James P. Hurley Co.
Environmental Risk Management Consultants

P.O. Box 82206
Kenmore, WA 98028

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

SITE ASSESSMENT REPORT

UNDERGROUND STORAGE TANK AND
PETROLEUM CONTAMINATED
SOIL REMOVAL PROJECT
CEDAR HILLS LANDFILL
MAPLE VALLEY, WASHINGTON
CO# 950207

SR 12/12/95 RM

DEPARTMENT OF ECOLOGY
NWRO/TCP TANKS UNIT

INTERIM CLEANUP REPORT	☑
SITE CHARACTERIZATON	☐
FINAL CLEANUP REPORT	☐
OTHER _____	☐
AFFECTED MEDIA: SOIL	☑
OTHER _____ GW	☑
INSPECTOR (INIT.) _____ DATE 12-7-95	

Prepared By:

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

Prepared For:

West Pac Environmental, Inc.
54 South Dawson Street
Seattle, WA 98108

Date Submitted:

May 11, 1995

Independent Action Report Update

Site Name: Cedar Hills Landfill

Inc. #: 5689 Date of Report: May 11, '95

County: King Date Report Rec'd: 6-14-95 (HQ)
10-24-95 (NWRO)

Reviewed by: Joe Hickey

Comments (please include: free prod., tank info., contaminant migration, GW depth & flow, conc. trends, PCS treated?):

1-1kgal. tank, registered as gasoline, was removed on 2-23-95, and ~ 300 yds^3 of PCS (diesel) was excavated successfully. Groundwater was encountered at ~ 8' bgs and was impacted, I assume visually noticeable, since no sampling of groundwater occurred. The consultant indicates no need for water treatment or monitoring. While this is possible, I can't agree at this time, without more groundwater investigation. The soil is sand over clay. No receptor information was provided.
JP Hurley said later there are no wells for drinking

Table of Contents

Contents

Purpose	1
Executive Summary	1, 2
Scope of Services	2
Site Description	2
Geology and Hydrology	2
Background	3
Summary of Field Activities	3, 4
Limitations	4

Tables

Table 1 Summary of Laboratory Results

Exhibits

Exhibit A Vicinity Map
Exhibit B Site Plan
Exhibit C Sampling Plan
Exhibit D Laboratory Reports

James P. Hurley Co.
Environmental Risk Management Consultants

P.O. Box 82206
Kenmore, WA 98028

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

May 10, 1995

West Pac Environmental, Inc.
54 South Dawson Street
P.O. Box 80743
Seattle, WA 98108

Attn.: Mr. Mark McCullough, Project Manager

SITE ASSESSMENT REPORT
UNDERGROUND STORAGE TANK AND
PETROLEUM CONTAMINATED SOIL REMOVAL PROJECT
CEDAR HILLS LANDFILL-16645 228TH AVENUE SOUTHEAST
MAPLE VALLEY, WASHINGTON
CO# 950207

Dear Mr. McCullough:

Site investigations of the subject property were conducted on February 23 and March 7, 1995 by James P. Hurley Co. (JPHC), an environmental consulting firm, to assess the condition of the subsurface soils in the vicinity of a 1,000 gallon underground storage tank (UST) on the subject property.

PURPOSE

The purpose of these investigations was to confirm the presence or absence of significant petroleum contamination in the soils surrounding the former UST. 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

Removal of Registered Gasoline UST. A 1,000 gallon single wall steel UST, which had been used to store diesel fuel for a water pump generator, was removed from an excavation on the north side of the subject property by West Pac Environmental, Inc. on February 23, 1995. Following the UST removal activities, diesel odors were observed in the area surrounding the excavation. Subsequent WTPH-D analysis of soil samples collected from the excavation yielded diesel range hydrocarbons

parts per million (ppm). These results exceeded the Model Toxics Control Act (MTCA) Method A Cleanup Standard for diesel in soil of 200 ppm. On the basis of the laboratory results and our field observations, we concluded that diesel contaminated soil was present in the base and sidewalls of the excavation following the UST removal activities.

On March 7, 1995, known soils with petroleum hydrocarbon contamination in excess of the MTCA Method A cleanup standard for diesel in soil of 200 ppm were removed from the vicinity of the former UST. We estimate that the total volume of the excavated diesel contaminated soil (DCS) did not exceed 300 cubic yards. The material, which contains diesel range hydrocarbon concentrations ranging from 230 ppm to 3,250 ppm, was transferred to Cedar Hills Landfill by West Pack Environmental, Inc. on March 7, 1995.

Water, interpreted as groundwater, was encountered at approximately eight feet below ground surface (bgs) and was impacted by the former contamination plume. However, we believe that migration of diesel in the groundwater was limited to the extremities of the excavation. Given the removal of the source (i.e. the LUST and the DCS), and the fact that clean soil was imported and placed in the excavation to pre-existing grades, we see no need for ongoing water treatment or monitoring.

SCOPE OF SERVICES

The scope of our services included observation of the UST and petroleum contaminated soil (PCS) removal activities, collection of soil samples for field screening and laboratory analysis of petroleum hydrocarbons in the diesel range by an approved laboratory using Method WTPH-D and preparation of this written report.

SITE DESCRIPTION

The UST site is located adjacent to the north side of a pump station on the north central portion of the property, which is owned and operated by King County (see Exhibit A, Vicinity Map). The UST and ancillary piping (see Exhibit B, Site Plan, and Exhibit C, Sampling Plan) were removed from a single excavation. The surface above the USTs was unpaved and covered with native grass.

GEOLOGY AND HYDROLOGY

The geology of the soils encountered in the excavation consisted of loose, sandy backfill to a depth of eight feet beneath ground surface (bgs) which was underlain by organic clays and glacially-overridden sand deposits. Shallow groundwater, which appeared to be perched on a thin layer of clay was encountered at a depth of 8 feet bgs during the tank removal and soil excavation activities.

BACKGROUND

According to Mr. Nigel White, the project manager for King County Facilities, the UST system was installed in the early 1980's and has stored diesel fuel for a pump station since that time. The UST system was removed because the pump station and fuel system are no longer needed.

SUMMARY OF FIELD ACTIVITIES

Tank Removal Phase. On February 23, 1995, Jim Hurley, an International Fire Code Institute (IFCI) certified site assessor for Washington State, observed the removal of the UST and the soils in the vicinity of the UST. Visual and olfactory evidence observed in the soils and the results of head space tests performed on samples collected during the soil removal phase of the work indicated that petroleum contamination was present in the base and sidewalls of the excavation. The tank was inspected for structural integrity after removal and was assessed to be in good condition, with no visible signs of corrosive degradation.

Following the tank removal activities, five representative soil samples were collected from the limits of the excavation and from the excavated spoil pile for laboratory analysis using method WTPH-D. Soil Sample #1 was a discrete sample collected beneath the UST. Soil Sample #2 was a composite sample collected from the north and west sidewalls of the excavation. Soil Sample #3 was a composite sample collected from the south and east sidewalls of the excavation. Sample #4 was a field duplicate of Sample #1. Sample #5 was a composite sample collected from the Spoil Pile. All five samples yielded diesel range hydrocarbon responses, ranging from 230 ppm to 3,250 ppm. These results were the bases for our opinion that the soils in the vicinity of the former UST exceeded the MTCA Method A cleanup standard of 200 ppm for diesel in soil. The incident was reported by telephone to the northwest regional office of the Washington State Department of Ecology under Report #18569.

Petroleum Contaminated Soil (PCS) Cleanup Phase. On March 7, 1995, Jim Hurley returned to the site to observe the removal of PCS from the former UST excavation. Approximately 300 tons of PCS were removed from the vicinity of the former UST and hauled to Cedar Hills Landfill. Throughout the soil removal phase, efforts were made to isolate clean soils from contaminated soils by screening representative samples for volatile organic compounds in head space tests using a Photovac portable ionization detector. The suspected clean soil was stockpiled on the south side of the excavation. Refer to Exhibit B, Site Plan, Exhibit C, Sampling Plan Table 1, Summary of Laboratory Results, and Exhibit D, Laboratory Reports.

The PCS removal activities ceased after our field screening tests indicated that the base and the sidewalls were clean. At the conclusion

samples were collected from the limits of the excavation and the suspected clean spoil pile. Sample 2-1 was a discrete sample collected from the base of the excavation at a depth of 12 feet bgs. Samples 2-2 through 2-6 were channel samples collected from the southwest, west, north, east, and south sidewalls of the excavation, respectively. Sample 2-7 was a composite sample collected from the suspected clean spoil pile. Sample 2-8 was a field duplicate of Sample 2-1. The bottom (2-1 and 2-8), west (2-3), north (2-4), and south (2-6) sidewall samples and the spoil pile composite sample (2-7) were non-detectable for diesel range hydrocarbons. The southwest sidewall sample (2-2) yielded 30 ppm. The east sidewall (2-5) yielded 44 ppm. These results were well below the MTCA Method A cleanup standards for diesel range hydrocarbons of 200.

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.

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 West Pac Environmental, Inc. and King County Facilities 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.

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

Sample #	Date Sampled	Location	Depth (feet bgs)	WTPH-D Result (ppm)
1-1	2-23-95	Beneath UST	8	2,700
1-2	2-23-95	Northwest sidewall	6 to 8	250
1-3	2-23-95	Southeast sidewall	6 to 8	230
1-4	2-13-95	Field Duplicate of Sample 1-1	8	3,250
1-5	2-13-95	Composite of Spoil Pile	1.5	250
2-1	3-7-95	Base of excavation after PCS removal activities on 3-7-95	12	<25
2-2	3-7-95	Southwest sidewall after PCS removal activities on 3-7-95	8 to 12	30
2-3	3-7-95	West sidewall after PCS removal activities on 3-7-95	8 to 12	<25
2-4	3-7-95	North sidewall after PCS removal activities on 3-7-95	8 to 12	<25
2-5	3-7-95	East sidewall after PCS removal activities on 3-7-95	8 to 12	44
2-6	3-7-95	South sidewall after PCS removal activities on 3-7-95	8 to 12	<25
2-7	3-7-95	Composite of Clean Spoil Pile after PCS removal activities on 3-7-95	1.5	<25
2-8	3-7-95	Field Duplicate of Sample #2-1	12	<25
MTCA Method A Cleanup Standard For Diesel In Soil				**200**

James P. Hurley Co.
Environmental Risk Management Consultants

TABLE 1
SUMMARY OF LABORATORY RESULTS

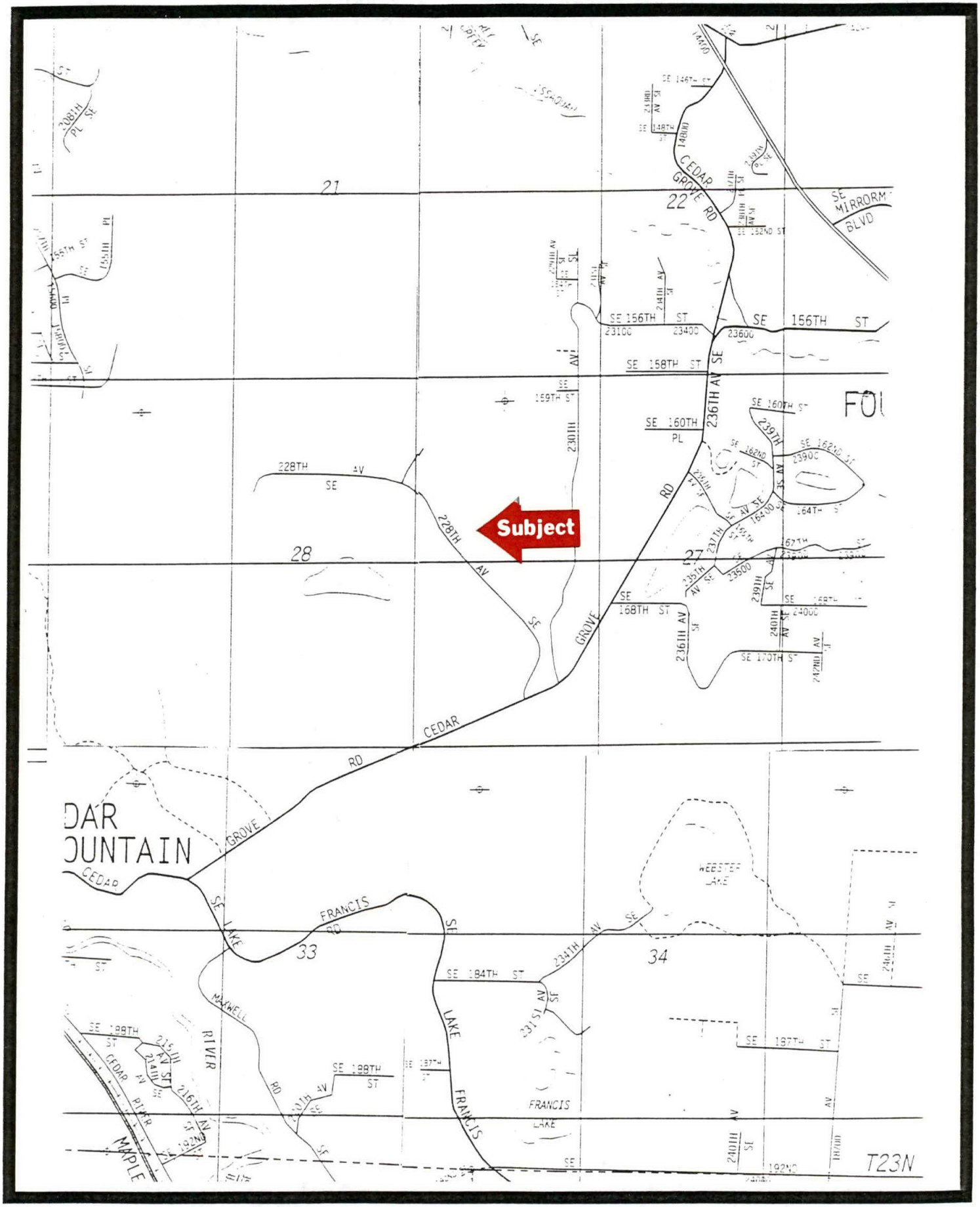


EXHIBIT A
VICINITY MAP

James P. Hurley Co.

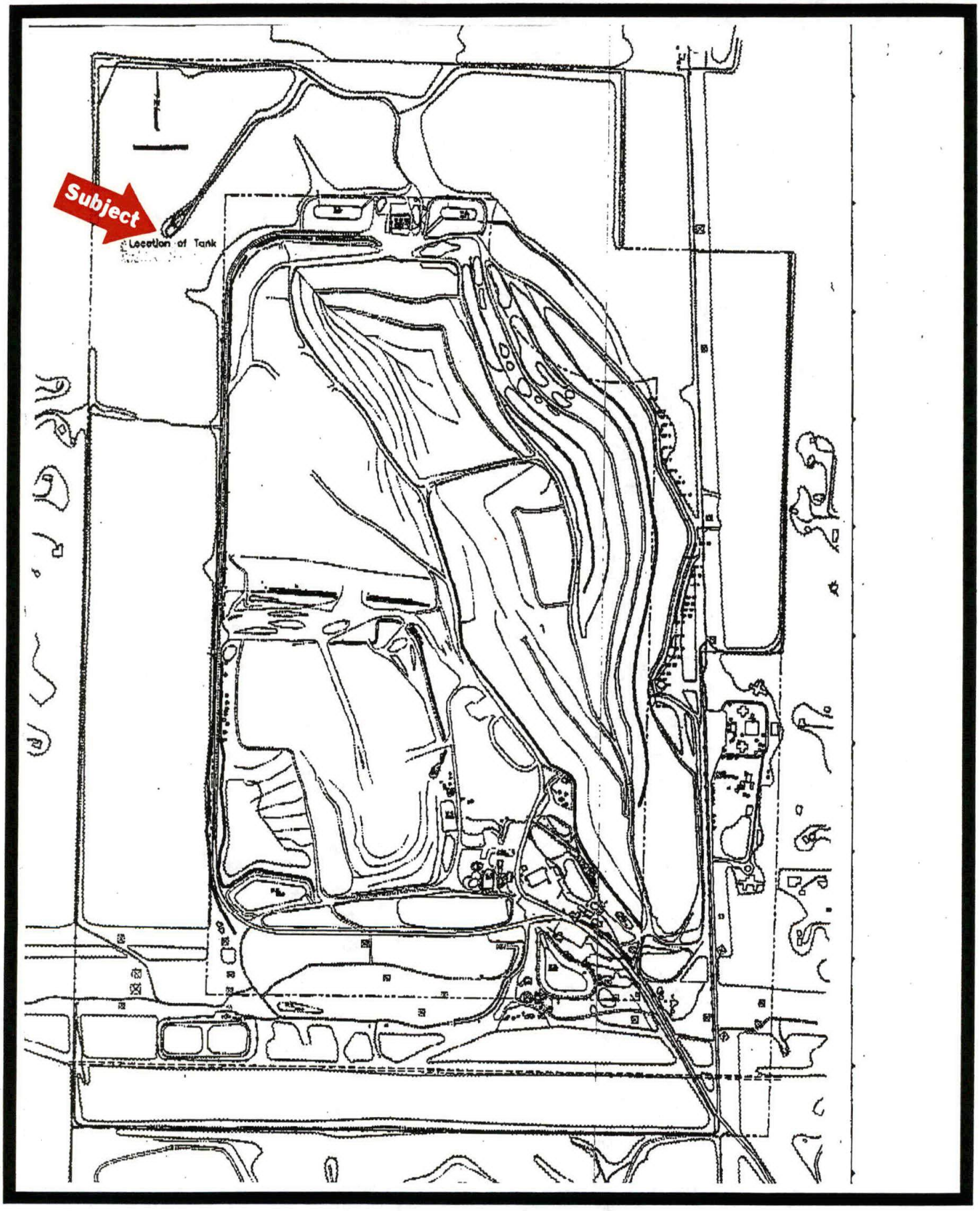
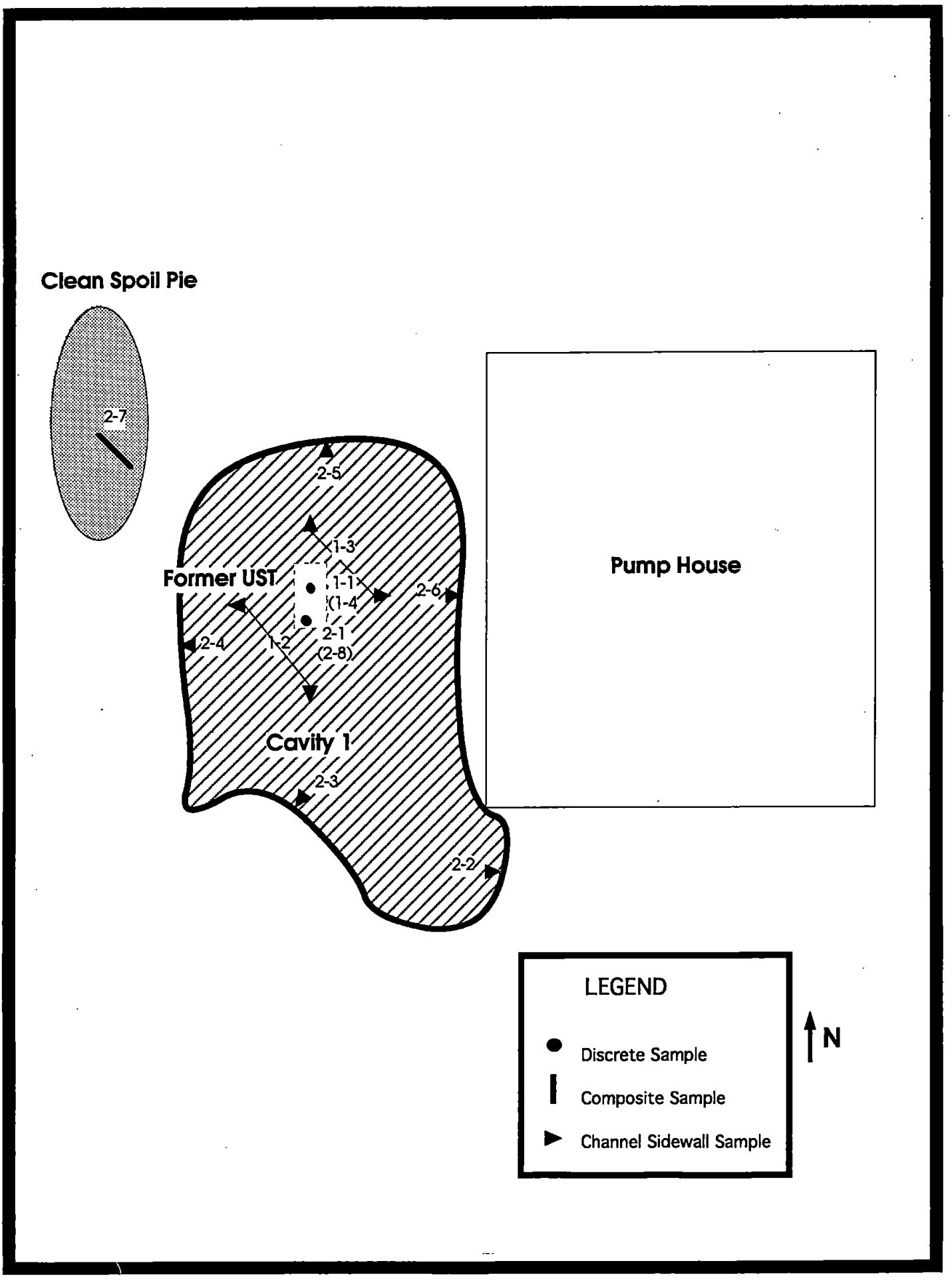


EXHIBIT B
SITE PLAN

James P. Hurley Co.
Environmental Risk Management Consultants



James P. Hurley Co.
Environmental Risk Management Consultants

Exhibit C
Sampling Plan

Exhibit D
Laboratory Reports

AMERICAN

ANALYTICAL LABORATORIES, INC.

February 27, 1995

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 2/23/95 from your Cedar Hills UST 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,

Todd Salamonsen
Laboratory Director

enclosures

Date of Analysis: 2/24/95
Samples Submitted: 2/23/95
File ID: 02-077
Analysis: WTPH-D
Units: mg/kg (ppm)

Client: West Pac
Project: Cedar Hills UST
Project #:
Matrix: Soil

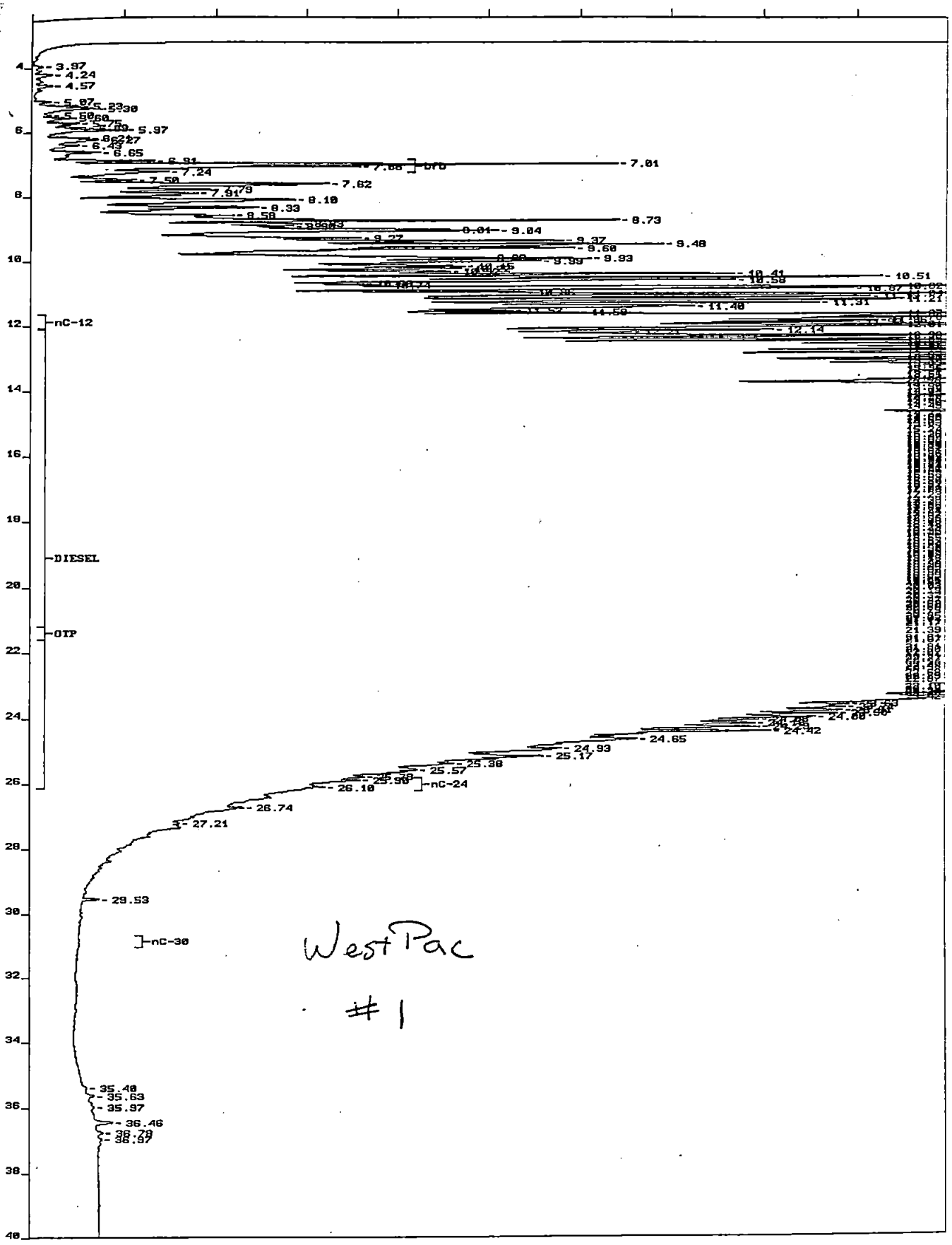
Results

Lab ID	Client ID	Result	Surrogate Recovery (BFB)	Surrogate Recovery (OTP)
02-077-1	#1	2,700	81%	112%
02-077-2	#2	250	91%	103%
02-077-3	#3	230	90%	100%
02-077-4	#4	3,250	81%	95%
02-077-5	#5	250	89%	99%
Quality Assurance				
02-077-5 Duplicate		380	81%	84%
Method Blank		<50	96%	96%

ppm - parts per million

File=C:\cp\data1\950224F4.04K Date printed = 02-24-1995 Time = 12:29:14

2.50 to 40.00 min. Low Y = -0.11948 mv High Y = 3.88052 mv Span = 4.00000 mv

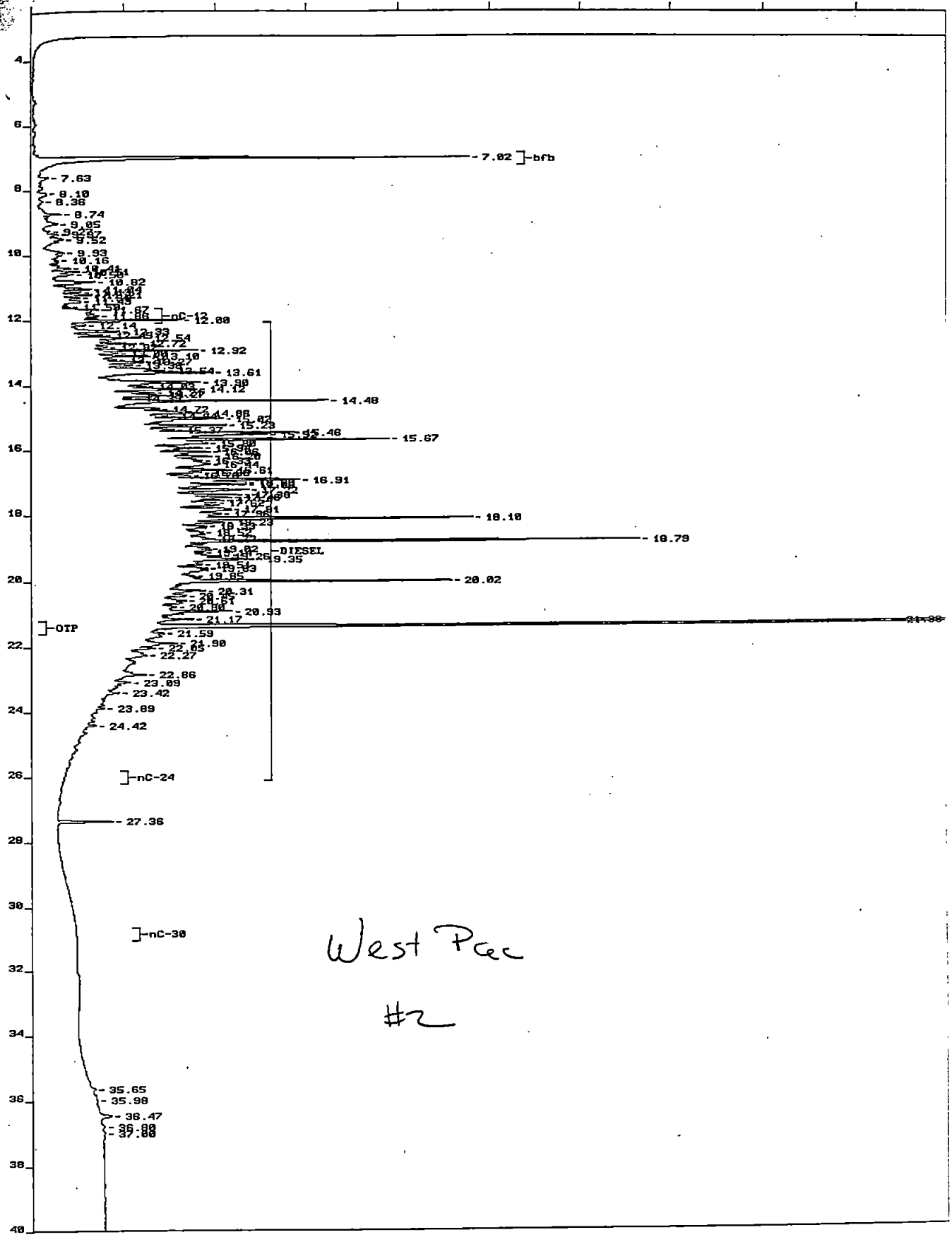


WestPac

#1

File=c:\cp\data1\950224F4.05R Date printed = 02-24-1995 Time = 13:16:30

2.50 to 40.00 min. Low Y = -0.13501 mv High Y = 3.86499 mv Span = 4.00000 mv

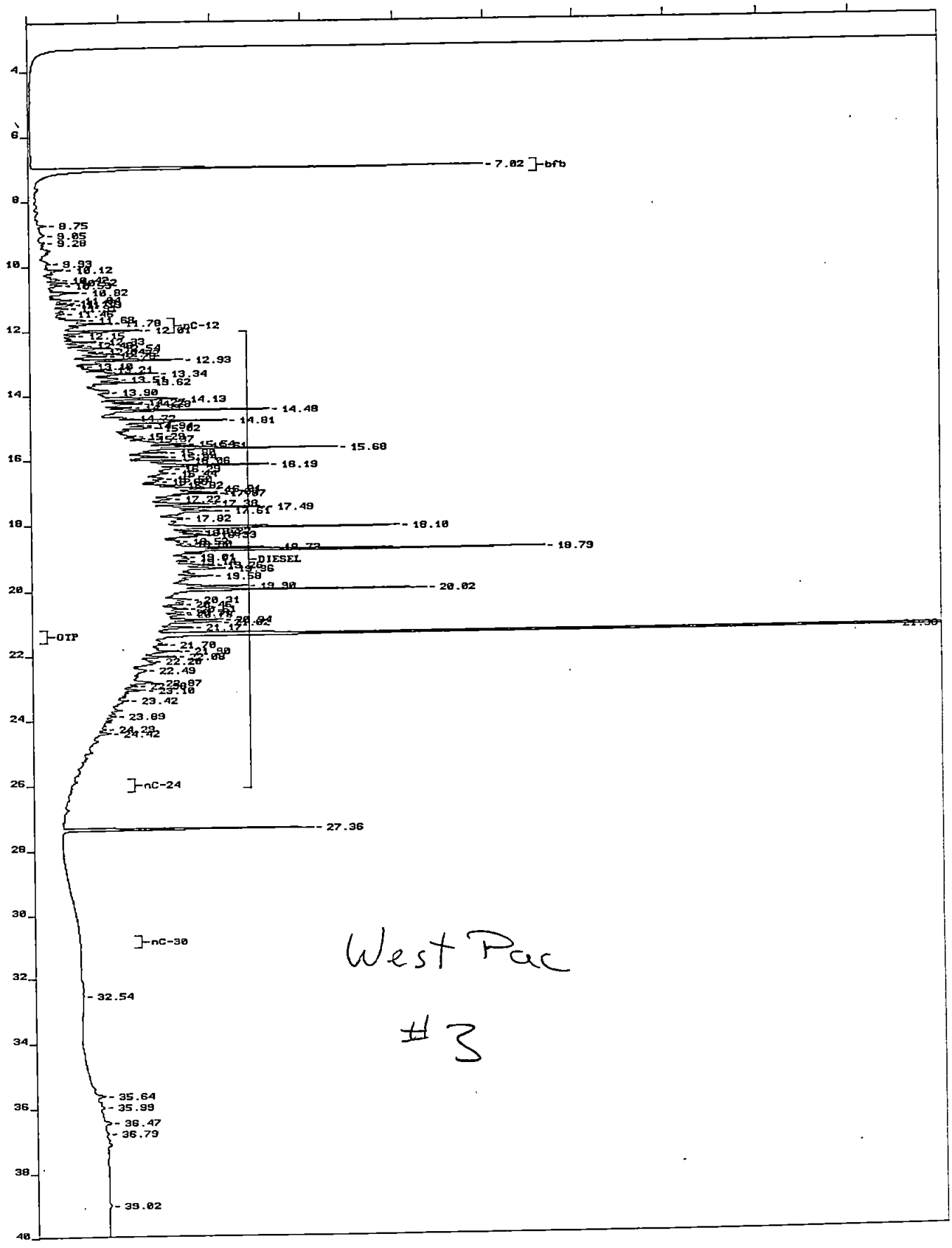


West Pac

#2

File=c:\cp\data1\950224F4.06i. Date printed = 02-24-1995 Time = 14:03:53

2.50 to 40.00 min. Low Y = -0.13824 mv High Y = 3.86176 mv Span = 4.00000 mv

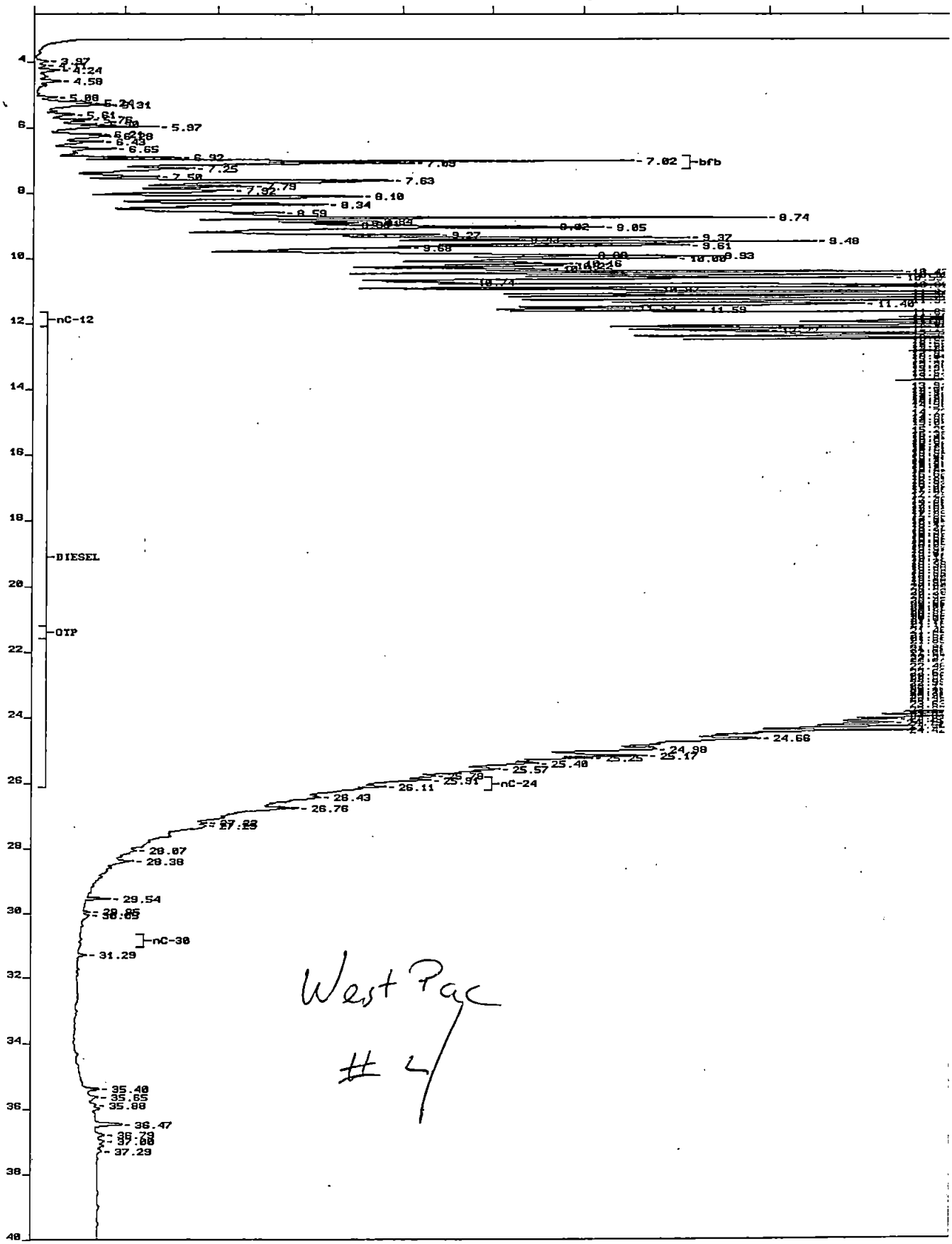


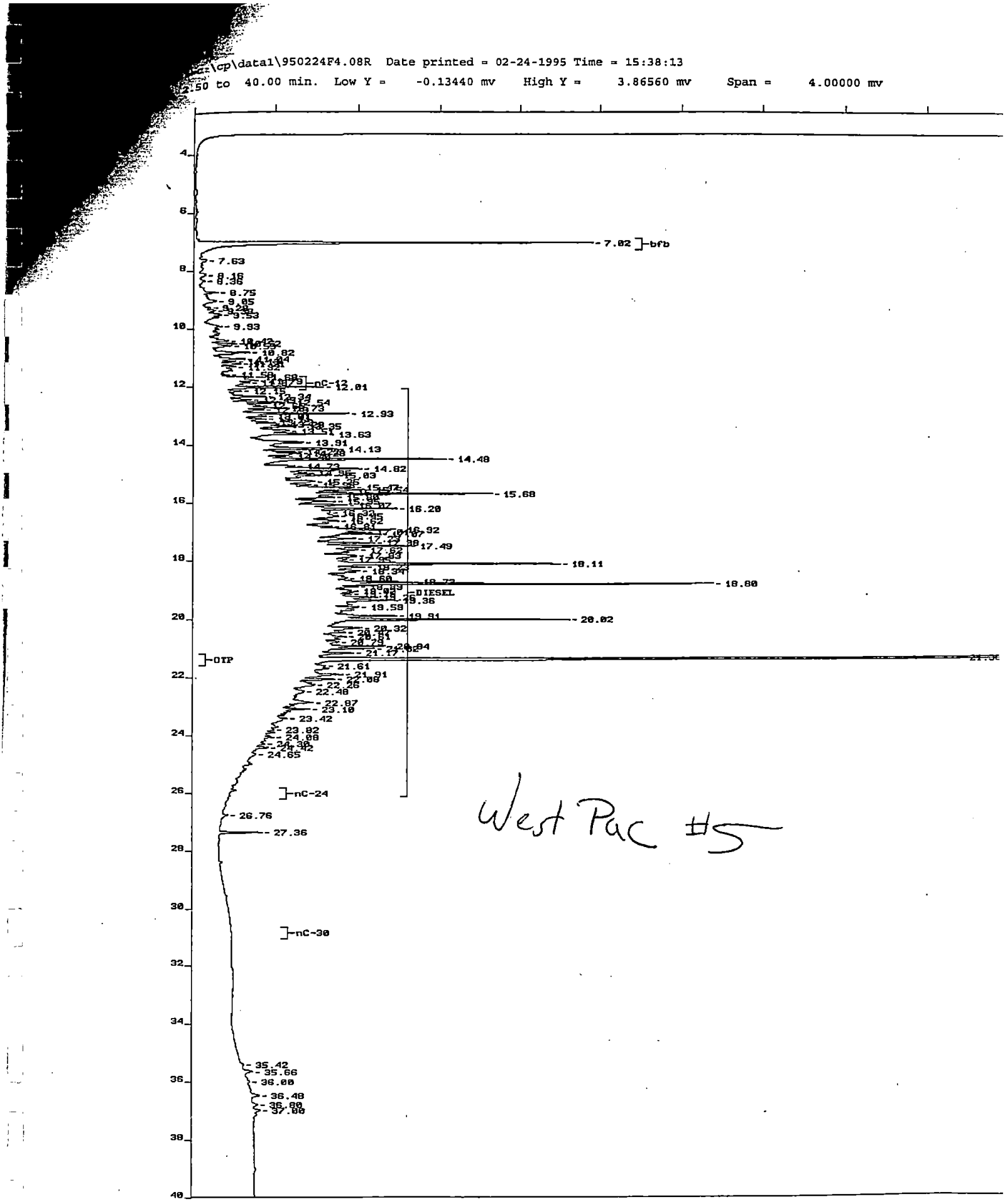
West Pac

#3

File=c:\cp\data1\950224F4.07R Date printed = 02-24-1995 Time = 14:51:04

2.50 to 40.00 min. Low Y = -0.11448 mv High Y = 3.88552 mv Span = 4.00000 mv




c:\cp\data1\950224F4.08R Date printed = 02-24-1995 Time = 15:38:13
2.50 to 40.00 min. Low Y = -0.13440 mv High Y = 3.86560 mv Span = 4.00000 mv
7.02
bfb
7.63
8.75
9.05
9.93
10.82
12.01
nC-12
12.93
13.63
13.91
14.13
14.48
14.82
15.68
16.20
17.49
18.11
18.80
DIESEL
19.36
19.59
19.91
20.02
OIP
21.61
21.91
22.48
22.87
23.10
23.42
23.82
24.08
24.65
nC-24
26.76
27.36
nC-30
35.42
35.66
36.00
36.48
36.80
37.00
West Pac #5

AMERICAN ANALYTICAL LABORATORIES, INC.

(206) 762-7599
FAX (206) 762-7665
8220 7th Avenue South
Seattle, WA 98108

02 077

CHAIN-OF-CUSTODY / REQUEST FOR ANALYSIS

Client Name West Pac – ~~M. Hall~~

Project Name Cedar Hills UST

Project No.

PO No.

Client Contact Mark McCullough

Send Lab Report To Jim Hurley
Mark McCullough

Date Required 2-27-95

Client Contact Phone Jim- 486-6665 Fax 486-7096

Sample Number	Sample I.D.	Date Collected	Time Collected	Sample Matrix	Number of Containers	WTPH-D							Comments
1 1	1	2-23	1:15	Soil	1/40z	X							
2 2	2	"	1:20	"	"	X							
3 3	3	"	1:35	"	"	X							
4 4	4	"	1:20	"	"	X							
5	5	"	2:00	"	"	X							

Analysis Requested

Special Instructions Please Call Jim w/ results ASAP

Was Preservative Used? No ☐ Yes ☒ What Kind? Cooler

What Analysis? WTPH-D

1. Relinquished By _____ Date 2-23-95 Time 3:15P Received By _____ Date 3:12 Time 2/23/95

2. Relinquished By _____ Date _____ Time _____ Received By _____ Date _____ Time _____

AMERICAN

ANALYTICAL LABORATORIES, INC.

March 13, 1995

West Pac
54 South Dawson Street
P.O. Box 80743
Seattle, WA 98108
Attn.: Mark McCullough

Dear Mark:

Enclosed are the results of the analyses of samples submitted on 3/07/95 from your Cedar Hills II 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,

Todd Salamonsen
Laboratory Director

enclosures

COPY

Date of Analysis: 3/8/95
Samples Submitted: 3/7/95
File ID: 03-033
Analysis: WTPH-D
Units: mg/Kg (ppm)

Client: West Pac
Project: Cedar Hills II
Project #:
Matrix: Soil

Results

Lab ID	Client ID	Result	Surrogate Recovery (BFB)	Surrogate Recovery (OTP)
03-033-1	#1	<25	104%	107%
03-033-2	#2	30	102%	108%
03-033-3	#3	<25	103%	109%
03-033-4	#4	<25	102%	111%
03-033-5	#5	44	98%	104%
03-033-6	#6	<25	95%	105%
03-033-7	#7	<25	98%	107%
03-033-8	#8	<25	91%	98%
Quality Assurance				
03-033-8 Duplicate		<25	90%	97%
Method Blank		<25	99%	101%

ppm - parts per million

COPY

AMERICAN
ANALYTICAL LABORATORIES, INC.
(206) 762-7599
FAX (206) 762-7665
8220 7th Avenue South
Seattle, WA 98108

CHAIN-OF-CUSTODY / REQUEST FOR ANALYSIS

Client Name: WPE
Project Name: Cedar ~~Park~~ Hills II
Project No.:
PO No.:
Client Contact: Jim Hurley / Mark McCollough

Send Lab Report To: Originals to Jim Hurley
Date Required: 3-10-95
Client Contact Phone: Jim – 486-6665
Mark – 763-1190

Sample Number	Sample I.D.	Date Collected	Time Collected	Sample Matrix	Number of Containers	Analysis Requested: WTPH-D								Comments
	1					X								
	2					X								
	3					X								
	4					X								
	5					X								
	6					X								
	7					X								
	8					X								

Special Instructions:
Was Preservative Used? No ☐ Yes ☒ What Kind? Cooler
What Analysis? WTPH-D

1. Relinquished By: [signature] Date 3-7-95 Time 4:10
Received By: [signature] Date 3/7/95 Time 4:10

2. Relinquished By: _____ Date _____ Time _____
Received By: _____ Date _____ Time _____