda, personal communication (1997).

Peacock, Tom, Hazardous Materials Specialist, Waste Management Division, County of Alameda, personal communication (1997).

San Leandro, City of, Planning Department, personal communication (1997).

Shasta Analytical Laboratory, California Department of Health Services Certification No. 1971, laboratory analytical reports (1997).

U.S. Environmental Protection Agency, Region 9, Drinking Water Standards and Health Advisories Table (1992).



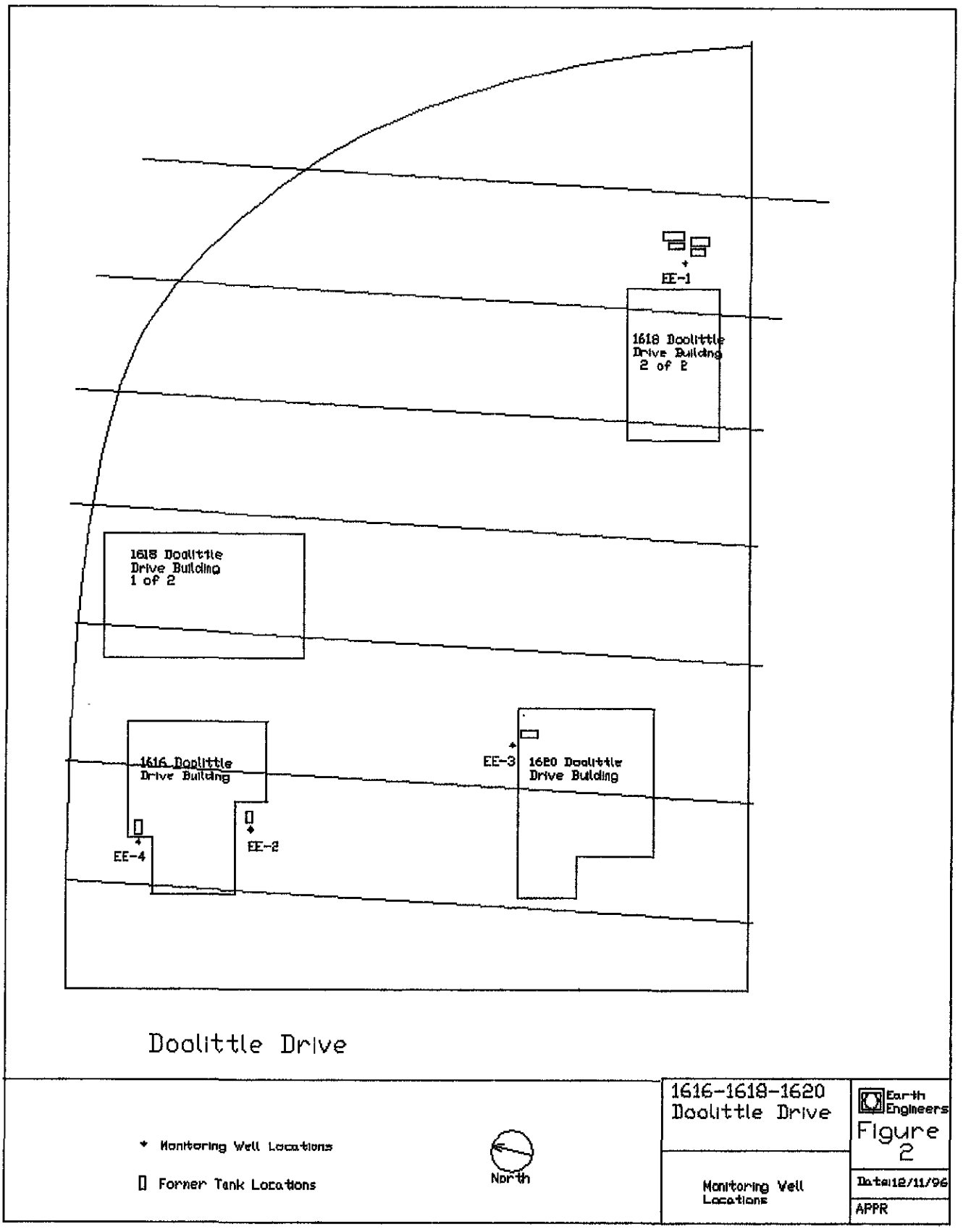
Earth Engineers

Figure 1:
Subject Site Map

Streams dashed where intermittent

Road

North


EE-1
1618 Doolittle Drive Building 2 of 2
1615 Doolittle Drive Building 1 of 2
1616 Doolittle Drive Building
EE-4
EE-2
EE-3
1620 Doolittle Drive Building
Doolittle Drive
Monitoring Well Locations
Former Tank Locations
North
1616-1618-1620 Doolittle Drive
Monitoring Well Locations
Earth Engineers
Figure 2
Date:12/11/96
APPR

APPENDIX A

LABORATORY ANALYTICAL REPORTS

Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640 Millbrae, CA 94030

Date Reported: 01/15/97
Job Number: N/A

DOHS Certification #1971

Source:	Doolittle Site
Lab. No.:	970009
Sample I.D.:	EE1
Matrix:	Water
Depth:	N/A
Date Collected:	01/02/97
Time Collected:	800
Date Received:	01/09/97
Date Extracted:	N/A
Date Analyzed:	01/13/97

Parameter	Results	Reporting Limit	Units	Method
Volatile Aromatics:				602
Benzene	93	0.5	ug/L	
Toluene	ND	0.5	ug/L	
Ethylbenzene	18	0.5	ug/L	
Xylenes	5.1	1.0	ug/L	
Surrogate Recovery:				
TFT	96%			
Gasoline	0.10	0.05	mg/L	8015 Mod.
Surrogate Recovery:				
TFT	112%			

Verified: Laboratory Manager

1240 Redwood Blvd. • Redding, CA 96003 • (916) 244-4442 • Fax (916) 244-4443

Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640
	Millbrae, CA 94030

Date Reported: 01/15/97
Job Number: N/A

DOHS Certification #1971

Source:	Doolittle Site
Lab. No.:	970010
Sample I.D.:	EE2
Matrix:	Water
Depth:	N/A
Date Collected:	01/02/97
Time Collected:	900
Date Received:	01/09/97
Date Extracted:	N/A
Date Analyzed:	01/13/97

Parameter	Results	Reporting Limit	Units	Method
Volatile Aromatics:				602
Benzene	ND	0.5	ug/L	
Toluene	ND	0.5	ug/L	
Ethylbenzene	ND	0.5	ug/L	
Xylenes	ND	1.0	ug/L	
Surrogate Recovery:				
TFT	100%			
Gasoline	ND	0.05	mg/L	8015 Mod.
Surrogate Recovery:				
TFT	95%			

Verified: Steven Perrin
Laboratory Manager

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Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640 Millbrae, CA 94030

Date Reported: 01/15/97
Job Number: N/A

DOHS Certification #1971

Source:	Doolittle Site
Lab. No.:	970011
Sample I.D.:	EE3
Matrix:	Water
Depth:	N/A
Date Collected:	01/02/97
Time Collected:	1000
Date Received:	01/09/97
Date Extracted:	N/A
Date Analyzed:	01/13/97

Parameter	Results	Reporting Limit	Units	Method
Volatile Aromatics:				602
Benzene	ND	0.5	ug/L	
Toluene	ND	0.5	ug/L	
Ethylbenzene	ND	0.5	ug/L	
Xylenes	ND	1.0	ug/L	
Surrogate Recovery: TFT	104%			
Gasoline	0.11 *	0.05	mg/L	8015 Mod.
Surrogate Recovery: TFT	98%			

* Gasoline present is degraded.

Verified: Laboratory Manager

Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640 Millbrae, CA 94030

Date Reported: 01/15/97
Job Number: N/A

DOHS Certification #1971

Source:	Doolittle Site
Lab. No.:	970012
Sample I.D.:	EE4
Matrix:	Water
Depth:	N/A
Date Collected:	01/02/97
Time Collected:	1100
Date Received:	01/09/97
Date Extracted:	N/A
Date Analyzed:	01/13/97

Parameter	Results	Reporting Limit	Units	Method
Volatile Aromatics:				602
Benzene	ND	0.5	ug/L	
Toluene	ND	0.5	ug/L	
Ethylbenzene	ND	0.5	ug/L	
Xylenes	ND	1.0	ug/L	
Surrogate Recovery:				
TFT	97%			
Gasoline	ND	0.05	mg/L	8015 Mod.
Surrogate Recovery:				
TFT	100%			

Verified: Laboratory Manager

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Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640 Millbrae, CA 94030

Date Reported: 01/15/97
Job Number: N/A

DOHS Certification #1971

Source: Doolittle Site
Lab. No.: 970010

QUALITY CONTROL DATA

Parameter	Reporting Limit	Units	Blank Results*	Spike Recovery,%	Spike Dup. Recovery,%	RPD
Volatile Aromatics:						
Benzene	0.5	ug/L	ND	85%	79%	7.3%
Toluene	0.5	ug/L	ND	110%	103%	6.6%
Chlorobenzene	0.5	ug/L	ND	111%	106%	4.6%

* Blank results were ND on all other analytes tested.

Verified: _____
Laboratory Manager

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Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640
	Millbrae, CA 94030

Date Reported: 01/15/97
Job Number: N/A

DOHS Certification #1971

Source: Doolittle Site
Lab. No.: 970010

QUALITY CONTROL DATA

Parameter	Reporting Limit	Units	Blank Results	Spike Recovery,%	Spike Dup. Recovery,%	RPD
Gasoline:	0.05	mg/L	ND	109%	92%	17.5%

Verified: _____
Laboratory Manager

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Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640 Millbrae, CA 94030

Date Reported:	01/15/97
Job Number:	N/A

DOHS Certification #1971

Source:	Doolittle Site
Lab. No.:	970009
Sample I.D.:	EE1
Matrix:	Water
Depth:	N/A
Date Collected:	01/02/97
Time Collected:	800
Date Received:	01/09/97
Date Extracted:	01/13/97
Date Analyzed:	01/13/97

Parameter	Results	Reporting Limit	Units	Method
Diesel	ND	0.05	mg/L	8015 Mod.

Verified: _____
Laboratory Manager

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Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640 Millbrae, CA 94030

Date Reported: 01/15/97
Job Number: N/A

DOHS Certification #1971

Source:	Doolittle Site
Lab. No.:	970010
Sample I.D.:	EE2
Matrix:	Water
Depth:	N/A
Date Collected:	01/02/97
Time Collected:	900
Date Received:	01/09/97
Date Extracted:	01/13/97
Date Analyzed:	01/13/97

Parameter	Results	Reporting Limit	Units	Method
Diesel	ND	0.05	mg/L	8015 Mod.

Verified: Laboratory Manager

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Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640
	Millbrae, CA 94030

Date Reported:	01/15/97
Job Number:	N/A

DOHS Certification #1971

Source:	Doolittle Site
Lab. No.:	970011
Sample I.D.:	EE3
Matrix:	Water
Depth:	N/A
Date Collected:	01/02/97
Time Collected:	1000
Date Received:	01/09/97
Date Extracted:	01/13/97
Date Analyzed:	01/13/97

Parameter	Results	Reporting Limit	Units	Method
Diesel	ND	0.05	mg/L	8015 Mod.

Verified: _____
Laboratory Manager

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Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640 Millbrae, CA 94030

Date Reported:	01/15/97
Job Number:	N/A

DOHS Certification #1971

Source:	Doolittle Site
Lab. No.:	970012
Sample I.D.:	EE4
Matrix:	Water
Depth:	N/A
Date Collected:	01/02/97
Time Collected:	1100
Date Received:	01/09/97
Date Extracted:	01/13/97
Date Analyzed:	01/13/97

Parameter	Results	Reporting Limit	Units	Method
Diesel	ND	0.05	mg/L	8015 Mod.

Verified:

Laboratory Manager

Shasta Analytical Laboratory

Client	Earth Engineers
Attention	Mark Armstrong
Address	P. O. Box 640 Millbrae, CA 94030

Date Reported: 01/15/97
Job Number: N/A

DOHS Certification #1971

Source: Doolittle Site
Lab. No.: 970009 -- 970012

QUALITY CONTROL DATA

Parameter	Reporting Limit	Units	Blank Results	LCS Recovery,%	LCS DUP Recovery,%	RPD
Diesel:	0.05	mg/L	ND	79%	78%	1.5%

Verified: Laboratory Manager

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CHAIN OF CUSTODY RECORD

PROJ. NO.	SITE NAME AND ADDRESS: Doolittle Site
	SAMPLERS: SIGNATURE: R. Mel RD

STA.NO. (LABEL)	DATE	TIME	COMP.	GRAB	STATION LOCATION (NARRATIVE DESCRIPTION)	TYPE/ NUMBER CON-TAINERS	TPHg w BTEX	TPHd						REMARKS
														Regular TAT
1	1-2-97	8:00		✓	EE1	40 ml VOA								970009
2	"	9:00		✓	EE2	"								970010
3	"	10:00		✓	EE3	"								970011
4	"	11:00		✓	EE4	"								970012

Relinquished by: Signature	Date/Time	Received by: Signature	Date/Time
R Mel RD	1-9-97	Sherrie Kenny	1/9/97 1000
Relinquished by: Signature	Date/Time	Received by: Signature	Date/Time
Relinquished by: Signature	Date/Time	Received by: Signature	Date/Time

REMARKS:

Provide QA/QC Report & Calibration

EARTH ENGINEERS
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