



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

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December 31, 1991  
Project No. 91-3

Mr. Dave Delamotte  
Durham Transportation  
P.O. Box 948  
Rosemead, California 91770

Subject: Progress Report #13  
Period Covering  
October 1, 1991 - December 31, 1991  
19984 Meekland Avenue, Hayward, CA

Dear Mr. Delamotte:

Enclosed is the thirteenth 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

After you review of this document, it is recommended that a copy be sent to Ms. Pam Evans of the Alameda County Health Care Services Department, Hazardous Materials Division. An extra copy of this report has 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 either of the undersigned at (510) 799-1140.

Sincerely,

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

John N. Alt, CEG #1136  
Consulting Geologist  
Toxic Technology Services  
CTTS, Inc.

Enclosure  
LAP/JNA/lap

## INTRODUCTION

The following is the thirteenth progress report of activities in the evaluation of the lateral and vertical extent of soil and groundwater contamination at 19984 Meekland Avenue, in the unincorporated area of Alameda County, near Hayward, California. This report covers the period of October 1, 1991 - December 31, 1991. The previous progress reports are dated as follows:

- |                       |                        |
|-----------------------|------------------------|
| 1. July 2, 1990       | 7. February 25, 1991   |
| 2. August 2, 1990     | 8. April 4, 1991       |
| 3. September 21, 1990 | 9. May 20, 1991        |
| 4. November 12, 1990  | 10. June 3, 1991       |
| 5. December 28, 1990  | 11. June 30, 1991      |
| 6. February 11, 1991  | 12. September 30, 1991 |

The purpose of this on-going investigation is two fold; to assess the vertical and lateral extent of soil and groundwater contamination and to characterize the contamination with regards to constituents and concentration. This investigation will result in the preparation of a remediation plan that will recommend appropriate, available technology.

## 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 the 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.

The data are presented on Table 1. They indicate a very low westward to northwestward gradient. For the most part, the elevations of groundwater in the wells are within 0.1 feet and are about at the level of error in the measuring techniques. Therefore an exact gradient was not calculated.

The data also indicates that the groundwater table rose approximately 0.9 feet over the first four months of measurement, then flattened out. Characteristic with the dry season, the groundwater table receded until November, flattened out and rose significantly with the heavy rains of February and March. The next five months have shown a steady drop in groundwater elevation, characteristic with a relatively dry spring and summer. The last three months indicate that the water table has again flattened out.

TABLE 1  
GROUNDWATER ELEVATION

Date	MW-1	MW-3	MW-4
Elevation top of casing	55.13	54.34	54.61
12/19/89	26.06 (O)	25.99 (O)	26.02 (o)
1/29/90	26.35	26.34	26.43
3/23/90	26.91 (O,S)	26.83 (O,-)	26.90 (o,-)
4/24/90	26.50 (O,S)	26.37 (o,-)	26.47 (-,-)
Elevation top of casing	55.18	--	--
	(new collar for casing MW-1 only)		
5/31/90	26.50 (O,S)	26.44 (-,-)	26.52 (-,-)
6/20/90	26.30 (O,S)	26.24 (-,-)	26.29 (-,-)
7/12/90	25.78 (O,S)	25.83 (O,-)	25.92 (-,-)
8/30/90	25.37 (O,S)	25.37 (-,-)	25.47 (-,-)
9/28/90	25.03 (O,S)	25.10 (-,-)	25.20 (-,-)
10/12/90	24.87 (O,S)	25.06 (-,-)	25.17 (-,-)
11/30/90	25.09 (O,S)	25.00 (-,-)	25.08 (-,-)
12/19/90	25.24 (O,S)	25.18 (-,-)	25.27 (-,-)
1/24/91	25.18 (O,S)	25.16 (-,-)	25.22 (-,-)
2/18/91	25.44 (O,S)	25.38 (-,-)	25.45 (-,-)
3/27/91	27.48	27.45	29.56*
	Odor and Sheen not taken		
4/17/91	28.15 (O,-)	28.09 (-,-)	27.99 (-,S)

Note: All measurements are in feet.  
(O) = strong odor; (o) = slight odor; (S) = sheen;  
(-) = non-detectable  
\* = suspect measurement

TABLE 1 (cont.)  
GROUNDWATER ELEVATION

Date	MW-1	MW-3	MW-4
Elevation top of casing	55.18	54.34	54.61
5/23/91	27.18 (-, -)	27.12 (-, -)	27.16 (-, -)
6/18/91	26.54 (o, -)	26.43 (-, -)	26.56 (-, -)
7/17/91	26.12 (O, S)	26.04 (-, -)	26.05 (-, -)
8/20/91	25.59 (O, S)	25.49 (o, -)	25.62 (o, -)
9/21/91	25.15 (O, S)	25.18 (-, -)	25.18 (-, -)
10/15/91	24.88 (O, S)	24.86 (-, -)	24.92 (-, -)
11/22/91	24.96 (O, S)	24.90 (-, -)	24.97 (-, -)
12/26/91	24.76 (O, S)	24.69 (o, -)	24.78 (-, -)

Note: All measurements are in feet.  
(O) = strong odor; (o) = slight odor; (S) = sheen;  
(-) = non-detectable

TABLE 1 (cont.)  
GROUNDWATER ELEVATION

Date	MW-5	MW-6	MW-7	MW-8	MW-9
Elevation top of casing	54.95	54.92	55.57	55.07	54.12
9/28/90	25.27 (O,-)	25.21 (O,S)	Not Installed		
10/12/90	25.16 (O,-)	25.07 (O,-)	25.11 (O,S)		
11/30/90	25.12 (-, -)	25.01 (-, -)	25.54 (o,-)		
12/19/90	25.15 (O,-)	25.22 (o,-)	25.14 (O,-)		
1/24/91	25.54 (-, -)	25.16 (o,-)	25.21 (o,-)		
2/18/91	25.39 (o,-)	25.40 (o,-)	25.46 (-, -)	25.48 (-, -)	25.40 (o,-)
3/27/91	26.62	27.46	27.50	27.40	27.40
	Odor and Sheen not taken				
4/17/91	28.04 (-, -)	28.00 (-, -)	28.02 (-, -)	28.06 (-, -)	27.99 (-, -)
5/23/91	27.17 (o,-)	27.11 (-, -)	27.19 (-, -)	27.19 (-, -)	27.13 (-, -)
6/18/91	26.77 (o,-)	26.46 (-, -)	26.53 (-, -)	26.57 (-, -)	26.58 (-, -)
7/17/91	26.13 (-, -)	26.04 (o,-)	26.10 (-, -)	26.13 (-, -)	26.04 (-, -)
8/20/91	25.37 (o,-)	25.50 (o,-)	25.59 (o,-)	25.60 (-, -)	25.52 (-, -)
9/21/91	25.49 (o,-)	25.06 (o,-)	25.16 (-, -)	25.18 (-, -)	25.15 (-, -)
10/15/91	25.00 (-, -)	24.82 (-, -)	24.97 (-, -)	24.94 (-, -)	24.84 (-, -)
11/22/91	24.94 (o,-)	24.87 (o,-)	24.94 (-, -)	24.96 (-, -)	24.89 (-, -)
12/26/91	24.89 (o,-)	24.67 (o,-)	24.76 (-, -)	24.79 (-, -)	24.70 (-, -)

Note: All measurements are in feet.  
(O) = strong odor; (o) = slight odor; (S) = sheen;  
(-) = non-detectable

## QUARTERLY MONITORING WELL SAMPLING AND ANALYSIS

On ~~September~~<sup>October</sup> 15, 1991, the three, two inch diameter on site groundwater monitoring wells (Plate 1) were each purged of a minimum of 7 gallons of water and samples collected. The five, four inch diameter wells (except MW-5) were each purged of a minimum of thirty-five gallons of water and samples collected. Twenty-five gallons of water were purged from MW-5 due to a heavy silt content and slow recharge of groundwater. 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.

Under the direction of Jack Alt, CEG, sampling was conducted by Lisa Polos, REA and Alejandro Zarantonello 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. MW-1 was the only well containing floating product. The product thickness was 0.1 feet in the bailer. The remaining wells, at the time of sample collection, did not contain 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, presented below summarizes the results from this sampling round. The complete NET analytical report is presented under Appendix A.

The State of California Maximum Contaminate Level in drinking water is 0.5 ppb for 1,2-Dichloroethane, 1750 ppb for Xylenes and 1 ppb for Benzene. The recommended drinking water action level for Toluene is 100 ppb.

In summary, all wells, except MW-4 and MW-8, are over the Maximum Contaminant Level (MCL) in drinking water for 1,2-Dichloroethane. All wells, except MW-7 and MW-8 are over the MCL for Benzene. MW-1 is over the MCL in drinking water for Xylenes and MW-1, MW-3, MW-5 and MW-6 are over the recommended drinking water action level for Toluene.

Trace levels of Tetrachloroethene were found in MW-7 and MW-8. Levels of the same constituent were found in MW-7, MW-8 and MW-9

during the July 1991 sampling. It appears that these levels are not phantom numbers and appear more prominently when the water table is at a low level.

MW-8, the on site upgradient well, contains trace levels (0.6 ppb) of Toluene. This is below the recommended drinking water action level. Levels of contamination in MW-8 are substantially lower than in the rest of the wells and still seems to indicate that the source of contamination was located on-site.

MW-9, the on-site downgradient well, continues to indicate contamination, however, at levels lower than MW-1, MW-3 and MW-5.

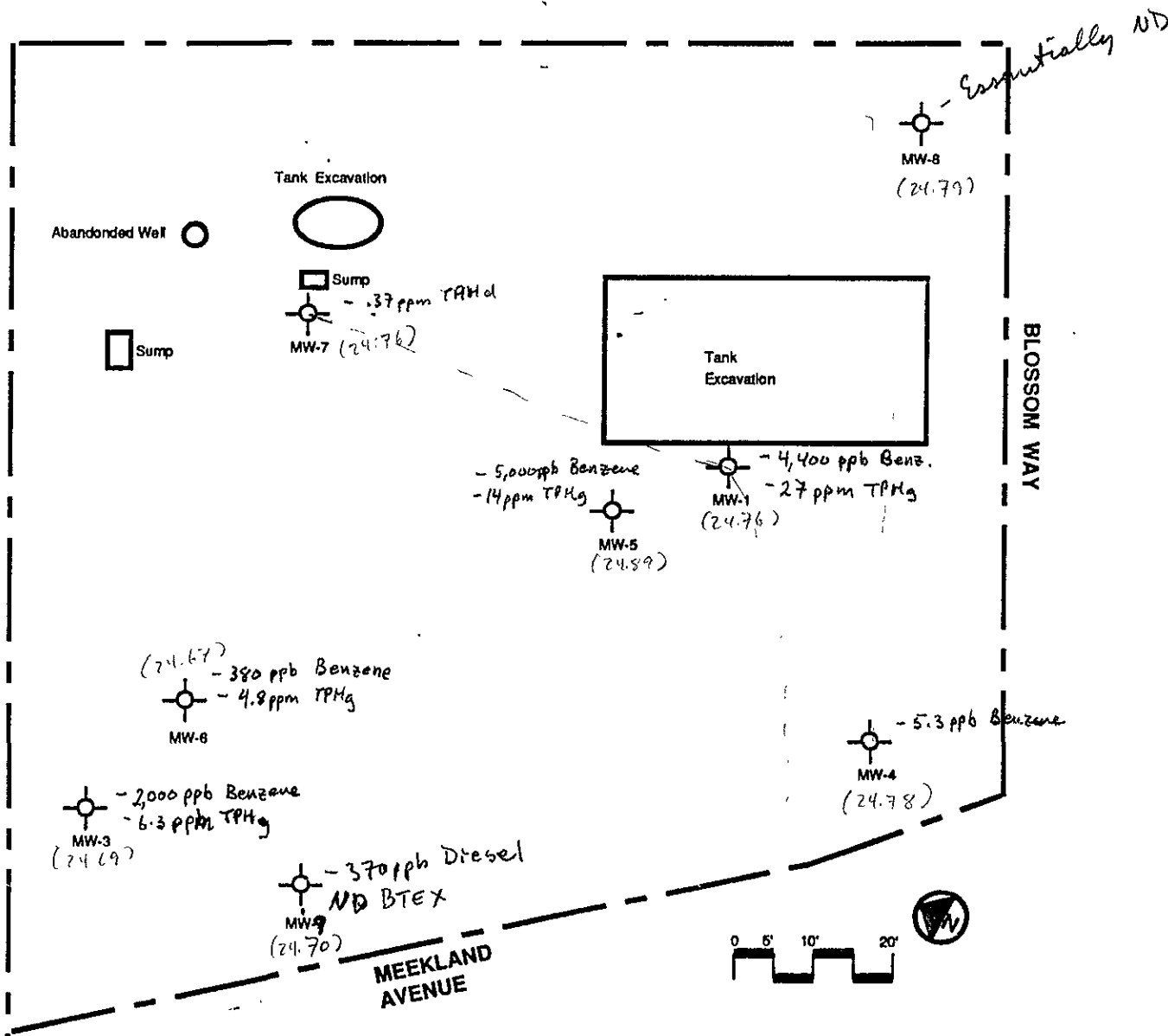
An additional constituent, Chlorobenzene was detected in MW-5 at a level below one part per billion (ppb).

TABLE 2  
SUMMARY OF RESULTS  
OCTOBER 15, 1991 SAMPLING

Constituent	MW-1		MW-3		MW-4	
1,2-Dichloroethane	25	ppb	27	ppb	ND	
Tetrachloroethene	ND		ND		ND	
Gasoline	27	ppm	6.3	ppm	ND	
Benzene	4400	ppb	2000	ppb	5.3	ppb
Ethylbenzene	1100	ppb	410	ppb	1.0	ppb
Toluene	1400	ppb	330	ppb	ND	
Xylenes	3200	ppb	550	ppb	0.8	ppb
Diesel	4.3	ppm	1.7	ppm	ND	
Chlorobenzene	ND		ND		ND	
Constituent	MW-5		MW-6		MW-7	
1,2-Dichloroethane	49	ppb	22	ppb	4.5	ppb
Tetrachloroethene	ND		ND		0.68	ppb
Gasoline	14	ppm	4.8	ppm	ND	
Benzene	5000	ppb	380	ppb	ND	
Ethylbenzene	530	ppb	69		ND	
Toluene	820	ppb	340	ppb	ND	
Xylenes	800	ppb	730	ppb	ND	
Diesel	3.3	ppm	1.6	ppm	0.37	ppm
Chlorobenzene	0.42	ppb	ND		ND	
Constituent	MW-8		MW-9			
1,2-Dichloroethane	ND		10	ppb		
Tetrachloroethene	0.40	ppb	ND			
Gasoline	ND		0.88	ppm		
Benzene	ND		160	ppb		
Ethylbenzene	ND		31	ppb		
Toluene	0.6	ppb	44	ppb		
Xylenes	ND		83	ppb		
Diesel	ND		0.30	ppm		
Chlorobenzene	ND		ND			

Note: ND = none detected





**Durham Transportation**

Date: October 1991  
 Scale: 1 inch = 20 feet  
 CTTS, Inc. - Toxic Technology Services

APPENDIX A



NATIONAL  
ENVIRONMENTAL  
TESTING, INC.

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

Jack Worthington  
Durham Transportation, Inc  
2713 N. River Ave.  
Rosemead, CA 91770

Date: 11/06/1991  
NET Client Acct. No: 25800  
NET Pacific Log No: 91.0042  
Received: 10/17/1991

Client Reference Information: 91-3

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 "Jules Skamarack", is written over a horizontal line. Below the line, the name and title are printed.

Jules Skamarack  
Laboratory Manager

cc: Lisa Polos  
Toxic Technologies  
P.O. Box 515  
Rodeo, CA 94572

Enclosure(s)



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

Date: 11/06/1991  
 Page: 2

NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-1  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101044 )

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			100	
as Gasoline		0.05	27	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			100	
Benzene		0.5	4,400	ug/L
Ethylbenzene		0.5	1,100	ug/L
Toluene		0.5	1,400	ug/L
Xylenes (Total)		0.5	3,200	ug/L
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			5	
DATE EXTRACTED			10-21-91	
DATE ANALYZED			10-22-91	
as Diesel		0.05	4.3	mg/L
as Motor Oil		0.5	ND	mg/L



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

Date: 11/06/1991  
 Page: 3

NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-1  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101044 )

Parameter	Method	Reporting Limit	Results	Units
METHOD 601 (GC,Liquid)				
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	25	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		2.0	ND	ug/L
1,1,2-Trichloroethane		1	ND	ug/L
Trichloroethene		2.0	ND	ug/L
Trichlorofluoromethane		2.0	ND	ug/L
Vinyl chloride		2.0	ND	ug/L



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

Date: 11/06/1991  
 Page: 4

NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-3  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101045 )

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			10	
as Gasoline		0.05	6.3	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			10	
Benzene		0.5	2,000	ug/L
Ethylbenzene		0.5	410	ug/L
Toluene		0.5	330	ug/L
Xylenes (Total)		0.5	550	ug/L
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			10-21-91	
DATE ANALYZED			10-22-91	
as Diesel		0.05	1.7	mg/L
as Motor Oil		0.5	ND	mg/L



Client Acct: 25800  
Client Name: Durham Transportation, Inc  
NET Log No: 91.0042

Date: 11/06/1991  
Page: 5

NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-3  
Date Taken: 10/15/1991  
Time Taken:  
LAB Job No: (-101045 )

Parameter	Method	Reporting Limit	Results	Units
METHOD 601 (GC,Liquid)				
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	27	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		2.0	ND	ug/L
1,1,2-Trichloroethane		1	ND	ug/L
Trichloroethene		2.0	ND	ug/L
Trichlorofluoromethane		2.0	ND	ug/L
Vinyl chloride		2.0	ND	ug/L



Client Acct: 25800  
Client Name: Durham Transportation, Inc  
NET Log No: 91.0042

Date: 11/06/1991  
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NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-4  
Date Taken: 10/15/1991  
Time Taken:  
LAB Job No: (-101046 )

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			10-26-91	
DILUTION FACTOR*			1	
as Gasoline		0.05	ND	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			10-26-91	
DILUTION FACTOR*			1	
Benzene		0.5	5.3	ug/L
Ethylbenzene		0.5	1.0	ug/L
Toluene		0.5	ND	ug/L
Xylenes (Total)		0.5	0.8	ug/L
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			10-21-91	
DATE ANALYZED			10-22-91	
as Diesel		0.05	ND	mg/L
as Motor Oil		0.5	ND	mg/L





Client Acct: 25800  
Client Name: Durham Transportation, Inc  
NET Log No: 91.0042

Date: 11/06/1991  
Page: 7

NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-4  
Date Taken: 10/15/1991  
Time Taken:  
LAB Job No: (-101046 )

Parameter	Method	Reporting Limit	Results	Units
METHOD 601 (GC,Liquid)				
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	ND	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		2.0	ND	ug/L
1,1,2-Trichloroethane		1	ND	ug/L
Trichloroethene		2.0	ND	ug/L
Trichlorofluoromethane		2.0	ND	ug/L
Vinyl chloride		2.0	ND	ug/L



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

Date: 11/06/1991  
 Page: 8

NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-5  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101047 )

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTEX, Liquid)				
METHOD 5030 (GC, FID)			--	
DATE ANALYZED			10-26-91	
DILUTION FACTOR*			10	
as Gasoline		0.05	14	mg/L
METHOD 8020 (GC, Liquid)			--	
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			100	
Benzene		0.5	5,000	ug/L
Ethylbenzene		0.5	530	ug/L
Toluene		0.5	820	ug/L
Xylenes (Total)		0.5	800	ug/L
METHOD 3510 (GC, FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			10-21-91	
DATE ANALYZED			10-22-91	
as Diesel		0.05	3.3	mg/L
as Motor Oil		0.5	ND	mg/L



Client Acct: 25800  
Client Name: Durham Transportation, Inc  
NET Log No: 91.0042

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NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-5  
Date Taken: 10/15/1991  
Time Taken:  
LAB Job No: (-101047 )

Parameter	Method	Reporting Limit	Results	Units
METHOD 601 (GC,Liquid)				
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	0.42	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	49	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		2.0	ND	ug/L
1,1,2-Trichloroethane		1	ND	ug/L
Trichloroethene		2.0	ND	ug/L
Trichlorofluoromethane		2.0	ND	ug/L
Vinyl chloride		2.0	ND	ug/L



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

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NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-6  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101048 )

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			50	
as Gasoline		0.05	4.8	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			50	
Benzene		0.5	380	ug/L
Ethylbenzene		0.5	69	ug/L
Toluene		0.5	340	ug/L
Xylenes (Total)		0.5	730	ug/L
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			10-21-91	
DATE ANALYZED			10-22-91	
as Diesel		0.05	1.6	mg/L
as Motor Oil		0.5	ND	mg/L



Client Acct: 25800  
Client Name: Durham Transportation, Inc  
NET Log No: 91.0042

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NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-6  
Date Taken: 10/15/1991  
Time Taken:  
LAB Job No: (-101048 )

Parameter	Method	Reporting Limit	Results	Units
METHOD 601 (GC,Liquid)				
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	22	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		2.0	ND	ug/L
1,1,2-Trichloroethane		1	ND	ug/L
Trichloroethene		2.0	ND	ug/L
Trichlorofluoromethane		2.0	ND	ug/L
Vinyl chloride		2.0	ND	ug/L



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

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NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-7  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101049 )

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTEXE,Liquid)			--	
METHOD 5030 (GC,FID)			10-26-91	
DATE ANALYZED			1	
DILUTION FACTOR*			0.05	
as Gasoline			ND	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			10-26-91	
DILUTION FACTOR*			1	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes (Total)		0.5	ND	ug/L
METHOD 3510 (GC,FID)			1	
DILUTION FACTOR*			10-21-91	
DATE EXTRACTED			10-22-91	
DATE ANALYZED			0.37	
as Diesel		0.05	0.37	mg/L
as Motor Oil		0.5	ND	mg/L



NET Pacific, Inc.

Client Acct: 25800  
Client Name: Durham Transportation, Inc  
NET Log No: 91.0042

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Ref: 91-3

SAMPLE DESCRIPTION: MW-7  
Date Taken: 10/15/1991  
Time Taken:  
LAB Job No: (-101049 )

Parameter	Method	Reporting Limit	Results	Units
METHOD 601 (GC, Liquid)				
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	4.5	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	0.68	ug/L
1,1,1-Trichloroethane		2.0	ND	ug/L
1,1,2-Trichloroethane		1	ND	ug/L
Trichloroethene		2.0	ND	ug/L
Trichlorofluoromethane		2.0	ND	ug/L
Vinyl chloride		2.0	ND	ug/L



NET Pacific, Inc.

Client Acct: 25800  
Client Name: Durham Transportation, Inc  
NET Log No: 91.0042

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Ref: 91-3

SAMPLE DESCRIPTION: MW-8  
Date Taken: 10/15/1991  
Time Taken:  
LAB Job No: (-101050 )

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE, Liquid)			--	
METHOD 5030 (GC, FID)				
DATE ANALYZED			10-26-91	
DILUTION FACTOR*			1	
as Gasoline		0.05	ND	mg/L
METHOD 8020 (GC, Liquid)			--	
DATE ANALYZED			10-26-91	
DILUTION FACTOR*			1	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	0.6	ug/L
Xylenes (Total)		0.5	ND	ug/L
METHOD 3510 (GC, FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			10-21-91	
DATE ANALYZED			10-22-91	
as Diesel		0.05	ND	mg/L
as Motor Oil		0.5	ND	mg/L





NET Pacific, Inc.

Client Acct: 25800  
Client Name: Durham Transportation, Inc  
NET Log No: 91.0042

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Ref: 91-3

SAMPLE DESCRIPTION: MW-8  
Date Taken: 10/15/1991  
Time Taken:  
LAB Job No: (-101050 )

Parameter	Method	Reporting Limit	Results	Units
METHOD 601 (GC,Liquid)				
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	ND	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	0.40	ug/L
1,1,1-Trichloroethane		2.0	ND	ug/L
1,1,2-Trichloroethane		1	ND	ug/L
Trichloroethene		2.0	ND	ug/L
Trichlorofluoromethane		2.0	ND	ug/L
Vinyl chloride		2.0	ND	ug/L



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

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NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-9  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101051 )

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Liquid)			--	
METHOD 5030 (GC,FID)				
DATE ANALYZED			10-26-91	
DILUTION FACTOR*			1	
as Gasoline		0.05	0.88	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			10	
Benzene		0.5	160	ug/L
Ethylbenzene		0.5	31	ug/L
Toluene		0.5	44	ug/L
Xylenes (Total)		0.5	83	ug/L
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			10-21-91	
DATE ANALYZED			10-22-91	
as Diesel		0.05	0.30	mg/L
as Motor Oil		0.5	ND	mg/L



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

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NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: MW-9  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101051 )

Parameter	Method	Reporting Limit	Results	Units
METHOD 601 (GC,Liquid)				
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	10	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		2.0	ND	ug/L
1,1,2-Trichloroethane		1	ND	ug/L
Trichloroethene		2.0	ND	ug/L
Trichlorofluoromethane		2.0	ND	ug/L
Vinyl chloride		2.0	ND	ug/L



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

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NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: B-1  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101052 )

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Liquid)			--	
METHOD 5030 (GC,FID)				
DATE ANALYZED			10-26-91	
DILUTION FACTOR*			1	
as Gasoline		0.05	ND	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			10-26-91	
DILUTION FACTOR*			1	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes (Total)		0.5	ND	ug/L
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			10-21-91	
DATE ANALYZED			10-22-91	
as Diesel		0.05	ND	mg/L
as Motor Oil		0.5	ND	mg/L



Client Acct: 25800  
 Client Name: Durham Transportation, Inc  
 NET Log No: 91.0042

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NET Pacific, Inc.

Ref: 91-3

SAMPLE DESCRIPTION: B-1  
 Date Taken: 10/15/1991  
 Time Taken:  
 LAB Job No: (-101052 )

Parameter	Method	Reporting Limit	Results	Units
METHOD 601 (GC,Liquid)				
DATE ANALYZED			10-28-91	
DILUTION FACTOR*			2	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	ND	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		2.0	ND	ug/L
1,1,2-Trichloroethane		1	ND	ug/L
Trichloroethene		2.0	ND	ug/L
Trichlorofluoromethane		2.0	ND	ug/L
Vinyl chloride		2.0	ND	ug/L



Client Acct: 25800  
Client Name: Durham Transportation, Inc  
NET Log No: 91.0042

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NET Pacific, Inc.

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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	104	ND	104	107	2.8
Benzene	0.5	ug/L	102	ND	101	109	8.2
Toluene	0.5	ug/L	108	ND	102	105	2.8
Gasoline	0.05	mg/L	101	ND	91	84	8.0
Benzene	0.5	ug/L	91	ND	92	85	8.3
Toluene	0.5	ug/L	97	ND	94	89	6.2
Diesel	0.05	mg/L	116	ND	63	76	10
Motor Oil	0.5	mg/L	109	ND	N/A	N/A	N/A
1,1-DCE	0.4	ug/L	100	ND	98	83	17
TCE	0.4	ug/L	92	ND	95	96	1.1
Chloro- benzene	0.4	ug/L	100	ND	102	106	2.9



NET Pacific, Inc

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 (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,  $100 \text{ (Value 1 - Value 2) / mean value}$ .
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample (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.

CHAIN OF CUSTODY RECORD

1530

PROJ. NO.		PROJECT NAME				NO. OF CONTAINERS	SAMPLERS				REMARKS
913		Durham Transportation					TPH-G	BTEX	TPH-D	601 Volatiles Chlorinated	
STA. NO	DATE	TIME	COMP.	GRAB	STATION LOCATION						
	10/16/91			X	MW-1	5	X	X	X	X	Normal TA  Report to: Lisa Polos GTS PO Box 515 Rodeo, LA 94572 Bill to: Durham Transportation  PO# 051680 per Lisa Polos to Mr Hwy
					MW-3	5	X	X	X	X	
					MW-4	6	X	X	X	X	
					MW-5	5	X	X	X	X	
					MW-6	5	X	X	X	X	
					MW-7	6	X	X	X	X	
					MW-8	5	X	X	X	X	
					MW-9	5	X	X	X	X	
					B-1	5	X	X	X	X	

( CUSTODY SEALED 10/16/91 @ 20:30 J.W. seal intact )

Relinquished by: (Signature) <i>Lisa Polos</i>	Date / Time 10/16/91 12:40	Received by: (Signature) <i>Jeff Smith</i>	Relinquished by: (Signature) <i>Jeff Smith</i>	Date / Time 10/16 20:30	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature) WHA NCS	Date / Time	Received for Laboratory by: (Signature) <i>Kenneth</i>	Date / Time 10/17/91 0800	Remarks	