

**PEMCO**

437 N. Columbia Blvd.  
P.O. Box 11569  
Portland, Oregon 97211  
Office (503) 283-2151  
FAX (503) 283-6388

August 15, 1991

DOE  
7272 Cleanwater Lane, LU-11  
Olympia, WA 98504-6811

Attn: Patty Martin

Re: Dick's Tire Factory  
710 W. Main  
Battle Ground, WA

Dear Ms. Martin:

Enclosed is the environmental report dated August 15, 1991 for the above referenced location.

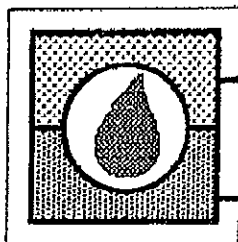
If you have any further questions, please do not hesitate to give me a call.

Sincerely,

PEMCO

*Gail Wayper*  
Gail Wayper  
Staff Geologist

Enclosure



FILE COPY

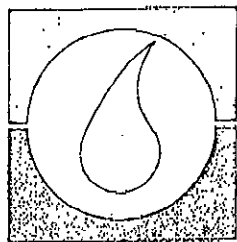
**PEMCO**

437 N. Columbia Blvd. Portland, Oregon  
(503) 283-2151

**ENVIRONMENTAL SITE ASSESSMENT**

For the Property Located at  
710 W. Main  
Battle Ground, WA

*Prepared for:*  
*Dick's Tire Factory*

**PEMCO**

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August 15, 1991

DOE  
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Olympia, WA 98504-6811

Attn: Ms. Patty Martin

Re: Dick's Tire Factory  
710 W. Main  
Battleground, WA

Dear Ms. Martin:

This report presents the procedures and results of soil sampling documented by PEMCO at the above referenced facility. PEMCO's scope of work included the removal of two (2) 1,000 gallon gasoline tanks and collecting soil samples for required analyses.

### **Procedures**

On 7/18/91, PEMCO removed two (2) tanks (listed above) from one excavation pit and collected a total of four (4) soil samples. Please reference Site Map 1 for sample locations and depths. One sample was collected from beneath each tank at a depth of 7.5 feet and two composite samples (one from the north and west walls and one from the south and east walls) were also collected. Sample #3, which had the strongest odor, was analyzed for WA-TPH-HCID, and, based on the results of the WA-TPH-HCID, all four samples were analyzed for WA-TPH-G. On 8/5, Patty Martin of the DOE approved running a BTEX analysis on the most contaminated sample only (i.e., #3). The results of all soil sampling can be found in Table 1.

All samples were collected using disposable vinyl gloves. The samples were packed for minimal headspace in a clean, EPA-approved glass containers and placed on ice for transport to the lab, accompanied by chain of custody documentation.

### **Subsurface Conditions**

Soils encountered at the site consisted of dark brown clay. No water was encountered during excavation and samples collected had faint to moderate odor.

**Chemical Results**

Results from laboratory analyses are as follows:

<b>Table 1.</b>				
<u>Sample No.</u>	<u>Location</u>	<u>Depth(ft.)</u>	<u>TPH-HCID*</u>	<u>TPH-G(ppm)</u>
1	bottom, n. tank	7.5		30
2	composite, n&w walls	7.0		30
3	bottom, s. tank	7.5	gasoline	110
4	composite, s&e walls	7.0		72

\*result given if tested.

BTEX results are as follows: benzene-ND; toluene-0.6ppm;  
ethyl benzene-0.5 ppm; xylene- 1 ppm

Complete analytical results and chain of custody documentation can be found in Appendix A.

**Conclusions**

Chemical analyses show that only one sample (#3) was above the Soil Action Level of 100 ppm for gasoline. However, by using the statistical method (Appendix E, Guidance for Remediation of Releases from Underground Storage Tanks), the calculated quantity is 89 ppm. These calculations are shown in Figure 1 (Appendix A). The BTEX levels for sample #3 are also below the Soil Action Levels. Since the cleanup standards for TPH-G and BTEX are met, this site is in compliance with current DOE rules and regulations.

Upon review of this report, if you feel these conclusions are appropriate, and no further action is necessary, a letter to that effect would be greatly appreciated.

Please do not hesitate to call if you have any questions.

Sincerely,

PEMCO



Gail K. Wayper  
Staff Geologist

cc: Richard Harris  
Dick's Tire Factory

# **APPENDIX A**

**Field Site Maps**

**Statistical Analysis**

**Chain of Custody Documentation**

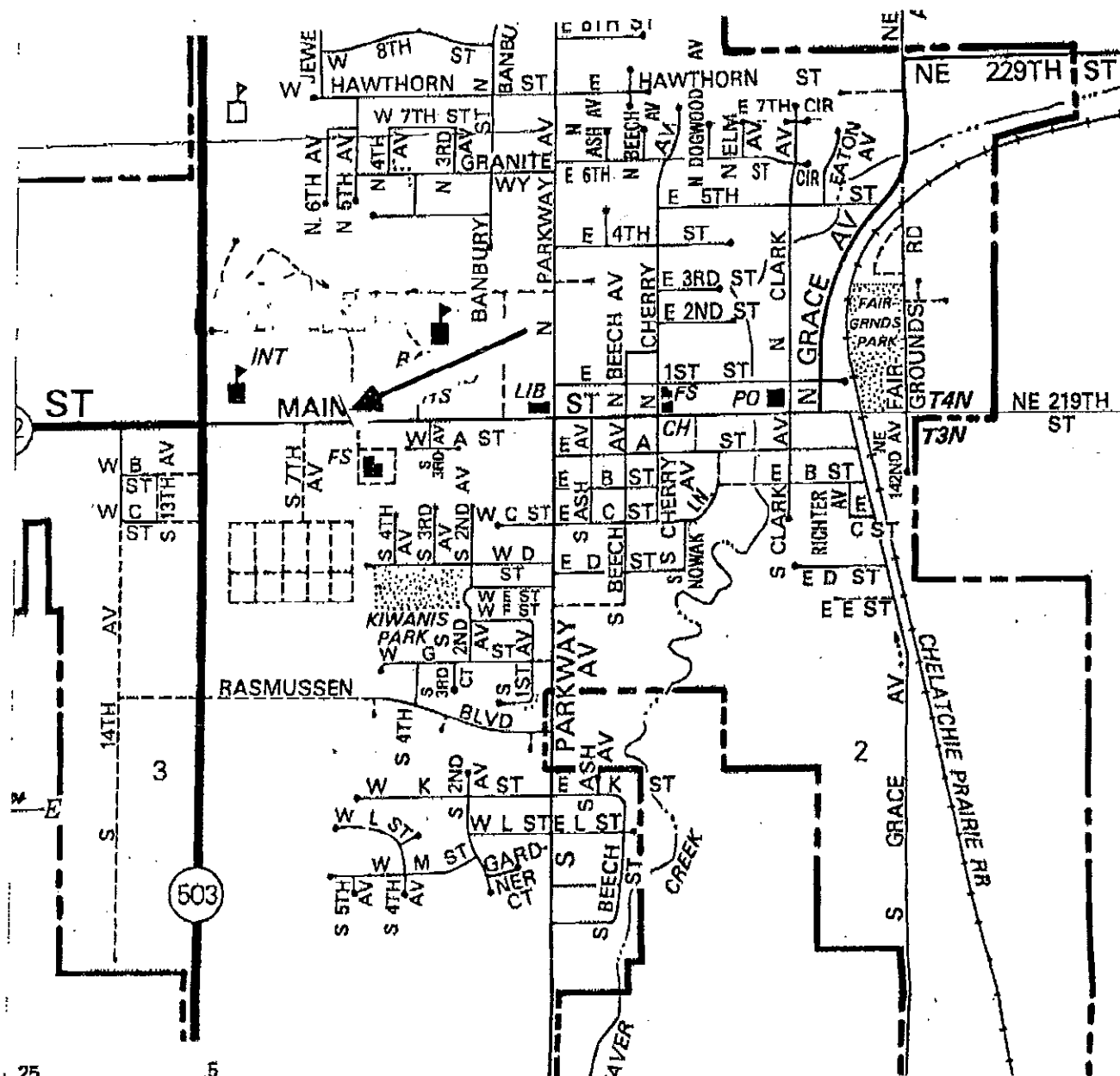
**Analytical Results**

**Location Map**

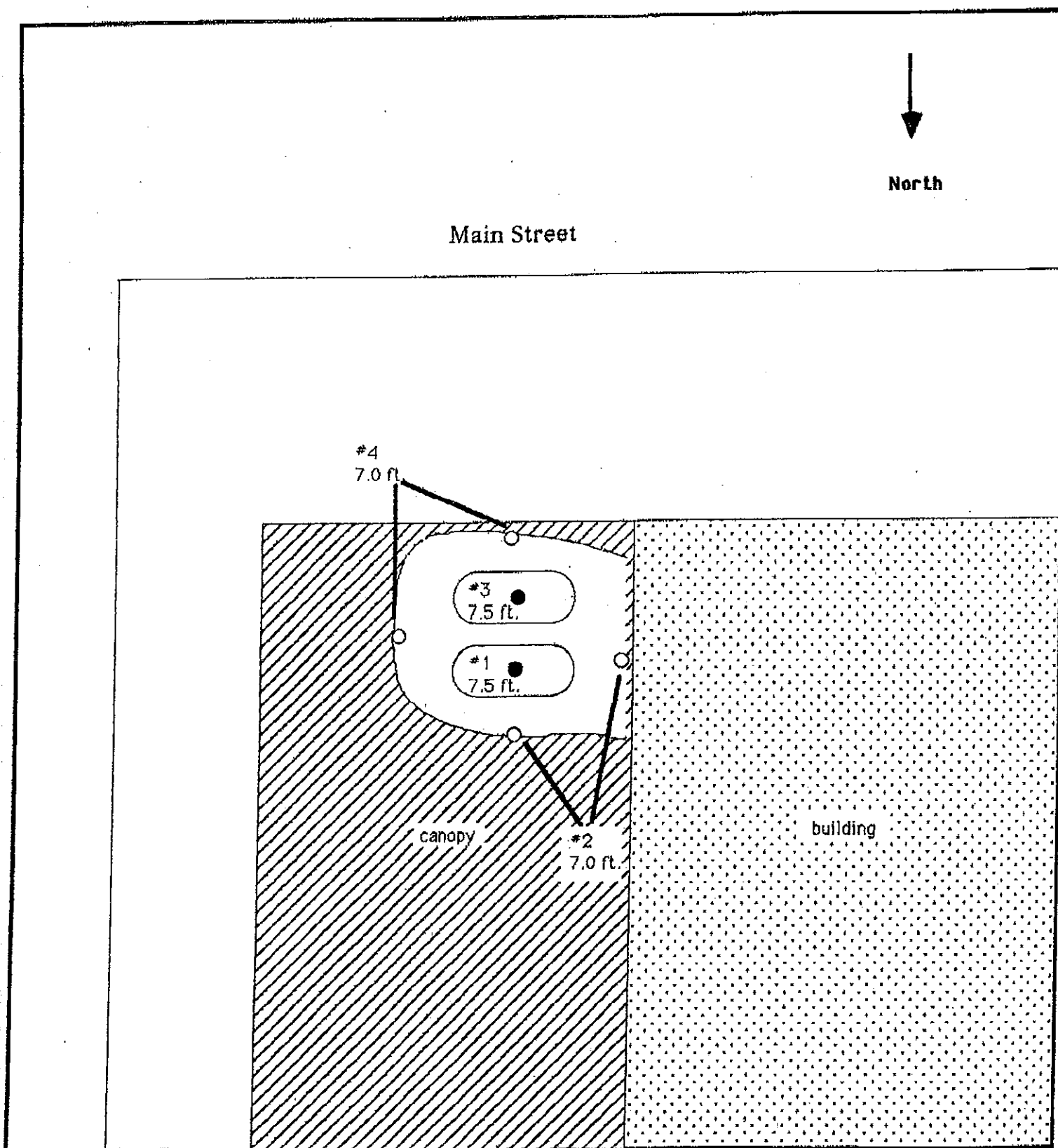
**Site Map 1 - Sample locations/results**

**Figure 1- Statistical Analysis**

**Samples collected 7/18/91 (#1175)**



Location Map



Dick's Tire Factory  
710 W. Main  
Battleground, WA  
Site Map 1

**KEY**

- Samples collected 7/18/91
- Composite samples collected 7/18/91

**PEMCO**

Job # 3176

Date: 8/15/91

Gail K. Wayper

**Figure 1. Statistical Analysis**

Sample #1 30 ppm

Sample #2 30 ppm

Sample #3 110 ppm

Sample #4 72 ppm

Mean = 60.5

Standard Deviation = 34.8

N=4

T=1.638

$$[60.5 + (34.8 \times 1.638 / 4)] = 89$$





437 N. COLUMBIA BLVD.  
P.O. BOX 11569  
PORTLAND, OR 97217  
(503) 283-2151

## CHAIN OF CUSTODY

[illegible]



NATIONAL  
ENVIRONMENTAL  
TESTING, INC.

NET Pacific, Inc.  
Suite 260  
17400 SW Upper Boones Ferry Rd.  
Portland, OR 97224  
Tel: (503) 624-5449  
Fax: (503) 639-6889

Bill Knutson  
Pemco  
P.O. Box 11569  
Portland, OR 97217

Date: 30-Jul-91  
NET Client Acct No: P62  
NET Pacific Log No: 1175  
Rec'd: 19-Jul-91

Project: # 3176; Dick Harris  
Location: 710 W. Main; Battle Ground

Dear Mr. Knutson:

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:

  
Kent Patton  
Field Services Manager

KP:pj  
Enclosure(s)

RECEIVED  
AUG 05 1991  
Ans'd.....



NET Pacific, Inc.

NET Log: 1175

Client: Pemco  
Address: Portland, OR  
Project: # 3176; Dick Harris  
Location: 710 W. Main; Battle Ground  
Contact: Bill Knutson  
Matrix: Soil

Sampled: 18-Jul-91  
Received: 19-Jul-91  
Reported: 30-Jul-91

Method: OAR/DEQ TPH-HCID  
Reporting Limit: 20 mg/Kg for TPH-Gas  
50 mg/Kg for TPH-Diesel

Lab ID: 1175.03

Sample Number	Sample I.D.	Dilution Factor	Date Analyzed	TPH HCID Results	Surrogate Recovery o-terphenyl
03	# 3Bot. S.	1	07/24/91	Gasoline	104%

Method: OAR/DEQ TPH-G  
Reporting Limit: 10 mg/Kg

Lab ID: 1175.01-04

Sample Number	Sample I.D.	Dilution Factor	Date Analyzed	TPH Gas Results	Units	Surrogate Recovery o-terphenyl
01	#1 B of N.	1	07/28/91	30	mg/Kg	74%
02	#2 Compos.	1	07/28/91	30	mg/Kg	82%
03	#3 Bot. S.	1	07/28/91	110	mg/Kg	99%
04	#4 Compos.	1	07/28/91	72	mg/Kg	84%



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Fax: (503) 639-6889

Bill Knutson  
Pemco  
P.O. Box 11569  
Portland, OR 97217

Date: 09-Aug-91  
NET Client Acct No: P62  
NET Pacific Log No: 1203  
Rec'd: 19-Jul-91

Project: # 3176; Dick Harris  
Location: 710 W. Main; Battle Ground

Dear Mr. Knutson:

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:

Kent Patton  
Field Services Manager

RECEIVED  
AUG 13 1991  
Ans'd.....

KP:pj  
Enclosure(s)



NET Pacific, Inc.

Method 5030/8020 - BTEX

NET Log: 1203

Client: Pemco  
Address: Portland, OR  
Project: # 3176; Dick Harris  
Location: 710 W. Main; Battle Ground  
Contact: Bill Knutson  
Matrix: Soil

Sampled: 18-Jul-91  
Received: 19-Jul-91  
Reported: 09-Aug-91

## Sample ID and Lab Results

Parameter	Rptng. Limit	Dilution Factor	1203.3 #3 B of S.	Units
Benzene	0.5	1	ND	mg/Kg
Toluene	0.5	1	0.6	mg/Kg
Ethyl benzene	0.5	1	0.5	mg/Kg
Xylene	0.5	1	1	mg/Kg
Surrogate recovery			100%	
Bromofluorobenzene				