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SUBSURFACE EXPLORATION SUMMARY

APR - 7 1995
Dan B

Quadrant Lake Union Center
659 North 34th Street
Seattle, Washington
Project Number: 1317

April 3, 1995

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SUBSURFACE EXPLORATION SUMMARY

Quadrant Lake Union Center
659 North 34th Street
Seattle, Washington
Project Number: 1317

Prepared for:

Quadrant Lake Union Center
659 North 34th Street
Seattle, Washington
Project Number: 1317

Prepared by:

Environmental Management Resources, Inc.
2509 152nd Avenue NE, Suite B
Redmond, Washington

April 3, 1995

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EXECUTIVE SUMMARY

The main body of the report should be consulted for a detailed discussion of the report findings. Based on the drilling of 27 soil borings, a brief summary of the results of our site evaluation is presented below:

- **Drilling:** 27 borings, B1 through B27 were drilled to a depth of three to five feet below ground surface (bgs).

- **Soils:** Based on lithology observed during the drilling and sampling of the borings, site soils generally consist of a surface layer of gravel that is immediately underlain by very dark brown sand, silt and gravel. This layer contains abundant cobbles up to a foot in diameter. The very dark brown sand, silt and gravel is underlain by light-to-dark brown sand, light brown sand and gravel, brown silt, and light gray silt and clay at various locations along the length of the site. The soil in borings B25 through B27 did not have the very dark brown sand, silt and gravel layer at the surface.

- **Groundwater:** No groundwater table was encountered. However, there was a wet zone at a depth of about one foot in the area around sampling location B19. Because of the water, no sample was collected from this location.

- **Analytical Results - Soil:** The results of the soil sampling analyses indicated that the soil samples did not contain TPH as diesel fuel or heavier oil above the WDOE Model Toxics Control Act Method A compliance level of 200 ppm (Table 1) with the exception of one sample– B27-2.5. This sample contained 630 ppm TPH heavier than diesel fuel. The laboratory analytical report is presented as Appendix D. None of the samples contained detectable concentrations of PCBs. Only two samples, B26-1.5 and B27-1 contained detectable concentrations of PAHs. No carcinogenic PAHs were detected above the WDOE Model Toxics Control Act Method A compliance level of 20 ppm.

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1.0 PROJECT DESCRIPTION

This report presents the results of our Phase II Subsurface Soil Exploration conducted for Quadrant Lake Union Center (Quadrant) at their facility in Seattle, Washington (Figure 1). The site is located in the SW 1/4 of the SW 1/4 of Section 18, Township 25 North, Range 4 East of King County, Washington. The property is located immediately south of North 34th Street between Stone Way at its east end and Phinney Avenue North at its west end (Figure 1). The approximate site boundaries, the locations of site structures, the locations of our explorations and other pertinent site information are presented on the Site Plan, Figure 2.

1.1 Background

The site is a former Burlington Northern Railroad right-of-way running alongside and parallel to North 34th Street in the Fremont neighborhood of Seattle (Figure 2). The right-of-way is approximately 3000 feet long and 30 to 40 feet wide. It runs immediately south of North 34th Street between Stone Way at its east end and Phinney Avenue North at its west end. Much of the northern side of the site is a concrete retaining wall ranging in height from 1 to 20 feet. The southern side of the site is bordered by asphalt parking lots, storage areas and buildings.

The eastern third of the site between Aurora Avenue and Stone Way is 90-95% covered with an asphalt parking lot and asphalt bicycle path and a new building on the right-of-way just east of the Aurora Avenue bridge. The site consists of the western two-thirds of the right-of-way and is predominantly unpaved between Aurora Avenue and Phinney Avenue, but contains numerous trailers, storage containers and other miscellaneous vehicles and equipment.

Previous investigation of the site has indicated that there is shallow soil, less than 2 feet below ground surface (bgs), containing elevated levels of petroleum hydrocarbons ranging from 110 ppm to 46,000 ppm along the right-of-way (Figure 3). PCBs and PAHs were also detected along the right-of-way. The first phase of previous soil samples were collected from locations targeted because of visible staining or other potential indicators of petroleum hydrocarbon occurrence. The second phase of previous soil samples were collected from a trench running down the center of the right-of-way. It was concluded from the soil sampling results that approximately 5,200 cubic yards of soil containing petroleum hydrocarbons would have to be remediated between Stone Way and Aurora Avenue North, and approximately 8,650 cubic yards of soil containing petroleum hydrocarbons would have to be remediated between Aurora Avenue North and Phinney Avenue North. This investigation focuses on the western portion of the right-of-way.

1.2 Purpose and Scope

The purpose of this investigation was to: 1) further characterize the soil with regard to petroleum hydrocarbon occurrence between Aurora Avenue North and Phinney Avenue North; 2) determine if groundwater has been impacted under the site; and 3) evaluate the field and laboratory data with regard to current regulatory criteria.

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During this evaluation, EMR performed the following scope of work:

- Drilled 27 soil borings: 24 in the right-of-way and 3 south of the right-of-way
- Submitted selected soil samples from each boring for chemical analysis of TPH by Ecology specified method WTPH-D extended, PCBs and/or PAHs
- Evaluated the accumulated data and prepared this report with recommendations

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2.0 SITE CONDITIONS

The site consists of a former railroad right-of-way that is partially covered with asphalt. The former railroad right-of-way is approximately 40 feet wide and 3000 feet long. The eastern third of the site is covered with asphalt, the remaining western third is bare ground. The focus of this investigation was the western two-thirds of the right-of-way and will be referred to as the site from this point on.

The site is being used for storage space with numerous trailers, containers and equipment located on it. The ground surface is predominantly gravel. The site is flat and at an elevation of approximately 15 feet above mean sea level.

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3.0 SUBSURFACE EXPLORATION

The subsurface exploration program accomplished for this study consisted of drilling 27 borings (B-1 through B-27) to a depth of three to five feet below the ground surface (bgs) (Figure 4).

3.1 Subsurface Conditions

Based on lithology observed during the drilling and sampling of the borings, site soils generally consist of a surface layer of gravel that is immediately underlain by very dark brown sand, silt and gravel. This layer contains abundant cobbles up to a foot in diameter. The very dark brown sand, silt and gravel is underlain by light-to-dark brown sand, light brown sand and gravel, brown silt, and light gray silt and clay at various locations along the length of the site. The soil in borings B25 through B27 did not have the very dark brown sand, silt and gravel layer at the surface.

No groundwater table was encountered. However, there was a wet zone at a depth of about one foot in the area around sampling location B19. Because of the water, no sample was collected from this location.

3.2 Soil Borings

The site was divided into a sampling grid consisting of 120 cells. A total of 24 borings were drilled in individual cells chosen at random. One boring was drilled in each of the selected grid locations. In addition, three borings were drilled south of the right-of-way to check for TPH. EMR personnel used a hand held two-man post hole digger equipped with a six inch outer diameter auger to drill the borings. Borings were drilled to a maximum depth of five feet below the ground surface. An electric jackhammer was used to break through asphalt and concrete pavement where necessary. All drilling equipment was decontaminated between boring locations.

3.3 Soil Sampling

Discrete soil samples were collected at depths ranging from 1.5 feet to 5 feet bgs to obtain representative samples of the subsurface soil. Samples were collected with a three inch diameter bucket auger. All sampling equipment was decontaminated between sampling points. Soil samples were placed into clean glass jars. Samples were labeled with the boring location and the sampling depth, i.e. B4-3 means boring number B4 from the three foot depth. Soil sampling Quality Assurance/Quality Control (QA/QC) procedures are detailed in Appendix E.

Each soil sample was screened for headspace volatiles in the field using a photoionization detector (PID). There were no PID readings observed above background levels. In addition to PID screening, each sample was classified as to soil lithology in the field using the Unified Soil Classification System (Appendix C).

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4.0 QUANTITATIVE ANALYSES

4.1 Analytical Methods

All of the soil samples were analyzed for total petroleum hydrocarbons as diesel fuel extended to heavier hydrocarbons by WDOE specified method WTPH-D extended. Nine of the samples were analyzed for polychlorinated biphenyls (PCBs). Fourteen of the samples were analyzed for polynuclear aromatic hydrocarbons (PAHs).

4.2 Chemical Analytical Results

The results of the soil sampling analyses indicated that the soil samples did not contain TPH as diesel fuel or heavier oil above the WDOE Model Toxics Control Act Method A compliance level of 200 ppm (Table 1) with the exception of one sample-- B27-2.5. This sample contained 630 ppm TPH heavier than diesel fuel. The laboratory analytical report is presented as Appendix D.

None of the samples contained detectable concentrations of PCBs. Only two samples, B26-1.5 and B27-1 contained detectable concentrations of PAHs. No carcinogenic PAHs were detected above the WDOE Model Toxics Control Act Method A compliance level of 20 ppm. These two samples were collected from a depth of 1 to 1.5 feet below the ground surface composed of asphalt. It is possible that the TPH and PAHs detected in the soil samples resulted from small amounts of asphalt inadvertently getting into the soil samples when they were collected.

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5.0 CONCLUSIONS

5.1 Subsurface Soil

Field observations of the subsurface soils during boring showed that the top 2 to 2.5 feet of soil is composed of very dark brown sand, silt and gravel. This material is fill that was the former road-bed for the railroad tracks. The soil in borings B25 through B27 did not have the very dark brown sand, silt and gravel layer at the surface.

During this investigation, 27 soil borings, B1 through B27, were advanced to further characterize known TPH, PCB and PAH affected subsurface soils. TPHs, PCBs and PAHs were not detected above the MTCA Method A compliance levels in any of the samples with the exception of B27-2.5 which contained 630 ppm TPH heavier than diesel fuel. The samples indicate that there is no TPH, PCB or PAH contamination of concern at or below a depth of 3 feet below the ground surface. The soil samples that contained low concentrations (< 100 ppm) of TPH, B11 through B18, were generally located in the areas corresponding to the previous shallow soil samples containing high concentrations of TPH. In general, these areas are located north of buildings K, M, H and C.

Previous soil samples were collected from the road-bed material and indicate that it contains, in places, higher concentrations of TPH (>200 ppm). The previous soil samples generally targeted isolated areas of visible soil staining. Two of these areas were around railroad track switches, three were at stained areas representing recent spills, and the other locations were located arbitrarily in the centerline of the tracks. The concentrations of TPH near the switches ranged from 400-11,700 ppm and averaged 3,363 ppm. The concentration of TPH at recent spills ranged from 120-46,000 ppm and averaged 13,260 ppm. The concentrations from the arbitrary sample locations ranged from 61-960 ppm and averaged 288 ppm. Clearly the concentration of TPH in the right-of-way away from isolated stained areas is significantly lower than the stained areas. Thus the stained areas are not representative of the right-of-way as a whole.

The TPH present in the shallow soil in the right-of-way is generally concentrated around switches and recent spills. Figure 5 shows that areas where the soil contains elevated levels of TPH. This area totals approximately 31,900 square feet. If the soil containing >200 ppm TPH extends down to 2 feet bgs, a total of 2,363 cubic yards of soil would require treatment/disposal.

5.2 Groundwater

Groundwater was not encountered under the site to the total depth explored (5 feet bgs). Groundwater has not been impacted by the TPH in the soil at this site.

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6.0 RECOMMENDATIONS

6.1 Further Investigation

Due to the presence of 630 ppm TPH in soil sample B27-1.5, EMR recommends additional soil borings in the area around boring B27 to confirm and delineate the TPH occurrence. We recommend three to four borings to be drilled through the asphalt down to a depth of two feet. One soil sample from each boring should be collected from a depth of 1.5 to 2 feet bgs. These samples should be analyzed for TPH by method WTPH-D extended. This additional investigation will cost roughly $3,000-$4,000.

6.2 Soil Remediation

Based on this current and previous studies of the subsurface soils at this site, there is approximately 2,363 cubic yards of soils containing petroleum hydrocarbons above the MTCA Method A compliance level of 200 ppm (Figures 5) in the right-of-way between Aurora Avenue North and Phinney Avenue North. This TPH impacted soil does not extend below a depth of 2 feet bgs.

Previous reports have detailed the remedial options available for soil containing TPH concentration >200 ppm. These include capping the site, bioremediation, low temperature thermal desorption and soil excavation with landfill disposal. Capping the site with a LDPE liner system or asphalt would limit the future use of the site area for buildings, etc. A previous treatability study conducted by Enviros, Inc. indicated that the TPH in the soil would not effectively biodegrade due to the presence of heavy hydrocarbons and PAHs. Biodegradation is also time intensive requiring a long treatment duration to achieve cleanup levels. On-site low temperature thermal desorption is not practical due to space limitations. Excavation of the soil containing TPH followed by off-site thermal desorption or landfill disposal seem to be the most promising remediation alternatives.

Due to space limitations, it would be best to load the soil directly into dump trucks for transport from the site rather than stockpiling the soil on-site. Excavation, loading, transportation and disposal of the TPH impacted soil in a landfill will cost roughly $175,000 to $200,000 depending on the total volume and weight of soil. Excavation, loading, transportation and thermal desorption of the TPH impacted soil will cost roughly $225,000 to $250,000 depending on the total volume and weight of soil. Consulting services including confirmation sampling, meetings, reporting and project management will cost roughly $25,000 to $35,000.

Disposal
14/40-85
19,000 - 27,000

Remed
95 - 106
24,000 - 27,000

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7.0 LIMITATIONS

This assessment was completed following generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area. Geologic and soil formations are inherently random, variable and indeterminate in nature; therefore, the findings and conclusions stated herein must be considered not as scientific certainties, but as professional opinions concerning the significance of the limited data gathered during the assessment. No other warranty, expressed or implied, is made. EMR does not and cannot represent that the site contains no hazardous waste or material, petroleum products, or other latent condition beyond that noted by EMR during the period of site assessment. Reuse of any part of this assessment for any other purpose without EMR's written authorization shall be at Client's risk. The Client agrees to indemnify and hold harmless EMR from all actions, claims, damages, and expense, including attorney fees, arising out of any unauthorized reuse.

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APPENDIX A: Figures

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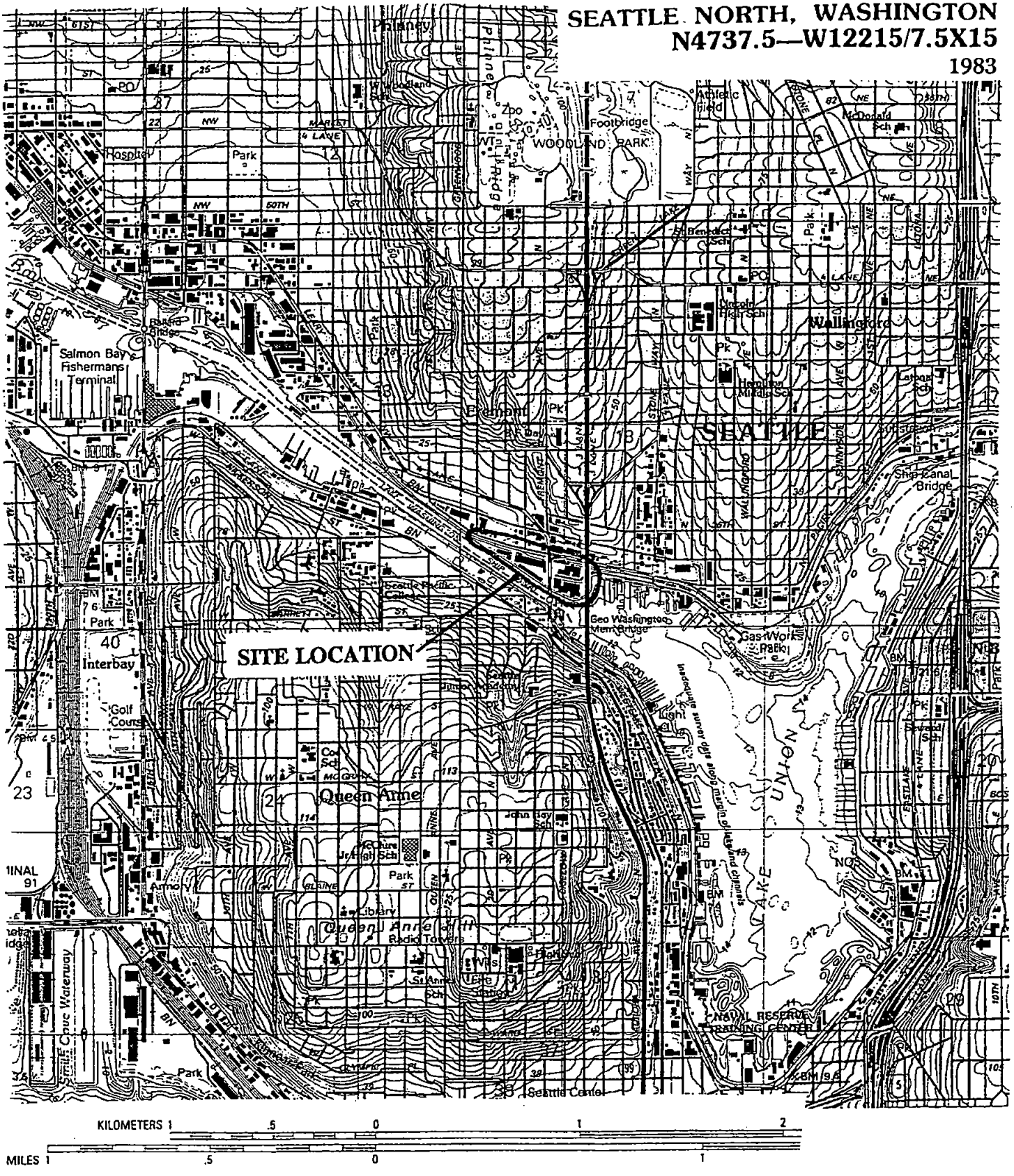
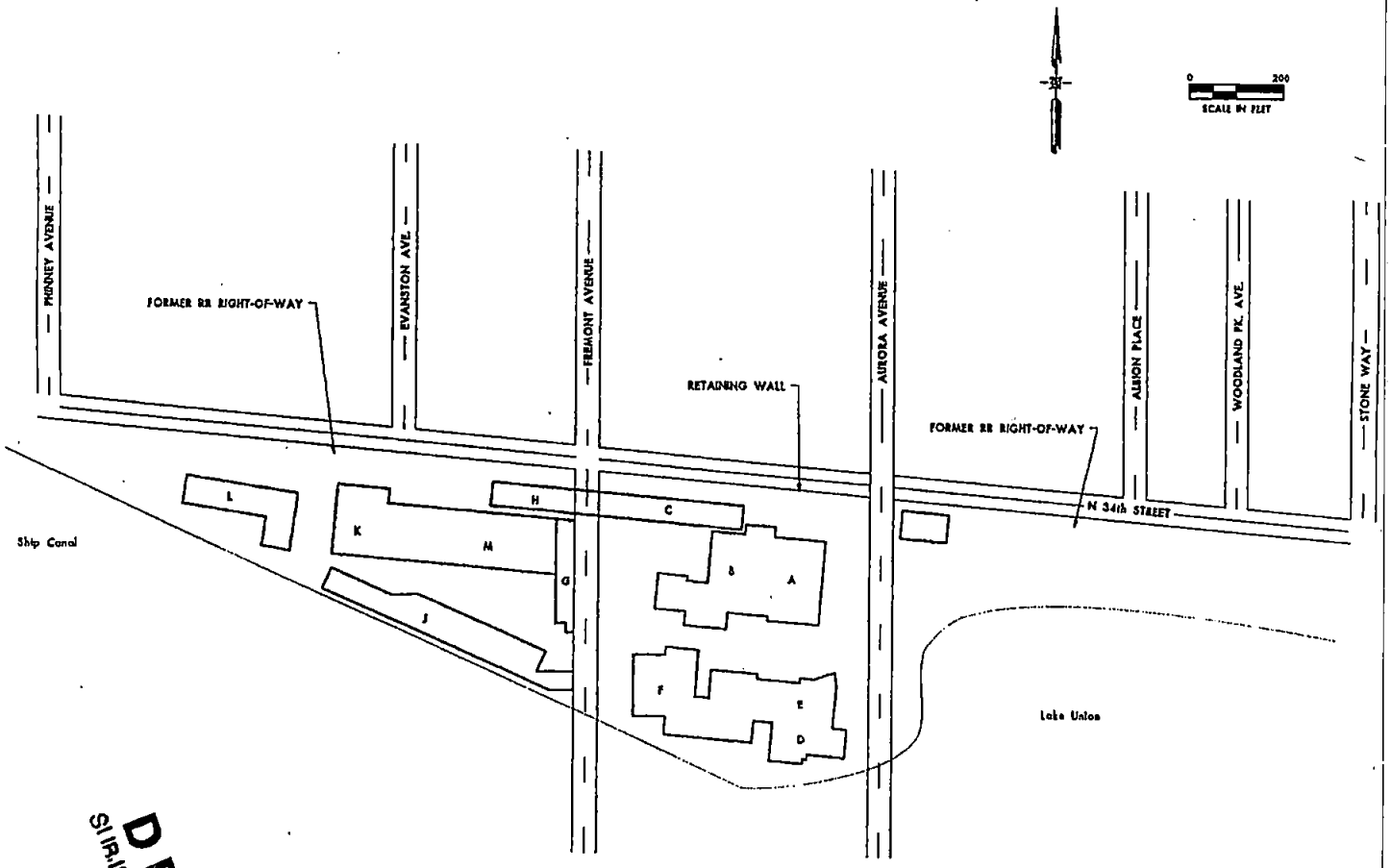


EMR INCORPORATED	*Burlington Northern Railroad Co.* *Quadrant Center* *Subsurface Soil Investigation* *Site Location Map*	Drawn By: JFK Checked By: TJP Project Number: 1317 C.I.D:	Revision No.: 1 Date: 3/29/95 Scale: File Name: 1317.GCD	FIGURE 1



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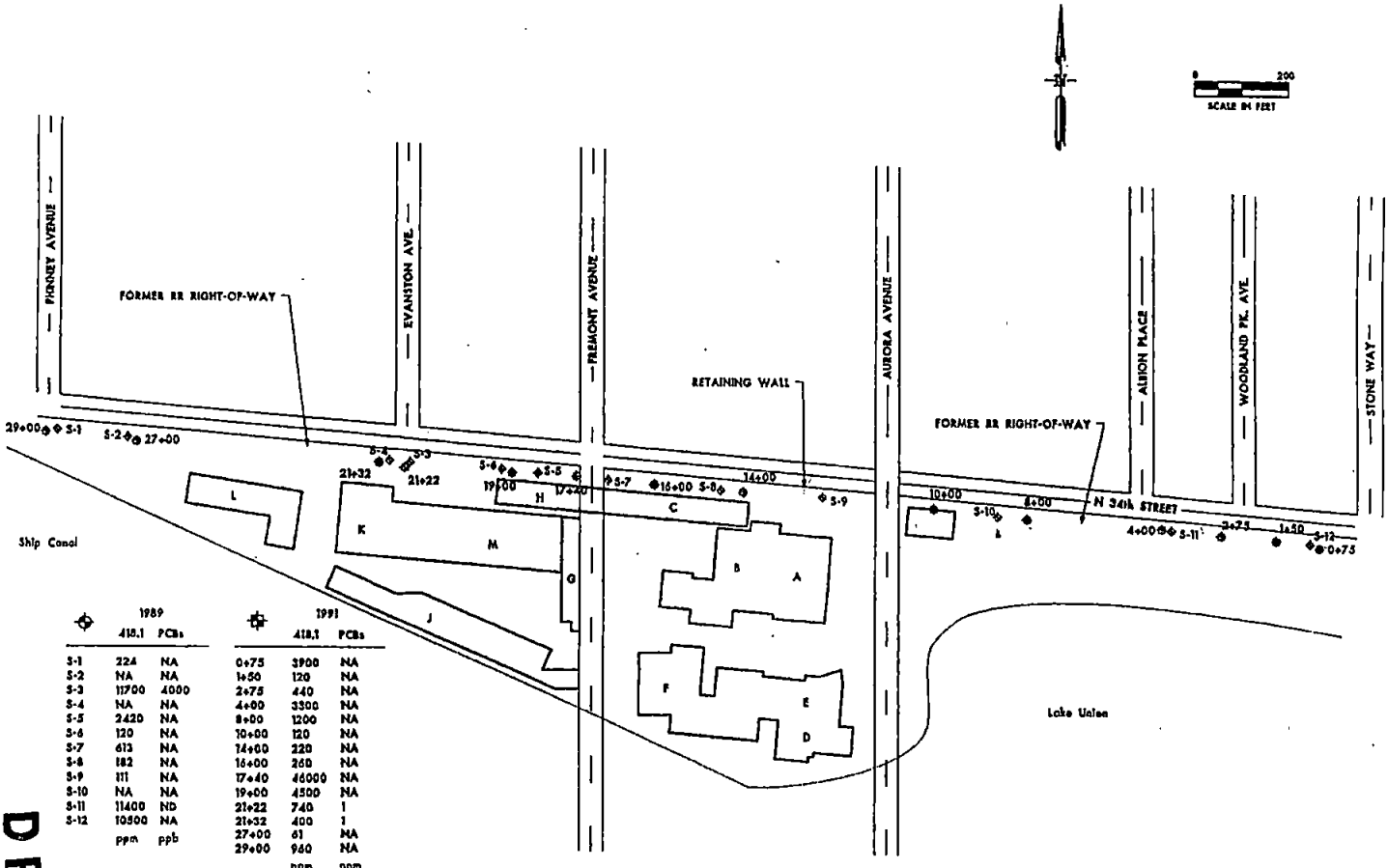
EMR INCORPORATED	Burlington Northern Railroad Co. Qwest Center Subsurface Soil Investigation Site Plan	Drawn By: MK Checked By: TJP Project Number: P-1317 CAD:	Revision No.: 1 Date: 8/17/94 Scale: File Name: 1317.GCD	FIGURE 2



	1989		1991		
	418.1	PCBs	418.1	PCBs	
S-1	224	NA	0+75	3900	NA
S-2	NA	NA	1+50	120	NA
S-3	11700	4000	2+75	440	NA
S-4	NA	NA	4+00	3300	NA
S-5	2420	NA	8+00	1200	NA
S-6	120	NA	10+00	120	NA
S-7	613	NA	14+00	220	NA
S-8	182	NA	16+00	260	NA
S-9	111	NA	17+40	46000	NA
S-10	NA	NA	19+00	4500	NA
S-11	11400	ND	21+22	740	1
S-12	10500	NA	21+32	400	1
			27+00	61	NA
			29+00	960	NA
	ppm	ppb		ppm	ppm

NA = Not Analyzed
ND = Not Detected
ppm = parts per million
ppb = parts per billion

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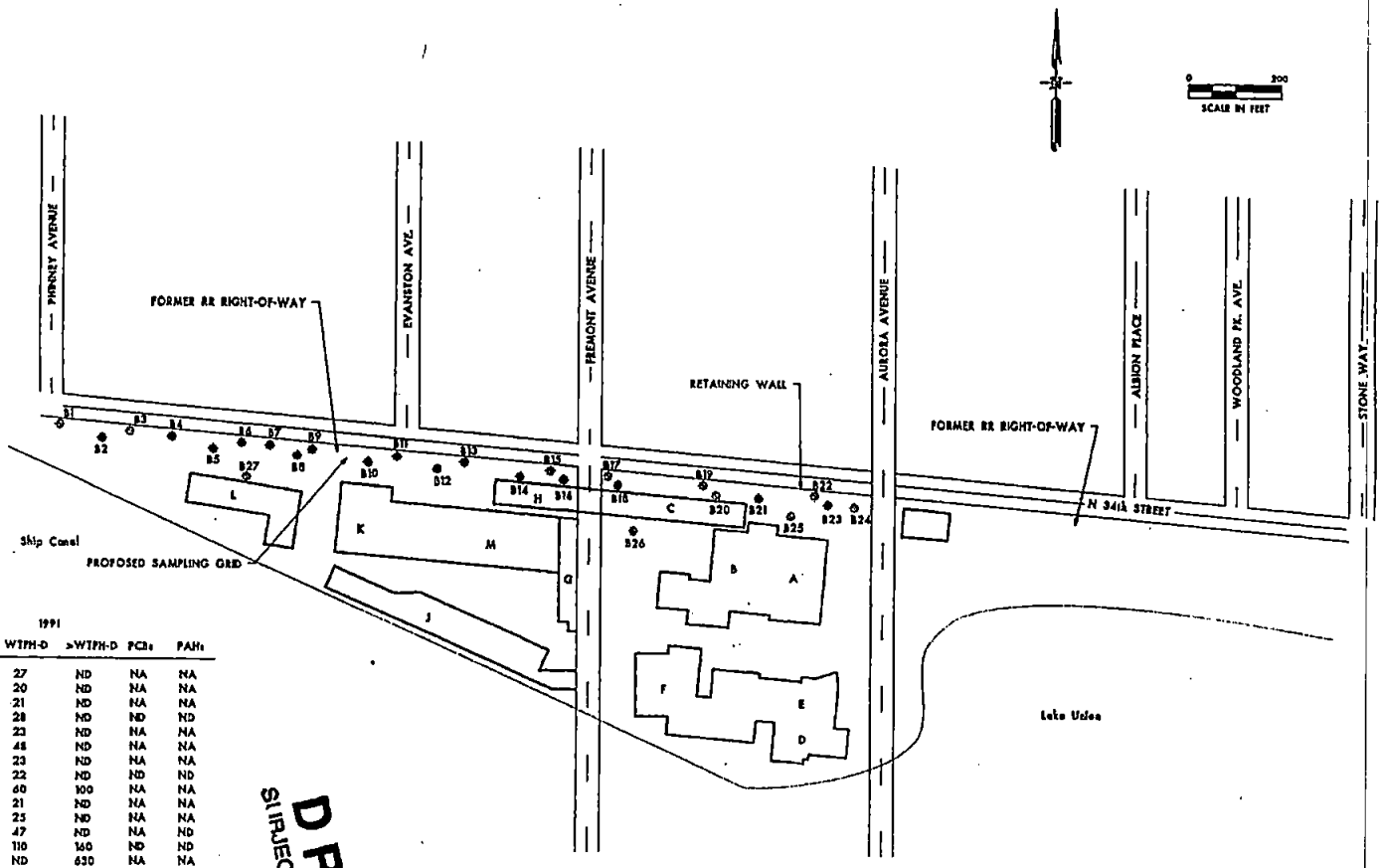
Burlington Northern Railroad Co.
Quadrant Center

Subsurface Soil Investigation
Former Sample Locations

Drawn By: JFK
Checked By: TJP
Project Number: 1317
C.I.D:

Revision No.: 1
Date: 3/29/95
Scale:
File Name: 1317.GCD

FIGURE 2



	1991			
	WTPH-D	>WTPH-D	PCBs	PAHs
B11-5	27	ND	NA	NA
B12-3	20	ND	NA	NA
B12-5	21	ND	NA	NA
B13-3	28	ND	ND	ND
B13-5	23	ND	NA	NA
B14-2.5	46	ND	NA	NA
B16-3	23	ND	NA	NA
B17-3	22	ND	ND	ND
B18-3	60	100	NA	NA
B18-5	21	ND	NA	NA
B23-4	25	ND	NA	NA
B26-1.5	47	ND	NA	ND
B27-1	110	160	ND	ND
B27-2	ND	630	NA	NA
	ppm	ppm	ppm	ppm

NA = Not Analyzed
ND = Not Detected
ppm = parts per million
ppb = parts per billion

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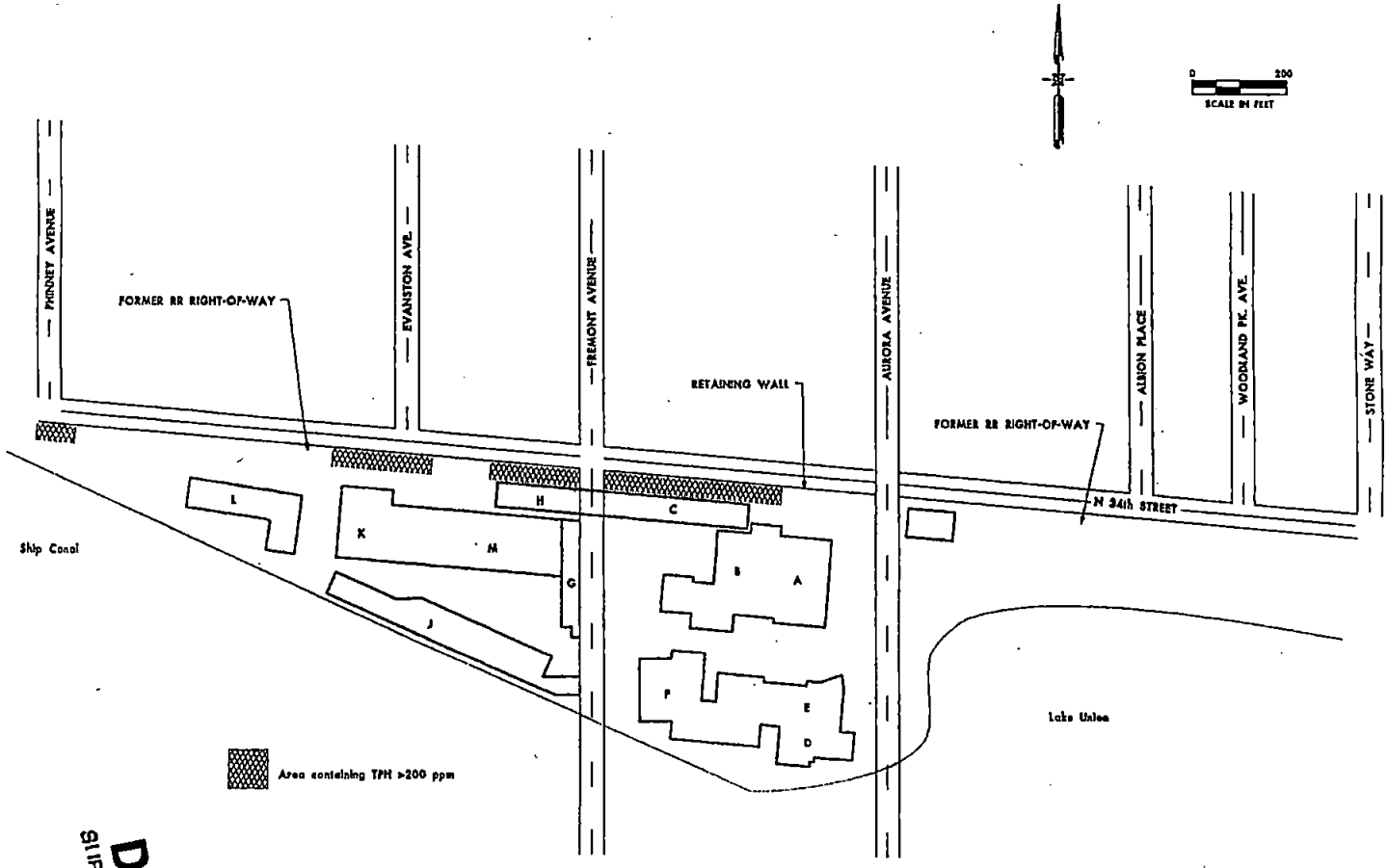
Burlington Northern Railroad Co.
Gondrant Center

Subsurface Soil Investigation
Proposed Sampling Grid

Drawn By: MK
Checked By: TW
Project Number: P-1317
CAD:

Revision Nos: 1
Date: 8/17/94
Scale:
File Name: 1317.GCD

FIGURE 4



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EMR INCORPORATED	*Burlington Northern Railroad Co.* *Quadrant Center* *Subsurface Soil Investigation* *Areas Containing TPH >200 ppm*	Drawn By: JFK Checked By: TJP Project Number: 1317 C.I.D.:	Revision No.: 1 Date: 3/29/95 Scale: File Name: 1317.GCD	FIGURE 5

APPENDIX B: Tables

TABLE 1

Soil Sample Results
Quadrant Center
Seattle, WA
EMR Project #1317

Soil samples collected 2/7/95 to 2/9/95

Sample ID	Depth (ft)	Diesel Range Hydrocarbons	>Diesel Range Hydrocarbons	Total PCBs	Total Carcinogenic PAHs	Units
B1-3	3	ND	ND	NA	ND	ppm
B1-5	5	ND	ND	NA	NA	ppm
B2-3	3	ND	ND	NA	NA	ppm
B2-5	5	ND	ND	NA	NA	ppm
B3-3	3	ND	ND	NA	ND	ppm
B3-5	5	ND	ND	NA	NA	ppm
B4-3	3	ND	ND	NA	NA	ppm
B4-5	5	ND	ND	NA	NA	ppm
B5-3	3	ND	ND	ND	ND	ppm
B5-5	5	ND	ND	NA	NA	ppm
B6-3	3	ND	ND	NA	NA	ppm
B6-5	5	ND	ND	NA	NA	ppm
B7-3	3	ND	ND	ND	ND	ppm
B7-5	5	ND	ND	NA	NA	ppm
B8-3	3	ND	ND	NA	ND	ppm
B8-5	5	ND	ND	NA	NA	ppm
B9-3	3	ND	ND	NA	NA	ppm
B9-5	5	ND	ND	NA	NA	ppm
B10-3	3	ND	ND	ND	ND	ppm
B10-5	5	ND	ND	NA	NA	ppm
B11-3	3	ND	ND	NA	NA	ppm
B11-5	5	27	ND	NA	NA	ppm
B12-3	3	20	ND	NA	NA	ppm
B12-5	5	21	ND	NA	NA	ppm
B13-3	3	28	ND	ND	ND	ppm
B13-5	5	23	ND	NA	NA	ppm
B14-2.5	2.5	48	ND	NA	NA	ppm
B15-3	3	ND	ND	NA	ND	ppm
B16-3	3	23	ND	NA	NA	ppm
B17-3	3	22	ND	ND	ND	ppm
B17-4.5	4.5	ND	ND	NA	NA	ppm
B18-3	3	60	100	NA	NA	ppm
B18-5	5	21	ND	NA	NA	ppm
B20-3	3	ND	ND	ND	ND	ppm
B20-4	4	ND	ND	NA	NA	ppm
B21-3	3	ND	ND	NA	NA	ppm
B21-4.5	4.5	ND	ND	NA	NA	ppm
B22-3	3	ND	ND	NA	NA	ppm

TABLE 1

Soil Sample Results
Quadrant Center
Seattle, WA
EMR Project #1317

Soil samples collected 2/7/95 to 2/9/95

Sample ID	Depth (ft)	Diesel Range Hydrocarbons	>Diesel Range Hydrocarbons	Total PCBs	Total Carcinogenic PAHs	Units
B23-3	3	ND	ND	ND	ND	ppm
B23-4	4	25	ND	NA	NA	ppm
B24-3	3	ND	ND	ND	ND	ppm
B24-4	4	ND	ND	NA	NA	ppm
B25-1.5	1.5	ND	ND	ND	ND	ppm
B25-4	4	ND	ND	NA	NA	ppm
B26-1.5	1.5	47	100	NA	0.2	ppm
B26-4	4	ND	ND	NA	NA	ppm
B27-1	1	110	160	ND	ND	ppm
B27-2.5	2.5	ND	630	NA	NA	ppm
WDOE Cleanup Level		200	200	10	20	ppm

ND = Not Detected
NA = Not Analyzed
ppm = parts per million

APPENDIX C: Drilling Logs

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PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B1*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/7/95*
BORING DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B1-3				Gray sandy silt. Fine sand 10%.
4				B1-5				Brown sand and gravel Dark brown silty clay.
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED	PROJECT: *Quadrant Center*	BORING/WELL I.D.: *B2*
	LOCATION: *Seattle, Wa*	OWNER: *Quadrant Center*
	PROJECT #: *1317*	DATE COMPLETED: *2/7/95*

BORING	DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN	DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING	DIAMETER: *NA*	LENGTH:	TYPE:

GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2								Brown sandy silt. Fine sand 10%.
				B2-3				Dark brown silty clay
4								Dark brown clay
				B2-5				Fine grained brown silty sand
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B3*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/7/95*
BORING	DEPTH: *5'* DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN	DIAMETER: *NA* LENGTH:	SLOT SIZE:
CASING	DIAMETER: *NA* LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B3-3				Brown sandy silt. Fine sand 10%.
4				B3-5				Gray clay Dark brown clay Fine grained brown silty sand
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B4*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/7/95*
BORING DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B4-3				Light brown medium-fine grained sand, silty
								Gray clay
4				B4-5				Light brown medium-fine grained sand, silty
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED	PROJECT: *Quadrant Center*	BORING/WELL I.D.: *B5*
	LOCATION: *Seattle, Wa*	OWNER: *Quadrant Center*
	PROJECT #: *1317*	DATE COMPLETED: *2/7/95*

BORING	DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN	DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING	DIAMETER: *NA*	LENGTH:	TYPE:

GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B5-3				Light brown medium-fine grained sand, silty
								Gray clay
4				B5-5				Light brown medium-fine grained sand, silty
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B6*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/7/95*
BORING DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Pea Gravel
								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B6-3				Light brown medium-fine grained sand, silty
								Gray clay
4				B6-5				Light brown medium-fine grained sand, silty
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B7*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/7/95*
BORING DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Pea Gravel
								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B7-3				Light brown medium-fine grained sand, silty
								Gray clay
4				B7-5				Light brown medium-fine grained sand, silty
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B8*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/7/95*
BORING — DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN — DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING — DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Pea Gravel
								Light brown sand, silt and gravel. Gravel is up to 6" in diameter. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B8-3				Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
4				B8-5				Light brown sand, silt and gravel. Gravel is up to 6" in diameter. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B9*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/7/95*
BORING DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Pea Gravel
								Light brown sand, silt and gravel. Gravel is up to 6" in diameter. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2								
				B9-3				Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
4								
				B9-5				Light brown sand, silt and gravel. Gravel is up to 6" in diameter. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B10*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Pea Gravel
								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B10-3				Light brown silty sand, very fine grained
4				B10-5				Light brown sand, medium grained
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B11*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING — DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN — DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING — DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B11-3				Light brown sand, medium-coarse grained
4				B11-5				
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B12*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B12-3				Light brown sand, fine-medium grained
4				B12-5				
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B13*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B13-3				Greenish/gray sand, fine-medium grained
4				B13-5				Gray silty clay
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B14*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING DEPTH: *2.5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B14-2.5				Light brown gravelly sand, cobbles
4								
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B15*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING DEPTH: *2.5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B15-3				Light brown gravelly sand, cobbles
4								
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B16*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING — DEPTH: *4'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN — DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING — DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B16-3				Light brown gravelly sand, cobbles
4								Brown sandy gravel, wet
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED	PROJECT: *Quadrant Center*	BORING/WELL I.D.: *B17*
	LOCATION: *Seattle, Wa*	OWNER: *Quadrant Center*
	PROJECT #: *1317*	DATE COMPLETED: *2/8/95*

BORING	DEPTH: *4.5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN	DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING	DIAMETER: *NA*	LENGTH:	TYPE:

GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B17-3				Light brown sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
4				B17-4.5				
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B18*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING DEPTH: *5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B18-3				brown gravelly sand
4								Brown sand with some gravel
6				B18-5				Greenish/gray fine-medium sand with some gravel
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B20*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING DEPTH: *4'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B20-3				Light brown silty sand
4				B20-4				Light brown sandy silt
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B21*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/8/95*
BORING DEPTH: *4.5'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B21-3				Light brown gravelly sand
4				B21-4.5				
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B22*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/9/95*
BORING DEPTH: *3'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B22-3				Light brown gravelly sand
4								
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B23*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/9/95*
BORING DEPTH: *4'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2				B23-3				Light brown gravelly sand
4				B23-4				
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B24*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/9/95*
BORING DEPTH: *4'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Very dark brown to black sand, silt and gravel. Gravel is up to 6" in diameter, mostly cobble sized. Sand is coarse to medium grained. Soil is well graded. Gravel 10-15%, sand 75-90%
2								Light brown gravelly sand
				B24-3				
4				B24-4				
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B25*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/9/95*
BORING DEPTH: *4'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING DIAMETER: *NA*	LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Asphalt
								Dark brown sand, silt and gravel
				B25-1.5				
2								Light brown medium grained sand
								Light brown gravelly sand
4				B25-4				
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED

PROJECT: *Quadrant Center*		BORING/WELL I.D.: *B26*
LOCATION: *Seattle, Wa*		OWNER: *Quadrant Center*
PROJECT #: *1317*		DATE COMPLETED: *2/9/95*
BORING	DEPTH: *4'* DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN	DIAMETER: *NA* LENGTH:	SLOT SIZE:
CASING	DIAMETER: *NA* LENGTH:	TYPE:
GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Asphalt
								Concrete
				B26-1.5				Dark brown sand, silt and gravel
2								
								Light brown sandy silt w/some gravel
4				B26-4				
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	

EMR INCORPORATED	PROJECT: *Quadrant Center*	BORING/WELL I.D.: *B27*
	LOCATION: *Seattle, Wa*	OWNER: *Quadrant Center*
	PROJECT #: *1317*	DATE COMPLETED: *2/9/95*

BORING	DEPTH: *3'*	DIAMETER: *6"*	LOG BY: *Jerome F. Kraus, PG*
SCREEN	DIAMETER: *NA*	LENGTH:	SLOT SIZE:
CASING	DIAMETER: *NA*	LENGTH:	TYPE:

GRAVEL PACK: *NA*	SEAL: *NA*	BOX TYPE: *NA*
DRILLING CO.: *NA*	DRILLING METHOD: *NA*	DRILLER: *NA*
LICENSE #: *NA*	SAMP. METHOD: *Bucket Auger*	RIG TYPE: *NA*

Depth (ft)	Boring Construction	Groundwater	Sample Recovery	Sample #	Blow Counts	PID Readings	Graphic Log	SOIL DESCRIPTION/CLASSIFICATION
0								Asphalt
				B27-1				Dark brown sand, silt and gravel
2								Light brown medium grained sand
				B27-2.5				
4								
6								
8								

Elevation Reference:	Top of Casing Elevation:	PAGE 1 of 1
Surface Elevation:	Survey Method:	