

11

NW 400091067
100759

 **James P. Hurley Co.**
Environmental Risk Management Consultants

P.O. Box 82206
Kenmore, WA 98028

Telephone (206) 486-6665
FAX (206) 486-7896

**SUMMARY REPORT
UNDERGROUND STORAGE TANK AND
CONTAMINATED SOIL REMOVAL PROJECT**

ACACIA MEMORIAL PARK
14951 BOTHELL WAY N.E.
SEATTLE, WASHINGTON
CO# 940103

RECEIVED
OCT 06 1998
DEPT. OF ECOLOGY

RECEIVED
MAR 16 1994
ECOLOGY

Prepared By:

James P. Hurley Company
P.O. Box 82206
Kenmore, WA 98028
Phone: (206) 486-6665

Prepared For:

Acacia Memorial Park
14951 Bothell Way N.E.
Seattle, WA 98155

Date Submitted:

February 24, 1994

DEPARTMENT OF ECOLOGY NWRO/TCP TANKS UNIT	
INTERIM CLEANUP REPORT	<input type="checkbox"/>
SITE CHARACTERIZATION	<input type="checkbox"/>
FINAL CLEANUP REPORT	<input type="checkbox"/>
OTHER _____	<input type="checkbox"/>
AFFECTED MEDIA: SOIL	<input type="checkbox"/>
OTHER _____ GW	<input type="checkbox"/>
INSPECTOR (INIT.) _____ DATE _____	

Table of Contents

Contents

Purpose	1
Executive Summary	1,2
Scope of Services	2
Background	2
Site Description	2
Geology and Hydrology	2
Summary of Field Activities	2-5
Sample Collection Protocol	5
Limitations	5

Exhibits

Exhibit A	Vicinity Map
Exhibit B	Site Plan
Exhibit C	Post UST Remedial Sampling Plan (on 1-20-94)
Exhibit D	Post Remedial Sampling Plan (on 1-29-94)
Exhibit E	Laboratory Reports

Tables

Table 1	Laboratory Analysis HCID Method
Table 2	Laboratory Analysis Methods WTPH-G/BTEX and EPA 418.1

February 24, 1994

Acacia Memorial Park
14951 Bothell Way N.E.
Seattle, WA 98155

Attn.: Mr. Bob Anthony

SUMMARY REPORT
UNDERGROUND STORAGE TANK AND CONTAMINATED SOIL REMOVAL PROJECT
ACACIA MEMORIAL PARK
14951 BOTHELL WAY NORTHEAST, SEATTLE, WASHINGTON
CO# 940103

Dear Bob:

Site investigations of the subject property were conducted on January 20, 27, and 28, 1994, by James P. Hurley Co. (JPHC), an environmental consulting firm, to assess the conditions of the subsurface soils in the vicinity of three underground storage tanks (USTs) on the subject property. The USTs were removed by APS services (APS) on January 20. Contaminated soil was excavated from the tank excavation and stockpiled on the property by APS on January 27.

PURPOSE

The purpose of this investigation was to confirm the presence or absence of significant petroleum contamination in the soils surrounding the former USTs. This site assessment report is prepared in accordance with the requirements of WAC 173-360-630 and as outlined in the Washington State Department of Ecology (WDOE) publication entitled Guidance for Site Checks and Site Assessments for Underground Storage Tanks, dated February 1991, revised October 1992.

EXECUTIVE SUMMARY

The following USTs were removed from a single excavation on the subject site on January 20, 1994.

<u>WSDOE Registered Tank ID#</u>	<u>Product Stored</u>	<u>Capacity [U.S. Gallons]</u>
UST1	unleaded gasoline	1,000
UST2	leaded gasoline	1,000
UST3 (unregistered)	heating fuel	500

Following the removal of the USTs, gasoline contaminated soil was discovered beneath UST1 and heavy oil contaminated soil was discovered beneath UST3.

Petroleum contaminated soils above the Model Toxics Control Act (MTCA) Method A cleanup standards, which by our estimate did not exceed (300) tons

in total weight, were subsequently removed from the excavation and placed in a birmed-off area on the northwest corner of the cemetery for on-site remediation.

Approximately four thousand (4,000) gallons of water were pumped from the bottom of the excavation prior to the contaminated soil removal activities on January 27 and 28. The source of the water was assessed to be surface water from a defective catch basin adjacent to the tank excavation. Ground water was not impacted by the petroleum release.

SCOPE OF SERVICES

The scope of services included observation of the UST removal activities; visual inspection of the UST and subsurface soils in the vicinity of the former USTs; collection of soil samples for field screening and laboratory analysis of TPH by an approved laboratory using Methods WTPH-HCID, WTPH-G/BTEX, and EPA 418.1; and preparation of this written report.

BACKGROUND

The former UST1 and UST2 system was used to store gasoline fuel for service vehicles operated by the maintenance staff. The original UST system was installed in the 1960's. UST1 was a replacement tank installed in the late 1970's. UST3 was used to store heating fuel for the maintenance facility.

SITE DESCRIPTION

The subject site is known as Acacia Memorial Park and is located at 14951 Bothell Way Northeast in Seattle, Washington (see Exhibit A, Vicinity Map). The USTs were located on the north side of the maintenance building on the subject property (see Exhibit B, Site Plan).

GEOLOGY AND HYDROLOGY

The geology of the soils encountered in the excavation consisted of loose brown sands and gravels (SM) to nine feet bgs, which was underlain by consolidated glacial deposits of sands, silts and clayey fine sands (ML) to the depths uncovered (approximately fourteen feet [14'] beneath ground surface [bgs]). No other site specific geologic information was uncovered as part of this investigation.

SUMMARY OF FIELD ACTIVITIES

UST REMOVAL PHASE. On January 20, 1994, Jim Hurley, a registered site assessor with JPHC, observed the excavation and removal of the USTs. The following conditions were noted during the site visit:

All three tanks were removed from a single excavation after having been pumped of residual product and rendered inert. The tanks varied in physical condition. UST1 was in poor condition with advanced corrosive degradation, which included several holes up to one quarter of an inch diameter in size, observed on the entire bottom half of the tank. A noticeable petroleum odor was evident, and gray staining patterns were observed, in the soil beneath UST1.

Following the removal of the USTs, six representative soil samples were collected from the excavation (see Exhibit C, Post UST Removal Sampling Plan). HCID analysis of Sample #1, a discrete sample collected beneath UST1 at a depth of nine feet (9') bgs, identified gasoline in the soil. Subsequent quantitative analysis yielded a petroleum hydrocarbon concentration in the gasoline range on the order of 90 parts per million (ppm). The chromatographic pattern for Sample #1 correlated with a "weathered" gasoline standard, which indicates that the gasoline has been present in the soil for several years.

UST2 appeared to be in fair condition, with evidence of corrosive degradation (but no visible holes) observed on the bottom half of the tank. A noticeable petroleum odor was evident, and gray staining patterns were observed, in the soil beneath UST2. HCID analysis of Sample #2, a discrete sample collected beneath UST2 at a depth of nine feet (9') bgs, identified gasoline, diesel, and heavy oil in the soil. Subsequent quantitative analysis of Sample #2 yielded a concentration of petroleum hydrocarbons in the gasoline range on the order of 160 parts per million (ppm) and total petroleum hydrocarbons (TPH) on the order of 7,000 ppm. The chromatographic pattern of the volatile compounds in Sample #2 correlated with a "weathered" gasoline standard.

UST3 appeared to be in fair condition, with evidence of corrosive degradation (but no visible holes) observed on the bottom half of the tank. A noticeable petroleum odor was evident, and gray and black staining patterns were observed, in the soil beneath UST3. HCID analysis of Sample #3, a discrete sample collected beneath UST3 at a depth of six feet (6') bgs, identified gasoline, diesel, and heavy oil in the soil. Subsequent quantitative analysis of Sample #3 yielded concentrations of petroleum hydrocarbons in the gasoline range on the order of 180 parts per million (ppm) and TPH on the order of 11,000 ppm. The chromatographic pattern of the volatile compounds in Sample #3 correlated with a "weathered" gasoline standard.

Sample #4 was a composite sample collected from the south and west sidewalls of the excavation. HCID analysis of Sample #4 identified gasoline, diesel, and heavy oil in the soil. Subsequent quantitative analysis of Sample #4 yielded TPH concentrations on the order of 2,000 ppm. The chromatographic pattern for volatile compounds in Sample #4 correlated with a "weathered" gasoline standard.

Soil Sample #5 was a composite sample collected from the north and east sidewalls of the excavation and yielded a TPH concentration on the order of 110 ppm. Sample #6 was a field duplicate of Sample #1. HCID analysis indicated of Sample #6 identified gasoline and heavy oil in the soil.

On the basis of these results and our field observations, we concluded that one or more of the USTs had leaked gasoline and heavy oil into the soil. The laboratory results exceeded the MTCA Method A cleanup standards for petroleum hydrocarbons in soil of 100 ppm for gasoline and 200 ppm for heavy oil. While the contaminants were intermixed throughout the excavation, the heavy oil contamination appeared to be

concentrated on the west half (in the vicinity of the former UST2 and UST3). Gasoline appeared to be spread throughout the excavation. Given the identification of several holes in the bottom of UST1, we concluded that UST1 was the main source of the gasoline. The source of the heavy oil is unknown. It is possible that UST3 was used to store used motor oil. Another possibility could be related to historical surface maintenance activities prior to the original paving of the site.

Water seeped into the excavation through the north and west sidewalls during the tank removal operations. A surface water catch basin with a defective outlet drain, located adjacent to the northeast corner of the excavation, appeared to be a contributing source of the water.

An attempt was made to isolate non-contaminated soil from contaminated soil. Field screening of soil samples collected from the bucket of the excavator was performed using head space tests with a Microtip portable photo ionization detector. We estimate that a total of 100 tons of soil was excavated as part of the tank removal operation. Of the total, approximately 20 tons was assessed to be "clean" and the remaining 80 tons was assessed to be impacted by petroleum contaminants. The two stockpiles were covered with plastic and left on site until the phase II cleanup work plan was established.

CONTAMINATED SOIL CLEANUP PHASE. On January 27 and 28, 1994, Jim Hurley visited the site to observe the removal of petroleum contaminated soil from the former UST excavation. The following activities and conditions were noted during the site visits:

On the morning of January 27, approximately 4,000 gallons of water were pumped from the excavation into a temporary storage tank. Approximately 220 tons of contaminated soil was subsequently removed from the bottom and sidewalls of the former tank excavation. Less than 100 gallons of water seeped into the excavation on January 27 and 28.

An attempt was made to isolate the heavy oil contaminated soil (HOCS) from the gasoline contaminated soil (GCS). We estimate that one hundred (100) tons of HOCS and two hundred (200) tons of GCS were removed from the excavation and transferred to an area on the northwest corner of the cemetery for on-site treatment. The stockpile area had been prepared as a birmed containment with two layers of 10 mil polyethylene sheeting covering the ground. Spoil Pile 1 contains GCS and Spoil Pile 2 contains HOCS.

At the conclusion of the excavation operation, the size of the excavation was measured to be fifteen feet in the north/south direction by thirty-five feet in the east/west direction with an average depth of thirteen feet bgs. Eight confirmation soil samples were collected from the bottom and sidewalls of the excavation for laboratory analysis. Refer to Exhibit D, Post Remedial Sampling Plan. All eight of the samples were non detectable for petroleum hydrocarbons.

On the basis of these results and our field observations, we concluded that the efforts to remove the petroleum contaminated soils above the

MTCA Method A cleanup standards of 100 ppm for gasoline and 200 ppm for heavy oil from the former UST site were successful.

SAMPLE COLLECTION PROTOCOL

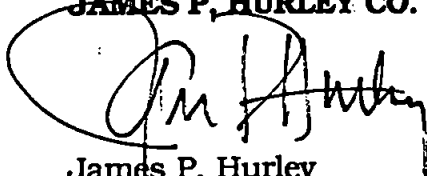
Each soil sample was collected with a previously decontaminated stainless steel spoon and transferred to the laboratory in prepared four ounce sampling jars, sealed with Teflon lids. The samples were transported in an ice chest equipped with blue ice. A chain of custody was completed at the time of transport. Results of the laboratory analysis are summarized in Tables 1 and 2. The laboratory reports are attached as Exhibit E.

LIMITATIONS

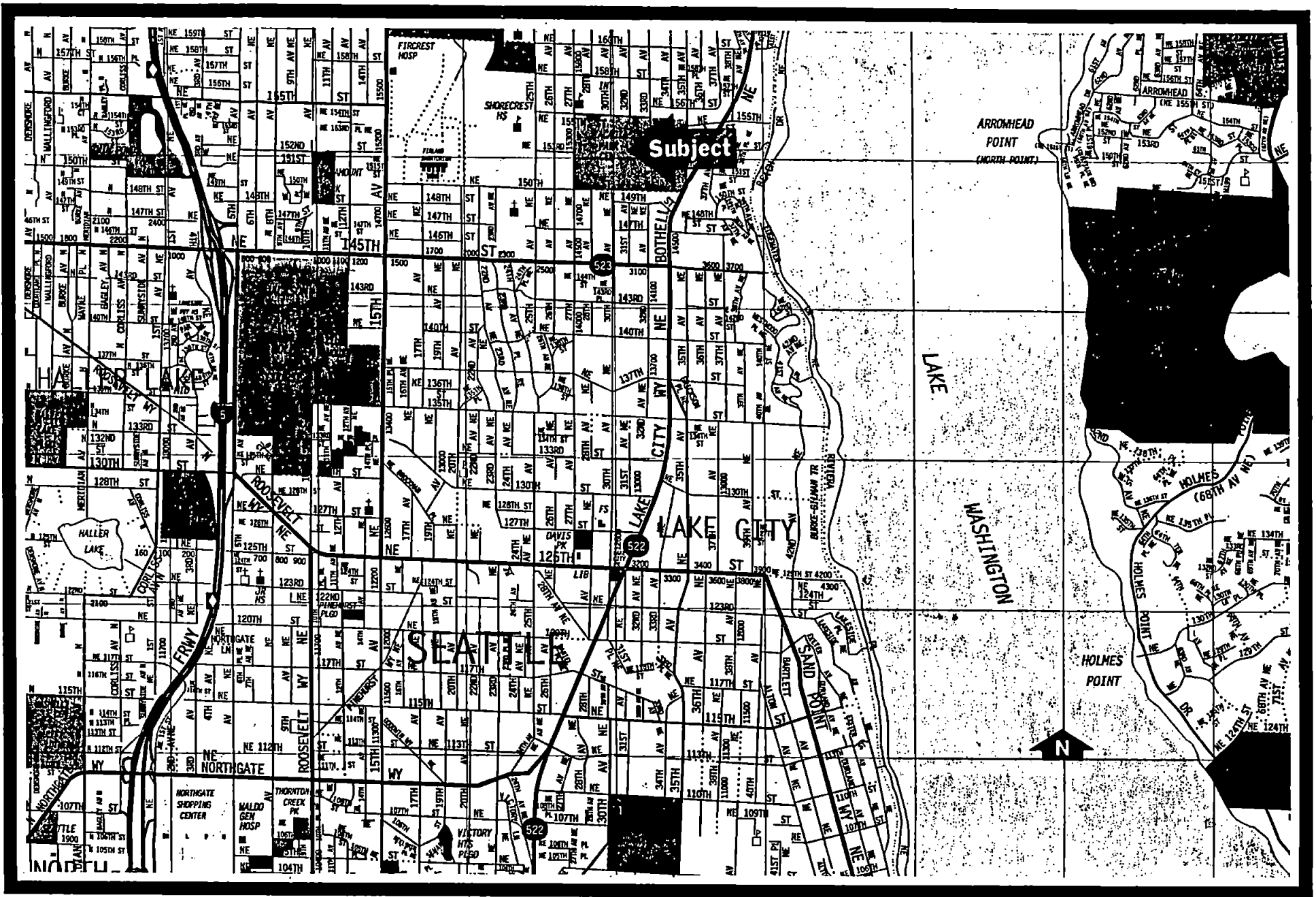
This report has been prepared using generally accepted professional practices, related to the nature of the work accomplished, in the same or similar localities, at the time the services were performed. This report has been prepared for the exclusive use of Acacia Memorial Park for the specific application to the project purpose. This report should not be construed to represent a legal opinion. No other conditions, expressed or implied, should be understood.

This report summarizes the services authorized under the terms of our contract. We appreciate the opportunity of providing you with our services. If you have any questions on this matter please call.

Sincerely,
JAMES P. HURLEY CO.



James P. Hurley
President
WSDOE Registered Site Assessor



James P. Hurley Co.
 Environmental Risk Management Consultants

EXHIBIT A
VICINITY MAP



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

-----PROPERTY LINE-----

Stockpiled Soil

UST Excavation
Maintenance Facility

Mausoleum

ACACIA MEMORIAL PARK
14951 BOTHELL WAY NORTHEAST
SEATTLE, WASHINGTON

Chapel

Office

BOTHELL WAY NORTHEAST

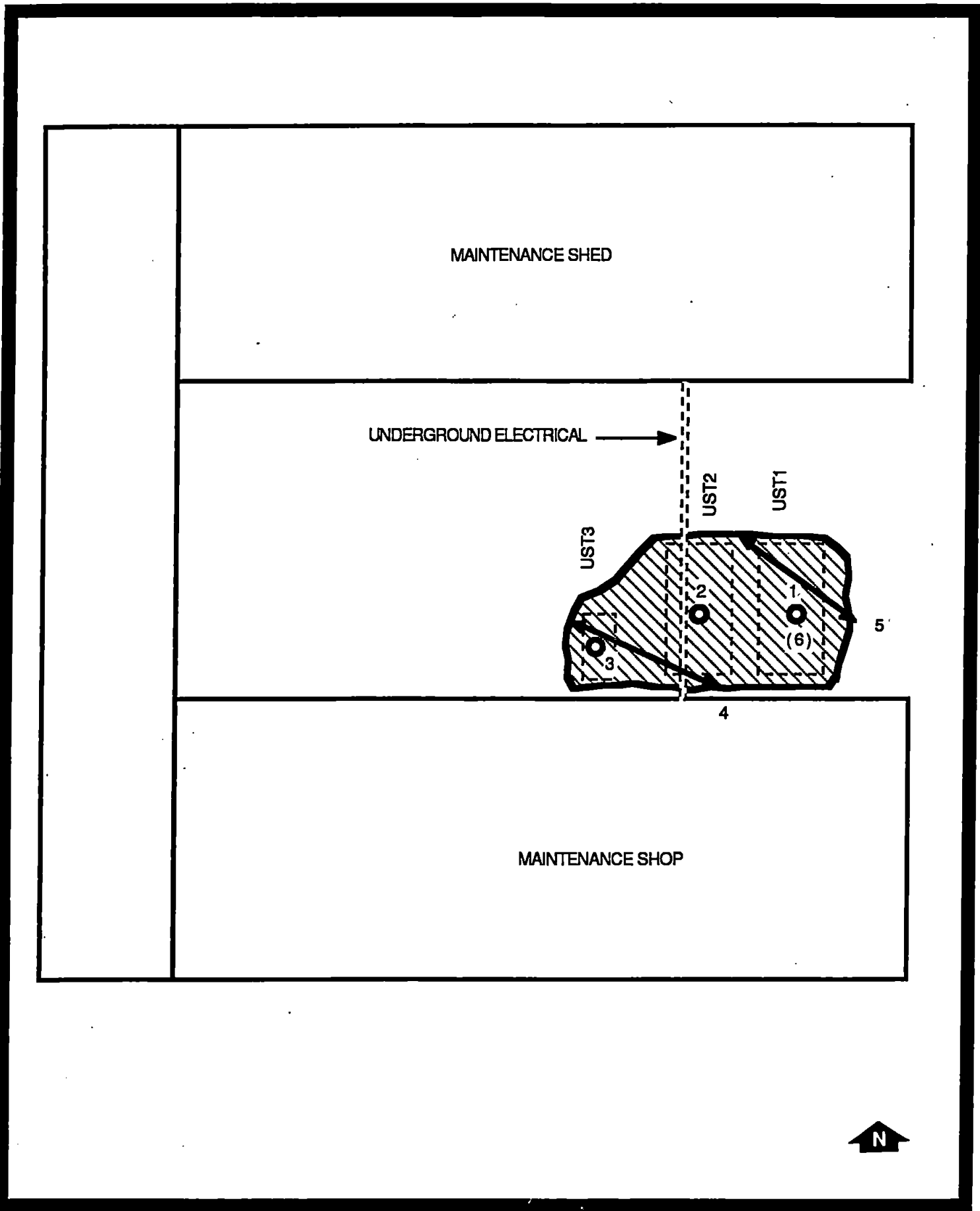


Sample #	Date Collected	Depth (bgs)	Characterization
1	1-20-94	9'	G
2	1-20-94	9'	G, D, HO
3	1-20-94	6'	G, D, HO
4	1-20-94	5' to 9'	G, D, HO
5	1-20-94	5' to 9'	HO
6	1-20-94	8"	G,HO
94127-1	1-27-94	7'	ND
94127-2	1-27-94	9'	ND
94127-3	1-27-94	12'	ND
94127-4	1-27-94	8' to 12'	ND
94127-5	1-27-94	8' to 12'	ND
94127-6	1-27-94	8' to 12'	ND
94127-7	1-27-94	8' to 12'	ND
94127-8	1-27-94	field duplicate of #5	ND
SP1	1-27-94	spoil pile #1	ND
SP2	1-27-94	spoil pile #2	D, HO
94128-1	1-28-94	12'	ND
94128-2	1-28-94	8' to 12'	ND
94128-3	1-28-94	8' to 12'	ND
94128-4	1-28-94	8' to 12'	ND

Does this mean detect?

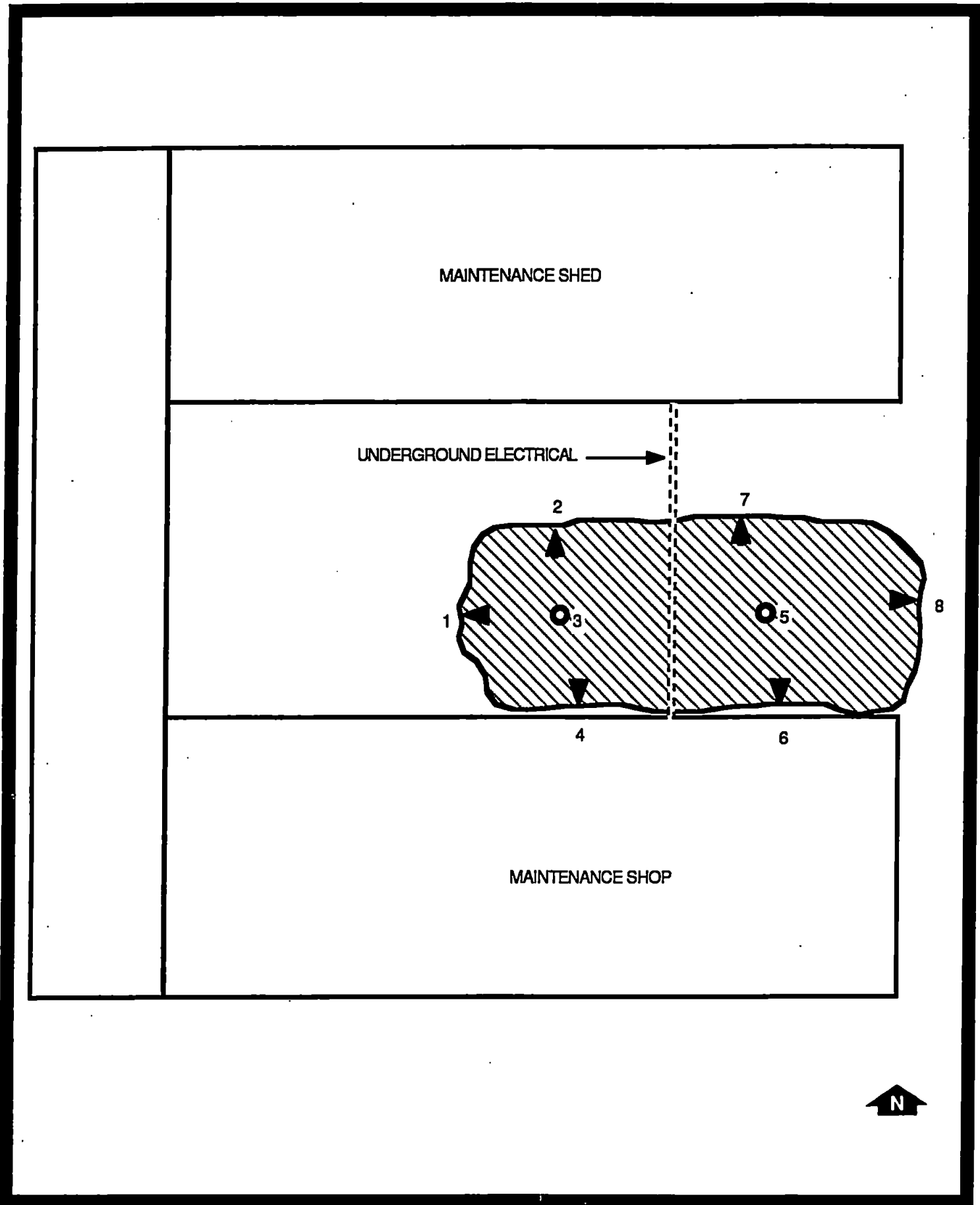
Notes:
 G- gasoline
 D - diesel
 HO - heavy oil
 ND- non detectable

TABLE 1
 LABORATORY RESULTS
 HCID METHOD



Real Estate Graphics, Inc. ©COPYRIGHT 1978

Sample#	Media	Method	Date Sampled	Depth (bgs)	Benzene	Toluene	Ethel- Benzene	Xylenes	Gasoline	TPH (ppm)
1	soil	WIPH-G/BTEX	1-20-94	9'	<0.05	1.0	1.6	10.2	90	
2	soil	WIPH-G/BTEX	1-20-94	9'	0.37	3.5	1.7	1.9	160	
2	soil	418.1	1-20-94	9'						7,000
3	soil	WIPH-G/BTEX	1-20-94	6'	<0.05	2.8	1.6	10.2	180	
3	soil	418.1	1-20-94	6'						11,000
4	soil	418.1	1-20-94	5' to 9'						2,000
5	soil	418.1	1-20-94	5' to 9'						110
94127-1	soil	418.1	1-27-94	13'						24
SP2	soil	418.1	1-27-94	18'						6,200
W-1	water	WIPH-G/BTEX	2-4-94	surface	3.2	9.8	2.9	503	2.0	
W-1	water	418.1	2-4-94	surface						4.6



Real Estate Graphics, Inc. ©COPYRIGHT 1979

EXHIBIT E
LABORATORY REPORTS



AMERICAN

ANALYTICAL SERVICES, INC.

January 21, 1994

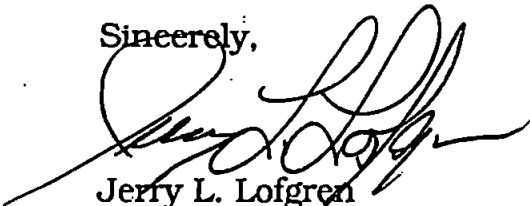
James P. Hurley Co.
P.O. Box 88206
Kenmore, WA 98028
Attn.: Jim Hurley

Dear Jim:

Enclosed are the results of the analyses of samples submitted on 1/20/94 from your Acacia project.

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding the reported results, please feel free to call me.

Sincerely,



Jerry L. Lofgren
Laboratory Manager

JLL:bcp

enclosures



Date of Report: 1/21/94
Samples Submitted: 1/20/94
File ID: 01-052
Analysis: WTPH-HCID
Unit: mg/kg (ppm)

Client: James P. Hurley Co.
Project: Acacia
Project #:
Matrix: Soil

Results

Lab ID	Client ID	GC Characterization	Surrogate Recovery
01-052-1	1	The chromatogram indicates the presence of hydrocarbons in the Gasoline (C7-Toluene) range.	93%
01-052-2	2	The chromatogram indicates the presence of hydrocarbons in the Gasoline (C7-Toluene), Diesel (C12-C24), and Heavy Oil (>C24) range.	110%
01-052-3	3	The chromatogram indicates the presence of hydrocarbons in the Gasoline (C7-Toluene), Diesel (C12-C24), and Heavy Oil (>C24) range.	104%
01-052-4	4	The chromatogram indicates the presence of hydrocarbons in the Gasoline (C7-Toluene), Diesel (C12-C24), and Heavy Oil (>C24) range.	106%
01-052-5	5	The chromatogram indicates the presence of hydrocarbons in the Heavy Oil (>C24) range.	99%
01-052-6	6	The chromatogram indicates the presence of hydrocarbons in the Gasoline (C7-Toluene) and Heavy Oil (>C24) range.	103%

Quality Assurance

Method Blank	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	96%
--------------	--	-----

ppm - parts per million



Date of Report: 1/28/94
Samples Submitted: 1/20/94
File ID: 01-052
Analysis: WTPH-418.1
Units: mg/kg (ppm)

Client: James P. Hurley Co.
Project: Acacia
Project #:
Matrix: Soil

Lab ID	Customer ID	Result
01-052-2	2	7,000
01-052-3	3	11,000
01-052-4	4	2,000
01-052-5	5	110

Quality Assurance

Method Blank <30

ppm - parts per million



Date of Report: 1/28/94
 Samples Submitted: 1/20/94
 File ID: 01-052
 Analysis: WTPH-BTEX
 Units: mg/kg (ppm)

Client: James P. Hurley Co.
 Project: Acacia
 Project #:
 Matrix: Soil

Results

Lab ID	Client ID	Gasoline	Benzene	Toluene	Ethyl Benzene	Xylenes	FB % Surrogate Recovery	BFB% Surrogate Recovery
01-052-1	1	90*	<0.05	1.0	1.6	10.2	87	87
01-052-2	2	160*	0.37	3.5	1.7	1.9	89	90
01-052-3	3	180*	<0.05	2.8	1.6	10.2	85	92
<u>Quality Assurance</u>								
01-052-2 Duplicate		130*	0.37	3.4	1.6	10.5	80	87
Method Blank		<1.0	<0.05	<0.05	<0.05	<0.05	100	106
01-052-2 Matrix Spike		---	69%	64% (Y)	40% (Y)	(Y)	82	81

* - "weathered" gasoline.

Y - Interferences were present which prevented quantitation of the surrogate recovery (Matrix Spike amount to small).

ppm - parts per million





AMERICAN

ANALYTICAL SERVICES, INC.

February 7, 1994

James P. Hurley Co.
P.O. Box 88206
Kenmore, WA 98028
Attn.: Jim Hurley

Dear Jim:

Enclosed are the results of the analyses of samples submitted on 1/29/94 from your Acacia project.

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding the reported results, please feel free to call me.

Sincerely,

Jerry L. Lofgren
Laboratory Manager

enclosures



Date of Report: 2/7/94
Samples Submitted: 1/28/94
File ID: 01-074
Analysis: WTPH-HCID
Unit: mg/kg (ppm)

Client: James P. Hurley Co.
Project: Acacia
Project #:
Matrix: Soil

Results

Lab ID	Client ID	GC Characterization	Surrogate Recovery
01-074-11	94128-1	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	120%
01-074-12	94128-2	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	113%
01-074-13	94128-3	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	110%
01-074-14	94128-4	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	108%

Quality Assurance

Method Blank	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	125%
--------------	--	------

ppm - parts per million



Date of Report: 2/7/94
Samples Submitted: 1/28/94
File ID: 01-074
Analysis: WTPH-HCID
Unit: mg/kg (ppm)

Client: James P. Hurley Co.
Project: Acacia
Project #:
Matrix: Soil

Results

Lab ID	Client ID	GC Characterization	Surrogate Recovery
01-074-1	94127-1	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	104%
01-074-2	94127-2	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	111%
01-074-3	94127-3	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	116%
01-074-4	94127-4	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	116%
01-074-5	94127-5	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	115%
01-074-6	94127-6	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	115%
01-074-7	94127-7	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	116%
01-074-8	94127-8	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	120%
01-074-9	SP1	<20 ppm Gasoline <50 ppm Diesel <100 ppm Oil	105%
01-074-10	SP2	The chromatogram indicates the presence of hydrocarbons in the Diesel (C12-C24) and Heavy Oil (>C24) range.	124%

ppm - parts per million



Date of Report: 2/7/94
Samples Submitted: 1/28/94
File ID: 01-074
Analysis: WTPH-418.1
Units: mg/kg (ppm)

Client: James P. Hurley Co.
Project: Acacia
Project #:
Matrix: Soil

Lab ID	Customer ID	Result
01-074-1	94127-1	24
01-074-10	SP2	6,200

Quality Assurance

Method Blank <20

ppm - parts per million





AMERICAN
ANALYTICAL SERVICES, INC.

February 11, 1994

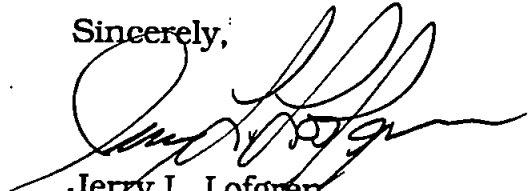
James P. Hurley Co.
P.O. Box 88206
Kenmore, WA 98028
Attn.: Jim Hurley

Dear Jim:

Enclosed are the results of the analyses of samples submitted on 2/04/94 from your Acacia II-Water Sampling project.

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding the reported results, please feel free to call me.

Sincerely,



Jerry L. Lofgren
Laboratory Manager

enclosures



Date of Report: 2/11/94
Samples Submitted: 2/4/94
File ID: 02-006
Analysis: WTPH-418.1
Units: mg/L (ppm)

Client: James P. Hurley Co.
Project: Acacia II-Water Sampling
Project #:
Matrix: Water

Lab ID	Customer ID	Result
02-006-1	W-1	4.6

Quality Assurance

Method Blank <1.2

ppm - parts per million



Date of Report: 2/11/94
 Samples Submitted: 2/4/94
 File ID: 02-006
 Analysis: WTPH-G/BTEX
 Units: mg/L (ppm) - Gasoline
 ug/L (ppb) - All others

Client: James P. Hurley Co.
 Project: Acacia II-Water Sampling
 Project #:
 Matrix: Water

Results

Lab ID	Client ID	Gasoline mg/L (ppm)	Benzene ug/L (ppb)	Toluene ug/L	Ethyl Benzene ug/L	Xylenes ug/L	FB % Surrogate Recovery
02-006-1	W-1	2.0	3.2	9.8	2.9	503	100%
<u>Quality Assurance</u>							
Method Blank		<1.0	<1.0	<1.0	<1.0	<1.0	100%
02-006-1 Duplicate		2.1	3.4	23.8	2.7	522	103%
02-006-1 Matrix Spike*		---	100%	100%	91%	94%	96%

* - Matrix Spike reported as percent recovery.





March 15, 1994

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

Gentlemen:

Enclosed herein please find the Underground Storage Tank Site Check/Site Assessment Checklist and the Summary Report on the Underground Storage Tank and Contaminated Soil Removal Project done by the James P. Hurley Company.

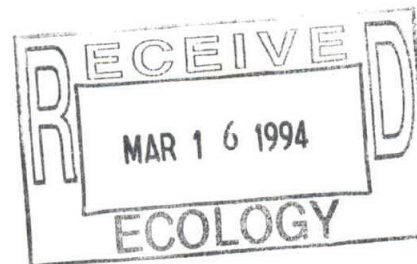
If you have any further questions, please do not hesitate to contact the undersigned.

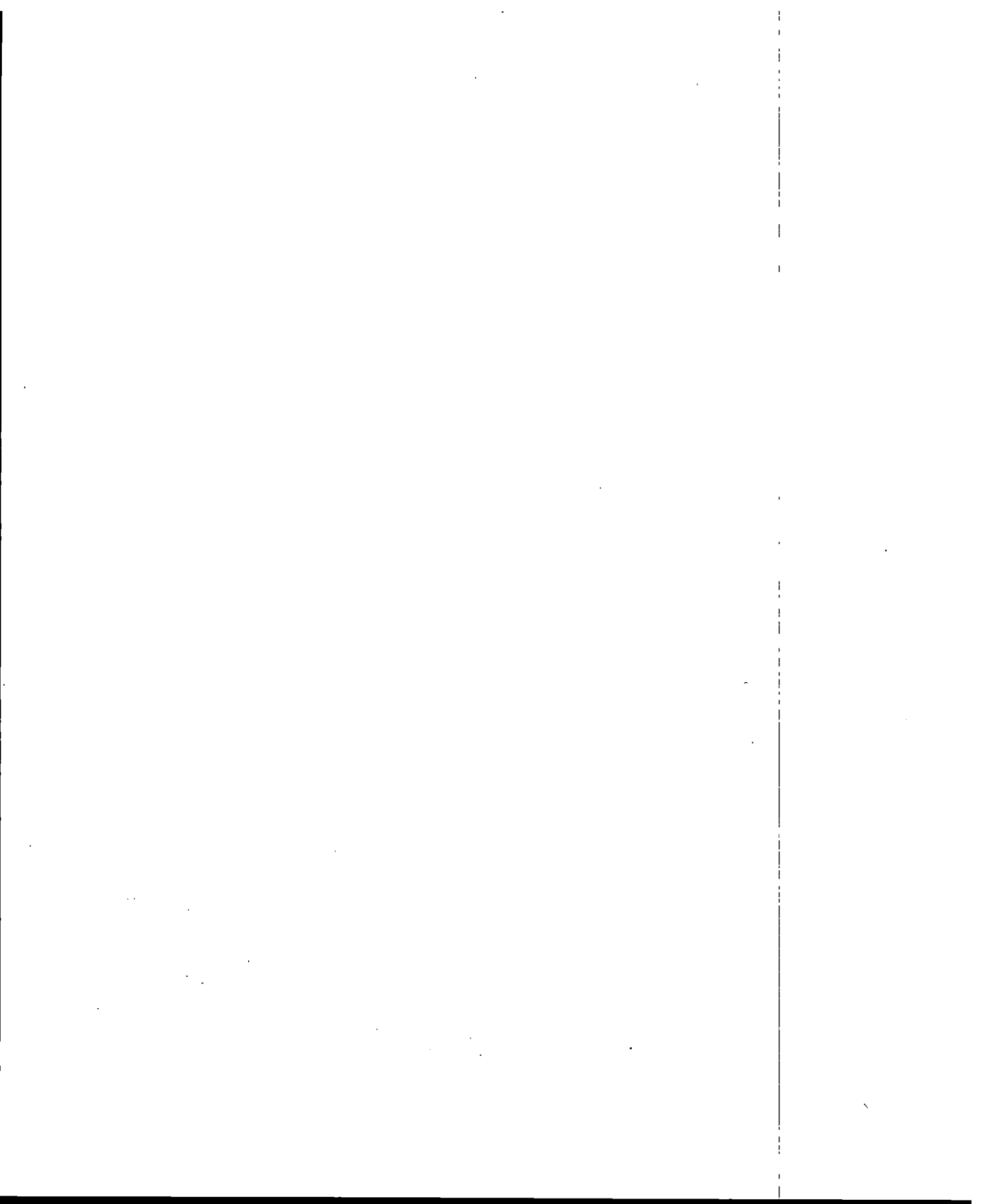
Thank you.

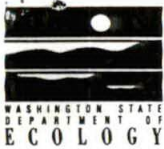
Sincerely,



Robert M. Anthony
Secretary/Treasurer
General Manager
ACACIA MEMORIAL PARK
14951 Bothell Way N.E.
Seattle, WA 98155
(206)362-5525







UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

nw

For Office Use Only	
Owner #	40009067
Site #	100759

INSTRUCTIONS:

When a release has **not** been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person registered with the Department of Ecology. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all the tanks for which the site check and site assessment is being conducted. Use the tank ID number if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This form must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section Department of Ecology P. O. Box 47655 Olympia, WA 98504-7655
--

SITE INFORMATION

Site ID Number (on invoice or available from Ecology if the tanks are registered): _____

Site/Business Name: Acacia Memorial Park

Site Address: 14951 Bothell ^{Way NE} Telephone: (206) 362-5525

Seattle WA 98155

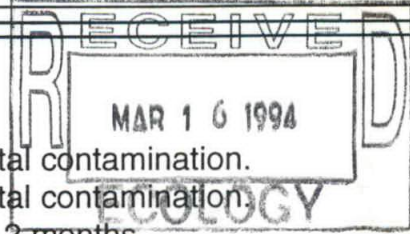
City State ZIP-Code

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
<u>1</u>	<u>1,000</u>	<u>unleaded gasoline</u>
<u>2</u>	<u>1,000</u>	<u>leaded gasoline</u>

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

- Check one:
- Investigate suspected release due to on-site environmental contamination.
 - Investigate suspected release due to off-site environmental contamination.
 - Extend temporary closure of UST system for more than 12 months.
 - UST system undergoing change-in-service.
 - UST system permanently closed-in-place.
 - UST system permanently closed with tank removed.
 - Abandoned tank containing product.
 - Required by Ecology or delegated agency for UST system closed before 12/22/88.
 - Other (describe): _____



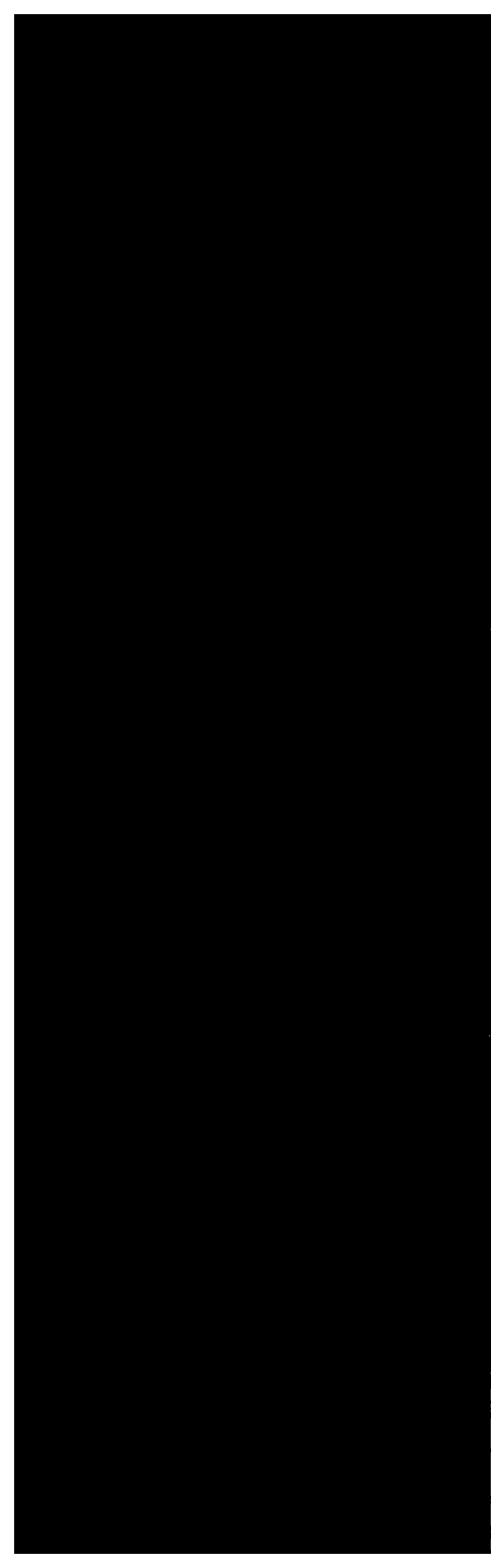
CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.

	YES	NO
1. The location of the UST site is shown on the vicinity map.	JPH	
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in the Site Assessment Guidance)	JPH	
3. A summary of UST system data is provided. (see Section 3.1)	JPH	
4. The soils characteristics at the UST site are described. (see Section 5.2)	JPH	
5. Is there apparent groundwater in the tank excavation?	JPH	
6. A brief description of the surrounding land is provided. (see Section 3.1)	JPH	
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	JPH	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	JPH	
- groundwater samples distinguished from soil samples (if applicable)		
- samples collected from stockpiled excavated soil	JPH	
- tank and piping locations and limits of excavation pit	JPH	
- adjacent structures and streets	JPH	
- approximate locations of any on-site and nearby utilities	JPH	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	JPH	
10. A table is provided showing laboratory results for each sample collected including: sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	JPH	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	JPH	
12. The results of this site check/site assessment indicate that a confirmed release of regulated substance has occurred.	JPH	

SITE ASSESSOR INFORMATION

<u>James P. Hurley</u> PERSON REGISTERED WITH ECOLOGY	<u>James P. Hurley Co.</u> FIRM AFFILIATED WITH	
BUSINESS ADDRESS: <u>P.O. Box 82206</u> <u>Kenmore WA 98028</u>	TELEPHONE: <u>(206) 486-6665</u>	
CITY	STATE	ZIP+CODE
I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173-360 WAC.		
<u>3-14-94</u> Date	<u>[Signature]</u> Signature of Person Registered with Ecology	



Date of Report: 2/18/94
Samples Submitted: 2/4/94
File ID: 02-006
Analysis: Total Lead
Units: mg/L (ppm)

Client: James P. Hurley Co.
Project: Acacia II-Water Sampling
Project #:

Matrix: Water

Lab ID	Client ID	Result
02-006-1	W-1	<0.1

Quality Assurance

Method Blank	<0.1
Matrix Spike	106%

ppm - parts per million



RELEASED
TURNAROUND?

James P. Hurley Co.
Environmental Risk Management Consultants

P.O. Box 82206
Kenmore, WA 98028

Telephone (206) 486-6665
FAX (206) 486-7896

PROJECT # _____
PROJECT NAME Acacia
MANAGER Jim
TRAVELER # _____

Dash	Sample Number	Date	Type	# Jars	Analysis Required						Comments
					WTPH-HCID	WTPH-G/BTEX	WTPH-G	WTPH-D	WTPH-418:1	DRY WEIGHT	
	94127-1	1-28-94			X						
	-2				X						
	-3				X						
	-4				X						
	-5				X						
	-6				X						
	-7				X						
	-8				X						
	SP1				X						
	SP2				X						
	94128-1				X						
	-2				X						
	-3				X						
	-4				X						

Submitted 4 [Signature]
Firm JPHC
Submitted _____
Firm _____

Date 1-29-94 Received by [Signature] Date 1-29-94
Time _____ Firm ASCI Time 9:00
Date _____ Received by _____ Date _____
Time _____ Firm _____ Time _____