

DEPARTMENT OF ECOLOGY  
UNDERGROUND STORAGE TANKS

DEC 09 1991

UNDERGROUND STORAGE TANK DECOMMISSIONING AND  
SITE ASSESSMENT FOR HOCKINSON FOOD MART AND HARDWARE  
17415 NE 159TH STREET  
BRUSH PRAIRIE, WASHINGTON 98606

NOVEMBER 26, 1991

Prepared for:

Mr. Robert Joner  
17415 NE 159th Street  
Brush Prairie, Washington 98606

Prepared by:

N.W. Construction Company  
22317 N.E. 72nd Avenue  
Battle Ground, Washington 98604

Job Number 71

## INTRODUCTION

At the request of Mr. Robert Joner, N.W. Construction Company agreed to decommission by removal two underground storage tanks previously used to store gasoline. These tanks were located at the Hockinson Food Mart and Hardware, 17415 NE 159th Street, Brush Prairie, Washington 98606. As part of the decommissioning process, a routine site assessment, including soil sample analysis of tank excavation sidewalls and floor was to be conducted and reported to Mr. Joner.

The decommissioning and site assessment process was carried out in two stages due to the discovery of gasoline contamination of soils around the tanks which required dig and haul landfill soil disposal. The initial removal of the tanks was performed in October 1991; the dig and haul removal of gasoline-contaminated soil and the second round of sampling of the excavation walls and bottom for the completion of the site assessment were performed on November 15, 1991.

## DECOMMISSIONING

One 3500 gallon steel tank and one 650 gallon steel tank (Fig. 1) were removed from the Hockinson site on October 23, 1991, in a routine procedure. Both tanks were inerted with CO<sub>2</sub> gas until oxygen meter readings for the atmosphere inside the tanks had fallen to levels below 5%. Both tanks were removed with a large backhoe (Plate 1) and removed from the site with a low-boy trailer. Both tanks were in good condition, with no significant corrosion evident on their exterior surfaces (Plates 2,3).

Soils and backfill sand around the tanks proved to be contaminated with gasoline (Plate 4). Excavation was continued to remove contaminated material. When the excavation appeared to be free of contamination, samples S-1 through S-6 were taken. Sidewall samples were taken at approximately 8 ft from ground surface. Laboratory results (Table 1) indicated that while most of the excavation was free of gasoline contamination, the north end, from which samples S-1 and S-5 had been taken, remained unsatisfactory.

#### OVEREXCAVATION AND DIG-AND-HAUL

On November 15, 1991, NW Construction returned to the site to excavate the remaining gasoline-contaminated soil, reassess the site, and haul the contaminated soil to the Hillsboro Landfill.

The excavation was lengthened approximately six feet and deepened from 10 feet to approximately 12 feet to remove the remaining gasoline-contaminated soil (Fig 1). The overexcavated wall and bottom were resampled and the samples analyzed by EPA method 8020. The results of these analyses appear in Table 1 as samples S-7 and S-8.

Soils removed from the site were hauled to the Hillsboro Landfill in Hillsboro, Oregon for disposal (Dump receipts, Appendix C). Nearly 50 tons of material were delivered to the landfill.

After sampling had been completed, the excavation was refilled with clean sand.

## LABORATORY ANALYTICAL RESULTS

Table 1 below summarizes analytical results for eight soil samples taken from the excavation.

TABLE 1

sample	W-TPHG ppm	benzene ppb	toluene ppb	ethylbenzene ppb	xylene ppb
S-1	1450	765	38000	188000	145200
S-2	ND	--	--	--	--
S-3	ND	--	--	--	--
S-4	ND	--	--	--	--
S-5	668	ND	479	254	18610
S-6	7.4	--	--	--	--
S-7	--	ND	ND	ND	ND
S-8	--	ND	ND	ND	ND

## CONCLUSION

- Laboratory results indicate that the underground storage tank excavation was virtually free of gasoline contamination at the time of the final site assessment.



Neil Shaw  
N.W. Construction Company  
Consulting Geologist

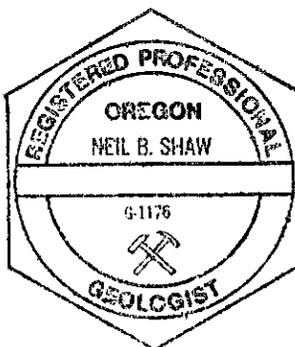
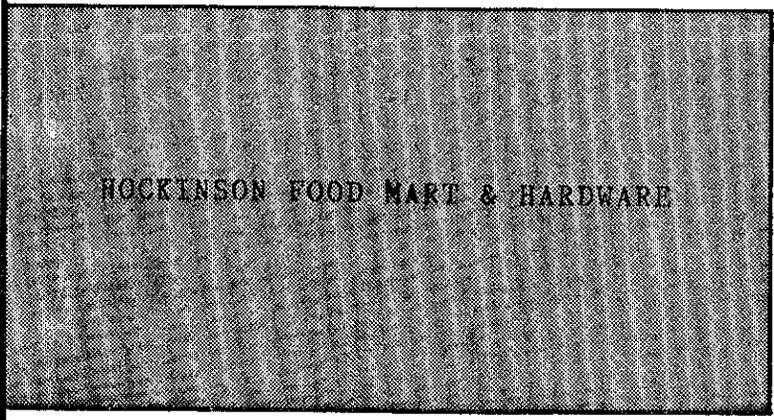
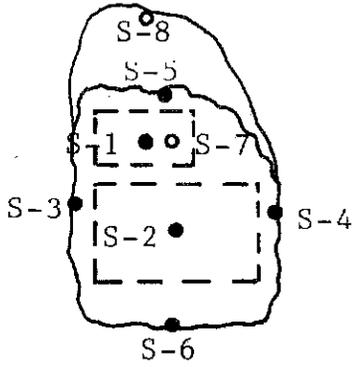


FIGURE 1 TANK LOCATIONS



N. E. 1 5 9 t h . S T R E E T



APPENDIX A

LABORATORY REPORTS  
AND CHAIN OF CUSTODY DOCUMENTS

## WATER, FOOD &amp; RESEARCH LABORATORY, INC.

Oregon State Certified Laboratory 31

13035 SW Pacific Hwy  
Portland, OR 97223

Page 1 of 2

Client: North West Construction

Date Rec'd.: 10/24/91

Report Date: 10/31/91

Job ID: No. 71

Matrix: Soil

Organic Analysis Data  
Gasoline in Soil

Method: WTPH-G

Client Sample ID	Lab Sample ID	Result	Reporting Limit mg/Kg	Percent Surrogate Recovery
S-1 N Swa	12460-1	1450	5	*
S-2	12460-2	ND	5	56
S-3	12460-3	ND	5	60
S-3	12460-3 (Duplicate)	ND	5	60
S-4	12460-4	ND	5	70
S-5	12460-5	668	5	76
S-6	12460-6	7.4	5	80

ND Not detected

\* Extent of contamination prevented percent surrogate recovery determination

13035 SW Pacific Hwy  
Portland, OR 97223

Page 2 of 2

Client: North West Construction

Date Rec'd.: 10/24/91

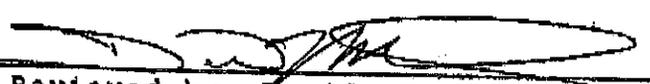
JOB ID: No. 71

Report Date: 10/31/91

Selected Volatile Aromatic Compounds

Method 5030/8020

Client Sample ID	Lab Sample ID	Parameter	Result	Reporting Limit
			-----mg/Kg-----	-----
S-1	12460-1	Benzene	0.765	0.05
		Ethyl Benzene	188	0.05
		Toluene	38.7	0.05
		m & p-Xylene	105	0.05
		o-Xylene	40.2	0.05
S-5	12460-5	Benzene	ND	0.05
		Ethyl Benzene	0.254	0.05
		Toluene	0.479	0.05
		m & p-Xylene	10.0	0.05
		o-Xylene	8.61	0.05

  
Reviewed by, David J. Melander

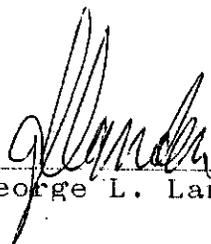
\*\*\*\*\* ANALYTICAL REPORT \*\*\*\*\*  
 \* BTEX Analytical Page 1 of 1 \*  
 \* 8725 SW White Pine Lane \*  
 \* Portland, Oregon 97225 November 21, 1991 \*  
 \*\*\*\*\*

Prepared For: Neil Shaw Consulting Geologist, Inc.  
 Contact: Neil Shaw (206) 253-9030  
 Address: 11305 Nancy Road Fax (503) 283-1153  
 Vancouver WA 98664

Project Name: Hockinson  
 Project Number: P.O. #:  
 Date Sampled: 11-15-91 Date Received: 11-20-91  
 Date Analyzed: 11-21-91 Matrix: Soil

BTEX (by EPA 8020)  
 Volatile Aromatic Hydrocarbons  
 \*\*\*\*\*  
 Water Results in ug/L (ppb)

Sample I.D.	Benzene	Toluene	Ethyl Benzene	Xylenes
71-S7	<2	<2	<2	<6
71-S7	<2	<2	<2	<6
Lower Reporting Limit	2	2	2	6

  
 \_\_\_\_\_  
 George L. Landen, Ph.D.

CHAIN OF CUSTODY

Hockinson

sample	designation	date	time	containers	analyses	and comments
71	S-7	11/15/91	1600	1	8020	71 S-7 / 2527
71	S-8	11/15/91	1610	1	8020	71-S8 / 2528
						Bill to:
						NW Construction
						Results to:
						Neil Shaw

sample total

2

container total

2

relinquished by  
representing  
date and time

Neil Shaw  
Neil Shaw Consulting Geologists  
11/15/91

received by  
representing  
date and time

" Ed Stearns  
BTEX  
11/20/91

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APPENDIX B

PLATES



PLATE 1 HOCKINSON STORE AND TANK EXCAVATION



PLATE 2 LARGE TANK AFTER EXCAVATION



PLATE 3 SMALL TANK



PLATE 4 EXCAVATION SIDEWALL WITH DISCOLORATION

APPENDIX C  
DUMP RECEIPTS

Hillsboro Landfill Inc.

Scale House - LAN # 2

CASH ACCOUNT  
 Tag #  
 Date 11-15-91  
 Time 13:27  
 Scale Op CLC  
 Type = DISPOS  
 Cash  
 Type = Not Specified  
 Out of State  
 Type = LF-Soil  
 Hillsboro  
 799  
 Amt Paid \$ 1,143.09 Change \$ 0.00

	In	Out	B2
Date	11-15-91	11-15-91	IN
Time	13:27	13:51	26
Scale Op	CLC	PLK	
	lbs	ton	
Gross Wt	94,680	47.343	S12
Tare Wt	36,060	18.03	S13
Net Wt	58,620	29.313	TN
Rate	\$ 39.00/TN		
Tip Fee	\$ 1,143.09		
Spec Fee	\$ 0.00		
Sales Tax	\$ 0.00		
Total Fee	\$ 1,143.09		

AUTHORIZED SIGNATURE

8240

Hillsboro Landfill Inc.

Scale House - LAN # 2

CASH ACCOUNT  
 Tag #  
 Date 11-15-91  
 Time 13:35  
 Scale Op CLC  
 Type = DISPOS  
 Cash  
 Type = Not Specified  
 Out of State  
 Type = LF-Soil  
 Hillsboro  
 799  
 Amt Paid \$ 606.84 Change \$ 0.00

	In	Out	B2
Date	11-15-91	11-15-91	IN
Time	13:35	13:52	20
Scale Op	CLC	PLI	
	lbs	ton	
Gross Wt	54,160	27.073	S12
Tare Wt	23,040	11.520	S13
Net Wt	31,120	15.553	TN
Rate	\$ 39.00/TN		
Tip Fee	\$ 606.84		
Spec Fee	\$ 0.00		
Sales Tax	\$ 0.00		
Total Fee	\$ 606.84		

AUTHORIZED SIGNATURE