RELEASE ID # 5689
CEDAR HILLS LANDFILL
KING/MAPLE VALLEY.

UST # 97414

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omega environmental

UST #97414 LUST # 5689

King County - Cedar Hills Landfill
UST Removal & Independent Cleanup Action Report

NW LS
97414
U3946

March 21, 1997

King County - Cedar Hills Landfill
16645 - 228th Avenue SE
Maple Valley, Washington

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ECOLOGY

Prepared by:
Omega
3214 16th Avenue SW
Seattle, Washington 98134

Prepared for:
King County - Cedar Hills Landfill
16645 - 228th Avenue SE
Maple Valley, Washington 98038

DEPARTMENT OF ECOLOGY
NWRO/TCP TANKS UNIT
INTERIM CLEANUP REPORT ☐
SITE CHARACTERIZATON ☐
FINAL CLEANUP REPORT ☒
OTHER ☐
AFFECTED MEDIA: SOIL ☒
OTHER GW ☐
INSPECTOR (INIT.) DATE 8/19/99

Project Number 9521-009

Petroleum Services Division / Seattle Branch
3214 16th Ave. SW / Seattle WA 98134
206.682.2440 / Fax 206.621.8568

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1. Introduction

This report presents the findings of Omega regarding the closure and removal of one 300-gallon diesel fuel underground storage tank (UST) and two 1000-gallon diesel fuel USTs located at the King County - Cedar Hills Landfill, in Maple Valley, Washington (Figure 1). This report documents tank closure and site assessment findings. In addition, this report is intended to satisfy the Washington State Department of Ecology (Ecology) reporting requirement for regulated USTs (Washington Administrative Code [WAC] 173-360) and the Model Toxics Control Act ([MTCA]WAC 173-340).

1.1 Scope of Work

The scope of work and objectives of this project were as follows:

- Decommission and removal of one 300-gallon diesel fuel UST and two 1000-gallon diesel fuel USTs;
- Determine the presence of diesel (C_{12} to C_{22}), range total petroleum hydrocarbons (TPH) in *in-situ* soils and groundwater after tank removal and cleanup activities.
- Prepare a final UST Removal and Independent Cleanup Action Report which documents known site and UST history, tank removal activities, soil sampling and results, site assessment and independent cleanup action conclusions, and recommendations. The report for this project was prepared following the Washington State Department of Ecology's (Ecology) *Guidelines for Site Checks and Site Assessments for UST* (revised, October 1992)

1.2 Site Location and History

The subject property is located at 16645 - 228th Ave SE, in Maple Valley, Washington (Figure 1). It is currently occupied by the King County Cedar Hills Landfill. One 300-gallon diesel fuel UST (referred to herein as UST-1) and two 1000-gallon diesel UST (referred to herein as UST-2 & UST-3) were located at three separate locations (Figure 2). These USTs supplied diesel fuel for three emergency power generators.

2. Tank Decommissioning & Removal Operations

2.1 UST Closure Permit

Omega submitted the 30-Day Intent to Close form to Ecology, and obtained a UST removal permit from King County. Copies of UST removal permits and related documents are included in Appendix A.

2.2 UST Conditions and Closure Activities

On January 22, 1996, the three (3) USTs were pumped of residual product by Coastal Tank Inc., of Seattle, Washington.

On January 23, 1996, Omega inerted the three USTs with dry ice (CO_2). Omega excavated and removed of the USTs after receiving permission from a King County Fire Marshal. All three USTs were transported to Coastal for final cleaning and disposal. Copies of the tank cleaning and disposal documentation are included in Appendix A.

Upon removal, each UST was visually inspected. The USTs were constructed of coated single wall steel and were in good condition. There were no visible signs of rusting or pitting on the USTs or product lines.

2.3 Soil Sampling Activities

On January 23, 1996, Omega performed a site assessment of subject property soils in the vicinity of each UST. Soil samples were placed directly into laboratory-prepared borosilicate glass jars sealed with Teflon lids. All samples were uniquely labeled and stored in a chilled cooler for transport to the analytical laboratory. Omega's sampling protocol and decontamination procedures are presented in Appendix B.

2.3.1 UST-1 Excavation Soil Sampling WA DB IO # 8

Five (5) discrete *in-situ* soil samples were collected from the excavation sidewalls (CH-UST1-NSW-3, CH-UST1-WSW-3, CH-UST1-ESW-3, CH-UST1-SSW-3) and floor (CH-UST1-B-6; Figure 3). In addition, three (3) discrete soil samples were collected from the stockpiled overburden soil (CH-UST1-OB1, CH-UST1-OB2, & CH-UST1-OB3). Sidewall samples were collected at the mid-point of the sidewalls at a depth of 3 feet below ground surface (BGS). The excavation floor sample was collected below the former location of the UST at a depth of approximately 6 feet BGS. Adjacent sidewall samples (CH-UST1-SSW-3 & CH-UST1-WSW-3) and (CH-UST1-NSW-3 & CH-UST1-ESW-3) and overburden samples (CH-UST1-OB1, CH-UST1-OB2, & CH-UST1-OB3) were composited by the analytical laboratory prior to analysis.

The overburden consisted of a well graded sandy gravel fill. Soils exposed in the excavation sidewalls consisted of a loose, moderate to well graded clayey, silty, medium sand with gravel. Groundwater was encountered within the six foot maximum excavation depth. On January 30,

1996, Omega collected a water sample (CH-UST1-GW) from the excavation. Depth to groundwater in the excavation was less than 1 foot.

2.3.2 UST-2 Excavation Soil Sampling #9

Five (5) discrete *in-situ* soil samples were collected from the excavation sidewalls (CH-UST2-NSW-5, CH-UST2-WSW-4, CH-UST2-ESW-5, CH-UST2-SSW-5) and floor (CH-UST2-B-7; Figure 3). In addition, three (3) discrete soil samples were collected from the stockpiled overburden soil (CH-UST2-OB1, CH-UST2-OB2, & CH-UST2-OB3). Sidewall samples were collected at the mid-point of the sidewalls at a depth of 3 feet below ground surface (BGS). The excavation floor sample was collected below the former location of the UST at a depth of approximately 6 feet BGS. Adjacent sidewall samples (CH-UST2-SSW-5 & CH-UST2-ESW-5) and (CH-UST2-NSW-5 & CH-UST2-WSW-4) and overburden samples (CH-UST2-OB1, CH-UST2-OB2, & CH-UST2-OB3) were composited by the analytical laboratory prior to analysis.

The overburden consisted of a crushed gravel fill. Soils exposed in the excavation sidewalls consisted of a loose, moderate to well graded clayey, silty, medium sand with gravel. Groundwater was not encountered within the seven foot maximum excavation depth.

2.3.3 UST-3 Excavation Soil Sampling #4

Five (5) discrete *in-situ* soil samples were collected from the excavation sidewalls (CH-UST3-NSW-5, CH-UST3-WSW-5, CH-UST3-ESW-5, CH-UST3-SSW-5) and floor (CH-UST3-B-7; Figure 3). In addition, three (3) discrete soil samples were collected from the stockpiled overburden soil (CH-UST3-OB1, CH-UST3-OB2, & CH-UST3-OB3). Sidewall samples were collected at the mid-point of the sidewalls at a depth of 3 feet below ground surface (BGS). The excavation floor sample was collected below the former location of the UST at a depth of approximately 6 feet BGS. Adjacent sidewall samples (CH-UST3-NSW-5 & CH-UST3-ESW-5) and (CH-UST3-SSW-5 & CH-UST3-WSW-5) and overburden samples (CH-UST3-OB1, CH-UST3-OB2, & CH-UST3-OB3) were composited by the analytical laboratory prior to analysis.

The overburden consisted of a pea gravel fill. Soils exposed in excavation sidewalls consisted of loose, moderate to well graded clayey, silty, medium sand with gravel. Groundwater was encountered within the excavation at a depth of approximately 6 feet BGS. On January 30, 1996, Omega collected a water sample (CH-UST3-GW) from the excavation.

2.4 Analytical Findings

Soil and groundwater samples were analyzed by American Analytical Laboratories in Seattle, Washington. Samples were analyzed for the presence of diesel (C_{12} to C_{22}), range TPH using Ecology Test Method WTPH-D. Analytical results and the associated MTCA Method A Soil Cleanup Levels are summarized in Table 1 and discussed below. A copy of the certificates of analysis and the chain of custody are provided in Appendix C.

2.4.1 UST-1 Analytical Findings #8

Soil samples analyzed from UST-1 excavation had diesel range TPH concentrations below the laboratory detection level of 50 ppm or were below Ecology's MTCA Method A Cleanup level

of 200 ppm. The laboratory composited overburden sample CH-UST1-OB1,OB2,OB3 and excavation floor sample CH-UST1-B-6 had detectable diesel range hydrocarbons concentrations of 110 ppm and 120 ppm, respectively.

Groundwater sample CH-UST1-GW collected from the UST-1 excavation had a diesel range TPH concentration of 1.0 ppm. Ecology's Method A Cleanup Level for total hydrocarbons in groundwater is 1.0 ppm.

2.4.2 UST-2 Analytical Findings

Soil samples analyzed from the UST-2 excavation had non-detectable (<50 ppm) concentrations of diesel range TPH.

2.4.3 UST-3 Analytical Findings

Three of four soil samples from the UST-3 excavation had diesel range TPH concentrations below the laboratory detection level of 50 ppm or were below Ecology's Method A Cleanup level of 200 ppm. Excavation floor sample CH-UST3-B-7 had a diesel range TPH concentration of 280 ppm. The laboratory composited overburden sample (CH-UST3-OB1,OB2,OB3) had a diesel range TPH concentration of 80 ppm.

Water sample CH-UST3-GW collected from the UST-3 excavation had a diesel range TPH concentration of 2.0 ppm. Ecology's Method A Cleanup Level for total TPH in groundwater is 1.0 ppm.

2.5 Site Assessment Conclusions

Laboratory results confirm that soils and groundwater in the vicinity of UST-1 and UST-3 had been impacted by diesel range TPH.

Soil samples collected form the UST-1 excavation overburden soil, sidewalls, and excavation floor had non-detectable diesel range TPH concentrations or concentrations below Ecology's MTCA Method A Soil Cleanup level of 200 ppm. A groundwater sample collected from the UST-1 excavation had a diesel range TPH concentration of 1 ppm. Ecology's MTCA Method A Groundwater Cleanup level for total TPH is 1 ppm.

Soil samples collected from the UST-2 excavation overburden soil, sidewalls, and excavation floor had non-detectable concentrations of diesel range TPH.

Soil samples collected from the UST-3 excavation sidewalls and overburden soil had non-detectable diesel range TPH concentrations or concentrations below Ecology's MTCA Method A Soil Cleanup level of 200 ppm. However, the UST-3 excavation floor sample had a diesel range TPH concentration of 280 ppm. A groundwater sample collected from the UST-3 excavation had a diesel range TPH concentration of 2 ppm. Ecology's MTCA Method A Groundwater Cleanup level for total TPH 1 ppm.

The source of the impacted soil and groundwater is most likely the result of periodic tank overfill or a pre-existing site condition associated with the landfill.

2.6 Regulatory Reporting Requirements

All three USTs were regulated and therefore subject to WAC-173-360, 24-hour release reporting requirements. On February 1, 1996 Omega reported the release to Ecology and was assigned a ERTS number of N23070. Omega's release reporting satisfies the reporting requirements of WAC 173-360. In addition, Omega's submittal of a copy of this report to Ecology satisfies MTCA's 90 day reporting requirement (WAC-173-340).

Omega summarized the field observations and laboratory results with Mr. Joe Hickey, director of Ecology's UST division. Based on the low concentrations of diesel in the soil and groundwater samples from the UST-1 excavation, and the fact that UST-1 was located within the boundaries of the landfills leachate collection and treatment system, Mr. Hickey did not feel that further action was warranted for UST-1. However, Mr. Hickey did indicate that the presence of impacted soil and groundwater in UST-3 excavation warranted further action.

2.7 Site Assessment Recommendations

Omega summarized its findings and recommendations in a discussion King County Cedar Hills Landfill personnel. Omega recommended the following actions:

- Dispose of stockpiled petroleum contaminated soil (PCS) from the UST-1 and UST-3 excavations;
- Excavate additional PCS from the floor of the UST-3 excavation;
- Dewater the UST-3 excavation and allow it to recharge; and
- Collect/analyze additional soil and groundwater samples to verify compliance with Method A Soil and Groundwater Cleanup levels.

2.8 Client Actions

Between January 31, 1996 and February 1, 1996, Omega loaded and transported approximately 60 cubic yards of PCS to the active portion of the landfill to be used as landfill cover. The PCS represented stockpiled overburden soil from the UST-1 and UST-3 excavations plus an additional 20 cubic yards of PCS excavated by Omega on February 1, 1996, from the floor of the UST-3 excavation. A follow-up soil sample (CH-UST3-RE-B-9), collected from the UST-3 excavation floor had non-detectable diesel range TPH concentrations.

On February 2, 1996, the Client had Olympus Environmental dewater the UST-3 excavation.

On September 9, 1996, Olympus Environmental collected additional soil samples from the north and east sidewalls and floor of the UST-3 excavation (total of three samples). Diesel range TPH was not detected in any of the three follow-up samples (Appendix C).

On February 3, 1997, Omega backfilled and compacted the UST-3 excavation.

3. Project Conclusions and Recommendations

At the time of site closure, soil samples collected form the sidewalls and floors of the UST-1, UST-2 and UST-3 excavations were in compliance with Ecology's MTCA Method A Soil Cleanup level of 200 ppm for diesel range TPH.

The initial site assessment indicated that groundwater exposed in the UST-3 excavation was slightly above Ecology's MTCA Method A Groundwater Cleanup level of 1 ppm. The UST-3 excavation was subsequently dewatered by Olympus Environmental.

By project completion approximately 60 cubic yards of PCS was loaded and transported to an active portion of the landfill to be used as landfill cover.

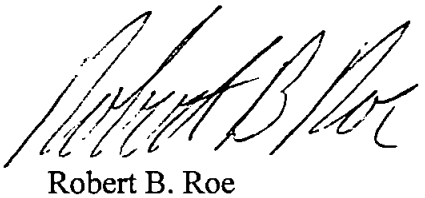
Based on initial site assessment and subsequent follow-up sampling, Omega does not recommend any additional site characterization or cleanup action.

4. Limitations

Work for this project was performed, and this report prepared, in accordance with generally accepted professional practices for the nature and conditions of work completed in same or similar locations at the present time. Omega's results and findings from the select area do not necessarily reflect soil or groundwater conditions underlying other areas of the site not investigated. This scope of work was not meant to determine the lateral or vertical full extent of groundwater impacted by the encountered release. This report is not meant to represent a legal opinion. No other warranty, expressed or implied, is made.

Any questions regarding our work or this report, the presentation of information, or interpretation of data are welcome and should be referred to the undersigned.

Sincerely,
OMEGA



Robert B. Roe
Project Geologist

cc: Washington State Department of Ecology
UST Division
PO Box 47655
Olympia, Washington 98504-7655

King County - Cedar Hills Landfill
Vicinity Map



omega
environmental · petroleum · construction
NORTHWEST REGION
3214 16th Ave. SW
Seattle, WA 98134
(206) 682-2440

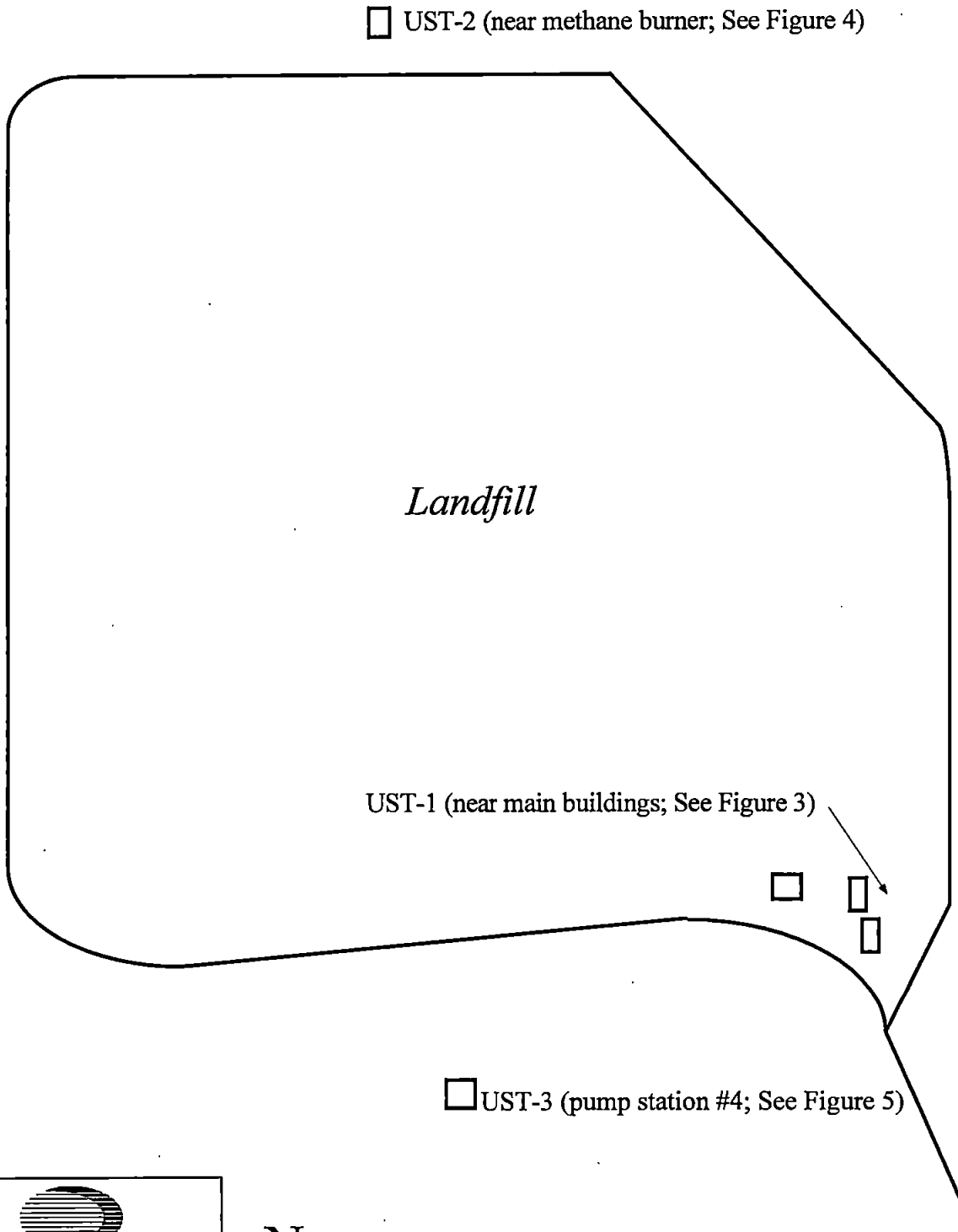
Renton, Washington
7.5 x 15 min. Topographic Quadrangle
1983

0 Miles 1

N

Scale : 1:25,000	Site Address: 16645 - 228th Ave SE, Maple Valley, WA.	Date: 3/18/96	Figure 1

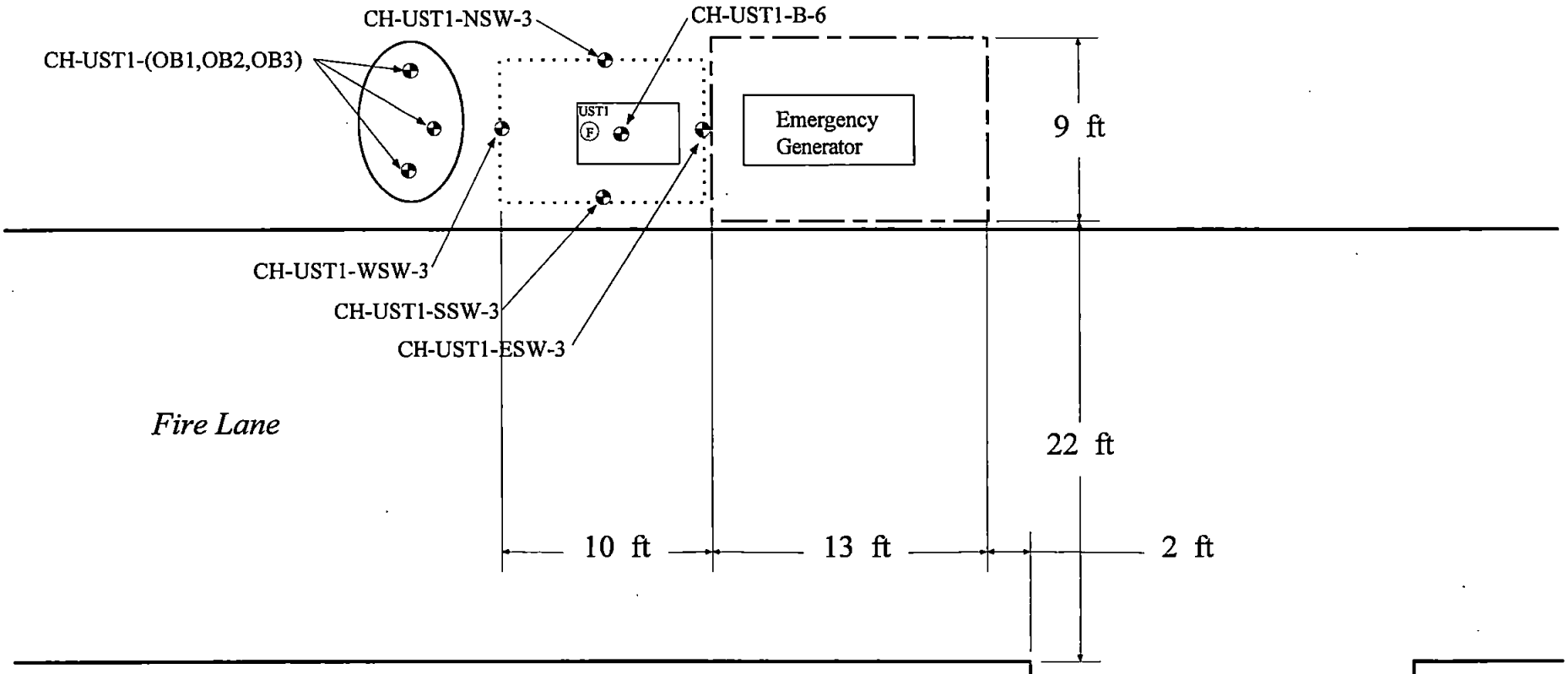
King County - Cedar Hills Landfill
Site Plan



omega
environmental - petroleum - construction
NORTHWEST REGION
3214 16th Ave. SW
Seattle, WA 98134
(206) 682-2440

Not to Scale	Site Address: 16645 - 228th Ave SE, Maple Valley, WA	Date: 03/18/96	Figure 2

King County - Cedar Hills Landfill
UST-1 Site & Soil Sampling Plan



KEY

- Sample Location
- Fill Port
- Former UST Location
- Excavation Limits

Scale: 1: 96

Site Address: 16645 - 228th Ave SE, Maple Valley, WA

Date: 03/18/96

Figure 3

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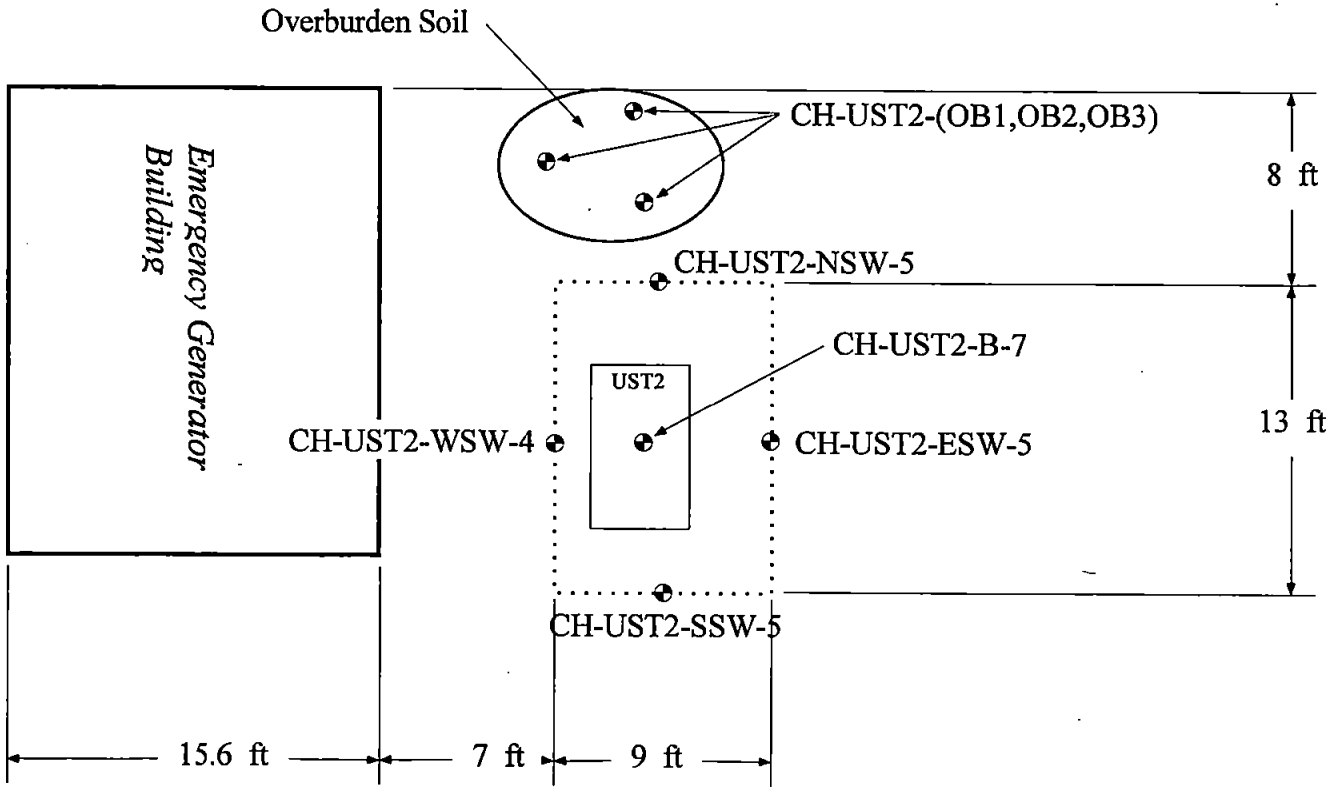
Seattle, WA 98134
(206) 682-2440

King County - Cedar Hills Landfill
UST-2 Site & Soil Sampling Plan



KEY

- Sample Location
- Former UST
- Excavation Limits

N

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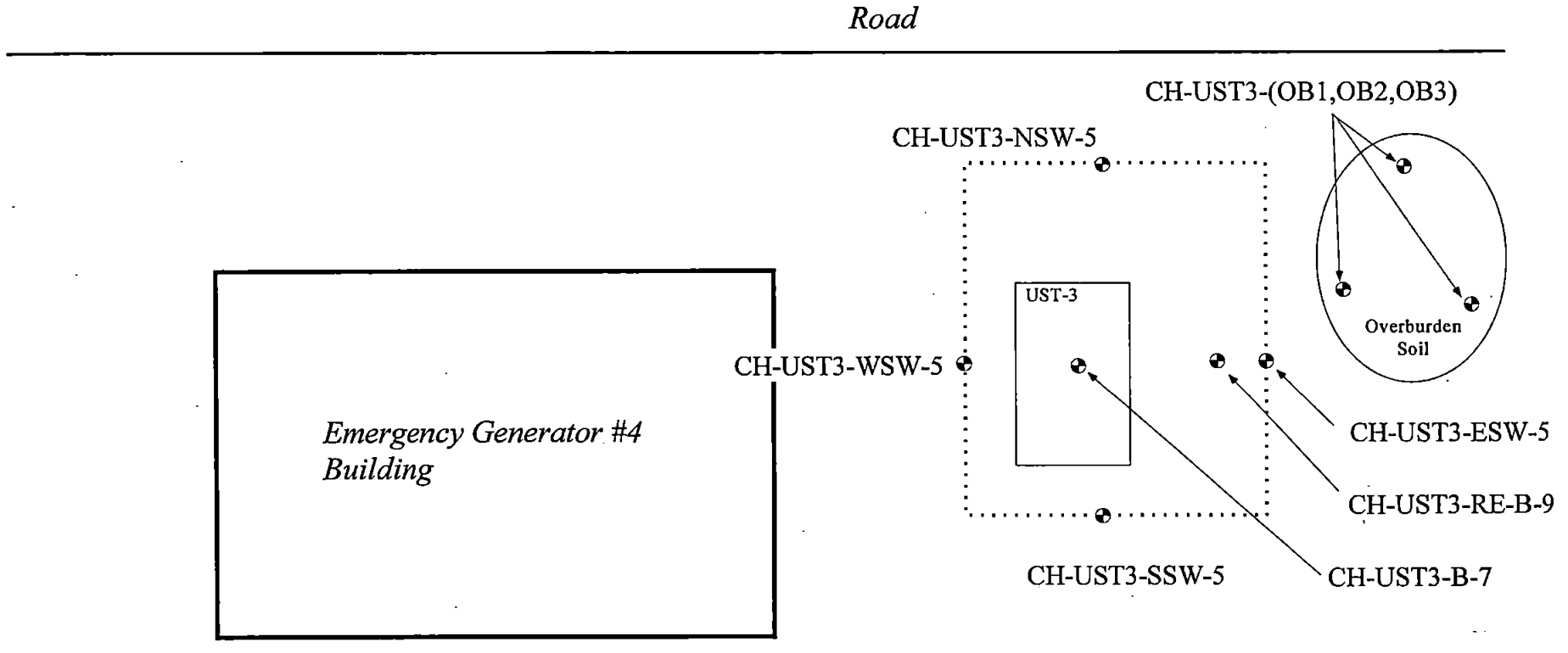
Seattle, WA 98134
(206) 682-2440

Not to Scale	Site Address: 16645 - 228th Ave SE, Maple Valley, WA	Date: 03/18/96	Figure 4

King County - Cedar Hills Landfill
UST-3 Site & Soil Sampling Plan



KEY

- Sample Location
- Former UST Location
- Excavation Limits

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3214 16th Ave. SW
Seattle, WA 98134
(206) 682-2440

Scale: 1:72	Site Address: 16645 - 228th Ave SE, Maple Valley, WA	Date: 03/18/96	Figure 5

Table 1: Summary of soil analytical results for Cedar Hills Landfill, UST Removal and Independent Cleanup Action Report.

Sample Number	Sample Date	Sample Location	Sample Type	Sample Depth	Diesel (ppm)
Soil Samples From UST-1 Excavation					
CH-UST1-(WSW-3 & SSW-3)	1/23/96	west & south sidewalls	composite	3	<50
CH-UST1-(NSW-3 & ESW-3)	1/23/96	north & east sidewalls	composite	3	53
CH-UST1-B-6	1/23/96	excavation floor	discrete	6	120
CH-UST1-(OB1,OB2,OB3)	1/23/96	overburden soil	composite	---	110
CH-UST1-GW	1/30/96	groundwater	discrete	---	1
Soil Samples From UST-2 Excavation					
CH-UST2-(SSW-5, ESW-5)	1/23/96	south & east sidewalls	composite	5	<50
CH-UST2-(NSW-5, WSW-4)	1/23/96	north & west sidewalls	composite	5,4	<50
CH-UST2-B-7	1/23/96	excavation floor	discrete	7	<50
CH-UST2-(OB1,OB2,OB3)	1/23/96	overburden soil	composite	---	<50
Soil & Groundwater Samples From UST-3 Excavation					
CH-UST3-(ESW-5, NSW-5)	1/23/96	east & north sidewalls	composite	5	<50
CH-UST3-(SSW-5,WSW-5)	1/23/96	south & west sidewalls	composite	5	<50
CH-UST3-B-7	1/23/96	excavation floor	discrete	7	*280*
CH-UST3-(OB1,OB2,OB3)	1/23/96	overburden soil	composite	---	80
CH-UST3-RE-B-9	2/1/96	excavation floor	discrete	9	<50
CH-UST3-GW	1/30/96	groundwater	discrete	---	2
MTCA	---	**Soil**	---	---	**200**
Method A Cleanup Levels	---	**Groundwater**	---	---	**1**

Samples collected by Omega Services' Site Assessor Registered with Ecology.
Diesel, diesel TPH determined using Washington State Test Method WTPH-D.
TPH, Total petroleum hydrocarbons.
ppm, parts per million (mg/Kg).
---. not applicable.
MTCA, Ecology's Model Toxics Control Act Method A Soil Cleanup Levels for gas TPH's in residential and industrial soils (WAC 173-340)

Appendix A

PERMITS & TANK CLEANING DOCUMENTATION

UNDERGROUND STORAGE TANK
Site Check / Site Assessment Checklist

NW FOR OFFICE USE ONLY LS
Site #: 97414
Owner #: V3946

INSTRUCTIONS

When a release has **not** been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by IFCI or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. **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 tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSEMENT: 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
PO Box 47655
Olympia WA 98504-7655

SITE INFORMATION

Site ID Number (Available from Ecology if the tanks are registered): _____

Site/Business Name: King County Solid Waste Cedar Hills Landfill Attn: Nigel White

Site Address: 16645 228th Ave S.E (Street) Telephone: (206) 296-0493

Maple Valley (City) WA (State) 98038 (Zip Code)

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TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
1	1,000 gal	diesel
2	1,000 gal	diesel
3	300 gal	diesel

Confirmed with Nigel White KCSW 9-4-97 LS

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 service.
- X 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 a vicinity map.	RR	
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	RR	
3. A summary of UST system data is provided. (see Section 3.1.)	RR	
4. The soils characteristics at the UST site are described. (see Section 5.2)	RR	
5. Is there any apparent groundwater in the tank excavation?	RR	
6. A brief description of the surrounding land use is provided. (see Section 3.1)	RR	
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.	RR	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	RR	
- groundwater samples distinguished from soil samples (if applicable)	RR	
- samples collected from stockpiled excavated soil	RR	
- tank and piping locations and limits of excavation pit	RR	
- adjacent structures and streets	RR	
- approximate locations of any on-site and nearby utilities	RR	
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)	—	
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.	RR	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	—	
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.	RR	

SITE ASSESSOR INFORMATION

Robert Roe — Person registered with Ecology

Omega Services — Firm Affiliated with

Business Address: 3214- 16th Ave SW — Street

Telephone: (206) 682-2440

Seattle — City

WA — State

98134 — 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.

3/24/97 — Date

Robert Roe — Signature of Person Registered with Ecology

NW 97414 LS
V3946

UNDERGROUND STORAGE TANK
Closure and Site Assessment Notice

See back of form for instructions

FOR OFFICE USE ONLY
Site ID #
Owner ID #

Please ✓ the appropriate box(es)
☐ Temporary Tank Closure ☐ Change-In-Service ☒ Permanent Tank Closure ☒ Site Check/Site Assessment

Site Information

Site ID Number (Available from Ecology if the tanks are registered)
Site/Business Name King County Solid Waste Cedar Hills Landfill
Site Address 16645-228th Ave S.E. (Street)
City/State Maple Valley WA
Zip Code 98038 Telephone (206) 296-0493
Owner's Signature Dennis Bamrud

Owner Information

(This form will be returned to this address)

UST Owner/Operator King County Solid Waste Cedar Hills Landfill
Mailing Address 16645-228th Ave SE (Street)
(P.O. Box)
City/State Maple Valley WA
Zip Code 98038 Telephone (206) 296-0493

Tank Closure/Change-In-Service Company

Service Company Omega Services
Certified Supervisor Sam C. Ross Decommissioning Certification No. 92923
Supervisor's Signature Mark O'Mara for Sam C. Ross.
Address 3214-16th Ave SW (Street)
City Seattle State WA P.O. Box 98134 Telephone (206) 682-2440

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Site Check/Site Assessor

Certified Site Assessor Robert Roe / Omega Services
Address 3214-16th Ave SW (Street) P.O. Box
City Seattle State WA Zip Code 98134 Telephone (206) 682-2440

Tank Information

Tank ID	Closure Date	Closure Method	Tank Capacity	Substances Stored
1	11/23/96	Removed	1,000	diesel
2	11/23/96	Removed	1,000	diesel
3	11/23/96	Removed	300	diesel

Confirmed w/ Nigel White 9-4-97 KCSW

Contamination Present at the Time of Closure

☒ Yes ☐ No ☐ Unknown

Check unknown if no obvious contamination was observed and sample results have not yet been received from analytical lab.

☒ Yes ☐ No

If contamination is present, has the release been reported to the appropriate regional office?

Ecology Fax# 360-407-7154
Faxed 11/1/95 mdm

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK
30 DAY NOTICE

See back of form for instructions
Please ☑ the appropriate box

☐ Intent to Install ☒ Intent to Close ☐ Both

For Office Use Only
Owner #
Site #

SITE INFORMATION:

Site ID Number (on invoice or available from Ecology if the tank is registered):
Site/Business Name: King County Solid Waste Cedar Hills Landfill Attn: Nigel White
Site Address: 16645 228th Ave. S.E. (Street) Owner/Operator Telephone: (206) 296-0993
Maple Valley (City) WA (State) 98038 (ZIP-Code)

TANK INFORMATION:

TANKS TO BE CLOSED

This section to be filled out ONLY if tanks are being removed

Tank ID	Projected Closure Date	Tank Capacity	Substance Stored	Date tank last used	Is there product in the tank? (yes/no)	If no, date tank was pumped
1	12/11/95	1,000	diesel	?	yes	
2	12/11/95	1,000	diesel	?	yes	
3	12/11/95	300	diesel	?	yes	

TANKS TO BE INSTALLED

This section to be filled out ONLY if tanks are being installed

Tank ID	Approx. Install Date

Please return copy to Omega Services. Thanks!

TANK INSTALLATION TO BE PERFORMED BY (if known):

This section to be filled out ONLY if tanks are being installed

Service Provider: Contact Name:
Telephone:
Address: (Street) (P.O. Box)
(City) (State) (ZIP-Code)

RECEIVED
APR 04 1997
ECOLOGY

TANK PERMANENT CLOSURE TO BE PERFORMED BY (if known):

This section to be filled out ONLY if tanks are being removed

Service Provider: Omega Services
Contact Name: Ms. Marta Massie
Telephone: 206 682-2440
Address: 3214 16th Ave SW (Street) (P.O. Box)
Seattle (City) WA (State) 98134 (ZIP-Code)

This form will be returned to this address
OWNER/ OPERATOR: Attn: Nigel White, Proj. Mgr. King County Cedar Hills Landfill
MAILING ADDRESS: 16645 228th Ave. S.E. (Street)
Maple Valley (City) WA (State) 98038 (ZIP-Code)

Once validated by Ecology, this form serves as your temporary permit for the tanks listed above

King County
Department of Development
and Environmental Services
3600 - 136th Place Southeast
Bellevue, Washington 98006-1480

OMEGA SERVICES, INC.
DEC 1 9 1995

Activity No: B95A5688
Project No : *9502320
Page : 1 of 1
Date Issued: 12/15/95
EXPIRES : 12/14/96

ISSUED * C O N S T R U C T I O N P E R M I T *

Permit Type : FLAMMABLE LIQUIDS STORAGE TANK Type Code: FIRETANK
Title : REMOVE 2 UG & 1 AG DIESEL TANK Valuation: 0
Description : & INSTALL 4 AG DIESEL TANKS
Occup'y/Type: Class: 036

Location : 16645 228TH AVE SE KC Zone: RA10
Parcel : 282306-9003 STR: SW,NE,28-23-06 Block:
Lot : Plat:

Applicant : KING COUNTY SOLID WASTE DIV. Phone:
Appl.Address: 400 YESLER WAY, ROOM 600
: SEATTLE, WA 98104-2637

CONTRACTOR : OMEGA SERVICES INC Lic. C OMEGASI055LM 206 682 2440
3214 16TH AVE SW
SEATTLE WA 98134

HER INFORMATION:

Fire District:	FD # 10	
Remove Existing Tank?	Y	(Y/N)
Replace Existing Tank?	Y	(Y/N)
Install New Tank?	Y	(Y/N)

COMMENTS AND CONDITIONS

1. This permit is subject to all corrections indicated on the associated plans and attached conditions and must be posted on the job site at all times in a visible and readily accessible location.
2. Work may proceed only at the direction of the field inspector. Prior to starting any work you must schedule a pre-construction conference. Major work may require TWO days notice to schedule the conference. Inspections may be requested at any time by calling 296-6615. To schedule an appointment with the Building or Fire inspector, call 296-6615 between 7:30 A.M. and 9:00 A.M. Requests received in the morning may not be processed in time for an inspection that day.
4. Please note the expiration date on this permit located in the upper right corner. A permit may be renewed only if a request to do so is received at least 30 days prior to the expiration date.

King County
Department of Development
and Environmental Services
3600 - 136th Place Southeast
Bellevue, Washington 98006-1400
(206) 296-6615

PERMIT # B95A5688 TYPE CONST. OCC.

ADDRESS: 16645 228th Ave SE

PROJECT NAME: K.C.S.W.

DATE OF REQUEST: DATE OF INSP. 1/29/96

TYPE OF INSPECTION: TR

CONTACT NAME: Sam PHONE #: Agr 314-5876

COMMENTS:

FD 10

APPROVALS:

CORRECTIONS:

Witnessed the Removal of
UGST on site
(1) 300 gal
(1) 500 gal
(2) 1000 gal
* Tank removals approved

NOTES:

- Tanks pumped & rinsed
- Vent / Fill pipes removed
- Tanks removed from premises

OI Olson

Rev. 3/92

Coastal Tank Cleaning, Inc.

3801 - 7th Avenue South, Seattle, Washington 98108
Phone: (206) 624-9843
Fax No.: (206) 624-9766

CHECKPOINT VERIFICATION

Cust
~~SHIP~~ NAME: Omega Job ~~ITEM~~#: 2814 PARA.#:

TANK NUMBER and/or LOCATION: Ship's Sink 4 Fuel oil tanks 1800 gallons Disposal

DATE: 11/22/96 TIME: WHEN CALLED:

WORKED CHECKED (√ONE)	ACCEPTED (√)	REJECTED (√)
SURFACE PREPARATION	✓	

Coastal Tank INC. REPRESENTATIVE:

CUSTOMER Q/A REPRESENTATIVE:

Tank Cleaning NO. 1076

GAS FREE

PUMP

4 Diesel Tanks

PER:

AUTHORIZED SIGNATURE:

ALTERNATE STRAIGHT BILL OF LADING—SHORT FORM

Original—Not Negotiable

Shipper No. _____

Carrier No. _____

Omega Services
(Name of Carrier)

Date _____

TO: Consignee Coastal Tank	FROM: Shipper King County Cedar Hills Landfill
Street	Street
Destination Zip Code	Origin Zip Code
Route:	Vehicle No.

No. Shipping Units	Kind of Packaging, Description of Articles Special Marks and Exceptions	Weight (Subject to Correction)	RATE	CHARGES
2	1000 Gal Diesel Tank			
1	500 Gal "			
1	300 Gal "			
	JOB # 2814			
	A. Cawley			

REMIT C.O.D. TO: ADDRESS	COD Amt: $	C.O.D. FEE: PREPAID ☐ COLLECT ☐ $	TOTAL CHARGES: $

Note: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

$ _____ per _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other charges.

_____
(Signature of Consignor)

FREIGHT CHARGES

Check Appropriate Box:

☐ Freight prepaid ☐ Collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading. The property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at anytime interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER	CARRIER
PER	PER DATE

TOPS FORM No. 3841

LITHO in U.S.A.

1

Phone (206) 624-9843
Fax No. (206) 624-9766

Coastal Tank Cleaning, Inc.

3801 7th Avenue South, Seattle, Washington 98108

DISPOSAL CERTIFICATION

Omega Services
3214 16th Ave SW
Seattle, Wa. 98134

February 2, 1995

Job Site: King County Landfill, 16645 228th Ave. SE, Maple Valley

Your PO#: 96190

Our Job#: 2814

Dear Sirs,

This letter is to certify that Coastal Tank Cleaning, Inc. (CTC) has received the following tank(s) for cleaning and disposal in accordance with all Federal, State and Local rules and regulations:

2 each 1,000 gallon
1 each 500 gallon
1 each 300 gallon

DATE RECEIVED: 1/24/96

OMEGA SERVICES, INC.
FEB - 5 1996

DATE CLEANED: 1/25/96

MARINE CHEMIST CERT. #: 42986

DATE DISPOSED: 1/25/96

BILL OF LADING #: 7042

METHOD OF DISPOSAL: Scrap Metal

If you have any questions regarding this matter please feel free to call at (206) 624-9843

Sincerely,

Don Austin
UST DISPOSAL MANAGER

-02-CO-TI*202RE

Phone: (206) 624-9843
Fax No. (206) 624-9766

Coastal Tank Cleaning, Inc.

3801 7th Avenue South, Seattle, WA 98108

TO: Omega

THIS LETTER IS TO CERTIFY THAT COASTAL TANK CLEANING, INC. HAS STRIPPED AND RINSED WITH SOAPY WATER THE BELOW LISTED TANKS IN ORDER TO ALLOW THE TANKS TO BE INERTED.

DATED THIS 22nd DAY OF JAN 1996

AUTHORIZED SIGNATURE:

Two 1000 gallon U.S.T.'s
ONE 300 gallon A.S.T.
ONE 500 gallon UST

All Listed Tanks contained Diesel

All Listed Tanks Located At King County Landfill
16645 228th Ave SE Maple Valley WA

Total Disposal 1800 gallons Diesel & Water

Industrial & Marine Tank Cleaning

FIRE DEPARTMENT COPY

Appendix B

SOIL SAMPLING PROTOCOLS

APPENDIX B
SOIL SAMPLING PROTOCOLS

Soil samples were selected based on field observations by an Omega Services Geologist (registered Site Assessor with Washington State Department of Ecology [Ecology]). Soil samples were collected and analyzed for parameters as outlined in Ecology's soil sampling and analytical guidelines.

Soil samples were collected using Omega's standard decontamination and sampling protocols. The *Mini Rae* PID was calibrated at the beginning at each field day to benzene using 100 ppm isobutylene and zero air. Sampling equipment (stainless steel spoons, bailers, augers, etc.) were decontaminated prior to each sampling episode using an Alconox detergent solution, rinsed with tap water, followed by a final rinse with de-ionized water. All samples were transferred to a preconditioned sterilized borosilicate glass jar with Teflon lids using a stainless steel spoon. Sample jars and bottles were then placed in a cooled ice chest. Samples were delivered to American Analytical Laboratories, Inc. of Seattle, Washington for chemical analysis. Chain of custody procedures were followed for all samples.

Appendix C

CERTIFICATES OF ANALYSIS

AMERICAN

ANALYTICAL LABORATORIES, INC.

January 26, 1996

Omega Services
3214 16th Ave SW
Seattle, WA 98134
Attn.: Robert Roe

Dear Robert:

Enclosed are the results of the analyses of samples submitted on 1/24/96 from your Ceder Hills Landfill 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

OMEGA SERVICES, INC.
JAN 31 1996

Date of Analysis: 1/26/96
Samples Submitted: 1/24/96
File ID: 01-064
Analysis: WTPH-D
Units: mg/Kg (ppm)

Client: Omega Services
Project: Ceder Hills Landfill
Project #:
Matrix: Soil

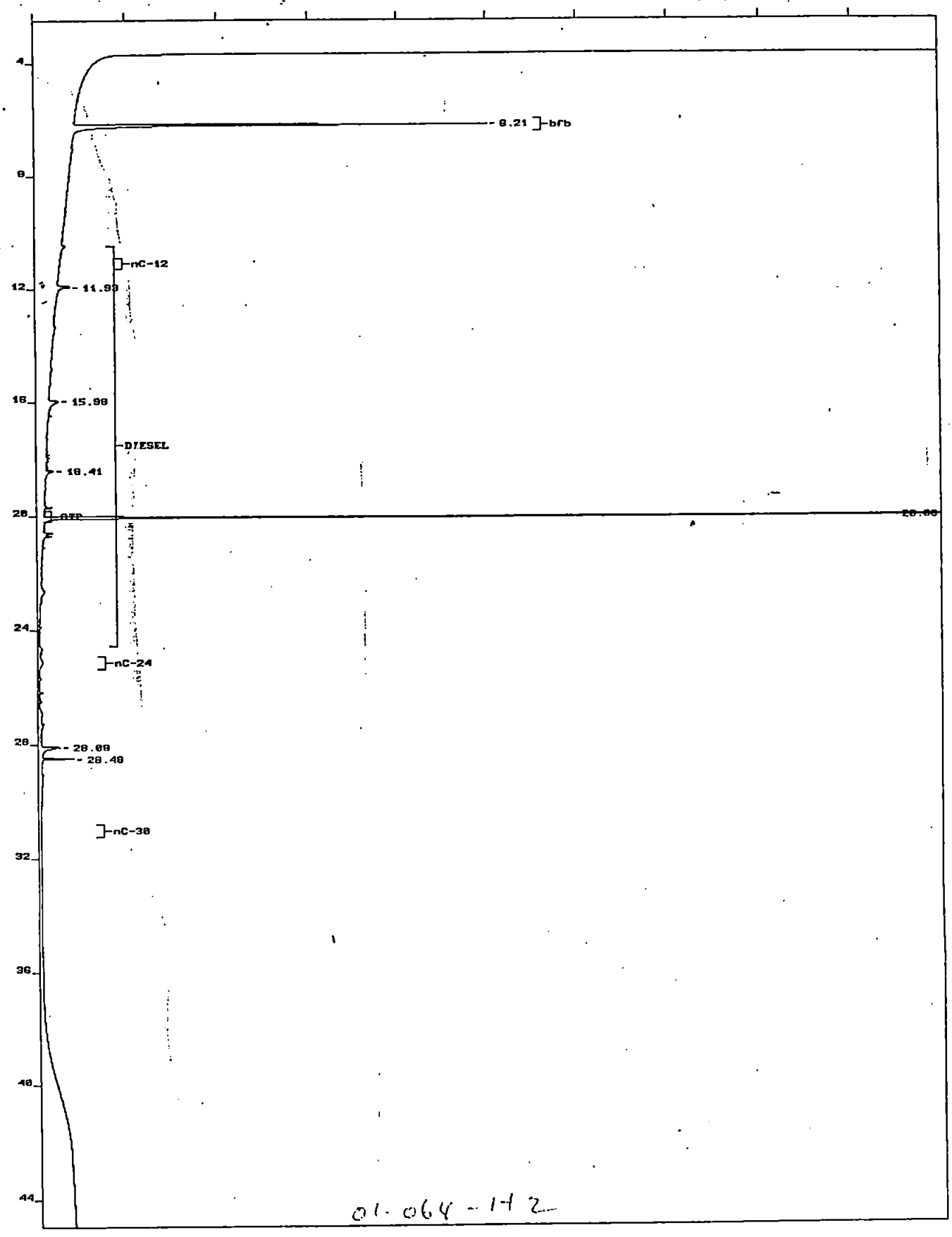
Results

Lab ID	Client ID	Diesel	Surrogate Recovery (BFB)	Surrogate Recovery (OTP)
01-064-1:2	CH-UST1-WSW-3/ CH-UST1-SSW-3	<50	102%	112%
01-064-3:4	CH-UST1-NSW-3 CH-UST1-ESW-3	53	100%	113%
01-064-5	CH-UST1-B-6	120	96%	112%
01-064-6:7:8	CH-UST1-OB1/CH-UST1-OB2/ CH-UST1-OB3	110	105%	114%
01-064-9:10	CH-UST2-SSW-5/ CH-UST2-ESW-5	<50	102%	113%
01-064-11:12	CH-UST2-WSW-4/ CH-UST2-NSW-5	<50	95%	111%
01-064-13	CH-UST2-B-7	<50	98%	112%
01-064-14:15:16	CH-UST2-OB1/CH-UST2-OB2/ CH-UST2-OB3	<50	98%	112%
01-064-17:18	CH-UST3-ESW-5/ CH-UST3-NSW-5	<50	95%	116%
01-064-19:20	CH-UST3-SSW-5/ CH-UST3-WSW-5	<50	102%	116%
01-064-21	CH-UST3-B-7	280	105%	123%
01-064-22:23:24	CH-UST3-OB1/CH-UST3-OB2/ CH-UST3-OB3	80	100%	116%
Quality Assurance				
01-064-21 Duplicate		270	98%	116%
Method Blank		<50	120%	121%

ppm - parts per million

File=c:\cp\Jan96c2\960124F4.20R Date printed = 01-25-1996 Time = 06:06:58

2.50 to 45.00 min. Low Y = 0.47165 mv High Y = 4.47165 mv Span = 4.00000 mv



01-064-142

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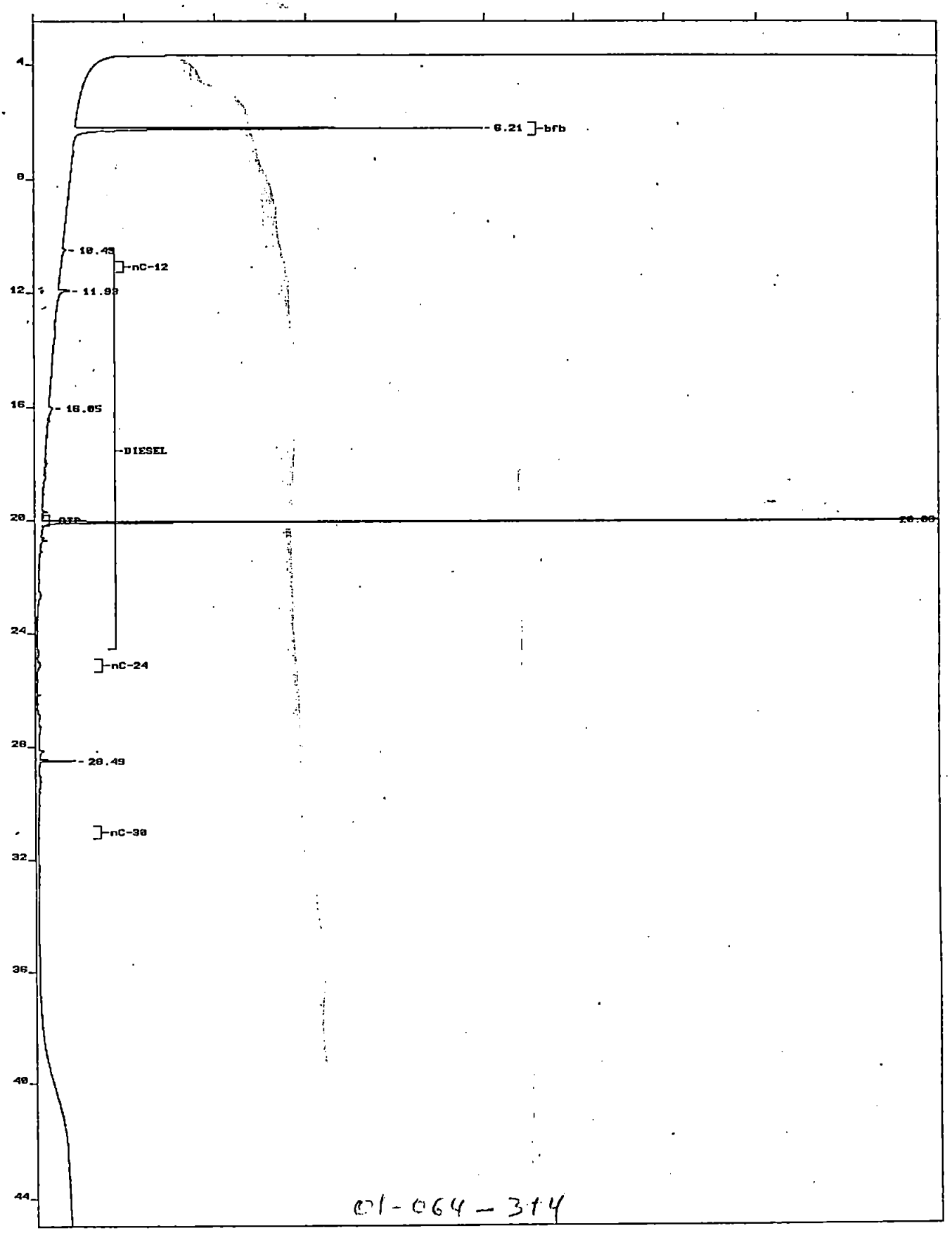
2.50 to 45.00 min. Low Y = 0.46886 mv High Y = 4.46886 mv Span = 4.00000 mv



01-064-314

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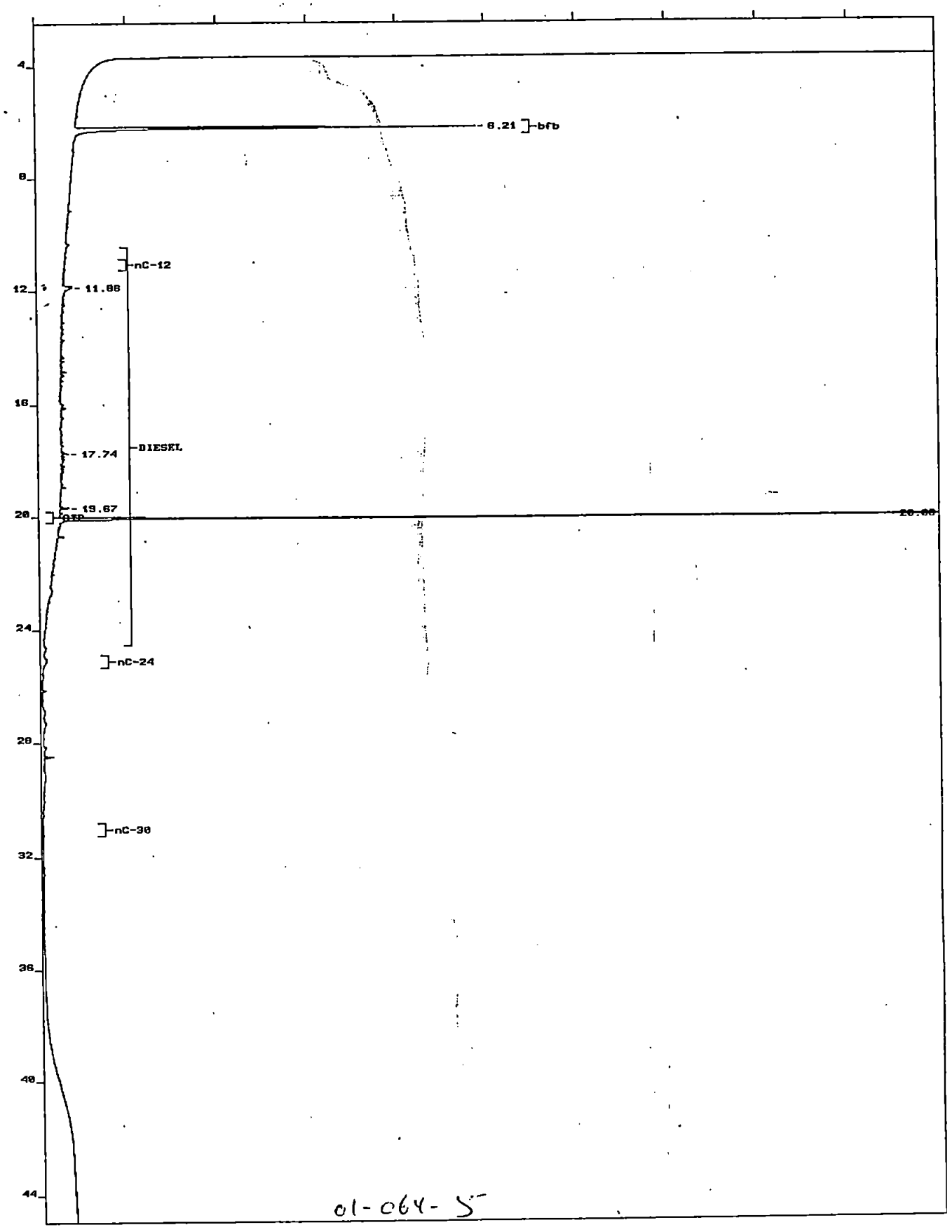
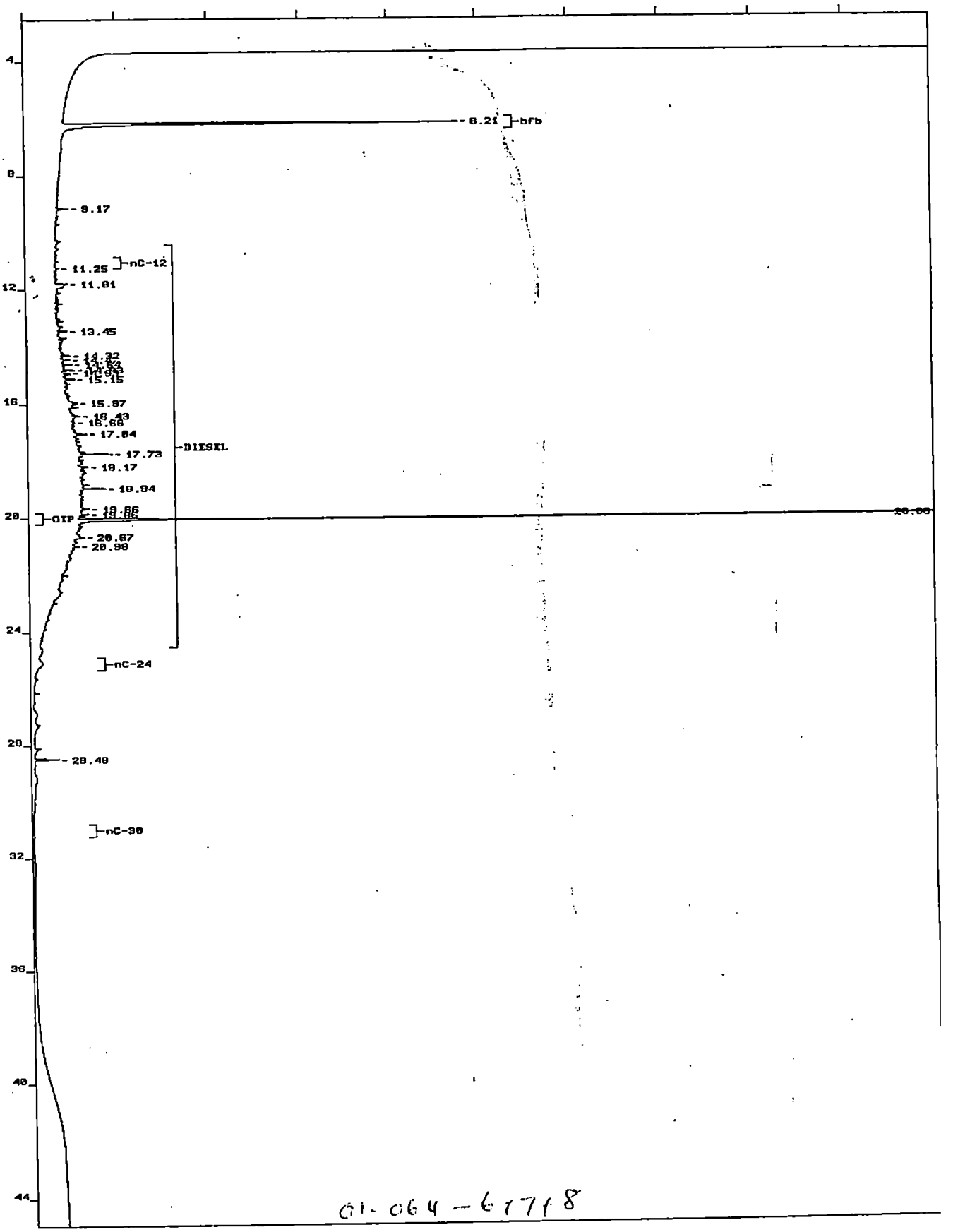
2.50 to 45.00 min. Low Y = 0.47486 mv High Y = 4.47486 mv Span = 4.00000 mv



01-064-S

File=c:\cp\Jan96c2\960124F4.23R Date printed = 01-25-1996 Time = 08:43:08

2.50 to 45.00 min. Low Y = 0.47996 mv High Y = 4.47996 mv Span = 4.00000 mv



01-064-61718

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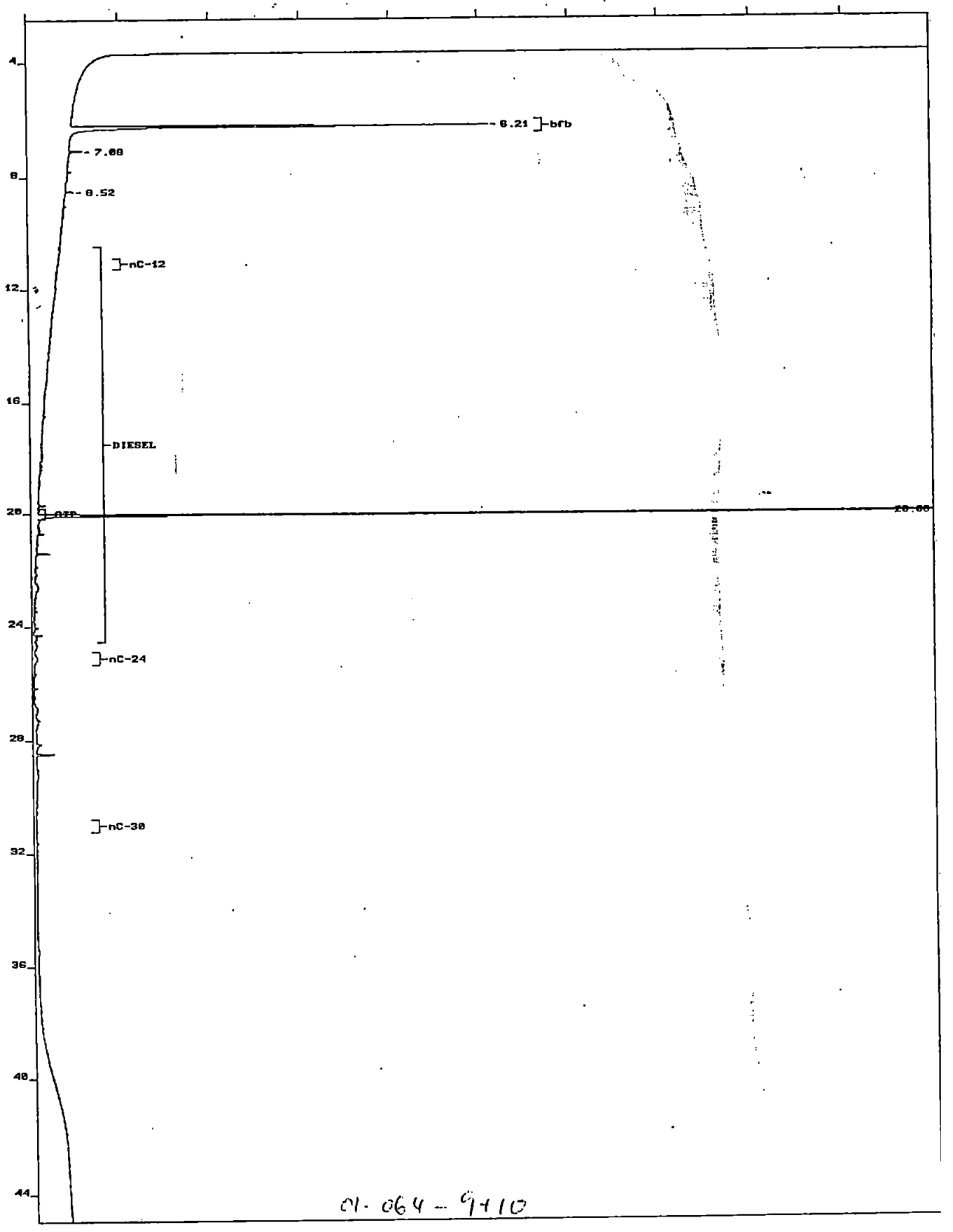
2.50 to 45.00 min. Low Y = 0.46972 mv High Y = 4.46972 mv Span = 4.00000 mv



01-064-9410

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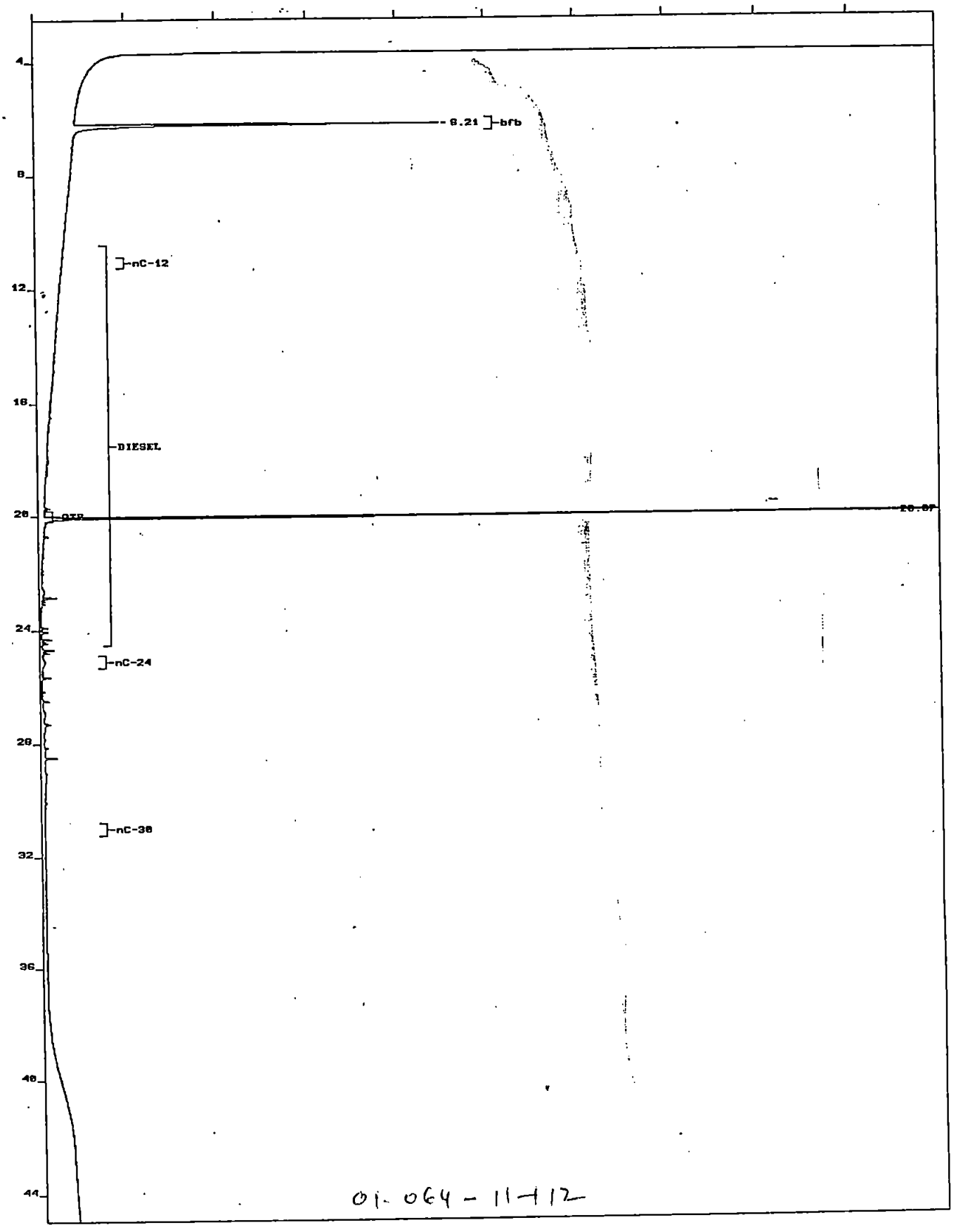
2.50 to 45.00 min. Low Y = 0.45325 mv High Y = 4.45325 mv Span = 4.00000 mv



01-064-11-12

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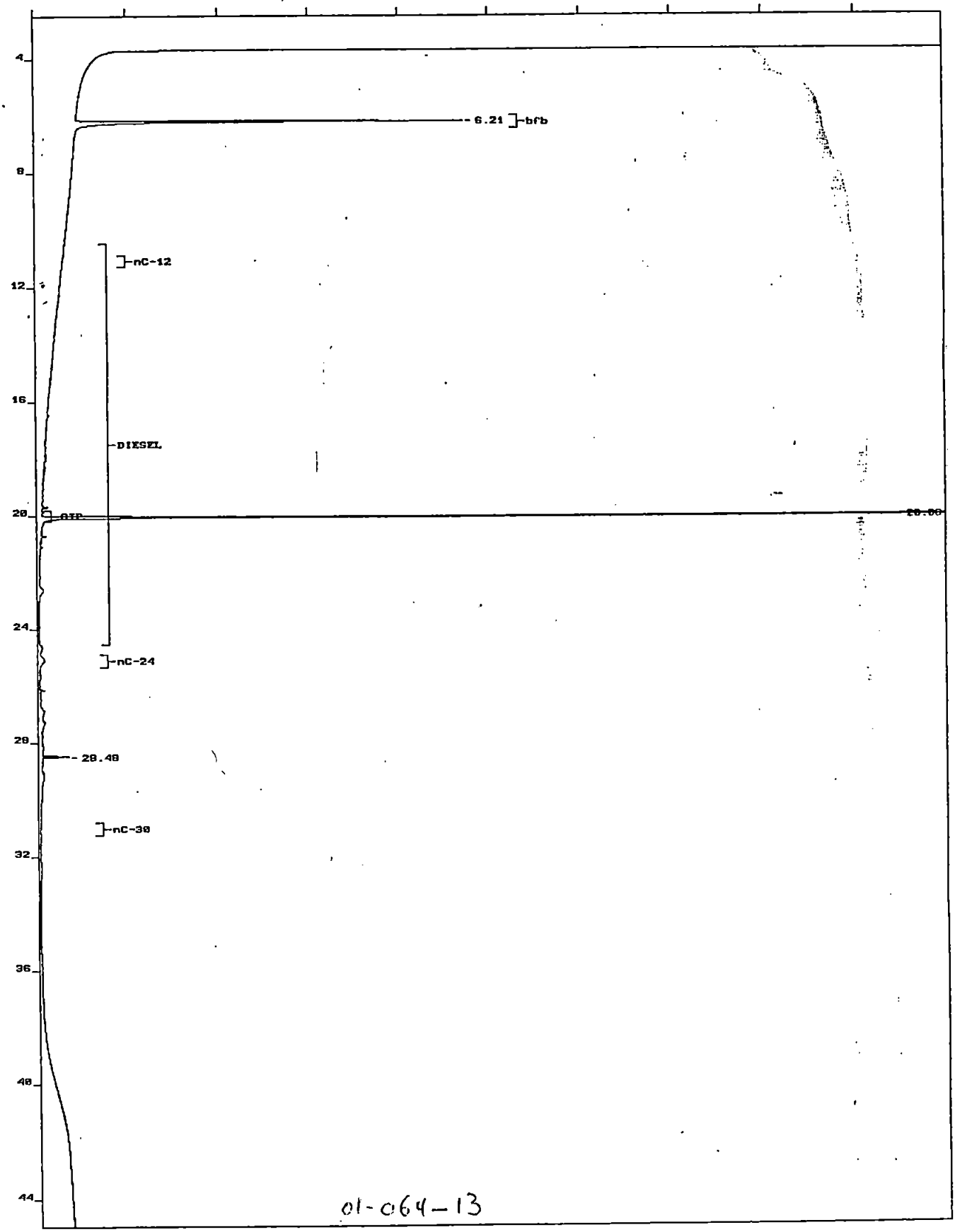
2.50 to 45.00 min. Low Y = 0.48587 mv High Y = 4.48587 mv Span = 4.00000 mv



01-064-13

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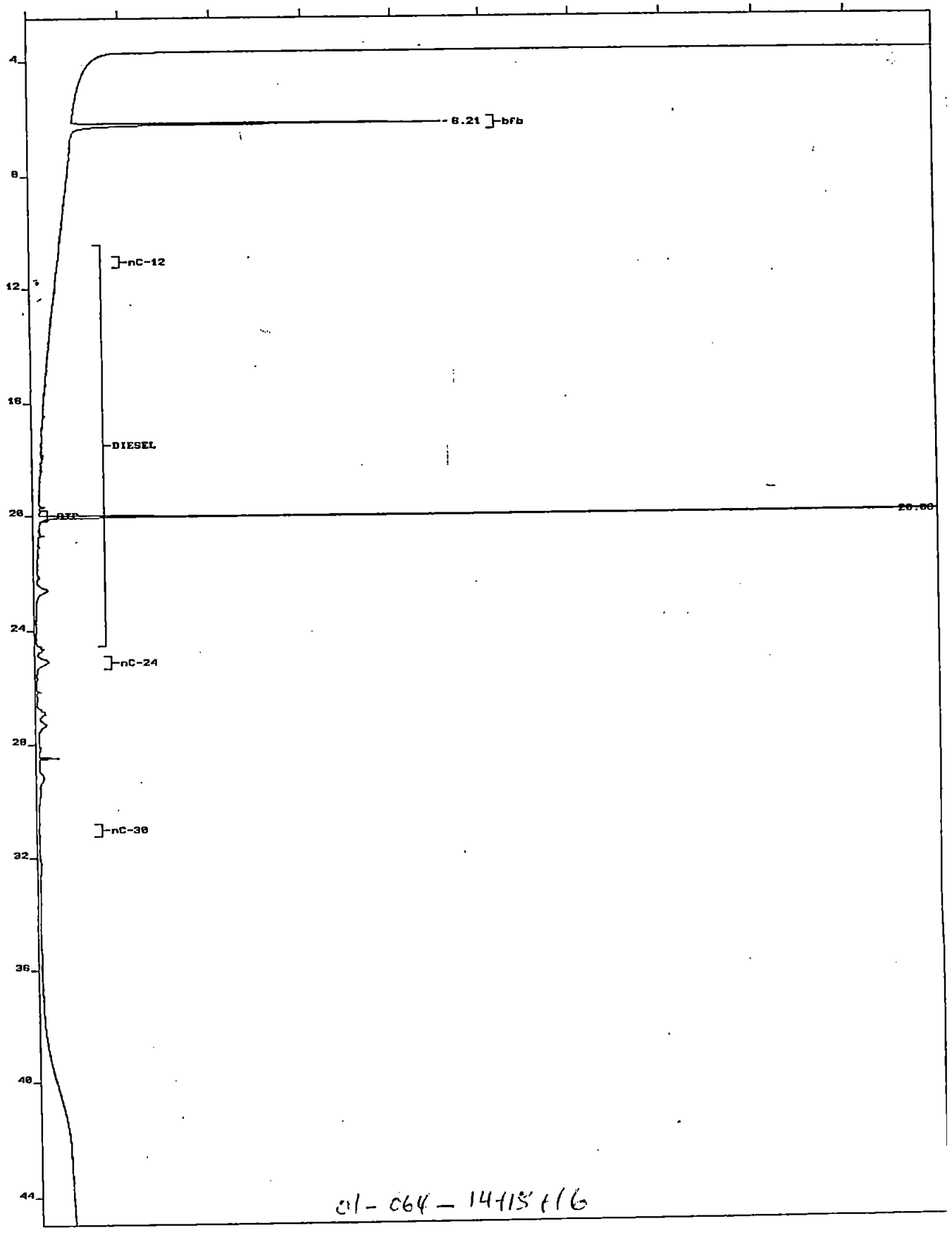
2.50 to 45.00 min. Low Y = 0.47765 mv High Y = 4.47765 mv Span = 4.00000 mv



01-064-14+15+16

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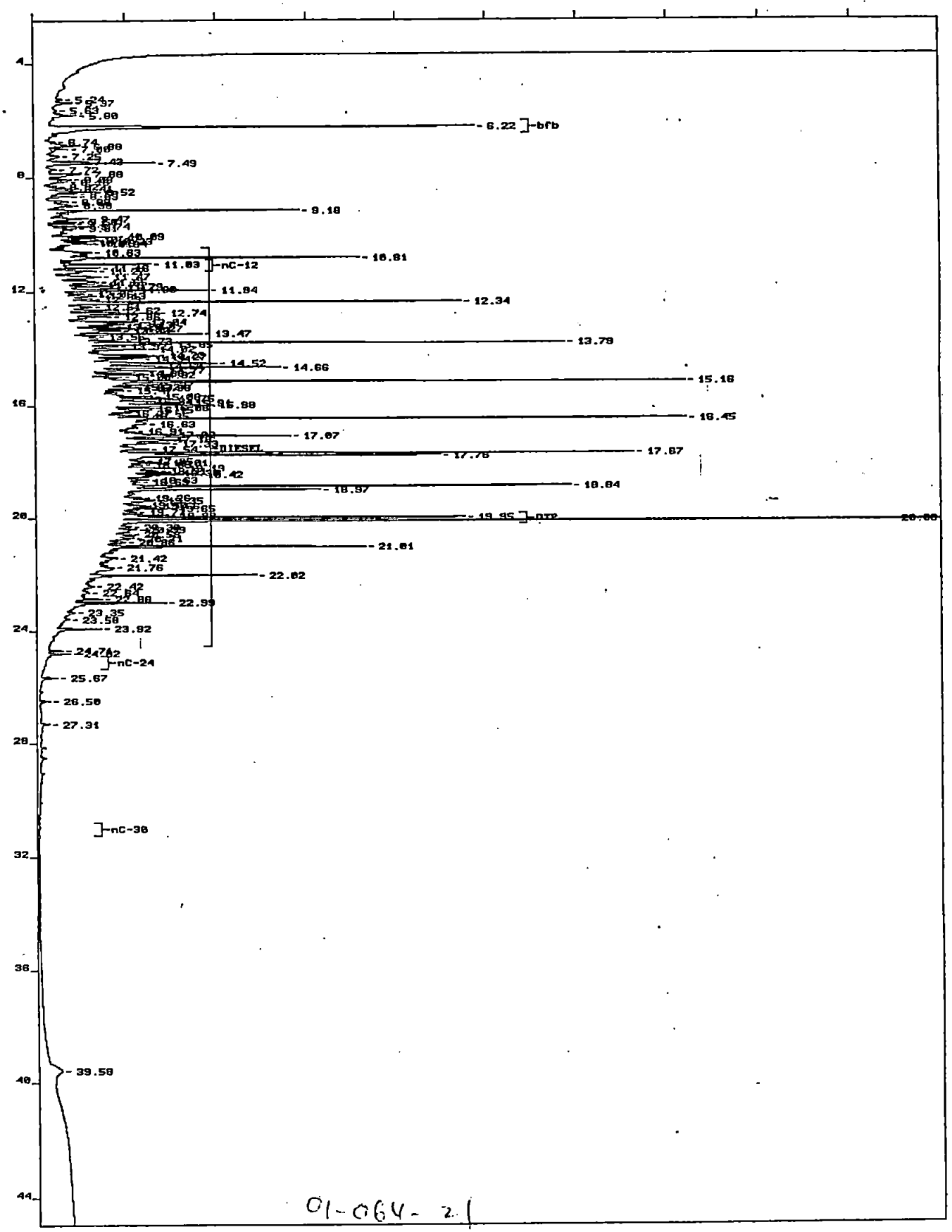
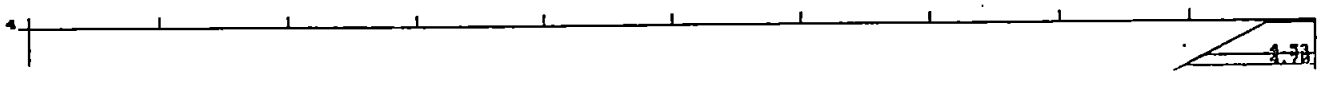
2.50 to 45.00 min. Low Y = 0.37623 mv High Y = 4.37623 mv Span = 4.00000 mv



01-064-2.1

File=c:\cp\JAN96C1\960125E1.03R Date printed = 01-25-1996 Time = 17:01:27

4.00 to 35.00 min. Low Y = 14.38363 mv High Y = 44.38363 mv Span = 30.00000 mv



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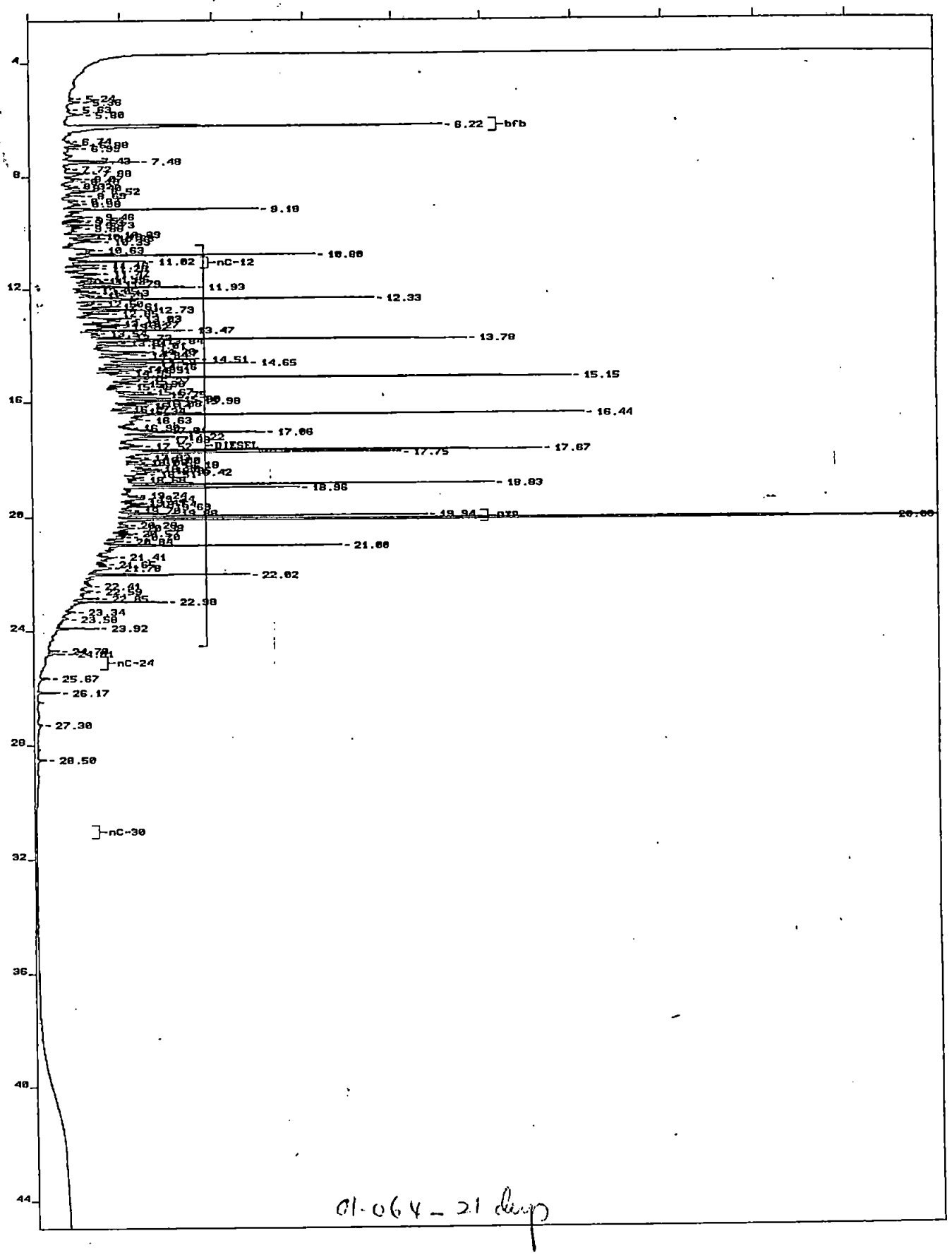
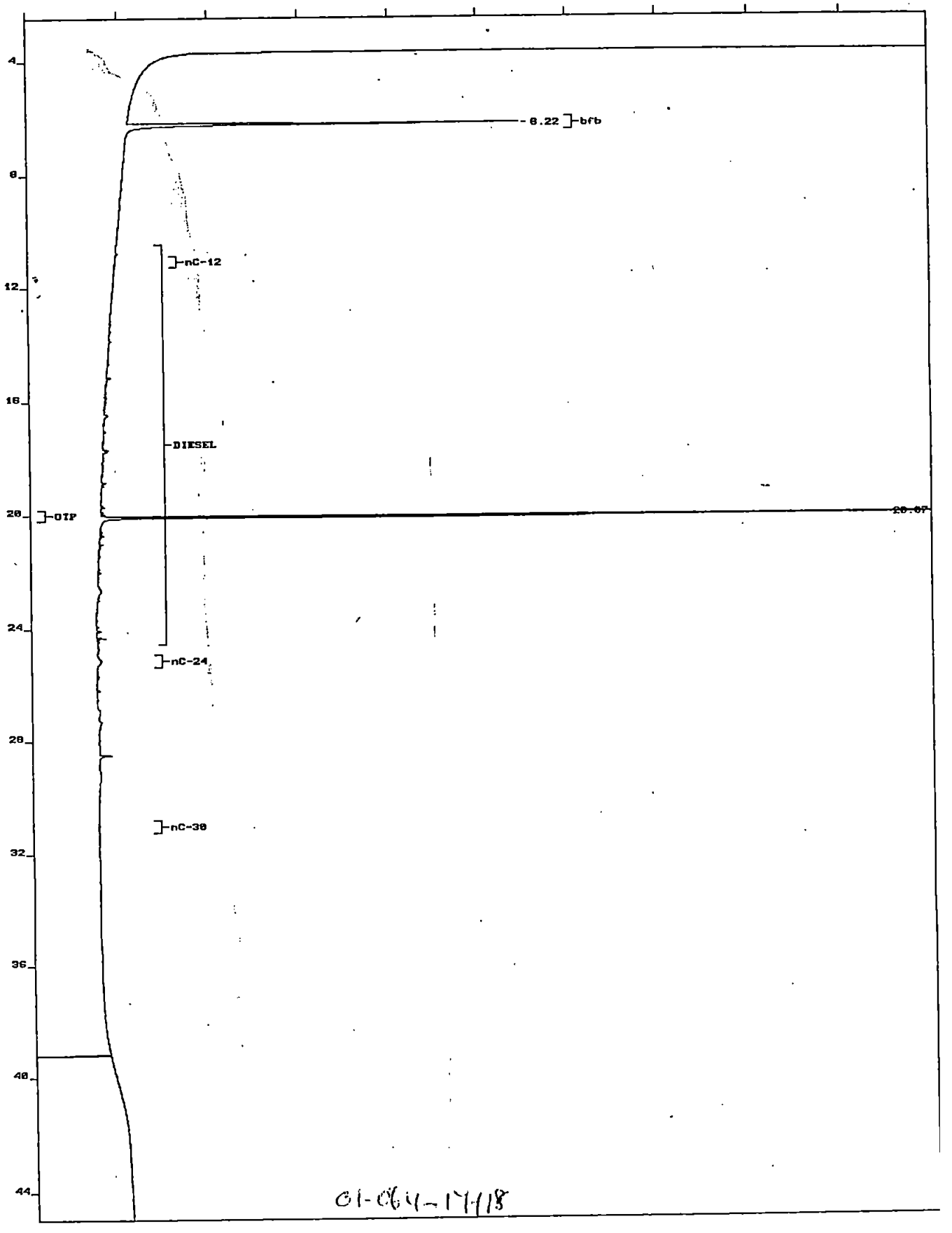
2.50 to 45.00 min. Low Y = 0.43648 mv High Y = 4.43648 mv Span = 4.00000 mv



01-064 - 21 dup

File=c:\cp\Jan96c2\960124F4.32R Date printed = 01-25-1996 Time = 17:27:12

2.50 to 45.00 min. Low Y = 0.16402 mv High Y = 4.16402 mv Span = 4.00000 mv



01-064-17418

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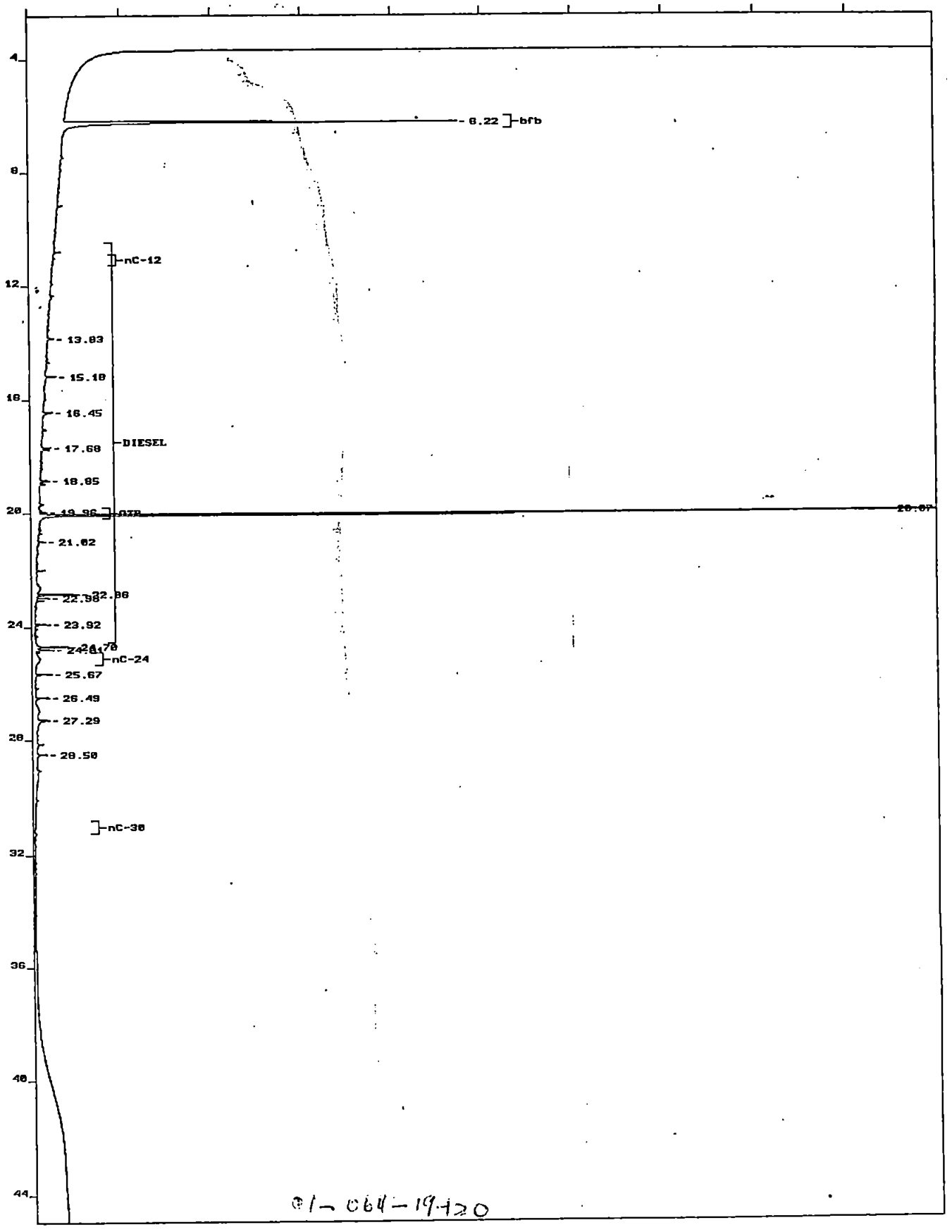
2.50 to 45.00 min. Low Y = 0.44891 mv High Y = 4.44891 mv Span = 4.00000 mv



01-064-19420

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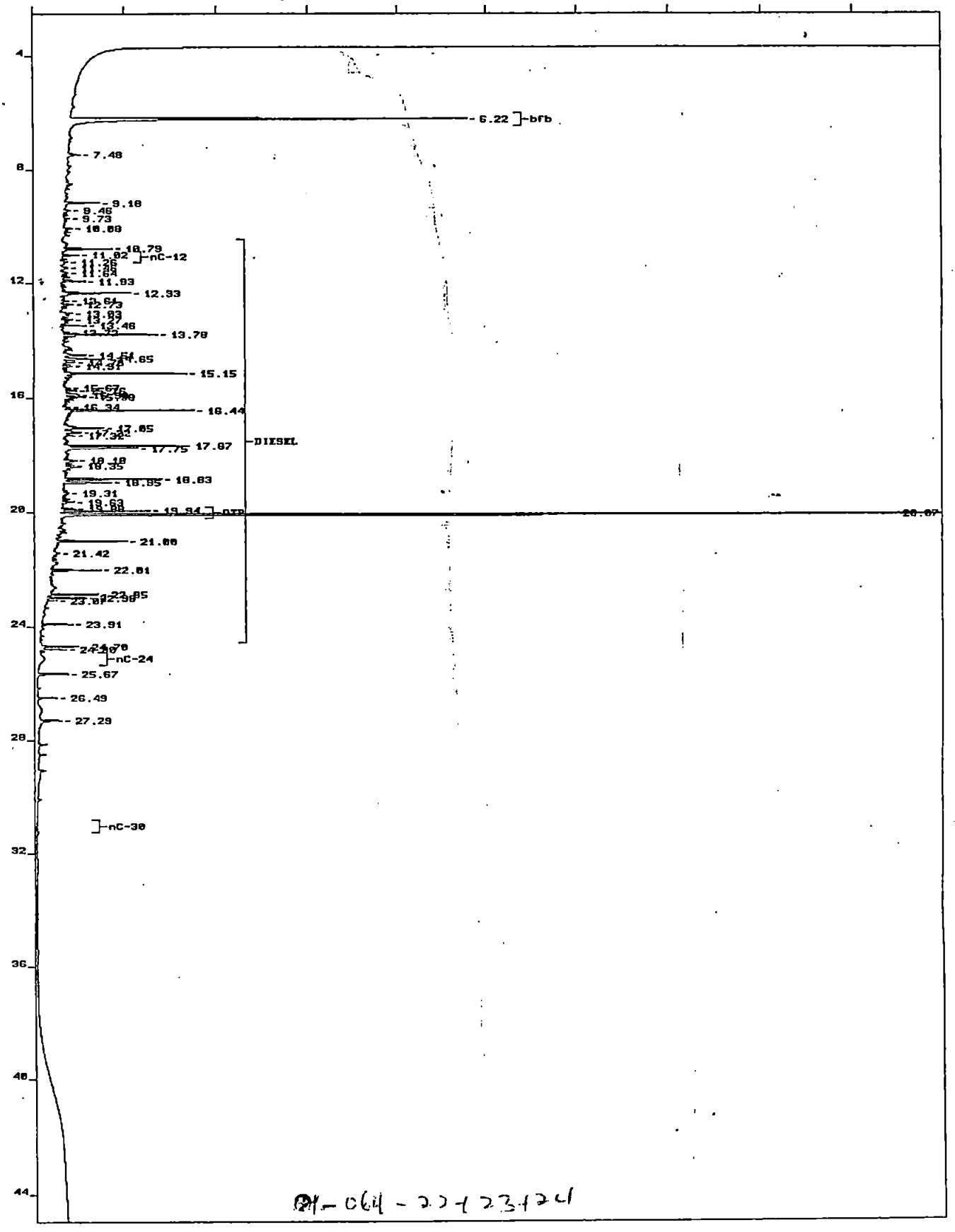
2.50 to 45.00 min. Low Y = 0.46112 mv High Y = 4.46112 mv Span = 4.00000 mv



01-064-22+23+24

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

CHAIN-OF-CUSTODY / REQUEST FOR ANALYSIS

01 064 1 of 3 pages

Client Name Omega Services
Project Name Cedar Hills Landfill
Project No.
PO No.
Client Contact Robert Roe / Marlo

Send Lab Report To Robert Roe / Omega
3214 16th Ave SW
Seattle WA 98134
Date Required 24h
Client Contact Phone 682-2440

Sample Number	Sample I.D.	Date Collected	Time Collected	Sample Matrix	Number of Containers	WTPH-Diesel							Comments
1	CH-UST1-WSW-3	1/23/96	1:28	Soil	1	X	Composite						
2	CH-UST1-SSW-3		1:28	Soil	1	X							
3	CH-UST1-NSW-3		1:28	Soil	1	X	Composite						
4	CH-UST1-ESW-3		1:28	Soil	1	X							
5	CH-UST1-B-6		1:28	Soil	1	X							
6	CH-UST1-OB1		1:28	Soil	1	X	Composite						
7	CH-UST1-OB2		1:28	Soil	1	X							
8	CH-UST1-OB3		1:28	Soil	1	X							
9	CH-UST2-SSW-5		2:15	Soil	1	X	Composite						
10	CH-UST2-ESW-5		2:15	Soil	1	X							
11	CH-UST2-WSW-4		2:15	Soil	1	X	Composite						
12	CH-UST2-NSW-5	√	2:15	Soil	1	X							

Special Instructions

Was Preservative Used? No ☐ Yes ☐ What Kind? What Analysis?

1. Relinquished By Robert Blue Date 1/24/96 Time 8:41 Received By [signature] Date 1-24-96 Time 8:41
2. Relinquished By Date Time Received By Date Time

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

CHAIN-OF-CUSTODY / REQUEST FOR ANALYSIS

Batch 01 064 2 of 3 pages

Client Name OMEGA Services

Project Name

Project No.

PO No.

Client Contact

Send Lab Report To

Date Required

Client Contact Phone

Sample Number	Sample I.D.	Date Collected	Time Collected	Sample Matrix	Number of Containers	WTPH-Diesel	Comments
13	CH-UST2-B-7	1/23/96	2:15	Soil	1	X	
14	CH-UST2-OB1	↓	↓	↓	1	X	
15	CH-UST2-OB2				1	X	
16	CH-UST2-OB3	↓	↓	↓	1	X	
17	CH-UST3-ESW-5		4:10		1	X	
18	CH-UST3-NSW-5				1	X	
19	CH-UST3-SSW-5				1	X	
20	CH-UST3-WSW-5				1	X	
21	CH-UST3-B-7				1	X	
22	CH-UST3-OB1				1	X	
23	CH-UST3-OB2		↓		1	X	
24	CH-UST3-OB3	↓		↓	1	X	

WTPH-Diesel: 13–16 = Composit; 17–20 = Composit; 21–23 = Composit

Special Instructions

Was Preservative Used? No ☑ Yes ☐ What Kind?

What Analysis?

1. Relinquished By [signature] Date 1/24/96 Time 8:43 Received By [signature] Date 1-24-96 Time 8:43

2. Relinquished By Date Time Received By Date Time

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

CHAIN-OF-CUSTODY / REQUEST FOR ANALYSIS

3 of 3 pages

Batch 01 064

Client Name Omega Services
Project Name Cedar Hills Landfill
Project No.
PO No.
Client Contact Robert Boe / Marlo

Send Lab Report To Omega
3214 16th Ave SW
Seattle WA 98134
Date Required 24h
Client Contact Phone 682-2440

Sample Number	Sample I.D.	Date Collected	Time Collected	Sample Matrix	Number of Containers	Analysis Requested: WTPH-Diesel								Comments
25	CH-UST1-EXW	1/23/96		H_2O	1	X								

Special Instructions Please hold until Omega decides to proceed with analysis.

Was Preservative Used? No ☐ Yes ☐ What Kind? _____ What Analysis? _____

1. Relinquished By _____ Date 1/24/96 Time 8:50 Received By _____ Date 1-24-96 Time 8:50
2. Relinquished By _____ Date _____ Time _____ Received By _____ Date _____ Time _____

AMERICAN

ANALYTICAL LABORATORIES, INC.

OMEGA SERVICES, INC.

FEB - 6 1996

January 31, 1996

Omega Services
3214 16th Ave SW
Seattle, WA 98134
Attn.: Robert Roe

Dear Robert:

Enclosed are the results of the analyses of samples submitted on 1/30/96 from your Ceder Hills Landfill 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

OMEGA SERVICES, INC.

FEB - 6 1996

Date of Analysis: 1/31/96
Samples Submitted: 1/30/96
File ID: 01-083
Analysis: WTPH-D
Units: mg/L (ppm)

Client: Omega Services
Project: Ceder Hills Landfill
Project #: 9521-009
Matrix: Water

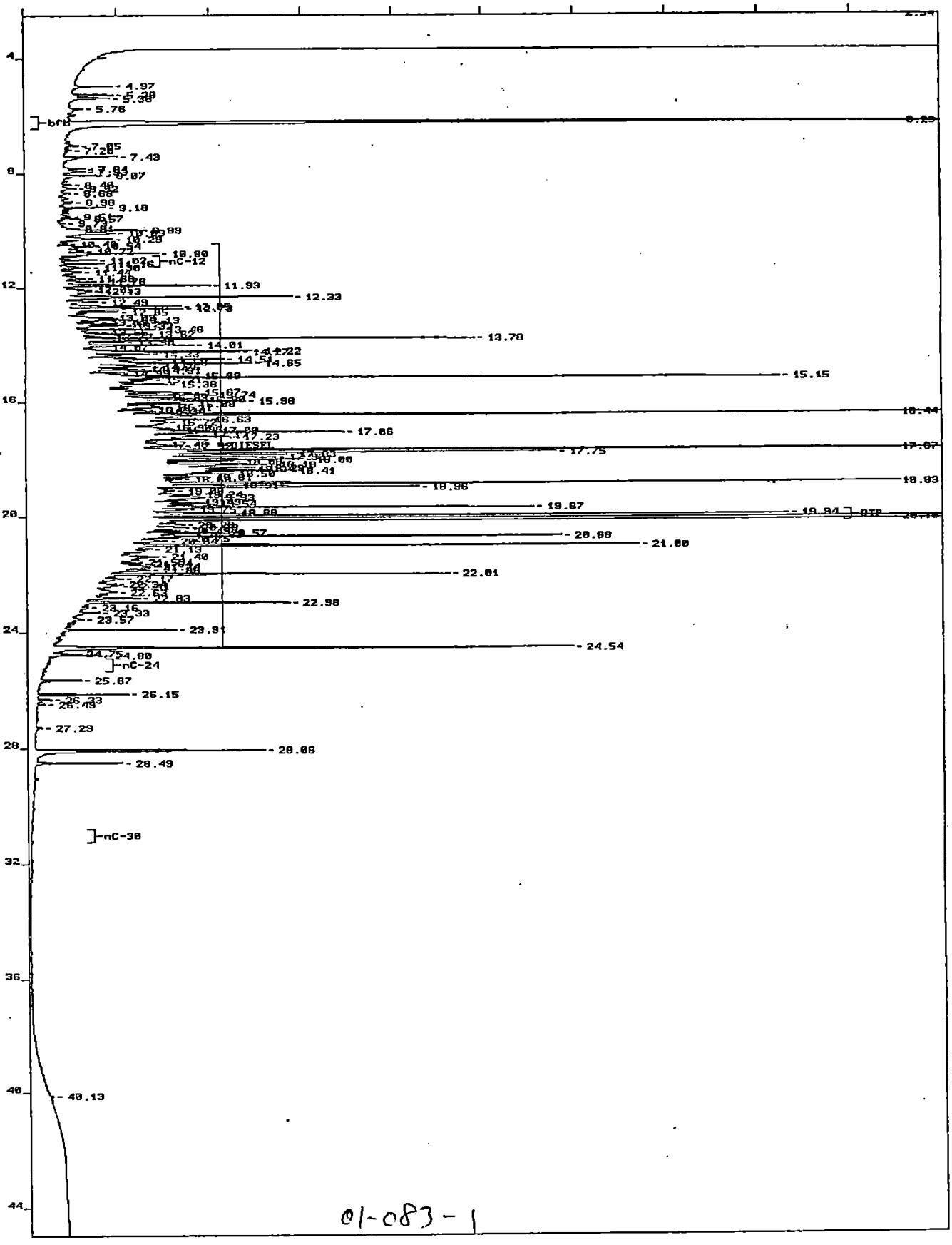
Results

Lab ID	Client ID	Diesel	Surrogate Recovery (BFB)	Surrogate Recovery (OTP)
01-083-1	CH-UST1-6W	1.0	84%	96%
01-083-2	CH-UST3-6W	2.0	54%	61%
Quality Assurance				
01-083-1 Duplicate		1.0	101%	120%
Method Blank		<0.25	80%	92%

ppm - parts per million

File=c:\cp\Jan96c2\960130F4.18R Date printed = 01-31-1996 Time = 07:25:09

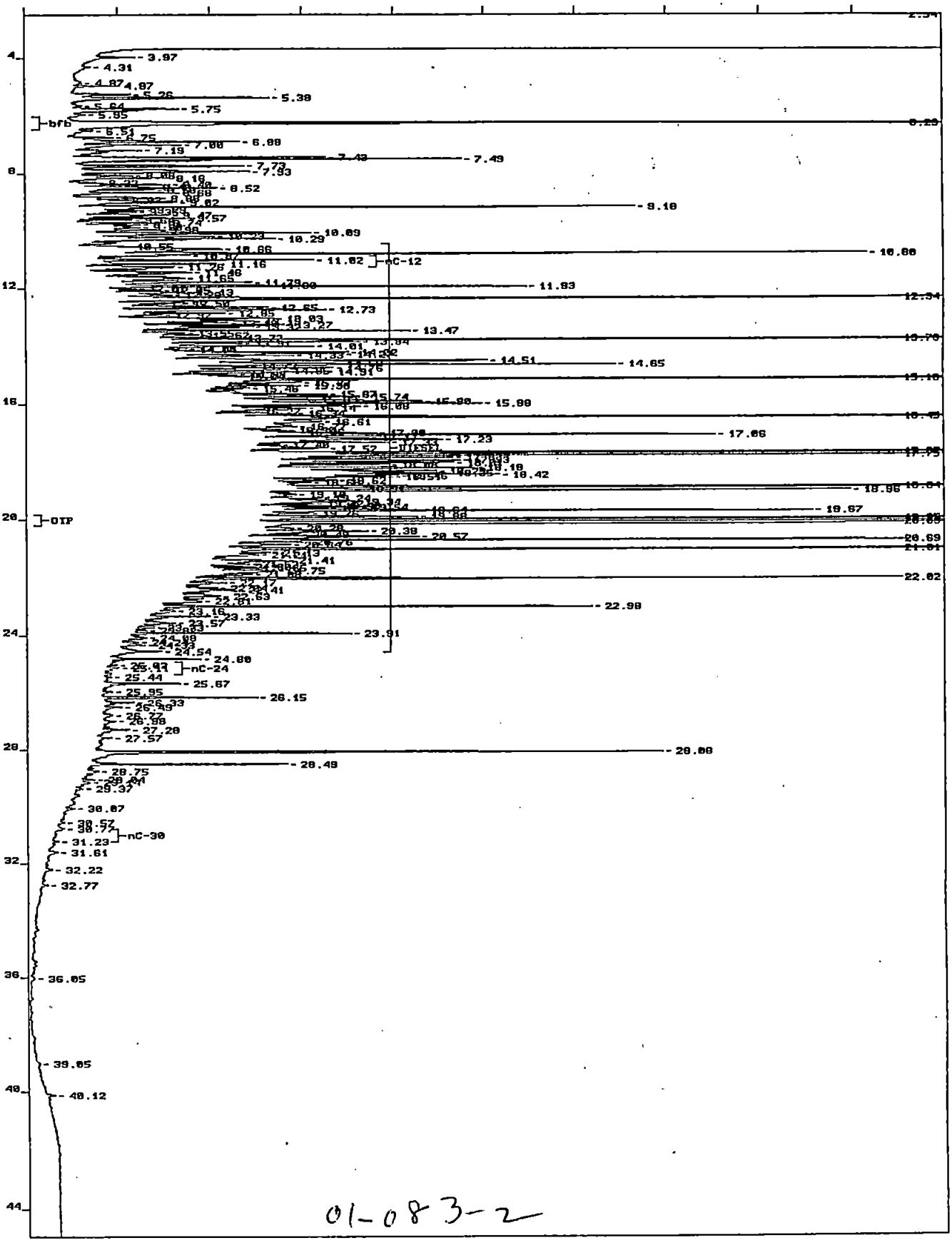
2.50 to 45.00 min. Low Y = 0.51298 mv High Y = 4.51298 mv Span = 4.00000 mv



01-083-1

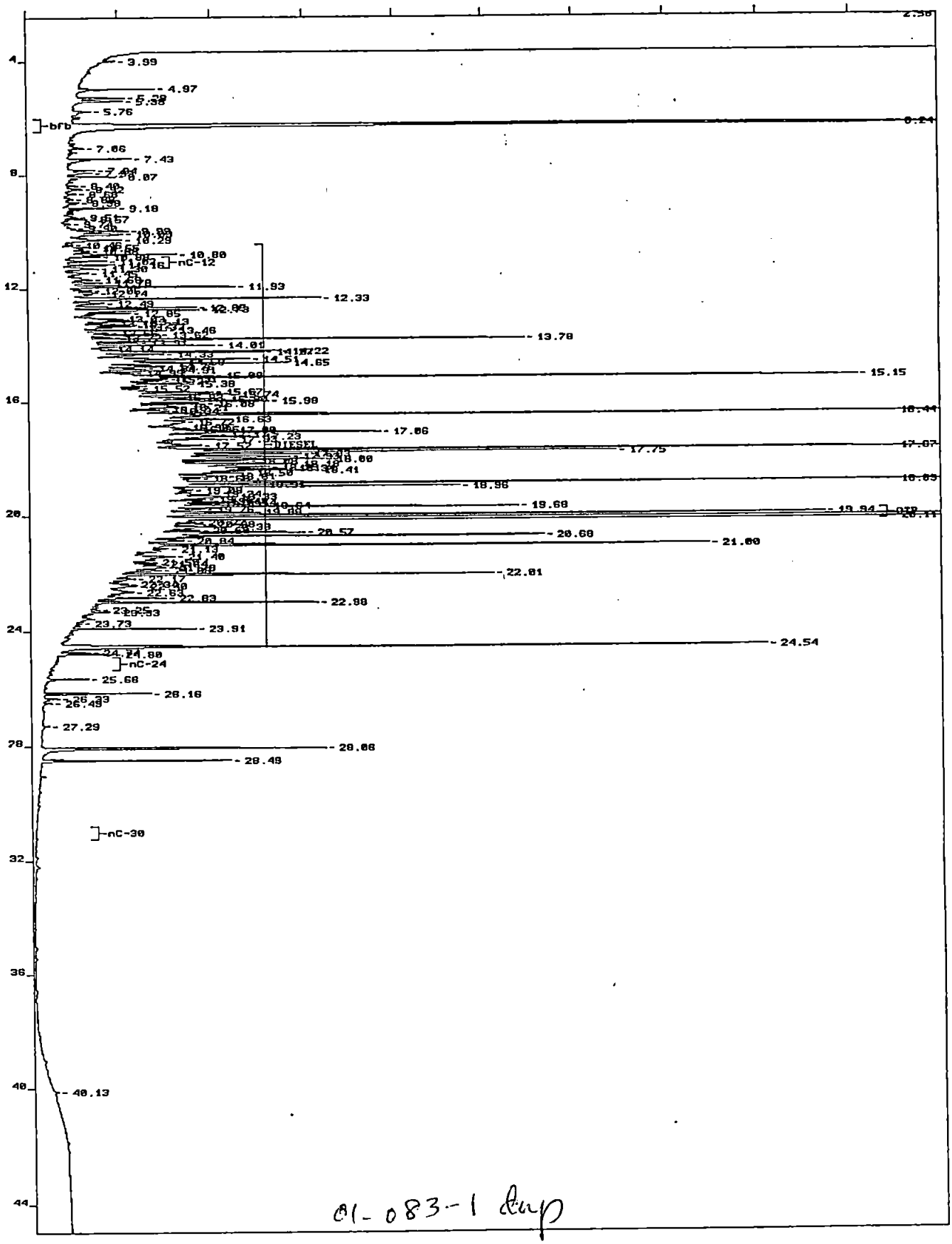
File=c:\cp\Jan96c2\960130F4.20R Date printed = 01-31-1996 Time = 09:08:09

2.50 to 45.00 min. Low Y = 0.55043 mv High Y = 4.55043 mv Span = 4.00000 mv



File=c:\cp\Jan96c2\960130F4.19R Date printed = 01-31-1996 Time = 08:16:38

2.50 to 45.00 min. Low Y = 0.51847 mv High Y = 4.51847 mv Span = 4.00000 mv



01-083-1 dup

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

CHAIN-OF-CUSTODY / REQUEST FOR ANALYSIS

01 083

Client Name: Omega Services
Project Name: Ceder Hills Landfill
Project No.: 9521-009
PO No.: 83682
Client Contact: Robert Roe / Marlo Massie

Send Lab Report To: Omega Services
3214 16th Ave SW
Seattle WA 98134
Date Required: 24 hour
Client Contact Phone: 682-2440

Analysis Requested

Sample Number	Sample I.D.	Date Collected	Time Collected	Sample Matrix	Number of Containers	WTPH-Diesel								Comments
	CH-UST1-6W	1/30/96	12:45	H_2O	1	X								
	CH-UST3-6W	↓	12:30	H_2O	1	X								

Special Instructions

Was Preservative Used? No ☐ Yes ☑ What Kind?

What Analysis?

1. Relinquished By: Robert B Roe Date: 1/30/96 Time: 1:30 Received By: Thomas Alan Malone Date: 1/30/96 Time: 1:30 pm
2. Relinquished By: Date: Time: Received By: Date: Time:

AMERICAN
ANALYTICAL LABORATORIES, INC.

OMEGA SERVICES, INC.
FEB 12 1996

February 2, 1996

Omega Services
3214 16th Ave SW
Seattle, WA 98134
Attn.: Robert Roe

Dear Robert:

Enclosed are the results of the analyses of samples submitted on 2/01/96 from your Ceder Hills Land Fill 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: 2/2/96
Samples Submitted: 2/1/96
File ID: 02-003
Analysis: WTPH-D
Units: mg/Kg (ppm)

Client: Omega Services
Project: Ceder Hills Land Fill
Project #: 9521-009
Matrix: Soil

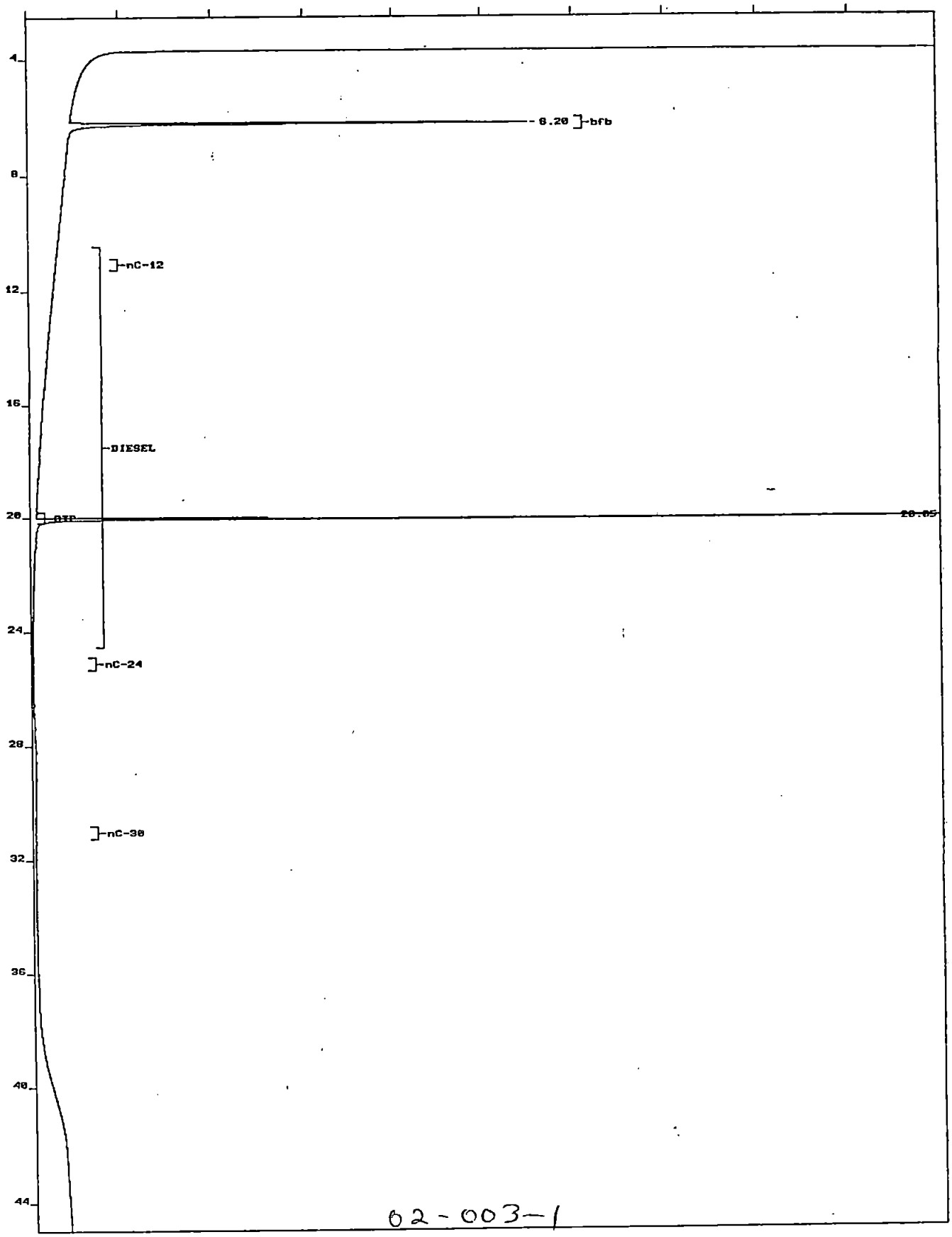
Results

Lab ID	Client ID	Diesel	Surrogate Recovery (BFB)	Surrogate Recovery (OTP)
02-003-1	CH-UST3-RE-B-9	<50	116%	110%
Quality Assurance				
Method Blank		<50	116%	109%

ppm - parts per million

File=c:\cp\Jan96c2\960131F4.38R Date printed = 02-02-1996 Time = 00:48:21

2.50 to 45.00 min. Low Y = 0.46491 mv High Y = 4.46491 mv Span = 4.00000 mv



02-003-1

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

CHAIN-OF-CUSTODY / REQUEST FOR ANALYSIS

02 003

Batch

Client Name Omega Services

Project Name Ceder Hills Land fill

Project No. 9521-009

PO No.

Client Contact Robert B Roe / Marlo Massie

Send Lab Report To Omega
3214 16th Ave SW
Seattle WA 98134

Date Required

Client Contact Phone 682-2440

Sample Number	Sample I.D.	Date Collected	Time Collected	Sample Matrix	Number of Containers	Analysis Requested: WTPH-Dx(ecy)								Comments
	CH-UST3-RE-B-9	2/1/96	12:15	Soil	1	X								

Special Instructions

Was Preservative Used? No ☑ Yes ☐ What Kind? What Analysis?

1. Relinquished By Robert B Roe Date 2/1/96 Time 1:15 pm Received By Marlo Massie Date 2/1/96 Time 1:15 pm

2. Relinquished By Date Time Received By Date Time

OLYMPUS
ENVIRONMENTAL, INC.

DATE: 1/21/97

TO: Mario - Omega

FAX NUMBER: 206 621-8568

PHONE NUMBER: 682-2440

FROM: Stacy Patterson

W.O. NUMBER: 6516

NUMBER OF PAGES: (INCLUDING COVERSHEET): 3

ITEM FAXED: Sampling MAP.

COMMENTS:

Our fax number is:

(206) 735-6620

If you have any trouble regarding this fax, please call: (206) 735-6625

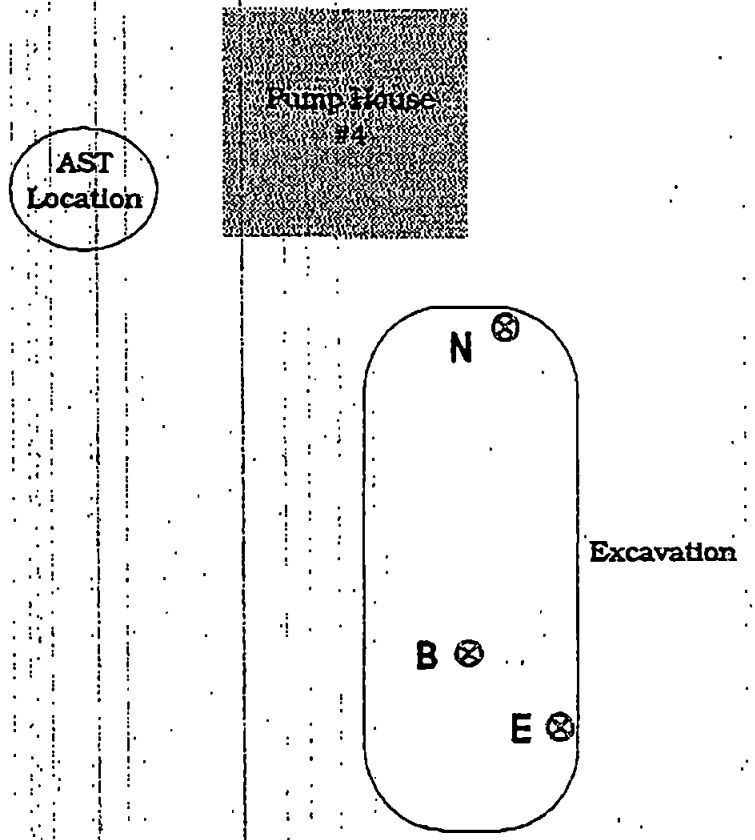
Environmental & Hazardous Waste Services
Auburn, WA | Spokane, WA | Helena, MT | Billings, MT | Portland, OR
302 West Valley Hwy, Suite 600 • Auburn, WA 98001 • (206) 735-6625

January 21, 1997

To: Marlo, Omega
From: Stacy Patterson, Olympus Environmental, Inc.
Re: Olympus Work Order 6516 - King County Solid Waste Division

Three soil samples were collected from the UST excavation near Pump House #4 at the Cedar Hills Landfill on September 9, 1996. The sampling plan prepared by Udaloy Environmental Services was followed. In addition, the locations of the sample points were designated by Mike Long of King County Solid Waste Division.

An excavator was used to collect the three samples from the excavation. The excavator scraped approximately one foot of soil from the sample area before collecting the sample. A stainless steel spoon was used to place the soil from the excavator bucket into sample jars. The excavator bucket and sample equipment were decontaminated between each sampling event. One sample was collected from the north wall, one sample from the east wall and one sample from the base of the excavation. The wall samples were collected approximately 4 feet bgs. The attached map depicts approximate locations of the sample points. Mike Long was provided pictures of the sample locations



OLYMPUS ENVIRONMENTAL INC.

King County Solid Waste
Cedar Hills Landfill
Sample Location Map
Olympus WO#: 6516
September 9, 1996

FIGURE 1

Not to Scale

Laucks Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX (206) 767-5063
Chemistry, Microbiology, and Technical Services

RECEIVED
NOV 15 1996
KCSWD
Cedar Hills

RECEIVED
K.C. NATURAL RESOURCES
OCT 7 1996
SOLID WASTE DIVISION
ENGINEERING SECTION

ENTERED ENVIS
10/28/96
(S)

20 September, 1996
Date Revised: 7 October, 1996

Rosendo Jimenez
King County Department of Natural Resources
Solid Waste Division
600 Yesler Building
400 Yesler Way, Room 500
Seattle, WA 98104-2637

RE: KCSW Cedar Hills UST Soil Samples, CH-GW01-01 / LTL Workorder 9609246

Dear Mr. Jimenez:

Please find enclosed original reports for the above referenced project. Laucks Testing Laboratories, Inc. (LTL), accepted three UST soil samples (B/Bottom, E/East Wall and N/North Wall) on September 9, 1996. The laboratory received the sample intact with no discrepancies on the chain-of-custody documentation (COC), except both TCLP Volatiles and Semi-Volatiles analyses were postponed until the client reviewed the results of the other analyses requested. September 20, 1995 Sendy Jimenez cancelled the requested TCLP Volatiles and Semi-Volatiles.. As requested, the laboratory completed the sample analysis according to the analyses requested on the Chain of Custody, with the above mentioned exceptions.

The results for all requested and batch QC samples are attached to this report.

Olympus Environmental ph# 735-6625
Stacy Patterson
1/13 2:23 I l/m for Stacy 1/13 2:45 Stacy is in the field until 1/15. When she gets back, she'll get me a copy of the report. 1/16 I l/m to have Stacy c/b re: this 1/17 Stacy called. She'll be in the field thru 1/21. She has no report. She does have field notes, so she can send a copy then.

This report is submitted for the exclusive use of the person, partnership, or corporation to whom it is addressed. Subsequent use of the name of this company or any member of its staff in connection with the advertising or sale of any product or process will be granted only on contract. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.

Printed on Recycled Paper

Laucks Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX (206) 767-5063
Chemistry, Microbiology, and Technical Services

CLIENT: KING COUNTY SOLID WASTE

DATE RECEIVED: 09/09/96
DATE REPORTED: 09/20/96
PO NUMBER: BO2418E

REPORT TO: Rosendo Jimenez
600 Yesler Building
Fifth Floor, Yesler Building
Seattle, WA 98104

Data Release Authorized: JEB 092096

UST Soil Samples

	E/EASTWALL
CLIENT IDENTIFICATION	E/East Wall
PROJECT NAME	Cedar Hills
PROJECT NUMBER	CH-SP01-01
SAMPLE DATE	09/09/96
MATRIX	Soil
LAB NUMBER	9609246-03

TPH-DIESEL REPORT

SAMPLE	LAB ID	CONSTITUENT	UNITS	RESULTS	Q	D.L.	REGLIMIT	RUN DATE
E/East Wall	9609246-03	TPH-DIESEL						
		Diesel Range, as diesel	mg/kg DB	<00031	U	00031		09/11/96

This report is submitted for the exclusive use of the person, partnership, or corporation to whom it is addressed. Subsequent use of the name of this company or any member of its staff in connection with the advertising or sale of any product or process will be granted only on contract. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.

Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX (206) 767-5063
Chemistry, Microbiology, and Technical Services

CLIENT: KING COUNTY SOLID WASTE

DATE RECEIVED: 09/09/96
DATE REPORTED: 09/20/96
PO NUMBER: BO2418E

REPORT TO: Rosendo Jimenez
600 Yesler Building
Fifth Floor, Yesler Building
Seattle, WA 98104

Data Release Authorized: BJB092096

UST Soil Samples

CLIENT IDENTIFICATION	B/BOTTOM B/Bottom
PROJECT NAME	Cedar Hills
PROJECT NUMBER	CH-SP01-01
SAMPLE DATE	09/09/96
MATRIX	Soil
LAB NUMBER	9609246-02

TPH-DIESEL REPORT

SAMPLE	LAB ID	CONSTITUENT	UNITS	RESULTS	Q	D.L.	REGLIMIT	RUN DATE
B/Bottom	9609246-02	TPH-DIESEL						
		Diesel Range, as diesel	mg/kg DB	<00031	U	00031		09/11/96

This report is submitted for the exclusive use of the person, partnership, or corporation to whom it is addressed. Subsequent use of the name of this company or any member of its staff in connection with the advertising or sale of any product or process will be granted only on contract. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.

Laucks Testing Laboratories, Inc.
940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX (206) 767-5063
Chemistry, Microbiology, and Technical Services

CLIENT: KING COUNTY SOLID WASTE

DATE RECEIVED: 09/09/96
DATE REPORTED: 09/20/96
PO NUMBER: BO2418E

REPORT TO: Rosendo Jimenez
600 Yesler Building
Fifth Floor, Yesler Building
Seattle, WA 98104

Data Release Authorized: JEA 09.20.96

UST Soil Samples

CLIENT IDENTIFICATION	N/NORTHWAL N/North Wall
PROJECT NAME	Cedar Hills
PROJECT NUMBER	CH-SP01-01
SAMPLE DATE	09/09/96
MATRIX	Soil
LAB NUMBER	9609246-04

TPH-DIESEL REPORT

SAMPLE	LAB ID	CONSTITUENT	UNITS	RESULTS	Q	D.L.	REGLIMIT	RUN DATE
N/North Wall	9609246-04	TPH-DIESEL						
		Diesel Range, as diesel	mg/kg DB	<00030	U	00030		09/11/96

This report is submitted for the exclusive use of the person, partnership, or corporation to whom it is addressed. Subsequent use of the name of this company or any member of its staff in connection with the advertising or sale of any product or process will be granted only on contract. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.

S INFORMATION WILL BE USED FOR REPORTING/BILLING (SEE BELOW)

CHAIN OF CUSTODY RECORD 9609246

WORK ORDER ID# 16516 PAGE 1 OF 1

DATE 9/9/96

SUBMITTED AT:

LAUCKS Testing Laboratories, Inc.

☒ 940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

☐ 1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX 452-1265

ME: Shirley Jergensen

DRESS: 400 Yesler Way Rm 1600
Seattle Wa 98104-2637

TENTION: King County Solid Waste

OJECT NAME: Cedar Hills

OJECT CONTACT:

LEPHONE/FAX: /296-8431

B/P.O. NO.:

MPLER (SIGNATURE) 735-6625 (PRINTED NAME)
Stacy Patterson S. Patterson

SAMPLE ID / LOCATION	DATE	TIME	Volatile Organics	Semi volatiles	Chlorinated Pest & PCB	TPH-D	TCLP volatiles	TCLP semi volatiles	NO. OF CONTAINERS	OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS
B / Bottom	9/9/96	10:15	X	X	X	X	X	X	4	
E / East Wall	9/9/96	10:30	X	X	X	X	X	X	4	
N / North Wall	9/9/96	10:45	X	X	X	X	X	X	4	

TESTS TO PERFORM

RECEIVED
K.C. NATURAL RESOURCES
SEP 23 1996
SOLID WASTE DIVISION
ENGINEERING SECTION

INSTRUCTIONS

1. USE ONE LINE PER SAMPLE.
2. BE SPECIFIC IN TEST REQUESTS.
3. CHECK OFF TESTS TO BE PERFORMED FOR EACH SAMPLE.

BILLING INFORMATION, IF DIFFERENT THAN ABOVE

NAME ADDRESS

ATTN: CITY, STATE, ZIP

TURNAROUND REQUEST

- ☐ 24-48 HRS (100% SUR)
- ☐ 5-DAYS (50% SUR)
- ☒ STD. 10-14 DAYS
- ☐ OTHER _____

TOTAL NO. OF CONTAINERS

CHAIN OF CUSTODY SEALS?
☐ YES ☐ NO ☐ NA

SHIPPED VIA:
☐ UPS ☐ FED-EX ☐ BUS
☐ HAND ☐ _____

TEMPERATURE _____
☐ AMBIENT ☐ REPRESENTATIVE

RELINQUISHED BY (SIGN AND PRINT)	DATE / TIME	RECEIVED BY (SIGN AND PRINT)	DATE / TIME
Stacy Patterson / Stacy Patterson	9/9/96 11:45	Kathy Kreps / Kathy Kreps	9/9/96 11:45

Appendix D

REFERENCES

APPENDIX D
REFERENCES

Guidance for Remediation of Releases from Underground Storage Tanks, Washington State Department of Ecology Toxics Cleanup Program, Revised 1994.

Guidance for Site Checks and Site Assessment for Underground Storage Tanks, Washington State Department of Ecology Underground Storage Tank Program, Revised, October, 1992.

The Model Toxics Control Act Cleanup Regulations, Chapter 173-340 WAC, Publication No. 94-06, Amended December, 1993.