TERRATECH

1365 VANDER WAY SAN JOSE, CALIFORNIA 95112 (408) 297-6969 FAX (408) 297-7716

90 DEC 18 AM 11:03

December 13, 1990
Project 4454/2

Mr. Rich Hiett
California Regional Water Quality Control Board
1800 Harrison Street, Suite 700
Oakland, California 94612

Subject: Request for Case Closure
Sunnyside Nursery Fuel Leak
24934 Mohr Drive
Hayward, California

Dear Mr. Hiett:

The attached letter report presents the results of the November 1990 sampling and analysis of the ground water monitoring well located at the former Sunnyside Nursery, 24934 Mohr Drive in Hayward, California.

This marks the fourth round of no detectable fuel in the ground water beneath this site. Based on this demonstrated absence of ground water impact, we formally request the RWQCB to review the documentation presented to date and issue a Case Closure.

Sincerely,

TERRATECH, INC.

E. R. Lautenbach

Eric R. Lautenbach
CE 42437

REGISTERED PROFESSIONAL ENGINEER
ERIC R. LAUTENBACH
No. C042437
EXP. 3/31/92
CIVIL
STATE OF CALIFORNIA

Attachment (November 1990 Monitoring Report)

cc: Hugh Murphy, Hayward Fire Department
Pamela Evans, Alameda County Health Services
Laura Rice, The Plymouth Group

225-K CANNERY ROW MONTEREY, CA 93940 (408) 372-3716 FAX (408) 372-7481
7891 WESTWOOD DR., SUITE 101 GILROY, CA 95020 (408) 842-0236 FAX (408) 842-7314
141 SUBURBAN RD., SUITE C2 SAN LUIS OBISPO, CA 93401 (805) 543-5493 FAX (805) 543-2748

TERRATECH

1365 VANDER WAY SAN JOSE, CALIFORNIA 95112 (408) 297-6969 FAX (408) 297-7716

December 13, 1990
Project 4454/2

Ms. Laura Rice
The Plymouth Group
1616 North Shoreline Boulevard
Mountain View, California 94043

Subject: Quarterly Ground Water Report - November 1990
Area of Former Diesel Tank
Sunnyside Nursery
Hayward, California

Dear Ms. Rice:

This letter report describes the field work performed and the findings gained from Terratech's recent ground water quality test at the Sunnyside Nursery site in Hayward, California. This marks the fourth quarterly round of monitoring at the location of the former diesel tank.

The objective of this testing was to document the continued absence of ground water impact after a nearby underground diesel tank (see Figure 1) and its associated backfill soil were removed (ref. Project 4454/2 letter reports dated February 26, March 13, and June 26, 1990). The soil between the north end of the tank and the pump was found to be slightly contaminated.

WORK PERFORMED

On November 27, 1990 MW-1 was purged and sampled using a pre-cleaned Teflon bailer. Approximately four well volumes of water were removed and drummed. Final pH measurements stabilized to $\pm$ 0.1 pH units; final temperature to $\pm$ 1 ^{o}F; and final conductivity to $\pm$ 10 micromhos/cm. Water samples were placed in containers supplied by the laboratory - two volatile organic analysis (VOA) vials (no headspace) and two amber-colored glass bottles.

All samples were kept iced or refrigerated from the time of collection to the time of testing. Standard chain-of-custody records were prepared to document sample collection, handling and analysis requests (see Appendix).

225-K CANNERY ROW MONTEREY, CA 93940 (408) 372-3716 FAX (408) 372-7481
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Project 4454/2

December 13, 1990

FINDINGS AND COMMENTS

Concurrent measurements of the ground water levels at three additional monitoring wells on an adjacent site (Sunnyside Commons II) continues to confirm our assumed west-southwesterly gradient direction (see Figure 2).

The analytical results to date are summarized in Table 1. The latest laboratory report is presented in the Appendix. No detectable amount of diesel or volatile organics was found in the collected sample.

This ground water finding continues to support our opinion that the trace amounts of methylene chloride and 1,1,1-trichloroethane (TCA) detected in the DH-2 grab sample from our original investigation were somehow introduced during the sampling or analytical processes. Further, there does not appear to be a ground water impact from the former diesel fuel system.

In accordance with the present California Regional Water Quality Control Board (RWQCB) guidelines, this completion of four quarters of clean post-cleanup monitoring warrants case review for closure.

Sincerely,

TERRATECH, INC.

E. R. Lautenbach

Eric R. Lautenbach
CE 42437

Attachments

cc: Hugh Murphy, Hayward Fire Department
Rich Hiett, California Regional Water Quality Control Board
Pamela Evans, Alameda County Health Services

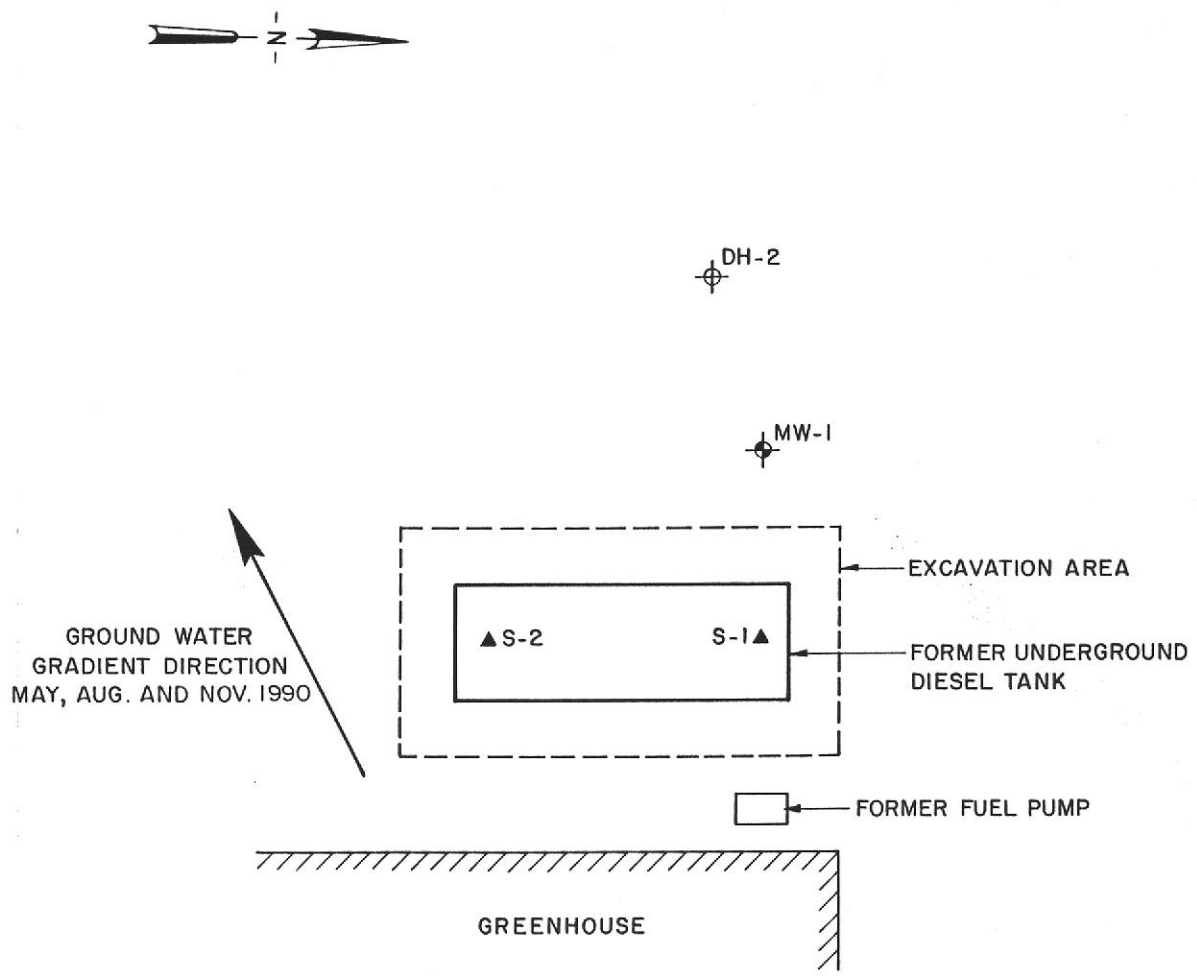
TABLE 1

SUMMARY OF ANALYTICAL RESULTS FOR MONITORING WELL MW-1

Sunnyside Nursery
Hayward, California

SAMPLE & DATE	BENZENE (ppm)	TOLUENE (ppm)	ETHYL-BENZENE (ppm)	XYLENES (ppm)	TPH as DIESEL (ppm)	VOLATILE ORGANICS (ppm)
SOIL @ 12.5'						
2/15/90	< 0.005	< 0.005	< 0.005	< 0.005	< 10	---
GROUND WATER						
2/21/90	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	N.D.
5/18/90	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	N.D.
8/28/90	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	N.D.
11/27/90	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	N.D.

Note:
N.D. indicates that all compounds in the analysis were below the reporting limits of the method (see appended lab report).



LEGEND

- DRILL HOLE (PHASE I STUDY)
- MONITORING WELL
- ▲ TANK REMOVAL SOIL SAMPLE

SCALE: 1" = 10'

12-90

TERRATECH

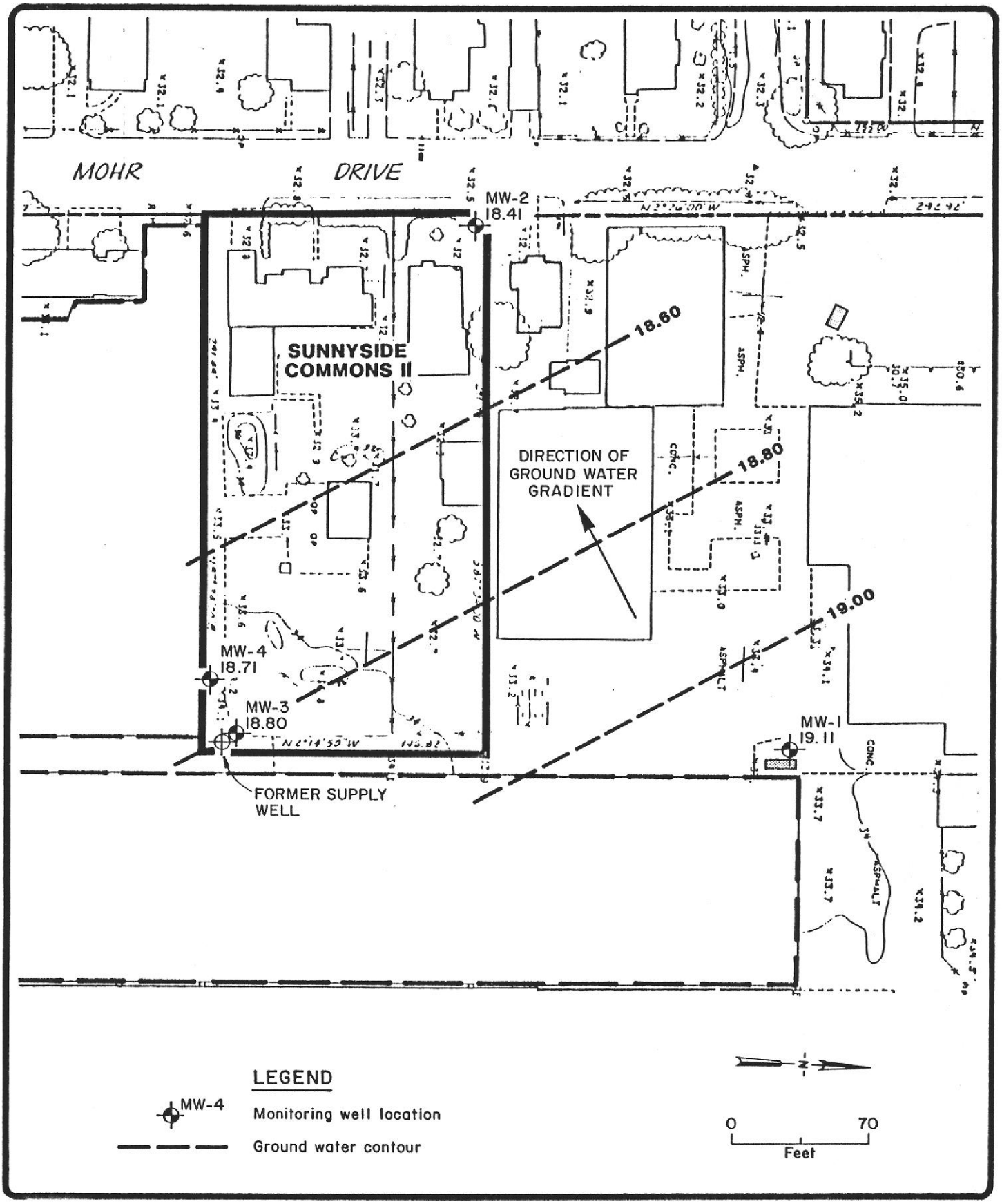
SUNNYSIDE NURSERY
HAYWARD, CALIFORNIA

LOCATION OF MONITORING WELL MW-1

FIGURE 1

PROJECT 4454/2

SAN JOSE BLUEPRINT CO.
PRINTED ON JR 330



Dec. 1990

TERRATECH

SUNNYSIDE COMMONS II
HAYWARD, CALIFORNIA

GROUND WATER GRADIENT 11/27/90

FIGURE
2

PROJECT
4454/2

SAN JOSE BLUEPRINT CO.
PRINTED ON JR 330

APPENDIX

CHAIN-OF-CUSTODY

AND

ANALYTICAL LABORATORY RESULTS

TERRATECH

CHAIN OF CUSTODY RECORD

P.O. NO. 5256

TURNAROUND: 2-week

PROJECT NUMBER: #4454/2

SAMPLERS (signature): Matt Blan

	Station Number	Date	Time	Comp.	Grab	Station Location	Number of Containers	Analysis Required: TPH DIESEL	EPA 8240	REMARKS: SAMPLE DEPTH
(1)	MW-1	11/28/90	PM				2 WATER 2 AMBER	X	X	15' ±

Relinquished by(signature): / Company or Agency:	Date / Time	Received by (signature): / Company or Agency:	Relinquished by(signature): / Company or Agency:	Date / Time	Received by (signature): / Company or Agency:
Relinquished by(signature): / Company or Agency:	Date / Time	Received by (signature): / Company or Agency:	Relinquished by: / Company or Agency:	Date / Time	Received by (signature): / Company or Agency:
Relinquished by(signature): Matt Blan / Company or Agency: TERRATECH, INC.	Date / Time 11/28/90 10:07	Received for Laboratory by: (signature) L. Kent	Date / Time 11-28-90 10:07	Remarks/Shipping Information: Send reports to: Eric Lautenbach, 1365 VANDER WAY, SAN JOSE 95112	

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

TERRATECH

DEC 12 1990

RECEIVED

REPORT

MR. ERIC LAUTENBACH
TERRATECH, INC. - SAN JOSE
1365 VANDER WAY
SAN JOSE, CA 95112

Workorder # : 9011232
Date Received : 11/28/90
Project ID : 4454/2
Purchase Order: 5256

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

ANAMETRIX ID	CLIENT SAMPLE ID
9011232- 1	MW-1

This report is paginated for your convenience and ease of review. It contains 9 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

12-11-90
Date

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

MR. ERIC LAUTENBACH
TERRATECH, INC. - SAN JOSE
1365 VANDER WAY
SAN JOSE, CA 95112

Workorder # : 9011232
Date Received : 11/28/90
Project ID : 4454/2
Purchase Order: 5256
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9011232- 1	MW-1	H2O	11/27/90	TPHd

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

MR. ERIC LAUTENBACH
TERRATECH, INC. - SAN JOSE
1365 VANDER WAY
SAN JOSE, CA 95112

Workorder # : 9011232
Date Received : 11/28/90
Project ID : 4454/2
Purchase Order: 5256
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Cheryl Balmer 12/11/90
Department Supervisor Date

Gareth Vorgt 12/11/90
Chemist Date

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

Anametrix W.O.: 9011232
Matrix : WATER
Date Sampled : 11/27/90
Date Extracted: 11/30/90

Project Number : 4454/2
Date released : 12/11/90
Instrument I.D.: HP19

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9011232-01	MW-1	12/03/90	50	ND
DWBL113090	METHOD BLANK	12/03/90	50	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 sample extraction by EPA Method 3510.

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

Garth Voigt 12/11/90
Analyst Date

Cheryl Balmer 12/11/90
Supervisor Date

ANAMETRIX REPORT DESCRIPTION
GCMS

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

Tentatively Identified Compounds (TICs)

TIC forms contain tabulated results for non-target compounds detected in GC/MS analyses. TICs must be requested at the time samples are submitted at Anametrix. TIC forms immediately follow the OADS form for each sample. If TICs are requested but not found, then TIC forms will not be included with the report.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anametrix uses several data qualifiers (Q) in it's report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.
- A - Indicates that the tentatively identified compound is a suspected aldol condensation product. This is common in EPA Method 8270 soil analyses.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

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

MR. ERIC LAUTENBACH
TERRATECH, INC. - SAN JOSE
1365 VANDER WAY
SAN JOSE, CA 95112

Workorder # : 9011232
Date Received : 11/28/90
Project ID : 4454/2
Purchase Order: 5256
Department : GCMS
Sub-Department: GCMS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9011232- 1	MW-1	H2O	11/27/90	8240

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

MR. ERIC LAUTENBACH
TERRATECH, INC. - SAN JOSE
1365 VANDER WAY
SAN JOSE, CA 95112

Workorder # : 9011232
Date Received : 11/28/90
Project ID : 4454/2
Purchase Order: 5256
Department : GCMS
Sub-Department: GCMS

QA/QC SUMMARY :

- No QA/QC problems encountered.

Paul Gowan 12-6-90
Department Supervisor Date

Janice Waterida 12/6/90
Chemist Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 624/8240
ANAMETRIX, INC. (408)432-8192

Project ID : 4454/2
Sample ID : MW-1
Matrix : WATER
Date Sampled :11/27/90
Date Analyzed :12/ 4/90
Instrument ID : F3

Anametrix ID : 9011232-01
Analyst : LW
Supervisor : PG

Dilution Factor : 1.00
Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	CHLOROMETHANE	10.	ND	U
75-01-4	VINYL CHLORIDE	10.	ND	U
74-83-9	BROMOMETHANE	10.	ND	U
75-00-3	CHLOROETHANE	10.	ND	U
75-69-4	TRICHLOROFLUOROMETHANE	5.	ND	U
75-35-4	1,1-DICHLOROETHENE	5.	ND	U
76-13-1	TRICHLOROTRIFLUOROETHANE	5.	ND	U
67-64-1	ACETONE	20.	ND	U
75-15-0	CARBON DISULFIDE	5.	ND	U
75-09-2	METHYLENE CHLORIDE	5.	ND	U
156-60-5	TRANS-1,2-DICHLOROETHENE	5.	ND	U
75-34-3	1,1-DICHLOROETHANE	5.	ND	U
78-93-3	2-BUTANONE	20.	ND	U
156-59-2	CIS-1,2-DICHLOROETHENE	5.	ND	U
67-66-3	CHLOROFORM	5.	ND	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	ND	U
56-23-5	CARBON TETRACHLORIDE	5.	ND	U
71-43-2	BENZENE	5.	ND	U
107-06-2	1,2-DICHLOROETHANE	5.	ND	U
79-01-6	TRICHLOROETHENE	5.	ND	U
78-87-5	1,2-DICHLOROPROPANE	5.	ND	U
75-27-4	BROMODICHLOROMETHANE	5.	ND	U
110-75-8	2-CHLOROETHYLVINYL ETHER	5.	ND	U
108-05-4	VINYL ACETATE	10.	ND	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	ND	U
108-10-1	4-METHYL-2-PENTANONE	10.	ND	U
108-88-3	TOLUENE	5.	ND	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	ND	U
79-00-5	1,1,2,-TRICHLOROETHANE	5.	ND	U
127-18-4	TETRACHLOROETHENE	5.	ND	U
591-78-6	2-HEXANONE	10.	ND	U
124-48-1	DIBROMOCHLOROMETHANE	5.	ND	U
108-90-7	CHLOROBENZENE	5.	ND	U
100-41-4	ETHYLBENZENE	5.	ND	U
1330-20-7	XYLENE (TOTAL)	5.	ND	U
100-42-5	STYRENE	5.	ND	U
75-25-2	BROMOFORM	5.	ND	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	ND	U
541-73-1	1,3-DICHLOROBENZENE	5.	ND	U
106-46-7	1,4-DICHLOROBENZENE	5.	ND	U
95-50-1	1,2-DICHLOROBENZENE	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 624/8240
ANAMETRIX, INC. (408)432-8192

Project ID :
Sample ID : BLANK
Matrix : WATER
Date Sampled : 0/ 0/ 0
Date Analyzed :12/ 4/90
Instrument ID : F3

Anametrix ID : 3CB1204V01
Analyst : ω
Supervisor : PG

Dilution Factor : 1.00
Conc. Units : ug/L

CAS NO.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	CHLOROMETHANE	10.	ND	U
75-01-4	VINYL CHLORIDE	10.	ND	U
74-83-9	BROMOMETHANE	10.	ND	U
75-00-3	CHLOROETHANE	10.	ND	U
75-69-4	TRICHLOROFLUOROMETHANE	5.	ND	U
75-35-4	1,1-DICHLOROETHENE	5.	ND	U
76-13-1	TRICHLOROTRIFLUOROETHANE	5.	ND	U
67-64-1	ACETONE	20.	ND	U
75-15-0	CARBON DISULFIDE	5.	ND	U
75-09-2	METHYLENE CHLORIDE	5.	ND	U
156-60-5	TRANS-1,2-DICHLOROETHENE	5.	ND	U
75-34-3	1,1-DICHLOROETHANE	5.	ND	U
78-93-3	2-BUTANONE	20.	ND	U
156-59-2	CIS-1,2-DICHLOROETHENE	5.	ND	U
67-66-3	CHLOROFORM	5.	ND	U
71-55-6	1,1,1-TRICHLOROETHANE	5.	ND	U
56-23-5	CARBON TETRACHLORIDE	5.	ND	U
71-43-2	BENZENE	5.	ND	U
107-06-2	1,2-DICHLOROETHANE	5.	ND	U
79-01-6	TRICHLOROETHENE	5.	ND	U
78-87-5	1,2-DICHLOROPROPANE	5.	ND	U
75-27-4	BROMODICHLOROMETHANE	5.	ND	U
110-75-8	2-CHLOROETHYLVINYL ETHER	5.	ND	U
108-05-4	VINYL ACETATE	10.	ND	U
10061-01-5	CIS-1,3-DICHLOROPROPENE	5.	ND	U
108-10-1	4-METHYL-2-PENTANONE	10.	ND	U
108-88-3	TOLUENE	5.	ND	U
10061-02-6	TRANS-1,3-DICHLOROPROPENE	5.	ND	U
79-00-5	1,1,2,-TRICHLOROETHANE	5.	ND	U
127-18-4	TETRACHLOROETHENE	5.	ND	U
591-78-6	2-HEXANONE	10.	ND	U
124-48-1	DIBROMOCHLOROMETHANE	5.	ND	U
108-90-7	CHLOROBENZENE	5.	ND	U
100-41-4	ETHYLBENZENE	5.	ND	U
1330-20-7	XYLENE (TOTAL)	5.	ND	U
100-42-5	STYRENE	5.	ND	U
75-25-2	BROMOFORM	5.	ND	U
79-34-5	1,1,2,2-TETRACHLOROETHANE	5.	ND	U
541-73-1	1,3-DICHLOROBENZENE	5.	ND	U
106-46-7	1,4-DICHLOROBENZENE	5.	ND	U
95-50-1	1,2-DICHLOROBENZENE	5.	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 624/8240
ANAMETRIX, INC. (408)432-8192

Project ID : 4454/2
Matrix : WATER

Anametrix ID : 9011232
Analyst : LW
Supervisor : PG

	SAMPLE ID	SU1	SU2	SU3	TOTAL OUT
1	BLANK	97	100	98	0
2	MW-1	97	98	97	0
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

	QC LIMITS
SU1 = 1,2-DICHLOROETHANE-D4	(75-113)
SU2 = TOLUENE-D8	(83-110)
SU3 = BROMOFLUOROBENZENE	(82-114)

* Values outside of Anametrix QC limits