

Northwest Testing Company

FIRST IN QUALITY CONTROL TESTING AND INSPECTION

3958

SITE ASSESSMENT REPORT

Project Name: Interlake Grocery Inspector License # W001329

Date of Assessment: October 5, 1994

Site assessment inspector Mark Robinson on site of the Interlake Grocery at 8:00 am, for sampling of water well. Cloudy, 46 degrees.

Water is sampled from the Jackson (noted as sample "Jackson") well located east, across Carpenter Road from the former UST site at the grocery store location, as well as from the on-site well (noted as sample "Grocery") located just west of the former UST location. The Jackson well has been sampled on several occasions, with the formerly elevated levels of benzene found to be steadily decreasing since the removal of petroleum contaminated soils at site. The last two times the well was tested, in March and June of 1994, no elevated levels of benzene were found. The on-site well had never shown any elevated levels of BTEX or petroleum hydrocarbons on two former tests. This well has not been used for some time.

In addition to testing of these two wells, a water sample is taken from a domestic well (noted as sample "Community") one block north of the former UST site. This well had never been sampled, and once served as a well for several domestic residences.

Finally, the contaminated soils removed during the site remediation were spread out in a thin (6 to 8 inch thick) lift over the west side of the site. A composite sample of this soil is taken for total petroleum hydrocarbon and BTEX analysis.

The water samples from the Jackson well and the on-site well were tested only for BTEX, as all previous tests for total petroleum hydrocarbons have been negative. The community well was checked for gasoline petroleum hydrocarbons as well as BTEX.

Samples were transported to TEG Laboratories in Lacey for analysis, per sections 5.5 and 7.4 of the February 1991 issue of the Department of Ecology Guidance for Site Checks and Site Assessments of Underground Storage Tanks, and its revisions.

Laboratory tests received late on October 5th indicated all water and soil samples to be within Department of Ecology safe limits for all analyzed compounds. See attached for laboratory results.

NORTHWEST TESTING COMPANY

Mark Robinson

Mark Robinson
Engineering Geologist
Washington State Registered Site Assessor

cc: Dave Swanson, Sr.
Lynn Gooding

INTERLAKE GROCERY PROJECT
 Olympia, Washington
 NW Testing Co.

Gasoline (WTPH-G) & BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene mg/kg	Toluene mg/kg	Eth Benz mg/kg	Xylene mg/kg	Gasoline mg/kg	Recovery (%)
Meth. Blank	10/05/94	nd	nd	nd	nd	nd	103
Interlake	10/05/94	nd	nd	nd	nd	nd	97
Interlake-Dup	10/05/94	nd	nd	nd	nd	nd	80
Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interferences prevent determination.

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INTERLAKE GROCERY PROJECT
 Olympia, Washington
 NW Testing Co.

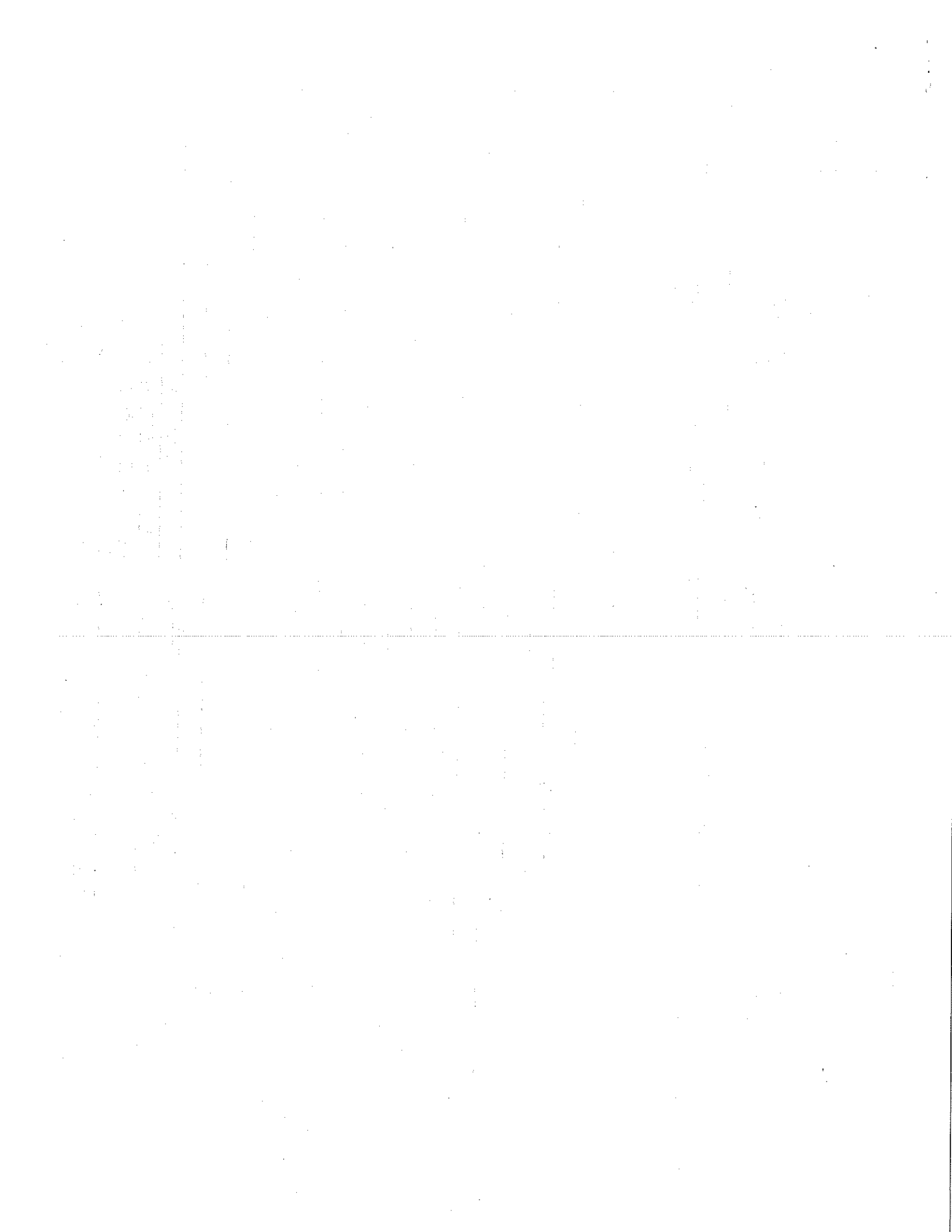
Gasoline (WTPH-G), & BTEX (EPA 8020) Analyses for Water

Sample Number	Date Analyzed	Benzene ug/l	Toluene ug/l	Eth Benz ug/l	Xylene ug/l	Gasoline ug/l	Recovery (%)
Meth. Blank	10/05/94	nd	nd	nd	nd	nd	102
Jackson	10/05/94	nd	nd	nd	nd	--	91
Grocery	10/05/94	nd	nd	nd	nd	--	82
Community	10/05/94	nd	nd	nd	nd	nd	114
Detection Limits		1	1	1	1	100	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interferences prevent determination.

=====



Northwest Testing Company

FIRST IN QUALITY CONTROL TESTING AND INSPECTION

RECEIVED
MAR 22 11:00 AM '94
P 3:29

SITE ASSESSMENT REPORT

Project Name: Interlake Grocery Inspector License # W001329

Date of Assessment: March 8, 1994

Site assessment inspector Mark Robinson on site of the Interlake Grocery at 3:00 pm, for sampling of water wells. Cloudy, 54 degrees.

Water is sampled from the Jackson well located east, across Carpenter Road from the former UST site at the grocery store location. The Jackson well has been sampled on three separate occasions, and has shown elevated levels of benzene at all test times. The degree of contamination has steadily been decreasing since the removal of petroleum contaminated soils at the former UST system at the Interlake Grocery across the street. A well on the site of the station has also been previously tested on two separate occasions, and has never shown any elevated BTEX or hydrocarbon levels. The well has not been used for some time.

The water sample is tested for BTEX, as previous tests for total petroleum hydrocarbons have been negative.

Sample is transported to Spectra Laboratories in Tacoma for analysis, per sections 5.5 and 7.4 of the February 1991 issue of the Department of Ecology Guidance for Site Checks and Site Assessments of Underground Storage Tanks, and it's revisions.

Laboratory tests received on March 18th indicate the no elevation of the benzene level. The level of benzene was formerly measured at 1.5 parts per billion (ppb) on 8-30-93, down from levels of 6.3 ppb measured on 10-14-92, 6.7 ppb measured on 10-29-92, and 2.0 ppb measured on March 26, 1993. The action level for benzene in groundwater is 1.0 ppb. The on site well showed no contamination in any samples. See attached for laboratory results.

Northwest Testing Company

Mark Robinson

Mark Robinson
Engineering Geologist
Washington State Registered Site Accessor

cc: Dave Swanson, Sr.
Lynn Gooding



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

March 16, 1994

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Water 1
Project: Interlake Store
Sample Matrix: Water
Date Sampled: 3-9-94
Date Received: 3-9-94
Spectra Project: S403-082
Spectra #3418

BTEX, EPA Method 8260
Dilution Factor: 1

Date Analyzed: 3-9-94
Units: ug/L

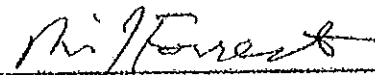
	<u>CAS#</u>	
Benzene	71-43-2	<1.0
Toluene	108-88-3	<1.0
Ethylbenzene	100-41-4	<1.0
Total Xylenes	—	<1.0

Surrogate Percent Recoveries:

Dibromofluoromethane	96%
Toluene-d8	93%
4-Bromofluorobenzene	101%

CAS# = Chemical Abstract Services Registry Number

SPECTRA LABORATORIES, INC.


Richard J. Forrester
Manager, Organic Chemistry



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

March 16, 1994

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

METHOD BLANK
Sample Matrix: Water
Spectra Project: S403-082
Applies to Spectra #3418

BTEX, EPA Method 8260
Dilution Factor: 1

Date Analyzed: 3-9-94
Units: ug/L

	<u>CAS#</u>	
Benzene	71-43-2	<1.0
Toluene	108-88-3	<1.0
Ethylbenzene	100-41-4	<1.0
Total Xylenes	—	<1.0

Surrogate Percent Recoveries:

Dibromofluoromethane	102%
Toluene-d8	102%
4-Bromofluorobenzene	106%

CAS# = Chemical Abstract Services Registry Number

SPECTRA LABORATORIES, INC.

Richard J. Forrester
Manager, Organic Chemistry



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

March 16, 1994

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

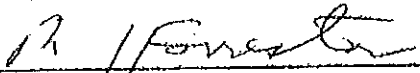
Attn: Mark Robinson

Sample Matrix: Water
EPA Method: 8260
Sample Spiked: Method Blank
Date Analyzed: 3-8-94
Units: ug/L
Spectra Project: S403-082
Applies to Spectra #3418

GCMS VOLATILE ORGANIC ANALYSIS QUALITY CONTROL RESULTS

<u>Compound</u>	<u>Sample Result</u>	<u>Spike Amount Added</u>	<u>Spike Amount Found</u>	<u>% Recovery</u>	<u>Dup. Spike Amount Found</u>	<u>% Recovery</u>	<u>RPD</u>
Benzene	<1.0	50	45.6	91	47.0	94	3
Toluene	<1.0	50	44.2	88	45.2	90	2

SPECTRA LABORATORIES, INC.


Richard J. Forrester
Manager, Organic Chemistry

Northwest Testing Company

RECEIVED

FIRST IN QUALITY CONTROL TESTING AND INSPECTION

3958

'93 SEP 10 09:17

SITE ASSESSMENT REPORT

DEPARTMENT OF ECOLOGY
S.W. REGIONAL OFFICE

Project Name: Interlake Grocery Inspector License # W001329

Date: August 30, 1993

Site assessment inspector Mark Robinson on site of the Interlake Grocery at 3:00 pm, for sampling of water wells. Clear, 80 degrees.

Water is sampled from both the Jackson well located east, across Carpenter Road from the site, and from a wellhead located on the site, approximately 30' west of the former UST site. The Jackson well has been sampled on two separate occasions, and has shown elevated levels of benzene. The well on site has also been previously tested, and has not shown any elevated BTEX levels. The well is not currently used. The depth to water at this well was measured at 41.5'.

Samples are tested for BTEX.

A list of samples and their respective locations follows:

1 Water A&B: On side well, 30' west of former UST system.

2 Water A&B: Jackson residence.

Samples were transported to Spectra Laboratories in Tacoma for analysis, per sections 5.5 and 7.4 of the February 1991 issue of the Department of Ecology Guidance for Site Checks and Site Assessments of Underground Storage Tanks, and it's revisions.

Laboratory tests received on September 7th indicate slight elevation of the benzene level in water from the Jackson residence well across the street. The level of benzene was measured at 1.57 parts per billion (ppb), down from levels of 6.3 ppb measured on 10-14-92, 6.7 ppb measured on 10-29-92, and 2.0 ppb measured on March 26, 1993. The action level for benzene in groundwater is 1.0 ppb. The on site well showed no contamination in any samples. See attached for laboratory results.

Northwest Testing Company

Mark Robinson

Mark Robinson
Engineering Geologist

MRR:eh

cc: Dave Swanson, Sr.
Lynn Gooding



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

September 3, 1993

Northwest Testing Co.
PO Box 10354
Olympia WA 98502

Attn: Mark Robinson

Sample ID: #1 Water
Project: Interlake Store
Sample Matrix: Water
Date Sampled: 8-30-93
Date Received: 8-30-93
Spectra Project: S308-156
Spectra #4673

BTEX, EPA Method 624/8240
Dilution Factor: 1

Date Analyzed: 8-31-93
Units: ug/L

Benzene	<1
Toluene	<1
Ethyl Benzene	<1
Total Xylenes	<1

Surrogate Recovery - Toluene-d8 103%

SPECTRA LABORATORIES, INC.

Richard J. Forrester
Manager, Organic Chemistry



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

September 3, 1993

Northwest Testing Co.
PO Box 10354
Olympia WA 98502

Attn: Mark Robinson

Sample ID: #2 Water
Project: Interlake Store
Sample Matrix: Water
Date Sampled: 8-30-93
Date Received: 8-30-93
Spectra Project: S308-156
Spectra #4675

BTEX, EPA Method 624/8240
Dilution Factor: 1

Date Analyzed: 8-31-93
Units: ug/L

Benzene	1.5
Toluene	<1.0
Ethyl Benzene	2.2
Total Xylenes	1.7

Surrogate Recovery - Toluene-d8 105%

SPECTRA LABORATORIES, INC.

Richard J. Forrester
Manager, Organic Chemistry



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

September 3, 1993

Northwest Testing Co.
PO Box 10354
Olympia WA 98502

Attn: Mark Robinson

METHOD BLANK
Sample Matrix: Water
Date Analyzed: 8-31-93
Spectra Project: S308-156
Applies to Spectra #'s
4673 and 4675

BTEX, EPA Method 624/8240
Dilution Factor: 1

Date Analyzed: 8-31-93
Units: ug/L

Benzene	<1
Toluene	<1
Ethyl Benzene	<1
Total Xylenes	<1

Surrogate Recovery - Toluene-d8 100%

SPECTRA LABORATORIES, INC.

Richard J. Forrester
Manager, Organic Chemistry



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September 3, 1993

Northwest Testing Co.
PO Box 10354
Olympia WA 98502

Attn: Mark Robinson

Sample Matrix: Water
EPA Method: 624/8240
Sample Spiked: Method Blank
Date Analyzed: 8-12-93
Units: ug/L
Spectra Project: S308-156
Applies to Spectra #'s
4673 and 4675

GCMS VOLATILE ORGANIC ANALYSIS QUALITY CONTROL RESULTS

<u>Compound</u>	<u>Sample Result</u>	<u>Spike Amount Added</u>	<u>Spike Amount Found</u>	<u>% Recovery</u>	<u>Dup. Spike Amount Found</u>	<u>% Recovery</u>	<u>RPD</u>
Benzene	<1	50	50.1	100	51.3	103	2
Toluene	<1	50	47.3	95	47.3	95	0

SPECTRA LABORATORIES, INC.

Richard J. Forrester
Manager, Organic Chemistry



3958

'93 SEP 10 A9:17 SITE ASSESSMENT REPORT

DEPARTMENT OF ECOLOGY
S.W. REGIONAL OFFICE

Project Name: Interlake Grocery Inspector License # W001329

Date: August 30, 1993

Site assessment inspector Mark Robinson on site of the Interlake Grocery at 3:00 pm, for sampling of water wells. Clear, 80 degrees.

Water is sampled from both the Jackson well located east, across Carpenter Road from the site, and from a wellhead located on the site, approximately 30' west of the former UST site. The Jackson well has been sampled on two separate occasions, and has shown elevated levels of benzene. The well on site has also been previously tested, and has not shown any elevated BTEX levels. The well is not currently used. The depth to water at this well was measured at 41.5'.

Samples are tested for BTEX.

A list of samples and their respective locations follows:

- 1 Water A&B: On side well, 30' west of former UST system.
- 2 Water A&B: Jackson residence.

Samples were transported to Spectra Laboratories in Tacoma for analysis, per sections 5.5 and 7.4 of the February 1991 issue of the Department of Ecology Guidance for Site Checks and Site Assessments of Underground Storage Tanks, and it's revisions.

Laboratory tests received on September 7th indicate slight elevation of the benzene level in water from the Jackson residence well across the street. The level of benzene was measured at 1.5 parts per billion (ppb), down from levels of 6.3 ppb measured on 10-14-92, 6.7 ppb measured on 10-29-92, and 2.0 ppb measured on March 26, 1993. The action level for benzene in groundwater is 1.0 ppb. The on site well showed no contamination in any samples. See attached for laboratory results.

Jackson well

10/3/92	6.3 ppb
10/29/92	6.7 ppb
3/26/93	2.0 ppb
9/7/93	1.5 ppb

wellhead on-site well 30' west

UST Benzene?
actual from
Refer to UST Benzene

a 3rd well?
or same?
or "non" well?
never sampled

0.5

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September 3, 1993

OK - Site west.

Northwest Testing Co.
PO Box 10354
Olympia WA 98502

Attn: Mark Robinson

Sample ID: #1 Water
Project: Interlake Store
Sample Matrix: Water
Date Sampled: 8-30-93
Date Received: 8-30-93
Spectra Project: S308-156
Spectra #4673

BTEX, EPA Method 624/8240
Dilution Factor: 1

Date Analyzed: 8-31-93
Units: ug/L

Benzene	<1
Toluene	<1
Ethyl Benzene	<1
Total Xylenes	<1

Surrogate Recovery - Toluene-d8 103%

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Richard J. Forrester
Manager, Organic Chemistry

SPECTRA Laboratories, Inc.

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September 3, 1993

Northwest Testing Co.
PO Box 10354
Olympia WA 98502

Attn: Mark Robinson

Sample ID: #2 Water
Project: Interlake Store
Sample Matrix: Water
Date Sampled: 8-30-93
Date Received: 8-30-93
Spectra Project: S308-156
Spectra #4675

BTEX, EPA Method 624/8240
Dilution Factor: 1

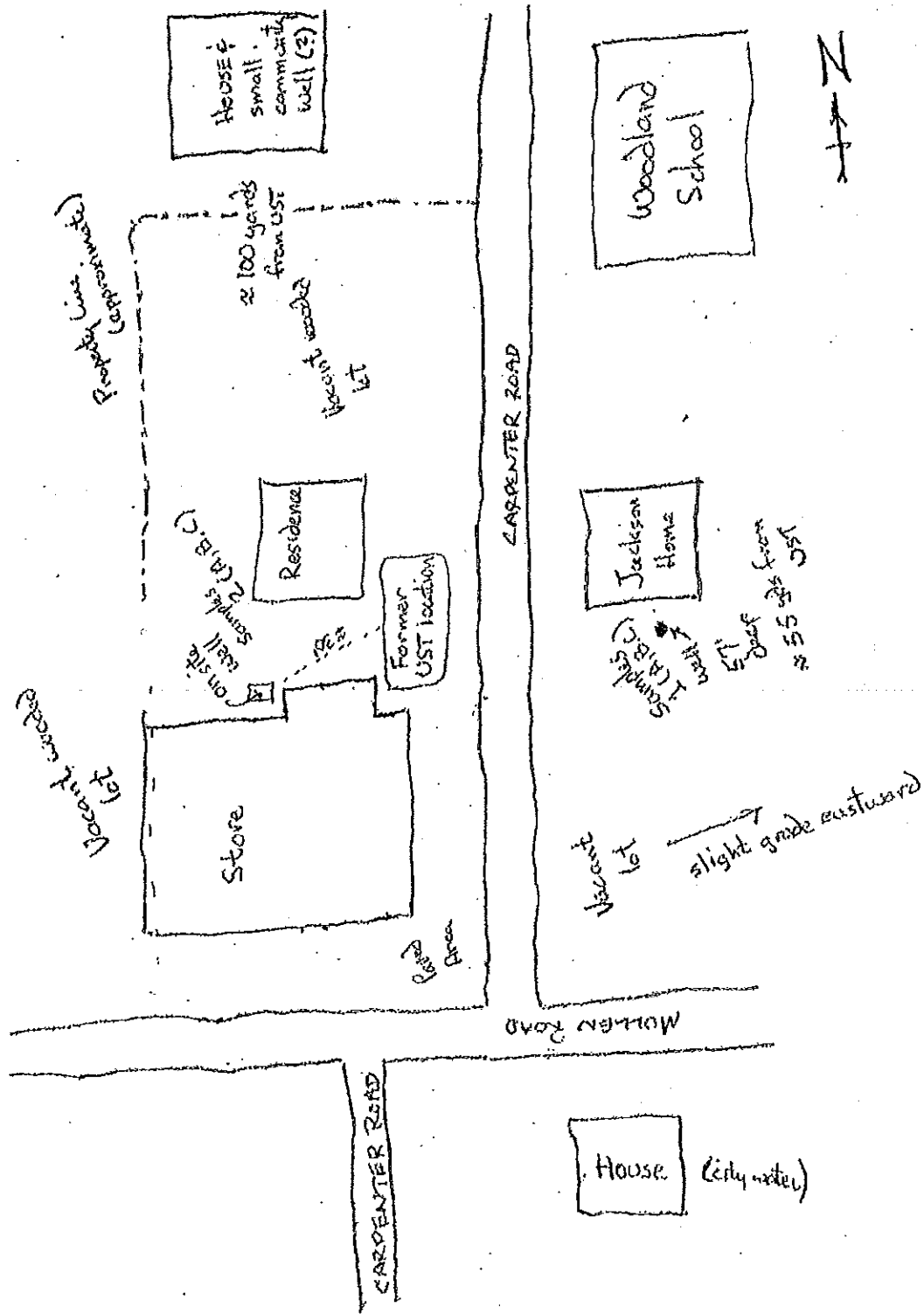
Date Analyzed: 8-31-93
Units: ug/L

Benzene	1.5
Toluene	<1.0
Ethyl Benzene	2.2
Total Xylenes	1.7

Surrogate Recovery - Toluene-d8 105%

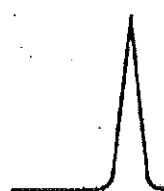
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Richard J. Forrester
Manager, Organic Chemistry



INTERLAKE GROCERY UST

3-24-93



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

March 25, 1993

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Water 1-A,B,C
Project: Inter Lake Grocery
Sample Matrix: Water
Date Sampled: 3-24-93
Date Received: 3-24-93
Spectra Project: S303-169
Spectra #1688
RUSH

BTEX, EPA Method 8240
Dilution Factor: 1

Date Analyzed: 3-24-93
Units: ug/L

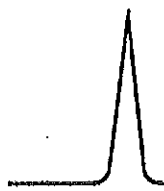
Benzene	2.0
Toluene	<1
Ethyl Benzene	1.1
Total Xylenes	<1

Surrogate Percent Recoveries:	
Toluene-d8	100

WTPH-G, ug/L	<250
Surrogate Rec. - Toluene-D8 100%	

SPECTRA LABORATORIES, INC.

Richard J. Foster
Manager, Organic Chemistry



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

March 25, 1993

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Water 2-A,B,C
Project: Inter Lake Grocery
Sample Matrix: Water
Date Sampled: 3-24-93
Date Received: 3-24-93
Spectra Project: S303-169
Spectra #1689
RUSH

BTEX, EPA Method 8240
Dilution Factor: 1

Date Analyzed: 3-24-93
Units: ug/L

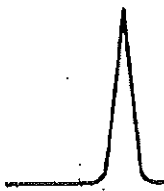
Benzene	<1
Toluene	<1
Ethyl Benzene	<1
Total Xylenes	<1

Surrogate Percent Recoveries:	
Toluene-d8	101

WTPH-G, ug/L	<250
Surrogate Recovery	Toluene-D8 101%

SPECTRA LABORATORIES, INC.

Richard J. Forrester
Manager, Organic Chemistry



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

March 25, 1993

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

METHOD BLANK

Sample Matrix: Water
Spectra Project: S303-169
Applies to Spectra #'s
1688 and 1689

WTPH-G, ug/L

<250

SPECTRA LABORATORIES, INC.



Richard J. Forrester
Manager, Organic Chemistry



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

March 25, 1993

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

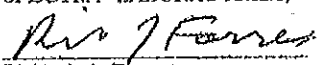
METHOD BLANK
Sample Matrix: Water
Spectra Project: S303-169
Applies to Spectra #'s
1688 and 1689


BTEX, EPA Method 8240
Dilution Factor: 1

Date Analyzed: 3-24-93
Units: ug/L

Benzene	<1
Toluene	<1
Ethyl Benzene	<1
Total Xylenes	<1

Surrogate Percent Recoveries:
Toluene-d8 101

SPECTRA LABORATORIES, INC.

Richard J. Forrester
Manager, Organic Chemis.



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

March 25, 1993

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample Matrix: Water
EPA Method: 624/8240
Sample Spiked: Method Blank
Date Analyzed: 3-24-93
Units: ug/L
Spectra Project: S303-169
Applies to Spectra #'s
1688 and 1689

GCMS VOLATILE ORGANIC ANALYSIS QUALITY CONTROL RESULTS

<u>Compound</u>	<u>Sample Result</u>	<u>Spike Amount Added</u>	<u>Spike Amount Found</u>	<u>% Recovery</u>	<u>Dup. Spike Amount Found</u>	<u>% Recovery</u>	<u>% RPD</u>
Benzene	<5	50	48.6	97	48.8	98	0
Toluene	<5	50	52.5	105	51.6	103	2

SPECTRA LABORATORIES, INC.


Richard J. Forrester
Manager, Organic Chemistry

Northwest Testing Company

FIRST IN QUALITY CONTROL TESTING AND INSPECTION

RECEIVED
SITE ASSESSMENT REPORT

03 APR -2 AIO:43

Project Name: Interlake Grocery Inspector License # W001329

S.W. REGIONAL DEPT.

Date: 3-26-93

March 24: Site assessment inspector Mark Robinson on site of the Interlake Grocery at 11:10 am, for sampling of water wells. Partly cloudy, 50 degrees.

Water is sampled from both the Jackson well located east, across Carpenter Road from the site, and from a wellhead located on the site, approximately 30' west of the former UST site. The Jackson well had been previously sampled and tested, and had shown elevated levels of benzene. The well on site had not been previously tested, and it is not currently used. The depth to water at this well was measured at 42'.

Samples are tested for total petroleum hydrocarbons and BTEX.

A list of samples and their respective locations follows:

Water 1A, 1B, 1C: Jackson residence well.

Water 2A, 2B, 2C: On site well, 30' west of former UST system.

Samples were stored and transported to the laboratory for analysis, per sections 5.5 and 7.4 of the February 1991 issue of the Department of Ecology Guidance for Site Checks and Site Assessments of Underground Storage Tanks, and it's revisions.

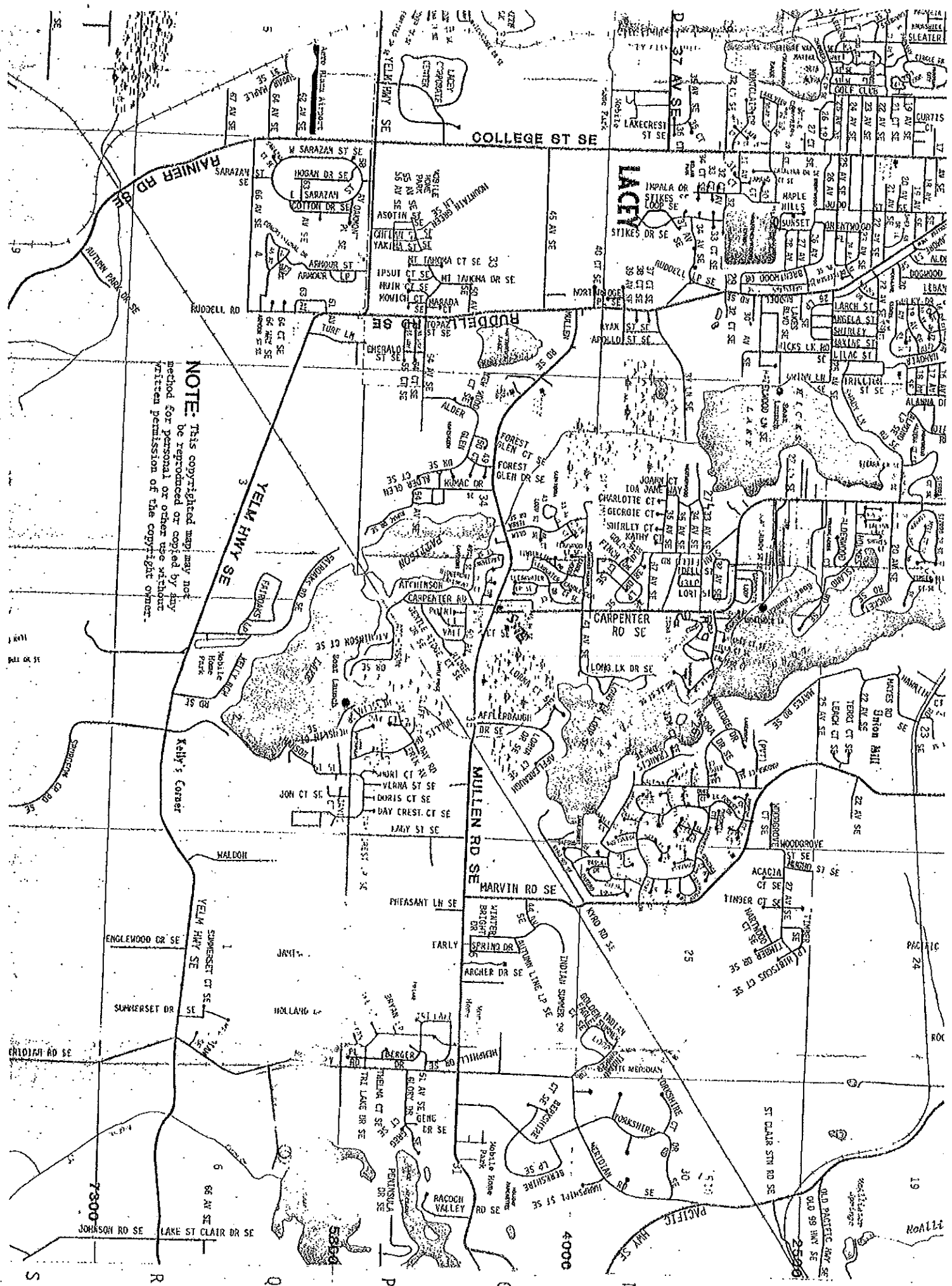
Laboratory tests received on March 25th indicate slight elevation of the benzene level in water from the Jackson residence well across the street. The level of benzene was measured at 2.0 parts per billion (ppb), down from levels of 6.3 ppb measured on 10-14-92, and 6.7 ppb measured on 10-29-92 prior to the removal of contaminated soils on the site. The action level for benzene in groundwater is 1.0 ppb. The on site well showed no contamination in any samples. See attached for laboratory results.

Northwest Testing Company

Mark Robinson
Mark Robinson
Engineering Geologist

MRR:eh

cc: Dave Swanson, Sr.
Lynn Gooding



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Kelly's Corner

LACEY

7300

4006

2506

1770

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75

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920

925

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970

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980

985

990

995

1000

3958

Northwest Testing Company

FIRST IN QUALITY CONTROL TESTING AND INSPECTION

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SITE ASSESSMENT REPORT

'94 JUN 24 PM

Project Name: Interlake Grocery Inspector License # W001329 DEPARTMENT OF ECOLOGY
W. REGIONAL OFFICE

Date of Assessment: June 13, 1994

Site assessment inspector Mark Robinson on site of the Interlake Grocery at 3:00 pm, for sampling of water well. Cloudy, 63 degrees.

Water is sampled from the Jackson well located east, across Carpenter Road from the former UST site at the grocery store location. The Jackson well had been sampled on three separate occasions, and had shown elevated levels of benzene at all test times. The degree of contamination has steadily been decreasing since the removal of petroleum contaminated soils at the former UST system at the Interlake Grocery across the street. The last time the well was tested was in March of 1994, when no elevated levels of benzene were found.

A well on the site of the station has also been previously tested on two separate occasions, and has never shown any elevated BTEX or hydrocarbon levels. The well has not been used for some time.

The water sample is tested for BTEX, as previous tests for total petroleum hydrocarbons have been negative.

Sample is transported to Spectra Laboratories in Tacoma for analysis, per sections 5.5 and 7.4 of the February 1991 issue of the Department of Ecology Guidance for Site Checks and Site Assessments of Underground Storage Tanks, and it's revisions.

Laboratory tests received on June 22nd indicate no elevation of the benzene level nor other compounds. The level of benzene was formerly measured at 1.5 parts per billion (ppb) on 8-30-93, down from levels of 6.3 ppb measured on 10-14-92, 6.7 ppb measured on 10-29-92, and 2.0 ppb measured on March 26, 1993. The action level for benzene in groundwater is 1.0 ppb. The on site well showed no contamination in any samples. See attached for laboratory results.

Northwest Testing Company

Mark Robinson

Mark Robinson
Engineering Geologist
Washington State Registered Site Assessor

cc: Dave Swanson, Sr.
Lynn Gooding

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

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'94 JUN 24 P1 156

DEPARTMENT OF ECOLOGY
S.W. REGIONAL OFFICE

June 21, 1994

Northwest Testing Co.
PO Box 10354
Olympia WA 98502

Attn: Mark Robinson

Sample ID: Water 1
Project: Interlake Grocery
Sample Matrix: Water
Date Sampled: 6-13-94
Date Received: 6-15-94
Spectra Project: S406-114
Spectra #7617

BTEX, EPA Method 8260
Dilution Factor: 1

Date Analyzed: 6-15-94
Units: ug/L

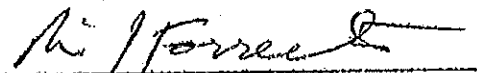
	<u>CAS#</u>	
Benzene	71-43-2	<1.0
Toluene	108-88-3	<1.0
Ethylbenzene	100-41-4	<1.0
Total Xylenes	—	<1.0

Surrogate Percent Recoveries:


Dibromofluoromethane	104%
Toluene-d8	102%
4-Bromofluorobenzene	99%

CAS# = Chemical Abstract Services Registry Number

SPECTRA LABORATORIES, INC.



Richard J. Forrester
Manager, Organic Chemistry



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

June 21, 1994

Northwest Testing Co.
PO Box 10354
Olympia WA 98502

Attn: Mark Robinson

METHOD BLANK
Sample Matrix: Water
Spectra Project: S406-114
Applies to Spectra #7617

BTEX, EPA Method 8260
Dilution Factor: 1

Date Analyzed: 6-15-94
Units: ug/L

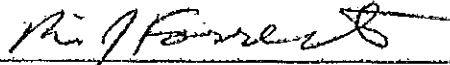
	<u>CAS#</u>	
Benzene	71-43-2	<1.0
Toluene	108-88-3	<1.0
Ethylbenzene	100-41-4	<1.0
Total Xylenes	—	<1.0


Surrogate Percent Recoveries:

Dibromofluoromethane	101%
Toluene-d8	100%
4-Bromofluorobenzene	100%

CAS# = Chemical Abstract Services Registry Number

SPECTRA LABORATORIES, INC.


Richard J. Forrester
Manager, Organic Chemistry



SPECTRA Laboratories, Inc.

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June 21, 1994

Northwest Testing Co.
PO Box 10354
Olympia WA 98502

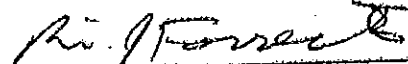
Attn: Mark Robinson

Sample Matrix: Water
EPA Method: 8260
Sample Spiked: Method Blank
Date Analyzed: 6-13-94
Units: ug/L
Spectra Project: S406-114
Applies to Spectra #7617

GCMS VOLATILE ORGANIC ANALYSIS QUALITY CONTROL RESULTS

<u>Compound</u>	<u>Sample Result</u>	<u>Spike Amount Added</u>	<u>Spike Amount Found</u>	<u>% Recovery</u>	<u>Dup. Spike Amount Found</u>	<u>% Recovery</u>	<u>RPD</u>
Benzene	<1.0	50	48.1	96	48.4	97	0
Toluene	1.2	50	48.6	95	48.2	94	1

SPECTRA LABORATORIES, INC.


Richard J. Forrester
Manager, Organic Chemistry

Northwest Testing Company

FIRST IN QUALITY CONTROL TESTING AND INSPECTION

RECEIVED

March 15, 1993

ATTN: Lynn Gooding

Department of Ecology
LUST Division
Mail Stop LU-11
7272 Clearwater Lane
Olympia, WA. 98504-6811

'93 MAR 16 A7:44
DEPARTMENT OF ECOLOGY
S.W. REGIONAL OFFICE

RE: Interlake Grocery

Dear Lynn:

Dave Swanson has requested that we to the Department both a status report and an Interim Action plan for the Interlake Grocery site in Lacey, Washington.

Site Status: Approximately 200 yards of petroleum contaminated soils have been removed from the former UST site, as well as all tanks and piping. Remaining in the ground are two confined areas where the removal of contaminated soils was not possible because it jeopardized the foundations of both the grocery and house structures. The location of these two lenses of soil are identified in the assessment reports. We estimate a total of approximately five yards of contaminated material remain located beneath the grocery building and the residence. The material is fairly isolated at fifteen to twenty one feet below grade, and beneath the structures. We do not view this as a further threat to the local population, and the contamination will be mitigated over time through natural bacterial processes. No further action is intended for these areas.

Interim Action:

a) Soils Remediation: The soils removed from the site have been stockpiled at a location off of the subject property, and have been suitably isolated above and below with plastic sheeting to avoid further environmental contamination. It is my understanding that Dave Swanson intends to remediate these soils at this other site, with remediation to be accomplished by biodegradation. We will assist Dave in an action plan to accomplish this.

b) Groundwater Status: A monitor well casing was installed at the site at the time the UST excavation pit was re-filled with clean gravel material. At this time, no groundwater has been noted in the well, which is approximately 25 feet in depth. There currently exists an unused well at the site, approximately 40 feet west of the old UST site, which formerly served the store with water.

4000
1000

Dave Swanson has requested that we initiate a water sampling plan on a quarterly basis which would sample water from both this well and from the Jackson Residence well across the street from the site. Should groundwater be noted in the monitor well casing placed in the former UST site, this water would also be sampled and tested. Samples would be tested for total petroleum hydrocarbons and for BTEX. Should all samples test clean for a period of one year, the sampling program would be terminated, and no further action would be taken at the site.

We will keep the Department apprised of the off site soil remediation efforts, as well as the quarterly water analysis program.

Respectfully,

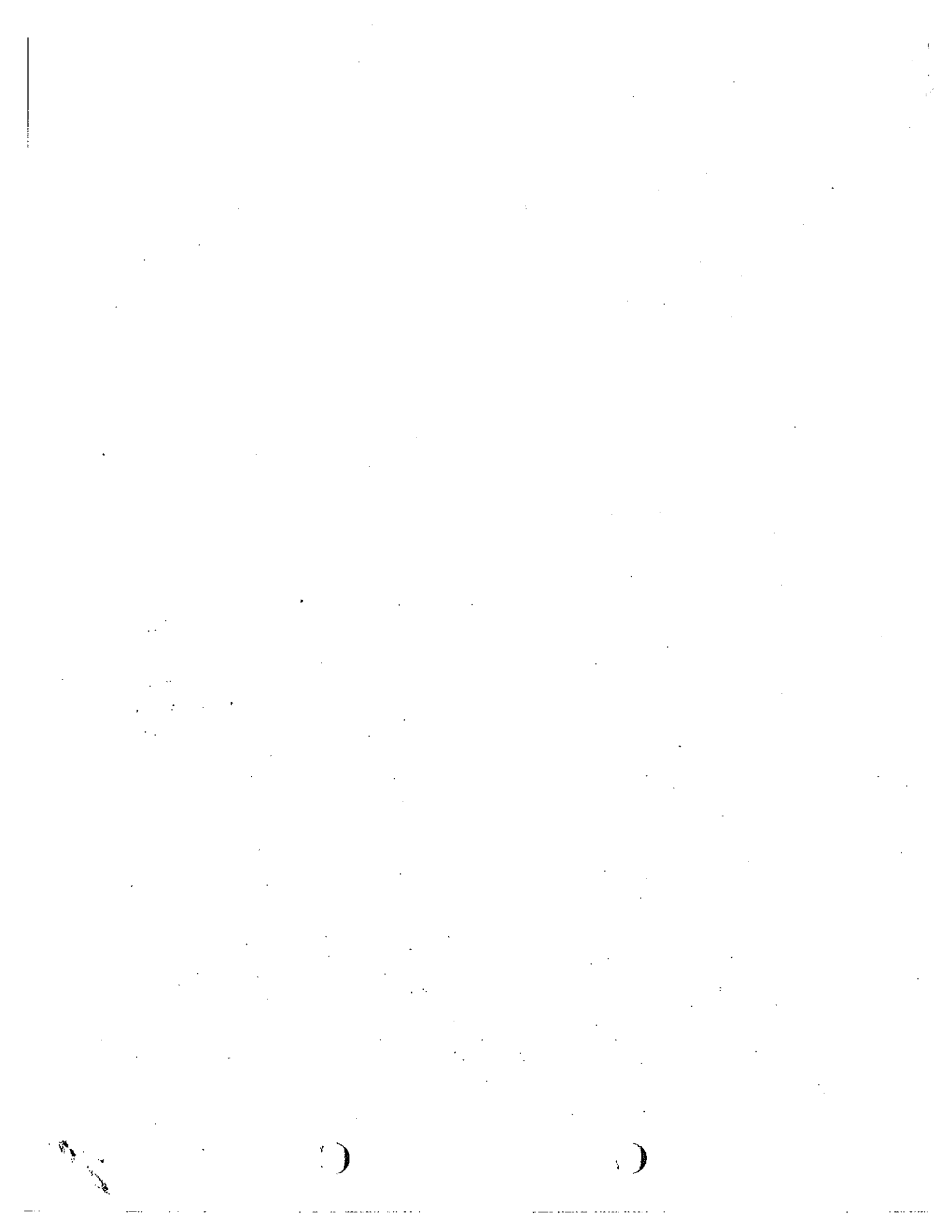
Northwest Testing Company

Mark Robinson

Mark Robinson
Engineering Geologist

MRR:eh

CC: Dave Swanson



V1 SW U0010291 J
Northwest Testing Company LUST 3958

FIRST IN QUALITY CONTROL TESTING AND INSPECTION

DEPARTMENT OF ECOLOGY
UNDERGROUND STORAGE TANKS

SITE ASSESSMENT REPORT

NOV 17 1992

Project Name: Interlake Grocery Inspector License # S001095

Excavation Contractor: Dave's Backhoe Service Dates: 10-30-92

11-05-92

Owner: Dave Swanson, Sr.

11-06-92

101824

This report comprises the data of excavation and site remediation for the above three listed dates. This is the third in a series of reports for this project, the initial tank pull being done on 9-29-92. For background information on this site, please see the Site Assessment reports for the above mentioned date, and for the follow up visit on October 26th.

October 30: Site assessment inspector Mark Robinson on site of the Interlake Grocery at 11:40 am, for site remediation. Overcast, 55 degrees.

Geological Conditions:

After further excavation of contaminated material at the site, it is noted that there are two fairly distinct soil types which have had influence on the dispersement of the fuel. The majority of the soil encountered is a sandy gravel which is fairly permeable, and which is still saturated with product. The other material is a poorly graded clayey gravel, which appears not to have retained the contamination, or is impermeable to the point where it resisted contamination. The clayey gravel is found as smaller lenses in the sandy gravel.

Mottling of the clayey soils is noted at about 20', an indication of high table groundwater. No groundwater is noted in the excavation today, which extends to a depth of 26'.

Site Remediation: The removal of contaminated soils from the UST site continues today along the north side of the excavation pit. This area is excavated to 26' in depth, at which point the soils encountered appear free of contamination. Contamination was noted in the north sidewall as the pit depth increased, and the contaminated areas in this sidewall were cut out as the excavation proceeded. Soil samples are taken from both the bottom and

sidewall areas where clean material was thought to be reached. Contaminated material is stockpiled outside the pit upon plastic sheeting.

After samples of the bottom and sidewall are taken along the north side of the pit, this area is backfilled with an imported, clean, gravel, and is tamped by the excavator bucket for compaction. Depth of fill is about 10', which leaves the pit depth here about 16'. Areas of known contamination remain from the center to the south side of the pit. Also, contamination remains along the west sidewall of the pit, from about 12.5' to 17' in depth. It is believed that the southwest sidewall and the bottom of the pit at the southwest wall, are now free from contamination. Samples are taken in these areas. Excavation of the contaminated material is proceeding in stages due to constraints placed on the accessibility to the pit by the surrounding buildings, and by the limited space available for the stockpiled material. In addition to the two samples taken from the pit today, two additional stockpile samples are taken. See the attached diagrams for information on the location of the samples taken today.

November 5: Site assessment inspector Mark Robinson on site, 10:30 am, for site remediation inspection. Contractor is not yet ready for a site check, inspector returns at 3:00 pm. Overcast, 50 degrees.

Site Remediation: Upon inspector's arrival, the excavation pit has been dug to a depth of 26' along the south side and center areas of the pit. It appears that the floor of the pit is now clean, and a sample of the gravel is taken at the here. The southeast wall of the pit, where the wall jogs out, has also been cut back to remove contamination, and one sample is taken here. The south half of the west wall has been cut back where a lens of contaminated material was followed and removed, and this wall is also sampled. No groundwater was encountered in the pit.

At this time there remains a small pocket of contaminated sandy gravel at the south wall. The pocket is approximately 36" from top to bottom, and about 48" across. It is located from 13.5' to 16.5' below surrounding grade, and in the middle to just west of the middle of the pit wall area. (see diagram #1). Further excavation in this area could endanger the stability of the building, as it would undercut the building wall. The pit sidewalls are already steeply sloped, and slightly undercutting the north wall of the grocery building. The contaminated seam is sampled to determine the concentration of contamination remaining.

There now remains for removal an area of contaminated material along the west wall, at about the center of the pit, which begins at 14' depth and is of unknown extent. This remaining area will be excavated tomorrow.

November 6th: Inspector Mark Robinson on site, 10:30 am, for site remediation inspection. Drizzle, 48 degrees.

Site Remediation: Upon arrival, the excavation of the remaining contaminated material along the west, center area of the pit has been largely removed. The pit has been cut to a depth of 25.5' in depth, and the bottom appears to be free from contamination. There remains a small seam of the sandy gravel which does appear contaminated. This seam measures 48" in exposed length, 8" in height, and is located at 21' below grade, directly beneath the southeast corner of the owner's residence. The pit sidewall is already undercutting the corner of the building, and further excavation into the wall may endanger the home. As noted above, a sample of the seam is taken to determine the degree of remaining contamination. Additional samples are taken at the bottom of the excavation, and at the west sidewall, directly beneath the contaminated seam.

No groundwater was noted at the bottom of the pit, but indications of groundwater are noted at about the 21' depth. An extended dry spell has lowered the groundwater table at the site.

Assessment Summary:

The contaminated material has largely been removed from the former UST area, and is presently stockpiled one block westward of the grocery. Material has been stockpiled upon 30 mils of plastic sheeting, and has been covered with plastic sheeting. The sides of the stockpile are slightly bermed to contain the material. Further testing of the stockpiled areas will be done prior to final disposal. The most likely disposal site at the time of this report is at the Kitsap County landfill.

There remains two seams of contaminated material in the pit area, which are thought to be of limited extent. These are located beneath the northeast wall of the grocery store, and beneath the southeast corner of the owner's residence. Further excavation of these seams endangered both structures.

Well water samples from the residence to the east of the site indicated elevated benzene levels.

Remediation Action:

A six by six foot cube of drain rock has been placed at the bottom of the pit at the north side, and a 12" pvc pipe casing with perforations at the bottom of the pipe has been extended from the 25' depth rock pocket to the surface. Two 6" casing monitor wells will be installed directly to the east of the excavation site to test groundwater conditions periodically. The placement of the 12"

pipe will provide the option of flushing out groundwater should contamination still be indicated in samples from the monitor wells. While groundwater was not found at the 25' depth, indications are that groundwater will pass this level in the rainy season. Excavation to the present groundwater depth was not feasible, as the excavation equipment was extended to its maximum capacity.

This remediation program will be presented to the Department of Ecology for their input.

Samples are tested for total petroleum hydrocarbons and / or BTEX, and some samples are tested for total lead.

A list of samples and their respective locations follows:

- Pit D: Bottom of pit north side (grade - 26')
- Pit E: North sidewall (grade - 17')
- Pit F: Center of pit, bottom (grade - 25')
- Pit G: Southeast pit sidewall, at jog (grade - 16.5')
- Pit H: West pit sidewall (grade - 24')
- Pit I: South pit sidewall, contaminated area (grade - 15.5')
- Pit J: Northwest sidewall, contaminated seam, grade - 21'
- Pit K: West sidewall, just beneath sample "Pit J"
- Pit L: Bottom of pit, northwest side, grade - 25.5'
- Stockpile C: Composite sample from the heavily contaminated stockpile area, 25 yards represented.
- Stockpile D: Composite sample from the heavily contaminated stockpile area, 25 yards represented.

Note: The locations of samples relative to the pit wall location as seen in the diagram may change, as the pit walls are continuously extended outward to follow and remove contaminated areas.

All sampling was done in accordance with the Field Sampling Procedures found in the February 1991 issue of the Department of Ecology Guidance for Site Checks and Site Assessments of Underground Storage Tanks, and revisions of the same. Samples were stored and transported to the laboratory for analysis, per sections 5.5 and 7.4 of the above referenced publication and its revisions.

Laboratory tests received on November 16th confirm that with the exceptions of the two remaining seams of contaminated material (sample numbers Pit I and Pit J), all contaminated soils have been removed from the UST pit site.

See attached for laboratory results.

Northwest Testing Company

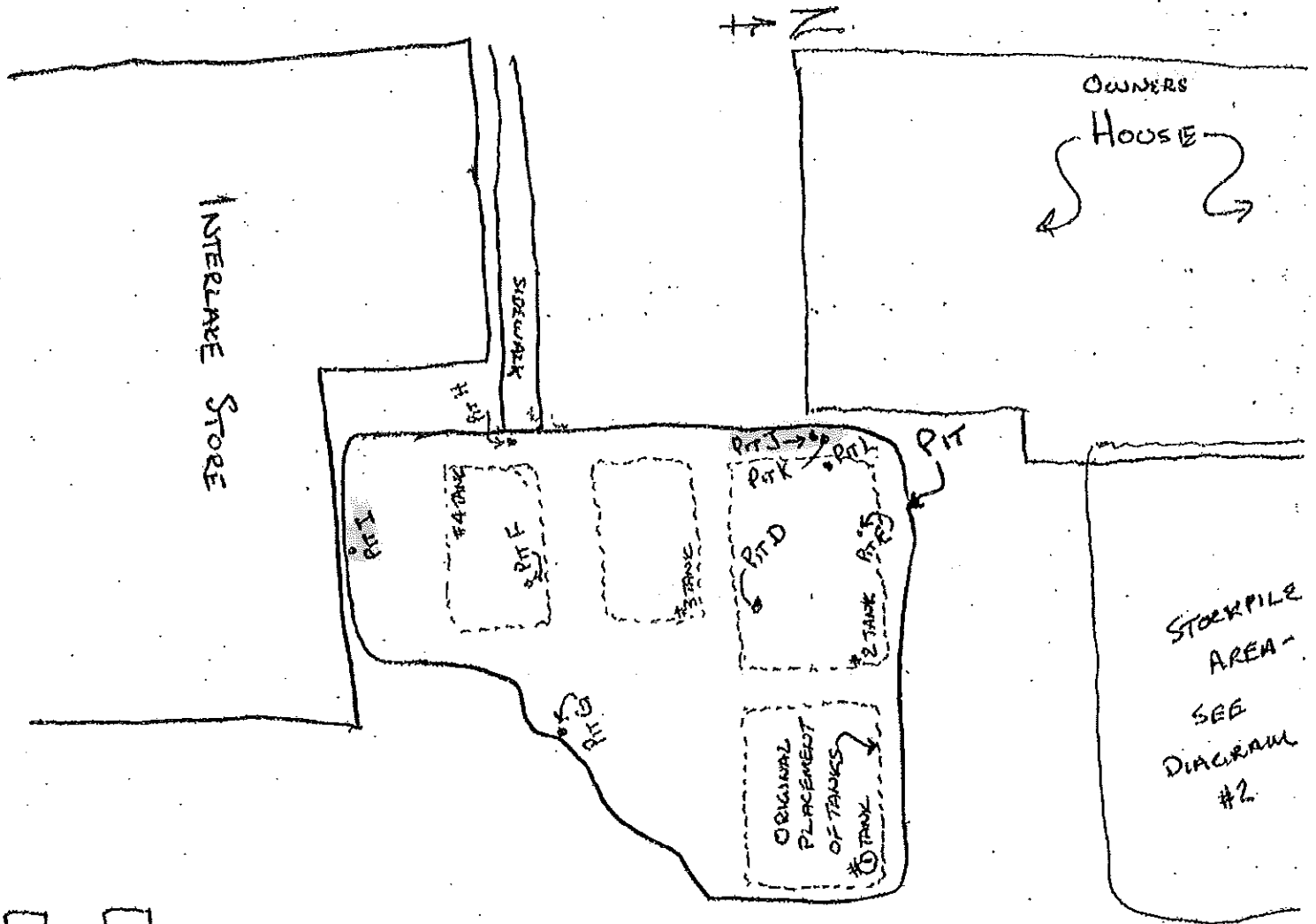
Mark Robinson

Mark Robinson
Engineering Geologist

MRR:eh

cc: Dave Swanson, Sr. (Owner)
Department of Ecology, UST division

MRR:eh



INTERLAKE GROCERY

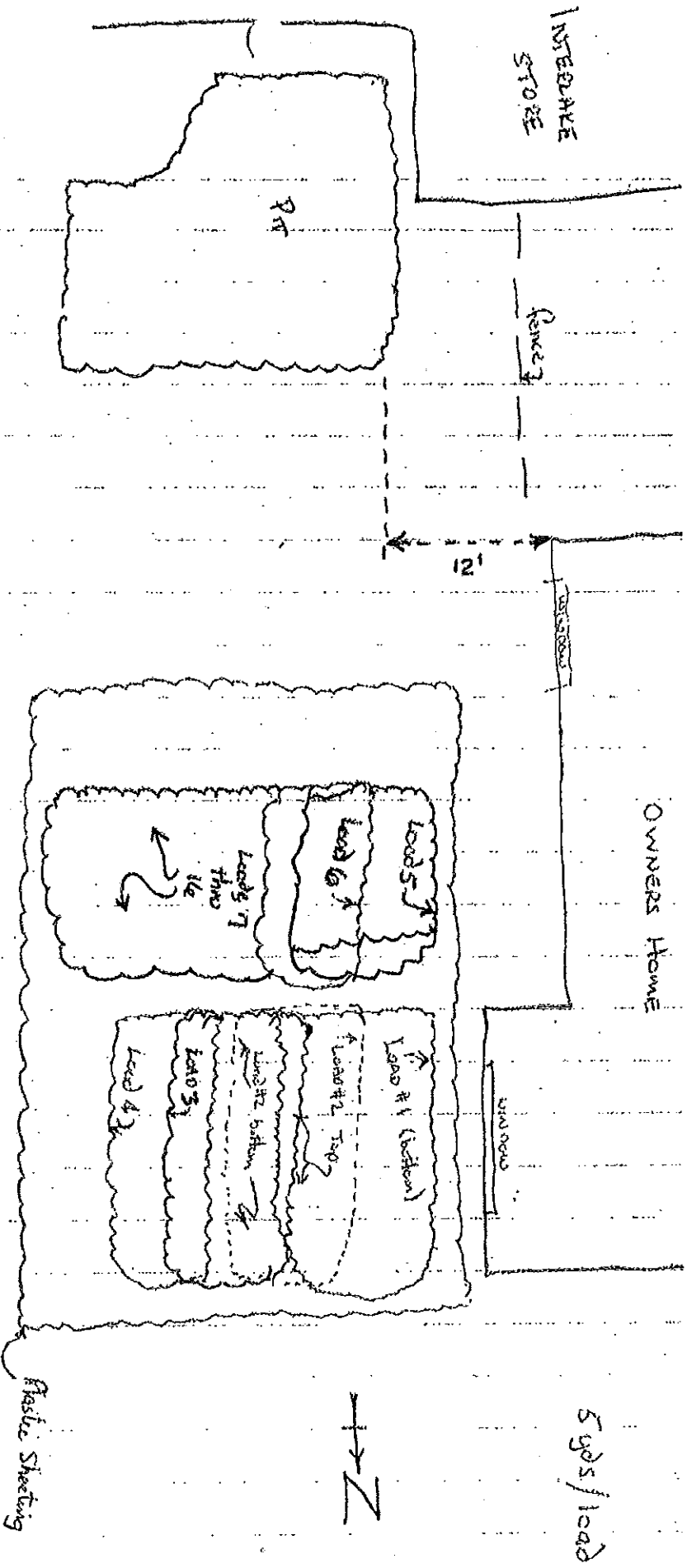
Diagram 1

10-30-92; 11-5-92

CARPENTER ROAD

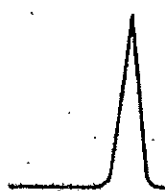
NOTE: The location of samples as noted in the report corresponded to the pit's excavated dimensions at the time of the sample. Pit dimensions were continuously increased to remove contamination.

MULLEN ROAD
PREVIOUS PUMP STATIONS



STOCKPILE C : Composite sample of loads
 (some contamination)
 STOCKPILE D : " " " " " "
 (heavy contamination)

INTERLAKE GROCERY 10-26-92 & 10-30-92
 Diagram 2



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

November 6, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Pit D
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 10-30-92
Date Received: 11-03-92
Spectra Project: S211-006
Spectra #0858

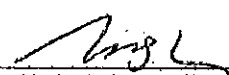
BTEX, EPA Method 8020
Dilution Factor: 1

Date Extracted: 11-03-92
Date Analyzed: 11-03-92
Units: mg/Kg

Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	<0.3

WTPH-G , mg/Kg <20

SPECTRA LABORATORIES, INC.


Steven G. Hibbs, Chemist



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

November 6, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Pit E
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 10-30-92
Date Received: 11-03-92
Spectra Project: S211-006
Spectra #0859


BTEX, EPA Method 8020
Dilution Factor: 1

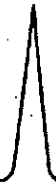
Date Extracted: 11-03-92
Date Analyzed: 11-03-92
Units: mg/Kg

Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	<0.3

WTPH-G , mg/Kg <20

SPECTRA LABORATORIES, INC.


Steven G. Hibbs, Chemist



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

November 12, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Pit F
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 11-05-92
Date Received: 11-06-92
Spectra Project: S211-046
Spectra #1019

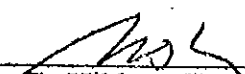
BTEX, EPA Method 8020
Dilution Factor: 1

Date Extracted: 11-06-92
Date Analyzed: 11-06-92
Units: mg/Kg

Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	<0.3

WIPH-G, mg/Kg	<20
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SPECTRA LABORATORIES, INC.


Steven G. Hibbs, Chemist



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

November 12, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Pit G
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 11-05-92
Date Received: 11-06-92
Spectra Project: S211-046
Spectra #1020

BTEX, EPA Method 8020
Dilution Factor: 1

Date Extracted: 11-06-92
Date Analyzed: 11-06-92
Units: mg/Kg

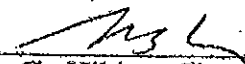
Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	<0.3

WTPH-G, mg/Kg	<20
---------------	-----

Total Lead (Pb), mg/Kg	<4
------------------------	----

Total Lead testing performed by EPA Method 6010

SPECTRA LABORATORIES, INC.


Steven G. Hibbs, Chemist



SPECTRA Laboratories, Inc.

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November 12, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Pit H
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 11-05-92
Date Received: 11-06-92
Spectra Project: S211-046
Spectra #1021

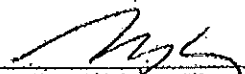
BTEX, EPA Method 8020
Dilution Factor: 1

Date Extracted: 11-06-92
Date Analyzed: 11-06-92
Units: mg/Kg

Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	<0.3

WTPH-G, mg/Kg	<20
---------------	-----

SPECTRA LABORATORIES, INC.



Steven G. Hibbs, Chemist



SPECTRA Laboratories, Inc

2221 Ross Way • Tacoma, WA 98421 • (252) 272-4850

November 12, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Pit I
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 11-05-92
Date Received: 11-06-92
Spectra Project: S211-046
Spectra #1022

WTPH-G, mg/Kg

6,210


Total Lead (Pb), mg/Kg

<4

Total Lead testing performed by EPA Method 6010

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Steven G. Hibbs, Chemist



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2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

November 12, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

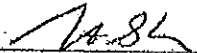
Attn: Mark Robinson

Sample ID: Pit J
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 11-05-92
Date Received: 11-06-92
Spectra Project: S211-046
Spectra #1023

WTPH-G, mg/Kg

2,160

SPECTRA LABORATORIES, INC.



Steven G. Hibbs, Chemist



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

November 12, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Pit K
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 11-05-92
Date Received: 11-06-92
Spectra Project: S211-046
Spectra #1024

BTEX, EPA Method 8020
Dilution Factor: 1

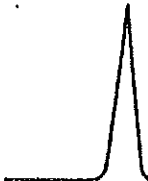
Date Extracted: 11-06-92
Date Analyzed: 11-06-92
Units: mg/Kg

Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	<0.3

WTPH-G, mg/Kg	<20
---------------	-----

SPECTRA LABORATORIES, INC.


Steven G. Hibbs, Chemist



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

November 12, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Pit L
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 11-05-92
Date Received: 11-06-92
Spectra Project: S211-046
Spectra #1025

BTEX, EPA Method 8020
Dilution Factor: 1

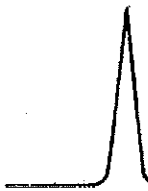
Date Extracted: 11-06-92
Date Analyzed: 11-06-92
Units: mg/Kg

Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	<0.3

WTPH-G, mg/Kg	<20
---------------	-----

SPECTRA LABORATORIES, INC.


Steven G. Hibbs, Chemist



SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

November 3, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 10-30-92
Date Received: 11-2-92
Spectra Project: S211-003
RUSH

<u>Spectra #</u>	<u>Sample ID:</u>	<u>WTPH-G. mg/Kg</u>
0850	Stockpile C	770
0851	Stockpile D	445

SPECTRA LABORATORIES, INC.


Steven G. Hibbs, Chemist

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Northwest Testing Company

FIRST IN QUALITY CONTROL TESTING AND INSPECTION

DEPARTMENT OF ECOLOGY
UNDEGROUND STORAGE TANKS

SITE ASSESSMENT REPORT

NOV 10 1992

Project Name: Interlake Grocery Inspector License # S001095

Excavation Contractor: Dave's Backhoe Service Date: 10-26-92

Owner: Dave Swanson, Sr.

10/824

Site assessment inspector Mark Robinson on site of the Interlake Grocery at 1:10 pm, for site remediation. Clear, 63 degrees.

This is a follow up report for this project, the initial tank pull being done on 9-29-92. For background information on this site, please see site assessment report for this date.

Site Remediation: Today the removal of contaminated soils from the UST site begins. The initial 20 yards of soils removed from the pit are mostly soils which have spalled off of the pit walls, or were moved around in pit from uncontaminated pit areas. This soil is lightly contaminated, and is stockpiled in a separate location.

After removal of this overburden, the excavation begins into the heavily contaminated soils. It is determined that the extent of the contamination reaches at least 15' down from the surrounding subgrade. After excavation along the south side of the pit (by the building), samples are taken at two locations in the south pit wall, and at the bottom of the pit immediately adjacent to the south wall, where it is thought that clean soil has been exposed. Contamination remains at the bottom of the pit as you proceed northward of this area. Further contamination is in evidence in the walls of the pit westward of this location (where the pit wall jogs inward) and along the north pit wall, beginning at a depth of about 9'-6". Removal of this contamination is not completed today. Approximately 10 yards of the heavily contaminated soil are stockpiled out of the pit, and contaminated pit soils are backfilled in the pit to shore up the south wall where the building sits. Due to the precarious situation concerning the building foundation, excavation is halted today, and options for shoring up the building or for insitu site remediation will be investigated.

See the attached diagrams for information on the location of the samples taken today.

Samples are tested for total petroleum hydrocarbons, total lead, and BTEX.

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A list of samples and their respective locations follows:

Pit A: Bottom of pit south side
(grade - 11'-6")

Pit B: South sidewall center (grade - 10').

Pit C: South sidewall center (grade - 5'-8").

Stockpile A: Composite sample from the lightly contaminated stockpile area, 20 yards represented.

Stockpile B: Composite sample from the heavily contaminated stockpile area, 10 yards represented.

All sampling was done in accordance with the Field Sampling Procedures found in the February 1991 issue of the Department of Ecology Guidance for Site Checks and Site Assessments of Underground Storage Tanks. Samples were stored and transported to the laboratory for analysis, per sections 5.5 and 7.4 of the above referenced publication and it's revisions.

Laboratory tests received on November 5 indicate no significant contamination in any samples of soils taken from the pit walls. Stockpile samples show some degree of contamination. See attached for laboratory results.

Northwest Testing Company

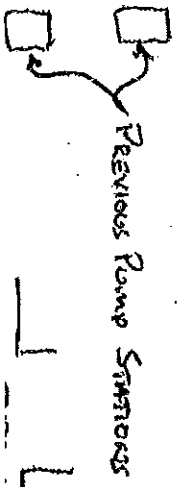
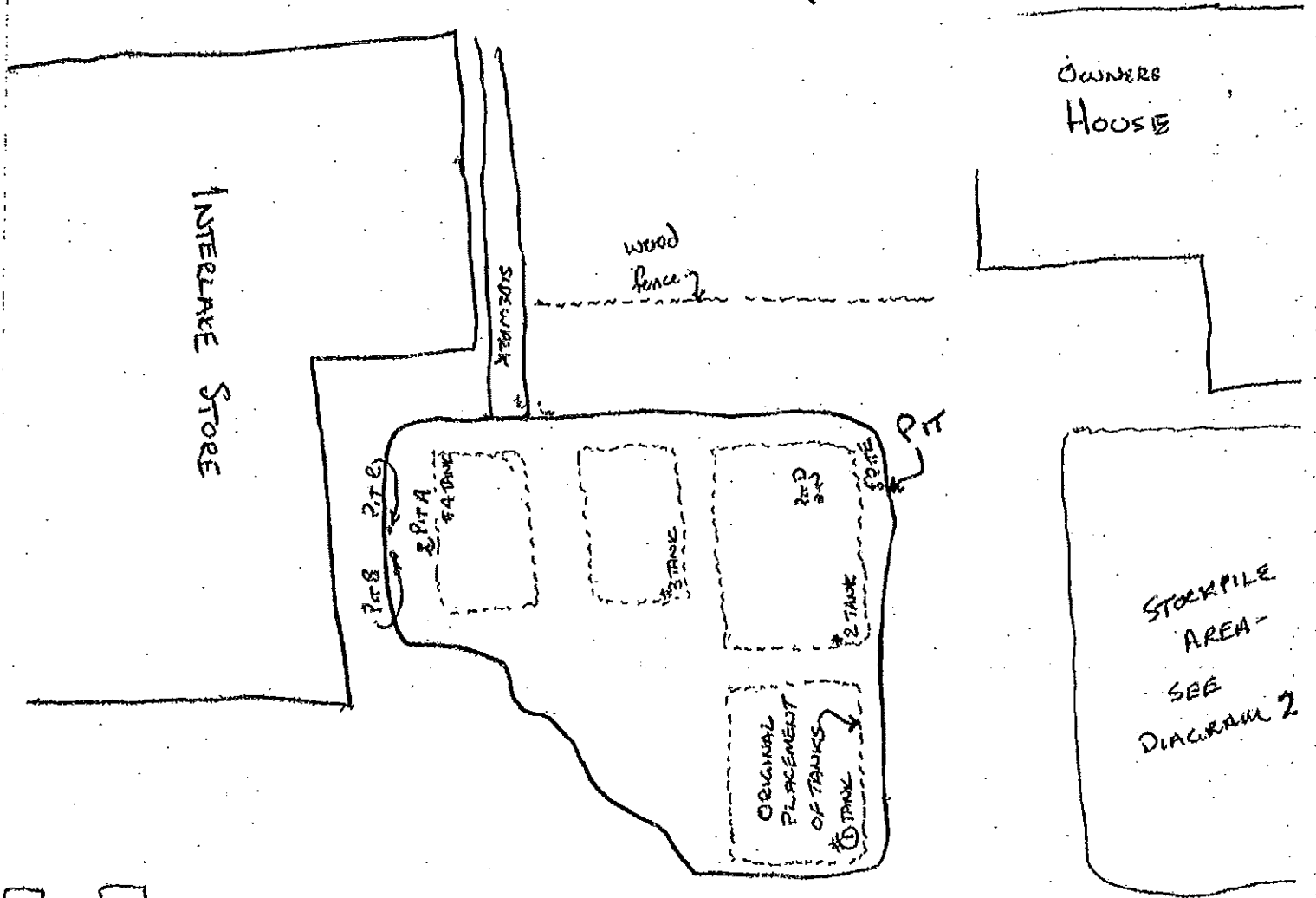
Mark Robinson

Mark Robinson
Engineering Geologist

MRR:eh

cc: Dave Swanson, Sr. (Owner)
Department of Ecology, UST division

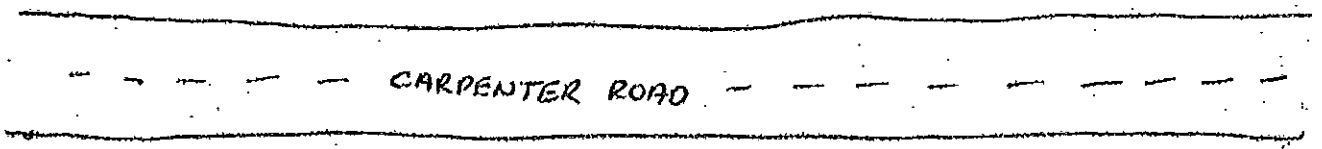
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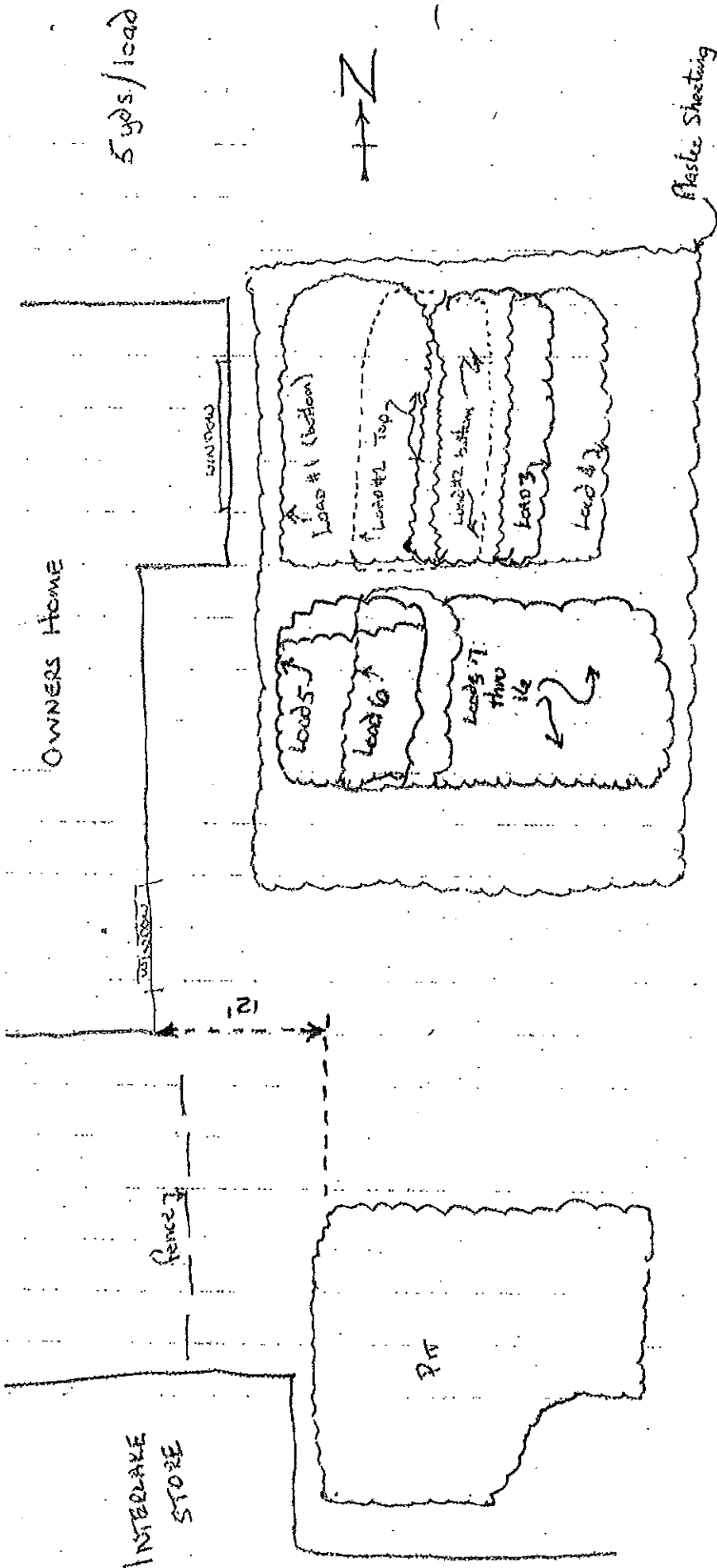


INTERLAKE GROCERY

Diagram 1

10-26-92





STOCKPILE A: Composite sample of Leads 1, 2, 3, 4 (some contamination)
 STOCKPILE B: " " " " 5+6 (heavy contamination)
 STOCKPILE

INTERLAKE GROCERY 10-26-92 & 10-30-92
 Diagram 2



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November 4, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

ID: Stockpile A
Location: Interlake Grocery
Matrix: Soil
Date Sampled: 10-26-92
Date Received: 10-28-92
Spectra Project: S210-239
Spectra #0614

BTEX, EPA Method 8020
Dilution Factor: 1

Date Extracted: 10-29-92
Date Analyzed: 10-29-92
Units: mg/Kg

Benzene	0.79
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	2.05

WTPH-G, mg/Kg

486

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November 4, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

ID: Stockpile B
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 10-26-92
Date Received: 10-28-92
Spectra Project: S210-239
Spectra #0615

BTEX, EPA Method 8020
Dilution Factor: 1

Date Extracted: 10-29-92
Date Analyzed: 10-29-92
Units: mg/Kg

Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	1.58

WTPH-G, mg/Kg 465

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November 4, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Plt A
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 10-26-92
Date Received: 10-28-92
Spectra Project: S210-239
Spectra #0616

BTEX, EPA Method 8020
Dilution Factor: 1

Date Extracted: 10-29-92
Date Analyzed: 10-29-92
Units: mg/Kg

Benzene

<0.3

Toluene

<0.3

Ethyl Benzene

<0.3

Total Xylenes

<0.3

WTPH-G, mg/Kg

<20


Total Lead (Pb), mg/Kg

<4

Total Lead testing performed by EPA Method 6010

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November 4, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

Sample ID: Pit B
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 10-26-92
Date Received: 10-28-92
Spectra Project: S210-239
Spectra #0617

BTEX, EPA Method 8020
Dilution Factor: 1

Date Extracted: 10-29-92
Date Analyzed: 10-29-92
Units: mg/Kg

Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	<0.3

WTPH-G, mg/Kg	<20
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Total Lead (Pb), mg/Kg	<4
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Total Lead testing performed by EPA Method 6010

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Steven G. Hibbs, Chemist



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2221 Ross Way • Tacoma, WA 98421 • (206) 835-4850

November 4, 1992

Northwest Testing Co.
P.O. Box 10354
Olympia, WA 98502

Attn: Mark Robinson

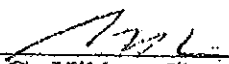
Sample ID: Pit C
Project: Interlake Grocery
Sample Matrix: Soil
Date Sampled: 10-26-92
Date Received: 10-28-92
Spectra Project: S210-239
Spectra #0618

BTEX, EPA Method 8020	Date Extracted: 10-29-92
Dilution Factor: 1	Date Analyzed: 10-29-92
	Units: mg/Kg

Benzene	<0.3
Toluene	<0.3
Ethyl Benzene	<0.3
Total Xylenes	<0.3

WTPH-G, mg/Kg	<20
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Steven G. Hibbs, Chemist

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3958 101854
Northwest Testing Company

FIRST IN QUALITY CONTROL TESTING AND INSPECTION

DEPARTMENT OF ECOLOGY
UNDERGROUND STORAGE TANKS

OCT 26 1992

SITE ASSESSMENT REPORT RECEIVED

Project Name: Interlake Grocery Inspector License # S001095
OCT 12 1992

Excavation Contractor: Dave's Backhoe Service Date: 9-29-92

Owner: Dave Swanson, Sr.

Site assessment inspector Mark Robinson on site of the Interlake Grocery at 11:10 am, for site assessment of tank closures. Clear, 64 degrees.

Site Background: The site is located at 7446 Mullen Road S.E. at intersection of Mullen Road and Carpenter Road, Lacey, WA. The grocery store still operates from the location, but the gasoline service was terminated in September of 1990, and at this time the pumps (two, one leaded regular and one unleaded) and their service lines to the tanks were removed by the owner. Four separate tanks are removed today, as follows: a 1000 gallon unleaded gasoline tank, a 1000 gallon leaded gasoline tank, and two more 500 gallon unleaded gasoline tanks. All the tanks are steel tanks with bitumen coating. The present owner of the store, David Swanson, said that to the best of his knowledge the two 500 gallon tanks were installed sometime around the early 1950's, with the larger two tanks installed around the mid-seventies. The tanks were last used around September of 1990, at which time they were drained and the lines pulled. The site is in residential section, and is bordered by Carpenter Road to the east, across which is a private home, to the north by a vacant lot and another private home, to the south by Mullen Road, across which is a home, and to the west by a vacant lot. The owner stated that he had applied for a site registration some five years back, but had never received a response, and had never followed this up. The tanks were serviced by Olympia Wood and Oil Company, and the product was sold under the Texaco name. Mr. Swanson purchased the grocery about twelve years ago from Mr. Dennis Kampbell.

Geological Conditions: The tanks are located in the sandy gravel soil native to the area, and no backfill was observed around the tanks. Groundwater level appeared to be at about 9' depth, exhibited by a moist condition of the gravels. No pooling of groundwater was seen in the pit at any depth, the deepest penetration being about eleven feet in depth. Topographical grade in the area is relatively level, with a slight eastward slope. While the store and the owner's private residence adjacent to the store are serviced by the city water supply, there

are wells supplying drinking water in the area. See below for further detail.

Site Assessment: Upon this inspector's arrival, the two 1000 gallon tanks and one of the 500 gallon tanks (tanks 1, 2, and 3 in the diagram) have been purged and removed from the pit, and have been capped and placed on the asphalt parking area for removal. Tank #1 was covered by approximately 52" of gravel, tank #2 by 33" of gravel, and tank numbers 3 and 4 by 24" of gravel. Tank numbers 1 and 2 are 63" in diameter, and tanks 3 and 4 are 47" in diameter. None of the tanks had restraining straps or anchors. The two 1000 gallon gasoline tanks were placed nose to nose at the north side of the pit, and the other two 500 gallon tanks were placed side by side to the south of these.

An odor of product was noted in the excavated area, with obvious contamination along the south side of the excavation exhibited by product saturated gravels, grey in color. The backhoe operator, Dave Schlottman, said that upon removal of the piping it was noticed that a pipe junction which led from the tanks to the pumps, and was located approximately between tank numbers 3 and 4, had what appeared to be a loose connection, being hardly threaded at the connection.

Upon excavation all tanks appear in very good condition, with no discernable leaks. All tanks are empty of product and water. The plumbing connections have all been drained and removed. Vent stacks remain on the existing building side, and are being removed as well. Soil samples were taken along the south and west sidewalls of the pit and from the soils underneath each of the tanks. Soil removed from the pit was stockpiled to the north of the pit upon plastic sheeting laid over the asphalt parking area. One composite sample of the stockpile is taken.

While the soils beneath tank number's 1 and 2 appear to be clean, the soils beneath tanks 3 and 4 are heavily contaminated. The sidewall at the southeast side also remains contaminated, and contamination is suspected on the west wall. In addition to the on-site sampling of soils, a sample of water is taken from the private well of the Robert E. Jackson residence across the street from the site, at 4636 Carpenter Road S.E. This well is slightly down gradient from the site, 57' deep (per owner), and is located approximately 50 yards from the UST area. Mr. Jackson remarked he had never noticed any peculiarity with the water.

See the enclosed diagrams for further information on the location of the tanks and samples.

Samples are tested for total petroleum hydrocarbons, total lead, and BTEX. Not all samples are tested, as some are obviously contaminated and require no further confirmation of contamination. These samples are held at the lab.

All tanks are prepared for removal from the site, and are to be

shipped to Mike's Custom Welding for disposal and / or recycling.

A list of samples and respective locations follows:

Water A: Water from well at Jackson residence.

Water B: Same as above.

Pit 1: Bottom of tank #1 -12" (grade -113").

Pit 2: Bottom of tank #2 (grade - 104").
Exhibits contamination.

Pit 3: Bottom of tank #3 (grade -69").
Exhibits contamination.

Pit 4: Bottom of tank #4 (grade -64").
Contamination confirmed.

Pit 5: South sidewall (grade -54").
Exhibits contamination.

Pit 6: West sidewall (grade -64"). May be contaminated,
but further soil removal is necessary in this
area.

Stockpile 1: Composite stockpile sample

All sampling was done in accordance with the Field Sampling Procedures found in the February 1991 issue of the Department of Ecology Guidance for Site Checks and Site Assessments of Underground Storage Tanks. Samples were stored and transported to the laboratory for analysis, per sections 5.5 and 7.4 of the above referenced publication.

Laboratory tests received on October 8th indicate contamination in samples Pit 4 (hydrocarbons) and Water B (benzene). See attached for laboratory results.

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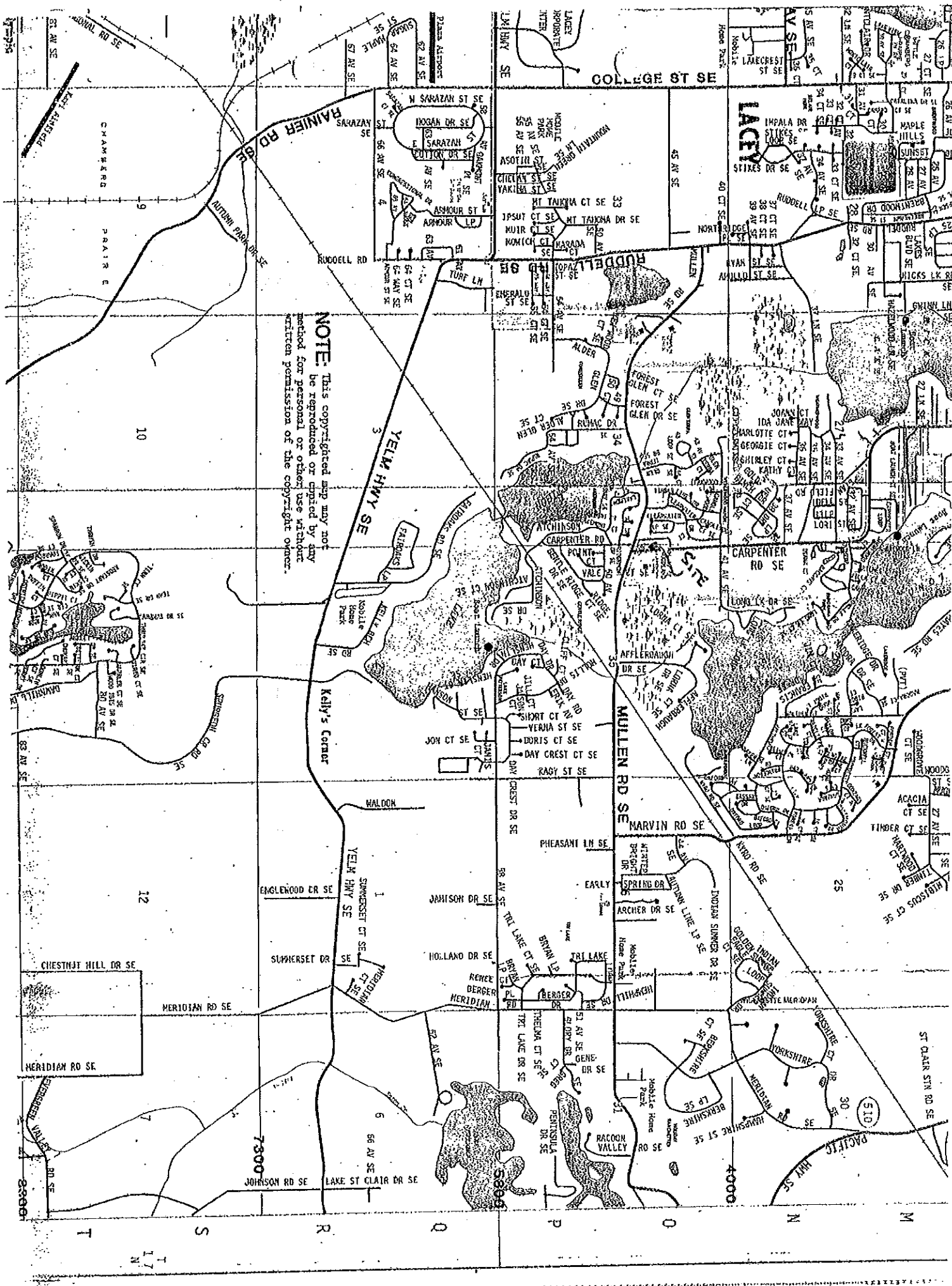
Mark Robinson

Mark Robinson
Engineering Geologist

MRR:eh

cc: Dave Swanson, Sr. (Owner)
Lynn Gooding, Dept. Ecology

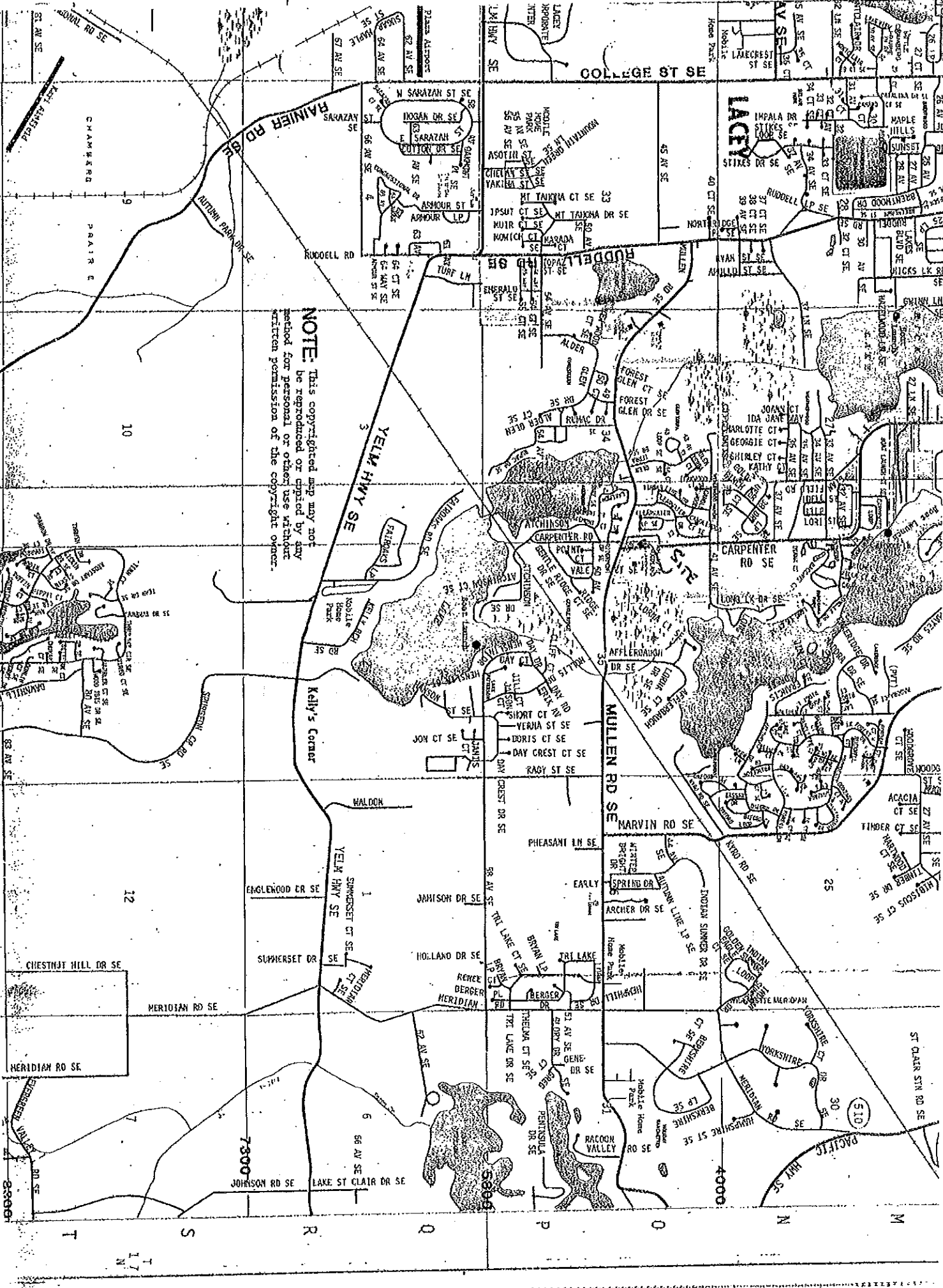
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Kaly's Corner

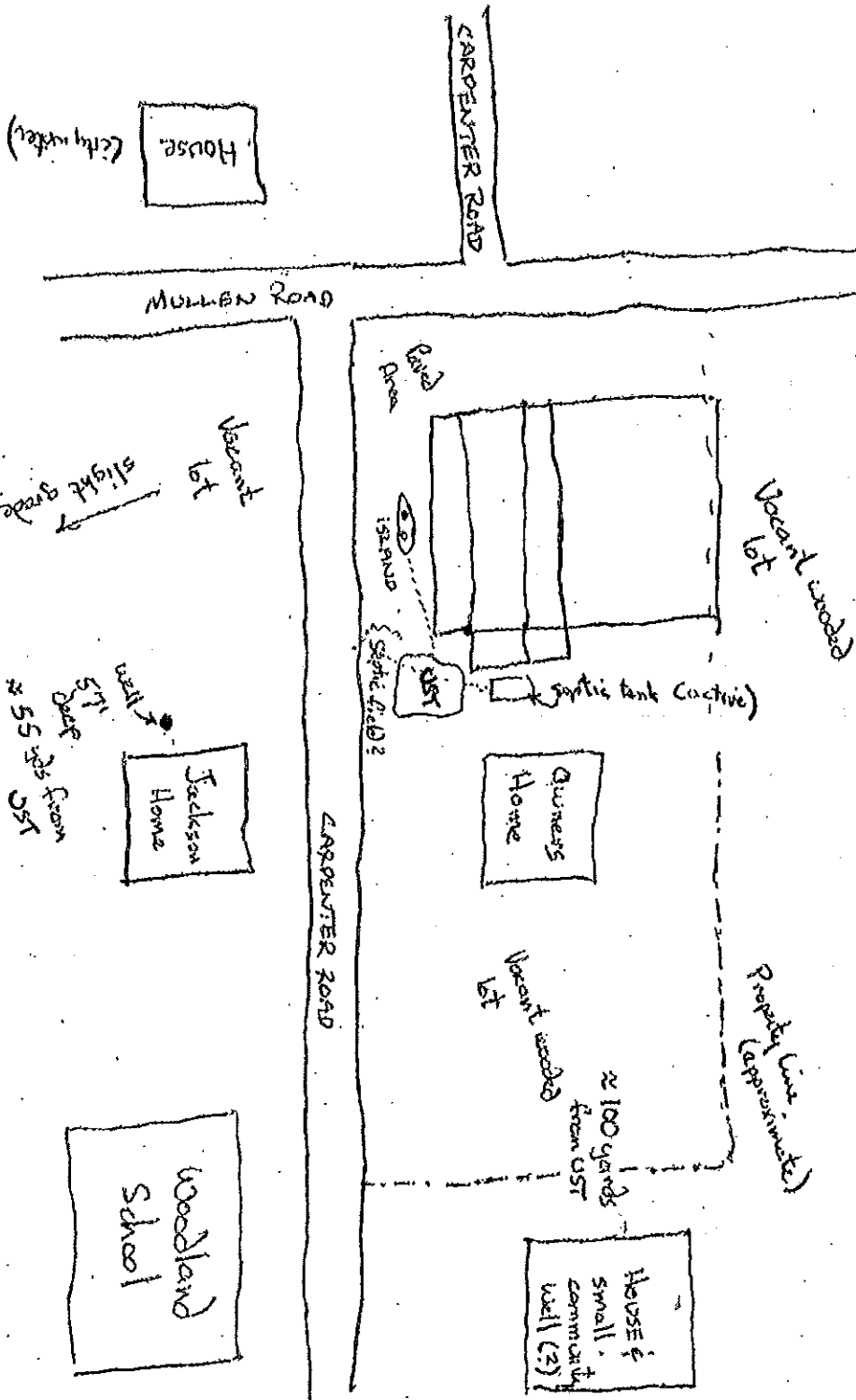
Raccoon Valley



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Kaly's Corner

Raccoon Valley



INTERLAKE GROCERY UST

9-29-92