ATT

February 19, 1991

Mr. Gil Wistar
Alameda County Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, CA 94621

Subject: **Addendum to Excavation, Soil Sample Collection and Monitoring Well Installation Report**
7400 Amador Valley Boulevard
Dublin, California
(Project No. 9115)

Dear Mr. Wistar:

Pursuant to our February 7, 1991 telephone conversation, Aqua Terra Technologies, Inc. has prepared an addendum to the January 25, 1991 Excavation, Soil Sample Collection and Monitoring Well Installation report.

The January 25, 1991 report states that the excavation was backfilled with clean fill and compacted to grade on June 14, 1990. In actuality, the excavation was backfilled by S.A. Poli of South San Francisco in late September, 1990.

Please contact us with any questions or comments regarding matters discussed herein.

Sincerely,

AQUA TERRA TECHNOLOGIES, INC.

Kimberly S. Lagomarsino
Staff Scientist

Terrance E. Carter
Project Manager

KSL/TEC:hk

c.c. Mr. Richard Dodge
Mr. Craig Mayfield - ACFCWCD (Zone 7)
Lester Feldman - RWQCB

Aqua Terra Technologies
Consulting Engineers
& Scientists

2950 Buskirk Avenue
Suite 120
Walnut Creek, CA
94596
415 934-4884

LETTER OF TRANSMITTAL

Date: January 28, 1991

To: Mr. Richard E. Dodge
1120 Walker Avenue
Walnut Creek, CA 94596

From: Kimberly S. Lagomarsino
Staff Scientist

Re: Excavation, Soil Sample Collection and Monitoring Well Installation Report

Aqua Terra Technologies
Consulting Engineers
& Scientists

2950 Buskirk Avenue
Suite 120
Walnut Creek, CA
9 4 5 9 6
415 934-4884

Transmitted herewith is a revised copy of the January 23, 1991 Excavation, Soil Sample Collection, and Monitoring Well Installation report prepared by ATT for the former Dutch Pride Dairy facility, located at 7400 Amador Valley Boulevard, Dublin, California.

cc: Craig Mayfield - ACFCWCD (Zone 7)
Gil Wistar - Alameda County Health Agency
Lester Feldman - RWQCB

9115/RD012891.TRN

January 25, 1991

Mr. Richard E. Dodge
1120 Walker Avenue
Walnut Creek, CA 94596

Subject: Excavation, Soil Sample Collection and Monitoring Well Installation 7400 Amador Valley Boulevard Dublin, California (Project No. 9115)

Dear Mr. Dodge:

The following letter report presents results of soil sampling and monitoring well installation activities for the former Dutch Pride Dairy facility located at 7400 Amador Valley Boulevard in Dublin, California.

Aqua Terra Technologies
Consulting Engineers
& Scientists

2950 Buskirk Avenue
Suite 120
Walnut Creek, CA
94596
415 934-4884

SITE BACKGROUND

On January 11, 1990, two 10,000 gallon underground fuel storage tanks were removed from the subject property. A site location map is presented on Plate 1 (Attachment A) and a facility location map is presented on Plate 2 (Attachment A). Approximately 100 cubic yards of gasoline contaminated soil was also removed and subsequently offhauled to the Richmond Sanitary Landfill for disposal.

After removal of the tanks, soil and water samples were collected, from the base of the excavation. These were submitted to a California Department of Health Services (DHS) certified laboratory. and analyzed for total petroleum hydrocarbons as gasoline (TPH/g) and for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Chemical analyses from five soil samples and one groundwater sample indicated the presence of THP/g and BTEX in soils and groundwater. Aqua Terra Technologies, Inc. (ATT) summary report for tank removal activities is presented in Attachment B.

EXCAVATION AND SAMPLE COLLECTION

On June 13, 1990, soils contaminated by TPH/g were further excavated from the former tank excavation. Soils were excavated to the eastern property boundary (Plate 3, Attachment A). Excavated soils were stockpiled at the rear of the former Dutch Pride Dairy building on six-mil visqueen to be subsequently aerated in accordance with Regulation 8, Rule 40 of the Bay Area Air Quality Management District's (BAAQMD) guidelines. Permission to aerate will be obtained from the BAAQMD. Aeration activities will be in accordance with the "Soil Excavation and Treatment Methods" specified in the ATT Work Plan dated March 29, 1990.

Four soil samples were collected from the extended site excavation on June 13, 1990. A site plan indicating sample collection locations is shown on Plate 3 (Attachment A). Samples NE Corner 12', SE Corner 12', and Center Wall were collected at a depth of 12 feet below grade. Sample SE Corner was collected at a depth of 8.5 feet below grade. Samples were collected and handled in accordance with the sample collection protocol presented in Attachment C. Samples were delivered under chain-of-custody documentation to a DHS certified laboratory for analysis.

Analytical Results

Samples were analyzed for TPH/g and BTEX using approved U.S. Environmental protection Agency (EPA) methods in accordance with the California State Water Resources Leaking Underground Fuel Tank (LUFT) Manual requirements. TPH/g concentrations ranged from 49 mg/Kg to 900 mg/Kg. Benzene and toluene concentrations ranged from below method detection limits to 7.4 mg/Kg and 9.4 mg/Kg, respectively. Ethylbenzene concentrations ranged from 0.83 mg/Kg to 19 mg/Kg. Xylene concentrations ranged from 2.7 mg/Kg to 76 mg/Kg. A summary of analytical data is listed on Table 1 (Attachment A). Laboratory analytical results and chain-of-custody documentation are in Attachment D.

Because further excavation, to remove TPH/g contaminated soils from the former fuel storage tank excavation, required excavation beyond monitoring well MW-10, the well was abandoned and removed from the ground. Monitoring well removal activities included extraction of the entire well casing.

Sept. 1990
On June 14, 1990, the excavation was backfilled with clean fill and compacted to grade.

MONITORING WELL CONSTRUCTION

On December 5, 1990, monitoring well MW-13 was installed as a replacement well for monitoring well MW-10 which was destroyed during excavation activities. Well MW-13 was installed approximately three feet southeast of former monitoring well MW-10 (Plate 3, Attachment A).

The boring for well MW-13 was drilled with 10.0-inch hollow stem auger to a depth of 17 feet below grade. The boring was logged using the Unified Soil Classification System (USCS). The well was constructed using four-inch inside diameter, PVC casing and machine-slotted screen with 0.02-inch openings. The annular space between the walls of the bore hole and the screen wall was backfilled with Lonestar No. 2 sand. The well was developed, on December 10, 1990, by pumping with a positive displacement hand pump. Well construction protocol is presented in Attachment E, and permit documentation, well construction and development details, and soil boring logs are presented in Attachment F.

Soil cuttings, generated during monitoring well construction, were added to the onsite soil stockpile. Well development water was stored onsite in a 55-gallon drum.

Sample Collection and Analytical Results

On December 12, 1990, the depth to groundwater in well MW-13 was measured using an electronic well sounder. Depth to groundwater was 9.68 feet below the top of the well casing.

A Groundwater sample was collected from Monitoring Well MW-13 on December 12, 1990, and analyzed for TPH/g and BTEX. The groundwater sample was collected and handled in accordance with the protocol presented in Attachment C. Laboratory analytical results, chain of custody documentation, and sample collection records are presented in Attachment G.

Analytical results show that 190 µg/L TPH/g, 37 µg/L benzene, 8.7 µg/L toluene, 5.7 µg/L ethylbenzene, and 20 µg/L total xylenes were present.

PLANNED ACTIVITIES

It is anticipated that the stockpiled soil at the subject facility will be aerated, in accordance with BAAQMD guidelines, during the spring of 1991.

Please contact us with any questions or comments regarding matters discussed herein.

Sincerely,

AQUA TERRA TECHNOLOGIES, INC.

Kimberly S. Lagomarsino
Staff Scientist

Terrance E. Carter
Senior Environmental Engineer

William E. Motzer, Ph.D.
Senior Hydrogeologist
California Registered Geologist #4202
(Expires 6/30/90)

KSL/TEC/WEM:pd

Attachments

cc: Craig Mayfield - ACFCWCD (Zone 7)
Gil Wistar - Alameda County Health

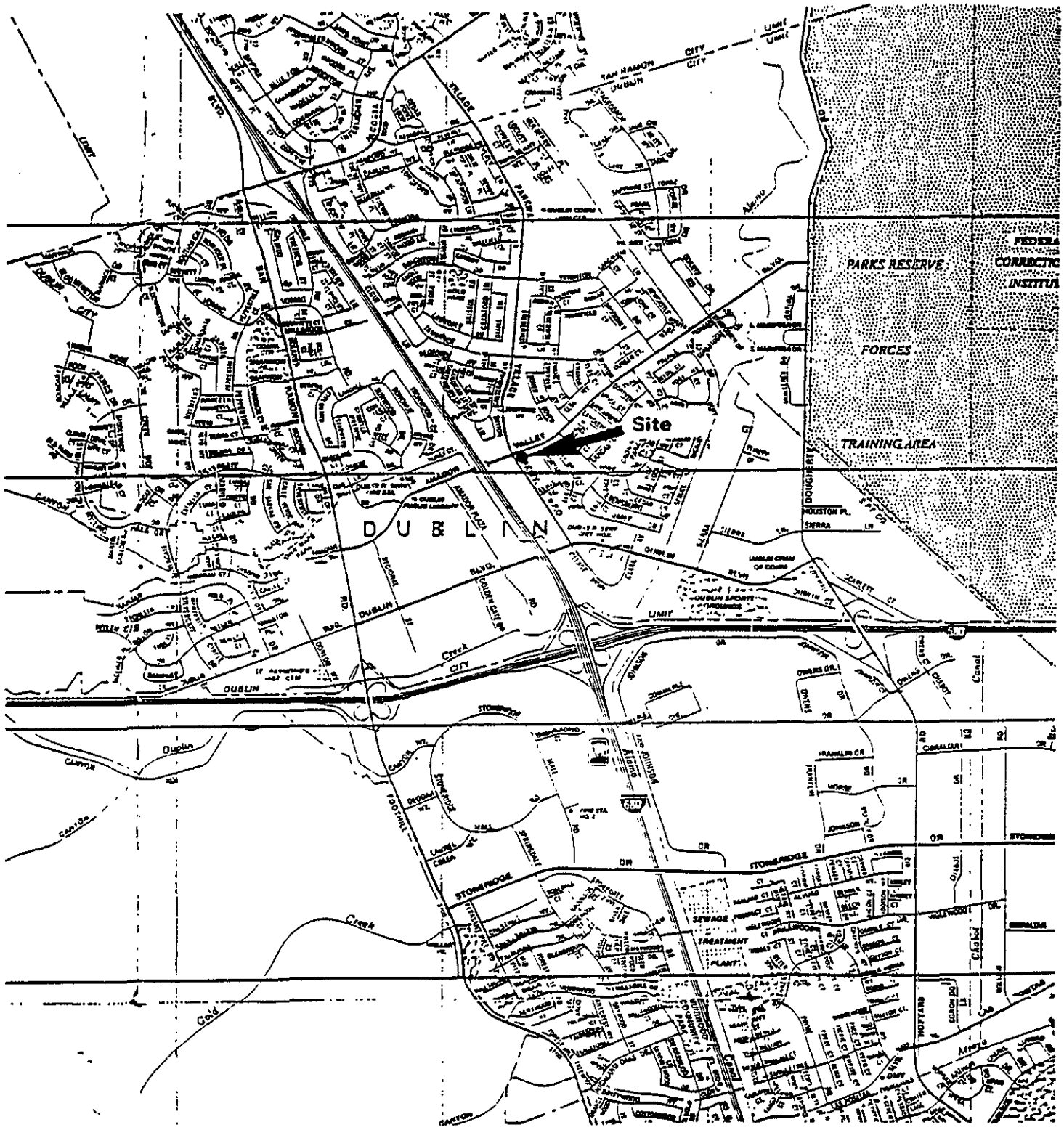
ATTACHMENT A

Tables & Plates

Table 1. Summary of Analytical Data
7400 Amador Valley Boulevard
Dublin, CA

Sample No.	TPH/g[a] (mg/Kg)[b]	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylenes (mg/Kg)
NE Corner 12'	49	0.23	1.0	0.83	2.7
SE Corner 12'	790	<5.0	<5.0	10	33
SE Corner	570	<5.0	<5.0	11	29
Center Wall	900	7.4	9.4	19	76

a. TPH/g = Total Petroleum Hydrocarbons as gasoline
b. mg/Kg = milligrams per Kilogram or parts per million (ppm)



Site Location

ATT Aqua Terra Technologies Consulting Engineers & Scientists	Dutch Pride Dairy
JOB NUMBER 9115	DATE 1/91
PLATE 1	

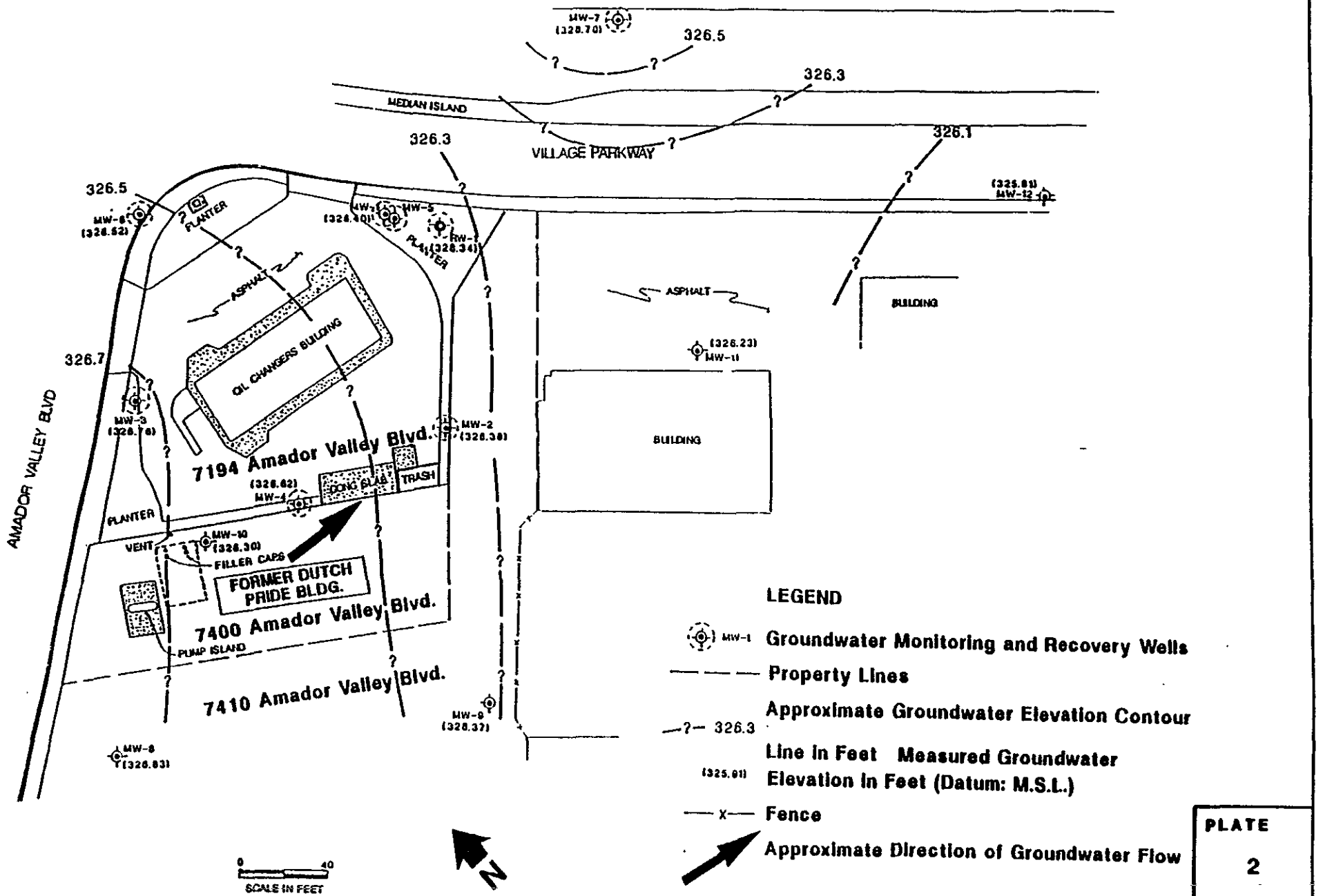


PLATE 2

ATT Aqua Terra Technologies Consulting Engineers & Scientists

Facility Location Map

Dutch Pride Dairy

JOB NUMBER	DATE
9115	1/91

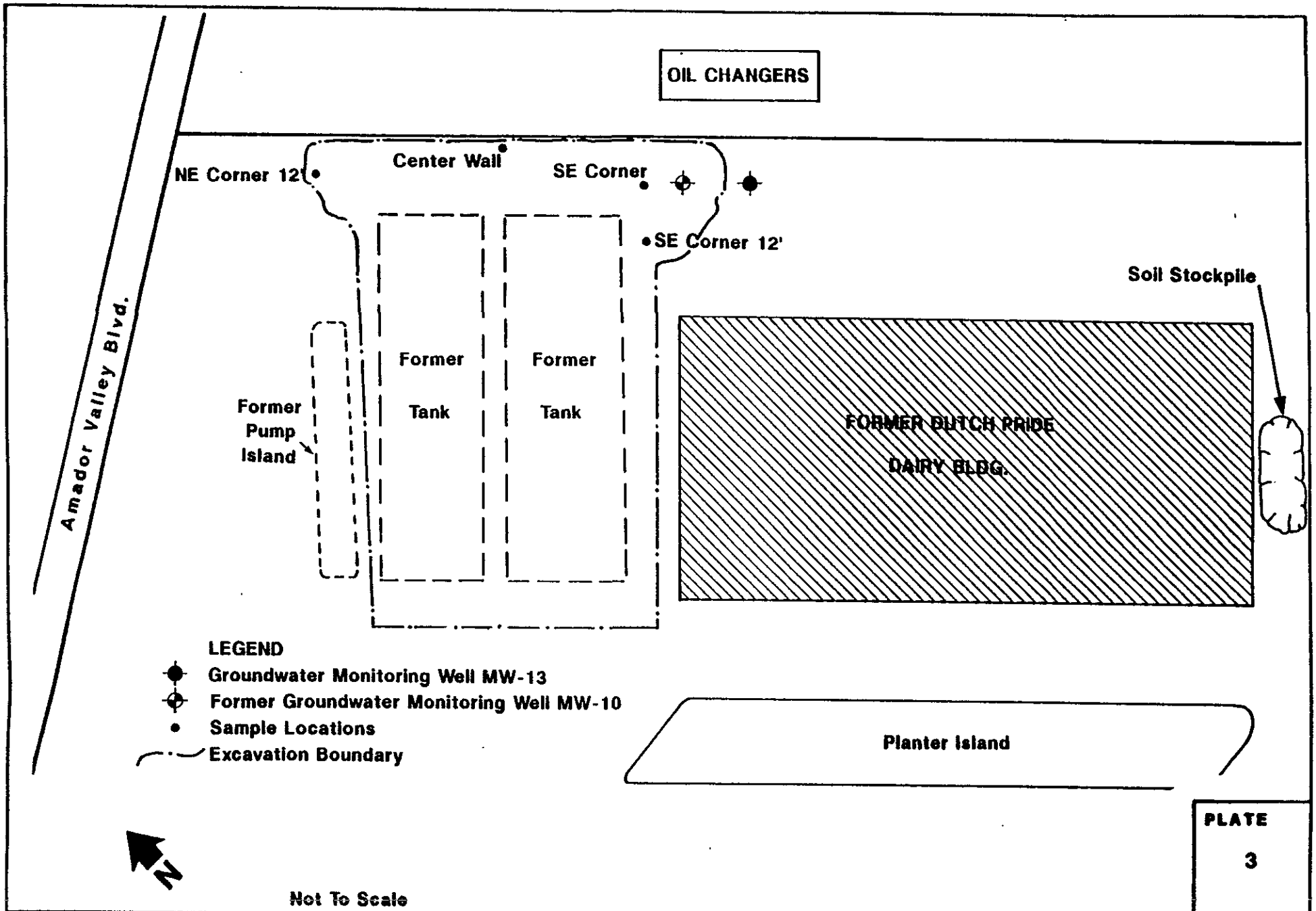


PLATE 3

ATT Aqua Terra Technologies Consulting Engineers & Scientists

Soil Excavation and Sample Locations

Dutch Pride Dairy

JOB NUMBER	DATE
9115	1/91

ATTACHMENT B

ATT Summary Report for Tank Removal

Original Data

February 14, 1990

Tom Daniels Excavating, Inc.
259 Lander Place
San Ramon, CA 94583

Attn: Betty Castro

Subject: Summary Report for Tank Removal at
7400 Amador Valley Blvd.
Dublin, California.
(Project No. 9115.1)

Dear Mrs. Castro:

Aqua Terra Technologies, Inc. (ATT) is pleased to submit the following summary regarding the results of soil samples collected from a tank removal at the above address.

Aqua Terra Technologies
Consulting Engineers
& Scientists

2950 Buskirk Avenue
Suite 120
Walnut Creek, CA
94596
415 934-4884

Soil and groundwater sample analysis results are given in Attachment A, with an accompanying field sketch showing where the samples were taken. Soil and groundwater samples were collected according to sampling and handling protocols given in Attachment B. In response to the holes in the tanks, a Fuel Tank Release Form was filed with the appropriate agencies, (Attachment C).

Copies of the tank disposal manifests may be obtained from Tom Daniels Excavating, Inc.

Based on the sample analysis results and in accordance with the Alameda County Department of Environmental Health - Hazardous Materials Division, and the San Francisco Regional Water Quality Control Board, an Initial Investigation is required.

Please contact me regarding preparation of the Initial Investigation work plan.

Sincerely,

AQUA TERRA TECHNOLOGIES, INC.

Terrance E. Carter

Terrance E. Carter
Senior Environmental Engineer

TEC:pd

cc: George Callahan
Gil Wistar, Alameda County Health

ATTACHMENT A

Laboratory Analysis Results

Aqua Terra Technologies
2950 Buskirk Avenue Ste. 120
Walnut Creek, CA 94596
Tel. (415) 934-4884
Fax. (415) 934-0418

ATT

CHAIN OF SAMPLE CUSTODY RECORD
(original document, please return) Page 1 of 2

Sampled By: Richard Brink
Signature:
Results To Be Sent To: Terry Carter
Results Needed By: 1/26/98
Sampling Location:

Date Sampled: 1/11-12/9
Job Number: OPD 9115
Laboratory Name: Aramatrix
Contact:
Phone #:

Sample Identification						Analysis/EPA Method No.						
Sample Collection			Number of Containers	Preserved	Containers	TPH Gas	BTEX					
Sample ID	Time (24 hr)	Matrix			40 ml VOA vial, 2½ x 6" brass tube							Remarks
PS1	14:15	Water	3	*	3	X	X					
TB	14:18	"	2	*	2	X	X					
SS1	9:55	Soil	1	ICE	1	X	X					
SS2	10:00	"	1	"	1	X	X					[redacted] LW
SS3	10:14	"	1	"	1	X	X					[redacted] LW
SS4	10:17	"	1	"	1	X	X					[redacted] LW
SP1	14:00	"	1	"	1	X	X					Composite See Notes
SP2	14:02	"	1	"	1	X	X					"
SP3	14:04	"	1	"	1	X	X					"
SP4	14:06	"	1	"	1	X	X					"

Notes: * with ~~ice~~ ice and HCl. Normal Turnaround. Composite SP1-SP4 into one sample
All soil samples taken 1/11/90. Water samples taken 1/12/90.

Relinquished By	Date	Time
	1/12/90	15:45
		:
		:

Received By	Date	Time
Jyothi Meenakshi	1/12/90	15:45
		:
		:

2950 Buskirk Avenue Ste. 120
Walnut Creek, CA 94596
Tel. (415) 934-4884
Fax. (415) 934-0418

ATT

CHAIN OF SAMPLE CUSTODY RECORD
(original document, please return)

Sampled By: Richard Brush
Date Sampled: 1 / 11 / 90
Signature: [signature]
Job Number: DRD
Results To Be Sent To: Terry Carter
Laboratory Name: Anametrix
Results Needed By: 1/26/90
Contact:
Sampling Location:
Phone #:

Sample Identification						Analysis/EPA Method No.						
Sample Collection			Number of Containers	Containers Preserved	Containers 2½ x 6" brass tube	TPH Gas	BTEX					
Sample ID	Time (24 hr)	Matrix										Remarks
SS5	10:40	Soil	1	ICE	1	X	X					
	:											
	:											
	:											
	:											
	:											
	:											
	:											
	:											
	:											

Notes:

Relinquished By	Date	Time
[signature]	1/12/90	15:45
		:
		:

Received By	Date	Time
[signature]	1/12/90	15:45
		:
		:

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

Terry Carter
Aqua Terra Technologies
2950 Buskirk Avenue
Suite 120
Walnut Creek, CA 94596

January 17, 1990
Anametrix W.O.#: 9001103
Date Received : 01/12/90
Project Number : DPD

Dear Mr. Carter:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.

Terry Cooke
TPH Supervisor

TC/dmt

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

Client : Aqua Terra Technologies
Address : 2950 Buskirk Avenue
Suite 120
City : Walnut Creek, CA 94596
Attn. : Terry Carter

Anametrix W.O.#: 9001103
Date Received : 01/12/90
Purchase Order#: N/A
Project No. : DPD
Date Released : 01/17/90

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
9001103-01	PS1	WATER	01/12/90	TPHg		01/16/90	N/A
9001103-02	TB	WATER	01/12/90	TPHg		01/16/90	N/A
9001103-03	SS1	SOIL	01/11/90	TPHg		01/16/90	N/A
9001103-04	SS2	SOIL	01/11/90	TPHg		01/16/90	N/A
9001103-05	SS3	SOIL	01/11/90	TPHg		01/16/90	N/A
9001103-06	SS4	SOIL	01/11/90	TPHg		01/16/90	N/A
9001103-07	SP1,2,3,4	SOIL	01/11/90	TPHg		01/16/90	N/A
9001103-08	SS5	SOIL	01/11/90	TPHg		01/17/90	N/A

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : DPD PS1
Matrix : WATER
Date sampled : 01/12/90
Date anl.TPHg: 01/16/90
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 9001103-01
Analyst : CB
Supervisor : TC
Date released : 01/17/90
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ug/l)	Amount Found (ug/l)
71-43-2	Benzene	250	3000
108-88-3	Toluene	250	9000
100-41-4	Ethylbenzene	250	1300
1330-20-7	Total Xylenes	500	13000
	TPH as Gasoline	125000	92000

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : DPD TB
Matrix : WATER
Date sampled : 01/12/90
Date anl.TPHg: 01/16/90
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 9001103-02
Analyst : CB
Supervisor : TC
Date released : 01/17/90
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ug/l)	Amount Found (ug/l)
71-43-2	Benzene	0.5	ND
108-88-3	Toluene	0.5	ND
100-41-4	Ethylbenzene	0.5	ND
1330-20-7	Total Xylenes	1	ND
	TPH as Gasoline	50	ND

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: DPD SS1	Anametrix I.D.	: 9001103-03
Matrix	: SOIL	Analyst	: CB
Date sampled	: 01/11/90	Supervisor	: TC
Date anl.TPHg	: 01/16/90	Date released	: 01/17/90
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	500	ND
108-88-3	Toluene	500	1200
100-41-4	Ethylbenzene	500	1000
1330-20-7	Total Xylenes	500	6600
	TPH as Gasoline	10000	56000

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : DPD SS2
Matrix : SOIL
Date sampled : 01/11/90
Date anl.TPHg: 01/16/90
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 9001103-04
Analyst : CB
Supervisor : TC
Date released : 01/17/90
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5000	ND
108-88-3	Toluene	5000	20000
100-41-4	Ethylbenzene	5000	31000
1330-20-7	Total Xylenes	5000	150000
	TPH as Gasoline	100000	1900000

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: DPD SS3	Anametrix I.D.	: 9001103-05
Matrix	: SOIL	Analyst	: CP
Date sampled	: 01/11/90	Supervisor	: TC
Date anl.TPHg	: 01/16/90	Date released	: 01/17/90
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5000	ND
108-88-3	Toluene	5000	8200
100-41-4	Ethylbenzene	5000	24000
1330-20-7	Total Xylenes	5000	80000
	TPH as Gasoline	100000	1300000

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : DPD SS4
Matrix : SOIL
Date sampled : 01/11/90
Date anl.TPHg: 01/16/90
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 9001103-06
Analyst : CB
Supervisor : TC
Date released : 01/17/90
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5000	ND
108-88-3	Toluene	5000	ND
100-41-4	Ethylbenzene	5000	9800
1330-20-7	Total Xylenes	5000	18000
	TPH as Gasoline	100000	600000

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: DPD SP1,2,3,4	Anametrix I.D.	: 9001103-07
Matrix	: SOIL	Analyst	: CB
Date sampled	: 01/11/90	Supervisor	: TC
Date anl.TPHg	: 01/16/90	Date released	: 01/17/90
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	500	ND
108-88-3	Toluene	500	ND
100-41-4	Ethylbenzene	500	ND
1330-20-7	Total Xylenes	500	2100
	TPH as Gasoline	10000	75000

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: DPD SS5	Anametrix I.D.	: 9001103-08
Matrix	: SOIL	Analyst	: cb
Date sampled	: 01/11/90	Supervisor	: TC
Date anl.TPHg	: 01/17/90	Date released	: 01/17/90
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	19
108-88-3	Toluene	5	15
100-41-4	Ethylbenzene	5	14
1330-20-7	Total Xylenes	5	34
	TPH as Gasoline	1000	ND

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.

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

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

II,III

Site ID # ____ Site Name Dutch Pride Dairy Today's Date 2/11/90

Site Address 7400 Amador Valley Pkwy

City Dublin, CA Zip 94568 Phone ____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:
____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
____ II. Business Plans, Acute Hazardous Materials
✓ III. Underground Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

II.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
___	2. Bus. Plan Stds.	25503(b)
___	3. RR Cars > 30 days	25503.7
___	4. Inventory Information	25504(a)
___	5. Inventory Complete	2730
___	6. Emergency Response	25504(b)
___	7. Training	25504(c)
___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MAT'LS

___	10. Registration Form Filed	25533(a)
___	11. Form Complete	25533(b)
___	12. RMPP Contents	25534(c)
___	13. Implement Sch. Req'd? (Y/N)	___
___	14. OffSite Conseq. Assess.	25524(c)
___	15. Probable Risk Assessment	25534(d)
___	16. Persons Responsible	25534(g)
___	17. Certification	25534(i)
___	18. Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General
- ___ 1. Permit Application — 25284 (H&S)
- ___ 2. Pipeline Leak Detection — 25292 (H&S)
- ___ 3. Records Maintenance — 2712
- ___ 4. Release Report — 2651
- ___ 5. Closure Plans — 2670

Monitoring for Existing Tanks
- ___ 6. Method
  - 1) Monthly Test
  - 2) Daily Vadose
    - Semi-annual gndwater
    - One time soils
  - 3) Daily Vadose
    - One time soils
    - Annual tank test
  - 4) Monthly Gndwater
    - One time soils
  - 5) Daily Inventory
    - Annual tank testing
    - Cont pipe leak det
    - Vadose/gndwater mon.
  - 6) Daily Inventory
    - Annual tank testing
    - Cont pipe leak det
  - 7) Weekly Tank Gauge
    - Annual tank tstng
  - 8) Annual Tank Testing
    - Daily Inventory
  - 9) Other ____
- ___ 7. Precis Tank Test Date: ____ — 2643
- ___ 8. Inventory Rec. — 2644
- ___ 9. Soil Testing. — 2646
- ___ 10. Ground Water. — 2647

New Tanks
- ___ 11. Monitor Plan — 2632
- ___ 12. Access. Secure — 2634
- ___ 13. Plans Submit Date: ____ — 2711
- ___ 14. As Built Date: ____ — 2635

Rev 6/88

Comments:

Removal of Two 10,000-gal. gasoline tanks which are unstocked fiberglass. Groundwater found at a depth of 8-9 feet in excavation. Obvious contamination visible in hole (floating product) and there is a strong smell of gasoline from soil samples. Lab report given to Eric Prestel of ATT.

2 soil samples collected from tank pit just to right of the tanks. Samples taken from black clay at tank backfill depth 1 20' above groundwater level. One soil sample taken beneath product piping. Water sample will be collected possible with remaining water from pit and letting fresh groundwater come in.

Stockpile contains about 200 yards of clay gravel/soil - this will be sampled according to Water Board requirements.

Have authorization for tanks to be removed later without my presence.

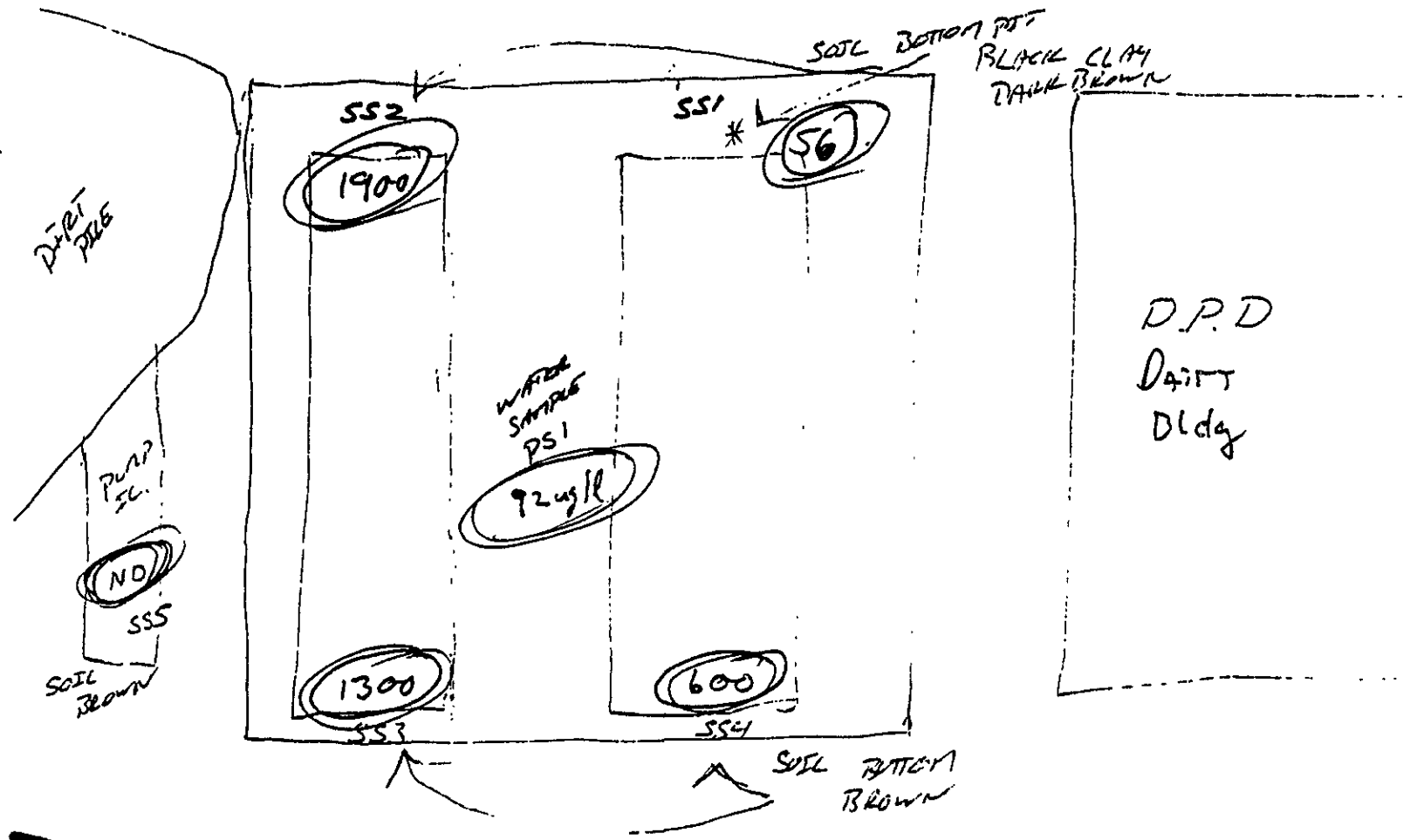
II, III

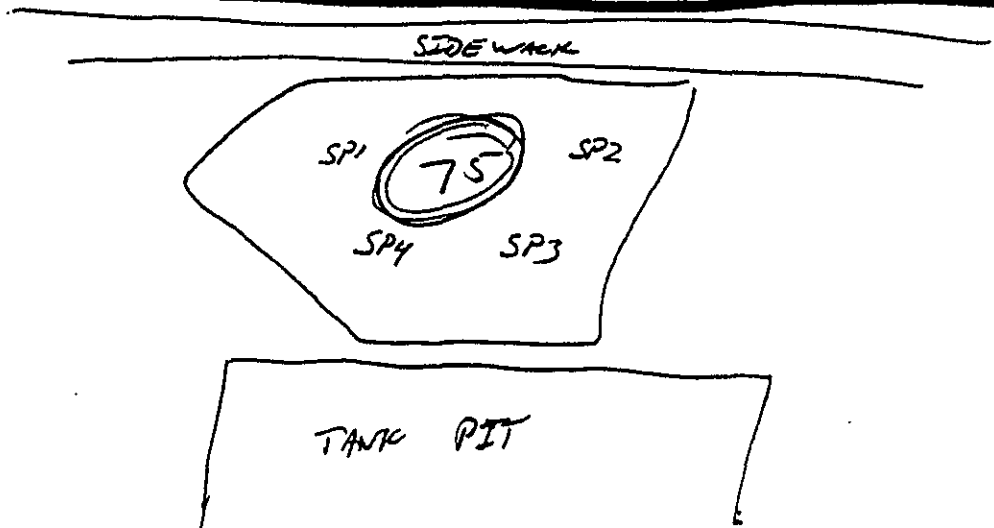
Contact: RICHARD BRUSH

Title: STAFF TECH. Inspector: ____

Signature: [signature] Signature: Gilbert M. Wistar

ALL SOIL SAMPLES HAVE ODOR





ATTACHMENT B

Soil & Groundwater Sample Collection & Handling

ATTACHMENT B

SOIL & GROUNDWATER SAMPLE COLLECTION & HANDLING PROTOCOL

INTRODUCTION & PURPOSE

Because reliable and representative test results must be generated from soil and groundwater samples, it is essential to establish a sampling procedure which assures that all samples are:

- Collected by approved and repeatable methods
- Representative of the materials(s) at the desired location and depth
- Uncontaminated by container and sampling equipment

The following sampling protocol was designed to be a guide to the sampling and handling procedures for soil and groundwater samples. Based on conditions which may be encountered in the field, some modifications to this protocol may be required to fit the needs of an individual site.

SAMPLING PROCEDURES

Groundwater Sampling

Prior to collecting groundwater samples, monitoring wells were purged by bailing until pH, conductivity, and temperature levels stabilize. Wells were purged and groundwater samples were obtained using a Teflon bailer and nylon rope. New nylon rope is used for each well.

The appropriate number of sample containers and type were used for each sample collected, in accordance with the analytical laboratory requirements and EPA protocol. The bottles were filled using the bailer. All sample bottles were pre-cleaned by the supplier according to EPA protocols.

To prevent cross contamination of groundwater samples by the sampling equipment, all equipment used in sampling was washed with a trisodium phosphate solution, triple rinsed with distilled water, and allowed to air dry prior to each use. A sample of the distilled water used in the final rinse was retained for analysis as part of sample quality assurance.

Soil Sampling

After the soil sampler is driven to the desired depth and the samples are retrieved, each end of the ring containing the soil sample is retained for laboratory analysis was sealed with Teflon sheeting, covered with plastic end caps, and sealed with PVC tape. All sample containers (tubes and end caps) were steamed cleaned and air dried prior to use. The soil sample recovered in the ring just above the sample retained for chemical analysis was examined in the field for visual and olfactory indications of chemical contamination and used for lithologic description.

The Unified Soil Classification System (USCS) was used to log and describe the soil by the onsite geologist. These logs also include details of the sampling process such as depth, apparent odors, discoloration, and any other factors which may be required to evaluate the presence of contamination at the site.

POST SAMPLING PROCEDURES

One field/travel blank consisting of one sample bottle filled with distilled water accompanied soil and groundwater sample containers at all times, including during transport to and from the site. Distilled water field/travel blanks were analyzed according to the appropriate EPA Methods corresponding to the soil/groundwater sample analyses.

Sample containers were labeled with sample number, project number, date, and the initials of the person collecting the sample. A separate sample collection record was maintained for each groundwater sample collected.

Soil and groundwater samples collected were analyzed by an analytical laboratory certified by the California Department of Health Services (DHS) for complete chemical analysis of hazardous waste as well as drinking water samples. Quality assurance documentation accompanied all analytical reports generated by the laboratory.

The samples were placed in an ice cooler immediately following collection, and remained in the ice cooler until refrigerated at the analytical laboratory. The samples were delivered to the laboratory direct by courier or overnight freight within 48 hours of time of collection. Appropriate chain of custody forms were used for all samples.

ATTACHMENT C

Fuel Tank Release Form

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☒ NO — HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ YES ☐ NO

FOR LOCAL AGENCY USE ONLY
I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFTY CODE.
SIGNED _____ DATE _____

REPORT DATE: 02/09/90 — CASE #:

REPORTED BY
NAME OF INDIVIDUAL FILING REPORT: Terrance E. Carter — PHONE: (415) 934-4884 — SIGNATURE: Terrance E Carter 02/02/90
REPRESENTING: ☒ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☐ OTHER _____
COMPANY OR AGENCY NAME: Aqua Terra Technologies, Inc.
ADDRESS: 2950 Buskirk, Suite 120 (STREET) — Walnut Creek (CITY) — CA (STATE) — 94596 (ZIP)

RESPONSIBLE PARTY
NAME: Owner: Richard Dodge ☐ UNKNOWN — CONTACT PERSON: Richard Dodge — PHONE: ( )
ADDRESS: 1120 Walker Avenue (STREET) — Walnut Creek (CITY) — CA (STATE) — 94596 (ZIP)

SITE LOCATION
FACILITY NAME (IF APPLICABLE): Dutch Pride Dairy — OPERATOR: Vacant Property — PHONE: ( )
ADDRESS: 7400 Amador Valley Blvd. (STREET) — Dublin (CITY) — Alameda (COUNTY) — 94568 (ZIP)
CROSS STREET: Village Parkway
TYPE OF AREA: ☒ COMMERCIAL ☐ INDUSTRIAL ☐ RURAL ☐ RESIDENTIAL ☐ OTHER _____
TYPE OF BUSINESS: ☐ RETAIL FUEL STATION ☐ FARM ☐ OTHER Vacant

IMPLEMENTING AGENCIES
LOCAL AGENCY / AGENCY NAME: Alameda County Health Care Services — CONTACT PERSON: Gil Wistas — PHONE: 415) 271-4320
REGIONAL BOARD: San Francisco RWQCB — CONTACT PERSON: - — PHONE: (415) 464-1255

SUBSTANCES INVOLVED
(1) NAME: Gasoline — QUANTITY LOST (GALLONS): _____ ☒ UNKNOWN
(2) NAME: _____ QUANTITY LOST (GALLONS): _____ ☐ UNKNOWN

DISCOVERY/ABATEMENT
DATE DISCOVERED: 01/11/90 — HOW DISCOVERED: ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ NUISANCE CONDITIONS ☐ TANK TEST ☒ TANK REMOVAL ☐ OTHER _____
DATE DISCHARGE BEGAN: ☒ UNKNOWN
METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY): ☐ REMOVE CONTENTS ☐ REPLACE TANK ☒ CLOSE TANK ☐ REPAIR TANK ☐ REPAIR PIPING ☐ CHANGE PROCEDURE ☐ OTHER _____
HAS DISCHARGE BEEN STOPPED? ☐ YES ☐ NO IF YES, DATE: _____

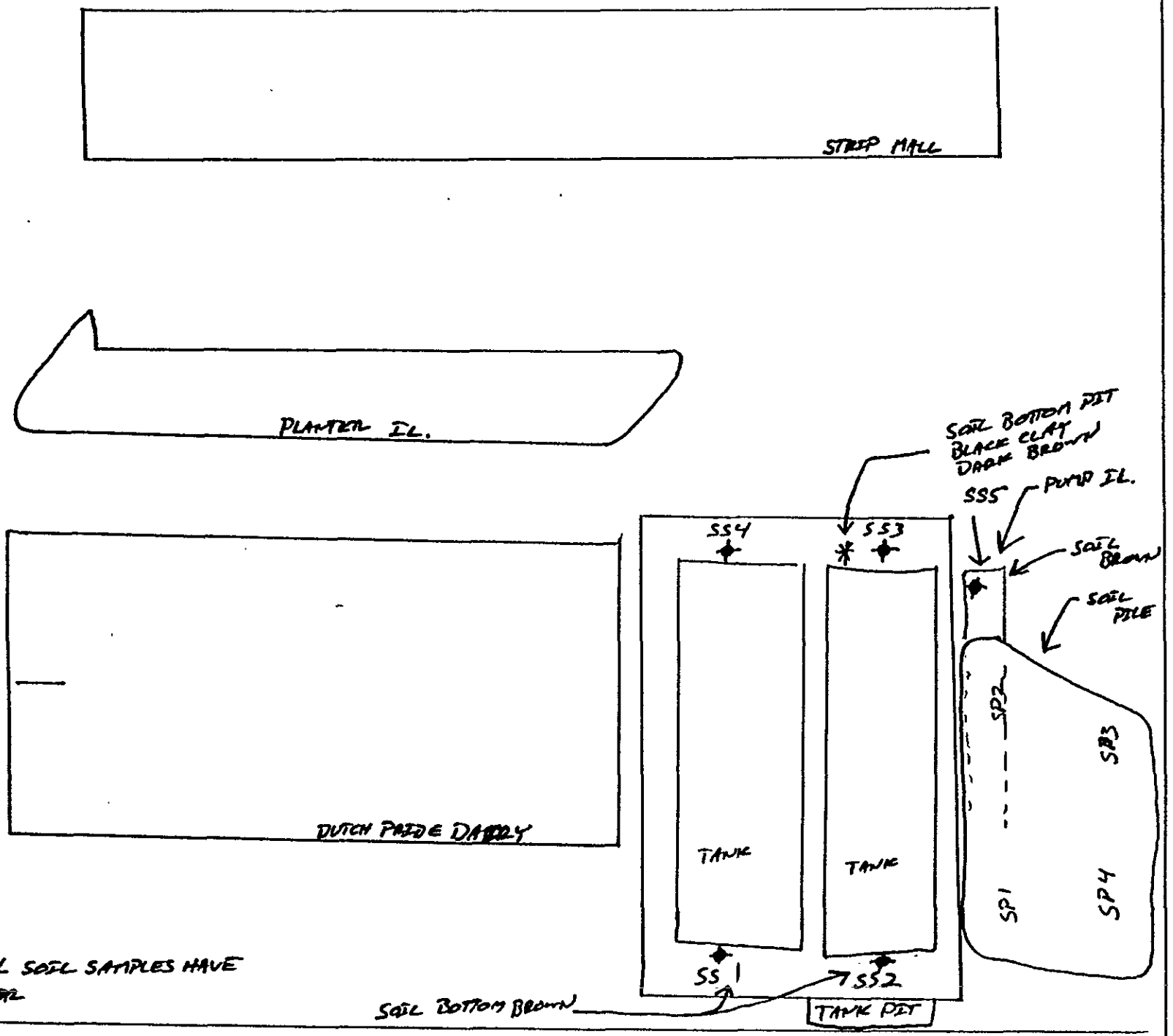
SOURCE/CAUSE
SOURCE OF DISCHARGE: ☒ TANK LEAK ☐ UNKNOWN ☐ PIPING LEAK ☐ OTHER
TANKS ONLY/CAPACITY: 10,000 GAL — AGE 15 YRS ☐ UNKNOWN
MATERIAL: ☐ FIBERGLASS ☒ STEEL ☐ OTHER _____
CAUSE(S): ☐ OVERFILL ☐ RUPTURE/FAILURE ☒ CORROSION ☐ UNKNOWN ☐ SPILL ☐ OTHER _____

CASE TYPE
CHECK ONE ONLY: ☒ UNDETERMINED ☐ SOIL ONLY ☐ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

CURRENT STATUS
CHECK ONE ONLY: ☒ SITE INVESTIGATION IN PROGRESS (DEFINING EXTENT OF PROBLEM) ☐ CLEANUP IN PROGRESS ☐ SIGNED OFF (CLEANUP COMPLETED OR UNNECESSARY) ☐ NO ACTION TAKEN ☐ POST CLEANUP MONITORING IN PROGRESS ☐ NO FUNDS AVAILABLE TO PROCEED ☐ EVALUATING CLEANUP ALTERNATIVES

REMEDIAL ACTION
CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)
☐ CAP SITE (CD) ☐ EXCAVATE & DISPOSE (ED) ☐ REMOVE FREE PRODUCT (FP) ☐ ENHANCED BIO DEGRADATION (IT)
☐ CONTAINMENT BARRIER (CB) ☒ EXCAVATE & TREAT (ET) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ REPLACE SUPPLY (RS)
☐ TREATMENT AT HOOKUP (HU) ☐ NO ACTION REQUIRED (NA) ☐ OTHER (OT) _____

COMMENTS
Work plan in progress.


STRIP MALL
PLANTER IL.
SOIL BOTTOM PIT
BLACK CLAY
DARK BROWN
PUMP IL.
SSS
SS4
SS3
SOIL BROWN
SOIL PILE
SP2
SP3
SP1
SP4
DUTCH PRIDE DAIRY
TANK
TANK
SS1
SS2
SOIL BOTTOM BROWN
TANK PIT
* NOTE ALL SOIL SAMPLES HAVE AN ODOR
SIDE WALK
OIL CHANGERS

ATTACHMENT C

Soil & Groundwater Sample Collection & Handling Protocol

ATTACHMENT C

SOIL & GROUNDWATER SAMPLE COLLECTION & HANDLING PROTOCOL

INTRODUCTION & PURPOSE

Because reliable and representative test results must be generated from soil and groundwater samples, it is essential to establish a sampling procedure which assures that all samples are:

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Sample containers were labeled with sample number, project number, date, and the initials of the person collecting the sample. A separate sample collection record was maintained for each groundwater sample collected.

Soil and groundwater samples collected were analyzed by an analytical laboratory certified by the California Department of Health Services (DHS) for complete chemical analysis of hazardous waste as well as drinking water samples. Quality assurance documentation accompanied all analytical reports generated by the laboratory.

The samples were placed in an ice cooler immediately following collection, and remained in the ice cooler until refrigerated at the analytical laboratory. The samples were delivered to the laboratory direct by courier or overnight freight within 48 hours of time of collection. Appropriate chain of custody forms were used for all samples.

ATTACHMENT D

Laboratory Analytical Results
Chain of Custody Documentation

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

Terry Carter
Aqua Terra Technologies
2950 Buskirk Avenue
Suite 120
Walnut Creek, CA 94596

June 25, 1990
Anametrix W.O.#: 9006172
Date Received : 06/14/90
Project Number : 9115

Dear Mr. Carter:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

Sarah Schoen, Ph.D.
Laboratory Manager

SRS/dm

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

Client : Aqua Terra Technologies
Address : 2950 Buskirk Avenue
Suite 120
City : Walnut Creek, CA 94596
Attn. : Terry Carter

Anametrix W.O.#: 9006172
Date Received : 06/14/90
Purchase Order#: N/A
Project No. : 9115
Date Released : 06/25/90

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
9006172-01	NE CORNER 12'	SOIL	06/13/90	TPH		06/21/90	N/A
9006172-02	SE CORNER 12'	SOIL	06/13/90	TPH		06/20/90	N/A
9006172-03	SE CORNER	SOIL	06/13/90	TPH		06/20/90	N/A
9006172-04	CENTER WALL	SOIL	06/13/90	TPH		06/21/90	N/A

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 9115 NE CORNER 12'
Matrix : SOIL
Date sampled : 06/13/90
Date anl.TPHg: 06/21/90
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 9006172-01
Analyst : CP
Supervisor : DDG
Date released : 06/25/90
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
71-43-2	Benzene	0.2	0.23
108-88-3	Toluene	0.2	1.0
100-41-4	Ethylbenzene	0.2	0.83
1330-20-7	Total Xylenes	0.2	2.7
	TPH as Gasoline	4	49

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 9115 SE CORNER 12'	Anametrix I.D.	: 9006172-02
Matrix	: SOIL	Analyst	: CB
Date sampled	: 06/13/90	Supervisor	: DDG
Date anl.TPHg	: 06/20/90	Date released	: 06/25/90
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	10
1330-20-7	Total Xylenes	5	33
	TPH as Gasoline	100	790

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 9115 SE CORNER	Anametrix I.D.	: 9006172-03
Matrix	: SOIL	Analyst	: CB
Date sampled	: 06/13/90	Supervisor	: COG
Date anl.TPHg	: 06/20/90	Date released	: 06/25/90
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	11
1330-20-7	Total Xylenes	5	29
	TPH as Gasoline	100	570

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.

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

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 9115 CENTER WALL	Anametrix I.D.	: 9006172-04
Matrix	: SOIL	Analyst	: CJ
Date sampled	: 06/13/90	Supervisor	: DOG
Date anl.TPHg	: 06/21/90	Date released	: 06/25/90
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
71-43-2	Benzene	2	7.4
108-88-3	Toluene	2	9.4
100-41-4	Ethylbenzene	2	19
1330-20-7	Total Xylenes	2	76
	TPH as Gasoline	40	900

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.

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

Aqua Terra Technologies
2950 Buskirk Avenue Ste. 120
Walnut Creek, CA 94596
Tel. (415) 934-4884
Fax. (415) 934-0418

(105 13:25)

9006172

(2)

CHAIN OF SAMPLE CUSTODY RECORD
(original document, please return)

Page 1 of 1

Sampled By: Terry Carter

Date Sampled: 6 / 13 / 90

Signature: Terry Carter

Job Number: 9115

Results To Be Sent To: T. Carter

Results Needed By: STD

Sampling Location: Dutch Pride Dairy

Laboratory Name: Anametrix

Contact:

Phone #:

	Sample Identification						Analysis/EPA Method No.	
	Sample Collection			Number of Containers	Preserved	Containers		
	Sample ID	Time (24 hr)	Matrix				Gas BTEX	Remarks
(1)	NE corner 12'	10 : 40	Soil	1			X	
(2)	75'W SE Corner 12'	11 : 00		1			X	
(3)	SE corner 6'	11 : 46		1			X	
(4)	Center Wall	12 : 10		1			X	
		:						
		:						
		:						
		:						
		:						
		:						

Notes:

Relinquished By	Date	Time
Terry Carter	6-14-90	10 :55
		:
		:

Received By	Date	Time
[signature]	6/14/90	10:55
[signature]	6/14/90	13 :00
		:

ATTACHMENT E

Drilling Procedures & Groundwater Monitoring Well Construction/Design

ATTACHMENT E

DRILLING PROCEDURES & GROUNDWATER MONITORING WELL CONSTRUCTION/DESIGN

DRILLING AND SAMPLING PROCEDURES

All borings for well construction were drilled using eight-inch diameter or larger hollow stem auger equipment. A California Registered Geologist directed or surpervised the collection of undisturbed samples of the soils encountered and the preparation of detailed logs for each boring.

Soil sampling was conducted using a modified California drive sampler, a standard penetration sampler, or a five-foot continuous sampler. Representative samples of each soil type were retained in two-inch to three-inch diameter, six-inch long, clean, brass or stainless steel tubes. The samples were retained for verification of soil classification and for chemical laboratory analytical testing, as appropriate. Teflon sheeting was placed between the soil sample and the cap, and the cap was sealed with PVC tape.

Where access limitations did not allow drilling with truck mounted equipment, either a trailer mounted drilling rig, portable power driven, or manually operated soil sampling equipment was utilized. If soil samples were to be retained for analysis, they were collected in clean brass tubes fitted within a thin walled drive sampler. The soil samples were capped and sealed as described above.

All down hole sampling, drilling, and well construction equipment and materials, including augers, casing, and screens were steam cleaned prior to their initial use. The sampling equipment was cleaned prior to each assembly by washing with a trisodium phosphate solution, rinsing with distilled water, and allowing to air dry. The auger flights, drill bit, and sampler were steam cleaned at each boring location.

MONITORING WELL CONSTRUCTION

Monitoring wells were constructed in accordance with applicable local water district or California Department of Water Resources guidelines. The specific completion details for each well were determined in the field at the time of drilling by a California Registered Geologist experienced in groundwater monitoring system design and installation.

Monitoring wells consist of two or four-inch diameter, Schedule 40 PVC casing and screens with flush, threaded joints. No PVC glue was used. The screened sections are machine slotted with either 0.010-inch (0.255 mm) 0.020-inch (0.51 mm) openings. The smaller slot size was used where the wells are screened within fine-grained sandy soils, and the larger slots were used where coarse sand or gravels are encountered. The slotted sections were fitted with a slip-on cap and placed opposite the water-bearing strata in the boring. The blank pipe was connected to the perforated pipe and extends to just below the ground surface.

The annulus between the side of the borehole and the slotted section was filled with a clean sand pack to variable depths, but not less than one or two feet above the perforated pipe. The annulus was packed with either Lonestar No. 1/20 (where 0.010-inch slotted pipe is used) or No. 3 (where 0.020-inch slotted pipe is used) washed sand filter material. The gradation of the filter material is summarized below:

U.S. Sieve No.	Opening (mm)	Percent Passing (No. 3)	Percent Passing (No. 1/20)
6	3.35	100	
8	2.36	99 - 100	
12	1.70	62 - 78	
16	1.18	15 - 33	100
20	0.85	0 - 8	90 - 100
30	0.60	0 - 4	14 - 40
40	0.425		0 - 5

A seal of bentonite pellets approximately 24-inches thick was placed above the sand pack to reduce the risk of grout penetration into the sand. The bentonite pellets were hydrated with distilled water to form a tight plug. A cement/bentonite grout was be placed above the bentonite plug to a depth of approximately two feet below the ground surface. The grout was pumped into the boreholes using a tremie pipe. Concrete was placed from the top of the cement/bentonite mixture to the ground surface.

At most sites in sedimentary formations, it is not practical to "rationally design" a filter pack based on sieve analyses. From experience, Lonestar No. 1/20 or No. 3 washed sand as a filter material was selected for use in wells. The 0.010-inch and 0.020-inch slot sizes were selected to retain 100 percent of the filter material.

The completed wells were enclosed in a traffic rated enclosure placed flush with grade or in an above-ground metal enclosure, and were fitted with a locking cap. If a groundwater level contour map was prepared, well head elevations were determined by a level survey, and well coordinates were determined by a traverse survey. The level/traverse survey was referenced to a bench mark of known or assigned elevation and coordinates. Once water levels have stabilized, water levels in all wells were measured.

After the wells had been completed, they were developed by pumping and surging to clean and stabilize the soils around the screens. A manually operated, positive displacement surge pump and Teflon bailer, surge block, and/or centrifugal pump was used for development. A minimum of 10 well casing volumes of water was removed during development; however, development continued until water flowed clear and pH, temperature, and conductivity had stabilized. All development equipment was steam cleaned prior to its initial use in each well. A well development log was maintained which included 1) a record of development water parameters at frequent intervals, 2) the quantity of water removed during development, and 3) flow rates during development.

Soil cuttings generated during drilling were wrapped in plastic sheeting, and water generated during well development was retained in secured 55-gallon drums until chemical analytical data from samples were received.

ATTACHMENT F

Permit Documentation
Well Construction & Development Details
Soil Boring Logs

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
5997 PARKSIDE DRIVE • PLEASANTON, CALIFORNIA 94588 • (415) 484-2600

29 November 1990

Aqua Terra Technologies
2950 Buskirk Avenue, Suite 120
Walnut Creek, CA 94596

Gentlemen:

Enclosed is Groundwater Protection Ordinance permit 90690 for a monitoring well construction project at 7400 Amador Valley Boulevard in Dublin for Richard Dodge.

Please note that permit condition A-2 requires that a well construction report be submitted after completion of the work. The report should include drilling and completion logs, location sketch, and permit number.

If you have any questions, please contact Wyman Hong or Craig Mayfield at 484-2600.

Very truly yours,

J. Killingstad, Chief
Water Resources Engineering

WH:mm
Enc.

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94566 ♦ (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

OCATION OF PROJECT 7400 Amador Valley Blvd., Dublin, CA

LIENT
ame Richard E. Dodge
ddress 1120 Walker Ave. Phone 935-3354
ity Walnut Creek Zip 94596

PPLICANT
ame Aqua Terra Technologies, Inc.
ddress 2950 Buskirk #120 Phone (415) 934-4884
ity Walnut Creek Zip 94596

YPE OF PROJECT

ell Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	___
Monitoring	X	Well Destruction	___

ROPOSED WATER SUPPLY WELL USE N/A
omestic ___ Industrial ___ Other ___
unicipal ___ Irrigation ___

RILLING METHOD:
ud Rotary ___ Air Rotary ___ Auger X
able ___ Other ___

RILLER'S LICENSE NO. C57-596545 (Exceltech)

ELL PROJECTS
Drill Hole Diameter 12 in. Maximum
Casing Diameter 4 in. Depth 20 ft.
Surface Seal Depth 1 ft. Number 1
(5 ft. minimum sanitary seal)

EOTECHNICAL PROJECTS N/A
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

STIMATED STARTING DATE December 5, 1990
STIMATED COMPLETION DATE December 5, 1990

hereby agree to comply with all requirements of this ermit and Alameda County Ordinance No. 73-68.

PPLICANT'S IGNATURE Terrance E. Carter Date Nov. 26, 90

FOR OFFICE USE

PERMIT NUMBER 90690
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

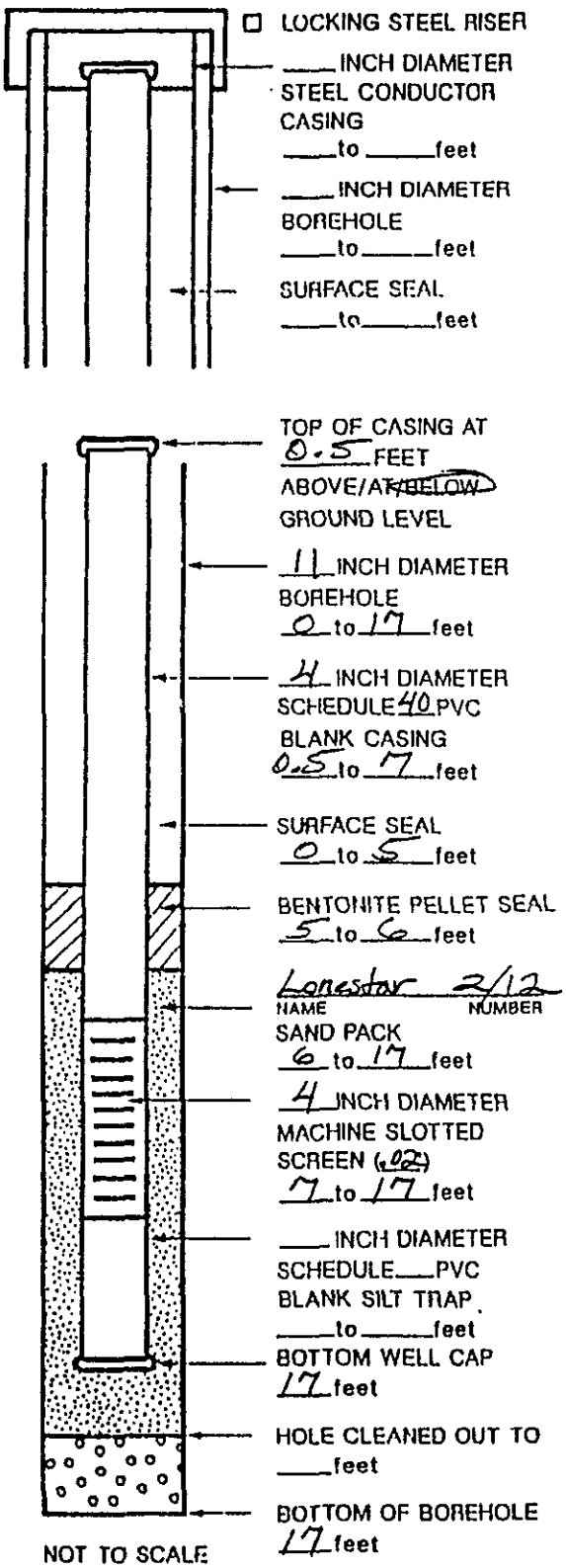
D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 26 Nov 90
Wyman Hong

121989

WELL CONSTRUCTION AND DEVELOPMENT DETAILS



NOT TO SCALE

ADDITIONAL INFORMATION:

JOB NAME	Dutch Pride Dairy		
JOB NUMBER	9115	PROJECT MANAGER	TC
LOGGED BY	BB	EDITED BY	
WELL DESIGNATION	MW13	DATE	12-5-90
DRILLING COMPANY	Exceltech		
EQUIPMENT:	☐ ____ INCH ROTARY WASH ☒ 10 INCH HOLLOW STEM AUGER ☐ ____ INCH DUAL TUBE	DRILLER	Frank
		HOURS DRILLED	
VOLUME OF WATER USED DURING DRILLING:		GALLONS	
METHOD OF DECONTAMINATION PRIOR TO DRILLING:	Steam Cleaning		

DEVELOPMENT

METHOD OF DEVELOPMENT:

DEVELOPMENT BEGAN:	DATE	TIME	
YIELD: ____ GPM	TIME: FROM ____ TO ____	DATE:	
YIELD: ____ GPM	TIME: FROM ____ TO ____	DATE:	
DEVELOPMENT ENDED:	DATE	TIME	
TOTAL WATER REMOVED DURING DEVELOPMENT:		GALLONS	

DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:
☐ CLEAR ☐ SLIGHTLY CLOUDY ☐ MOD. TURBID ☐ VERY MUDDY

ODOR OF WATER:

WATER DISCHARGED TO:
☐ GROUND SURFACE ☐ STORM SEWERS ☐ TANK TRUCK ☐ STORAGE TANK ☐ DRUMS ☐ OTHER

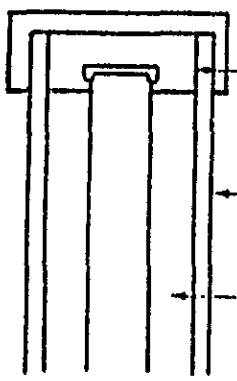
DEPTH TO WATER AFTER DEVELOPMENT ____ FEET

MATERIALS USED

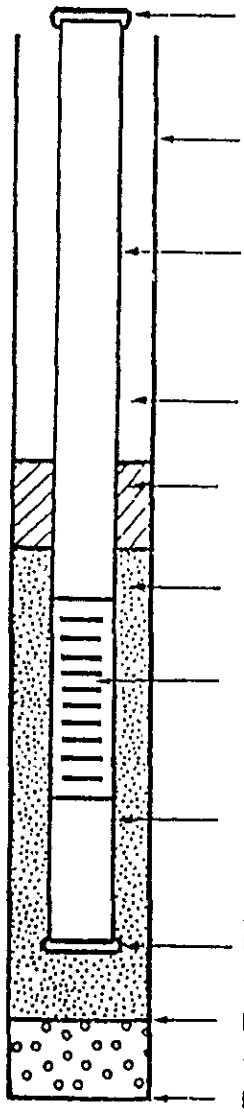
____ SACKS OF ____ SAND
____ SACKS OF ____ CEMENT
____ GALLONS OF GROUT USED
____ SACKS OF POWERED BENTONITE
____ POUNDS OF BENTONITE PELLETS
____ FEET OF ____ INCH PVC BLANK CASING
____ FEET OF ____ INCH PVC SLOTTED SCREEN
____ FEET OF ____ INCH STEEL CONDUCTOR CASING

GROUT PUMP USED? ☐ YES ☐ NO
TREMIE PIPE USED? ☐ YES ☐ NO
WELL COVER USED ☐ LOCKING STEEL COVER ☐ CHRISTY BOX ☐ OTHER ____
SILT TRAP USED? ☐ YES ☐ NO

WELL CONSTRUCTION AND DEVELOPMENT DETAILS



- ☐ CHRISTY BOX
- ☐ LOCKING STEEL RISER
- ____ INCH DIAMETER STEEL CONDUCTOR CASING ____ to ____ feet
- ____ INCH DIAMETER BOREHOLE ____ to ____ feet
- SURFACE SEAL ____ to ____ feet



- TOP OF CASING AT ____ FEET ABOVE/AT/BELOW GROUND LEVEL
- ____ INCH DIAMETER BOREHOLE ____ to ____ feet
- ____ INCH DIAMETER SCHEDULE ____ PVC BLANK CASING ____ to ____ feet
- SURFACE SEAL ____ to ____ feet
- BENTONITE PELLET SEAL ____ to ____ feet
- NAME _____ NUMBER _____ SAND PACK ____ to ____ feet
- ____ INCH DIAMETER MACHINE SLOTTED SCREEN (____") ____ to ____ feet
- ____ INCH DIAMETER SCHEDULE ____ PVC BLANK SILT TRAP ____ to ____ feet
- BOTTOM WELL CAP ____ feet
- HOLE CLEANED OUT TO ____ feet
- BOTTOM OF BOREHOLE ____ feet

NOT TO SCALE

ADDITIONAL INFORMATION:

JOB NAME	Dutch Pride Dairy
JOB NUMBER	9115
PROJECT MANAGER	
LOGGED BY	Layne
EDITED BY	
WELL DESIGNATION	MW13
DATE	12/10/90
DRILLING COMPANY	
EQUIPMENT:	☐ ____ INCH ROTARY WASH ☐ ____ INCH HOLLOW STEM AUGER ☐ ____ INCH DUAL TUBE
DRILLER	
HOURS DRILLED	
VOLUME OF WATER USED DURING DRILLING:	GALLONS
METHOD OF DECONTAMINATION PRIOR TO DRILLING:	

DEVELOPMENT

METHOD OF DEVELOPMENT: Hand Pump

DEVELOPMENT BEGAN: DATE 12/10/90 TIME 1201

YIELD: 3 GPM	TIME: FROM 1201	TO 1210	DATE: 12/10/90
YIELD: 3 GPM	TIME: FROM 1242	TO 1246	DATE: 12/10/90

DEVELOPMENT ENDED: DATE 12/10/90 TIME 1246

TOTAL WATER REMOVED DURING DEVELOPMENT: 39 GALLONS

DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:
☐ CLEAR ☒ SLIGHTLY CLOUDY ☐ MOD. TURBID ☐ VERY MUDDY

ODOR OF WATER: Yes

WATER DISCHARGED TO:
☐ GROUND SURFACE ☐ STORM SEWERS ☐ TANK TRUCK ☐ STORAGE TANK ☒ DRUMS ☐ OTHER

DEPTH TO WATER AFTER DEVELOPMENT _____ FEET

MATERIALS USED

_____ SACKS OF _____ SAND

_____ SACKS OF _____ CEMENT

_____ GALLONS OF GROUT USED

_____ SACKS OF POWERED BENTONITE

_____ POUNDS OF BENTONITE PELLETS

_____ FEET OF ____ INCH PVC BLANK CASING

_____ FEET OF ____ INCH PVC SLOTTED SCREEN

_____ FEET OF ____ INCH STEEL CONDUCTOR CASING

GROUT PUMP USED? ☐ YES ☐ NO

TREMIE PIPE USED? ☐ YES ☐ NO

WELL COVER USED ☐ LOCKING STEEL COVER ☐ CHRISTY BOX ☐ OTHER _____

SILT TRAP USED? ☐ YES ☐ NO

ATTACHMENT G

Laboratory Analytical Results
Chain of Custody Documentation
Sample Collection Records

AQUA TERRA TECHNOLOGIES, INC.

ATT

Log of Exploratory Boring

Project : Dutch Pride Dairy — Project No: 9115

Location 7400 Amador Valley Blvd., Dublin, CA — Date: 12-05-90

Boring No: MW13 — Driller: Exceltech (Frank) — Page 1 of 1

Logged by: BB — Project Manager: TC — Reviewed by:

Penetration (0.5 Feet)	Depth (Feet)	USCS	Field Description
	0	asphalt	0' - 0.3' Asphalt
	1	fill	0.3' - 1.5' Gravel fill
	2		1.5' - 4' Silty clay; dark olive gray (5Y 4/2) to black; minor component of fine sand; moderate plasticity; medium stiff to stiff; moist.
	3	CL	
	4		4' - 7' Sandy clay to clayey sand; olive gray (5Y 5/2); range of 20% to 90% fine sand; moist (strong hydrocarbon odor).
	5		5' Sample
5, 7, 8	6	CL-SC	
	7		7' - 17' Silty Clay; very dark gray (2.5Y 3/0); high plasticity; stiff; moist (strong hydrocarbon odor to 13).
	8		
	9		
	10		10' Sample
4, 5, 7	11	OH	11' First water
	12		
	13		
	14		
	15		
4, 6, 7	16		16' Sample
	17		B. O. H. @ 17'
	18		
	19		
	20		
	21		
	22		
	23		
	24		
	25		
	26		
	27		
	28		

MW131290.PM3

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

KIMBERLY LARGAMIRSO
AQUA TERRA TECHNOLOGIES
2950 BUSKIRK AVENUE, SUITE 120
WALNUT CREEK, CA 94596

Workorder # : 9012119
Date Received : 12/12/90
Project ID : 9115
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9012119- 1	MW13
9012119- 2	TB
9012119- 3	FB

This report is paginated for your convenience and ease of review. It contains 3 pages excluding the cover letter. The report is organized into sections. Each section contains all analytical results and quality assurance data related to a specific group or section within Anametrix. The Report Summary that precedes each section will help you determine which group at Anametrix generated the data. The Report Summary will contain the signatures of the department supervisor and a chemist, both of whom reviewed the analytical data. Please refer all questions to the department supervisor that signed the form.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Burt Sutherland
Laboratory Director

12-21-90
Date

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

KIMBERLY LARGAMIRSO
AQUA TERRA TECHNOLOGIES
2950 BUSKIRK AVENUE, SUITE 120
WALNUT CREEK, CA 94596

Workorder # : 9012119
Date Received : 12/12/90
Project ID : 9115
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9012119- 1	MW13	H2O	12/12/90	TPHg/BTEX
9012119- 2	TB	H2O	12/12/90	TPHg/BTEX
9012119- 3	FB	H2O	12/12/90	TPHg/BTEX

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

KIMBERLY LARGAMIRSO
AQUA TERRA TECHNOLOGIES
2950 BUSKIRK AVENUE, SUITE 120
WALNUT CREEK, CA 94596

Workorder # : 9012119
Date Received : 12/12/90
Project ID : 9115
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Department Supervisor — 12-21-90 Date

Chemist — Inna Shor 12/21/90 Date

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

Anametrix W.O.: 9012119
Matrix : WATER
Date Sampled : 12/12/90

Project Number : 9115
Date Released : 12/21/90

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW13 -01	Sample I.D.# TB -02	Sample I.D.# FB -03	Sample I.D.# 04B1219A BLANK
Benzene	0.5	37	ND	ND	ND
Toluene	0.5	8.7	ND	ND	ND
Ethylbenzene	0.5	5.7	ND	ND	ND
Total Xylenes	0.5	20	ND	ND	ND
TPH as Gasoline	50	190	ND	ND	ND
% Surrogate Recovery		74%	96%	89%	98%
Instrument I.D.		HP4	HP4	HP4	HP4
Date Analyzed		12/19/90	12/19/90	12/19/90	12/19/90
RLMF		1	1	1	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.
Anametrix control limits for surrogate recovery are 50-150%.

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

Tina Shor 12/21/90
Analyst Date

Supervisor 12-21-90
Supervisor Date

Aqua Terra Technologies, Inc.
2950 Buskirk Avenue, Ste. 120
Walnut Creek, CA 94596
Tel. (415) 934-4884
Fax. (415) 934-0418

9012119
9115

CHAIN OF SAMPLE CUSTODY RECORD

(original document, please return)

ATT

Page 1 of 1

Sampled By: Layne Williams
Signature: Layne Williams
Results To Be Sent To: Kimberly Largamirso
Results Needed By: 12/28/90
Fax Results ASAP ☒

Date Sampled: 12/12/90
ATT Job #: 9115
Lab Name: Anametrix
Contact: Jennifer
Phone #:
Lab Job #:

	Sample Collection				Sample Preservation				Sample Containers				Analysis/EPA Method No.						
	Sample I.D.	Time (24 hr)	Matrix (e.g. Water, Soil)	Number of Containers	Ice	HCL	Dry Ice		40 ml VOA				TPH Gas	BTEX					Remarks
01	MW13	1320	Water	3	X	X			3				X	X					samples cold, ok, voas HCL P. tech
02	TB	1245	"	3	X	X			3				X	X					
03	FB	1135	"	3	X	X			3				X	X					

Notes: ~~NLW Note~~ Normal Turnaround.

Relinquished by/ Company Affiliation	Date	Time	Received by: Company Affiliation	Date	Time
Layne Williams	12/12/90	1700		12/12/90	17:00

SAMPLE COLLECTION RECORD - MONITOR WELL

ATT

Date: 12-13-90 Sample I.D.: MW13 Job No.: 9115

Site Location: Dutch Pride Dairy

No. of Containers : 3 /(check one): X Well Samples;

___Duplicates from well_____; ___Travel Blanks;

___Field Blanks; ___Other (explain)/_____

W.L.(1/100'): 9.68' Time : 1235 B.O.W.(1/2'): 17'

Method: X Electric Well Sounder; ___Other/_____

Con./pH meter calibrated: (Y) / N Well Loc. Map: (Y) / N

Calculated Purge Volume (4 casing volumes): 19 gallons

Purging Method: X Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr): 1257, Product: Y / (N)
Sheen: Y / (N), Odor: Y / (N) Vapor:____ ppm / %LEL

Turbidity: N, Color: N

Time Stop Purging (24 hr): 1314, Product: Y / (N)
Sheen: Y / (N), Odor: Y / (N) Vapor:____ ppm / %LEL

Turbidity: light-red, Color: Brown

	Temp.	pH	Cond.	Purge Vol.	Time
First :	18°C	6.57	4060 µs	6	1300
Second:	18.5°	6.76	4310	12	1306
Final :	18°C	6.84	4210	19	1314

Sample Collection Time (24 hr): 1320

Notes: [illegible]

Collected By (signature): [signature]

SAMPLE COLLECTION RECORD - MONITOR WELL

ATT

Date: 12-12-90 Sample I.D.: ~~MW13~~ TB Job No.: 9115

Site Location: Dutch Pride Dairy

No. of Containers : 3 /(check one): ___Well Samples;

___Duplicates from well_____; X Travel Blanks;

___Field Blanks; ___Other (explain)/_____

W.L.(1/100'): ~~1245~~ Time :_____ B.O.W.(1/2'):_____

Method:___Electric Well Sounder; ___Other/_____

Con./pH meter calibrated: Y / N Well Loc. Map: Y / N

Calculated Purge Volume (4 casing volumes):_____ gallons

Purging Method: ___Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr):_____, Product: Y / N
Sheen: Y / N , Odor: Y / N , Vapor:____ ppm / %LEL

Turbidity:_____, Color:_____

Time Stop Purging (24 hr):_____, Product: Y / N
Sheen: Y / N , Odor: Y / N , Vapor:____ ppm / %LEL

Turbidity:_____, Color:_____

	Temp.	pH	Cond.	Purge Vol.	Time
First :					
Second:					
Final :					

Sample Collection Time (24 hr): 1245

Notes:_____

Collected By (signature): Laura Williams

SAMPLE COLLECTION RECORD - MONITOR WELL

Date: 12-12-90 Sample I.D.: ~~9115~~ FB Job No.: 9115

Site Location: Dutch Pride Dairy

No. of Containers : 3 /(check one): ___Well Samples;

___Duplicates from well_____; ___Travel Blanks;

X Field Blanks; ___Other (explain)/_____

W.L.(1/100'):_____ Time :_____ B.O.W.(1/2'):_____

Method:___Electric Well Sounder; ___Other/_____

Con./pH meter calibrated: Y / N Well Loc. Map: Y / N

Calculated Purge Volume (4 casing volumes):_____ gallons

Purging Method: ___Disposable Bailer; ___Teflon Bailer;

___Other/_____

Time Start Purging (24 hr):_____, Product: Y / N
Sheen: Y / N , Odor: Y / N , Vapor:____ ppm / %LEL

Turbidity:_____, Color:_____

Time Stop Purging (24 hr):_____, Product: Y / N
Sheen: Y / N , Odor: Y / N , Vapor:____ ppm / %LEL

Turbidity:_____, Color:_____

	Temp.	pH	Cond.	Purge Vol.	Time
First :					
Second:					
Final :					

Sample Collection Time (24 hr): 1135

Notes:_____

Collected By (signature): Kevin Williams

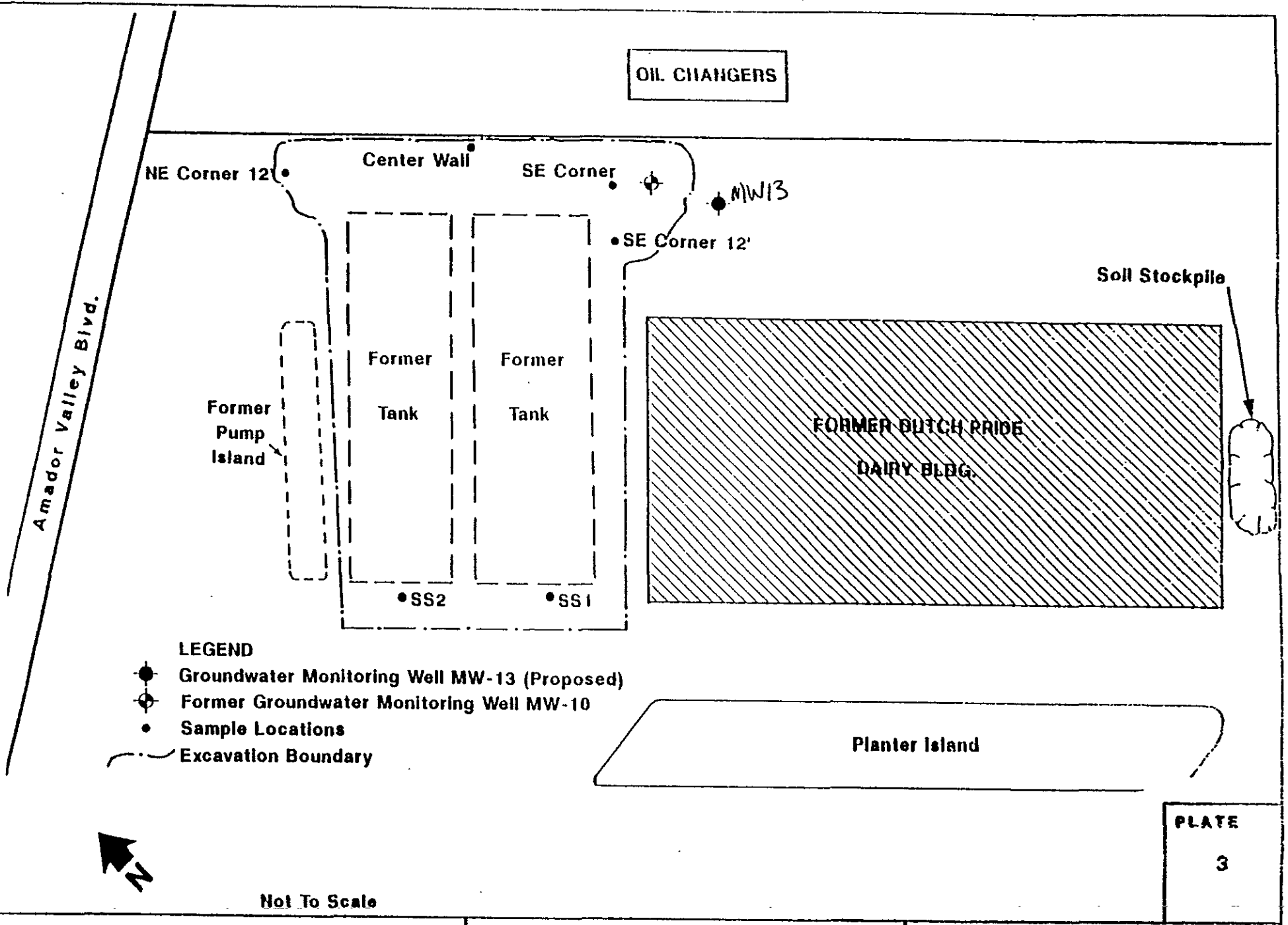


PLATE 3

ATT Aqua Terra Technologies Consulting Engineers & Scientists

Soil Excavation and Sample Locations

Dutch Pride Dairy

JOB NUMBER	DATE
9115	9/90