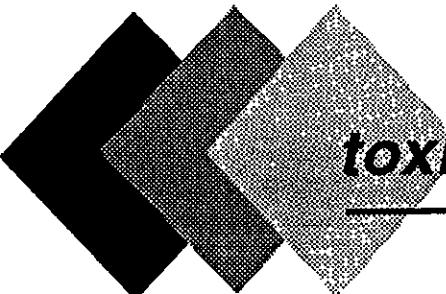


93 AUG -4 PM 12:59



***CTTS , Inc.  
toxic technology services***

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**PROGRESS REPORT # 21  
April 1 - June 30, 1993**

Durham Transportation  
19984 Meekland Avenue  
Hayward, California

Project # 93-4

July 16, 1993  
Project Number 93-4

Mr. David Delamotte  
Durham Transportation  
9171 Capitol of Texas Highway North  
Travis Bldg., Suite 200  
Austin, Texas 78759

Subject: Progress Report #21  
Period Covering  
April 1, 1993 - June 30, 1993  
19984 Meekland Avenue, Hayward, CA

Dear Mr. Delamotte:

Enclosed is the twenty-first progress report for the Phase II investigation to evaluate the extent of soil and groundwater contamination at 19984 Meekland Avenue in the unincorporated area of Alameda County, near Hayward, California.

This report covers the following topics:

Introduction  
Monthly Monitoring of Groundwater Elevations  
Quarterly Monitoring Well Sampling and Analysis  
Summary

After you review this document, it is recommended that copies be sent to Ms. Juliette Shin of the Alameda County Health Care Services Department, Hazardous Materials Division and Mr. Eddy So of the Regional Water Quality Control Board. Extra copies of this report have been provided to you for this purpose.

Thank you for this opportunity to provide Durham Transportation with these environmental services. If you have any questions, please call the undersigned at (510) 799-1140.

Sincerely,



Lisa A. Polos, REA, CHMM  
Senior Scientist  
Toxic Technology Services  
CTTS, Inc.



John N. Alt, CEG  
Consulting Geologist  
Toxic Technology Services  
CTTS, Inc.

Enclosure  
LAP/JNA/lap

## INTRODUCTION

The following is the twenty-first progress report of activities in the evaluation of the extent of soil and groundwater contamination at 19984 Meekland Avenue, in the unincorporated area of Alameda County, near Hayward, California (Plate 1). This report covers the period of April 1, 1993 through June 30, 1993.

The purpose of this on-going investigation is two fold; to assess the extent of soil and groundwater contamination and to characterize the contamination with regards to constituents and concentration.

## MONTHLY MONITORING OF GROUNDWATER ELEVATIONS

As stated in previous reports, the groundwater gradient at the site is essentially flat. The elevation of the groundwater has been measured in the monitoring wells on site by surveying the elevation of the top of each casing and measuring the depth to groundwater using an electronic probe. The elevations are based on Alameda County benchmark BLO-MEEK located in the middle of the intersection of Blossom Way and Meekland Avenue. The depth to groundwater was measured in December of 1989, January of 1990, and then monthly since March of 1990.

Beginning in April of 1993, Juliette Shin of the Alameda County Health Care Services Department, Hazardous Materials Division agreed to Durham Transportation conducting the groundwater elevations on a quarterly basis, rather than monthly. This will be done at the time of the groundwater sampling and analysis.

This report provides groundwater elevations for April and June. From this point forward, elevations will be measured at the time of the quarterly groundwater sampling and analysis.

Tables 1 and 1a and Figure 1 represent data for the previous twenty four measurements. The groundwater elevation data are presented on Table 1. Figure 1 is a graph showing variations in the elevation of groundwater at the site. In any given month, the groundwater elevation across the site generally varies within 0.1 feet. This variation is roughly within the range of error in the measuring techniques. The data indicate that the water table fluctuates in response to the various seasons of the year. Table 1a presents the odor and sheen observations recorded concurrently with the elevations of groundwater. Figures 2a and 2b present gradient maps depicting the interpolated groundwater gradient for the site over the reporting period. The data indicate that the site is essentially flat with a very low westward to northwestward gradient. This is consistent with the regional gradient.

## QUARTERLY MONITORING WELL SAMPLING AND ANALYSIS

On January <sup>14</sup> ~~28~~ and <sup>15</sup> ~~29~~, 1993, the ten groundwater monitoring wells (Plate 1) were each purged of approximately three well volumes of water and samples collected. Bailing was conducted starting with the least contaminated well moving to wells that have historically shown the greatest levels of contamination, using a PVC

Triloc pump. The pump was rinsed between wells with tap water. Samples were collected using a new, disposable plastic bailer for each well. Purged water was contained in 55 gallon drums.

Sampling was conducted by Lisa Polos, REA, and John Alt, CEG, of Toxic Technology Services.

At the time of sample collection, the contents of the first bailer of water were inspected to assess the presence of any floating product. None of the wells, at the time of sample collection, contained floating product.

Collected samples were put into a cooled ice chest and transported to NET Pacific Laboratory in Santa Rosa California for analysis of Total Petroleum Hydrocarbons as Gasoline and Diesel, BTEX and Volatile Halogenated Hydrocarbons.

Table 2 summarizes the results from this sampling round. The NET analytical reports are presented under Appendix A.

#### SUMMARY

The State of California Maximum Contaminant Level (MCL) in drinking water is 0.5 ppb for 1,2-Dichloroethane, 5 ppb for Tetrachloroethene (Tetrachloroethylene), 1750 ppb for Xylenes and 1 ppb for Benzene. The recommended drinking water action level for Toluene is 100 ppb.

All wells except MW-8, MW-11 and MW-12 are over the MCL in drinking water for 1,2-Dichloroethane. All wells except MW-8 are over the MCL for Benzene. MW-5 is over the MCL for Xylenes. MW-5, MW-6 and MW-9 are over the recommended drinking water action level for Toluene.

The highest level of gasoline was found in MW-5. MW-5 is now the closest well to the fuel tank excavation.

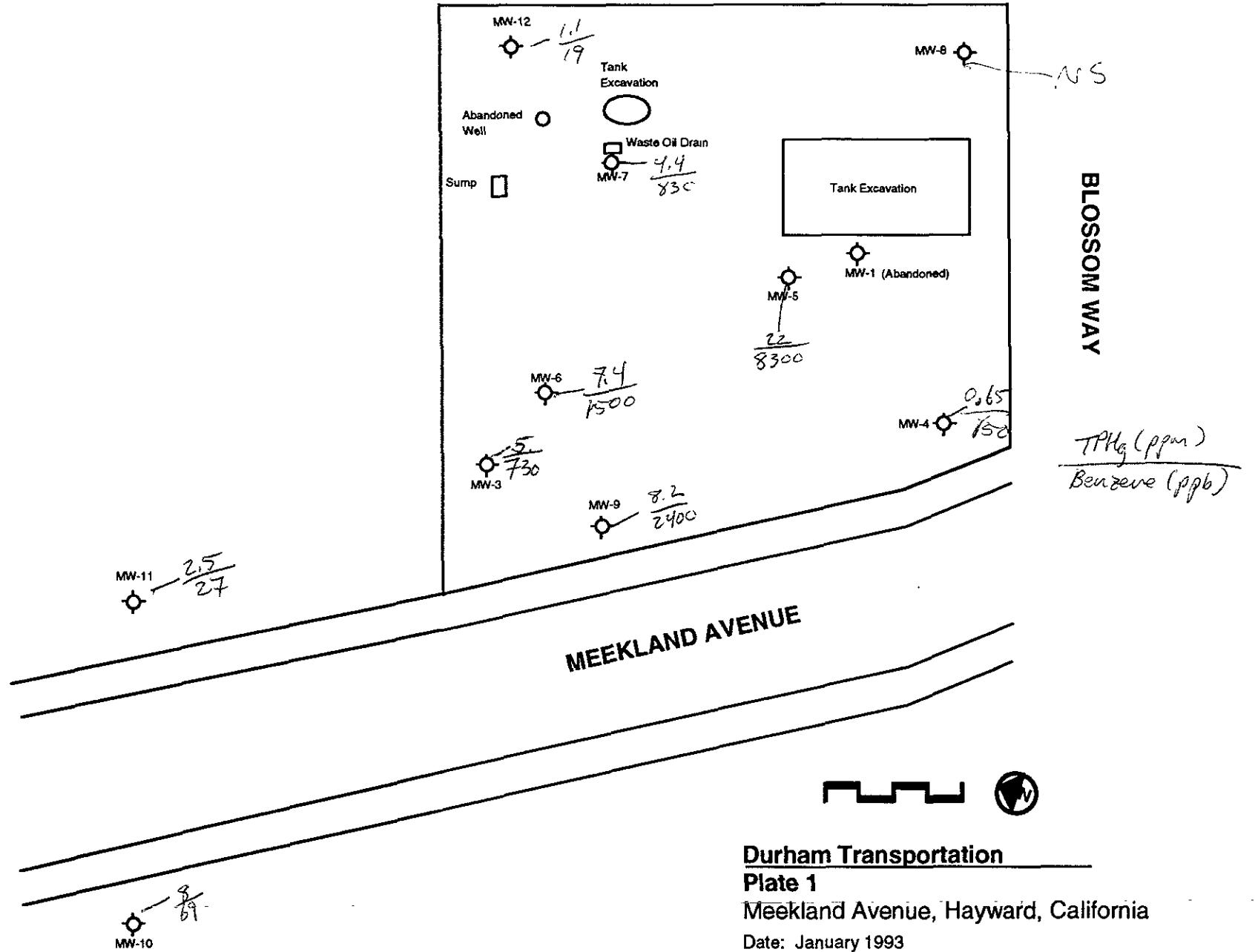
Petroleum hydrocarbons heavier than gasoline, but lighter than diesel, were found in every well except MW-8 and MW-11. This seems to indicate the presence of very old gasoline.

MW-11 contained hydrocarbons that were not as light as the hydrocarbons found in the other wells. However, the data indicates that these compounds were not readily identified as diesel.

MW-8, the on site up gradient well, contains trace levels of Tetrachloroethene, but less than the MCL. This is consistent with previous sampling rounds. Levels of contamination in MW-8, when present, are substantially lower than in the rest of the wells and still seem to indicate that the source of contamination was located on site.

The levels of contamination for this sampling round are generally higher than in previous rounds. Figure 1 indicates that the water table is dropping after reaching a record high. This means that water was percolating through an area of the capillary fringe that had not had water for many years. It appears that the groundwater has washed through and carried away some of the contamination that is present in the capillary fringe.

PP



Durham Transportation  
**Plate 1**  
**MEEKLAND AVENUE, Hayward, California**  
 Date: January 1993  
 Scale: 1 inch = 30 feet  
 CTTS, Inc. - Toxic Technology Services

**TABLE 1****GROUNDWATER ELEVATIONS (feet above MSL)**  
**DURHAM TRANSPORTATION-MEEKLAND PROJECT**

DATE	MW3	MW4	MW5	MW6	MW7	MW8	MW9	MW10	MW11	MW12
Apr-91	28.09	27.99	28.04	28.00	28.02	28.06	27.99	.	.	.
May-91	27.12	27.16	27.17	27.11	27.19	27.19	27.13	.	.	.
Jun-91	26.45	26.56	26.77	26.46	26.53	26.57	26.58	.	.	.
Jul-91	26.04	26.05	26.13	26.04	26.10	26.13	26.04	.	.	.
Aug-91	25.49	25.62	25.37	25.50	25.59	25.60	25.52	.	.	.
Sep-91	25.18	25.18	25.49	25.06	25.16	25.18	25.15	.	.	.
Oct-91	24.86	24.92	25.00	24.82	24.97	24.94	24.84	.	.	.
Nov-91	24.90	24.97	24.94	24.87	24.94	24.96	24.89	.	.	.
Dec-91	24.69	24.78	24.89	24.67	24.76	24.79	24.70	.	.	.
Jan-92	25.31	25.28	25.48	25.31	25.37	25.37	25.32	25.16	25.90	.
Feb-92	28.23	28.22	28.24	28.15	28.24	28.26	28.19	28.37	28.18	.
Mar-92	28.54	28.46	28.49	28.40	28.46	28.59	28.42	28.32	28.41	.
Apr-92	28.43	28.48	28.39	28.43	28.49	28.51	28.44	28.32	28.44	.
May-92	27.76	27.75	27.79	27.56	27.75	27.79	27.70	27.67	27.68	.
Jun-92	26.92	26.87	26.88	26.81	26.87	26.92	26.81	26.64	26.76	.
Jul-92	26.40	26.47	26.49	26.41	28.16	26.53	26.41	26.23	26.37	.
Aug-92	25.88	25.85	25.81	25.76	25.83	25.88	25.79	25.26	26.07	.
Sep-92	25.68	25.64	25.60	25.56	25.61	25.67	25.56	25.39	25.54	.
Oct-92	25.30	25.27	25.29	25.17	25.23	25.32	25.19	25.00	25.14	.
Nov-92	25.17	25.25	25.25	25.17	25.25	25.29	25.19	25.01	25.13	.
Dec-92	26.10	26.06	26.03	26.02	26.05	26.10	26.02	25.92	26.08	26.35
Jan-93	30.74	30.76	30.72	30.73	30.82	30.82	30.74	30.65	30.74	30.82
Feb-93	30.32	30.32	30.22	30.29	30.39	30.37	30.29	30.17	30.28	30.32
Mar-93	30.80	30.80	30.80	30.89	30.84	30.85	30.81	30.60	30.74	30.82
Apr-93	30.54	30.61	30.50	30.56	30.65	30.67	30.57	30.39	30.52	30.59
Jun-93	29.51	29.56	29.58	29.59	29.56	29.72	29.46	29.34	29.41	29.63

MW-1 abandoned December 14, 1992. Consult previous reports for MW-1 data.

TABLE 1a

**GROUNDWATER ODOR AND SHEEN OBSERVATIONS  
DURHAM TRANSPORTATION--MEEKLAND PROJECT**

	MW 3	MW 4	MW 5	MW 6	MW 7	MW 8	MW 9	MW 10	MW 11	MW 12
Apr-91	-	-	S	-	-	-	-	-	-	-
May-91	-	-	-	o	-	-	-	-	-	-
Jun-91	-	-	-	o	-	-	-	-	-	-
Jul-91	-	-	-	-	o	-	-	-	-	-
Aug-91	-	-	o	-	o	-	o	-	-	-
Sep-91	-	-	-	o	-	o	-	-	-	-
Oct-91	-	-	-	-	-	-	-	-	-	-
Nov-91	-	-	-	o	-	o	-	-	-	-
Dec-91	o	-	-	o	-	o	-	-	-	-
Jan-92	o	-	-	o	-	o	-	o	-	o
Feb-92	-	-	-	o	-	-	-	-	o	-
Mar-92	-	-	-	o	S	-	-	o	-	o
Apr-92	o	-	-	o	-	o	-	-	o	-
May-92	o	-	-	o	-	-	o	-	o	-
Jun-92	-	-	-	-	-	-	-	o	-	-
Jul-92	-	-	-	o	-	-	-	-	-	-
Aug-92	-	-	-	o	-	-	-	-	-	-
Sep-92	-	-	-	o	-	-	-	o	-	-
Oct-92	-	-	-	o	-	o	-	-	o	-
Nov-92	-	-	-	o	-	o	-	o	-	o
Dec-92	-	-	-	-	-	-	-	-	-	o
Jan-93	o	-	-	o	-	-	o	-	-	-
Feb-93	-	-	-	o	-	-	-	-	-	-
Mar-93	-	-	-	o	-	-	-	o	-	o
Apr-93	-	-	-	o	-	o	-	-	-	-
Jun-93	o	-	-	o	-	o	-	o	-	o

O=Strong Odor

o=Slight Odor

S=Sheen

-=None Present

MW-1 abandoned December 14, 1992. Consult previous reports for MW-1 data.

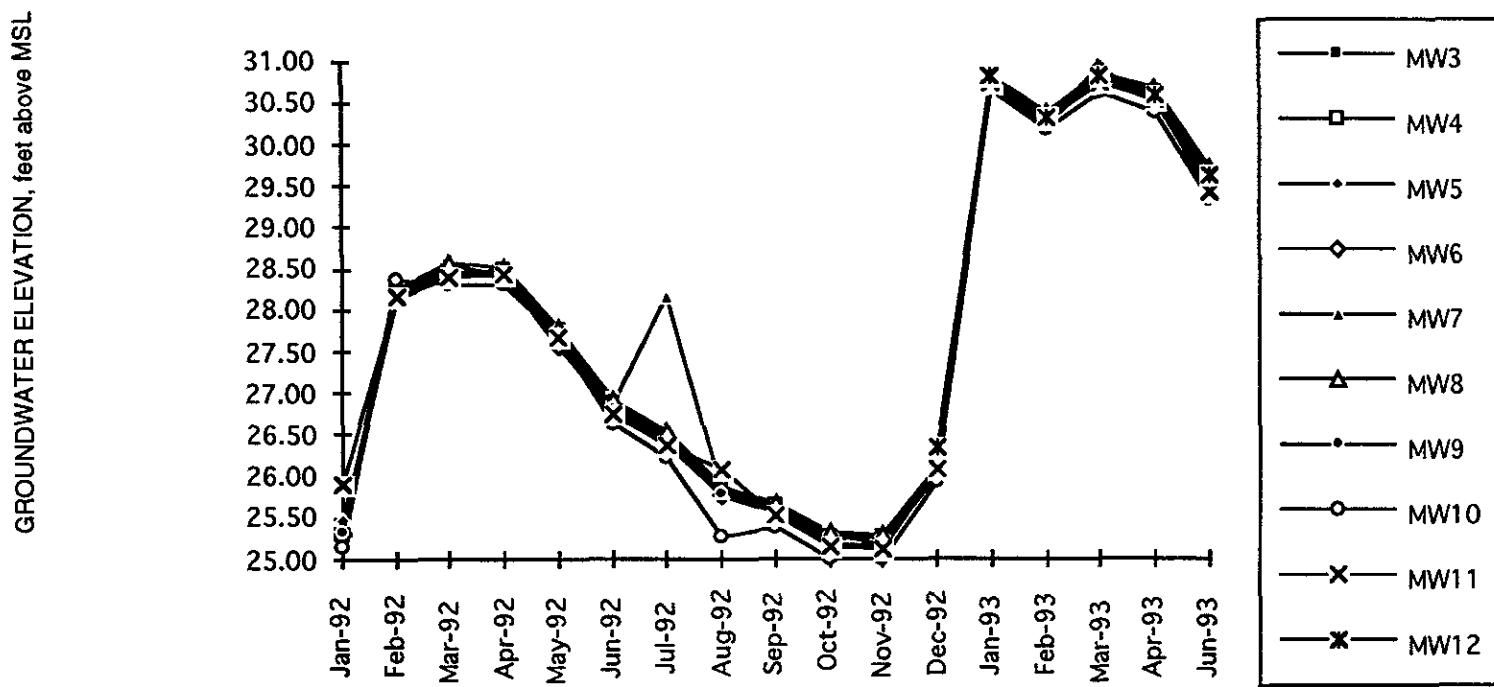
TABLE 2

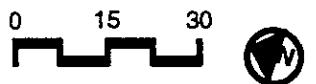
**GROUNDWATER CHEMICAL DATA--JUNE 1993**  
**DURHAM TRANSPORTATION--MEEKLAND PROJECT**

<u>PARAMETER</u>	<u>UNITS</u>	<u>MW-3</u>	<u>MW-4</u>	<u>MW-5</u>	<u>MW-5 DUP</u>	<u>MW-6</u>	<u>MW-7</u>
Gasoline	mg/L	5	0.65	22	23	7.4	4.4
Diesel	mg/L	*1.1	*0.14	*2.9	*2.3	*1.9	*1.1
Benzene	ug/L	730	150	8300	9600	1500	830
Ethylbenzene	ug/L	240	21	740	730	480	330
Toluene	ug/L	43	ND	2500	3000	120	49
Xylenes	ug/L	380	ND	1900	1900	1400	620
1,2-Dichloroethane	ug/L	13	.3.7	110	110	29	8.6
Tetrachloroethylene	ug/L	ND	ND	ND	ND	ND	ND
		<u>MW-8</u>	<u>MW-9</u>	<u>MW-10</u>	<u>MW-11</u>	<u>MW-12</u>	<u>BLANK</u>
Gasoline	mg/L	ND	8.2	8	2.5	1.1	ND
Diesel	mg/L	ND	*1.3	*2.1	0.16	*0.75	ND
Benzene	ug/L	ND	2400	69	27	19	ND
Ethylbenzene	ug/L	ND	360	7.9	99	21	ND
Toluene	ug/L	ND	480	ND	ND	ND	ND
Xylenes	ug/L	ND	1500	490	34	57	ND
1,2-Dichloroethane	ug/L	ND	29	16	ND	ND	ND
Tetrachloroethylene	ug/L	1.4	ND	ND	ND	ND	ND

\* The positive result for the Petroleum Hydrocarbon as Diesel analysis on this sample appears to be a lighter hydrocarbon than Diesel.

**FIGURE 1**  
**DURHAM TRANSPORTATION – MEEKLAND PROJECT**  
**GROUNDWATER ELEVATIONS, feet above MSL**





### Durham Transportation

**Figure 2a – Groundwater Gradient Map -April 1993**

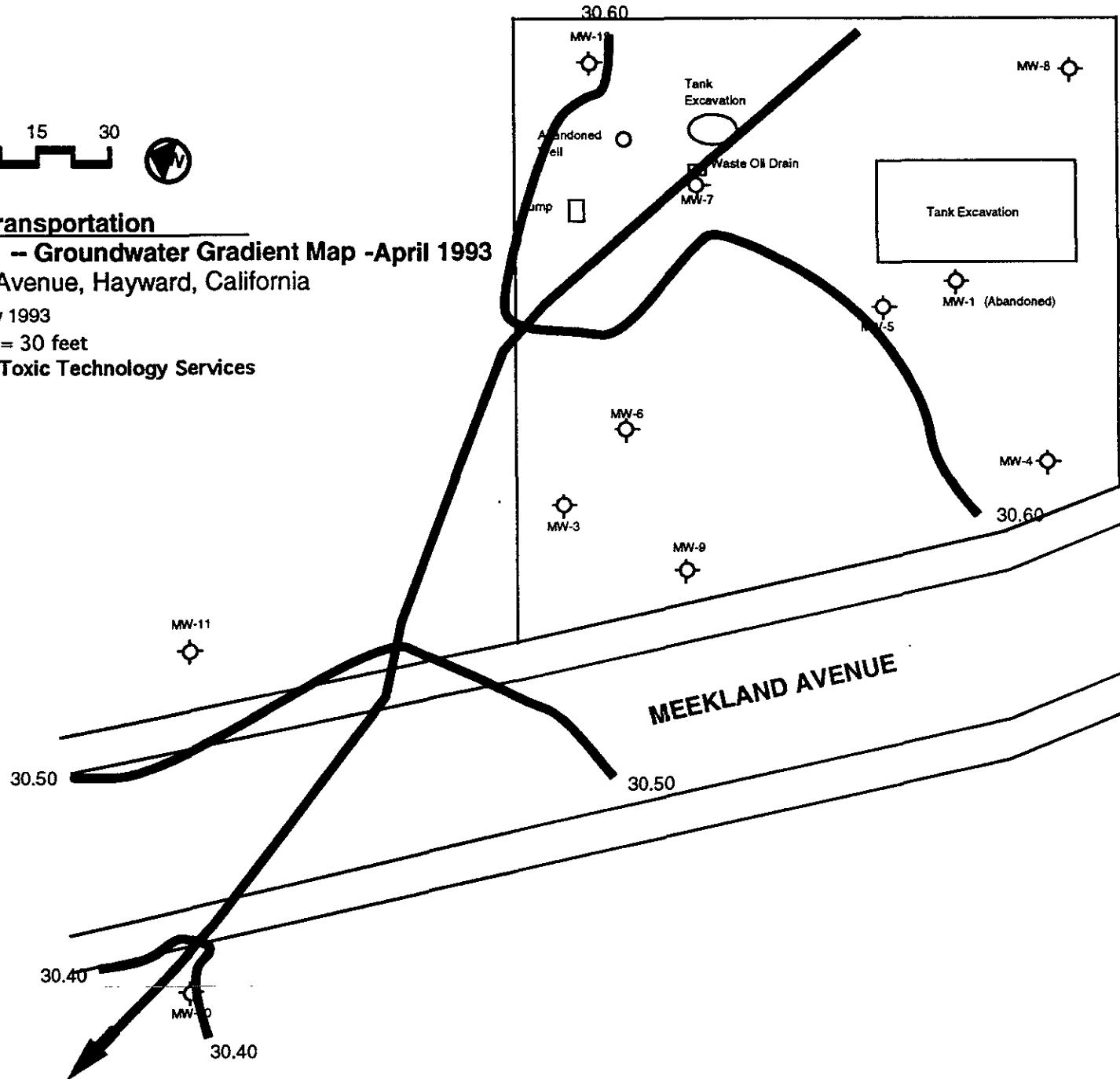
Meekland Avenue, Hayward, California

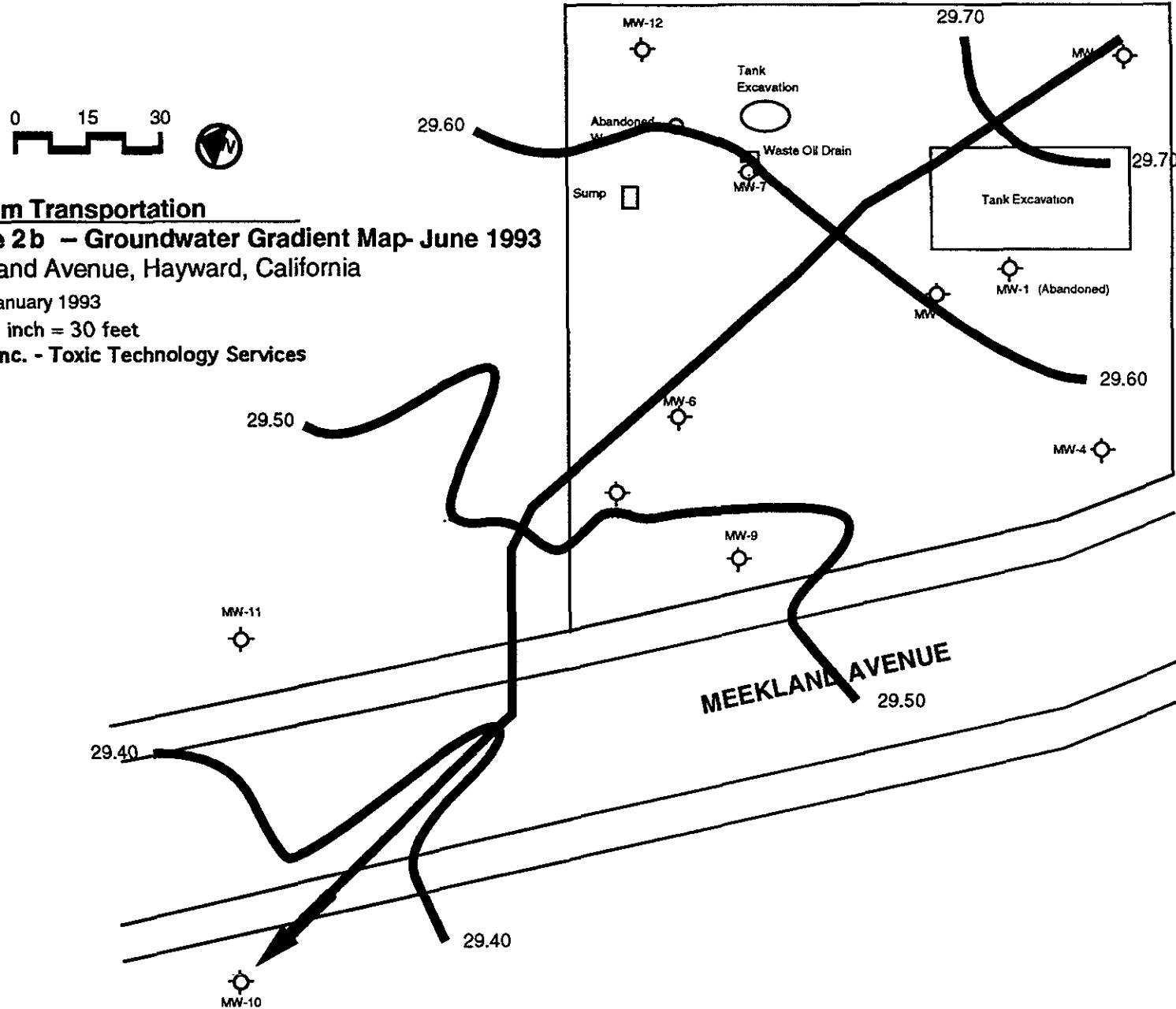
Date: January 1993

Scale: 1 inch = 30 feet

CTTS, Inc. - Toxic Technology Services

BLOSSOM WAY





BLOSSOM WAY

## **APPENDIX A**



NATIONAL  
ENVIRONMENTAL  
TESTING, INC.  
®

NET Pacific, Inc.  
435 Tesconi Circle  
Santa Rosa, CA 95401  
Tel: (707) 526-7200  
Fax: (707) 526-9623

Lisa A. Polos  
Toxic Technology Services  
PO Box 515  
Rodeo, CA 94572

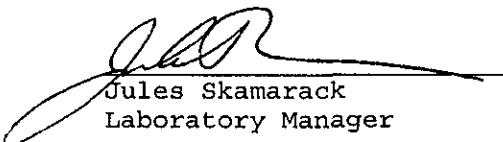
Date: 07/06/1993  
NET Client Acct. No: 70700  
NET Pacific Job No: 93.02545  
Received: 06/16/1993

Client Reference Information

Durham Meekland, Project No: 93-4QZ

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:



A handwritten signature in black ink, appearing to read "J.S." followed by a long, flowing line.

Jules Skamarack  
Laboratory Manager

Enclosure(s)



Client Acct: 70700  
Client Name: Toxic Technology Services  
® NET Log No: 93.02545

Date: 07/06/1993  
Page: 2

Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-3  
Date Taken: 06/14/1993  
Time Taken:  
LAB Job No: (-160294 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE, Liquid)	--			
METHOD 5030/M8015				
DATE ANALYZED	06-17-93			
DILUTION FACTOR*	1			
as Gasoline	5.0	0.05	mg/L	5030
METHOD 8020 (GC, Liquid)	--			
DATE ANALYZED	06-17-93			
DILUTION FACTOR*	1			
Benzene	730	0.5	ug/L	8020
Ethylbenzene	240	0.5	ug/L	8020
Toluene	43	0.5	ug/L	8020
Xylenes (Total)	380	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	100		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	1.1**	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510

\*\* The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.



Client Acct: 70700  
Client Name: Toxic Technology Services  
©NET Log No: 93.02545

Date: 07/06/1993  
Page: 3

Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-3  
Date Taken: 06/14/1993  
Time Taken:  
LAB Job No: (-160294 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	13	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	MI**		% Rec.	601
Bromochloromethane	67		% Rec.	601

\*\* Matrix interference.



Client Acct: 70700  
Client Name: Toxic Technology Services  
®NET Log No: 93.02545

Date: 07/06/1993  
Page: 4

Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-10  
Date Taken: 06/14/1993  
Time Taken:  
LAB Job No: (-160295 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)				
METHOD 5030/M8015	--			
DATE ANALYZED	06-17-93			
DILUTION FACTOR*	1			
as Gasoline	8.0	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-17-93			
DILUTION FACTOR*	1			
Benzene	69	0.5	ug/L	8020
Ethylbenzene	7.9	0.5	ug/L	8020
Toluene	ND	0.5	ug/L	8020
Xylenes (Total)	490	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	116		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	2.1**	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510

\*\* The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.



Client Acct: 70700  
Client Name: Toxic Technology Services  
®NET Log No: 93.02545

Date: 07/06/1993  
Page: 5

Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-10  
Date Taken: 06/14/1993  
Time Taken:  
LAB Job No: (-160295 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	16	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	MI**		% Rec.	601
Bromochloromethane	76		% Rec.	601

\*\* Matrix interference.



Client Acct: 70700  
Client Name: Toxic Technology Services  
® NET Log No: 93.02545

Date: 07/06/1993  
Page: 6

Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-11  
Date Taken: 06/14/1993  
Time Taken:  
LAB Job No: (-160296 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)	--			
METHOD 5030/M8015				
DATE ANALYZED	06-17-93			
DILUTION FACTOR*	1			
as Gasoline	2.5	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-17-93			
DILUTION FACTOR*	1			
Benzene	27	0.5	ug/L	8020
Ethylbenzene	99	0.5	ug/L	8020
Toluene	ND	0.5	ug/L	8020
Xylenes (Total)	34	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	110		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	0.16	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510



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Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-11  
Date Taken: 06/14/1993  
Time Taken:  
LAB Job No: (-160296 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	ND	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	MI**		% Rec.	601
Bromochloromethane	80		% Rec.	601

\*\* Matrix interference.



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SAMPLE DESCRIPTION: MW-8  
Date Taken: 06/14/1993  
Time Taken:  
LAB Job No: (-160297 )

<u>Parameter</u>	<u>Results</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Method</u>
TPH (Gas/BTXE,Liquid)				
METHOD 5030/M8015	--			
DATE ANALYZED	06-17-93			
DILUTION FACTOR*	1			
as Gasoline	ND	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-17-93			
DILUTION FACTOR*	1			
Benzene	ND	0.5	ug/L	8020
Ethylbenzene	ND	0.5	ug/L	8020
Toluene	ND	0.5	ug/L	8020
Xylenes (Total)	ND	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	96		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	ND	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510



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Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-8  
Date Taken: 06/14/1993  
Time Taken:  
LAB Job No: (-160297 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	ND	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	1.4	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	122		% Rec.	601
Bromochloromethane	95		% Rec.	601



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SAMPLE DESCRIPTION: MW-4  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160298 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)	--			
METHOD 5030/M8015				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
as Gasoline	0.65	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Benzene	150	0.5	ug/L	8020
Ethylbenzene	21	0.5	ug/L	8020
Toluene	ND	0.5	ug/L	8020
Xylenes (Total)	ND	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	106		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	0.14**	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510

\*\* The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.



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Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-4  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160298 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	3.7	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2;2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	MI**		% Rec.	601
Bromochloromethane	101		% Rec.	601

\*\* Matrix interference.



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SAMPLE DESCRIPTION: MW-5  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160299 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE, Liquid)				
METHOD 5030/M8015	--			
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	10			
as Gasoline	22	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	10			
Benzene	8,300	0.5	ug/L	8020
Ethylbenzene	740	0.5	ug/L	8020
Toluene	2,500	0.5	ug/L	8020
Xylenes (Total)	1,900	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	89		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	2.9**	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510

\*\* The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.



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SAMPLE DESCRIPTION: MW-5  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160299 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	110.	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	MI**		% Rec.	601
Bromochloromethane	96		% Rec.	601

\*\* Matrix interference.



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SAMPLE DESCRIPTION: MW-6  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160300 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)	--			
METHOD 5030/M8015				
DATE ANALYZED	06-21-93			
DILUTION FACTOR*	10			
as Gasoline	7.4	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-21-93			
DILUTION FACTOR*	10			
Benzene	1,500	0.5	ug/L	8020
Ethylbenzene	480	0.5	ug/L	8020
Toluene	120	0.5	ug/L	8020
Xylenes (Total)	1,400	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	99		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	1.9**	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510

\*\* The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.



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SAMPLE DESCRIPTION: MW-6  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160300 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	29	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	MI**		% Rec.	601
Bromochloromethane	99		% Rec.	601

\*\* Matrix interference.



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SAMPLE DESCRIPTION: MW-7  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160301 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTxE,Liquid)				
METHOD 5030/M8015	--			
DATE ANALYZED	06-21-93			
DILUTION FACTOR*	10			
as Gasoline	4.4	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	10			
Benzene	830	0.5	ug/L	8020
Ethylbenzene	330	0.5	ug/L	8020
Toluene	49	0.5	ug/L	8020
Xylenes (Total)	620	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	99		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	1.1**	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510

\*\* The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.



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SAMPLE DESCRIPTION: MW-7  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160301 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	8.6	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	MI**		% Rec.	601
Bromochloromethane	102		% Rec.	601

\*\* Matrix interference.



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Client Name: Toxic Technology Services  
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SAMPLE DESCRIPTION: MW-9  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160302 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTxE,Liquid)				
METHOD 5030/M8015	--			
DATE ANALYZED	06-21-93			
DILUTION FACTOR*	20			
as Gasoline	8.2	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-21-93			
DILUTION FACTOR*	20			
Benzene	2,400	0.5	ug/L	8020
Ethylbenzene	360	0.5	ug/L	8020
Toluene	480	0.5	ug/L	8020
Xylenes (Total)	1,500	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	89		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	1.3**	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510

\*\* The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.



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Client Name: Toxic Technology Services  
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SAMPLE DESCRIPTION: MW-9  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160302 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	29	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--		% Rec.	601
1,4-Difluorobenzene	MI**		% Rec.	601
Bromochloromethane	96			

\*\* Matrix interference.



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Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-12  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160303 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTKE,Liquid)				
METHOD 5030/M8015	--			
DATE ANALYZED	06-21-93			
DILUTION FACTOR*	1			
as Gasoline	1.1	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-21-93			
DILUTION FACTOR*	1			
Benzene	19	0.5	ug/L	8020
Ethylbenzene	21	0.5	ug/L	8020
Toluene	ND	0.5	ug/L	8020
Xylenes (Total)	57	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	MI***		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	0.75**	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510

\*\* The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.

\*\*\* Matrix interference.



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Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: MW-12  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160303 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	ND	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	MI**		% Rec.	601
Bromochloromethane	107		% Rec.	601

\*\* Matrix interference.



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Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: B-1  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160304 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)	--			
METHOD 5030/M8015				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
as Gasoline	ND	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Benzene	ND	0.5	ug/L	8020
Ethylbenzene	ND	0.5	ug/L	8020
Toluene	ND	0.5	ug/L	8020
Xylenes (Total)	ND	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	100		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	ND	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510



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Ref: Durham Meekland, Project No: 93-4QZ

SAMPLE DESCRIPTION: B-1  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160304 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	7.7	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	64	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	ND	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--		% Rec.	601
1,4-Difluorobenzene	103		% Rec.	601
Bromochloromethane	94			



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SAMPLE DESCRIPTION: MW-5D  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160305 )

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)				
METHOD 5030/M8015	--			
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	10			
as Gasoline	23	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	10			
Benzene	9,600	0.5	ug/L	8020
Ethylbenzene	730	0.5	ug/L	8020
Toluene	3,000	0.5	ug/L	8020
Xylenes (Total)	1,900	0.5	ug/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	89		% Rec.	5030
METHOD 3510/M8015				
DILUTION FACTOR*	1			
DATE EXTRACTED	06-21-93			
DATE ANALYZED	06-22-93			
as Diesel	2.3**	0.05	mg/L	3510
as Motor Oil	ND	0.5	mg/L	3510

\*\* The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.



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SAMPLE DESCRIPTION: MW-5D  
Date Taken: 06/15/1993  
Time Taken:  
LAB Job No: (-160305 )

Parameter	Results	Reporting Limit	Units	Method
METHOD 601 (GC,Liquid)				
DATE ANALYZED	06-18-93			
DILUTION FACTOR*	1			
Bromodichloromethane	ND	0.4	ug/L	601
Bromoform	ND	0.4	ug/L	601
Bromomethane	ND	0.4	ug/L	601
Carbon tetrachloride	ND	0.4	ug/L	601
Chlorobenzene	ND	0.4	ug/L	601
Chloroethane	ND	0.4	ug/L	601
2-Chloroethylvinyl ether	ND	1.0	ug/L	601
Chloroform	ND	0.4	ug/L	601
Chloromethane	ND	0.4	ug/L	601
Dibromochloromethane	ND	0.4	ug/L	601
1,2-Dichlorobenzene	ND	0.4	ug/L	601
1,3-Dichlorobenzene	ND	0.4	ug/L	601
1,4-Dichlorobenzene	ND	0.4	ug/L	601
Dichlorodifluoromethane	ND	0.4	ug/L	601
1,1-Dichloroethane	ND	0.4	ug/L	601
1,2-Dichloroethane	110	0.4	ug/L	601
1,1-Dichloroethene	ND	0.4	ug/L	601
trans-1,2-Dichloroethene	ND	0.4	ug/L	601
1,2-Dichloropropane	ND	0.4	ug/L	601
cis-1,3-Dichloropropene	ND	0.4	ug/L	601
trans-1,3-Dichloropropene	ND	0.4	ug/L	601
Methylene chloride	ND	10	ug/L	601
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601
Tetrachloroethene	ND	0.4	ug/L	601
1,1,1-Trichloroethane	ND	0.4	ug/L	601
1,1,2-Trichloroethane	ND	0.4	ug/L	601
Trichloroethene	ND	0.4	ug/L	601
Trichlorofluoromethane	ND	0.4	ug/L	601
Vinyl chloride	ND	0.4	ug/L	601
SURROGATE RESULTS	--			
1,4-Difluorobenzene	MI**			601
Bromochloromethane	84			601

\*\* Matrix interference.



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QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	0.05	mg/L	108.0	ND	106.0	108.0	1.9
Benzene	0.5	ug/L	99.0	ND	90.9	91.6	0.8
Toluene	0.5	ug/L	100.0	ND	94.5	95.4	0.9
Gasoline	0.05	mg/L	96.1	ND	95.0	95.0	0.0
Benzene	0.5	ug/L	96.0	ND	101.0	98.2	2.7
Toluene	0.5	ug/L	92.2	ND	101.6	98.7	2.8
Gasoline	0.05	mg/L	93.5	ND	88.8	84.8	4.6
Benzene	0.5	ug/L	94.8	ND	88.7	100.0	11
Toluene	0.5	ug/L	94.0	ND	99.1	101.0	1.8
Gasoline	0.05	mg/L	111.0	ND	117.0	110.0	6.2
Benzene	0.5	ug/L	102.2	ND	99.5	97.5	2.0
Toluene	0.5	ug/L	114.8	ND	100.1	99.0	1.0
Diesel	0.05	mg/L	110.3	ND	72.8	62.2	15
Motor Oil	0.5	mg/L	110.7	ND	N/A	N/A	N/A

COMMENT: Blank Results were ND on other analytes tested.

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Chlorobenzene	0.4	ug/L	109.0	ND	110.0	105.0	4.7
1,1-Dichloroethene	0.4	ug/L	94.0	ND	90.0	85.0	5.7
Trichloroethene	0.4	ug/L	111.0	ND	95.0	95.0	0.0

COMMENT: Blank Results were ND on other analytes tested.



## KEY TO ABBREVIATIONS and METHOD REFERENCES

- < : Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
- \* : Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
- ICVS : Initial Calibration Verification Standard (External Standard).
- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
- mg/L : Concentration in units of milligrams of analyte per liter of sample.
- mL/L/hr : Milliliters per liter per hour.
- MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.
- N/A : Not applicable.
- NA : Not analyzed.
- ND : Not detected; the analyte concentration is less than applicable listed reporting limit.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference,  $100 \frac{[Value\ 1 - Value\ 2]}{mean\ value}$ .
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- umhos/cm : Micromhos per centimeter.

### Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater", 17th Edition, APHA, 1989.

