ENVIRONMENTAL PARTNERS INC 10940 NE 33rd Place Suite 110 Bellevue, Washington 98004 ph 206.889.4717 fax 206.889.4755

Confidential

Walker Subaru
YCP # NW0420
Sound ~~Station~~ Subaru
LUST # 442838

August 22, 1996

ENTERED 4/7/00

Dave M
A Gutis
File
cc: J. Brown 8-27-96

DEPARTMENT OF ECOLOGY
NWRO/TCP TANKS UNIT
INTERIM CLEANUP REPORT
SITE CHARACTERIZATION
FINAL CLEANUP REPORT
OTHER nearby site [X]
AFFECTED MEDIA: SOIL
OTHER ______ GW
INSPECTOR (INIT) ___ DATE 4/7/0

Mr. Mitch Johnson
Safeway Inc.
1000 124th Avenue NE
Suite 201
Bellevue, WA 98015-8501

Re: Report for Phase II Investigation
100 and 106 South 3rd Street, Renton, WA

Environmental Partners, Inc. (EPI) is pleased to present this report which summarizes the Phase II soil and ground water investigation conducted at the Smith Property located at 100 and 106 South 3rd Street in Renton, Washington (subject property). This investigation included the following activities:

- Installation of three on-site ground water monitoring wells. This task included the collection of six subsurface soil samples for analysis of Total Petroleum Hydrocarbons - Hydrocarbon Identification (TPH-HCID); and benzene, toluene, ethylbenzene, and xylene (BTEX). Additionally, EPI collected ground water samples from each well for analysis of TPH-gasoline (G), TPH-diesel (D) TPH-oil (O) and BTEX.

- An elevational survey of each well head. This survey information has been used by EPI to determine the approximate direction of ground water flow at the subject property.

During a Phase I Environmental Site Assessment (ESA) of the subject property conducted by EPI in June of 1996, it was determined that the subject property and the Subaru property were formerly occupied by gasoline service stations. In addition, a Phase I ESA of the Subaru property conducted by Environmental Associates, Inc. in May, 1996 revealed that soil and ground water on that site was contaminated with TPH-G and BTEX.

EPI's Phase I investigation of the subject property was designed to determine whether or not the soil and ground water contamination at the adjacent Subaru property has migrated onto the subject property, and whether or not there is an on-site source of contamination from the former on-site service station. Information regarding ground water flow direction was not provided in the Subaru property Phase II report. Based on EPI's observations of local surface topography, the Subaru property appears to be hydraulically up-gradient of the subject property.

Monitoring Well Installation and Soil Sampling

On Monday, July 22, 1996, EPI was met at the subject property by Cascade Drilling, Inc. (Cascade) to install three ground water monitoring wells. All three wells were installed within the boundaries of the Smith property (see Figure 1). The Smith property is somewhat triangular shaped, and one well was placed near each corner of the property. EPI believed that these well locations would identify potentially contaminated ground water entering the subject property from the surrounding area. The well located near the Subaru property (MW-1) was intended to provide data as to whether the contamination from that property had migrated onto the subject property.

Monitoring well MW-1 was installed near the southwest corner of the property next to the Photo Chalet building. This well was installed at a depth of 15 feet below ground surface (bgs). Drill cuttings that emerged from the borehole appeared wet at a depth of approximately eight feet bgs. EPI collected two split spoon soil samples, from three feet bgs and eight feet bgs, for submittal to the laboratory, Analytical Resources, Inc. (ARI) of Seattle, Washington. Petroleum odors were noted in the drill cuttings by EPI at approximately six to seven feet bgs, and in the eight foot sample from the MW-1 borehole. Descriptive borehole logs for each well location are included as Attachment A of this report.

Monitoring well MW-2 was installed at the southeast corner of the property near the Frame Crafters building. This well was installed at a depth of approximately 15 feet bgs. Drill cuttings that emerged from the borehole appeared wet at a depth of approximately eight feet bgs. EPI collected two split spoon soil samples, from three feet bgs and eight feet bgs, for submittal to ARI. Petroleum odors were noted by EPI in both of these samples, and in drill cuttings from the MW-2 borehole.

Monitoring well MW-3 was installed at the northeastern corner of the property near the fence. This well was installed at a depth of approximately 15 feet bgs. Drill cuttings that emerged from the borehole appeared wet at a depth of approximately eight feet bgs. EPI collected two split spoon soil samples, from three feet bgs and eight feet bgs, for submittal to ARI. No detectable chemical or petroleum odors were noted by EPI in either of these samples, or in drill cuttings from the MW-3 borehole.

After examining each split spoon soil sample and collecting the aforementioned soil samples for analysis of TPH-HCID and BTEX, EPI placed representative soil samples from each spoon into individual zip lock plastic bags for head space analysis. Each bag was labeled with information pertaining to the sample location (well number) and retrieval depth. Head space analysis is a means by which the presence of volatile organic compounds (VOCs), such as benzene, toluene, ethylbenzene and xylene, in a particular soil volume is determined. Soils are placed into a sealed container (such as a zip-lock bag) and allowed to lie undisturbed, so that VOCs are released into the dead air space lying within the container; the concentration of VOCs in the air space is measured using a photoionization detector (PID). EPI's head space measurements are summarized below in Table 1.

All three monitoring wells were installed using the same installation techniques and similar construction materials. The lower ten feet of each well consists of two-inch diameter, 0.010-inch factory slotted, PVC well screen. Two-inch diameter "blank" PVC casing extends from the top of the screened interval to just below the ground surface. A sand pack, consisting of 6/12 washed silica sand, extends from the bottom

of each boring to approximately one foot above the top of the well screen. Activated bentonite chips extend from the top of the sand pack to approximately one foot below the ground surface. Each well head is protected by a flush mounted, steel "road box" set in quick-set concrete. Each road box is set slightly higher than the surrounding grade to direct surface water run-off away from the well head. Well construction diagrams prepared for each monitoring well by Cascade are included as Attachment B.

All down-hole drilling equipment was decontaminated by steam cleaning prior to each use. Steam cleaning occurred on a self-contained decon trailer owned and operated by Cascade. Split spoon samplers were decontaminated in a solution of Alconox and water and thoroughly rinsed with water prior to each use. Stainless steel scoops used for transferring soil samples from the split spoon samplers to sample containers (provided by ARI) were decontaminated in a solution of phosphate-free soap and water and thoroughly rinsed with deionized water prior to each use.

All decontamination wastewater, development water, and drill cuttings were placed into fifty-five gallon drums and are temporarily stored on-site while a suitable disposal method is determined.

All soil samples that were collected and submitted to ARI for analysis were placed into appropriate sample containers supplied by the laboratory, logged on a chain of custody form, placed in a chilled ice chest, and hand delivered by EPI to the laboratory on the same day as collection.

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Soil Analytical Results

Table 1 provides a summary of analytical results and PID head space readings obtained for soil samples collected at the subject property during the installation of the three on-site monitoring wells described above. A copy of ARI's soil data package is included as Attachment C to this report.

Table 1
Soil Sampling Results and Head Space Measurements (ppm)
(July 22, 1996)

Sample Number	Gasoline Range	m,p Xylene	Head Space
MW-1:3	20 U	0.065 U	2,000
MW-1:8	**7,100**	**34.0**	2,000
MW-2:3	20 U	0.062 U	2,000
MW-2:8	**290**	**26.0**	2,000
MW-3:3	20 U	0.062 U	2,000
MW-3:8	20 U	0.064 U	580
MTCA*	100	20.0	NA

* State of Washington Model Toxics Control Act (MTCA) Method A Cleanup Levels for soil.
U Compound was analyzed for, but not detected at the given detection limit.
NA Not Applicable.
Notes: EPI converted these values to ppm to facilitate a comparison between the analytical results and the corresponding MTCA Method A soil cleanup level.

No detected concentrations in the diesel and oil ranges, benzene, and toluene were identified in any of the soil samples collected on July 22, 1996. Ethylbenzene was detected in soil samples MW-1:8 and MW-2:8, however the concentrations were below the MTCA Method A Cleanup Level. Concentrations of m,p xylene, and in the gasoline range exceeding the MTCA Method A Cleanup Levels were identified in soil samples collected from MW-1 and MW-2 at a depth of eight feet bgs (MW-1:8 and MW-2:8). It should be noted that due to the dilution factor of sample MW-1:8, the detection limit for BTEX was raised to 0.630 ppm which is above the MTCA Method A Cleanup Level for benzene of 0.5 ppm. Therefore, it is not known whether or not the concentration of benzene in this sample is above the MTCA Method A Cleanup Level for benzene. However, concentrations of benzene were not detected in any of the other samples above the MTCA Method A Cleanup Level for benzene.

Ground Water Sampling Procedures

Water samples from each of the three monitoring wells were collected by hand, using a 1.66 inch by 36 inch, opaque, PVC bailer. EPI used one disposable bailer per well; each bailer was discarded upon completion of sampling.

Prior to purging and sampling each well, the depth to water and total depth of the well was measured. Measurements were made using a Solonist water level meter. To ensure reproducibility of the data, all measurements were made to a specific mark on the top surface of the PVC well casing. These measurements were used to determine the volume of water that would be purged from the well prior to the collection of ground water samples. The measurements were also used to determine the elevation of the water table, which will be discussed in more detail in the Hydrogeology section of this report.

Prior to leaving the site on July 22, 1996, EPI developed each well by hand-bailing water from the well until the water showed signs of clearing. Despite reasonable efforts to remove sediments from ground water entering the wells, ground water extracted from these wells contains a significant quantity of fine sediment.

Based on the initial measurements taken at each well, a purge volume equal to three times the volume of water contained within the well was calculated. Purging continued until the calculated purge volume was removed from the well. All ground water removed during purging was collected in buckets, from which field measurements of pH, conductivity, and temperature were made (Table 2). After these field measurements were completed, purge water was discharged to the ground surface away from the well head. Ground water sampling was conducted by EPI on July 23, 1996.

Table 2
Ground Water pH, Conductivity, and Temperature
(July 23, 1996)

Well Number	Gallons Purged	pH	Conductivity (µmhos/cm)	Temperature (Fahrenheit)
MW-1	1.0	7.47	786	75.5
	1.5	7.10	741	74.1
	2.0	4.91	743	72.5
MW-2	1.0	5.79	455	69.8
	1.5	6.08	457	68.7
	2.0	6.18	460	67.7
MW-3	1.0	7.13	1146	69.5
	1.5	7.12	922	69.3
	2.0	7.10	795	68.5

At each well, ground water samples were extracted using the same bailer that was used for purging. All ground water samples were placed in appropriate sample containers, recorded on a chain of custody, placed in a chilled ice chest, and hand delivered by EPI to ARI. Ground water samples were analyzed for TPH-G, TPH-D, TPH-O, and BTEX.

Ground Water Analytical Results

Table 3 provides a summary of analytical results obtained for ground water samples collected at the subject property on July 23, 1996. A copy of ARI's ground water data package is included as Attachment D to this report.

Table 3
Ground Water Analytical Results (ppb)
(July 23, 1996)

Sample Number	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl benzene	m,p-Xylene	o-Xylene
MW-1W	**9,800**	25,000 U	50,000 U	5.0 U	24 Y	**78**	**92**	9.4
MW-2W	**15,000**	25,000 U	50,000 U	10 U	26 Y	**220**	**740**	**27**
MW-3W	250 U	250 U	**8,000**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTCA*	1,000	1,000	1,000	5.0	40	30	20	20

* State of Washington Model Toxics Control Act (MTCA) Method A Cleanup Levels for ground water.

U Compound was analyzed for, but not detected at the given detection limit.

Y Raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

Note: EPI converted these values to ppb to facilitate a comparison between the analytical results and the corresponding MTCA Method A ground water cleanup level.

Concentrations of TPH-G, ethylbenzene, and xylenes exceeding the MTCA Method A Cleanup Levels were identified in ground water samples collected from MW-1 and MW-2. The concentration of TPH-O exceeding the MTCA Method A Cleanup Level was identified in the ground water sample collected from MW-3. Please note that due to the dilution factor of samples MW-1 and MW-2 for the TPH-D and TPH-O analyses, the detection limits were raised to 25,000 ppb which is above the MTCA Method A Cleanup Level of 1,000 ppb. Therefore, the actual concentrations of TPH-D and TPH-O in these samples is not known, but given the high levels of TPH-G in these samples, the concentrations of TPH-D and TPH-O are likely to be above the Cleanup Level of 1,000 ppb.

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Hydrogeology

EPI retained INCA Engineers, Inc. of Bellevue, Washington to survey the elevation of the top of each PVC well casing installed during EPI's ground water investigation. INCA's elevation measurements were made to the same mark on the well casings that were used by EPI to measure the depth to ground water and overall depth of each well prior to sampling. By subtracting EPI's depth to ground water measurements from INCA's elevational measurements, the elevation of the water table at each monitoring well can be established, allowing a general determination of the direction of ground water flow at the subject property.

Based on these measurements, EPI estimates that ground water at the subject property flows generally toward the southwest (Figure 1).

Conclusions

EPI's Phase II soil and ground water investigation at the subject property has revealed the following:

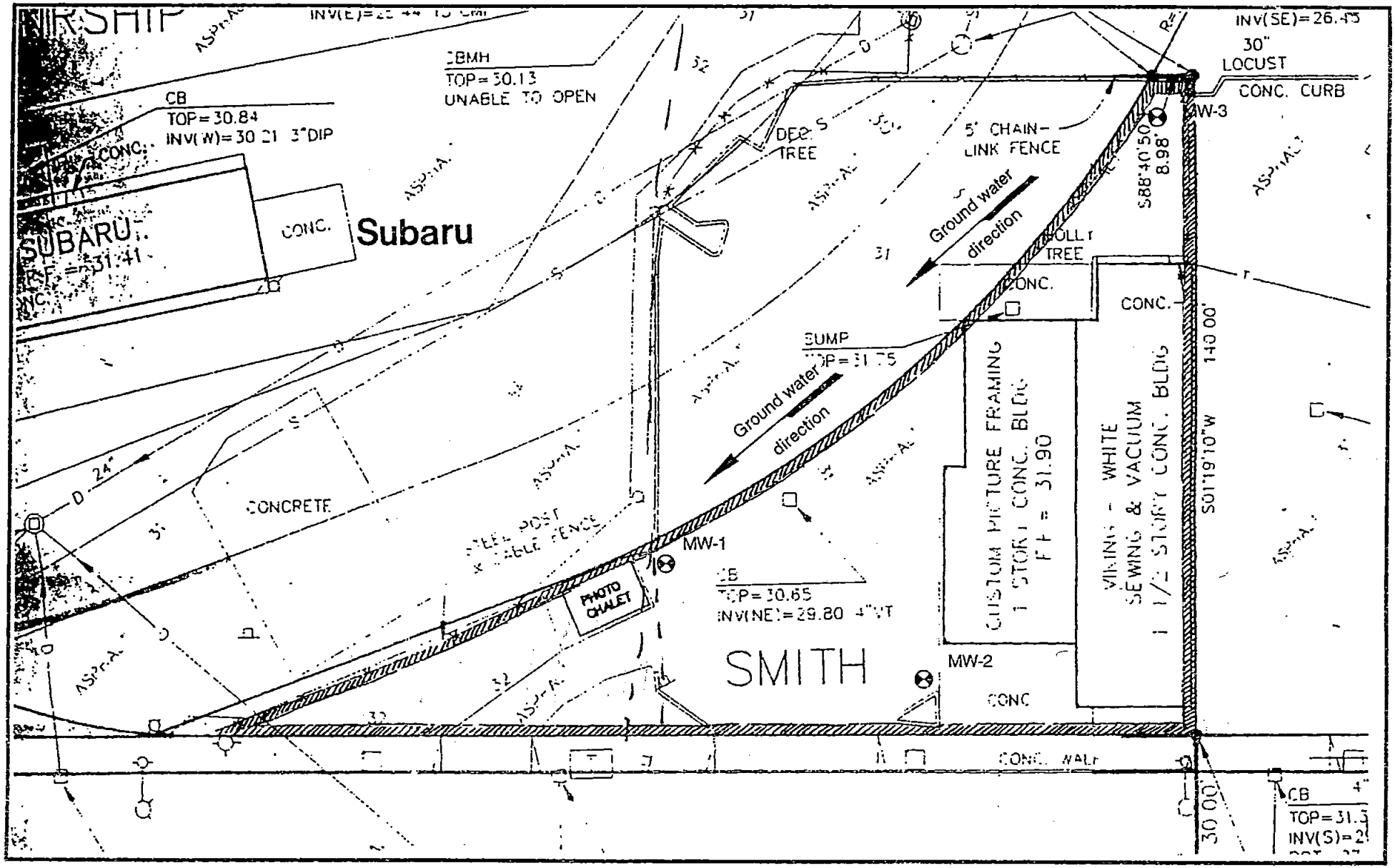
- The soils in the southwestern portion of the site contain concentrations of m,p-xylene and concentrations in the gasoline range (TPH) above the MTCA Method A Soil Cleanup Levels;
- Ground water with concentrations of petroleum hydrocarbons above the MTCA Method A Ground Water Cleanup Levels appears to originate at the site;
- Ground water concentrations of TPH-O above the MTCA Method A Ground Water Cleanup Level appears to originate from off-site (up-gradient), and is migrating on-site; and
- Based on the ground water flow direction, contaminated ground water appears to be migrating off-site.

We appreciate the opportunity to be of service to you. Please call us at (206) 889-4747 if you have any questions.

Sincerely,

Kim Huguelet
Project Manager

Enc: Attachment A - Borehole Logs
Attachment B - Well Construction Diagrams
Attachment C - Laboratory Data for Soils
Attachment D - Laboratory Data for Water



ENVIRONMENTAL PARTNERS INC

Date: August, 1996
EPI Project No: 08219.0

N

Figure 1

Monitoring Wells Locations and Ground Water Flow Direction

Key

Subject Property Boundary

Source: ALTA Survey and Topographic Map
Date: April 25, 1995

Please Note: Well Locations Not Drawn to Scale

Attachment A

Borehole Log - Boring MW-1
Smith Property

Boring MW-1

Client	Safeway	Job No.	08219.0
Drilling Contractor	Cascade		
Drilling Method	Hollow Stem Auger		
Logged By	K. Huguelet		
Date	July 22, 1996		
Sheet #	1 of 1		

MEDIA G/S/W	SAMPLER TYPE	SAMPLE DEPTH (FT.) TOP	SAMPLE DEPTH (FT.) BOTTOM	BLOWS/6" SAMPLER	IN. DRIVEN / IN. REC.	TIME	SAMPLE NAME	DEPTH IN FEET	USCS SOIL TYPE	SOIL DESCRIPTION	COMMENTS
								1			
								2			
								3			
S	SS	3.0'	4.5'	4-5-7	18/18	8:30	MW-1:3	4			3'-4.5' dark greenish gray fine SAND w/some clay
								5			
								6			
								7			strong odor @ 6-7 feet
								8			
S	SS	8'	9.5'	4-7-8	18/18	8:40	MW-1:8	9			8' - 9' dark greenish gray SAND, fine grained 9"- 9.5' dark gray CLAY
								10			Water @ 11 feet Bottom of boring @ 15 feet

Borehole Log - Boring MW-2
Smith Property

Boring MW-2

Client	Safeway	Job No.	08219.0
Drilling Contractor	Cascade		
Drilling Method	Hollow Stem Auger		
Logged By	K. Huguelet		
Date	July 22, 1996		
Sheet #	1 of 1		

MEDIA G/S/W	SAMPLER TYPE	SAMPLE DEPTH (FT.) TOP	SAMPLE DEPTH (FT.) BOTTOM	BLOWS/6" SAMPLER	IN DRIVEN / IN REC.	TIME	SAMPLE NAME	DEPTH IN FEET	USCS SOIL TYPE	SOIL DESCRIPTION	COMMENTS
								1			
								2			
								3			
S	SS	3.0'	4.5'	6-7-6	18/18	9:30	MW-2:3	4			3' - 3.5' dark greenish gray CLAY, slight odor 3.5' - 4.5' moderate yellowish brown SILT, with fine grained sand lenses
								5			
								6			
								7			
								8			
S	SS	8	9.5'	4-6-8	18/18	9:40	MW-2:8	9			Strong odor 8' - 8'8" dark greenish gray CLAY, with fine grained sand 8'8"- 9.5' medium dark gray SAND, med. to coarse grained, trace silt
								10			Water @ 11 feet Bottom of boring @ 15 feet

Borehole Log - Boring MW-3
Smith Property

Boring MW-3

Client	Safeway	Job No.	08219.0
Drilling Contractor	Cascade		
Drilling Method	Hollow Stem Auger		
Logged By	K. Huguelet		
Date	July 22, 1996		
Sheet #	1 of 1		

MEDIA G/S/W	SAMPLER TYPE	SAMPLE DEPTH (FT.) TOP	SAMPLE DEPTH (FT.) BOTTOM	BLOWS/6" SAMPLER IN. DRIVEN / IN. REC.	TIME	SAMPLE NAME	DEPTH IN FEET	USCS SOIL TYPE	SOIL DESCRIPTION	COMMENTS
							1			
							2			
							3			
S	SS	3.0'	4.5'	8-7-3	12/18	10:20	MW-3:3 4			3'6" - 3'11" moderate olive brown silty SAND, fine grained 3'11" - 4' 6" multicolored SAND, fine to coarse grained, with silt, trace organics
							5			
							6			
							7			
S	SS	8	9.5'	2-2-4	18/18	10:30	8 MW-3:8 9			8' - 8'4"' moderate brown CLAY 8'4" - 9'6" medium dark gray silty SAND, fine grained
							10			Water @ 11 feet Bottom of boring @ 15 feet

Attachment B

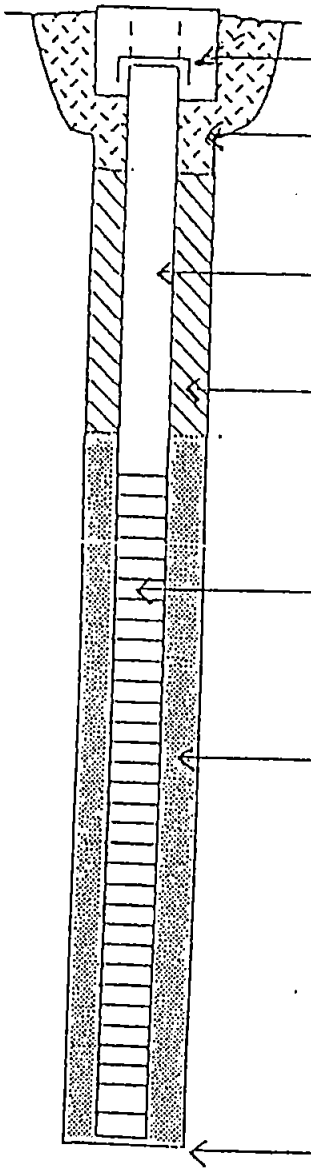
RESOURCE PROTECTION WELL REPORT

START CARD NO. R06272

PROJECT NAME: SAFEWAY
WELL IDENTIFICATION NO. ACN 073
DRILLING METHOD: HSA
DRILLER: BRENT C. MAHON
FIRM: Cascade Drilling, Inc.
SIGNATURE:
CONSULTING FIRM: ENVIRONMENTAL PARTNERS
REPRESENTATIVE: ERIC KOLTES

COUNTY: KING
LOCATION: NE ¼ SW ¼ Sec 18 Twn 23N R 5E
STREET ADDRESS OF WELL: MW-1
100 SOUTH 3rd ST. - RENTON
WATER LEVEL ELEVATION:
GROUND SURFACE ELEVATION: N/A
INSTALLED: 7-22-96
DEVELOPED:

63336

AS-BUILT	WELL DATA	FORMATION DESCRIPTION
	WELL COVER CONCRETE SURFACE SEAL DEPTH = 1/ft PVC BLANK 2"x 5' BACKFILL 2 ft. TYPE: BENT CHIPS PVC SCREEN 2"x10' SLOT SIZE: .010 GRAVEL PACK 4 ft. MATERIAL: 2/12 LONESTAR WELL DEPTH 15' "	0 - 2 ft. SANDY / GRAVEL 2 - 4 ft. FILL MATERIAL 4 - 15 ft. SANDY (SOME SILT)

SCALE: 1" = _____ PAGE _____ OF _____

RESOURCE PROTECTION WELL REPORT

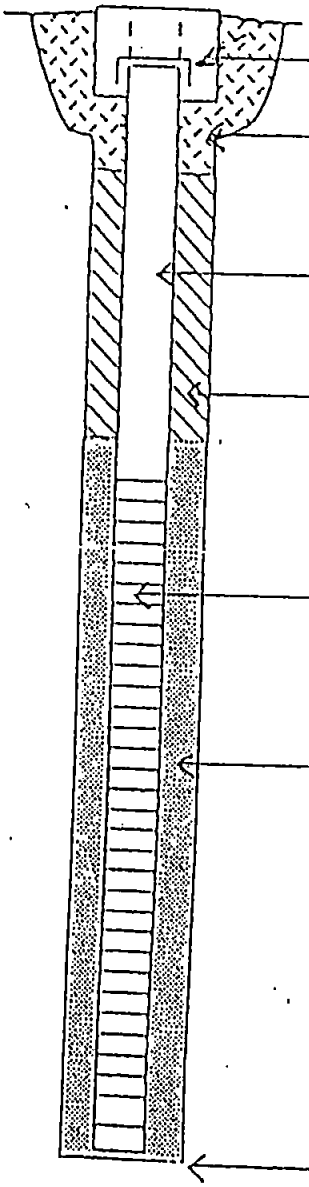
START CARD NO. R06272

PROJECT NAME: SAFEWAY
WELL IDENTIFICATION NO. ACN 074
DRILLING METHOD: HSA
DRILLER: BRENT C. MAJOR
FIRM: Cascade Drilling, Inc.
SIGNATURE:
CONSULTING FIRM: ENVIRONMENTAL PARTNERS
REPRESENTATIVE: ERIC KOLTES

COUNTY: KING
LOCATION: NE 1/4 SW 1/4 Sec 18 Twn 23N R 5E
STREET ADDRESS OF WELL: MW-2
100 SOUTH 3rd ST. - RENTON
WATER LEVEL ELEVATION:
GROUND SURFACE ELEVATION: N/A
INSTALLED: 7-22-96
DEVELOPED:

6336

AS-BUILT



WELL DATA

WELL COVER
CONCRETE SURFACE SEAL
DEPTH = 1/ft
PVC BLANK 2"x 5'
BACKFILL 2 ft.
TYPE: BENT CHIPS
PVC SCREEN 2"x 10'
SLOT SIZE: .010
GRAVEL PACK 4 ft.
MATERIAL: 7/12
LONESTAR
WELL DEPTH 15'

FORMATION DESCRIPTION

0 - 1 ft.
GRAVEL

1 - 9 ft.
SANDY / GRAVEL

9 - 15 ft.
SANDY / SOME SILT

SCALE: 1" =

PAGE

RESOURCE PROTECTION WELL REPORT

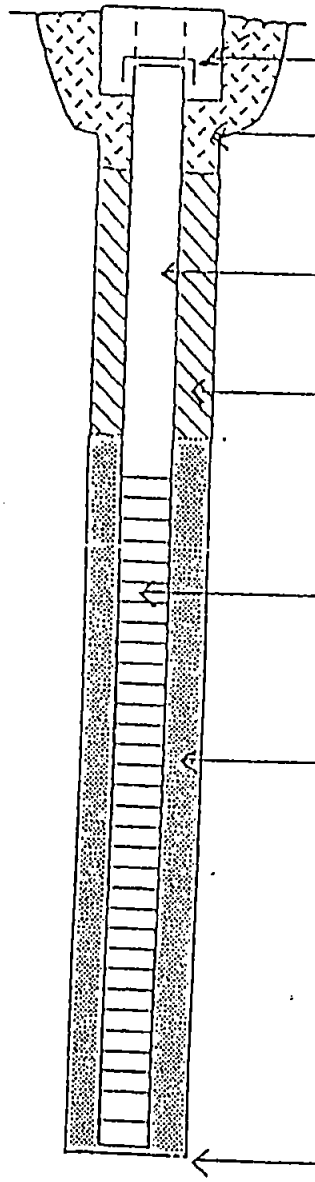
START CARD NO. R06272

PROJECT NAME: SAFEWAY
WELL IDENTIFICATION NO. ACN 075
DRILLING METHOD: HSA
DRILLER: BRENT C. MAIOR
FIRM: Cascade Drilling, Inc.
SIGNATURE:
CONSULTING FIRM: ENVIRONMENTAL PARTNERS
REPRESENTATIVE: ERIC KOLTES

COUNTY: KING
LOCATION: NE ¼ SW ¼ Sec 18 Twn 23N R 5E
STREET ADDRESS OF WELL: MW-3
100 SOUTH 3rd ST. - RENTON
WATER LEVEL ELEVATION:
GROUND SURFACE ELEVATION: N/A
INSTALLED: 7-22-96
DEVELOPED:

6336

AS-BUILT



WELL DATA

WELL COVER
CONCRETE SURFACE SEAL
DEPTH = 2 ft
PVC BLANK 2"x 5'
BACKFILL 2 ft.
TYPE: BENT CHIPS
PVC SCREEN 2"x 10'
SLOT SIZE: .010
GRAVEL PACK 4 ft.
MATERIAL: 2/12
LONESTAR
WELL DEPTH 15'

FORMATION DESCRIPTION

0 - 4 ft.
SANDY / GRAVEL FILL (GLASS, WOOD, GRAVEL)
4 - 15 ft.
SANDY (SOME SILT)
- ft.

SCALE: 1" =

PAGE OF

Attachment C

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 31, 1996

Eric Koltes/Kim Huguelet
Environmental Partners
10940 NE 33rd Place Suite 110
Bellevue, WA 98004

Re: Project: 08219.0
ARI Job No. P650

Dear Eric/Kim:

Enclosed are the original Chain-of-Custody record and final results for the samples from the project referenced above. Analytical Resources, Inc. accepted six soil samples in good condition on July 22, 1996. The samples were analyzed for BETX and WTPH-HCID as requested.

Gasoline-range hydrocarbons were detected in Samples MW-1-8 and MW-2-8 above reporting limit; however, the patterns detected did not match the gas standard.

The gas-range hydrocarbons present in the two samples mentioned above interfered with the recovery of the surrogate, trifluorotoluene, in the BETX analysis. No action was taken due to the high trifluorotoluene recoveries in these two samples.

No further analytical complications were noted.

A copy of the results and all raw data will remain on file at ARI. Should you have questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
(206) 340-2866 x-113

Enclosures

cc: Files P650

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request

Date: 7/22/96
Page 1 of 1
Number of coolers: 1
Cooler Temp: 4.0°C
Rad. Survey: _____

Analytical Resources, Incorporated
Analytical Chemist and Consultants
400 Ninth Avenue North
Seattle, WA 98109-4708
(206) 621-6490
(206) 621-7523 (Fax)

ARI Client: ENVIRONMENAL PARTNERS Phone#: 889-4747
Client Contact: KIM HUGUELET
Client Project ID: 08219.0
Samplers: EK & KH

	Sample ID	Date	Time	Matx	No Cont	Lab ID	Analysis Required: HCID	Analysis Required: BTEX	Notes/Comments
1	MW-1-3	7/22/96	8:30	Soil	2		X	X	HOT
2	MW-1-8	7/22/96	8:40	Soil	2		X	X	
3	MW-2-3	7/22/96	9:30	Soil	2		X	X	
4	MW-2-8	7/22/96	9:40	Soil	2		X	X	
5	MW-3-3	7/22/96	10:20 (42)	Soil	2		X	X	
6	MW-3-8	7/22/96	10:30 (92)	Soil	2		X	X	
7									

ARI Project No: P560
Comments/Special Instructions:

Relinquished by: (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)
Printed Name: K Huguelet	Printed Name:	Printed Name:
Company: Environmental Partners	Company:	Company:
Date: 7-22-96 Time: 15:10	Date: Time:	Date: Time:
Received by: (Signature)	**Received by: (Signature)**	**Received by: (Signature)**
Printed Name: Erin Johnson	Printed Name:	Printed Name:
Company: ARI	Company:	Company:
Date: 7/22/96 Time: 15:10	Date: Time:	Date: Time:

TOTAL PETROLEUM HYDROCARBONS
WA HCID Method by GC/FID

ANALYTICAL RESOURCES INCORPORATED

QC Report No: P560-Environmental Partners
Matrix: Soil Project: 08219.0

Date Received: 07/22/96

Data Release Authorized:
Reported: 07/29/96

Lab ID	Client Sample ID	Date Analyzed	Dilution Factor	Gas Range	Diesel Range	Oil Range	Surrogate Recovery
96-11671-0726MB	Method Blank	07/26/96	1:1	20 U	25 U	50 U	92.0%
96-11671-P560A*	MW-1-3	07/26/96	1:1	20 U	25 U	50 U	105%
96-11672-P560B*	MW-1-8	07/26/96	1:2	7100	50 U	100 U	102%
96-11673-P560C*	MW-2-3	07/26/96	1:1	20 U	25 U	50 U	92.0%
96-11674-P560D*	MW-2-8	07/26/96	1:1	290	25 U	50 U	99.0%
96-11675-P560E*	MW-3-3	07/26/96	1:1	20 U	25 U	50 U	101%
96-11676-P560F*	MW-3-8	07/26/96	1:1	20 U	25 U	50 U	106%

Values reported in ppm (mg/kg) on a dry weight basis.

Surrogate is Methyl Arachidate.
Gas value based on total peaks in the range from Toluene to C12.
Diesel value based on the total peaks in the range from C12 to C24.
Oil value based on the total peaks in the range from C24 to C38.

Data Qualifiers

U	Compound not detected at the given detection limit.
X	Value detected above linear range of instrument. Dilution required.
J	Indicates an estimated value below the calculated detection limit.
S	No value reported due to saturation of the detector. Dilution required.
D	Indicates the surrogate was not detected because of dilution of the extract.
C	Indicates a probable value which cannot be confirmed due to matrix interference.
NR	Indicates no recovery due to matrix interference and/or dilution.

FORM-1 HCID

ANALYTICAL
RESOURCES
INCORPORATED

TOTAL PETROLEUM HYDROCARBONS
WA HCID Method by GC/FID

Lab Sample ID: P560A
LIMS ID: 96-11671
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Date Received: 07/22/96

Data Release Authorized:
Reported: 07/29/96

MATRIX SPIKE/SPIKE DUPLICATE RECOVERY

Date extracted: 07/25/96
Date analyzed: 07/26/96

CONSTITUENT		SAMPLE VALUE	SPIKE VALUE	SPIKE ADDED	% RECOVERY	RPD
MATRIX SPIKE						
Diesel Range	<	25.0	643	652	98.6%	
MATRIX SPIKE DUPLICATE						
Diesel Range	<	25.0	666	500	133%	29.7%

HCID Surrogate Recovery

Matrix Spike	Methylarachidate	93.0%
MS Duplicate	Methylarachidate	98.0%

Values reported in (ppm) mg/kg-dry

HCID SPIKE CONTROL LIMITS

Percent Recovery 50-150%
Duplicate RPD <50%

Advisory QA Limits

TOTAL PETROLEUM HYDROCARBONS
WA HCID Method by GC/FID

ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: P560SB
LIMS ID: 96-11671
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Data Release Authorized:
Reported: 07/29/96

LABORATORY CONTROL SAMPLE RECOVERY REPORT
Date extracted: 07/25/96
Date analyzed: 07/26/96

CONSTITUENT	SPIKE VALUE	SPIKE ADDED	% RECOVERY
LABORATORY CONTROL SAMPLE			
Diesel Range	499	500	99.8%

HCID Surrogate Recovery

Spike Blank	Methylarachidate	97.0%

Values reported in parts per million (mg/kg)

HCID SPIKE CONTROL LIMITS

Percent Recovery 50-150%
Duplicate RPD <50%

Advisory QA Limits

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: Method Blank

Lab Sample ID: P560MB
LIMS ID: 96-11671
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 07/29/96

Date analyzed: 07/24/96
Percent Moisture: NA

Sample Amount: 0.050 g Equiv
Dilution Factor: 1

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
71-43-2	Benzene	50 U
108-88-3	Toluene	50 U
100-41-4	Ethylbenzene	50 U
	m,p-Xylene	50 U
95-47-6	o-Xylene	50 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	87.3%

Data Qualifiers

U	Indicates compound was analyzed for, but not detected at the given detection limit.
J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
B	Found in associated method blank.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-1-3

Lab Sample ID: P560A
LIMS ID: 96-11671
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Date Sampled: 07/22/96
Date Received: 07/22/96

Data Release Authorized:
Reported: 07/29/96

Date analyzed: 07/24/96
Percent Moisture: 23.3%

Sample Amount: 0.038 g
Dilution Factor: 1

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
71-43-2	Benzene	65 U
108-88-3	Toluene	65 U
100-41-4	Ethylbenzene	65 U
	m,p-Xylene	65 U
95-47-6	o-Xylene	65 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	97.1%
Bromobenzene	80.8%

Data Qualifiers

U Indicates compound was analyzed for, but not detected at the given detection limit.
J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
B Found in associated method blank.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL
RESOURCES
INCORPORATED

Sample No: MW-1-8

Lab Sample ID: P560B
LIMS ID: 96-11672
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Date Sampled: 07/22/96
Date Received: 07/22/96

Data Release Authorized:
Reported: 07/29/96

Date analyzed: 07/24/96
Percent Moisture: 20.6%

Sample Amount: 0.040 g
Dilution Factor: 10

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
71-43-2	Benzene	630 U
108-88-3	Toluene	4,400 Y
100-41-4	Ethylbenzene	18,000
	m,p-Xylene	34,000
95-47-6	o-Xylene	630 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	139%
Bromobenzene	NR

Data Qualifiers

U	Indicates compound was analyzed for, but not detected at the given detection limit.
J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
B	Found in associated method blank.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-2-3

Lab Sample ID: P560C
LIMS ID: 96-11673
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Date Sampled: 07/22/96
Date Received: 07/22/96

Data Release Authorized:
Reported: 07/29/96

Date analyzed: 07/24/96
Percent Moisture: 19.5%

Sample Amount: 0.040 g
Dilution Factor: 1

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
71-43-2	Benzene	62 U
108-88-3	Toluene	62 U
100-41-4	Ethylbenzene	62 U
	m,p-Xylene	62 U
95-47-6	o-Xylene	62 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	96.6%
Bromobenzene	79.5%

Data Qualifiers

U	Indicates compound was analyzed for, but not detected at the given detection limit.
J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
B	Found in associated method blank.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-2-8

Lab Sample ID: P560D
LIMS ID: 96-11674
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Date Sampled: 07/22/96
Date Received: 07/22/96

Data Release Authorized:
Reported: 07/29/96

Date analyzed: 07/24/96
Percent Moisture: 17.0%

Sample Amount: 0.042 g
Dilution Factor: 5

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
71-43-2	Benzene	300 U
108-88-3	Toluene	700 Y
100-41-4	Ethylbenzene	6,200
	m,p-Xylene	26,000
95-47-6	o-Xylene	300 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	112%
Bromobenzene	NR

Data Qualifiers

U Indicates compound was analyzed for, but not detected at the given detection limit.
J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
B Found in associated method blank.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-3-3

Lab Sample ID: P560E
LIMS ID: 96-11675
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Date Sampled: 07/22/96
Date Received: 07/22/96

Data Release Authorized:
Reported: 07/29/96

Date analyzed: 07/24/96
Percent Moisture: 19.4%

Sample Amount: 0.040 g
Dilution Factor: 1

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
71-43-2	Benzene	62 U
108-88-3	Toluene	62 U
100-41-4	Ethylbenzene	62 U
	m,p-Xylene	62 U
95-47-6	o-Xylene	62 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	97.4%
Bromobenzene	73.6%

Data Qualifiers

- U Indicates compound was analyzed for, but not detected at the given detection limit.
- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector. Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- B Found in associated method blank.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-3-8

Lab Sample ID: P560F
LIMS ID: 96-11676
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Date Sampled: 07/22/96
Date Received: 07/22/96

Data Release Authorized:
Reported: 07/29/96

Date analyzed: 07/24/96
Percent Moisture: 21.8%

Sample Amount: 0.039 g
Dilution Factor: 1

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
71-43-2	Benzene	64 U
108-88-3	Toluene	64 U
100-41-4	Ethylbenzene	64 U
	m,p-Xylene	64 U
95-47-6	o-Xylene	64 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	97.2%
Bromobenzene	76.8%

Data Qualifiers

U Indicates compound was analyzed for, but not detected at the given detection limit.
J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
B Found in associated method blank.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.

ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

Lab Sample ID: P560SB
LIMS ID: 96-11671
Matrix: Soil

QC Report No: P560-Environmental Partners
Project: 08219.0

Data Release Authorized:
Reported: 07/29/96

LABORATORY CONTROL SAMPLE

Date analyzed: 07/24/96

CONSTITUENT	SPIKE FOUND	SPIKE ADDED	% RECOVERY
Benzene	28.0	25.0	112%
Toluene	27.8	25.0	111%
Ethylbenzene	27.6	25.0	110%
m,p-Xylene	53.6	50.0	107%
o-Xylene	26.6	25.0	106%

BETX SURROGATE RECOVERIES

Trifluorotoluene	114 %
Bromobenzene	113 %

Reported in Total ug/kg Dry Weight (ppb)

BETX SPIKE CONTROL LIMITS

Percent Recovery 75-130%

Attachment D

Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 6, 1996

Kim Huguelet
Environmental Partners
10940 NE 33rd Place Suite 110
Bellevue, WA 98004

Re: Project: 08219.0
ARI Job No. P570

Dear Kim:

Enclosed are the original Chain-of-Custody record and final results for the samples from the project referenced above. Analytical Resources, Inc. accepted three water samples in good condition on July 23, 1996. The samples were analyzed for BETX/WTPH-G and WTPH-D+Oil as requested.

All samples were initially analyzed for BETX/WTPH-G on 7/26/96. Due to an instrument malfunction, the samples were re-analyzed on 8/2/96. The re-analyses proceeded without incident of note. The results for the re-analyses only have been submitted.

No further analytical complications were noted.

A copy of the results and all raw data will remain on file at ARI. Should you have questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
(206) 340-2866 x-113

Enclosures

cc: Files P570

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request

Date: 7-23-96

Page 1 of 1

Number of coolers: 1

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

P570

rad. surv: background

cooler temp: 10.

ARI Client: Environmental Partners Phone #: 889-4747

Client Contact: Kim Huguelet

Client Project ID: 08219.0

Samplers: KH

	Sample ID	Date	Time	Matx	No Cont	Lab ID	BTEX	TPH-G	TPH-Dext						Notes/Comments
1	MW-1W	7-23-96	12:30	W	3		✓	✓	✓						Four trip blank vials were received. MF 7-23-96
2	MW-2W	"	10:45	W	3		✓	✓	✓						
3	MW-3W	"	12:00	W	3		✓	✓	✓						
4															
5															
6															
7															

Comments/Special Instructions:

Relinquished by: (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)
Printed Name: K Huguelet	Printed Name:	Printed Name:
Company: EPI	Company:	Company:
Date: 7-23-96 Time: 14:10	Date: Time:	Date: Time:
Received by: (Signature) Mary Lou Fox	Received by: (Signature)	Received by: (Signature)
Printed Name: Mary Lou Fox	Printed Name:	Printed Name:
Company: ARI	Company:	Company:
Date:		

ANALYTICAL
RESOURCES
INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS
WA TPHd Range C12 to C24 by GC/FID
and Oil

Lab ID: 96-11724
Matrix: Water

QC Report No: P570-Environmental Partners
Project: 08219.0

Date Received: 07/23/96

Data Release Authorized:
Reported: 08/01/96

Lab ID	Sample ID	Date Extracted	Date Analyzed	Dilution Factor	Diesel Range	*HC ID	Oil Range	Surr Rec
P570MB	Method Blank	07/25/96	07/29/96	1:1	0.25 U	---	0.50 U	97.0%
P570A	MW-1W	07/25/96	07/29/96	1:100	25 U	---	50 U	D
P570B	MW-2W	07/25/96	07/29/96	1:100	25 U	---	50 U	D
P570C	MW-3W	07/25/96	07/29/96	1:1	0.25 U	M. OIL	0.86	93.0%

Surrogate is Methyl-Arachidate.

* ID indicates, in the opinion of the analyst, the petroleum product with the best pattern match. 'NO' indicates that there was not a good match for any of the requested products.
Values reported in ppm (mg/L)
Diesel quantitation on total peaks in the range from C12 to C24.
Oil quantitation on total peaks in the range from C24 to C38.

Data Qualifiers

U	Compound not detected at the given detection limit.
X	Value detected above linear range of instrument. Dilution required.
J	Indicates an estimated value below the calculated detection limit.
S	No value reported due to saturation of the detector. Dilution required.
D	Indicates the surrogate was not detected because of dilution of the extract.
E	Indicates a value above the linear range of the detector. Dilution required.
NR	Indicates no recovery due to matrix interference.

FORM-1 WA TPHD

ANALYTICAL
RESOURCES
INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS
WA TPHd Range C12 to C24 by GC/FID

Lab Sample ID: P570SB
LIMS ID: 96-11724
Matrix: Water

QC Report No: P570-Environmental Partners
Project: 08219.0

Data Release Authorized:
Reported: 08/01/96

LABORATORY CONTROL SAMPLE RECOVERY REPORT
Analyzed 07/29/96

CONSTITUENT	SPIKE FOUND	SPIKE ADDED	% RECOVERY
Diesel Range Hydrocarbons	2.64	2.50	106%

TPHd Surrogate Recovery

Methylarachidate	101%

Values reported in parts per million (mg/L)

ANALYTICAL
RESOURCES
INCORPORATED

TOTAL GASOLINE RANGE HYDROCARBONS
WTPHg Range Toluene to C12 by GC/FID

QC Report No: P570-Environmental Partners
Matrix: Water Project: 08219.0

Data Release Authorized: Date Received: 07/23/96
Reported: 08/05/96

Lab ID	Client Sample ID	Date Analyzed	Dilution Factor	Gas Range	Gas ID	Surr A Rec	Surr B Rec
P570-0802MB	Method Blank	08/02/96	1:1	0.25 U	NO	94.6%	79.1%
96-11724-P570A	MW-1W	08/02/96	1:5	9.8	NO	150%	101%
96-11725-P570B	MW-2W	08/02/96	1:10	15	NO	137%	101%
96-11726-P570C	MW-3W	08/02/96	1:1	0.25 U	NO	92.4%	67.2%
96-11727-P570D	Trip Blank	08/02/96	1:1	0.25 U	NO	93.8%	74.4%

Surrogate A is Trifluorotoluene.
Surrogate B is Bromobenzene.
Values reported in ppm (mg/L).
Quantitation on total peaks in the gasoline range from Toluene to C12.

Data Qualifiers

U	Compound not detected at the given detection limit.
X	Value detected above linear range of instrument. Dilution required.
J	Indicates an estimated value below the calculated detection limit.
S	No value reported due to saturation of the detector. Dilution required.
D	Indicates the surrogate was not detected because of dilution of the extract.
NR	Indicates no recovery due to matrix interference.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: Method Blank

Lab Sample ID: P570MB
LIMS ID: 96-11724
Matrix: Water

QC Report No: P570-Environmental Partners
Project: 08219.0

Date Sampled: NA
Date Received: NA

Data Release Authorized:
Reported: 08/05/96

Date analyzed: 08/02/96

Volume Purged: 5.0 mL
Dilution: 1:1

Reported in ppb (ug/L)

CAS Number	Analyte	Value
71-43-2	Benzene	1.0 U
108-88-3	Toluene	1.0 U
100-41-4	Ethylbenzene	1.0 U
	m,p-Xylene	1.0 U
95-47-6	o-Xylene	1.0 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	92.7%
Bromobenzene	78.0%

Data Qualifiers

U	Indicates compound was analyzed for, but not detected at the given detection limit.
J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
B	Found in associated method blank.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-1W

Lab Sample ID: P570A
LIMS ID: 96-11724
Matrix: Water

QC Report No: P570-Environmental Partners
Project: 08219.0

Date Sampled: 07/23/96
Date Received: 07/23/96

Data Release Authorized:
Reported: 08/05/96

Date analyzed: 08/02/96

Volume Purged: 5.0 mL
Dilution: 1:5

Reported in ppb (ug/L)

CAS Number	Analyte	Value
71-43-2	Benzene	5.0 U
108-88-3	Toluene	24 Y
100-41-4	Ethylbenzene	78
	m,p-Xylene	92
95-47-6	o-Xylene	9.4

BETX 8020 Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	99.2%

Data Qualifiers

U	Indicates compound was analyzed for, but not detected at the given detection limit.
J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
B	Found in associated method blank.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL
RESOURCES
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Sample No: MW-2W

Lab Sample ID: P570B
LIMS ID: 96-11725
Matrix: Water

QC Report No: P570-Environmental Partners
Project: 08219.0

Date Sampled: 07/23/96
Date Received: 07/23/96

Data Release Authorized:
Reported: 08/05/96

Date analyzed: 08/02/96

Volume Purged: 5.0 mL
Dilution: 1:10

Reported in ppb (ug/L)

CAS Number	Analyte	Value	
71-43-2	Benzene	10	U
108-88-3	Toluene	26	Y
100-41-4	Ethylbenzene	220	
	m,p-Xylene	740	
95-47-6	o-Xylene	27	

BETX 8020 Surrogate Recovery

Trifluorotoluene	107%
Bromobenzene	98.9%

Data Qualifiers

U	Indicates compound was analyzed for, but not detected at the given detection limit.
J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
B	Found in associated method blank.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: MW-3W

Lab Sample ID: P570C
LIMS ID: 96-11726
Matrix: Water

QC Report No: P570-Environmental Partners
Project: 08219.0

Date Sampled: 07/23/96
Date Received: 07/23/96

Data Release Authorized:
Reported: 08/05/96

Date analyzed: 08/02/96

Volume Purged: 5.0 mL
Dilution: 1:1

Reported in ppb (ug/L)

CAS Number	Analyte	Value
71-43-2	Benzene	1.0 U
108-88-3	Toluene	1.0 U
100-41-4	Ethylbenzene	1.0 U
	m,p-Xylene	1.0 U
95-47-6	o-Xylene	1.0 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	92.0%
Bromobenzene	66.8%

Data Qualifiers

U	Indicates compound was analyzed for, but not detected at the given detection limit.
J	Indicates an estimated value when that result is less than the calculated detection limit.
E	Indicates a value above the linear range of the detector. Dilution Required
S	Indicates no value reported due to saturation of the detector.
D	Indicates the surrogate was diluted out.
B	Found in associated method blank.
Y	Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA	Indicates compound was not analyzed.
NR	Indicates no recovery due to interferences.

ORGANICS ANALYSIS DATA SHEET
BETX by Method 8020

ANALYTICAL RESOURCES INCORPORATED

Sample No: Trip Blank

Lab Sample ID: P570D
LIMS ID: 96-11727
Matrix: Water

QC Report No: P570-Environmental Partners
Project: 08219.0

Date Sampled: 07/19/96
Date Received: 07/23/96

Data Release Authorized:
Reported: 08/05/96

Date analyzed: 08/02/96

Volume Purged: 5.0 mL
Dilution: 1:1

Reported in ppb (ug/L)

CAS Number	Analyte	Value
71-43-2	Benzene	1.0 U
108-88-3	Toluene	1.0 U
100-41-4	Ethylbenzene	1.0 U
	m,p-Xylene	1.0 U
95-47-6	o-Xylene	1.0 U

BETX 8020 Surrogate Recovery

Trifluorotoluene	92.7%
Bromobenzene	73.5%

Data Qualifiers

U Indicates compound was analyzed for, but not detected at the given detection limit.
J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector. Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
B Found in associated method blank.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.