HARTCROWSER

Earth and Environmental Technologies

Hart Crowser, Inc.
1910 Fairview Avenue East
Seattle, Washington 98102-3699
FAX 206.328.5581
206.324.9530

J-2104-03

October 2, 1990

Messrs. Robert M. Parks and Charles E. Hart
TRF Pacific, Inc.
12400 Southeast 38th
Bellevue, Washington 98006

Re: Current Condition and Recommended Remediation
Petroleum Hydrocarbon-Affected Area on
Northeast Boundary of Larry's Market Phase I Property
Bellevue, Washington

Dear Messrs. Parks and Hart,

This letter report presents results of chemical analyses for soil samples recently collected from a small area affected by petroleum hydrocarbon contaminants on the northeastern boundary of the subject property. The letter also provides a recommendation for constructing a contamination barrier along the property boundary which will effectively eliminate further flow of petroleum hydrocarbons from the adjacent property onto the Phase I property. TRF Pacific, Inc., currently owns the Phase I property, but the Tiki lot and adjacent land to the north of the Phase I property are owned by others.

The soil analyses presented in this letter supplement soil and groundwater quality information included in our September 14, 1990, letter to TRF.

PROJECT FINDING

It is Hart Crowser's opinion that the remedial construction system outlined below will mitigate the on-site contamination.

Hart Crowser recommends that a low-permeability contamination barrier and groundwater interceptor drain be installed across the affected area at the Phase I property boundary. The barrier will effectively eliminate further migration of petroleum contaminants onto the Phase I property. Since petroleum hydrocarbon concentrations in soil on the affected area are only minimally in excess of the proposed MTCA cleanup standards, Hart Crowser does not believe that additional soil removal is necessary. Residual concentrations of petroleum hydrocarbons on the Phase I property should decrease over time to below the currently proposed MTCA cleanup standards. A small volume of residual groundwater remaining in the affected area will be collected by the interceptor drain system for testing and appropriate discharge. Groundwater in the vicinity of the project site is not associated with known drinking water supply wells or other commercial uses.

The remaining sections summarize the **CURRENT CONDITION - PHASE I PROPERTY, REMEDIATION PLANS - TIKI PROPERTY** and **RECOMMENDED REMEDIATION STRATEGY - PHASE I PROPERTY.** Tables 1 and 2 present sampling information and results of soil and groundwater chemical analyses. Figure 1 is a Site Plan showing locations of Hart Crowser explorations on the Phase I property. Appendix A describes our field exploration and sampling methods and Appendix B presents complete laboratory analytical documentation. The tables, figure, and appendices are located at the end of this letter.

CURRENT CONDITION - PHASE I PROPERTY

Hart Crowser's project work to date has identified gasoline fuel hydrocarbons in soil samples within a small area on the Larry's Market Phase I property, near the northeast boundary of the property (Figure 1). Based on this information, a maximum area of about 5,000 square feet of the parking lot and north perimeter road has been affected. This area represents only a small fraction (about 2 percent) of the total Phase I property area.

The gasoline contamination has migrated onto the Phase I property from the Tiki Car Wash property to the north, based on groundwater elevation data from Hart Crowser monitoring wells MW-20 and MW-23 on the Phase I property, and from additional Hart Crowser wells on the Tiki lot and adjacent lots. No free product has been identified in soil or groundwater on, or adjacent to, the Phase I property.

Soil and Groundwater Quality

Results from our project work are based on soil sample data from test pits TP-1 through TP-3, and on groundwater data from monitoring wells MW-20 and MW-23 (Figure 1). The soil and groundwater samples were collected by Hart Crowser on September 13, 1990. Test pit excavation was observed by Hart Crowser and was completed under contract to TRF. The September 13 data supplement June 4, 1990, Hart Crowser soil and groundwater sample data from MW-20 and MW-23, and from soil borings B-22 and B-24. The soil borings and monitoring wells were completed under subcontract to Hart Crowser.

The September 13, 1990, soil and groundwater samples were submitted to Analytical Technologies, Inc. (ATI) laboratory in Seattle, Washington, for fuel hydrocarbon analyses (EPA Method 8015 Modified) and benzene, ethylbenzene, toluene, and xylene analyses (BETX - EPA Method 8020). The June 4, 1990, samples were submitted to Analytical Resources, Inc. (ARI) laboratory in Seattle, Washington, for fuel hydrocarbon and BETX analyses. During the field drilling program, Hart Crowser screened soil samples from the explorations for the presence of volatile organic compounds indicative of petroleum hydrocarbons with a portable photoionization detector (PID).

Soil and Groundwater Chemical Analysis Results

Within the affected area on the Phase I property, detectable concentrations of gasoline fuel hydrocarbons were found in soil samples collected from test pits TP-1 and TP-2. Sample S-2 (4- to 8-foot depth) in TP-1 and sample S-1 (1- to 3-foot depth) in TP-2 contained fuel hydrocarbon concentrations of 190 and 480 parts per million (ppm), respectively. Sample S-2 from soil boring B-22 contained a fuel hydrocarbon concentration of 150 ppm. These concentrations are slightly in excess of the 100 ppm soil cleanup standard proposed by the Washington State Department of

Ecology (Ecology) under the Model Toxics Control Act (MTCA). The proposed MTCA (Cleanup Regulation and Proposed Amendments, Chapter 173-340 WAC, dated July 27, 1990) currently provides the most stringent regulatory cleanup standards for soil and groundwater.

Other soil samples from TP-1 and TP-2 above the 8-foot depth contained fuel hydrocarbon concentrations at or below the proposed MTCA cleanup standard. No fuel hydrocarbons were detected in samples collected below a depth of 8 feet in the test pits, or in any of the soil samples from MW-20 and MW-23, south of the affected area on the Phase I property.

BETX concentrations in soil samples from TP-1, TP-2, and B-22 were below the proposed MTCA cleanup standard, except for xylenes (56 ppm) in sample S-1 from TP-2. The xylene concentration was slightly in excess of the proposed MTCA soil cleanup standard of 20 ppm xylene. Xylene was the only BETX compound detected in soil samples from MW-20 and MW-23. The latter xylene concentrations were well below the proposed MTCA cleanup standard.

No detectable fuel hydrocarbons or BETX concentrations were found in either the June 4 or September 13, 1990, groundwater samples from MW-20 and MW-23 on the Phase I property. As shown on Figure 1, these wells confirm the limited extent of groundwater contamination on the Phase I property. Although groundwater quality information from the affected area of the Phase I property has not been collected, the concentration of gasoline-related contaminants are expected to be relatively low since the area is near the periphery of overall area of contamination. The groundwater analysis results also indicate that the affected area has not spread laterally to the south and southwest on the Phase I property since June.

Other Soil Quality Data

Soil samples from test pit TP-3 and soil boring B-24 were screened in the field for the presence of volatile organic hydrocarbons with an portable H-Nu field ionization detector. None of the samples contained H-Nu volatile vapors in excess of ambient background concentrations (1 to 6 H-Nu units). Since the results did not indicate the presence of petroleum hydrocarbon contaminants, and soil samples were not submitted for chemical analysis.

Groundwater Flow Direction

Hart Crowser collected groundwater elevation data from monitoring wells MW-20, MW-23, and other wells located north of the Phase I property on June 4, June 26, and September 13, 1990, to determine groundwater flow direction. On each date, the groundwater flow direction across the Phase I property boundary was to the southwest, from the Tiki property toward the Phase I property.

REMEDIATION PLANS - TIKI PROPERTY

Following discovery of the petroleum hydrocarbon contamination on the Tiki property and adjacent lots by Hart Crowser, Tiki Enterprises retained Kleinfelder environmental consultants to conduct additional investigation of the product release. As part of this work, we understand that Kleinfelder would also develop a strategy for remediating the contaminated soil and groundwater (September 5, 1990, letter from Kleinfelder to Tiki Enterprises). The remediation plan is expected to include a system to pump groundwater from the affected area on and adjacent to the Tiki property, and then remove contaminants from the groundwater via filtering or an air stripping tower. The remediation strategy may also include a system to extract petroleum vapors from soil.

RECOMMENDED REMEDIATION STRATEGY - PHASE I PROPERTY

We understand that TRF is currently negotiating permanent financing for the Phase I property in anticipation of sale of the property in mid-October/November of 1990. Although Hart Crowser believes that the Tiki remediation strategy is a viable, effective approach, we understand that it would not be implemented by the planned property transaction date.

In order to effect remediation on the Phase I property in this time frame, we recommended construction of a subgrade contamination barrier along the northern boundary of the Phase I property to effectively eliminate the migration of gasoline-related constituents onto the Phase I property (Figure 1). Hart Crowser is currently completing a work plan for completing the barrier. As currently planned, the barrier

will consist of a ten-foot-deep trench filled with a low permeability cement/fly ash/bentonite backfill. Contaminated soil from the barrier trench excavation will be removed for off-site disposal. A groundwater interceptor drain will be installed below ground surface along the south side (Phase I property) of the barrier. The purpose of the interceptor drain is to collect localized minor seepage near the barrier and to collect residual groundwater in the affected zone on the Phase I property. Water will be pumped to the surface for storage and water quality testing prior to discharge in the sanitary sewer. The contamination barrier and interceptor trench would separate the affected area on the Phase I property from the source of contamination. Hart Crowser does not expect that remediation for the Phase I property will impede future remediation on, and adjacent to, the Tiki property.

Based on the project chemical analysis, only a limited quantity of soil with fuel hydrocarbon concentrations approaching 480 ppm is present at shallow depths around test pit TP-2. Much of this soil will be excavated during construction of the barrier trench and removed from the property. The sampling data also indicate that petroleum hydrocarbon concentrations decrease rapidly with depth and distance (south and west) from TP-2. After construction of the contamination barrier and interceptor drain, soil concentrations of gasoline-related constituents within the affected area on the Phase I property are expected to decrease over time to below MTCA standards. The small amount of residual groundwater in the affected area will be collected by the interceptor drain system for testing and discharge.

We look forward to working with you on this project. If we may provide any additional information or clarification of this letter, please call us.

Sincerely,

HART CROWSER, INC.

RICHARD F. MOORE
Environmental Specialist

GARRY E. HORVITZ
Principal

RFM/GEH:alm
larryne.lr

Attachments:

Table 1 - Summary of Soil Chemical Analyses
Larry's Market Phase I Property - Bellevue
Table 2 - Summary of Groundwater Chemical Analyses
Larry's Market Phase I Property - Bellevue
Figure 1 - Site and Exploration Plan
Appendix A - Field Explorations and Sampling Methods
Appendix B - Laboratory Analytical Documentation
Analytical Technologies, Inc., and
Analytical Resources Inc.

Table 1 – Summary of Soil Chemical Analyses
Larry's Market Phase I Property – Bellevue

Sample	Date Sampled	Depth in Feet	H-Nu Reading (H-Nu Units)	Odor	Concentrations in ppm: Fuel Hydrocarbons	Benzene	Ethyl-benzene	Toluene	Xylenes
TEST PITS									
TP-1 S-1 (1)	9/13/90	1 to 4	220	gasoline-like	35 (gasoline)	0.064	0.065	<0.025	0.47
TP-1 S-2 (1)	9/13/90	4 to 8	350	gasoline-like	190 (gasoline)	0.10	0.19	<0.025	1.4
TP-1 S-3 (1)	9/13/90	8 to 12	26	-	<5	0.29	<0.025	0.041	0.044
TP-2 S-1 (1)	9/13/90	1 to 3	240	gasoline-like	480 (gasoline)	0.097	7.2	3.5	56
TP-2 S-2 (1)	9/13/90	3 to 7	260	gasoline-like	100 (gasoline)	0.036	0.37	0.070	3.6
TP-2 S-3 (1)	9/13/90	7 to 12	49	-	<5	0.130	<0.025	0.033	0.040
SOIL BORINGS (B) AND MONITORING WELLS (MW)									
MW-20 S-3 (2)	6/4/90	7-1/2 to 9	1	-	<25	<0.056	<0.056	<0.056	0.170
B-22 S-2 (2)	6/4/90	2-1/2 to 4	170	gasoline-like	150 (gasoline)	<0.056	0.370	0.310	2.70
MW-23 S-2 (2)	6/4/90	2-1/2 to 4	1	-	<25	<0.061	<0.061	<0.061	0.025
CURRENT DRAFT ECOLOGY SOIL CLEANUP GUIDELINES (3)					100 (4)	0.66	14	143	NE
PROPOSED MTCA SOIL CLEANUP GUIDELINES (5)					100	0.50	20	40	20

Notes:

Fuel Hydrocarbons: EPA Method 8015 Modified
Benzene, Ethylbenzene, Toluene, and Xylenes: EPA Method 8020 or 8240
NE: Not Established.
<: Indicates concentration below analytical detection limit used.
H-Nu Reading: H-Nu photoionization detector field screening device. Readings in H-Nu units.
(1) Sample analyzed by Analytcal Technology, Inc. (ATI)
(2) Sample analyzed by Analytcal Resources, Inc. (ARI)
(3) August 1988 Draft Soil Cleanup Guidelines for UST removal.
(4) Current Internal Washington State Department of Ecology (Ecology) Policy.
(5) July 27, 1990, Proposed MTCA Soil Compliance Concentrations. Cleanup concentrations have not been formally adopted by Ecology and are expected to change prior to establishing final concentrations.

Table 2 – Summary of Groundwater Chemical Analyses
Larry's Market Phase I Property – Bellevue

		Concentrations in ppm				
Sample	Sample Date	Fuel Hydrocarbons	Benzene	Ethyl-benzene	Toluene	Xylenes
MONITORING WELL MW-20						
MW-20 (1)	6/4/90	<10	<0.001	<0.001	<0.001	<0.002
MW-20 (2)	9/13/90	<1	<0.0005	<0.0005	<0.0005	<0.0005
MONITORING WELL MW-23						
MW-23 (1)	6/4/90	<10	<0.001	<0.001	<0.001	<0.002
MW-23 (2)	9/13/90	<1	<0.0005	<0.0005	<0.0005	<0.0005
CURRENT DRAFT ECOLOGY SOIL CLEANUP GUIDELINES (3)		15	0.066	1.4	14.3	NE
PROPOSED MTCA SOIL CLEANUP GUIDELINES (4)		1	0.005	0.020	0.040	0.020

Notes:

Fuel Hydrocarbons: EPA Method 8015 Modified
Benzene, Ethylbenzene, Toluene, and Xylenes: EPA Method 8020 or 8240

NE: Not Established.
<: Indicates concentration below analytical detection limit used.

(1) Sampled analyzed by Analytical Resources, Inc. (ARI)
(2) Sample analyzed by Analytical Technologies, Inc. (ATI)
(3) August 1988 Draft Groundwater Cleanup Guidelines for UST removal.
(4) July 27, 1990, Proposed MTCA Groundwater Compliance Concentrations. Cleanup concentrations have been formally adopted by Ecology and are expected to change prior to establishing final concentrations.

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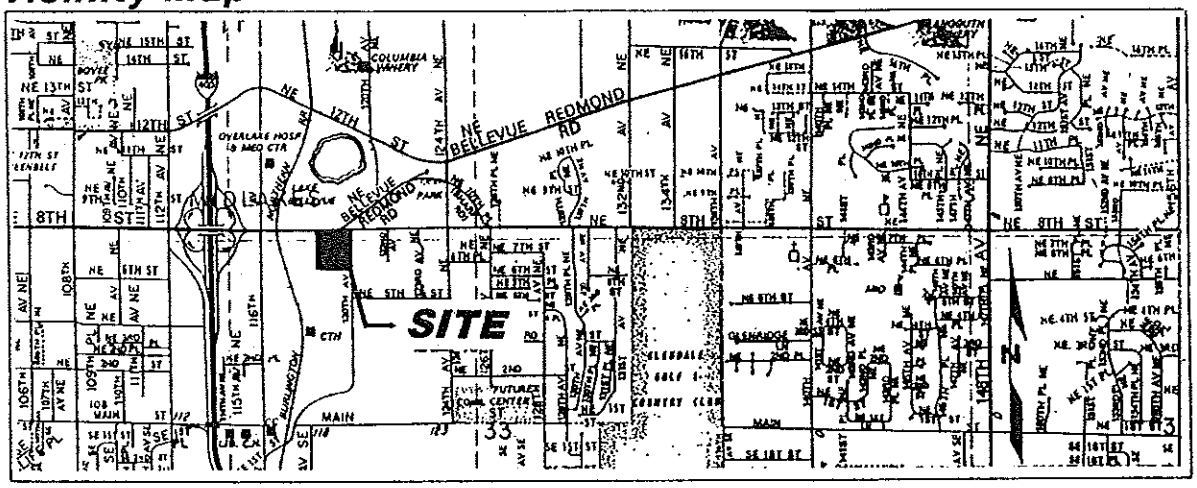
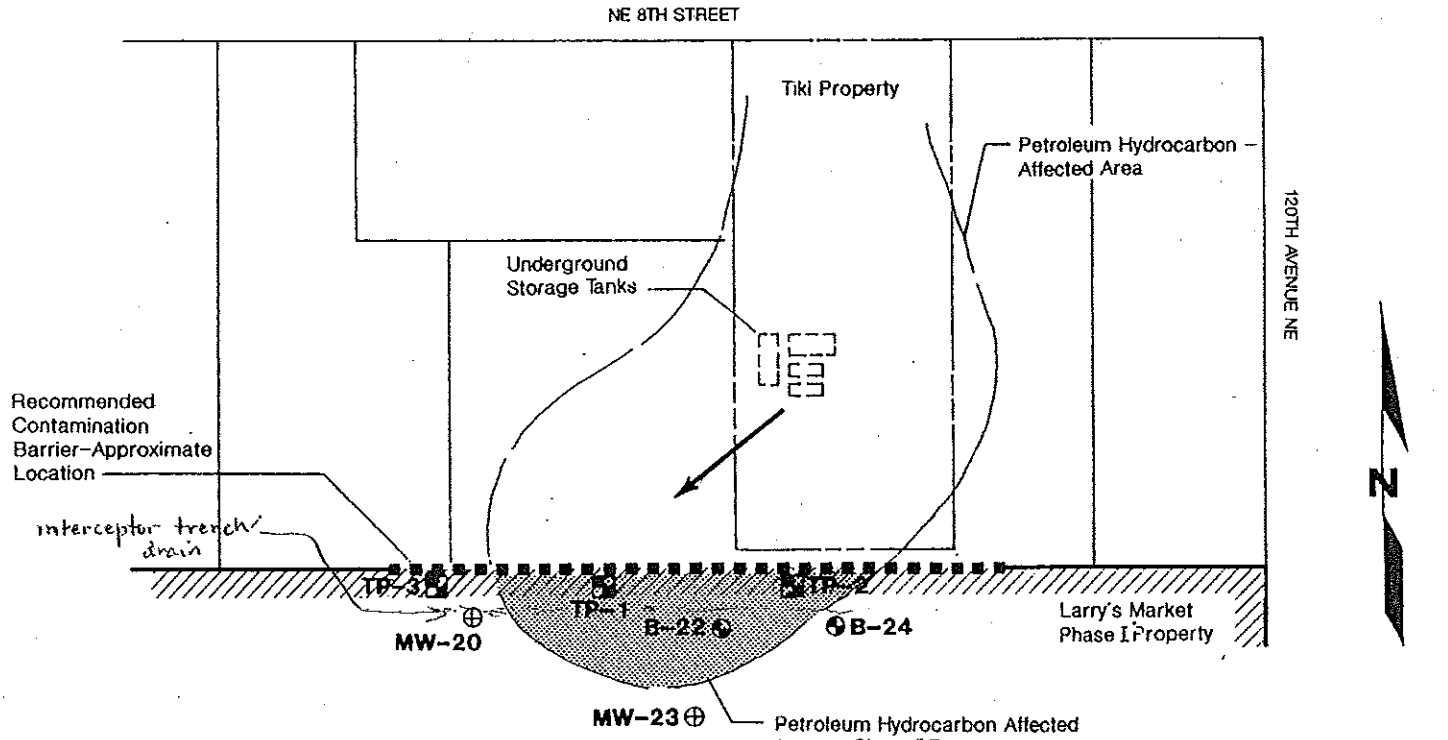
Site and Exploration Plan

Vicinity Map





B-11 Boring Location and Number

MW-5 Monitoring Well Location and Number

TP-1 Test Pit Location and Number

Groundwater Flow Direction
(Southwest Portion of Affected Area)

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Figure 1

APPENDIX A
FIELD EXPLORATIONS AND SAMPLING METHODS

APPENDIX A
FIELD EXPLORATIONS AND SAMPLING METHODS

Subsurface Explorations

Subsurface explorations for this project included test pit excavations TP-1 through TP-3, soil borings B-22 and B-24, and monitoring wells MW-20 and MW-23. Test pits were completed by J.R. Abbott Construction Company, Inc., under direct contract to TRF Pacific, Inc., on September 13, 1990. Soil borings and monitoring wells were completed by McDonald Holt, Inc., under subcontract to Hart Crowser, on May 25, May 31, and June 1, 1990.

Figure 1, the Site and Exploration Plan located at the end of the report text, shows the locations of the site explorations, located by existing physical features. Surface elevations for test pit explorations and soil borings were estimated using elevation data from the "Grading and Storm Drainage" map by Bush, Roed, and Hitchings, Inc., dated May 1, 1989, and revised December 12, 1989. Elevations of monitoring well monuments (ground surface) were surveyed by Hart Crowser relative to the 144.43-foot elevation of the benchmark located near the Tiki Car Wash/Dollar Rent-a-Car property boundary next to NE 8th Street. The benchmark elevation datum was verbally reported to Hart Crowser in the field on June 26, 1990, by Applied Geotechnology, Inc. (AGI). AGI reported that the benchmark elevation datum was established via survey by Bush, Roed, and Hitchings.

Test Pit Explorations

To assess soil conditions along the proposed contamination barrier alignment, test pits TP-1 through TP-3 were completed. The test pits were completed using a backhoe to depths of 13 to 14 feet below ground surface. The excavations were observed by an experienced field geologist from Hart Crowser.

Soil Borings and Monitoring Wells

To assess soil and groundwater quality on the Phase I property, soil borings B-22 and B-24, and monitoring wells MW-20 and MW-23 were completed. The explorations were completed to depths of 4 to 13-1/2 feet below ground surface. The explorations used a 3-3/8-inch inside

diameter hollow-stem auger advanced with a truck-mounted drill rig. The drilling was continuously observed by a field representative from Hart Crowser.

Exploration Logs

Exploration logs for test pit, soil boring, and monitoring well explorations completed for this project are presented on Figures A-2 through A-8, at the end of this appendix. The exploration logs show our interpretation of the excavation and drilling sampling data. They indicate the depth where the soils change. Note that the change may be gradual. In the field, we classified the samples taken from the explorations according to the methods presented on Figure A-1 - Key to Exploration Logs. Figure A-1 also provides a legend explaining the symbols and abbreviations used in the logs.

Soil Sample Collection

Test Pit Excavations

In the test pit excavations, Hart Crowser collected representative samples of the soil types from the backhoe bucket using a stainless steel spoon. The density/consistency of the soils (as presented parenthetically on Figures A-2 through A-4 to indicate their having been estimated) is based on the visual observation only, since disturbed soils cannot be measured for in-place density in the laboratory.

For BETX analyses, two discrete samples were collected for each test pit sample depth noted in Table 1, and on the test pit logs. Each discrete sample was extracted separately at the contract receiving laboratory and the extracts were then combined for a composite analysis over the sample depth.

Soil Borings and Monitoring Wells

Soil samples from the soil borings and monitoring wells were obtained using a modified version of the Standard Penetration Test (SPT) with a 2-inch inside diameter split-spoon sampler driven with a 300-pound hammer. The modified test uses a larger diameter sampler than the standard test, and was used to provide adequate sample recovery. The modified SPT is an approximate measure of soil density and consistency.

To be useful, the results must be used with engineering judgement in conjunction with other tests.

The standard SPT (as described in ASTM D 1587) is used to obtain semi-disturbed samples. The modified test is the same as the standard test except that a 2-inch inside diameter split-spoon sampler is employed with a 300-pound hammer. With the hammer free-falling 30 inches, the sampler is driven into the soil for 18 inches. The number of blows required to drive the sampler the last 12 inches only is the modified Standard Penetration Resistance. The modified Standard Penetration Resistance, or blow counts measure the relative density of granular soils and consistency of cohesive soils. The blow counts are presented on boring logs at their respective sample depths. The modified SPT blow counts are roughly equivalent to the blow counts expected from an SPT at the same location. Based on our experience in similar soil conditions, we have inferred the soil densities shown (comparable to what would be obtained from an SPT) on the boring logs.

Monitoring Well Installation

Groundwater monitoring wells MW-20 and MW-23 were installed following completion of the soil borings.

A two-inch-diameter, flush-threaded schedule 80 PVC pipe with a 4-foot screen section was installed in MW-23 to a depth of approximately 9 feet below the ground surface at the time of drilling. In MW-20, a ten-foot screen section was installed to approximately 13 feet below the ground surface. The well screen sections consisted of 0.010-inch slotted PVC pipe. The backfill material around the screened sections consists of clean 20/40 sand which extends approximately one foot above the top of the screen in MW-20, and two feet above the top of the screen in MW-23.

The well installations were sealed with bentonite chips from the top of the sand pack to about 1 foot below ground surface. The top of the wells were encased with an 8-inch-diameter steel monument set in ready-mix cement and flush-mounted in the pavement.

The wells were developed by Hart Crowser on June 4, 1990, by bailing approximately three well casing volumes to remove sediment and allow

fresh groundwater to enter the well. A clean, poly-plastic bailer with polypropylene line was used for bailing each well.

Groundwater samples were collected from each well by Hart Crowser on June 4 and September 13, 1990. Prior to sampling, about three casing volumes of water were purged from the well to allow fresh groundwater to enter the well screen. The method of purging was analogous to the development method described above. A measurement of depth to groundwater was taken in each monitoring well using an electric well sounder prior to purging for sampling. The reference measuring point was the top of the well monument (ground surface elevation noted on each well log).

Sample Handling and Transfer

During sampling of soils from the test pit excavations, monitoring wells, and soil borings, soils were transferred directly to specially cleaned, air-tight glass jars provided by the contract receiving laboratories using a clean, stainless steel spoon.

Groundwater samples obtained from the monitoring wells were poured from the bailer into clean bottles provided by the contract receiving laboratory.

Sample jars and bottles were labeled, placed in an insulated cooler with ice, and delivered to the contract receiving laboratory. Sample custody forms accompanied the samples to the laboratory.

Sampling equipment and stainless steel spoons were brush-scrubbed clean with Alconox detergent and then rinsed with deionized water between samples. Backhoe, drilling, and sampling equipment was steam-cleaned prior to drilling and between explorations, using a high-pressure hot water washer.

Organic Vapor Detection

Organic vapors were measured in soil sample jar headspaces during the field investigation using an H-Nu portable photoionization detector. The H-Nu measurements were made by piercing the foil-covered headspace jar with the H-Nu probe. These sample jar organic vapor

readings are presented on the exploration logs on Figures A-2 through A-8.

The H-Nu has a sealed ultraviolet light source which emits photons which ionizes trace organics but does not ionize the major components of air. Which organic vapors are detected depends on the photoionization potential of the particular compounds, and the calibration and lamp voltage of the instrument. For instance, some organic vapors, such as methane, cannot be detected by the H-Nu.

For the field observation, the H-Nu was equipped with a 10.2 eV lamp. The instrument was calibrated to a benzene equivalent which has the lowest human exposure threshold in air of the volatile organic compounds commonly found in gasoline. The organic vapor concentrations measured by the H-Nu can be correlated to the total volatile compounds in a given sample and are, therefore, a useful screening test. The H-Nu values are also used for environmental monitoring as a health and safety measure.

Key to Exploration Logs

Sample Descriptions

Classification of soils in this report is based on visual field and laboratory observations which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. Visual-manual classification methods of ASTM D 2488 were used as an identification guide.

Soil descriptions consist of the following:
Density/consistency, moisture, color, minor constituents, MAJOR CONSTITUENT, additional remarks.

Density/Consistency

Soil density/consistency in borings is related primarily to the Standard Penetration Resistance. Soil density/consistency in test pits is estimated based on visual observation and is presented parenthetically on the test pit logs.

SAND or GRAVEL Density	Standard Penetration Resistance in Blows/Foot	SILT or CLAY Consistency	Standard Penetration Resistance in Blows/Foot	Approximate Shear Strength in TSF
Very loose	0 - 4	Very soft	0 - 2	<0.125
Loose	4 - 10	Soft	2 - 4	0.125 - 0.25
Medium dense	10 - 30	Medium stiff	4 - 8	0.25 - 0.5
Dense	30 - 50	Stiff	8 - 15	0.5 - 1.0
Very dense	>50	Very stiff	15 - 30	1.0 - 2.0
		Hard	>30	>2.0

Moisture

Dry	Little perceptible moisture
Damp	Some perceptible moisture, probably below optimum
Moist	Probably near optimum moisture content
Wet	Much perceptible moisture, probably above optimum

Minor Constituents

	Estimated Percentage
Not identified in description	0 - 5
Slightly (clayey, silty, etc.)	5 - 12
Clayey, silty, sandy, gravelly	12 - 30
Very (clayey, silty, etc.)	30 - 50

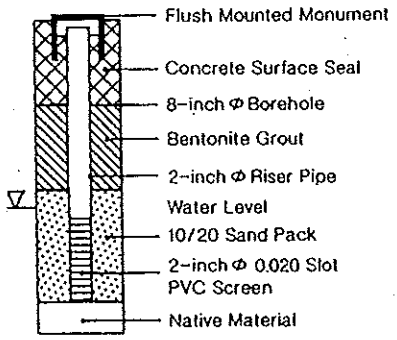
Legends

Sampling

BORING SAMPLES

- Split Spoon
- Shelby Tube
- Cuttings
- No Sample Recovery
- P — Tube Pushed, Not Driven

Monitoring Well Observations



Test Symbols

GS	Grain Size Classification
CN	Consolidation
TUU	Triaxial Unconsolidated Undrained
TCU	Triaxial Consolidated Undrained
TCD	Triaxial Consolidated Drained
QU	Unconfined Compression
DS	Direct Shear
K	Permeability
PP	Pocket Penetrometer Approximate Compressive Strength in TSF
TV	Torvane Approximate Shear Strength in TSF
CBR	California Bearing Ratio
MD	Moisture Density Relationship
AL	Atterberg Limits

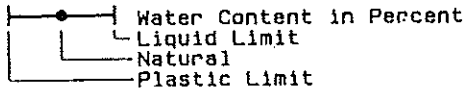


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Figure A-1

Log of Test Pit TP-1

Ground Surface Elevation Approximately 140 Feet

Sample Number	Sample Depth in Feet	H-Nu Reading in H-Nu Units	Water Content in Percent	Stratum Depth in Feet	Sample Description
				0 to 1	Four inches of asphalt concrete over (medium dense), moist, gray, slightly silty, gravelly SAND (base course aggregate).
S-1 S-2	1 to 4 4 to 8	200 350	11 11	1 to 8	(Medium dense), moist, mottled brown, slightly gravelly, silty SAND with boulders less than 18 inches in diameter. Grades to wet at 6½ feet depth.
S-3	8 to 12	26	9	8 to 13	(Dense to very dense), damp to moist, gray, slightly gravelly, silty SAND (TILL).

Bottom of TP-1 at 13 feet, completed 9/13/90.
Seepage (< 1 gallon per hour) noted at 7½-foot depth.

Log of Test Pit TP-2

Ground Surface Elevation Approximately 140 Feet

Sample Number	Sample Depth in Feet	H-Nu Reading in H-Nu Units	Water Content in Percent	Stratum Depth in Feet	Sample Description
					Four inches of asphalt concrete over (medium dense), moist to wet, brown-gray, slightly silty, gravelly SAND (base course aggregate).
S-1 S-2	1 to 3 3 to 7	240 260	10 10	1 to 6½	(Medium dense), moist, mottled brown, slightly gravelly, silty SAND with cobbles less than 10 inches in diameter.
S-3 S-4	7 to 12 12 to 14	49 48	9 10	6½ to 14	(Dense to very dense), moist, gray, gravelly, silty SAND (TILL) with cobbles less than 10 inches in diameter.

Bottom of TP-2 at 14 feet, completed 9/13/90.
Seepage (< 1 gallon per hour) noted at 7½-foot depth.
Seepage (~ 5 gallon per hour) noted at 12½-foot depth.

Log of Test Pit TP-3

Ground Surface Elevation Approximately 140 Feet

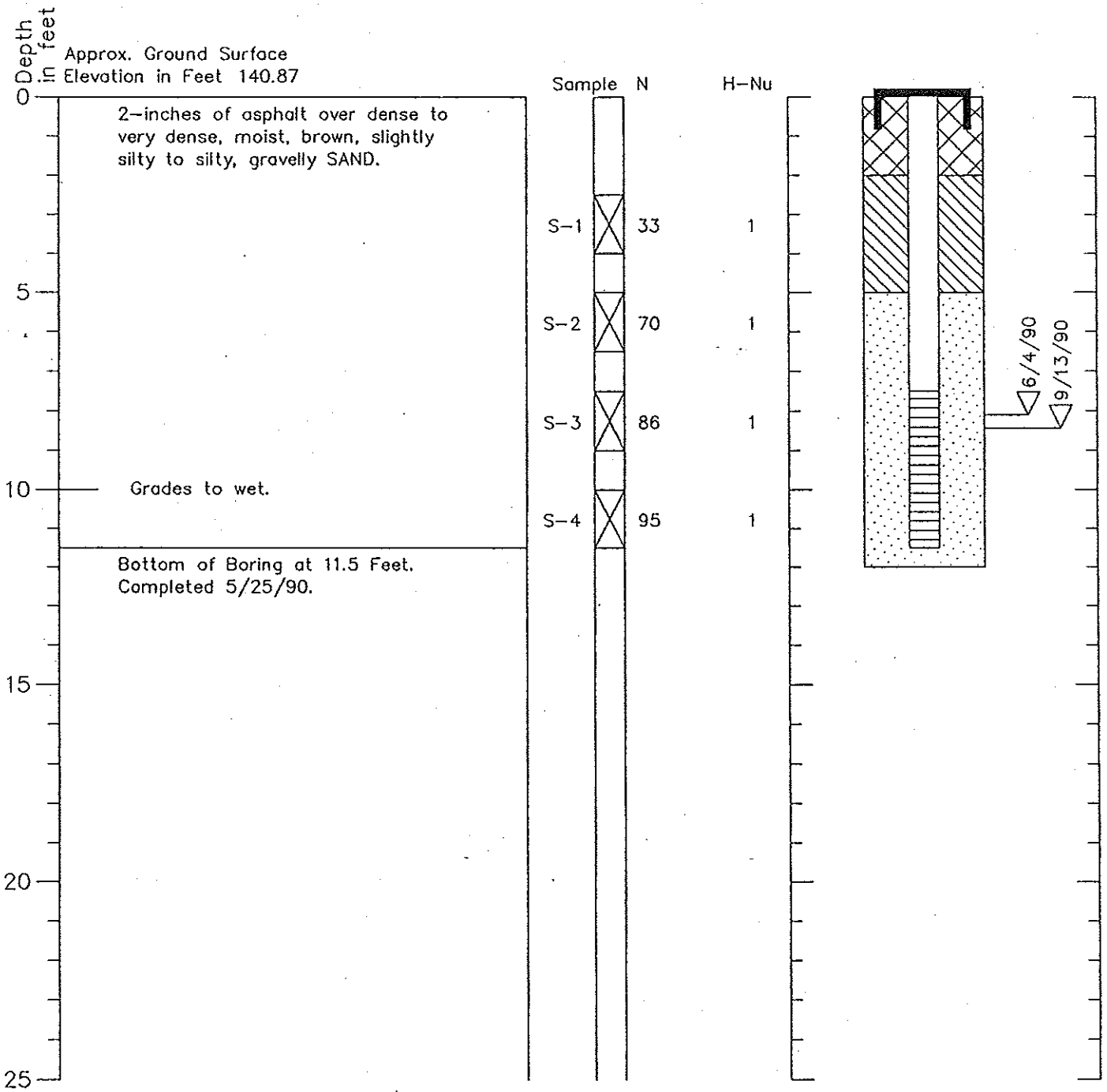
Sample Number	Sample Depth in Feet	H-Nu Reading in H-Nu Units	Water Content in Percent	Stratum Depth in Feet	Sample Description
					Four inches of asphalt concrete over (medium dense), moist, gray-brown, silty, gravelly SAND (base course aggregate).
S-1	1 to 2½	1	3	1 to 2½	(Medium dense), damp, gray-brown, slightly silty, very gravelly SAND (FILL).
S-2	2½ to 11	1	9	2½ to 11	(Medium dense), moist, gray-brown, slightly gravelly, silty SAND. Grades to wet at 8½ feet depth.
S-3	11 to 14	1	8	11 to 14	(Dense to very dense), damp to moist, gray, slightly gravelly, silty SAND (TILL).

Bottom of TP-1 at 14 feet, completed 9/13/90.
Seepage (~ 3 gallon per hour) noted at 8½-foot depth.

Boring Log and Construction Data for Monitoring Well MW-20

Geologic Log

Monitoring Well Design



1. Refer to Figure A–1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
4. Elevations measured relative to an assumed reference datum of 144.43 at benchmark near the Tiki Carwash/ Dollar–Rent–A–Car property boundary adjacent to NE 8th street.

HARTCROWSER

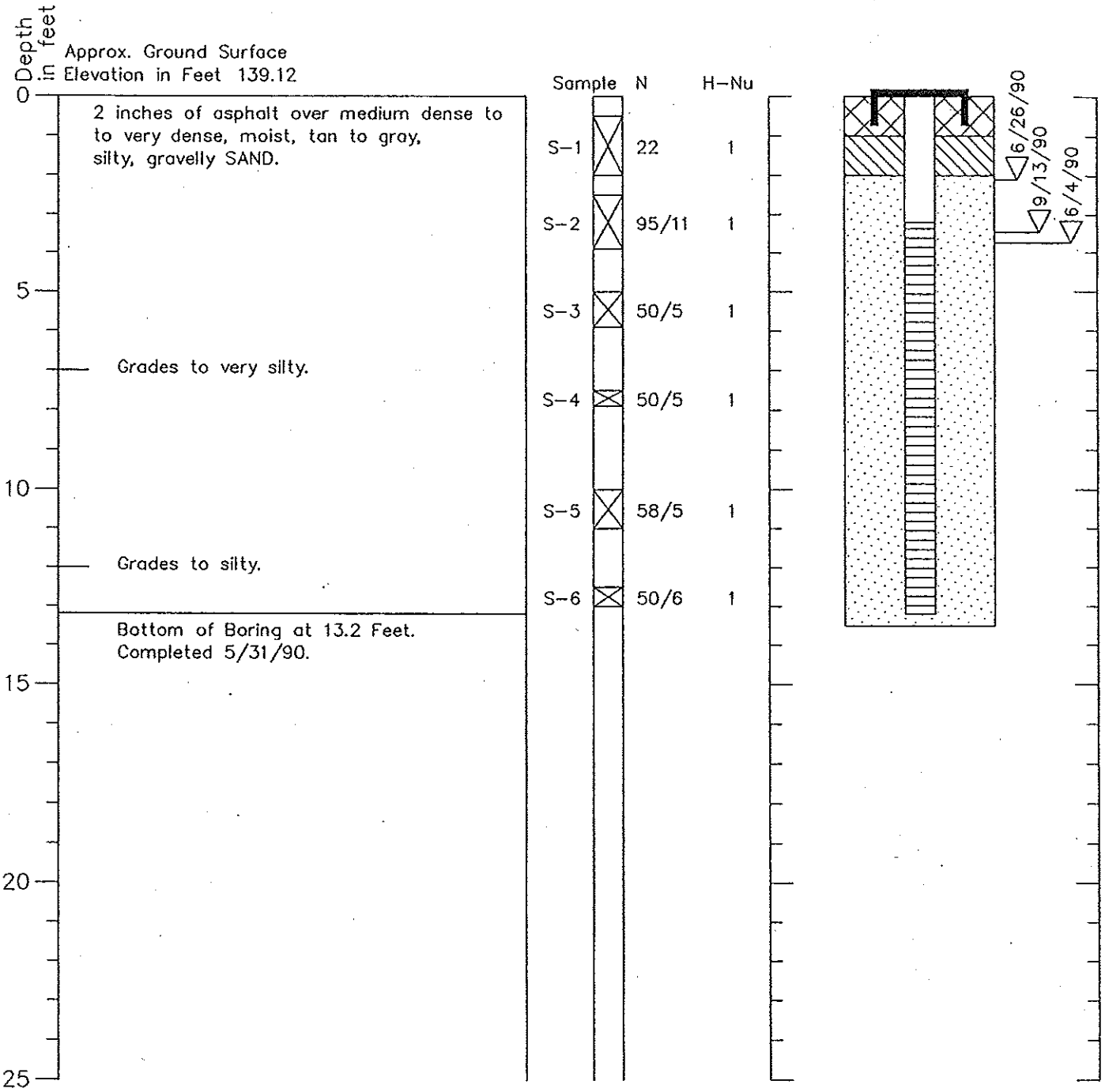
J-2104-03 5/90

Figure A-5

Boring Log and Construction Data for Monitoring Well MW-23

Geologic Log

Monitoring Well Design



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
4. Elevations measured relative to an assumed reference datum of 144.43 at benchmark near the Tiki Carwash/ Dollar-Rent-A-Car property boundary adjacent to NE 8th street.

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Figure A-6

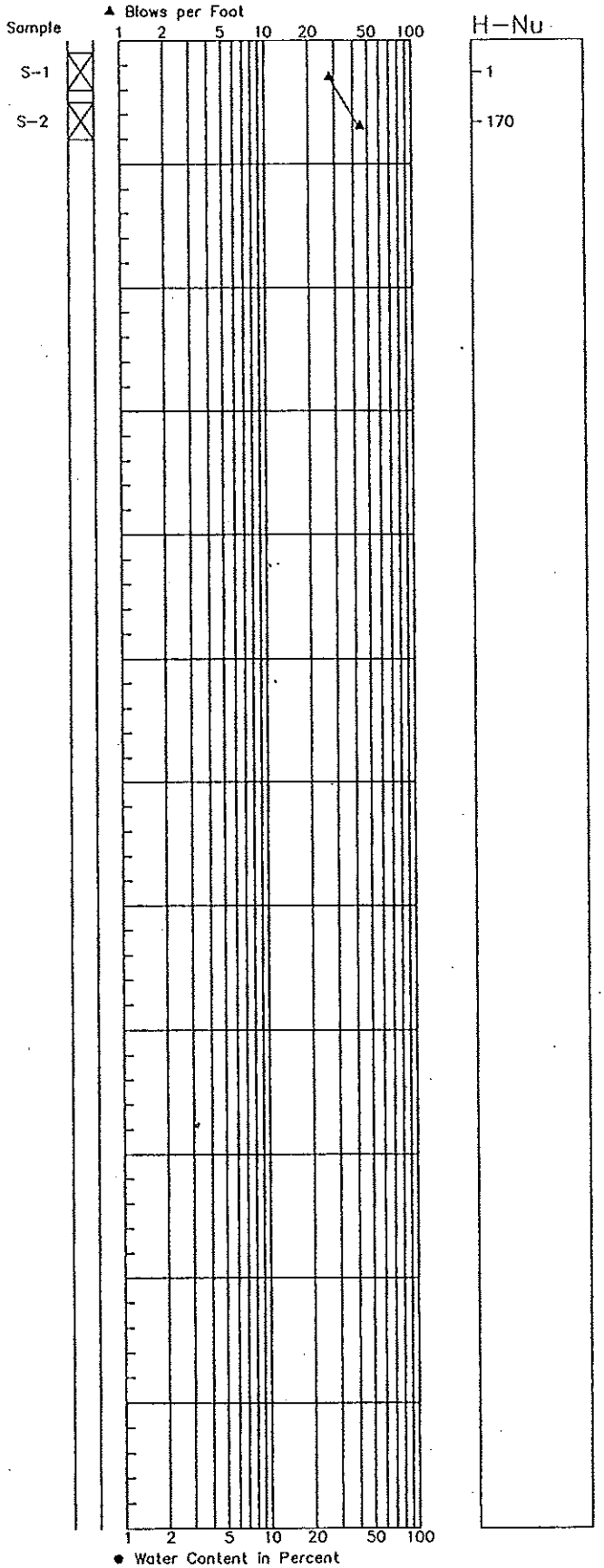
Boring Log B-22

Soil Descriptions

Ground Surface Elevation in Feet 139

Depth in Feet	Soil Description
0	2 inches of asphalt over medium dense to dense, moist, tan to gray, gravelly, silty SAND.
5	Bottom of Boring at 4.0 Feet. Completed 5/31/90.
	Note: Gasoline-like odor in sample S-2.
10	
15	
20	
25	
30	
35	
40	
45	
50	
55	
60	

STANDARD PENETRATION RESISTANCE



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

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J-2104-03 5/90

Figure A-7 1/1

Boring Log B-24

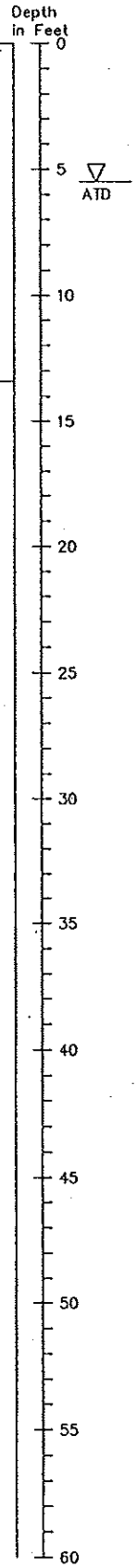
Soil Descriptions

Ground Surface Elevation in Feet 138

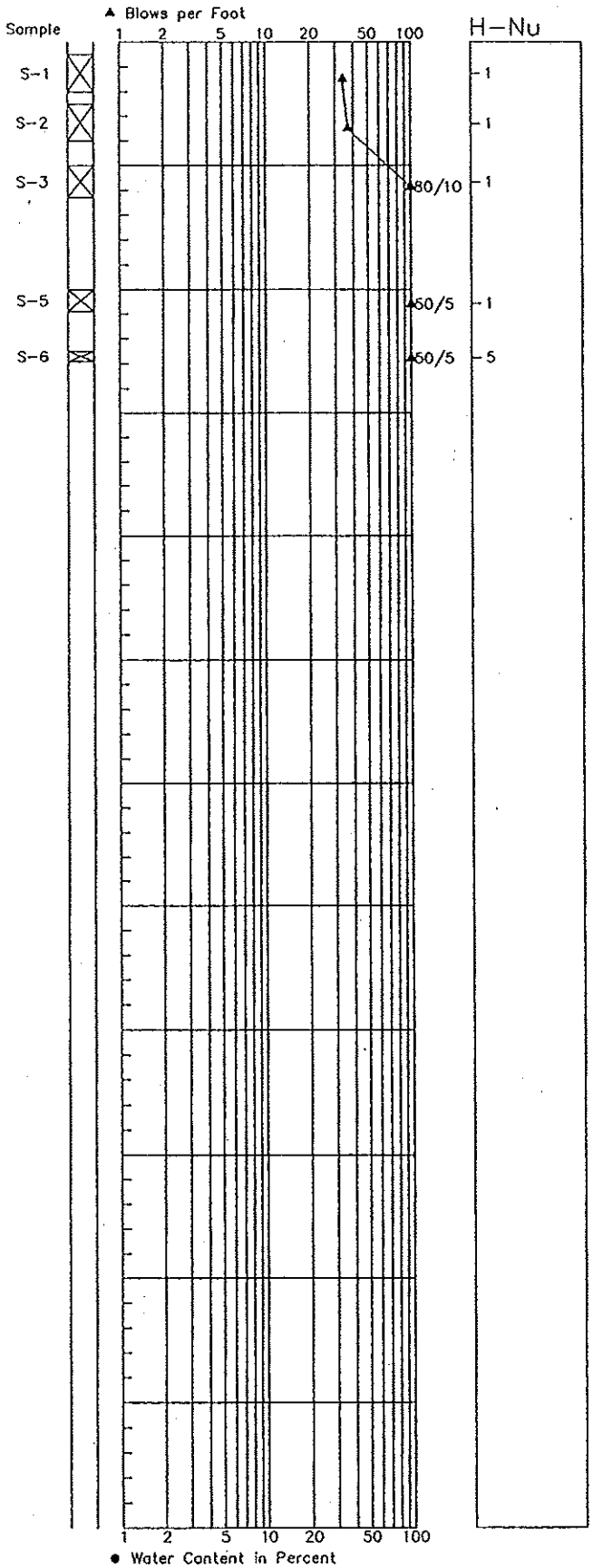
2 inches of asphalt over dense to very dense, moist, gray to tan, gravelly, silty SAND.

Grades to very gravelly.

Bottom of Boring at 13.4 Feet.
Completed 6/1/90.



STANDARD PENETRATION RESISTANCE



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

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Figure A-8 1/1

APPENDIX B
LABORATORY ANALYTICAL DOCUMENTATION

Hart Crowser
J-2104-03

ANALYTICAL TECHNOLOGIES, INC.

Analytical Technologies, Inc. 560 Naches Avenue, S.W., Suite 101, Renton, WA 98055, (206) 228-8335

ATI I.D. # 9009-089

September 28, 1990

Hart Crowser, Inc.
1910 Fairview Avenue East
Seattle, WA 98102-3699

Attention : Rick Moore

Project Number : 2104-02

Project Name : N. E. 8th Bellevue

On September 14, 1990, Analytical Technologies, Inc. received six soil samples and two water samples for analysis. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The results, sample cross reference, and the quality control data are enclosed.

Emily C. Carfioli
Senior Project Manager

Frederick W. Grothkopp
Technical Manager

FWG/elf

SAMPLE CROSS REFERENCE SHEET

CLIENT : HART CROWSER, INC.
PROJECT # : 2104-02
PROJECT NAME : N. E. 8TH BELLEVUE

ATI #	CLIENT DESCRIPTION	DATE SAMPLED	MATRIX
9009-089-1	TP1 S1	09/13/90	SOIL
9009-089-2	TP1 S2	09/13/90	SOIL
9009-089-3	TP1 S3	09/13/90	SOIL
9009-089-4	TP2 S1	09/13/90	SOIL
9009-089-5	TP2 S2	09/13/90	SOIL
9009-089-6	TP2 S3	09/13/90	SOIL
9009-089-7	MW-20	09/13/90	WATER
9009-089-8	MW-23	09/13/90	WATER

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	6
WATER	2

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

ANALYTICAL SCHEDULE

CLIENT : HART CROWSER, INC.
PROJECT # : 2104-02
PROJECT NAME : N. E. 8TH BELLEVUE

ANALYSIS	TECHNIQUE	REFERENCE	LAB
BETX	GC/PID	EPA 8020	R
FUEL HYDROCARBONS	GC/FID	EPA 8015 MODIFIED	R
MOISTURE	GRAVIMETRIC	METHOD 7-2.2	R

R = ATI - Renton
SD = ATI - San Diego
T = ATI - Tempe
PNR = ATI - Pensacola
FC = ATI - Fort Collins
SUB = Subcontract

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 2104-02	DATE RECEIVED	: N/A
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: N/A
CLIENT I.D.	: REAGENT BLANK	DATE ANALYZED	: 09/21/90
SAMPLE MATRIX	: WATER	UNITS	: ug/L
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

COMPOUND	RESULT
BENZENE	<0.5
ETHYLBENZENE	<0.5
TOLUENE	<0.5
TOTAL XYLENES	<0.5
SURROGATE PERCENT RECOVERY	
BROMOFLUOROBENZENE	86

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-20	DATE ANALYZED	: 09/21/90*
SAMPLE MATRIX	: WATER	UNITS	: ug/L
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

COMPOUND	RESULT
BENZENE	<0.5
ETHYLBENZENE	<0.5
TOLUENE	<0.5
TOTAL XYLENES	<0.5
SURROGATE PERCENT RECOVERY	
BROMOFLUOROBENZENE	87

* Analyzed past the 14-day hold time.

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: N/A
CLIENT I.D.	: MW-23	DATE ANALYZED	: 09/21/90*
SAMPLE MATRIX	: WATER	UNITS	: ug/L
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

COMPOUND	RESULT
BENZENE	<0.5
ETHYLBENZENE	<0.5
TOLUENE	<0.5
TOTAL XYLENES	<0.5
SURROGATE PERCENT RECOVERY	
BROMOFLUOROBENZENE	90

* Analyzed past the 14-day hold time.

PURGEABLE AROMATICS
QUALITY CONTROL DATA

CLIENT : HART CROWSER, INC.
PROJECT # : 2104-02
PROJECT NAME : N. E. 8TH BELLEVUE
EPA METHOD : 8020 (BETX)

SAMPLE I.D. : 9009-098-4
DATE ANALYZED : 09/19/90
MATRIX : WATER
UNITS : ug/L

COMPOUND	SAMPLE RESULT	SPIKE ADDED	SPIKED SAMPLE	% REC	DUP SPIKED SAMPLE	DUP % REC	RPD
BENZENE	<0.5	12.0	13.0	108	12.5	104	4
TOLUENE	<0.5	12.0	13.4	111	12.6	105	6
TOTAL XYLENES	<0.5	16.6	17.7	107	16.8	101	5

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 2104-02	DATE RECEIVED	: N/A
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/14/90
CLIENT I.D.	: REAGENT BLANK	DATE ANALYZED	: 09/25/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

RESULTS BASED ON DRY WEIGHT

COMPOUND	RESULT
BENZENE	<0.025
ETHYLBENZENE	<0.025
TOLUENE	<0.025
TOTAL XYLENES	<0.025

SURROGATE PERCENT RECOVERY

BROMOFLUOROBENZENE	115

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 2104-02	DATE RECEIVED	: N/A.
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: REAGENT BLANK	DATE ANALYZED	: 09/22/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

RESULTS BASED ON DRY WEIGHT

COMPOUND	RESULT
BENZENE	<0.025
ETHYLBENZENE	<0.025
TOLUENE	<0.025
TOTAL XYLENES	<0.025

SURROGATE PERCENT RECOVERY	
BROMOFLUOROBENZENE	117

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/14/90
CLIENT I.D.	: TP1 S1	DATE ANALYZED	: 09/24/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

RESULTS BASED ON DRY WEIGHT

COMPOUND	RESULT
BENZENE	0.064
ETHYLBENZENE	0.065
TOLUENE	<0.025
TOTAL XYLENES	0.47

SURROGATE PERCENT RECOVERY	
BROMOFLUOROBENZENE	81

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/14/90
CLIENT I.D.	: TP1 S2	DATE ANALYZED	: 09/25/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

RESULTS BASED ON DRY WEIGHT

COMPOUND	RESULT
BENZENE	0.10
ETHYLBENZENE	0.19
TOLUENE	<0.025
TOTAL XYLENES	1.4

SURROGATE PERCENT RECOVERY	
BROMOFLUOROBENZENE	80

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/14/90
CLIENT I.D.	: TP1 S3	DATE ANALYZED	: 09/25/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

RESULTS BASED ON DRY WEIGHT

COMPOUND	RESULT
BENZENE	0.29
ETHYLBENZENE	<0.025
TOLUENE	0.041
TOTAL XYLENES	0.044

SURROGATE PERCENT RECOVERY	
BROMOFLUOROBENZENE	78

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/14/90
CLIENT I.D.	: TP2 S1	DATE ANALYZED	: 09/25/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

RESULTS BASED ON DRY WEIGHT

COMPOUND	RESULT	
BENZENE	0.097	
ETHYLBENZENE	7.2	*
TOLUENE	3.5	
TOTAL XYLENES	56	*

SURROGATE PERCENT RECOVERY

BROMOFLUOROBENZENE	100

* Dilution factor = 25.

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: TP2 S2	DATE ANALYZED	: 09/21/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

RESULTS BASED ON DRY WEIGHT

COMPOUND	RESULT
BENZENE	0.036
ETHYLBENZENE	0.37
TOLUENE	0.070
TOTAL XYLENES	3.6

SURROGATE PERCENT RECOVERY

BROMOFLUOROBENZENE	119

PURGEABLE AROMATICS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: TP2 S3	DATE ANALYZED	: 09/22/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8020 (BETX)	DILUTION FACTOR	: 1

RESULTS BASED ON DRY WEIGHT

COMPOUND	RESULT
BENZENE	0.13
ETHYLBENZENE	<0.025
TOLUENE	0.033
TOTAL XYLENES	0.040

SURROGATE PERCENT RECOVERY

BROMOFLUOROBENZENE	99

PURGEABLE AROMATICS
QUALITY CONTROL DATA

CLIENT : HART CROWSER, INC.
PROJECT # : 2104-02
PROJECT NAME : N. E. 8TH BELLEVUE
EPA METHOD : 8020 (BETX)

SAMPLE I.D. : 9009-089-3
DATE EXTRACTED : 09/14/90
DATE ANALYZED : 09/24/90
MATRIX : SOIL
UNITS : mg/Kg

COMPOUND	SAMPLE RESULT	SPIKE ADDED	SPIKED SAMPLE	% REC	DUP SPIKED SAMPLE	DUP % REC	RPD
BENZENE	0.069	0.60	0.542	79	0.616	91	13
TOLUENE	<0.025	0.60	0.565	94	0.529	88	7
TOTAL XYLENES	0.033	0.83	0.770	89	0.715	82	7

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PURGEABLE AROMATICS
QUALITY CONTROL DATA

CLIENT	: HART CROWSER, INC.	SAMPLE I.D.	: 9009-103-1
PROJECT #	: 2104-02	DATE EXTRACTED	: 09/17/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE ANALYZED	: 09/21/90
EPA METHOD	: 8020 (BETX)	MATRIX	: SOIL
		UNITS	: mg/Kg

COMPOUND	SAMPLE RESULT	SPIKE ADDED	SPIKED SAMPLE	% REC	DUP SPIKED SAMPLE	DUP % REC	RPD
BENZENE	<0.025	0.60	0.551	92	0.518	86	6
TOLUENE	<0.025	0.60	0.589	98	0.548	91	7
TOTAL XYLENES	<0.025	0.83	0.812	98	0.758	91	7

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 2104-02	DATE RECEIVED	: N/A
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: REAGENT BLANK	DATE ANALYZED	: 09/21/90
SAMPLE MATRIX	: WATER	UNITS	: mg/L
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	<1
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<1
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: MW-20	DATE ANALYZED	: 09/21/90
SAMPLE MATRIX	: WATER	UNITS	: mg/L
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	<1
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<1
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: MW-23	DATE ANALYZED	: 09/21/90
SAMPLE MATRIX	: WATER	UNITS	: mg/L
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	<1
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<1
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: HART CROWSER, INC.	SAMPLE I.D.	: 9009-085-4
PROJECT #	: 2104-02	DATE EXTRACTED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE ANALYZED	: 09/21/90
EPA METHOD	: 8015 MODIFIED	MATRIX	: WATER
		UNITS	: mg/L

COMPOUND	SAMPLE RESULT	CONC SPIKED	SPIKED SAMPLE	% REC	DUP SPIKED SAMPLE	DUP % RECOVERY	RPD
FUEL HYDROCARBONS	<1	100	106	106	78	78	30

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 2104-02	DATE RECEIVED	: N/A
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: REAGENT BLANK	DATE ANALYZED	: 09/22/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: TP1 S1	DATE ANALYZED	: 09/22/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	35
HYDROCARBON RANGE	C6 - C14
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: TP1 S2	DATE ANALYZED	: 09/22/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	190
HYDROCARBON RANGE	C6 - C14
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: TP1 S3	DATE ANALYZED	: 09/22/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: TP2 S1	DATE ANALYZED	: 09/22/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	480
HYDROCARBON RANGE	C6 - C14
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: TP2 S2	DATE ANALYZED	: 09/22/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	100
HYDROCARBON RANGE	C6 - C14
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS ANALYSIS
DATA SUMMARY

CLIENT	: HART CROWSER, INC.	DATE SAMPLED	: 09/13/90
PROJECT #	: 2104-02	DATE RECEIVED	: 09/14/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE EXTRACTED	: 09/17/90
CLIENT I.D.	: TP2 S3	DATE ANALYZED	: 09/22/90
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
EPA METHOD	: 8015 MODIFIED	DILUTION FACTOR	: 1

COMPOUND	RESULT
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	GASOLINE
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	-
HYDROCARBONS QUANTITATED USING	DIESEL

FUEL HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: HART CROWSER, INC.	SAMPLE I.D.	: 9009-089-3
PROJECT #	: 2104-02	DATE EXTRACTED	: 09/17/90
PROJECT NAME	: N. E. 8TH BELLEVUE	DATE ANALYZED	: 09/22/90
EPA METHOD	: 8015 MODIFIED	MATRIX	: SOIL
		UNITS	: mg/Kg

COMPOUND	SAMPLE RESULT	CONC SPIKED	SPIKED SAMPLE	% REC	DUP SPIKED SAMPLE	DUP % RECOVERY	RPD
FUEL HYDROCARBONS	<5	500	515	103	494	99	4

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

GENERAL CHEMISTRY RESULTS

CLIENT : HART CROWSER, INC.
PROJECT # : 2104-02
PROJECT NAME : N. E. 8TH BELLEVUE

SAMPLE MATRIX : SOIL
UNITS : %

ATI I.D.#	CLIENT I.D.	MOISTURE
9009-089-1	TP1 S1	20
9009-089-2	TP1 S2	12
9009-089-3	TP1 S3	8.2
9009-089-4	TP2 S1	9.1
9009-089-5	TP2 S2	8.6
9009-089-6	TP2 S3	9.3

GENERAL CHEMISTRY QUALITY CONTROL

CLIENT : HART CROWSER, INC.
PROJECT # : 2104-02
PROJECT NAME : N. E. 8TH BELLEVUE

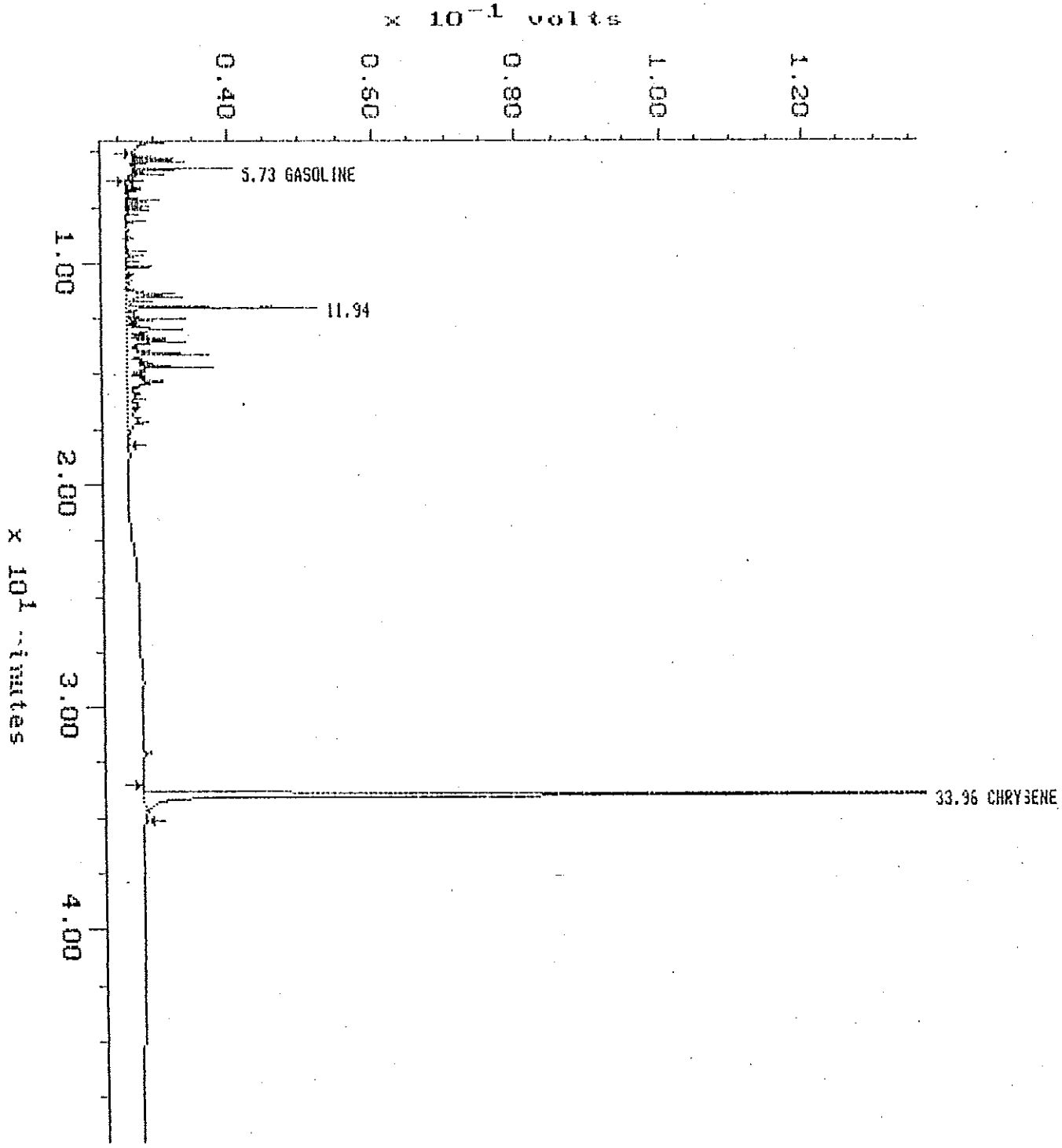
SAMPLE MATRIX : SOIL
UNITS : %

PARAMETER	ATI I.D.	SAMPLE RESULT	DUP RESULT	RPD	SPIKED RESULT	SPIKE ADDED	% REC
MOISTURE	9009-084-1	12	13	8	N/A	N/A	N/A

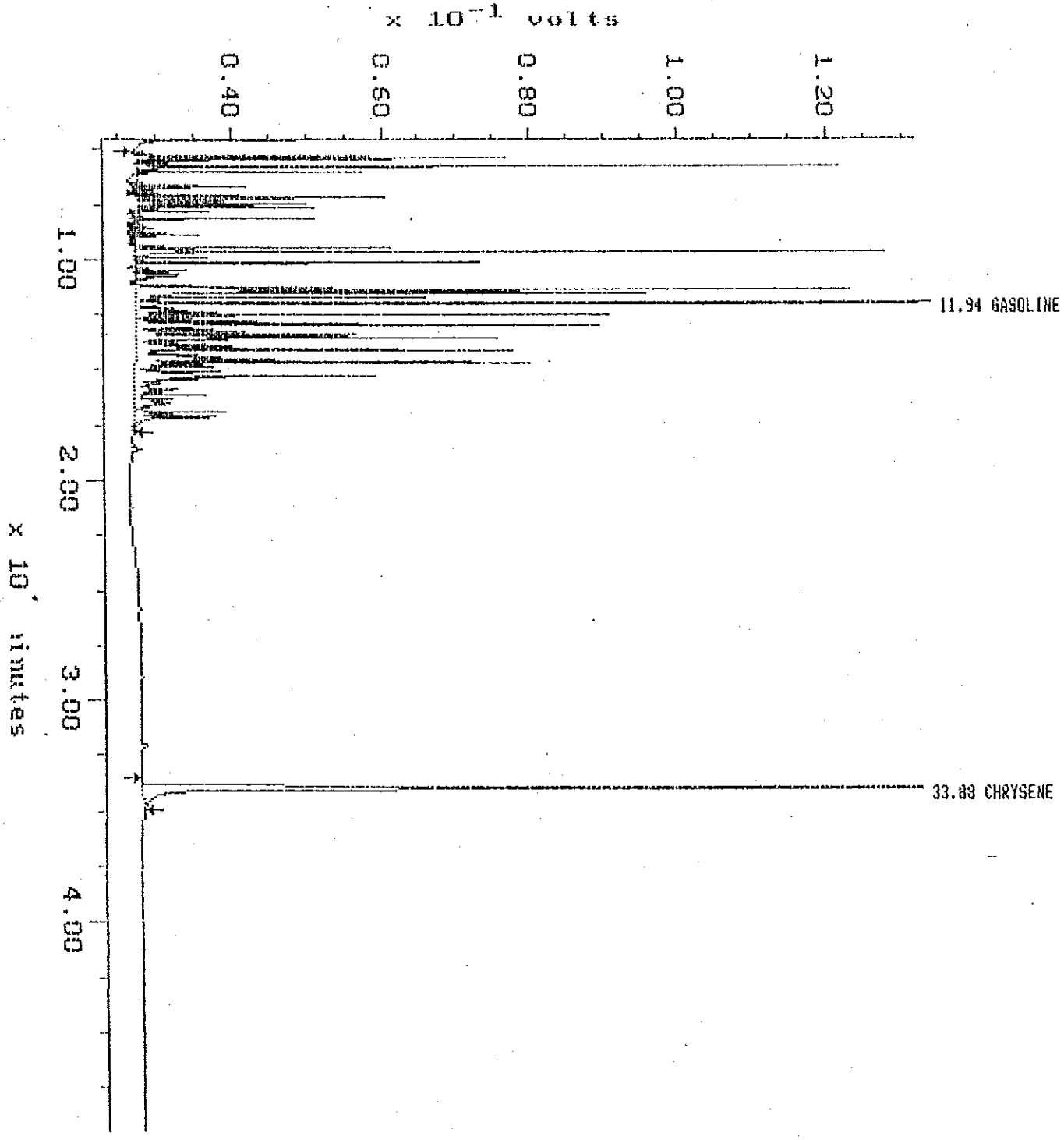
$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

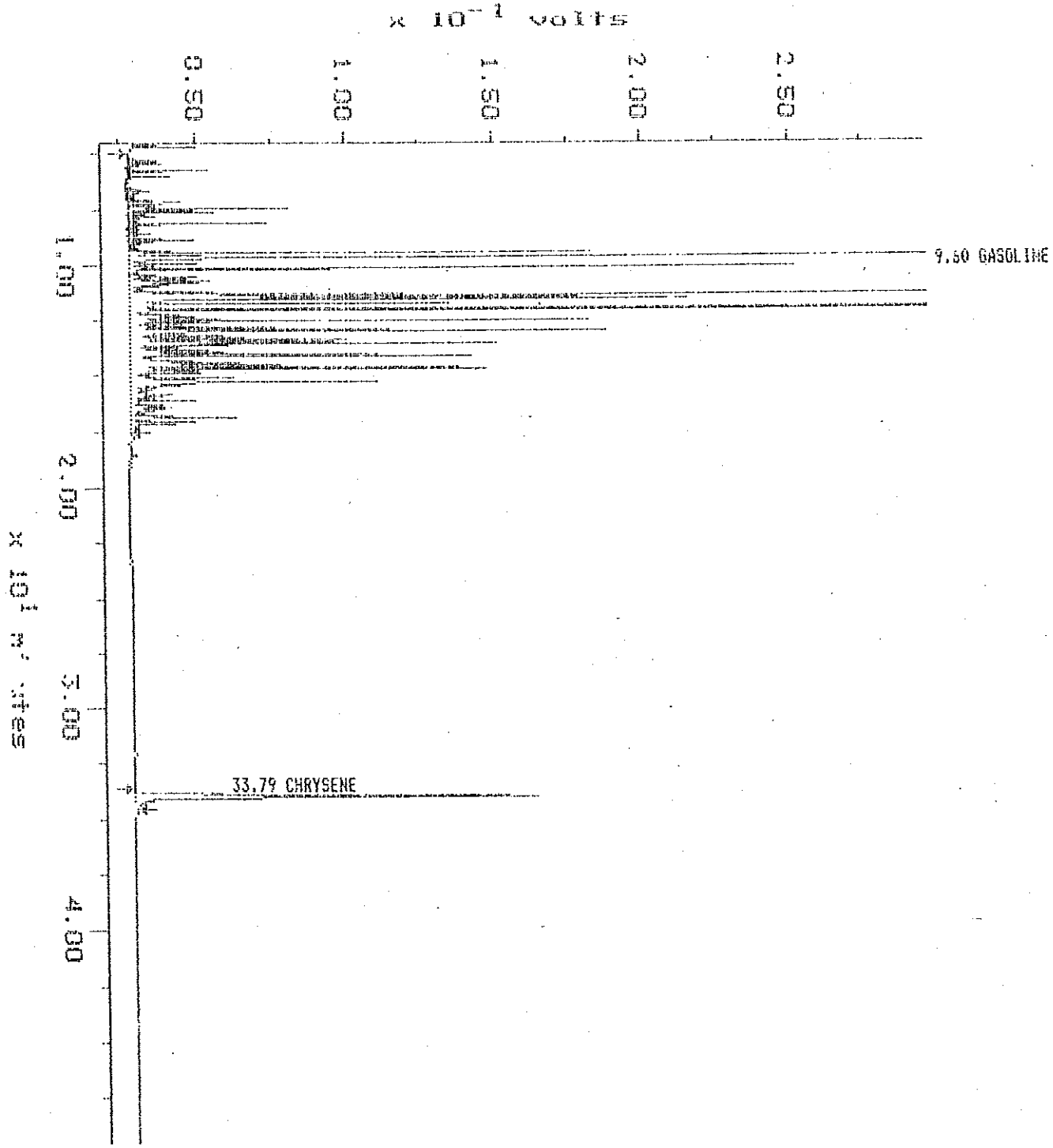
Sample: 9009-089-1 Channel: detector 1 Filename: 0PF03404
Acquired: 22-SEP-90 6:53 Method: L:\MAXDATA\PACK-F\FUEL921 Operator: LAL
Comments: 8015 FUEL FINGERPRINT/ 1UL INJECT ON PACKIE



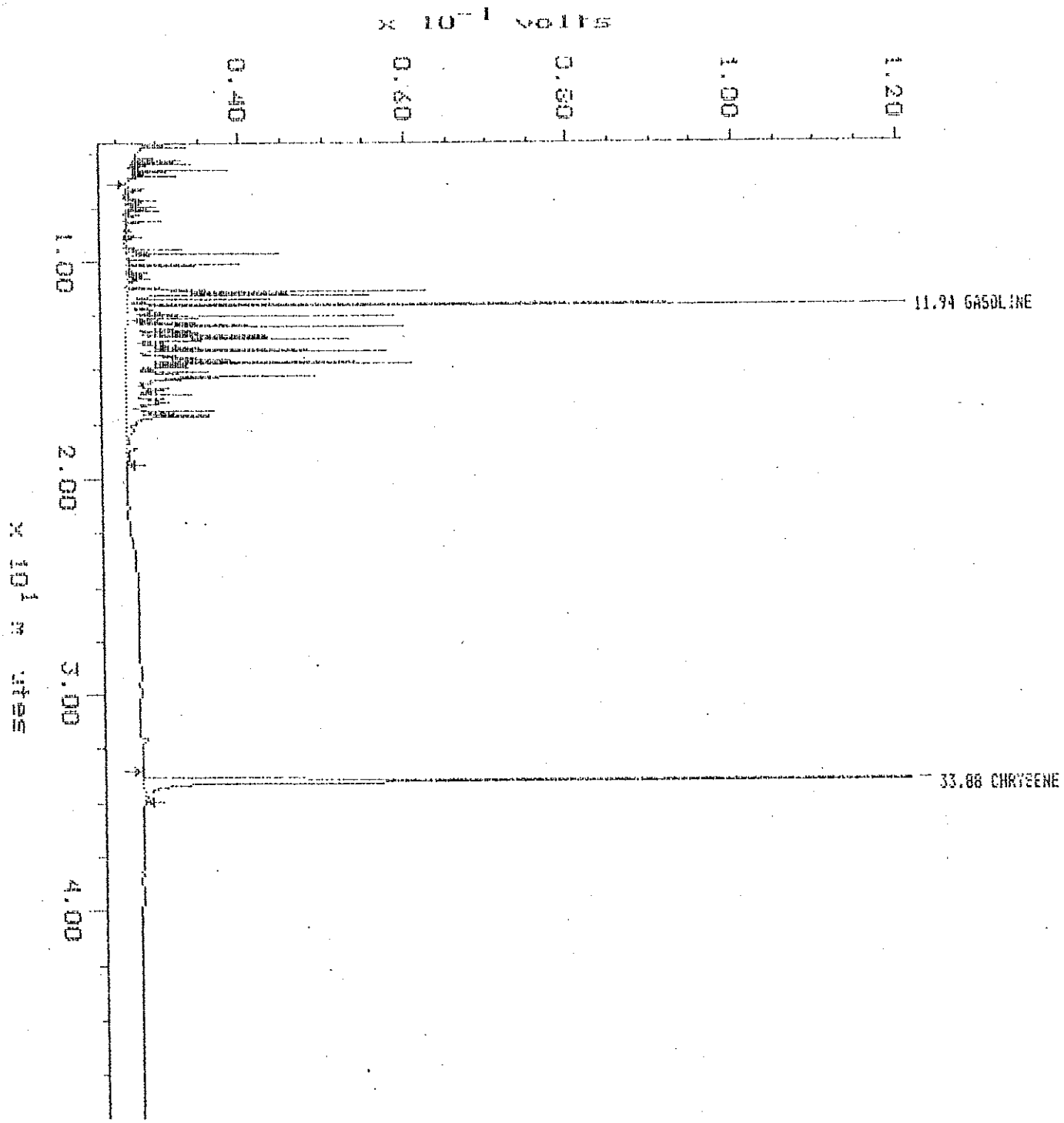
Sample: 9009-089-2 Channel: detector 1 Filename: 0PF03405
Acquired: 22-SEP-90 7:54 Method: L:\HA\DATA\PACK-F\FUEL921 Operator: LAL
Comments: 8015 FUEL FINGERPRINT/ 1UL INJECT ON PACKIE



Sample: 9009-089-4 Channel: detector 1 Filename: 0PF03409
Acquired: 22-SEP-90 11:56 Method: L:\MAXDATA\PACK-F\FUEL721 Operator: LHL
Comments: 8015 FUEL FINGERPRINT/ 1UL INJECT ON PACKIE



Sample: 9009-089-S Channel: detector 1 Filename: 0FF03410
Acquired: 22-SEP-90 12:56 Method: L:\MAXDATA\PACK-F\FUEL921 Operator: LAL
Comments: 8015 FUEL FINGERPRINT/ 1UL INJECT ON PACKIE



ATTN. [illegible]

Sample Custody Record

DATE 9/14/90 PAGE 1 OF 1

HARTCROWSER [illegible]
Hart Crowser, Inc.
1910 Fairview Avenue East
Seattle, Washington 98102-3699

JOB NUMBER [illegible] LAB NUMBER

PROJECT MANAGER [illegible]

PROJECT NAME NE [illegible] Bellevue

SAMPLED BY: [illegible] 9/13/90

LAB NO.	SAMPLE	TIME	STATION	MATRIX	TESTING: BETX 8020	TESTING: 8015 Mod	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	[illegible]	[illegible]	[illegible]	Soil	X	X	3	For each BETX [illegible]
	[illegible]				X	X	3	analysis [illegible]
	[illegible]		[illegible]		X	X	3	Please extract each [illegible]
	[illegible]		[illegible]		X	X	3	[illegible] separately, then
	[illegible]		[illegible]		X	X	3	combine extracts
	[illegible]		[illegible]		X	X	3	for [illegible]
	[illegible]							Will result in 12
	[illegible]							BETX extractions, 6
	[illegible]							total composites [illegible]
	MW-20	[illegible]	[illegible]	Water	X	X	3	6 total analyses
	MW-23	[illegible]	[illegible]	Water	X	X	3	BETX (soil only)

RELINQUISHED BY	DATE	RECEIVED BY	DATE
[illegible] SIGNATURE	9/14/90	SIGNATURE	
[illegible] PRINTED NAME	TIME 7:30	PRINTED NAME	TIME
COMPANY		COMPANY	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		[illegible] SIGNATURE	9/14/90
PRINTED NAME	TIME	[illegible] PRINTED NAME	TIME [illegible]
COMPANY		COMPANY	

TOTAL NUMBER OF CONTAINERS 24

METHOD OF SHIPMENT [illegible]

SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS [illegible]

DISTRIBUTION:

1. PROVIDE WHITE AND YELLOW COPIES TO LABORATORY
2. RETURN PINK COPY TO PROJECT MANAGER
3. LABORATORY TO FILL IN SAMPLE NUMBER AND SIGN FOR RECEIPT
4. LABORATORY TO RETURN WHITE COPY TO HART CROWSER

Hart Crowser
J-2104-03

ANALYTICAL RESOURCES INC.

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Chemists &
Consultants

333 Ninth Ave. North
Seattle, WA 98109-5187
(206) 621-6490
(206) 621-7523 (FAX)

10 June 1990

Mr. Rick Moore
Hart Crowser, Inc.
1910 Fairview Ave. East
Seattle, WA 98102-3699

RE: Project No. 2104-02, NE 8th St. / ARI Job. No. 6407

Dear Mr. Moore:

Enclosed are final results for the above-referenced project. These results were faxed to you on Friday, June 8th.

If you have any questions or require additional information, please feel free to call any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

Michelle J. Turner

Michelle J. Turner
Project Coordinator

enclosures
cc: file

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ORGANICS ANALYSIS DATA SHEET
METHOD 624/8240

Sample: Method Blank

Lab ID: 0607MB
Matrix: Water

QC Report No: 6407 - Hart Crowser
Project No: #2104-02
NE 8th Street
Date Received: 06/05/90

Data Release Authorized: _____
Report prepared 06/08/89 - MAC:C cpg

Amount Analyzed: 5.0 mls
Conc/Dil: 1 to 1
pH: NA

Instrument: FINN 5
Date Analyzed: 06/07/90

CAS Number		µg/L
71-43-2	Benzene	1.0U
108-88-3	Toluene	1.0U
100-41-4	Ethylbenzene	1.0U
1330-20-7	Total Xylenes	2.0U

Surrogate Recoveries	
d8-Toluene	99.8%
Bromofluorobenzene	102%
d4-1,2-Dichloroethane	94.4%

Data Reporting Qualifiers

Value — If the result is a value greater than or equal to the detection limit, report the value.

U — Indicates compound was analyzed for but not detected at the given detection limit.

J — Indicates an estimated value when result is less than specified detection limit.

B — This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.

K — This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.

M — Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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Sample: B22 S2

ORGANICS ANALYSIS DATA SHEET
METHOD 624/8240

QC Report No: 6407 - Hart Crowser
Project No: #2104-02
NE 8th Street
Date Received: 06/05/90

Lab ID: 6407 B
Matrix: Soil

Data Release Authorized: _____
Report prepared 06/08/89 - MAC:C cpg

Amount Analyzed: 0.090 g (dry weight)
Percent Moisture: 9.5%
pH: NA

Instrument: FINN 5
Date Analyzed: 06/06/90

CAS Number		µg/kg
71-43-2	Benzene	56 U
108-88-3	Toluene	310
100-41-4	Ethylbenzene	370
1330-20-7	Total Xylenes	2700

Surrogate Recoveries

d8-Toluene	98.5%
Bromofluorobenzene	104%
d4-1,2-Dichloroethane	99.8%

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.
U	Indicates compound was analyzed for but not detected at the given detection limit.
J	Indicates an estimated value when result is less than specified detection limit.
B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANICS ANALYSIS DATA SHEET
METHOD 624/8240

Sample: B20 S3

Lab ID: 6407 D
Matrix: Soil

QC Report No: 6407 - Hart Crowser
Project No: #2104-02
NE 8th Street
Date Received: 06/05/90

Data Release Authorized: _____
Report prepared 06/08/89 - MAC:C cpg

Instrument: FINN 5
Date Analyzed: 06/06/90

Amount Analyzed: 0.089 g (dry weight)
Percent Moisture: 11.1%
pH: NA

CAS Number		µg/kg
71-43-2	Benzene	56 U
108-88-3	Toluene	56 U
100-41-4	Ethylbenzene	56 U
1330-20-7	Total Xylenes	170

Surrogate Recoveries

d8-Toluene	104%
Bromofluorobenzene	103%
d4-1,2-Dichloroethane	105%

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.
U	Indicates compound was analyzed for but not detected at the given detection limit.
J	Indicates an estimated value when result is less than specified detection limit.
B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANICS ANALYSIS DATA SHEET
METHOD 624/8240

Sample: B23 S2

Lab ID: 6407 E
Matrix: Soil

QC Report No: 6407 - Hart Crowser
Project No: #2104-02
NE 8th Street
Date Received: 06/05/90

Data Release Authorized: _____
Report prepared 06/08/89 - MAC:C cpg

Amount Analyzed: .0815 g (dry weight)
Percent Moisture: 18.5%
pH: NA

Instrument: FINN 5
Date Analyzed: 06/07/90

CAS Number		µg/kg
71-43-2	Benzene	61 U
108-88-3	Toluene	61 U
100-41-4	Ethylbenzene	61 U
1330-20-7	**Total Xylenes**	**25 M**

Surrogate Recoveries

d8-Toluene	95.6%
Bromofluorobenzene	104%
d4-1,2-Dichloroethane	97.6%

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.
U	Indicates compound was analyzed for but not detected at the given detection limit.
J	Indicates an estimated value when result is less than specified detection limit.
B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANICS ANALYSIS DATA SHEET
METHOD 624/8240

Sample: B23 S2

Lab ID: 6407 F
Matrix: Soil

QC Report No: 6407 - Hart Crowser
Project No: #2104-02
NE 8th Street
Date Received: 06/05/90

Data Release Authorized: _____
Report prepared 06/08/89 - MAC:C cpg

Amount Analyzed: 0.088 g (dry weight)
Percent Moisture: 11.5%
pH: NA

Instrument: FINN 5
Date Analyzed: 06/07/90

CAS Number		µg/kg
71-43-2	Benzene	57 U
108-88-3	Toluene	57 U
100-41-4	Ethylbenzene	57 U
1330-20-7	Total Xylenes	110 U

Surrogate Recoveries

d8-Toluene	95.7%
Bromofluorobenzene	103%
d4-1,2-Dichloroethane	98.1%

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.
U	Indicates compound was analyzed for but not detected at the given detection limit.
J	Indicates an estimated value when result is less than specified detection limit.
B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

Sample Custody Record

DATE 6/5/90 PAGE 2 OF 2

HARTCROWSER

Hart Crowser, Inc.
1910 Fairview Avenue East
Seattle, Washington 98102-3699

JOB NUMBER 2104-02 LAB NUMBER

PROJECT MANAGER Rick Moore

PROJECT NAME NE 8th Street

SAMPLED BY: Grant Knechtel

LAB NO.	SAMPLE	TIME	STATION	MATRIX	TESTING: BETX 8020	TESTING: BOIS Mod	TESTING: 8240	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	MW12			Water	X	X		2	
	MW20				X	X		3	
	MW21				X	X		3	
	MW23				X	X		2	
	MW 9					X	X	3	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Signature: Grant Knechtel	6/5/90	Signature: Terrie Bedger	6/5/90
Printed Name: Hart Crowser	TIME: 1350	Printed Name: Terrie Bedger	TIME: 13:30
Company		Company: ARI	
RELINQUISHED BY	DATE	RECEIVED BY	DATE
Signature	TIME	Signature	TIME
Printed Name		Printed Name	
Company		Company	

TOTAL NUMBER OF CONTAINERS: ~~18~~ 15 Water

METHOD OF SHIPMENT: Fast Courier

SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS

DISTRIBUTION:

1. PROVIDE WHITE AND YELLOW COPIES TO LABORATORY
2. RETURN PINK COPY TO PROJECT MANAGER
3. LABORATORY TO FILL IN SAMPLE NUMBER AND SIGN FOR RECEIPT
4. LABORATORY TO RETURN WHITE COPY TO HART CROWSER

Sample Custody Record

DATE 6/5/90 PAGE 1 OF 2

HART CROWSER

Hart Crowser, Inc.
1910 Fairview Avenue East
Seattle, Washington 98102-3699

JOB NUMBER 2104-02 LAB NUMBER

PROJECT MANAGER Rick Moore

PROJECT NAME NE 8th street

SAMPLED BY: Grant Kvaltveit

LAB NO.	SAMPLE	TIME	STATION	MATRIX	TESTING: BETX 8020	TESTING: 8015 Mod	TESTING: 8240	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	B17 S1		2.5-4.0'	Soil	X	X		2	
	B22 S2		2.5-4.0'		X	X		2	
	MW12 S3		7.5-9.0'		X	X		2	* Sample Bottles Say "B" Instead of MW- per Rick Report as "B" YH. 6-5-90 14:15
	MW20 S3		7.5-9.0'		X	X		2	
	MW21 S1		2.5-4.0'		X	X		2	
	MW23 S2		2.5-4.0'		X	X		2	
	MW8B S3		7.5-9.0'		RFW 6/5/90		X	1	
	MW9 S3		7.5-9.0				X	1	
	MW10 S4		10.0-11.5				X	1	

* Per Rick 6-5-90 14:15 YH

RELINQUISHED BY	DATE	RECEIVED BY	DATE
Signature	6/5/90	Signature	6/5/90
Printed Name: Grant Kvaltveit	TIME	Printed Name: Terrie Hedger	TIME
Company: Hart Crowser	1330	Company: ARI	13:30
RELINQUISHED BY	DATE	RECEIVED BY	DATE
Signature	TIME	Signature	TIME
Printed Name		Printed Name	
Company		Company	

TOTAL NUMBER OF CONTAINERS: 15 soil

METHOD OF SHIPMENT: Fed Courier

SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS

DISTRIBUTION:

1. PROVIDE WHITE AND YELLOW COPIES TO LABORATORY
2. RETURN PINK COPY TO PROJECT MANAGER
3. LABORATORY TO FILL IN SAMPLE NUMBER AND SIGN FOR RECEIPT
4. LABORATORY TO RETURN WHITE COPY TO HART CROWSER

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ORGANICS ANALYSIS DATA SHEET
METHOD 624/8240

Sample: Trip Blank

Lab ID: 6407 O
Matrix: Water

QC Report No: 6407 - Hart Crowser
Project No: #2104-02
NE 8th Street
Date Received: 06/05/90

Data Release Authorized: _____
Report prepared 06/08/89 - MAC:C cpg

Amount Analyzed: 5.0 mls
Conc/Dil: 1 to 1
pH: NA

Instrument: FINN 5
Date Analyzed: 06/06/90

CAS Number		µg/L
71-43-2	Benzene	1.0U
108-88-3	Toluene	1.0U
100-41-4	Ethylbenzene	1.0U
1330-20-7	Total Xylenes	2.0U

Surrogate Recoveries

d8-Toluene	105%
Bromofluorobenzene	99.6%
d4-1,2-Dichloroethane	97.1%

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.	B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
U	Indicates compound was analyzed for but not detected at the given detection limit.	K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
J	Indicates an estimated value when result is less than specified detection limit.	M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.

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ORGANICS ANALYSIS DATA SHEET
METHOD 624/8240

Sample: MW 20

Lab ID: 6407 K
Matrix: Water

QC Report No: 6407 - Hart Crowser
Project No: #2104-02
NE 8th Street
Date Received: 06/05/90

Data Release Authorized: _____
Report prepared 06/08/89 - MAC:C cpg

Amount Analyzed: 5.0 mls
Conc/Dil: 1 to 1
pH: NA

Instrument: FINN 5
Date Analyzed: 06/07/90

CAS Number		µg/L
71-43-2	*Benzene*	*1.0U*
108-88-3	*Toluene*	*1.0U*
100-41-4	*Ethylbenzene*	*1.0U*
1330-20-7	*Total Xylenes*	*2.0U*

Surrogate Recoveries

d8-Toluene	96.3%
Bromofluorobenzene	102%
d4-1,2-Dichloroethane	93.5%

Data Reporting Qualifiers

Value	If the result is a value greater than or equal to the detection limit, report the value.
U	Indicates compound was analyzed for but not detected at the given detection limit.
J	Indicates an estimated value when result is less than specified detection limit.
B	This flag is used when the analyte is found in the blank as well as a sample. Indicates possible/probable blank contamination.
K	This flag is used when quantitated value falls above the limit of the calibration curve and dilution should be run.
M	Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match parameters.