

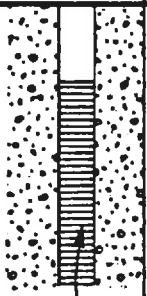
APPENDIX A

Site Boring Logs (on CD)

PROJECT King County Ground Water Study - EnumclawPage 1 of 2Location North sideBoring No. MW-1Surface Elevation 818.39 ft.Drilling Method Air RotaryTotal Depth 85 ft.Drilled By Unitas/JohnsonDate Completed 8/24/83Logged By CEWells

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
			1	Bag		GM-ML	0.0'-6.0' Gravelly sandy silt, tan, soft, saturated.	
		10	2	"		SM-GM	6.0'-33.0' Gravelly silty sand, silty gravelly sand, dark grey, loose, well graded, with some cobbles, wet.	
			3	"				
		20	4	"				
			5	"				
		30	6	"				
			7	"		GM	33.0'-38.0' Silty sandy gravel, dark grey, with some cobbles, wet to saturated.	
		40	8	"		GM-ML	38.0'-42.0' Gravelly sandy silt, dark grey with some cobbles, wet to saturated.	
			9	"		SP	42.0'-44.0' Sand, brown, fine to medium grained, poorly graded, with some silt, damp.	
		50	10	"		SW-GW	44.0'-78.0' Gravelly sand, sandy gravel, brown, grey, loose, well graded, dry to damp.	
			11	"				
		60	12	"				
			13	"				
		70	14	"				

PROJECT King County Ground Water Study - EnumclawPage 2 of 2Boring No. MW-1

WELL DETAILS	PENE- TRATION TIME / RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
 3" dia. PVC screen, 0.010" slots			15	Bag		SW-GW		
		80	16	"		GM	78.0'-81.0' Silty sandy gravel, dark grey, loose, wet.	
			17	"		GW	81.0'-83.0' Sandy gravel, grey, loose, coarse, water bearing (pumped 5 gpm)	Temp. = 10°C
		90				GM	83.0'-85.0' Silty sandy gravel, dark grey, loose, wet.	Cond. = 335
		100						
		110						
		120						
		130						
		140						

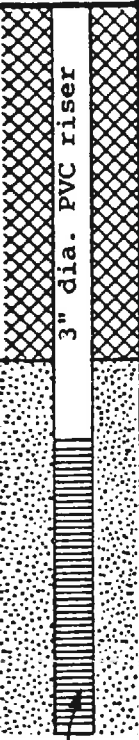
PROJECT King County Ground Water Study - EnumclawPage 1 of 1Location West sideBoring No. MW-2Surface Elevation 796.51 ft.Drilling Method Air RotaryTotal Depth 65 ft.Drilled By Unitas/JohnsonDate Completed 8/25/83Logged By CEWells

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
Bentonite 3" dia. PVC riser Sand Heave 3" dia. PVC screen, 0.010" slots			1	Bag		SW-SP	0.0'-18.0' Sand, grey-brown, brown, medium to coarse, moderately well graded, loose, damp.	
		10	2	"				
			3	"				
		20	4	"		SW	18.0'-22.0' Gravelly sand, grey brown, medium to coarse, well graded sand, with 1/2"-3/4" gravel, some silt, wet.	
			5	"				
		30	6	"		SP-SM	31.0'-37.0' Sand, silty sand, brown, fine grained, damp.	
			7	"				
		40	8	"		SW-SP	37.0'-62.0' Sand, dark grey, medium to coarse grained, moderately well graded, loose, damp to 45 ft., saturated below 45 ft.	
			9	"				
		50	10	"				
			11	"				
		60	12	"				
			13	"		SP-SM	62.0'-65.0' Sand, silty sand, brown to grey-brown, fine to medium grained, moderately well graded, saturated.	EC=165
		70						

PROJECT King County Ground Water Study - EnumclawPage 1 of 2Location Southeast cornerBoring No. MW-3Surface Elevation 845.52 ft.Drilling Method Air RotaryTotal Depth 110 ft.Drilled By Unitas/JohnsonDate Completed 8/26/83Logged By CEWells

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
Bentonite 3" dia. PVC riser			1	Bag		SW-SP	0.0'-13.0' Sand, brown, fine to medium grained, moderately well graded, with few gravels to 3/4" diameter, damp to wet.	
		10	2	"		SW	13.0'-22.0' Sand, gravelly sand, grey brown, fine to coarse, well graded, with some cobbles, damp.	
			3	"			22.0'-28.0' Silty sandy gravel, brown, hard, wet.	
		20	4	"				
			5	"				
		30	6	"		GW-SW	28.0'-33.0' Gravelly sand, sandy gravel, grey, hard, with some cobbles, dry.	
			7	"		SW-SP	33.0'-42.0' Sand, dark brown, medium to coarse, moderately well graded, small amount of gravel to 1/2" diameter, loose, damp.	
		40	8	"		SW-SP	42.0'-94.0' Sand, brown to dark brown, moderately poorly graded to well graded, occasional gravelly zones with gravel to 1/2" diameter, loose, damp.	
			9	"				
		50	10	"				
			11	"				
		60	12	"				
			13	"				
		70	14	"				

PROJECT King County Ground Water Study - EnumclawPage 2 of 2Boring No. MW-3

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
 Bentonite 3" dia. PVC riser Sand Heave 3" dia. PVC screen, 0.010" slots			15	Bag				
		80	16	"		SW-SP		
			17	"				
		90	18	"				
			19	"		SP	94.0'-11.0' Sand, dark grey, poorly graded to moderately poorly graded, loose, wet to saturated. Angular coal fragments occurred below 107 ft.	
		100	20	"				
			21	"				
		110	22	"				3-4 gpm T=11°C EC= 75
		120						
		130						
		140						

PROJECT ENUMCLAW LANDFILLPage 1 of 2Location North of Sonneson houseBoring No. MW-4Surface Elevation Top PVC 771.65 ft.Drilling Method Air RotaryTotal Depth 95 feetDrilled By Johnson Drilling Co.Date Completed 8/4/86Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
			5	Cuttings		SW/GM	0-14' <u>SILTY GRAVEL/SILTY SAND</u> , dark yellowish brown, with fine sand, gravel, cobbles, and boulders, wet to moist, saturated 10 ft.	▽
		10	10	"				
		15	"					▽
		20	20	"		SW	14-20' <u>GRAVELLY SAND</u> , dark olive gray, with some silt and sand, well graded, lost moisture at 18 feet.	
		25	"			GW	20-51' <u>SANDY GRAVEL</u> , dark yellowish brown, little to no fines, medium to coarse sand and gravel, well graded, saturated at 25 ft	
		30	30	"				EC = 180
		35	"					
		40	40	"			Sand is fine to coarse color change to olive gray.	
		45	"					
		50	50	"				
		55	"			GC	51-65' <u>CLAYEY GRAVEL/ GRAVEL</u> with clay lenses, olive gray.	EC = 105
		60	60	"		CL	55-58' <u>SILTY CLAY/</u> trace of sand and gravel, olive gray, lost water.	
		65	"			SP	58-95' <u>SAND</u> , dark yellowish brown to olive gray, trace of silt and clay, poorly graded, saturated.	
		70	70	"				

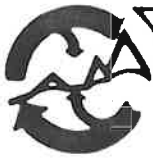


PROJECT ENUMCLAW LANDFILL

Page 2 of 2

Boring No. MW-4

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
 Bentonite Sand and Heave Sand 2 inch sch. 80 slotted 0.010 inch PVC 8 inch steel casing with driveshoe		70	70	Cuttings		SP	58-95' See page 1 for description.	
			75	"				
		80	80	"				
			85	"			Coal chips appear less than 1/8" diameter.	
		90	90	"				
		100					Total depth 95 feet.	



PROJECT ENUMCLAW LANDFILL

Page 1 of 1

Location Norht of Sonneson home.

Boring No. MW-5

Surface Elevation Top PVC S 772.88 ft.
Top PVC D 772.65 ft.

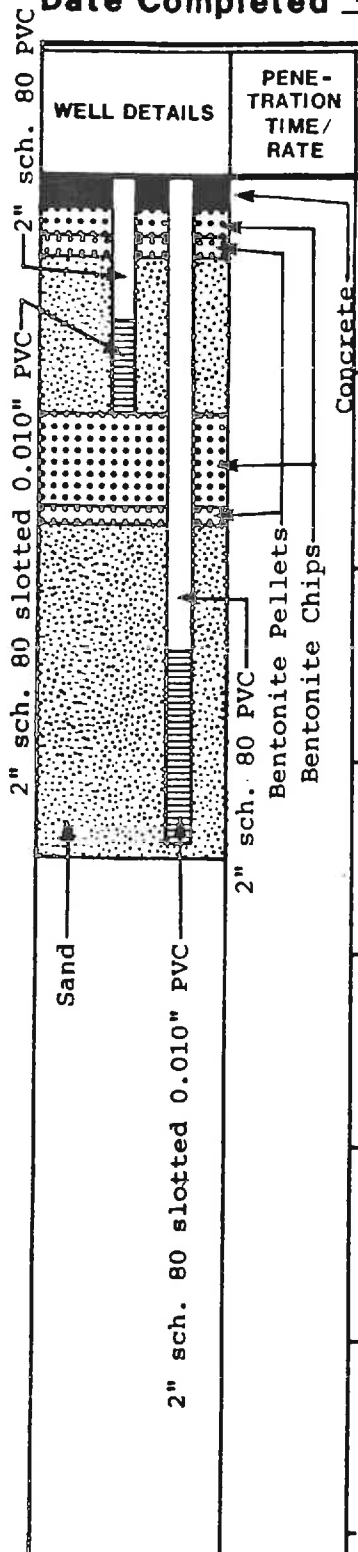
Drilling Method Air Rotary

Total Depth 35 feet

Drilled By Johnson Drilling Co.

Date Completed 8/6/86

Logged By G. S. Mack/L.M. West

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		5	5	Cuttings		SW/GW	0-8' GRAVELLY SAND/SANDY GRAVEL, dark yellowish brown, medium to coarse sand and gravel, well graded, moist.	
		10	10	"		GM/GW	8-20' SILTY GRAVEL, medium brown, boulders greater than 8 inch at top, increase silt at bottom. Saturated at 10 feet, dry at 15 feet, and saturated at 20 feet.	
		15	15	"				
		20	20	"				
		25	25	"		GW/GP	25-35' SAND AND GRAVEL, numerous cobbles.	EC = 150
		30	30	"				
		35	35	"				
		40						



PROJECT ENUMCLAW LANDFILL

Page 1 **of** 2

Location Main gate, east side.

Boring No. MW-6

Surface Elevation Top PVC 838.16 ft.

Drilling Method Air Rotary

Total Depth 125 feet

Drilled By Johnson Drilling Co.

Date Completed 8/14/86

Logged By G. S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
			5	Cuttings		GW	0-15' SANDY GRAVEL, olive gray, some boulders, medium to coarse sand, well graded, dry.	
		10	10	"				
		15	"					
		20	20	"		SW	15-20' GRAVELLY SAND, dark olive gray, fine to medium sand, well graded, moist.	
		25	"			GW/GM	20-57' SANDY GRAVEL, medium gray, medium to coarse gravel with some cobbles, clay and silt layers, well graded, dry.	
		30	30	"				
		35	"					
		40	40	"				
		45	"					
		50	50	"				
		55	"					
		60	60	"		SM/GM	57-61' SILTY SAND, with gravel, olive gray, well graded, dry, gravel layer at base.	
		65	"			SP/SW	61-125' See page 2 for description.	
		70	70	"				
							increase in fine material	



WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		70	70	Cuttings		SP/SW	61-125' SAND, dark yellowish brown, fine to medium sand with silt and some gravel layers, moderately poorly graded, slightly damp.	 EC = 120
		75	"	"				
		80	80	"			moisture in sand.	
		85	"	"				
		90	90	"			cuttings are wet.	
		95	"	"			saturated.	
		100	100	"				
		105	"	"				
		110	110	"			fine to coarse sand.	
		115	"	"			gravel appears in sand	
		120	120	"			coal chips appear.	
		125	"	"				
		130					Total depth 125 feet.	

June 15, 1993

Env. Engineering
Planning
Landscape Architecture

911 Western Avenue
Suite 302
Seattle, WA 98104
Phone 206.223.0326

Principals:
Maureen A. Kwolek, PE
Peg Szustek, RLA
Tom von Schrader, PE
John W. Rundall, PE

Mr. Bernard Breyen
Scozzolo Construction, Inc.
2825 South 154th Street
Seattle, WA 98188

Re: Enumclaw Landfill Closure Project, Phase II
Contract No. C10388C, Project No. 013115
Monitoring Well No. 6, SvR File No. 93002

Dear Mr. Breyen:

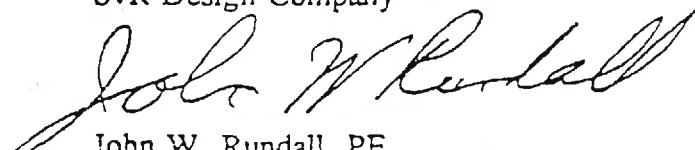
This letter is to confirm our discussions regarding abandoning MW-6 and replacing it with a new well (MW-6a). The abandonment of MW-6 shall be in accordance with WAC 173-160. A copy of the boring log is attached and it shows that between 23 feet and 73 feet there is still 50 feet of casing.

The new well (MW-6a) is to be located within five to ten feet of the MW-6 location. We will determine the precise location prior to drilling. MW-6a should be constructed similar to MW-6 and shall be in accordance with WAC 173-160. It should be noted that the WAC requires installation by a licensed driller; we understand Hayes meets that criteria.

There has been some discussion about reducing the size of the well to six inch diameter. Apparently the materials in the formations that the well is expected to encounter are hard and make drilling a straight well difficult. In order for the County to fit their sampling equipment in the well, after completion, the well must be straight enough to pass a "dummy" through the length of the two inch, Schedule 80 pipe. Discuss this requirement with Hayes and also be aware that drilling a six inch diameter straight can be more difficult than an eight inch diameter. The County will accept a six inch well if the above criteria is met.

Let us know what your schedule is for accomplishing this work-so we can have someone on-site to log the well. King County Solid Waste and the Health Department want the abandonment complete by mid-July. Please let us know if you have any questions.

Sincerely,
SvR Design Company


John W. Rundall, PE
Project Manager

cc: Jeff Bunnell, King County Solid Waste Division
Sue Byers, R.W. Beck and Associates
Mike Spillane, Herrera Environmental Consultants
Doug Hartsock, EMCON Northwest

OWNER: NAME ENUMCLAW LANDFILL

Address

28800 SE 44TH ST

ENUMCLAW, WA 98022-

(2) LOCATION OF WELL: County PIERCE

(3a) STREET ADDRESS OF WELL (or nearest address) 288010 SE 44TH ST

- NW 1/4 SE 1/4 Sec 19 T 20 N. R 7E WM

(13) PROPOSED USE: MONITORING

(14) TYPE OF WORK:

Owner's number of well MW-6A

(If more than one)

NEW WELL

Method: ROTARY

(5) DIMENSIONS:

Drilled 120 ft.

Diameter of well 6 inches

Depth of completed well 108 ft.

(16) CONSTRUCTION DETAILS:

Casing installed:

6

Dia. from #3

ft. to 2

ft.

THREADED

2

Dia. from #2

ft. to 98

ft.

PVC

Dia. from

ft. to

ft.

Perforations: NO

Type of perforator used

SIZE of perforations

	ft. to	in. by	ft. to	in.
perforations from				
perforations from				
perforations from				

Screens: YES

Manufacturer's Name

Type PVC

Model No

Diam. 2

slot size 10

From 98

ft. to 108

ft.

Diam.

slot size

From

ft. to

ft.

Gravel packed: YES

Size of gravel 10/20

Gravel placed from 96

ft. to 111

ft.

Surface seal: YES

To what depth? 96 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? NO

Type of water?

Depth of strata

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type

H.P.

(15) WATER LEVELS:

Land-surface elevation 835.76

above mean sea level

Static level

80

ft. below top of well

Date 07/09/93

Artesian Pressure

lbs. per square inch

Artesian water controlled by

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL

BROWN GRAVEL SAND COBBLES

FROM

TO

BROWN SAND & GRAVEL

0

15

BROWN GRAVEL SILT & SAND

15

43

BROWN GRAVEL & SAND

43

47

BROWN SAND

47

60

BROWN SAND & GRAVEL

60

70

BROWN SAND & GRAVEL

70

70

STEEL
PROTECTIVE CASING

EL 833.31

PVC CASING

EL 837.91

EL 835.76

BRANNON
HAYES DRILLING
(206) 266-6110

TDP of PVC? Yes, per Spec

Before 11/22/93

Work started 07/08/93

Completed 07/09/93

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? NO If yes, by whom?

yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test

gal./min.

ft. drawdown after

hrs.

Air test

gal./min. w/ stem set at

ft. for

hrs.

Artesian flow

g.p.m.

Date

Temperature of water

Was a chemical analysis made? NO

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HAYES DRILLING, INC.

(Person, firm, or corporation) (Type or print)

ADDRESS 556 ERSKIE RD. BDW, WA

[SIGNED]

License No. 1825

Contractor's

Registration No. HAYESDI106J5

Date 07/12/93

Post-It brand fax transmittal memo 7671

of pages

5

To <u>Mike Spillane</u>	From <u>Brannon</u>
Co.	Co. <u>Hayes Drilling</u>
Dept.	Phone # <u>206 766-6110</u>
Fax # <u>825-2521</u>	Fax #

3109

PROJECT ENUMCLAW LANDFILLPage 1 of 2Location On bench near north fenceBoring No. MW-7Surface Elevation Top PVC 813.36 ft.Drilling Method Air RotaryTotal Depth 120 feetDrilled By Johnson Drilling Co.Date Completed 8/22/86Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
2" sch. 80 PVC Riser Bentonite Slurry 2" sch. 80 slotted 0.010" PVC Bentonite Chips Sand			5	Cuttings		GW	0-13' <u>SANDY GRAVEL</u> , tan, boulders to 6 inches, trace of fines, well graded, dry.	
		10	10	"				
			15	"		SW	13-20" <u>GRAVELLY SAND</u> , medium gray, trace fines, fine to coarse, well graded, dry, charcoal or coal at 16 ft.	
		20	20	"				
			25	"		SP	20-62' <u>SAND</u> , dark yellowish brown, gravel layers, generally poorly graded, coal pieces, 25-33' dark brown.	
		30	30	"				
			35	"			fine to coarse sand.	
		40	40	"			fine to medium sand, dark brown.	
			45	"				
		50	50	"			Dark yellowish brown, damp.	
			55	"				
		60	60	"				
			65	"		SW	62-92' See page 2 for description.	
		70	70	"				

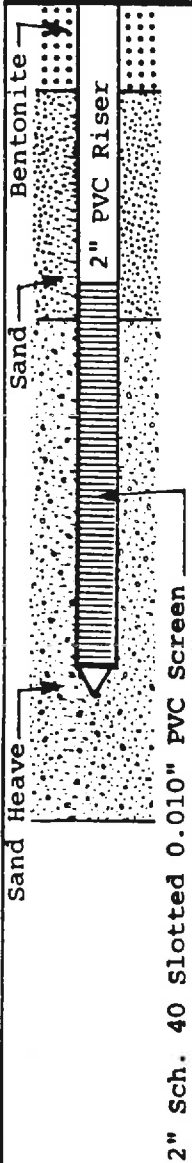
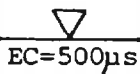


WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		70	70	Cuttings		SW	62-92' <u>GRAVELLY SAND/SAND</u> , with gravel layers, dark brown, medium to coarse sand, well graded, saturated at 70 ft.	EC = 130
		75	"					
		80	80	"				
		85	"					
		90	90	"				EC = 145
		95	"			GP/GW	92-97' <u>SANDY GRAVEL</u> , dark yellowish brown, gravel to 2 inches, moderately poorly graded, saturated.	
		100	100	"		SC/GC	97-116' <u>CLAYEY SAND</u> , olive gray, with gravel or gravel layers and silt, little water flowing, water stopped at 106 feet.	
		105	"					
		110	110	"				
		115	"				Gravel increases.	EC = 240
		120	120	"		GP	116-120' <u>GRAVEL</u> , olive gray, some clay and silt, moderately poorly graded, wet.	
							Total depth 120 feet.	

PROJECT ENUMCLAW LANDFILLPage 1 of 2Location GierkeBoring No. MW-8Surface Elevation Top PVC
787.14 ft.Drilling Method 5" ODEXTotal Depth 56 feetDrilled By Kring DrillingDate Completed 1-20-87Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
						SW	0-5' <u>SILTY SAND</u> , yellowish brown, with some gravel, well graded.	
		5	5	SS		SP	5-56' <u>SAND</u> , yellowish gray to olive gray, mottled, fine to medium sand, trace of silt, poorly graded, damp.	
		10	10	SS				
		15	15	SS				
		20	20	SS				
		25	25	SS			25 ft. charcoal or coal chips less than 1/4", trace of gravel and silt.	
		30	29	SS				
			34	SS				
		35						

PROJECT ENUMCLAW LANDFILLPage 2 of 2Boring No. MW-8

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
 2" Sch. 40 Slotted 0.010" PVC Screen		35					5-56' <u>SAND</u> , continued.	
		40				SP	-42 ft. heaving sands.	 EC=500µs
		45						
		50						
		55						
		60						

Geologic & Monitoring Well Construction Log

Project Number
BV99072B

Well Number
MW-9

Sheet
1 of 3

Project Name
Enumclaw Landfill

Surface Elevation
823.74

Location
Enumclaw, Washington

Water Depth (ft to c)
79.36

Drilling Method
Hollow-Stem Auger 8" OD/4" ID

Start Date
September 30, 1999

Sampling Method
3.25" OD D&M Split-Spoon Ring Sampler, 300 lb hammer

Finish Date
September 30, 1999

Depth feet	Well Construction	Methane %	Lab Test	S T	Blows/ 6"	Sample ID	ML Graphic	Description
	8" Above-Grade Locking Steel Monument w/ Bollards Concrete Seal	0						FILL
	Bentonite chips							-grades very gravelly and cobbly -drills easier from 4 to 7 feet
5		0			27 27 44	S-1		MUDFLOW
		0			25 50/6"	S-2		Very dense, moist, brown GRAVEL with SILT; few sand
10		0	G		29 50/5"	S-3		
15		0			24 50/5"	S-4		
20	2-inch ID SCH 40 PVC Well Casing	0			20 25 28	S-5		RECESSIONAL OUTWASH
25		0			27 23 28	S-6		Very dense, damp, brown SAND; trace gravel, sand fine to medium
30		0			26 28 29	S-7		-sand fine to coarse
35	Bentonite Grout at 30%	0						-grades moist

Sampler Type (ST):

-  Grab Sample
-  No Recovery
-  2" OD Split-Spoon Sampler

Lab Tests:

- G - Grain Size
- P - Permeability
- M - Moisture Content

Logged by: RRRH

Approved by: JJS

 Water Level (ATD)  Static Water Level

Figure No. B - 6

Geologic & Monitoring Well Construction Log

Project Number
BV99072B

Well Number
MW-9

Sheet
2 of 3

Project Name
Enumclaw Landfill

Surface Elevation
823.74

Location
Enumclaw, Washington

Water Depth (ft toc)
79.36

Drilling Method
Hollow-Stem Auger 8" OD/4" ID

Start Date
September 30, 1999

Sampling Method
3.25" OD D&M Split-Spoon Ring Sampler, 300 lb hammer

Finish Date
September 30, 1999

Depth feet	Well Construction	Methane %	Lab Test	S T	Blows/ 6"	Sample ID	Mtl. Graphic	Description
								Very dense, damp, brown SAND; trace gravel, sand fine to medium
45	Bentonite Grout at 30%	0			41 30 30	S-8		-trace organics
50		0	G		29 28 28	S-9		-trace silt clasts
55		0			27 32 32	S-10		
60		0			30 28 32	S-11		-trace organics
65		0			22 34 35	S-12		
70		0			20 26 29	S-13		-sand fine to medium
75	Bentonite chips	0			34 50/6"	S-14		-trace organics
	77' - ATD 77.13' (11/18/99)							
	Filter Pack, 10x20 Colorado silica sand	0	G		13 17 24	S-15		-grades dense and wet

Sampler Type (ST):

-  Grab Sample
-  No Recovery
-  2" OD Split-Spoon Sampler

Lab Tests:

- G - Grain Size
- P - Permeability
- M - Moisture Content

Logged by: RRH

Approved by: JJS

 Water Level (ATD)  Static Water Level

Figure No. B - 6

Geologic & Monitoring Well Construction Log

Project Number

BV99072B

Well Number

MW-9

Sheet

3 of 3

Project Name Enumclaw Landfill

Surface Elevation 823.74

Location Enumclaw, Washington

Water Depth (ft toc) 79.36

Drilling Method Hollow-Stem Auger 8" OD/4" ID

Start Date September 30, 1999

Sampling Method 3.25" OD D&M Split-Spoon Ring Sampler, 300 lb hammer

Finish Date September 30, 1999

Depth feet	Well Construction	Methane %	Lab Test	S T	Blows/ 6"	Sample ID	Mtl. Graphic	Description
	Filter Pack, 10x20 Colorado silica sand	0			10 27 28	S-16		Very dense, wet, brown SAND; trace gravel, sand fine to medium
85	Well Screen 2" ID SCH 40 PVC, 0.01" slot size	0	G		12 25 29	S-17		-grades very dense
90	Threaded end cap, 2" ID SCH 40 PVC	0						Bottom of boring at 90.1 ft. depth. Monitoring well installed to depth of 90 feet.
95								
100								
105								
110								
115								

Sampler Type (ST):



Grab Sample



No Recovery



2" OD Split-Spoon Sampler

Lab Tests:

G - Grain Size

P - Permeability

M - Moisture Content



Water Level (ATD)



Static Water Level

Logged by:

RRH

Approved by:

JJS

Figure No.

B - 6

Geologic & Monitoring Well Construction Log

Project Number

BV99072B

Well Number

MW-10

Sheet

1 of 2

Project Name Enumclaw Landfill

Surface Elevation 797.74

Location Enumclaw, Washington

Water Depth (ft to c) 49.9

Drilling Method Cable Tool: 10" casing above 32', 6" casing below 32'

Start Date October 21, 1999

Sampling Method 2.0" Split-Spoon Sampler; 3.25" Split-Spoon Ring Sampler and bailer

Finish Date October 26, 1999

Depth feet	Well Construction	Methane %	Lab Test	S T	Blows/ 6"	Sample ID	Mtl. Graphic	Description
	8" Above-Grade Locking Steel Monument w/ Bollards Concrete seal							LANDFILL REFUSE
	Bentonite grout	0.2						-cuttings include glass, metal, styrofoam, plastic, cloth and paper
5		0.2			28 50/4"	S-1		Very dense, moist, brown GRAVEL with SAND, with SILT; trace glass, metal and wood
10		0.3			50/5"	S-2		Very dense, moist, brown GRAVEL with SAND; trace silt, trace debris including metal, glass and wood
		0.3			22 23 46	S-3		
15		0.2			10 14 30	S-4		Very dense, wet, brown GRAVEL with SAND; trace silt, trace glass, plastic, and wood in shoe
		0.4			100/6"	S-5		
20	2-inch ID SCH 40 PVC Well Casing	0.4			15 50/3"	S-6		Very dense, wet, brown to dark gray GRAVEL with SAND; 5% debris including glass, plastic, and metal
		0.3			10 11 20	S-7		Dense, wet, dark brown GRAVEL with SAND; 5% debris including metal and glass
25		0.2			18 12 24	S-8		
		0.2			50/5"	S-9		Very dense, wet, brown SAND with GRAVEL; trace silt, trace debris including metal and glass
30		0			50/4"	S-10		MUDFLOW Very dense, wet, medium brown GRAVEL with SAND; trace silt; no debris observed
		0			50/4"	S-11		
35		0.2	G		13 10 10	S-12		-increase in gravel content Dense, dark gray SILTY GRAVEL with SAND; trace clay; gravel fine to coarse, subrounded to well-rounded; sand fine to coarse, primarily fine
								RECESSIONAL OUTWASH

Sampler Type (ST):

-  Grab Sample
-  No Recovery
-  2" OD Split-Spoon Sampler

Lab Tests:

- G - Grain Size
- P - Permeability
- M - Moisture Content

Logged by:

RRH/SJS

Approved by:

JJS

 Water Level (ATD)  Static Water Level

Figure No

R - 7

Geologic & Monitoring Well Construction Log

Project Number

BV99072B

Well Number

MW-10

Sheet

2 of 2

Project Name Enumclaw Landfill

Surface Elevation 797.74

Location Enumclaw, Washington

Water Depth (ft toc) 49.9

Drilling Method Cable Tool: 10" casing above 32', 6" casing below 32'

Start Date October 21, 1999

Sampling Method 2.0" Split-Spoon Sampler; 3.25" Split-Spoon Ring Sampler and bailer

Finish Date October 26, 1999

Depth feet	Well Construction	Methane %	Lab Test	S T	Blows/ 6"	Sample ID	Mtl. Graphic	Description
45	Hydrated bentonite chips	0.1			35 38 42	S-13		-gravel and cobble content increasing; harder drilling -decrease in fines; clearer bail water
47.54' (11/18/99)	47" - ATD	0.4						
50		0.1			35 50/2"	S-14		-increase in sand content; little fines
55	Filter Pack, 10x20 Colorado silica sand	0			30 30 30	S-15		Very dense, gray GRAVEL; few sand; gravel fine to coarse, clasts subrounded to well-rounded, primarily mafic lithologies; sand fine to coarse, primarily medium to coarse -slight increase in fines
60	Well screen 2" ID SCH 40 PVC, 0.01" slot size	0.1			25 30 35	S-16		-slight increase in fines, sand and fine gravel; mineralogy of sand grains is ~50% mafic, 30% quartz, 20% other
65	Threaded end cap, 2" ID SCH 40 PVC	0	G		10 7 17	S-17		Dense, light gray SAND; little silt; sand fine to medium, very angular to subrounded; no bedding
66.5	Slough Backfill	0	G		27 17 25	S-18		-grades very dense, few silt -few gravel and cobbles
70								Bottom of boring at 66.5 ft. depth. Borehole completed with a 10-inch casing temporarily installed through the landfill debris to a depth of 32 feet. Bentonite grout slurry tremied in 10-inch casing annulus. A 6-inch casing was used to complete the boring to 66.5 feet. Monitoring well installed to depth of 65 feet.
75								

Sampler Type (ST):



Grab Sample



No Recovery



2" OD Split-Spoon Sampler

Lab Tests:

G - Grain Size

P - Permeability

M - Moisture Content



Water Level (ATD)



Static Water Level

Logged by:

RRH/SJS

Approved by:

JJS

Figure No.

B - 7



PROJECT ENUMCLAW LANDFILL

Page 1 of 1

Location Near West fence

Boring No. RP-1

Surface Elevation NA

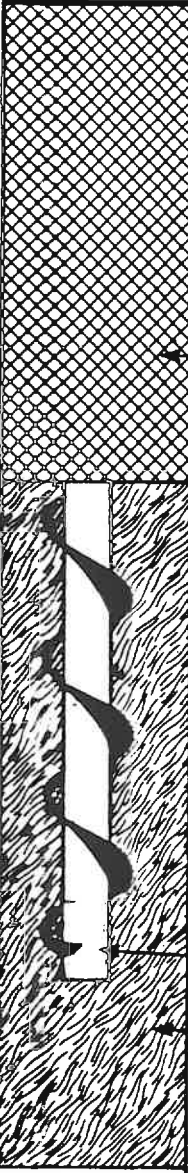
Drilling Method 4" Hollow Stem Auger

Total Depth 60 feet

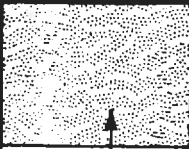
Drilled By Kring Drilling Co.

Date Completed 6/20/86

Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
 Bentonite Slurry 25' of Auger twisted off Heave							0-4' <u>SANDY GRAVEL</u> , cover material.	
		10					4-20' <u>REFUSE</u> , mixed with sandy gravel, metal, glass, ash, wood products, little organic material.	
		20	1	Soil				
			2	"				
		30	3	"				
			4	"				
		40	5	"				
			6	"				
		50	7	"				
			9	"				
		60						
		70						
								EC = 510

PROJECT ENUMCLAW LANDFILLPage 1 of 1Location Lower level of treesBoring No. RP-2Surface Elevation NADrilling Method 4" Hollow Stem AugerTotal Depth 7 feetDrilled By Kring Drilling Co.Date Completed 6/20/86Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
						GM	0-7' <u>SANDY GRAVEL</u> , medium brown, with silt, cobbles and boulders, well graded, cover material.	
Natural Fill		10					Hole collapsed on Auger.	

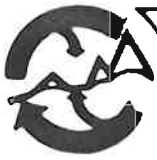
PROJECT ENUMCLAW LANDFILLPage 1 of 1Location Western section in trees.Boring No. RP-3

Top PVC 814.64 ft

Surface Elevation 814.33 ft.Drilling Method 4" Hollow Stem AugerTotal Depth 38.5 feetDrilled By Kring Drilling Co.Date Completed 7/1/86Logged By G.S. Mack

PVC

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
3/4" PVC Riser Concrete Bentonite Chips 3/4" slotted 0.020" PVC Traction Sand Bentonite Pellets 1 1/2" slotted 0.020" PVC							0-1.4' <u>SANDY GRAVEL</u> , with boulders, cover.	
		10					1.4-29' <u>REFUSE</u> , corroded metal, burnt paper, wood fragments, little organic material.	
		17.5	Soil					
		20						
		22.5	"					
		27.5	"					
		30				GW	29-38.5' <u>SANDY GRAVEL</u> , medium brown with silt, moist.	
		32.5	"					
		37.5	"					
		40					Total Depth 38.5 feet.	
		50						



PROJECT ENUMCLAW LANDFILL

Page 1 of 1

Location Near East side fence.

Boring No. RP-4

Surface Elevation 857.17 ft.

Drilling Method 4" Hollow Stem Auger

Total Depth 38.5 feet

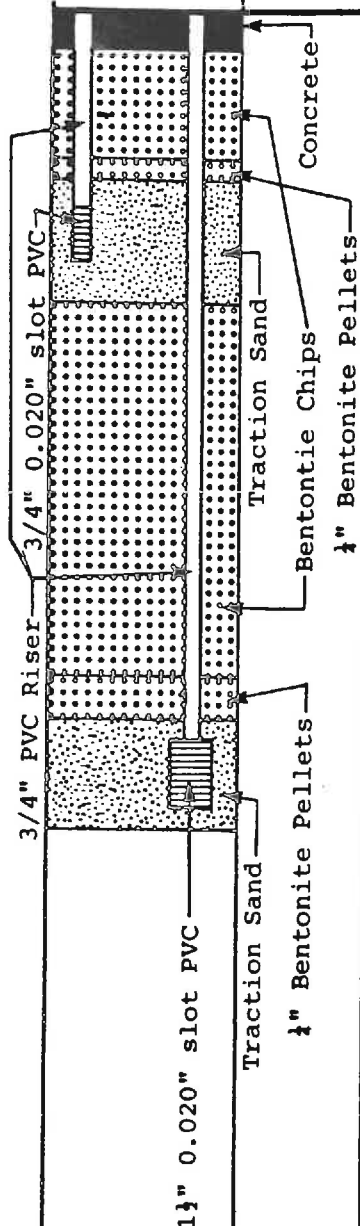
Drilled By Kring Drilling Co.

Date Completed 7/2/86

Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
Concrete 3/4" PVC Riser 3/4" slotted 0.020" PVC Bentonite Chips Bentonite Pellets 1 1/2" slotted 0.020" PVC Traction Sand 3/4" PVC Riser							0-2.2' GRAVELLY SAND, with some silt and boulders, medium sand, cover.	
		10					2.2-25' REFUSE, metal, old tires, glass, wood, organic material.	
		20	23.5	Refuse			25-30' SAND, gray with reddish brown streaks, occasional gravel and silt.	
		30	28.5	Soil		SP/SW	30-31' SILTY CLAY, with gravel, grayish brown.	
		30	32.5	"		CL	30-38.5' GRAVELLY SAND, medium gray with streaks of orangish brown and black, with silt, well graded.	
		40	38.5	"		SW	Total Depth 38.5'.	
		50						

PROJECT ENUMCLAW LANDFILLPage 1 of 1Location Central upper plateauBoring No. RP-5Surface Elevation Top PVC 857.92 ft.
857.17 ft.Drilling Method 4" Hollow Stem AugerTotal Depth 42 feetDrilled By Kring Drilling Co.Date Completed 7/7/86Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		10					0-0.8' <u>SANDY GRAVEL WITH SILT</u> , cover material.	
		20					0.8-42' <u>REFUSE</u> , glass, plastic, metal, wood products, organic material.	
		30						
		40	1	Refuse				
		50					Total Depth 42 feet Auger hit refusal. Abandoned April 1987 by removing casings and tremie backfill w/cement grout.	



PROJECT ENUMCLAW LANDFILL

Page 1 of 2

Location On north fence line

Boring No. G-6

Top PVC

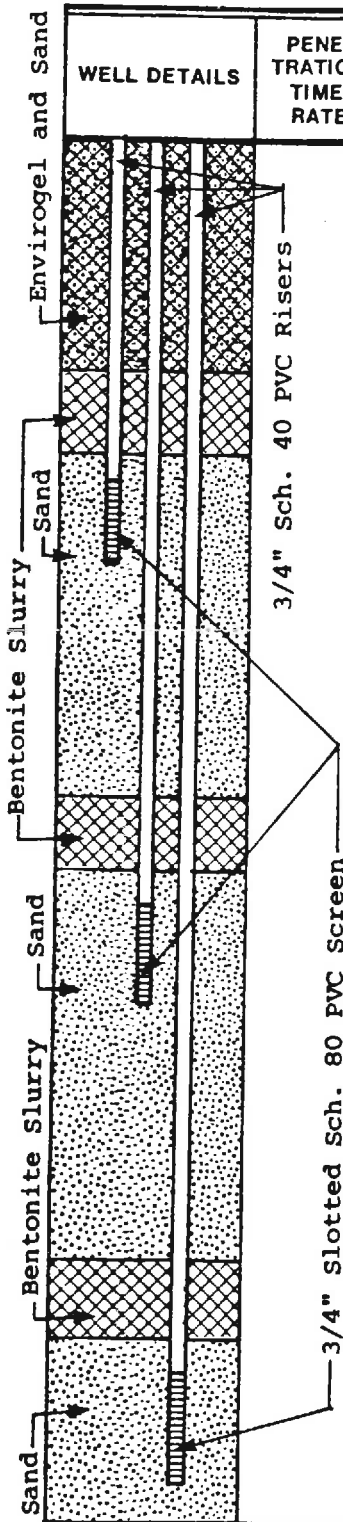
Surface Elevation 819.90, 820.09, 820.20 ft Drilling Method 5" ODEX

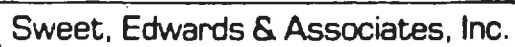
Total Depth 40 feet

Drilled By Kring Drilling

Date Completed 1-14-87

Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
							0-2' <u>FILL</u> .	
		5				SM	2-9' <u>SILTY SAND</u> , medium yellowish brown, fine to coarse sand, some gravel well graded, moist.	
		10				SM	9-18' <u>SILTY SAND</u> , light olive gray to dark blueish gray, very fine to fine sand, some gravel, moderately well graded, moist.	
		15				SW	18-40' <u>GRAVELLY SAND</u> , light olive gray to olive gray, fine to coarse sand, trace of silt, wet to 35 ft., damp 35 ft. to 40 ft.	
		20						
		25						
		30						
		35						



PROJECT ENUMCLAW LANDFILL

Page 2 of 2

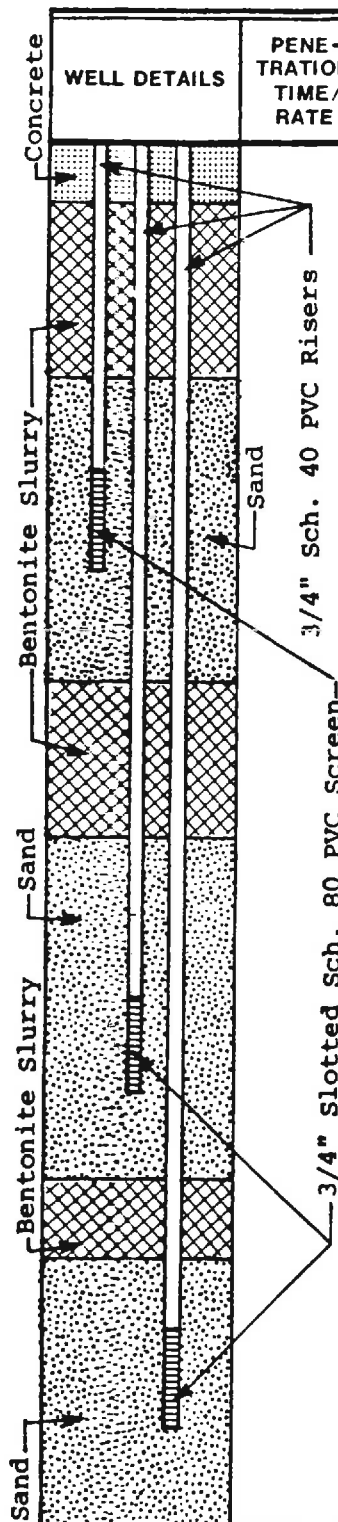
Boring No. G-6

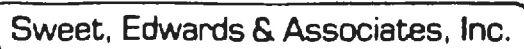
SEA-300-02b

PROJECT ENUMCLAW LANDFILLPage 1 of 2Location North fence lineBoring No. G-7

Top PVC

Surface Elevation 820.89, 820.97, 821.05 ft. Drilling Method 5" ODEXTotal Depth 40 feetDrilled By Kring DrillingDate Completed 1-15-87Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		5					0-3' <u>FILL</u> , gravel, sand, wood chips.	
		10				SM	3-21' <u>SILTY SAND</u> , dark yellowish brown to yellowish brown, fine sand, some gravel in places, trace of clay, moist.	
		15						
		20						
		25				SW	21-40' <u>SILTY SAND</u> , olive gray to dark olive gray, fine to medium sand, some gravel, trace of clay, less gravel at depth, moist.	
		30						
		35						



PROJECT ENUMCLAW LANDFILL

Page 2 of 2

Boring No. G-7

SEA-300-02b



PROJECT ENUMCLAW LANDFILL

Page 1 of 2

Location East side of landfill

Boring No. G-8

Surface Elevation 864.20, 864.24, 864.16 ft

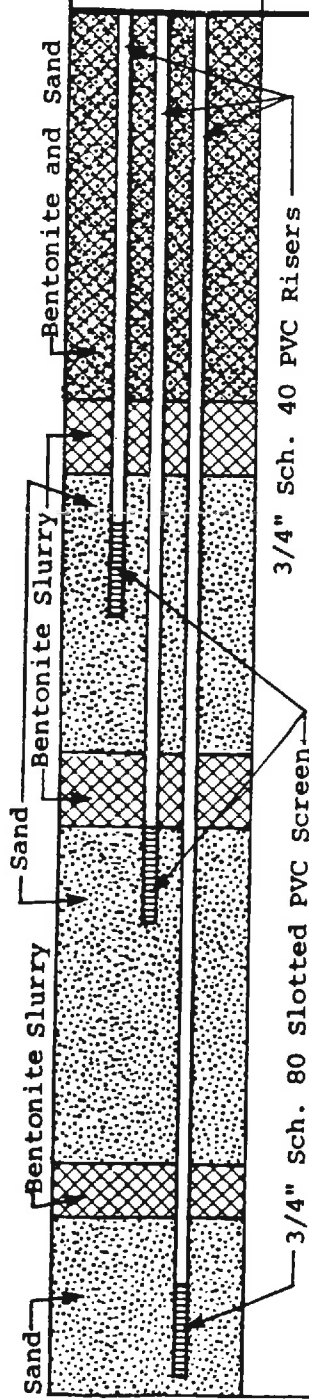
Drilling Method 5" ODEX

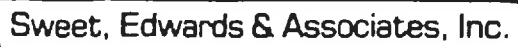
Total Depth 40 feet

Drilled By Kring Drilling

Date Completed 1-16-87

Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		0-2'					FILL.	
		2-12'				SP	SILTY SAND, dark yellowish brown, fine sand with some gravel, trace of clay, well graded, wet.	
		12-40'				GP	GRAVEL, light olive gray to light blueish gray, some boulders, trace of silt and clay.	
		36 ft.					increasing in silt.	



PROJECT ENUMCLAW LANDFILL

Page 2 of 2

Boring No. G-8

SEA-300-02b



PROJECT Enumclaw Landfill

Page 1 of 1

Location North Fence Line, West of MW-1

Boring No. G-9

Surface Elevation _____

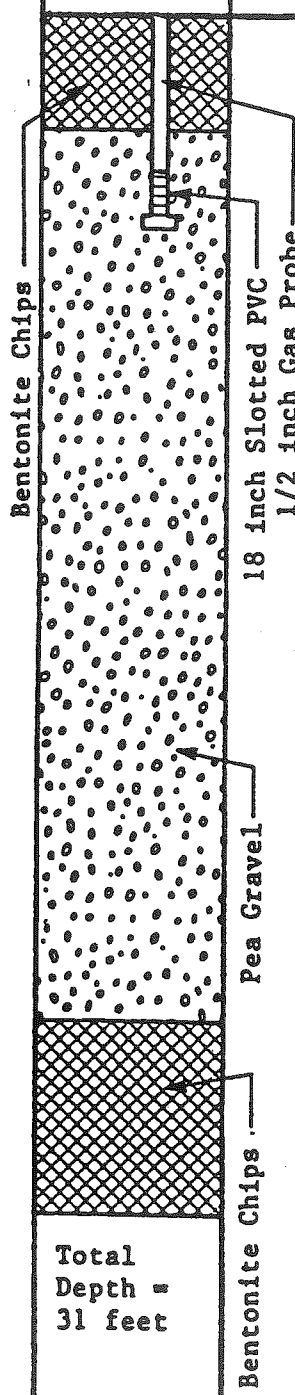
Drilling Method 5 inch ODEX

Total Depth 31 feet

Drilled By Kring Drilling Company

Date Completed Nov. 18, 1987

Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		5	1	SPT	6/6/5	SM	0-13 <u>SILTY SAND</u> , light olive grey to moderate brown, with some gravel, well graded, moist.	
		10	2	SPT	5/6/7			
		15	3	SPT	3/4/5		-12' increase in gravel	
		20	4	SPT	3/4/24	SM	13-31 <u>SILTY SAND</u> , medium grey to greenish grey to olive grey, sand is medium to fine, well graded occasional gravel, boulders.	
		25	5	SPT	13/18/13			
		30	6	SPT	50 for 6"		Boulders to several feet diameter.	
Total Depth = 31 feet		35					SPT = Standard Penetration Test	



PROJECT Enumclaw Landfill

Page 1 of 3

Location North Fence Line

Boring No. G-10

Surface Elevation

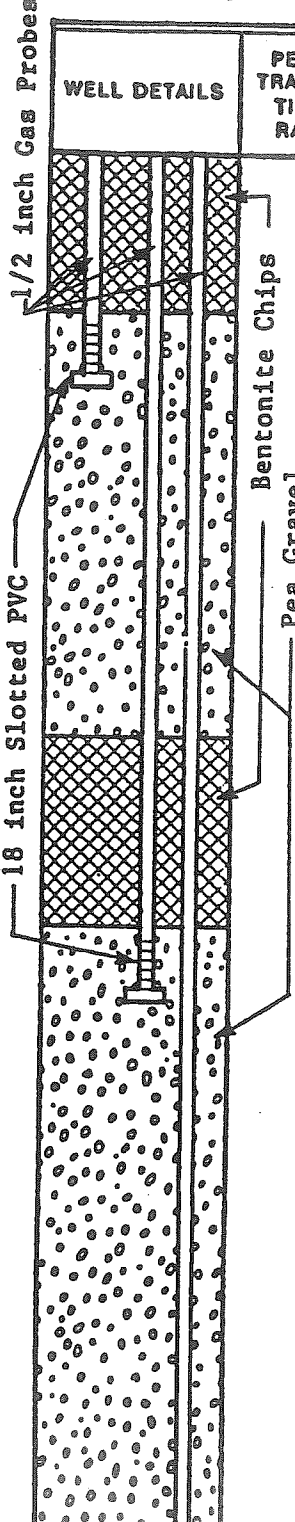
Drilling Method 5-inch ODEX

Total Depth 75 feet

Drilled By Kring Drilling Company

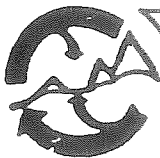
Date Completed 11/21/87

Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		5	1	SS	26/14/ 8		0-7 <u>FILL</u> , sandy gravel with trace of silt, moderate yellowish brown, dry wood chips.	 Perched
		10	2	SS	4/6/9	GW	7-18 <u>SANDY GRAVEL</u> , moderate yellowish brown, light olive grey when saturated, coarse sand, trace silt, gravel to several inches, boulders to several feet, well graded.	
		15	3	SS	45 for 6			
		20	4	SS	8/8/9	SP/GW	18-22 <u>SAND/SANDY GRAVEL</u> , moderate yellowish brown fine to coarse sand interbed with layers of gravel and sand, poor to well graded, moist.	
		25	5	SS	9/16/ 21	GW	22-27 <u>SANDY GRAVEL</u> , mottled light grey to moderate yellowish brown to light olive grey, fine to coarse sand, gravel subangular to subrounded, well graded, moist.	
		30	6	SS	12/17/ 16	SW	27-37 <u>GRAVELLY SAND</u> , olive grey, fine to coarse sand, gravel subangular to subrounded, well graded, moist.	
		35	7	SS				

PROJECT Enumclaw LandfillPage 2 of 2Boring No. G - 10

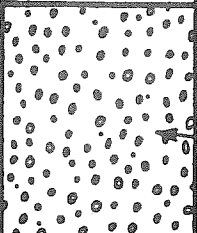
WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
Pea Gravel Bentonite Chips 1/2 inch Gas Probe 18 inch Slotted PVC Pea Gravel		35				SW	GRAVELLY SAND - Descrip- tion above.	
		40	8	SS	32/17/ 7		37-75 SANDY GRAVEL, yellow- ish grey to light olive grey, weathered, sand is fine with some coarse, gravel is subangular to rounded up to 0.3- inches. Dry, well graded. - 45 feet boulders	
		45	9	SS	50 for 6"			
		50	10	SS	50 for 6"			
		55	11	SS	50 for 6"	GW		
		60	12	SS	50 for 6"			
		65	13	SS	50 for 6"			
		70	14	SS	50 for 5"			



PROJECT Enumclaw Landfill

Page 3 of 3

Boring No. G - 10

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
	Pea Gravel	70			9/37/ 40	GW	<u>SANDY GRAVEL</u> cont.	
Total Depth = 75 feet			15	SS			SS = Split Spoon Sample driven with Jar Hammer.	

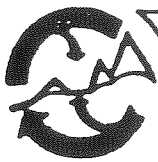
PROJECT Enumclaw LandfillPage 1 of 3Location South side south of roadBoring No. G - 11

Surface Elevation _____

Drilling Method 8 inch Air RotaryTotal Depth 80 feetDrilled By Tacoma Pump and DrillDate Completed 12/3/87Logged By G.S. Mack

1/2 inch Gas Probes

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
Bentonite Chips 18 inch Slotted PVC Bentonite Chips Pea Gravel		5	1	Cutting		GW	0-12 Sandy boulders, moderate yellowish brown, with some silt near surface, fine to coarse sand and gravel intermixed with boulders and cobbles, very well graded, dry.	
		10	2	Cutting				
		15	3	Cutting			12-43 SANDY GRAVEL, moderate yellowish brown to medium grey with some boulders and cobbles, trace of silt, well graded, dry.	
		20	4	Cutting				
		25	5	Cutting		GW		
		30	6	Cutting				
		35	7	Cutting				



PROJECT Enumclaw Landfill

Page 2 of 3

Boring No. G - 11

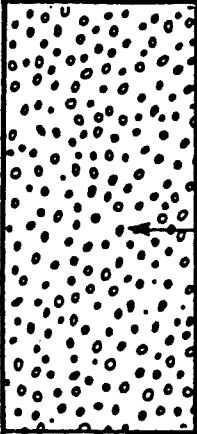
WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
 1/2 inch Gas Probe 18 inch Slotted PVC Pea Gravel Bentonite Chips Pea Gravel		35	7	Cutting		GW	12-43 <u>SANDY GRAVEL</u> , cont.	
		40	8	Cutting				
		45	9	Cutting				
		50	10	Cutting		SP	43-80 <u>SAND</u> , moderate yellowish brown, fine to medium sand, with some gravel, moderately poorly graded.	
		55	11	Cutting				
		60	12	Cutting			- little gravel	
		65	13	Cutting				
		70	14	Cutting				



PROJECT Enumclaw Landfill

Page 3 of 3

Boring No. G - 11

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
 Pea Gravel		70	14	Cutting		SP	43-80 <u>SAND</u> , continued	
		75	15	Cutting				
		80	16	Cutting				
Total Depth = 80 feet		85						
		90						

G12 missing

Probe Decommissioning Diagram

Project Number
BV99072B

Well Number
GP-13

Sheet
1 of 1

Project Name Enumclaw Landfill

Surface Elevation (ft) 775

Geographic Location Enumclaw, Washington

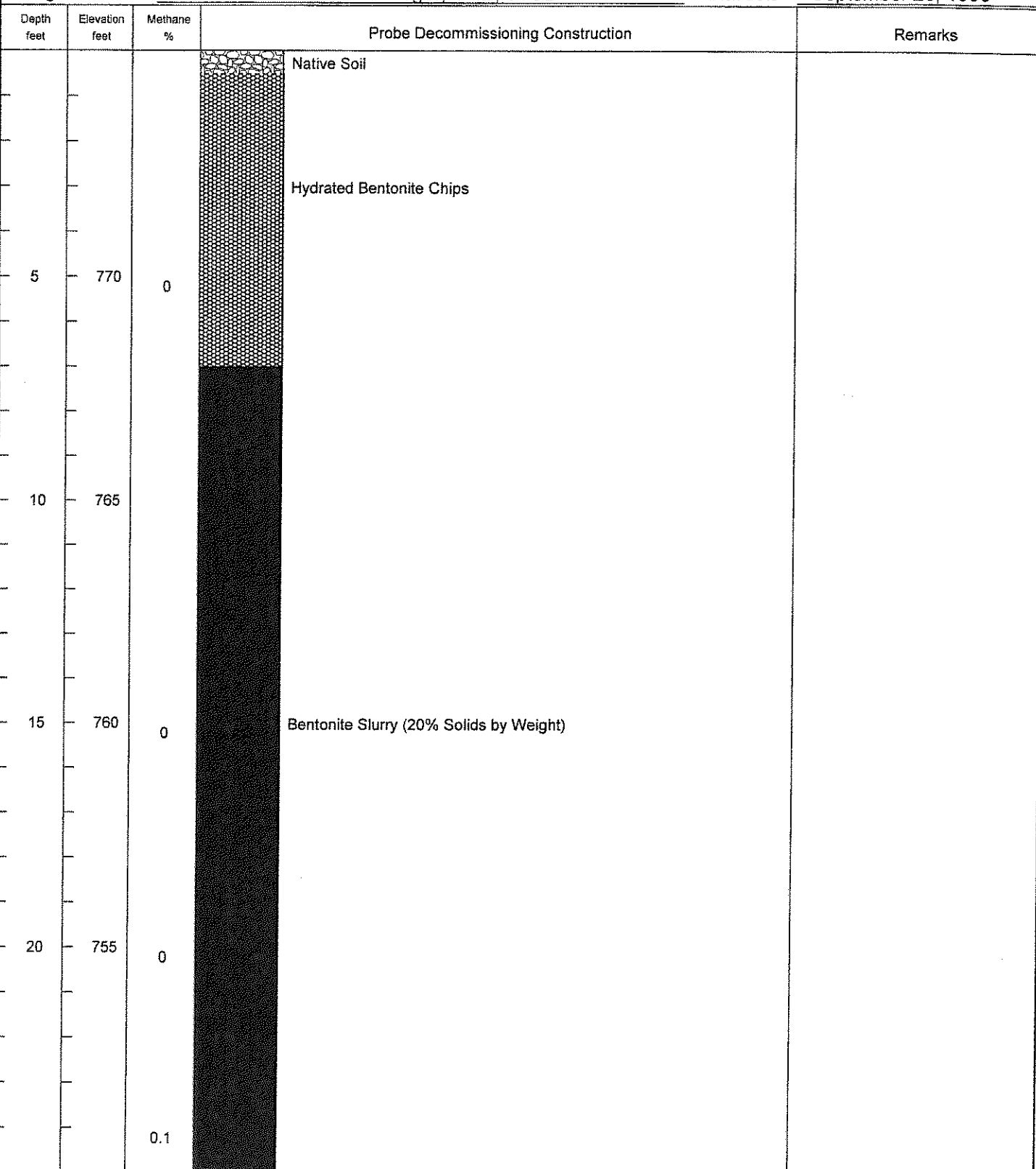
Water Depth (ft to c)

Specific Location Auman Residence

Start Date September 28, 1999

Drilling Method Mobile B-61 Hollow-Stem Auger, 4" ID, 6" OD

Finish Date September 28, 1999



Completion Material:

-  Native Soil
-  Bentonite Chips
-  Bentonite Slurry

-  Static Water Level
-  Water Level (ATD)

Logged by: SJS

Approved by: JJS

Figure No. B - 4



Sweet, Edwards & Associates, Inc.

BORING LOG

PROJECT Enumclaw Landfill

Page 1 of 1

Location Northeast of Sonneson's HouseBoring No. G - 13

Surface Elevation _____

Drilling Method 4-1/4 inch Hollow S AugerTotal Depth 25 feetDrilled By Tacoma Pump & DrillingDate Completed November 9, 1987Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		5	1	no sample		GW	0-25 SANDY GRAVEL, moderate yellowish brown. Coarse to fine sand, trace of silt, gravel is sub-angular to subrounded, moist, very well graded.	
		10						
		15	2	DM				
		20	3	DM				
Total Depth = 25 feet		25	4	DM			DM = Split Core Barrel Sample using Standard Hammer.	
		30						



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Probe Decommissioning Diagram

Project Number
BV99072B

Well Number
GP-14

Sheet
1 of 1

Project Name Enumclaw Landfill

Surface Elevation (ft) 786.5

Geographic Location Enumclaw, Washington

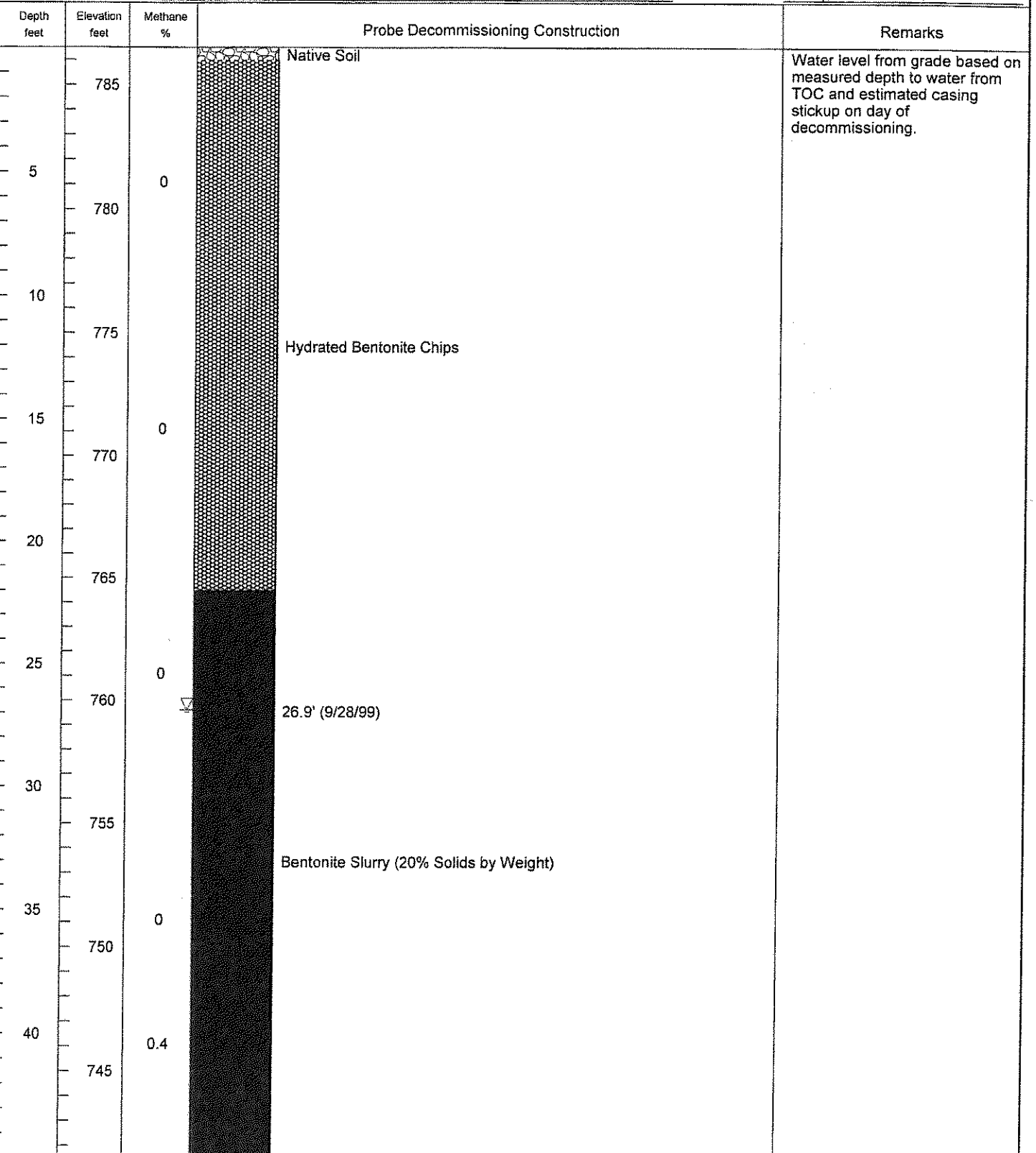
Water Depth (ft to c) 29.40

Specific Location Gierke Residence

Start Date September 28, 1999

Drilling Method Mobile B-61 Hollow-Stem Auger, 4" ID, 6" OD

Finish Date September 28, 1999



Completion Material:

- Native Soil
- Bentonite Chips
- Bentonite Slurry

- Static Water Level
- Water Level (ATD)

Logged by: SJS

Approved by: JJS

Figure No. B - 5



Sweet, Edwards & Associates, Inc.

BORING LOC

PROJECT Enumclaw Landfill

Page 1 of 2

Location Adjacent to MW-8, West Side

Boring No. G - 14

Surface Elevation

Drilling Method 4-1/4 inch Hollow Stem Auger

Total Depth 40 feet

Drilled By Tacoma Pump & Drilling

Date Completed November 6, 1987

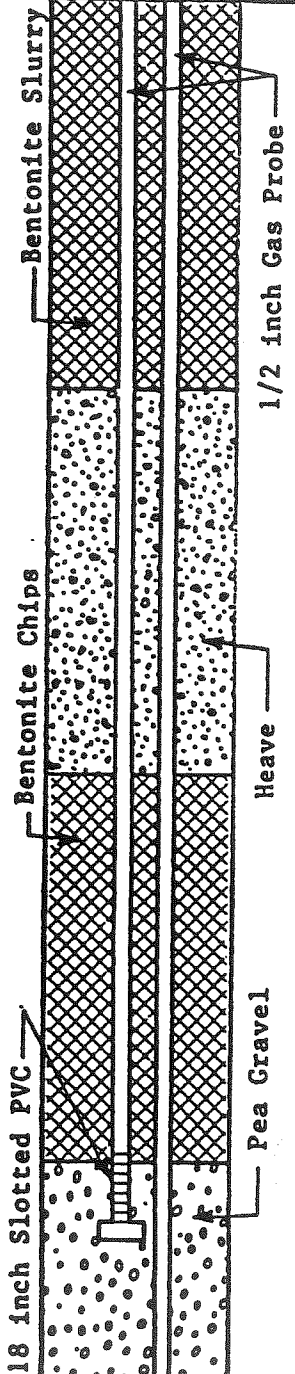
Logged By G.S. Mack

WELL DETAILS	PENETRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		5	1	DM		SP	0-1 SOIL, moderate yellowish brown, organic material.	
		10	2	DM			1-20 SAND, olive grey to moderate yellowish brown, medium to fine sand, laminated light and dark minerals, poorly graded, dry.	
		15	3	DM				
		20	4	DM				
		25	5	DM		SP	20-40 SAND, olive grey, to moderate yellowish brown, fine to medium sand, trace of coarse sand and gravel, coal chips.	
		30	6	DM				
		35						

PROJECT Enumclaw LandfillPage 1 of 2Location North Fence LineBoring No. G - 15

Surface Elevation _____

Drilling Method 5 inch ODEXTotal Depth 60 feetDrilled By Kring DrillingDate Completed November 19, 1987Logged By G S Mack

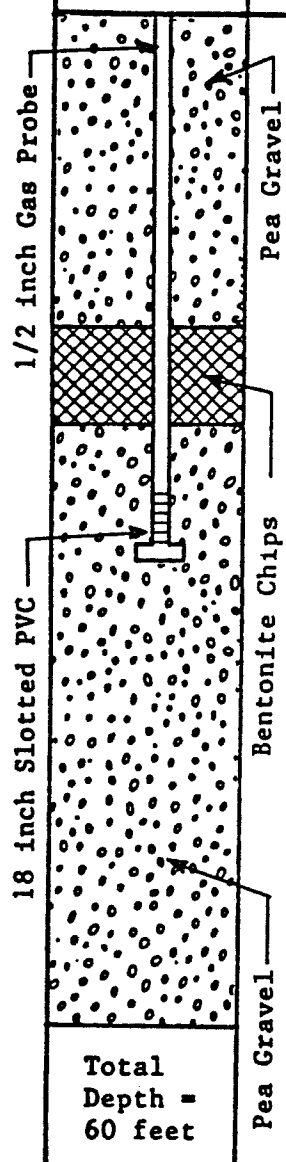
WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
		5					See G - 9 for Geology	
		10						
		15						
		20						
		25						
		30						
		35	7	SS		SP	30-37 SAND, light olive brown to dark yellowish brown, fine to medium sand, trace of gravel and silt, poorly graded, moist.	



PROJECT Enumclaw Landfill

Page 2 of 2

Boring No. G - 15

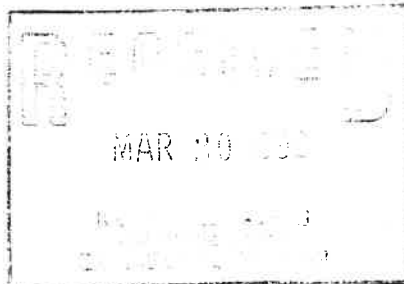
WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
			NO.	TYPE				
 1/2 inch Gas Probe 18 inch Slotted PVC Pea Gravel Bentonite Chips Total Depth = 60 feet		35	7	SS		SP	<u>SAND</u> , continued.	
		40	8	SS			37-56 <u>SANDY GRAVEL</u> , weathered, dark yellowish orange to moderate red- dish brown, iron stain, fine to medium sand, with trace of silt, well grad- ed, moist.	
		45	9	SS				
		50	10	SS		GW		
		55	11	SS			Boulders	
		60	12	SS		GW	56-60 <u>SILTY GRAVEL</u> , light olive grey, weathered, some fine sand, boulders, well graded.	
		65					SS = Split Spoon Sample using Jar Hammer.	



Sweet-Edwards/EMCON, Inc.

Ground Water, Engineering, Waste Management, & Drilling Services

18912 N. Creek Parkway, Suite 210 • Bothell, WA 98011
Office (206) 485-5000 • FAX (206) 486-9766



March 19, 1990
Project S01-04.02

Mr. Tim Spencer
R. W. Beck
Fourth & Ballard Building
2621 Fourth Avenue
Seattle, Washington 98121

RE: Abandonment of G-11 and Drilling G-16 at Enumclaw Landfill

Dear Tim:

Gas probe G-11 was abandoned and replacement gas probe G-16 was completed at Enumclaw Landfill. Work began on February 13, 1990, and was completed on February 19, 1990.

ABANDONMENT OF G-11

Gas probe G-11 had been destroyed by heavy equipment. The security casing had been pulled off and the PVC casings were broken off. The steel security casing was found nearby and was reused for the completion of G-16. G-11 was located on the south side of the landfill and had been buried by the daily-cover haul road. To locate G-11, King County surveyors had to resurvey and mark the location.

G-11 was abandoned by drilling with 6-inch air rotary to a depth of 78 feet. The hole was backfilled with a cement-bentonite mixture. Settlement of the backfill occurred overnight. In the morning, the hole was topped with Enviropug medium, a bentonite chip designed to seal boreholes.

DRILLING OF G-16

G-16 was installed to replace the monitoring point lost when G-11 was destroyed. The location of G-16 was selected to be the southeast corner of the landfill. An access road

467/BECKG11-L.307/me:4(wp)

was constructed by the landfill operator after an underground utilities locator had been to the site.

G-16 was drilled to a depth of 80 feet using 6-inch air-rotary. Construction of G-16 was designed to monitor three depth zones. Each of the three monitoring zones were constructed of a porous backfill of pea gravel. Each gas probe was installed in the upper 3 feet of the backfill, then the backfill in each zone was sealed with bentonite chips. The enclosed boring log shows the completion details. The monitoring zone depths are summarized in Table 1.

Table 1
SUMMARY OF G-16 CONSTRUCTION

Monitoring Zone	Monitoring Zone Length (ft)	Monitoring Zone Interval (ft bgs)
Shallow	17	7-1/2 - 24
Middle	26-1/2	26-1/2 - 53
Deep	22	56 - 78

The geology encountered during drilling of G-16 was similar to the geology encountered in earlier borings. The upper 8-feet was composed of the Ocala Mudflow, mainly boulders, cobbles, and gravel with a silty sand matrix. The bottom 72 feet of drilling encountered glacial outwash, deposits consisting of unconsolidated sands and gravels.

LANDFILL GAS

Landfill gas was monitored during abandonment of G-11 and construction of G-16 using a Gastech GX-3N. Measurements were conducted of the atmosphere around and inside the casing. No gas was detected during abandonment or construction.

Mr. Tim Spencer
March 19, 1990
Page 3

After the completion of G-16, the three gas probes were monitored for landfill gas. No gas was detected at that time. Disturbance from air rotary drilling may have caused the gas levels to be abnormally low. Probe G-16 should be monitored on a regular schedule.

Respectfully submitted,

Sweet-Edwards/EMCON, Inc.

A handwritten signature in black ink, appearing to read 'Gregory S. Mack', is written above the printed name.

Gregory S. Mack
Staff Geologist

GSM/klm

Enclosure

LOG OF EXPLORATORY BORING

PROJECT NAME R.W. Beck
 LOCATION Enumclaw Landfill
 DRILLED BY Tacoma Pump & Drill
 DRILL METHOD Air Rotary
 LOGGED BY Greg Mack

BORING NO. GP-16
 PAGE 1 OF 4
 REFERENCE ELEV.
 TOTAL DEPTH 80.00'
 DATE COMPLETED 2/19/90

SAMPLE NUMBER	SAMPLING METHOD	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-LOGIC COLUMN	WELL DETAILS	LITHOLOGIC DESCRIPTION
1	C		5				0 - 8 feet: SILTY SAND with GRAVEL, COBBLES, and BOULDERS; yellowish brown at surface to greenish grey at base; boulders and cobbles occur throughout section, increase in occurrence at the base; little to some subangular to subrounded and hard gravel; mostly fine sand with little medium and coarse; little fines; well graded; moist (SM). (OCEOLA MUDFLOW)
2	C		10				-- @ 6 feet: Boulders. 8 - 13 feet: GRAVELLY SAND with COBBLES; yellowish brown; trace of cobbles; some gravel up to 2 inches, mostly fine and hard; mostly fine to coarse sand; trace of fines; well graded; moist (SW). (OUTWASH)
3	C		15				13 - 27 feet: SAND; yellowish brown; little gravel up to 1-1/2 inch and hard, gravel occurs in seams of less than 2 feet; mostly fine sand with little medium and coarse; trace of fines; poorly graded; moist (SP). (OUTWASH)
4	C		20				

REMARKS

C = Cutting; 6-inch Air Rotary; Field location: Southeast corner.



SWEET-EDWARDS/EMCON

S01-04.02.RBGPE.13A/me:3.03/08/90

LOG OF EXPLORATORY BORING

PROJECT NAME R.W. Beck
 LOCATION Enumclaw Landfill
 DRILLED BY Tacoma Pump & Drill
 DRILL METHOD Air Rotary
 LOGGED BY Greg Mack

BORING NO. GP-16
 PAGE 2 OF 4
 REFERENCE ELEV.
 TOTAL DEPTH 80.00'
 DATE COMPLETED 2/19/90

	SAMPLE NUMBER	SAMPLING METHOD	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- LOGIC COLUMN	WELL DETAILS	LITHOLOGIC DESCRIPTION
	5	C		25				
	6	C		30				27 - 42 feet: SANDY GRAVEL with COBBLES and BOULDERS; yellowish brown; few cobbles; mostly fine to coarse gravels; some fine to coarse sand; trace of fines; moist; well graded (GW). (OUTWASH)
	7	C		35				
	8	C		40				

REMARKS

C = Cutting; 6-inch Air Rotary; Field location: Southeast corner.



SWEET-EDWARDS/EMCON

S01-04.02.RBGPE.13A/me:3.03/08/90

LOG OF EXPLORATORY BORING

PROJECT NAME R.W. Beck
 LOCATION Enumclaw Landfill
 DRILLED BY Tacoma Pump & Drill
 DRILL METHOD Air Rotary
 LOGGED BY Greg Mack

BORING NO. GP-16
 PAGE 3 OF 4
 REFERENCE ELEV.
 TOTAL DEPTH 80.00'
 DATE COMPLETED 2/19/90

	SAMPLE NUMBER	SAMPLING METHOD	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- LOGIC COLUMN	WELL DETAILS	LITHOLOGIC DESCRIPTION
	9	C		45				decrease in sand
	10	C		50				42 - 56 feet: GRAVEL with SAND; yellowish brown; mostly fine to coarse gravel, hard; some sand fine to coarse; trace of fines; moist; well graded (GW). (OUTWASH)
	11	C		55				56 - 58 feet: SANDY GRAVEL; dark yellowish brown; mostly gravel, fine to coarse, up to several inches; some sand fine to coarse; trace of fines; moist; well graded (GW). (OUTWASH)
	12	C		60				58 - 80 feet: SAND; dark yellowish brown; few fine gravel; mostly fine sand with little

REMARKS

C = Cutting; 6-inch Air Rotary; Field location: Southeast corner.



SWEET-EDWARDS/EMCON

S01-04.02.RBGPE.13A/me:3.03/08/90

LOG OF EXPLORATORY BORING

PROJECT NAME R.W. Beck
 LOCATION Enumclaw Landfill
 DRILLED BY Tacoma Pump & Drill
 DRILL METHOD Air Rotary
 LOGGED BY Greg Mack

BORING NO. GP-16
 PAGE 4 OF 4
 REFERENCE ELEV.
 TOTAL DEPTH 80.00'
 DATE COMPLETED 2/19/90

	SAMPLE NUMBER	SAMPLING METHOD	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- LOGIC COLUMN	WELL DETAILS	LITHOLOGIC DESCRIPTION
	13	C		65				medium to coarse; trace of fines; moist to 78 feet, wet below 78 feet; poorly graded (SP). (OUTWASH)
	14	C		70				
	15	C		75				-- @ 72 feet: Increase in moisture.
				80				-- @ 78 feet: Water discharging with cuttings. Bottom of boring at 80 feet.

REMARKS

C = Cutting; 6-inch Air Rotary; Field location: Southeast corner.



SWEET-EDWARDS/EMCON

S01-04.02.RBGPE.13A/me:3.03/08/90

GP-17 Missing

GP-18 Missing

Geologic & Gas Probe Construction Log

Project Number

BV99072B

Well Number

GP-19

Sheet

1 of 2

Project Name Enumclaw Landfill

Surface Elevation 824.24

Location Enumclaw, Washington

Water Depth (ft bgs)

Drilling Method Hollow-Stem Auger 8" OD/4" ID

Start Date October 1, 1999

Sampling Method 3.25" OD D&M Split-Spoon Ring Sampler

Finish Date October 1, 1999

Depth feet	Gas Probe Construction	Methane %	Lab Test	S T	Blows/ 6"	Sample ID	Mtl. Graphic	Description
	8" Above-Grade Locking Steel Monument w/ Bollards							FILL
	Concrete seal							
	Hydrated bentonite chips	0						-grades very gravelly and cobbly
	3/4" ID SCH 80 PVC Casing							-drills easier from 4 to 7 feet
5	Filter pack, pea gravel							
	Well screen 3/4" ID SCH 80 PVC, 0.04" slot size	0						MUDFLOW
10		0						Very dense, moist, brown GRAVEL with SILT; few sand
		0						
15	Hydrated bentonite chips	0						

Sampler Type (ST):

-  Grab Sample
-  No Recovery
-  2" OD Split Spoon Sampler

Lab Tests:

- G - Grain Size
- M - Moisture Content
-  Water Level (Date of Measurement)
-  Water Level (ATD)

Logged by: RRH

Approved by: JJS

Figure No. B - 8



**ASSOCIATED
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Geologic & Gas Probe Construction Log

Project Number

BV99072B

Well Number

GP-19

Sheet

2 of 2

Project Name Enumclaw Landfill

Surface Elevation 824.24

Location Enumclaw, Washington

Water Depth (ft bgs)

Drilling Method Hollow-Stem Auger 8" OD/4" ID

Start Date October 1, 1999

Sampling Method 3.25" OD D&M Split-Spoon Ring Sampler

Finish Date October 1, 1999

Depth feet	Gas Probe Construction	Methane %	Lab Test	S T	Blows/ 6"	Sample ID	Mit. Graphic	Description
25	Hydrated bentonite chips	0			25 24 28	S-1		Very dense, damp, brown GRAVEL with SAND; few silt
								RECESSIONAL OUTWASH
	Filter pack, pea gravel	0			50/5"			-drills easier 26-27 ft. due to SAND content -gravels in auger
30	Well screen 3/4" ID SCH 80 PVC, 0.04" slot size							-drills like SAND
		0			50/3"			-gravels in auger
35								Bottom of boring at 32.5 ft. depth. GP-19 located approximately 5 feet south of MW-9. The log for MW-9 was used for lithology description for GP-19. Nested gas probes installed in borehole per Ecology variance. Gas probe installed at 10 feet depth and 32 feet depth.

Sampler Type (ST):



Grab Sample



No Recovery



2" OD Split Spoon Sampler

Lab Tests:

G - Grain Size

M - Moisture Content

Water Level (Date of Measurement)

Water Level (ATD)

Logged by: RRH

Approved by: JJS

Figure No. B - 8

Geologic & Gas Probe Construction Log

Project Number

BV99072B

Well Number

GP-20

Sheet

1 of 2

Project Name Enumclaw Landfill

Surface Elevation 801.55

Location Enumclaw, Washington

Water Depth (ft bgs)

Drilling Method 10" Casing Cable Tool

Start Date October 19, 1999

Sampling Method 3" OD California Split-Spoon Sampler, 300 lb hammer and bailer

Finish Date October 21, 1999

Depth feet	Gas Probe Construction	Methane %	Lab Test	S T	Blows/ 6"	Sample ID	Mtl. Graphic	Description
	8" Above-Grade Locking Steel Monument w/ Bollards							FILL
	Concrete seal							Grass/Topsoil over GRAVEL; trace sand
	Bentonite chips							No landfill material in bailer cuttings from 0 to 5 feet.
5		0		I	36 50/4"	S-1		Very dense, moist, brown GRAVEL with SAND, with SILT, few cobbles
								No landfill material in bailer cuttings from 5 to 10 feet.
	Filter pack, pea gravel							Brown SAND with GRAVEL; trace silt
10		0		O	50/5"	S-2		No landfill material in bailer cuttings from 10 to 15 feet.
	Well screen 3/4" ID SCH 80 PVC, 0.04" slot size	0						GRAVEL with SAND
15	Threaded end cap, 3/4" ID SCH 80 PVC	0	G	I	50/5"	S-3		Very dense, moist, brown SAND; trace silt; sand fine to medium
	Bentonite chips	0	G	I	100/6"	S-4		MUDFLOW
								Very dense, moist, brown GRAVEL with SAND and SILT
20		0						
		0			50/6" 50/4"	S-5		

Sampler Type (ST):



Grab Sample



No Recovery



2" OD Split Spoon Sampler

Lab Tests:

G - Grain Size

M - Moisture Content

▽ Water Level (Date of Measurement)

▼ Water Level (ATD)

Logged by: RRH

Approved by: JJS

Figure No. B - 9

Geologic & Gas Probe Construction Log

Project Number

BV99072B

Well Number

GP-20

Sheet

2 of 2

Project Name Enumclaw Landfill

Surface Elevation 801.55

Location Enumclaw, Washington

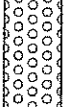
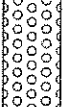
Water Depth (ft bgs)

Drilling Method 10" Casing Cable Tool

Start Date October 19, 1999

Sampling Method 3" OD California Split-Spoon Sampler, 300 lb hammer and bailer

Finish Date October 21, 1999

Depth feet	Gas Probe Construction	Methane %	Lab Test	S T	Blows/ 6"	Sample ID	Mtl. Graphic	Description
		0			50/5"	S-6		Very dense, moist, brown GRAVEL with SAND and SILT
30		0			75/6"	S-7		RECESSIONAL OUTWASH -less fines, rounded gravel
	Filter pack, pea gravel							-grades very dense, well rounded gravel in drive shoe of sampler and bailer cuttings
	Well screen 3/4" ID SCH 80 PVC, 0.04" slot size	0	G		50/6" 50/3"	S-8		Very dense, gray GRAVEL; few SAND
35		0			40 50/4"	S-9		-rounded to well-rounded gravels and cobbles; trace sand
	Threaded end cap, 3/4" ID SCH 80 PVC							
	Bentonite chips							
40		0			50/5"	S-10		Bottom of boring at 40 ft. depth. Nested gas probes installed in borehole per Ecology variance. Gas probe installed at 15 feet depth and 37 feet depth.
45								

Sampler Type (ST):



Grab Sample



No Recovery



2" OD Split Spoon Sampler

Lab Tests:

G - Grain Size

M - Moisture Content

 Water Level (Date of Measurement)

 Water Level (ATD)

Logged by: RRH

Approved by: JJS

Figure No. B - 9



Exploration Log

Project Number
BV99072B

Exploration Number
SB-1

Sheet
1 of 1

Project Name Enumclaw Landfill
Location Enumclaw, Washington
Driller/Equipment Tacoma Pump and Drilling/Mobile B-61 Hollow-Stem Auger, 4" ID, 6" OD
Hammer Weight/Drop 300 lb/30 inches

Ground Surface Elevation (ft) ~ 802
Datum
Date Start/Finish 09/29/1999-09/29/1999
Hole Diameter (in) 6 inch

This log is part of the report prepared by Associated Earth Sciences (AESI) for the named project and should be read together only with that report for complete interpretation. This summary applies only to the location of this exploration and at the time of exploration. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Dry, brown SAND with roots and organics; sand fine to coarse

Dry, tan GRAVEL with SAND; gravel fine to coarse, sand fine to coarse, few cobbles

Landfill material (cloth) appeared in auger cuttings at 6 feet).

-grades trace cobbles

-grades very hard, little return

-grades slightly moist

-grades softer

Bottom of boring at 27 ft. depth.
Very hard soil conditions prevented drive samples from being collected between 0 to 25 feet.
Attempted three borings: refusal at 2, 7, and 27 feet.
Abandoned borehole with bentonite chips.

Sampler Type (ST):

- No Recovery
- 3.25" OD D&M Split-Spoon Ring Sampler
- Grab Sample

Lab tests:

- C - Chemical Properties
- P - Permeability
- M - Moisture
- ▽ Static Water Level
- ▼ Water Level at time of drilling (ATD)

Logged by: SJS
Approved by: JJS
Figure No. B - 10



Exploration Log

Project Number
BV99072B

Exploration Number
SB-2

Sheet
1 of 1

Project Name
Enumclaw Landfill

Location
Enumclaw, Washington

Driller/Equipment
Tacoma Pump and Drilling/Hollow-Stem Auger, 4" ID, 8" OD

Hammer Weight/Drop
300 lb/30 inches

Ground Surface Elevation (ft) ~ 800

Datum

Date Start/Finish 10/04/1999-10/04/1999

Hole Diameter (in) 4 inch

This log is part of the report prepared by Associated Earth Sciences (AESI) for the named project and should be read together only with that report for complete interpretation. This summary applies only to the location of this exploration and at the time of exploration. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth, ft	S-T	Samples	Graphic Symbol	DESCRIPTION	Well Completion	Blows/6"	Blows/Foot				Methane %
							10	20	30	40	
				LANDFILL DEBRIS							
		S-1				5 8 22					0
5		S-2 S-3		-Glass, metal, cloth, plastic debris with est. 20% GRAVEL in SAND matrix; few cobbles and gravels		22 30 34					50+ 0
		S-4 S-5		-cobble and gravel content decreases		28 32 33					50+ 0
				Bottom of boring at 7.5 feet. Backfilled with hydrated bentonite chips.							

Sampler Type (ST):



No Recovery



3.25" OD D&M Split-Spoon Ring Sampler



Grab Sample

Lab tests:

C - Chemical Properties

P - Permeability

M - Moisture

Static Water Level

Water Level at time of drilling (ATD)

Logged by: RRH

Approved by: JJS

Figure No. B - 11



Exploration Log

Project Number
BV99072B

Exploration Number
SB-3

Sheet
1 of 1

Project Name
Enumclaw Landfill

Location
Enumclaw, Washington

Driller/Equipment
Tacoma Pump and Drilling/Hollow-Stem Auger, 4" ID, 8" OD

Hammer Weight/Drop
300 lb/30 inches

Ground Surface Elevation (ft) ~ 802

Datum

Date Start/Finish 10/04/1999-10/04/1999

Hole Diameter (in) 4 inch

This log is part of the report prepared by Associated Earth Sciences (AES) for the named project and should be read together only with that report for complete interpretation. This summary applies only to the location of this exploration and at the time of exploration. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth, ft	Samples	Graphic Symbol	DESCRIPTION	Well Completion	Blows/ft	Blows/Foot				Methane %
						10	20	30	40	
			GRAVEL; very few cuttings							
			-No recovery		50/4"					0
5			Refusal at 3.5 feet; backfilled with Bentonite chips. Second attempt refusal at 4.0 feet; backfilled with Bentonite chips.							

Sampler Type (ST):

- ☐ No Recovery
- ☒ 3.25" OD D&M Split-Spoon Ring Sampler
- ☐ Grab Sample

Lab tests:

- C - Chemical Properties
- P - Permeability
- M - Moisture
- ☐ Static Water Level
- ☒ Water Level at time of drilling (ATD)

Logged by: RRH

Approved by: JJS

Figure No. B - 12

**Table B-1
Survey Data
Enumclaw Landfill**

Well or Probe	Northing	Easting	Elevation		
			Top of Monument	Top of PVC Casing	Ground Surface
MW-09	11002.21	11436.68	826.48	825.97	823.74
MW-10	10358.60	11409.77	800.63	800.10	797.74
GP-19	11007.80	11437.88	827.03	826.31 S	826.45 D 824.24
GP-20	10210.97	11457.86	804.37	803.51 S	803.45 D 801.55
Notes: 1. Data provided by King County; surveyed 1/13/00. 2. S and D refer to shallow and deep, respectively. 3. The top of the PVC casing elevations for gas probes GP-19 and GP-20 are the top of the PVC adapter, not the reducer or labcock.					



Sweet-Edwards / EMCON, Inc.

PROJECT NO.

S01-04.02

TEST PIT NO.

Pit #1

SHEET 1 OF 1

TEST PIT LOG

PROJECT Enumclaw Landfill LOCATION Southside Fence line LOGGER Mack
ELEVATION _____ CONTRACTOR _____
EXCAVATION METHOD Backhoe DATE EXCAVATED 18 Oct. 1988
WATER LEVEL AND DATE _____ APPROX. DIMENSIONS: Length _____ Width _____ Maximum Depth 7 ft.

ELEVATION ()	DEPTH BELOW SURFACE ()	SAMPLE		SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL		DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE, GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION
	1			Top Soil, dark brown, abundant organic material.		
	2			Silty Sand, upper part moderate yellowish brown grading to light olive grey, at 2 feet, patches of yellowish brown, with some sub- rounded to subangular cobbles and boulders, massive, dry (SM)		
	3			(Oceola Mud Flow)		
	4					
	5					
	6					
	7					
	8			Total depth 7 feet.		
	9					
	10					

Water seeps, water ponds
at surface.



Sweet-Edwards / EMCON, Inc.

PROJECT NO.

S01.04.03

TEST PIT NO.

Pit # 2

SHEET 1 OF 1

TEST PIT LOG

PROJECT Enumclaw Landfill LOCATION South fence line LOGGER Mack
ELEVATION _____ CONTRACTOR _____
EXCAVATION METHOD Backhoe DATE EXCAVATED 18 Oct. 1988
WATER LEVEL AND DATE _____ APPROX. DIMENSIONS: Length _____ Width _____ Maximum Depth 12 ft.

ELEVATION ()	DEPTH BELOW SURFACE ()	SAMPLE		SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL		DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE, GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION
	1			Cover Material, sandy gravel, pale olive, some cobbles.		
	2					
	3			Refuse, glass, metal, bottles, buried garbage, ash.		
	4					
	5					
	6					
	7					
	8			Silty sand, pale olive, with some subrounded cobbles and boulders, massive, dry. (SM) (Oceola Mud Flow)		
	9					
	10					
	11					
	12					
	13			Total depth 12 feet.		
	14					
	15					



Sweet-Edwards / EMCON, Inc.

PROJECT NO.
S01-04.03TEST PIT NO.
Pit #3

SHEET 1 OF 1

TEST PIT LOG

PROJECT Enumclaw Landfill LOCATION South fence line LOGGER Mack
ELEVATION _____ CONTRACTOR _____
EXCAVATION METHOD Backhoe DATE EXCAVATED 18 Oct. 1988
WATER LEVEL AND DATE _____ APPROX. DIMENSIONS: Length _____ Width _____ Maximum Depth 10 ft.

ELEVATION ()	DEPTH BELOW SURFACE ()	SAMPLE		SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL		DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE, GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION
	1			Refuse, demolition waste, wood, concrete blocks, sheet metal, bed springs, burned garbage.		
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10			Total depth 10 feet.		
	11					
	12					
	13					
	14					
	15					



Sweet-Edwards / EMCON, Inc.

PROJECT NO.

S01-04.02

TEST PIT NO.

Pit # 4

SHEET 1 OF 1

TEST PIT LOG

PROJECT Enumclaw Landfill LOCATION South fence line LOGGER Mack

ELEVATION _____ CONTRACTOR _____

EXCAVATION METHOD Backhoe DATE EXCAVATED 18 Oct. 1988WATER LEVEL AND DATE _____ APPROX. DIMENSIONS: Length _____ Width _____ Maximum Depth 8 ft.

ELEVATION ()	DEPTH BELOW SURFACE ()	SAMPLE		SOIL DESCRIPTION SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL	SYMBOLIC LOG	COMMENTS DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE, GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION
		INTERVAL	TYPE AND NUMBER			
	1			Cover, sandy gravel, moderate yellowish brown, with some cobbles.		
	2			Refuse, iron, burned garbage, alternating layers of dusky red to dusky brown or black.		
	3					
	4					
	5					
	6					
	7					
	8			Total depth 8 feet.		
	9					
	10					
	11					
	12					
	13					
	14					
	15					



Sweet-Edwards / EMCON, Inc.

PROJECT NO.
S01-04.02TEST PIT NO.
Pit #5

SHEET 1 OF 1

TEST PIT LOG

PROJECT Enumclaw Landfill LOCATION South of gate LOGGER Mack

ELEVATION CONTRACTOR

EXCAVATION METHOD Backhoe DATE EXCAVATED 17 Oct. 1988

WATER LEVEL AND DATE APPROX. DIMENSIONS: Length Width Maximum Depth 9'

ELEVATION ()	DEPTH BELOW SURFACE ()	SAMPLE		SOIL DESCRIPTION SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL	SYMBOLIC LOG	COMMENTS DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE, GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION
		INTERVAL	TYPE AND NUMBER			
	1			Top Soil, dark brown, sand and gravel.		
	2			Silty Sand, medium grey, with some boulders and cobbles, slightly plastic, damp, well graded. (SM) (Oceola Mud Flow)		
	3					
	4					
	5					
	6					
	7			Sandy gravel, moderate yellowish brown with trace of silt, sand is fine to coarse with some cobbles and boulders. (GP) (Outwash)		
	8					
	9					
	10			Total depth 9 feet.		
	11					
	12					
	13					
	14					
	15					



Sweet-Edwards / EMCON, Inc.

PROJECT NO.

S01-04.02

TEST PIT NO.

Pit # 6

SHEET 1 OF 1

TEST PIT LOG

PROJECT Enumclaw Landfill LOCATION West of G-11 LOGGER Mack

ELEVATION _____ CONTRACTOR _____

EXCAVATION METHOD Backhoe DATE EXCAVATED 17 Oct. 1988WATER LEVEL AND DATE _____ APPROX. DIMENSIONS: Length _____ Width _____ Maximum Depth 10'

ELEVATION ()	DEPTH BELOW SURFACE ()	SAMPLE		SOIL DESCRIPTION SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL	SYMBOLIC LOG	COMMENTS DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE, GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION
		INTERVAL	TYPE AND NUMBER			
	1			Topsoil, dark brown, organic material.		
	2			Silty Sand, olive grey, with some subangular cobbles and boulders, massive. (SM) (Oceola Mud Flow)		
	3					
	4					
	5			Sandy Gravel, moderate yellowish brown, gravel is subrounded to subangular, with some cobbles. (GW) (Outwash Deposits)		
	6					
	7					
	8					
	9					
	10					
	11			Total depth 10 feet.		
	12					
	13					
	14					
	15					



Sweet-Edwards / EMCON, Inc.

PROJECT NO.

S01-04.02

TEST PIT NO.

Pit #7

SHEET 1 OF 1

TEST PIT LOG

PROJECT Enumclaw Landfill LOCATION Southwest of fence LOGGER Mack

ELEVATION _____ CONTRACTOR _____

EXCAVATION METHOD Backhoe DATE EXCAVATED 18 Oct. 1988WATER LEVEL AND DATE _____ APPROX. DIMENSIONS: Length _____ Width _____ Maximum Depth 10'

ELEVATION ()	DEPTH BELOW SURFACE ()	SAMPLE		SOIL DESCRIPTION	SYMBOLIC LOG	COMMENTS
		INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL		DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE, GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION
	1	Grab Tube		Sandy Gravel, moderate yellowish brown to yellow grey, with some subangular to subrounded cobbles and boulders. (GW) (Outwash)		
	2			Silty Gravel, yellowish grey, subangular to subrounded gravel, cobbles. Each grain is coated with silt, little sand. (GM) (Outwash)		
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11	Total depth 10 feet.				
	12					
	13					
	14					
	15					



Sweet-Edwards / EMCON, Inc.

PROJECT NO.
S01-04.02TEST PIT NO.
Pit # 8

SHEET 1 OF 1

TEST PIT LOG

PROJECT Enumclaw Landfill LOCATION Southwest fence line LOGGER Mack
ELEVATION _____ CONTRACTOR _____
EXCAVATION METHOD Backhoe DATE EXCAVATED 18 Oct. 1988
WATER LEVEL AND DATE _____ APPROX. DIMENSIONS: Length _____ Width _____ Maximum Depth 8'

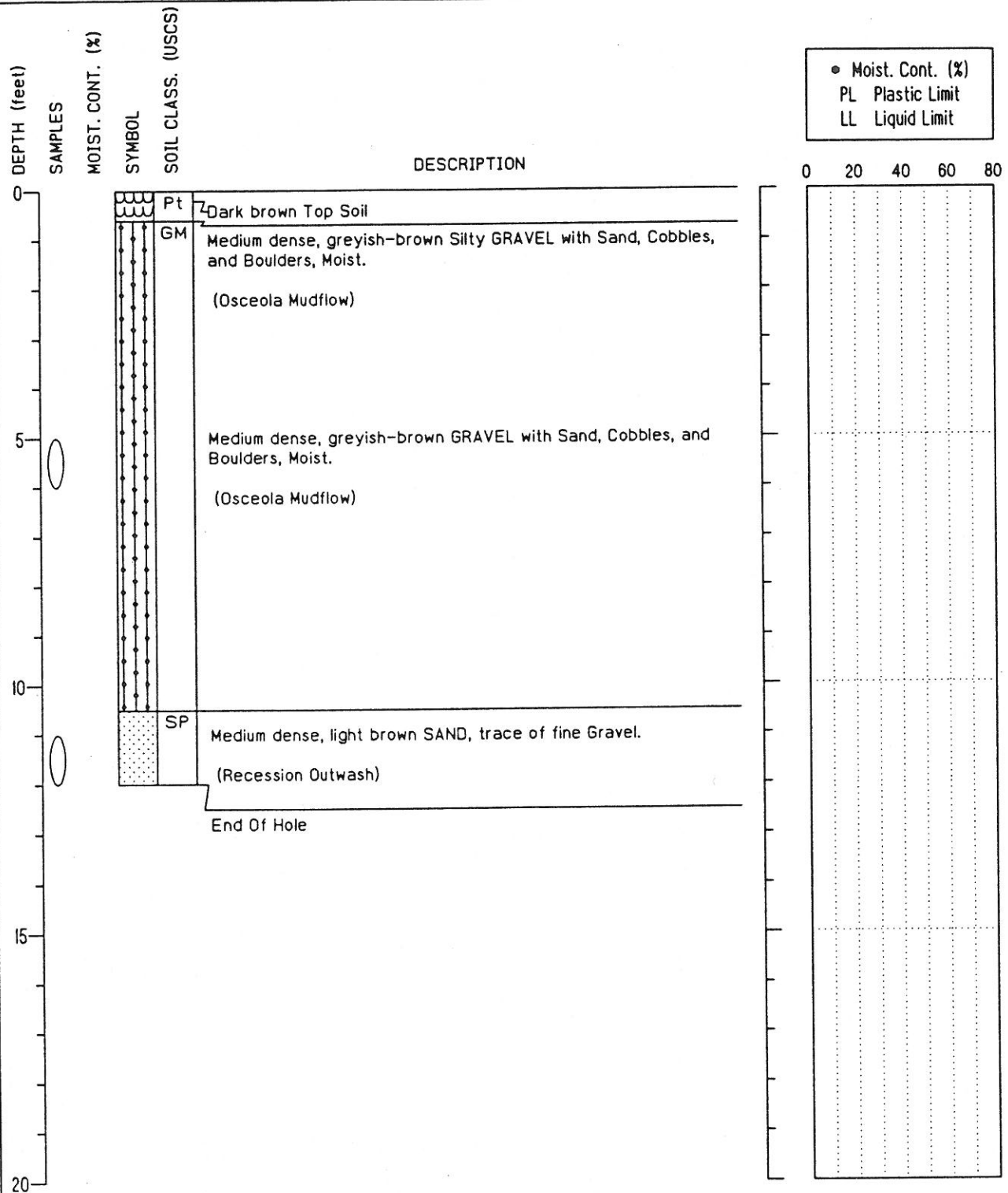
ELEVATION ()	DEPTH BELOW SURFACE ()	SAMPLE		SOIL DESCRIPTION SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL	SYMBOLIC LOG	COMMENTS DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE, GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION
		INTERVAL	TYPE AND NUMBER			
	1			Cover fill, sand and gravel, moderate yellowish brown, trace of refuse (nonburned).		
	2					
	3					
	4			Refuse, ash, burned refuse, bottles, metal items.		
	5					
	6					
	7					
	8			Total depth 8 feet.		
	9					
	10					
	11					
	12					
	13					
	14					
	15					

HONG WEST & ASSOCIATES, INC.

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tired Backhoe
SAMPLING METHOD: Grab

TEST PIT LOG

TOTAL DEPTH: 12.0 Feet
SURFACE ELEVATION: 831 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

LOCATION: S.E. 440th St. Enumclaw, WA
DATE COMPLETED: 2/26/92
LOGGED BY: Chris Behrens

TEST PIT: TP-1

PROJECT NUMBER: 92021, Task 2

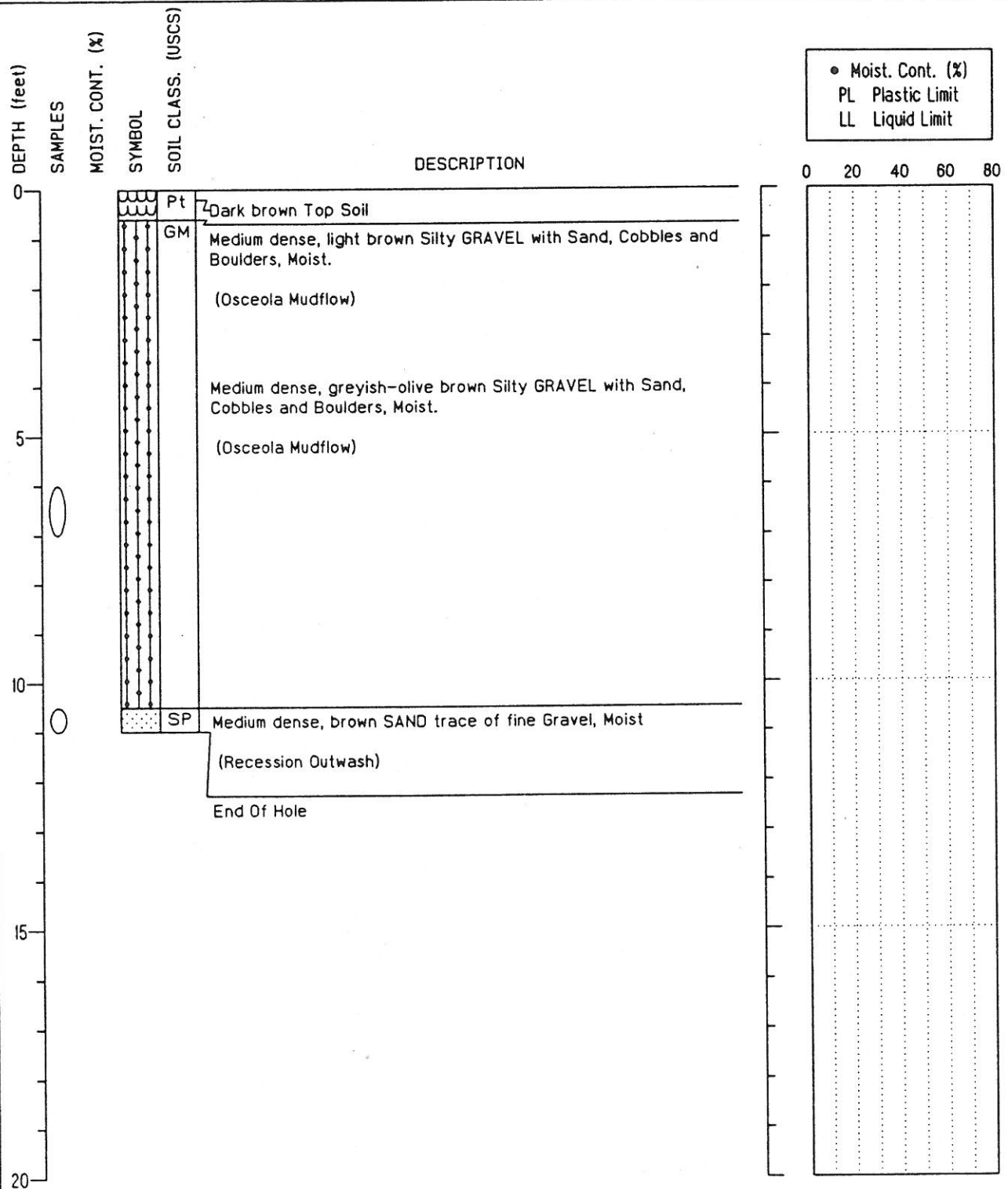
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tire Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 11.0 Feet
SURFACE ELEVATION: 831 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-2

LOCATION: S.E.440th St. Enumclaw WA

PROJECT NUMBER: 92021, Task 2

DATE COMPLETED: 2/26/92

LOGGED BY: Chris Behrens

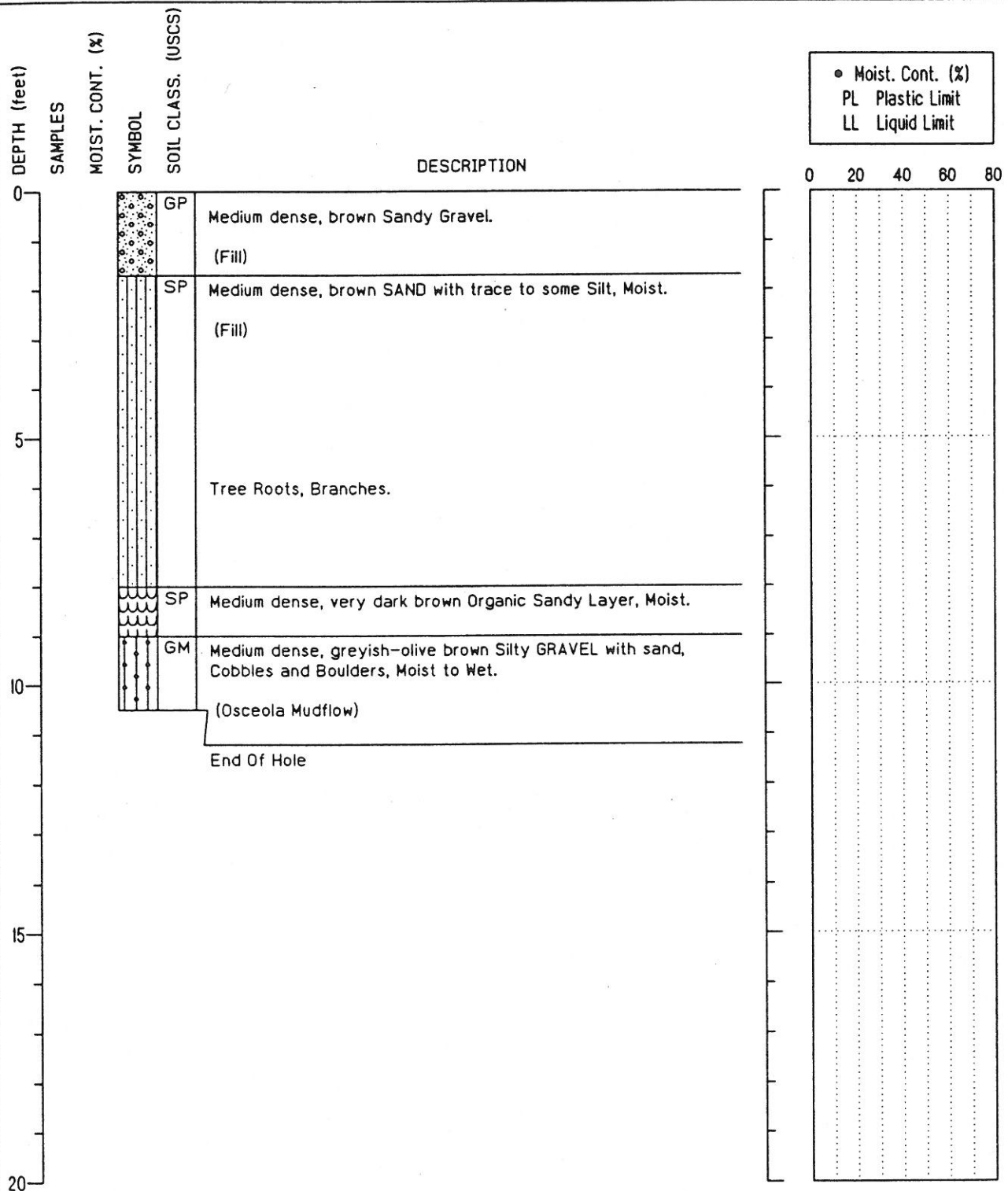
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tire Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 10.5 Feet
SURFACE ELEVATION: 782 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-3

LOCATION: S.E. 440th St. Enumclaw WA

PROJECT NUMBER: 92021, Task 2

DATE COMPLETED: 2/26/92

LOGGED BY: Chris Behrens

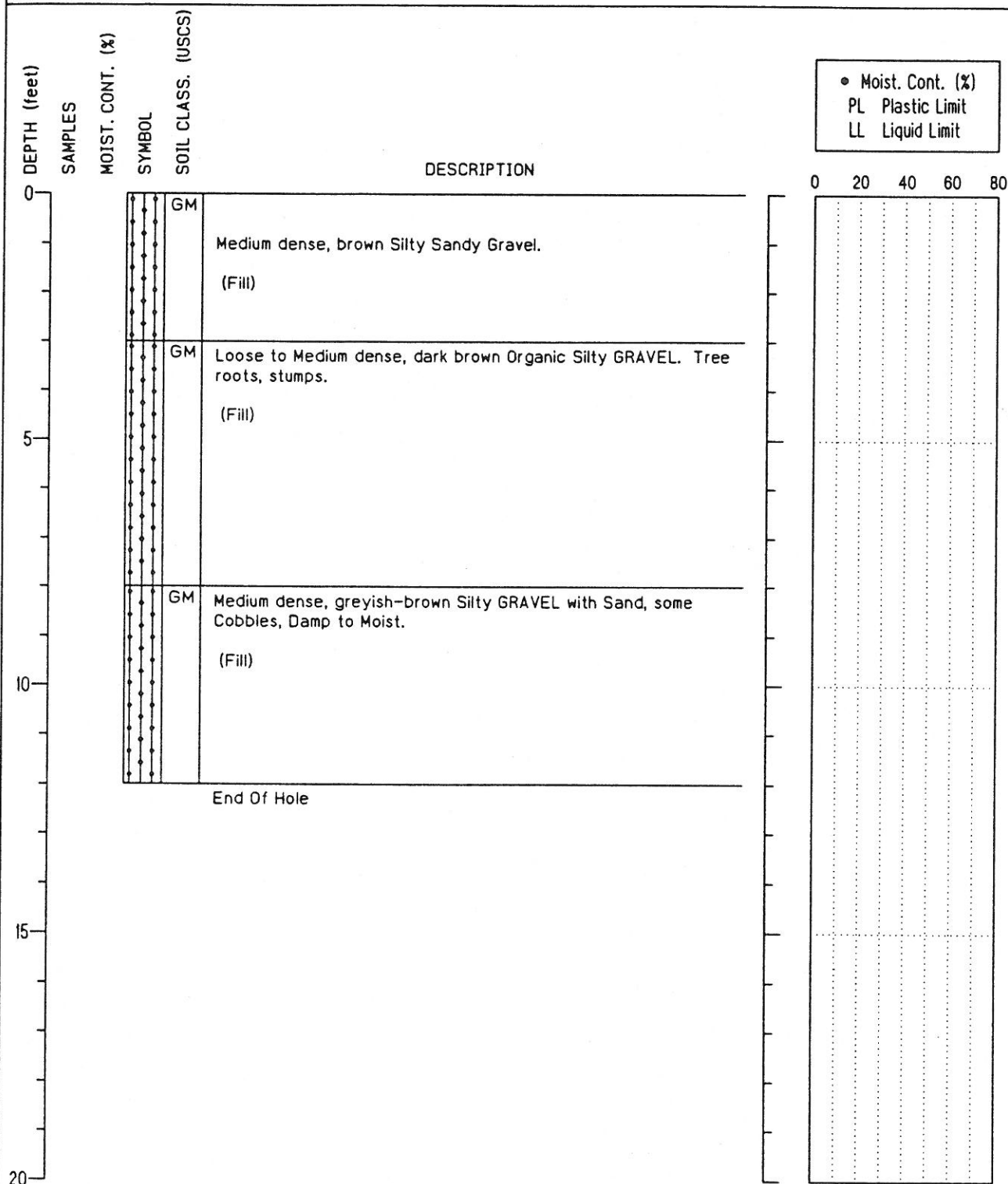
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tire Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 12.0 Feet
SURFACE ELEVATION: 784 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-4

LOCATION: S.E. 440th St. Enumclaw WA

PROJECT NUMBER: 92021, Task 2

DATE COMPLETED: 2/26/92

LOGGED BY: Chris Behrens

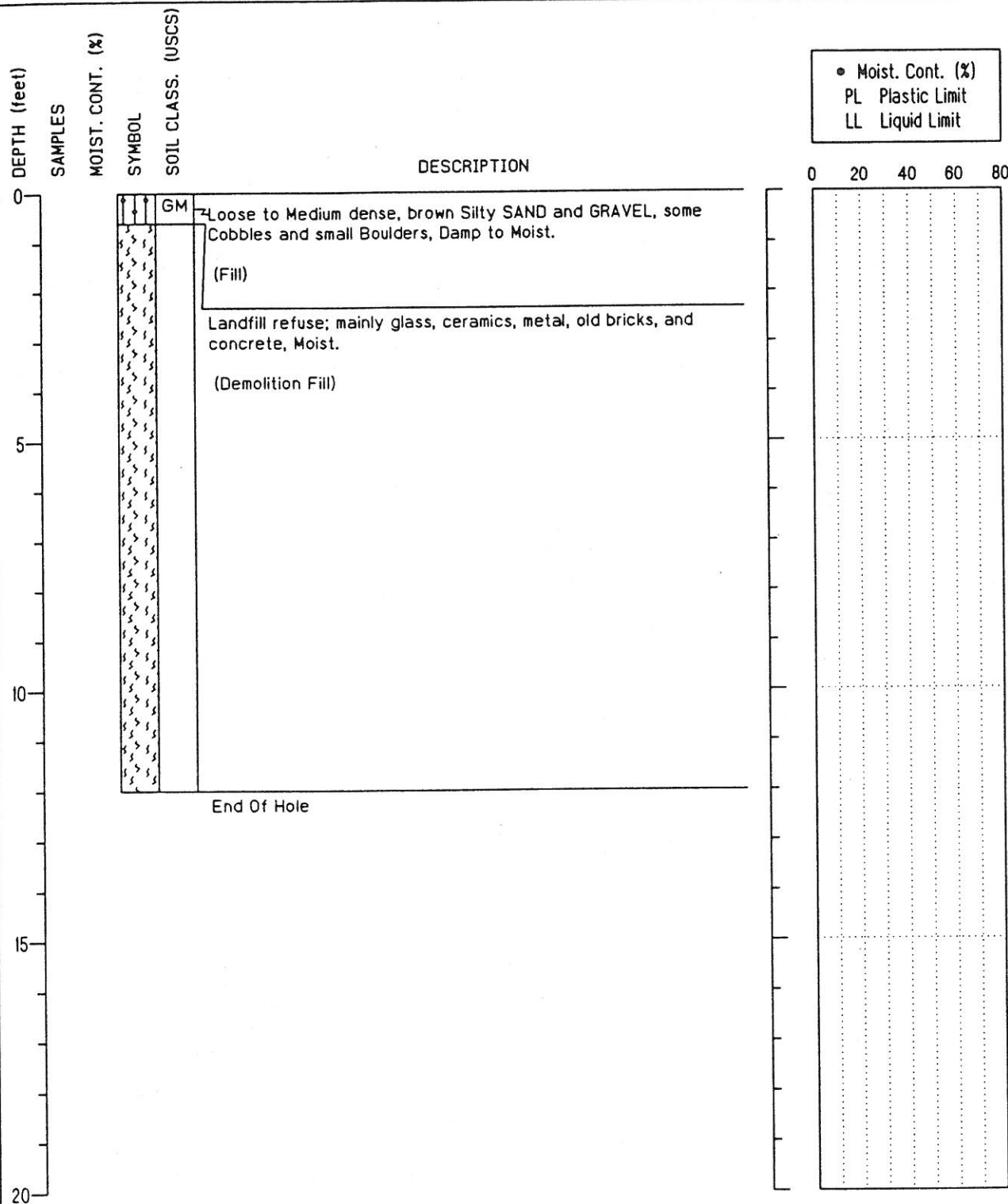
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tire Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 12.0 Feet
SURFACE ELEVATION: 823 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-5

LOCATION: S.E. 440th St. Enumclaw WA
DATE COMPLETED: 2/27/92
LOGGED BY: Chris Behrens

PROJECT NUMBER: 92021, Task 3

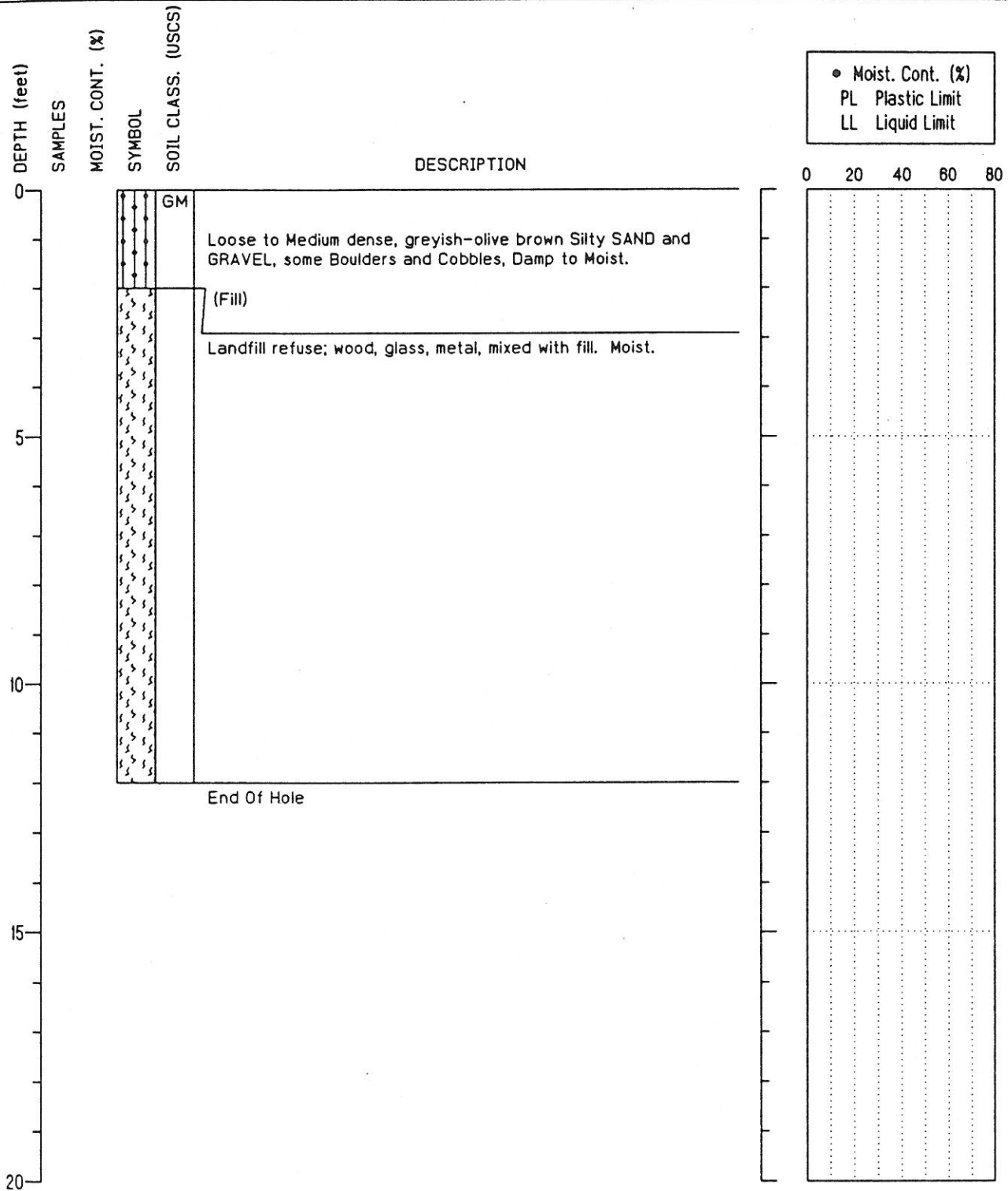
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tire Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 12.0 Feet
SURFACE ELEVATION: 821 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-6

LOCATION: S.E. 440th St. Enumclaw, WA

PROJECT NUMBER: 92021, Task 3

DATE COMPLETED: 2/27/92

LOGGED BY: Chris Behrens

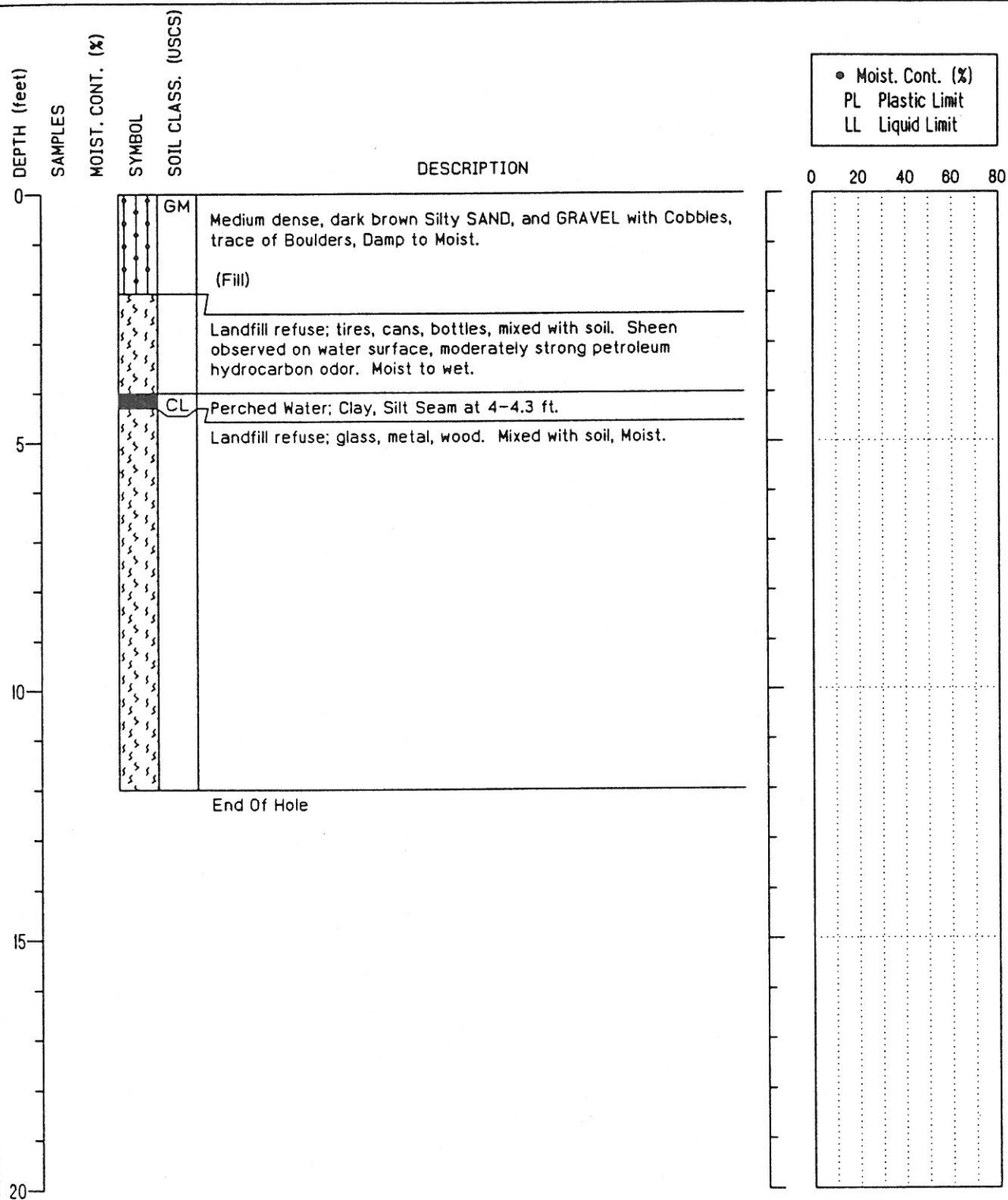
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tire Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 12.0 Feet
SURFACE ELEVATION: 825 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-7

LOCATION: S.E. 440th St. Enumclaw, WA

PROJECT NUMBER: 92021, Task 3

DATE COMPLETED: 2/27/92

LOGGED BY: Chris Behrens

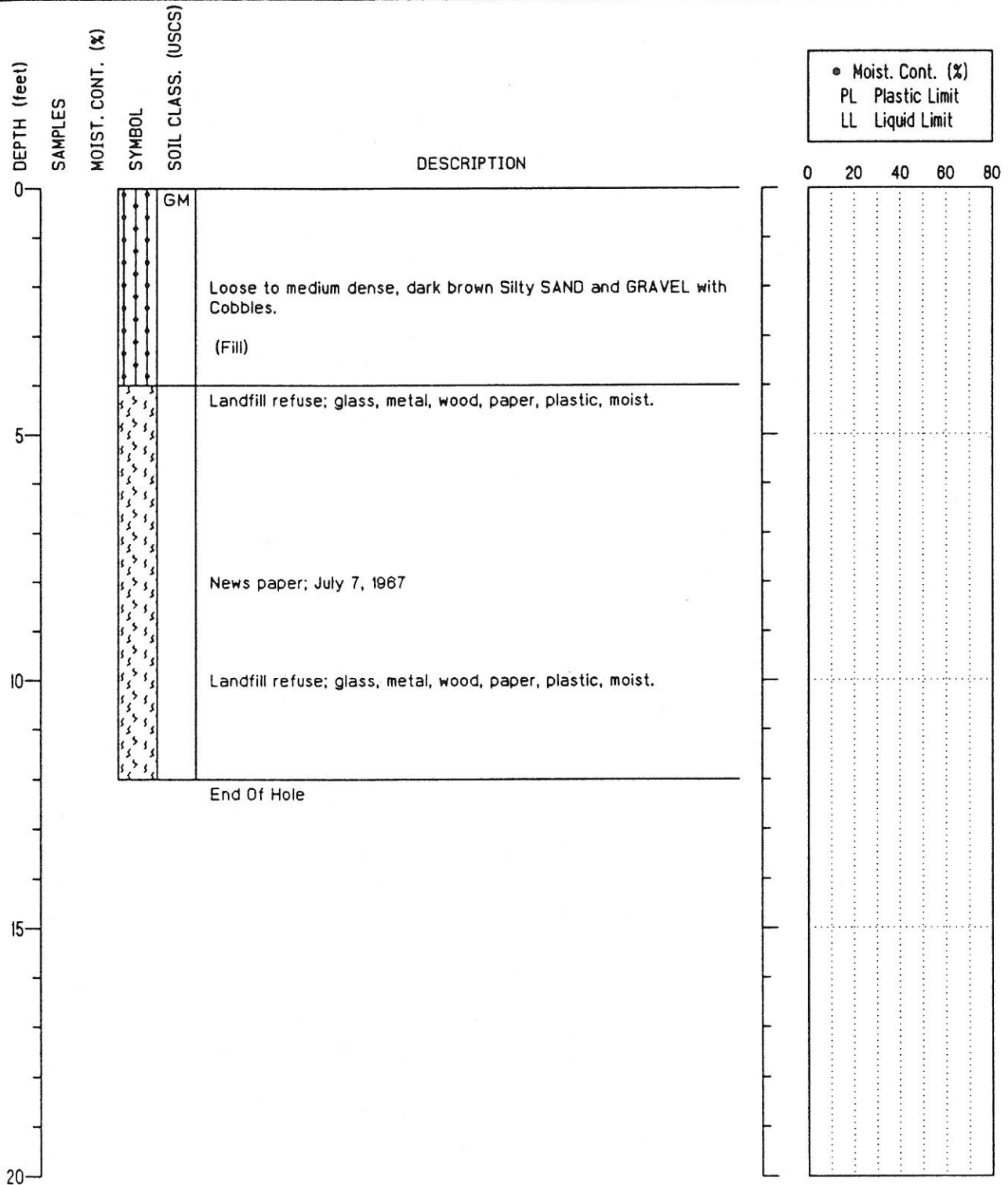
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tire Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 12.0 Feet
SURFACE ELEVATION: 828 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-8

LOCATION: S.E. 440th St. Enumclaw, WA
DATE COMPLETED: 2/27/92
LOGGED BY: Chris Behrens

PROJECT NUMBER: 92021, Task 3

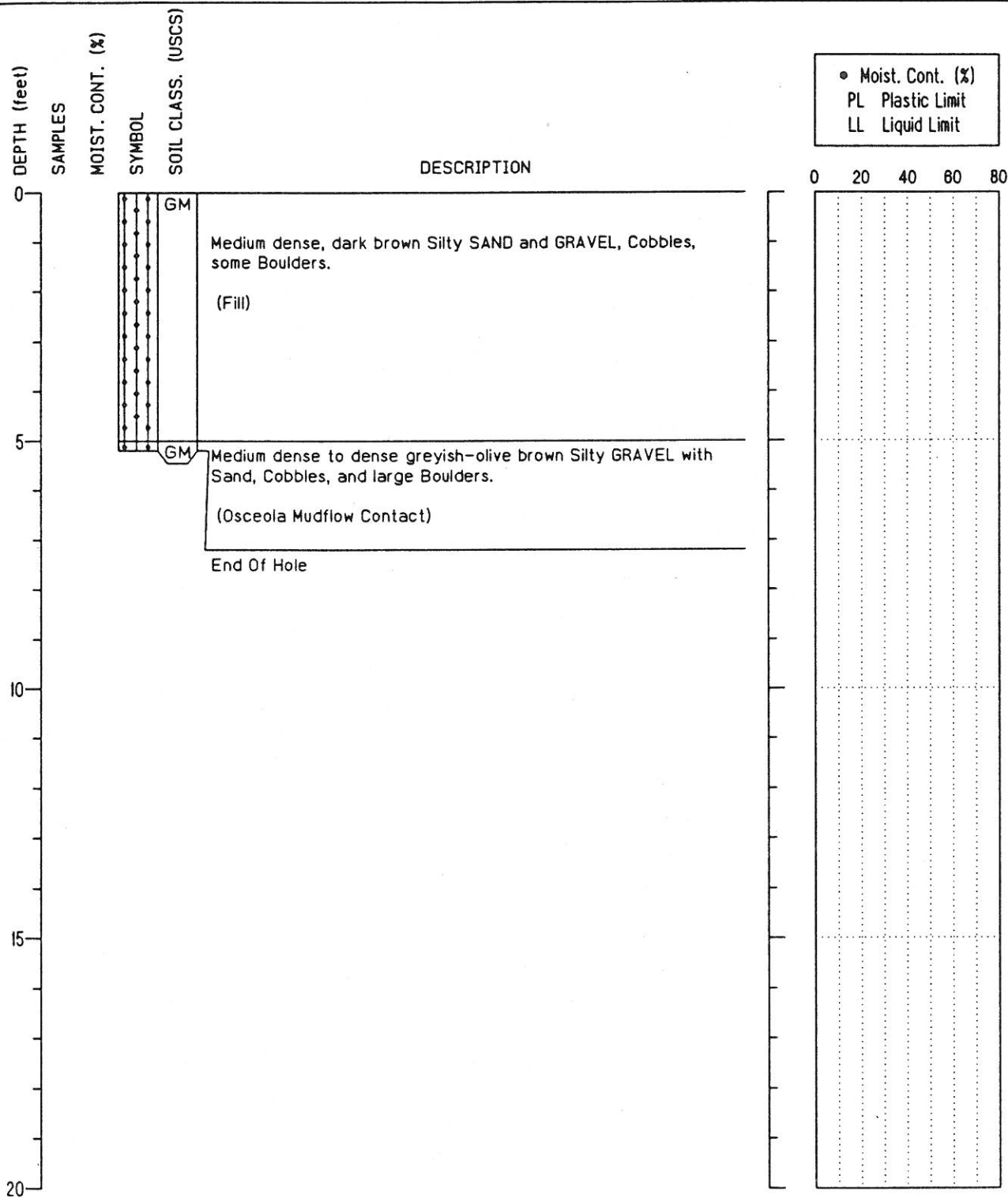
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tire Backhoe
SAMPLING METHOD: Grab

TEST PIT LOG

TOTAL DEPTH: 5.2 Feet
SURFACE ELEVATION: 830 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

LOCATION: S.E. 440th St. Enumclaw, WA
DATE COMPLETED: 2/27/92
LOGGED BY: Chris Behrens

TEST PIT: TP-9

PROJECT NUMBER: 92021, Task 3

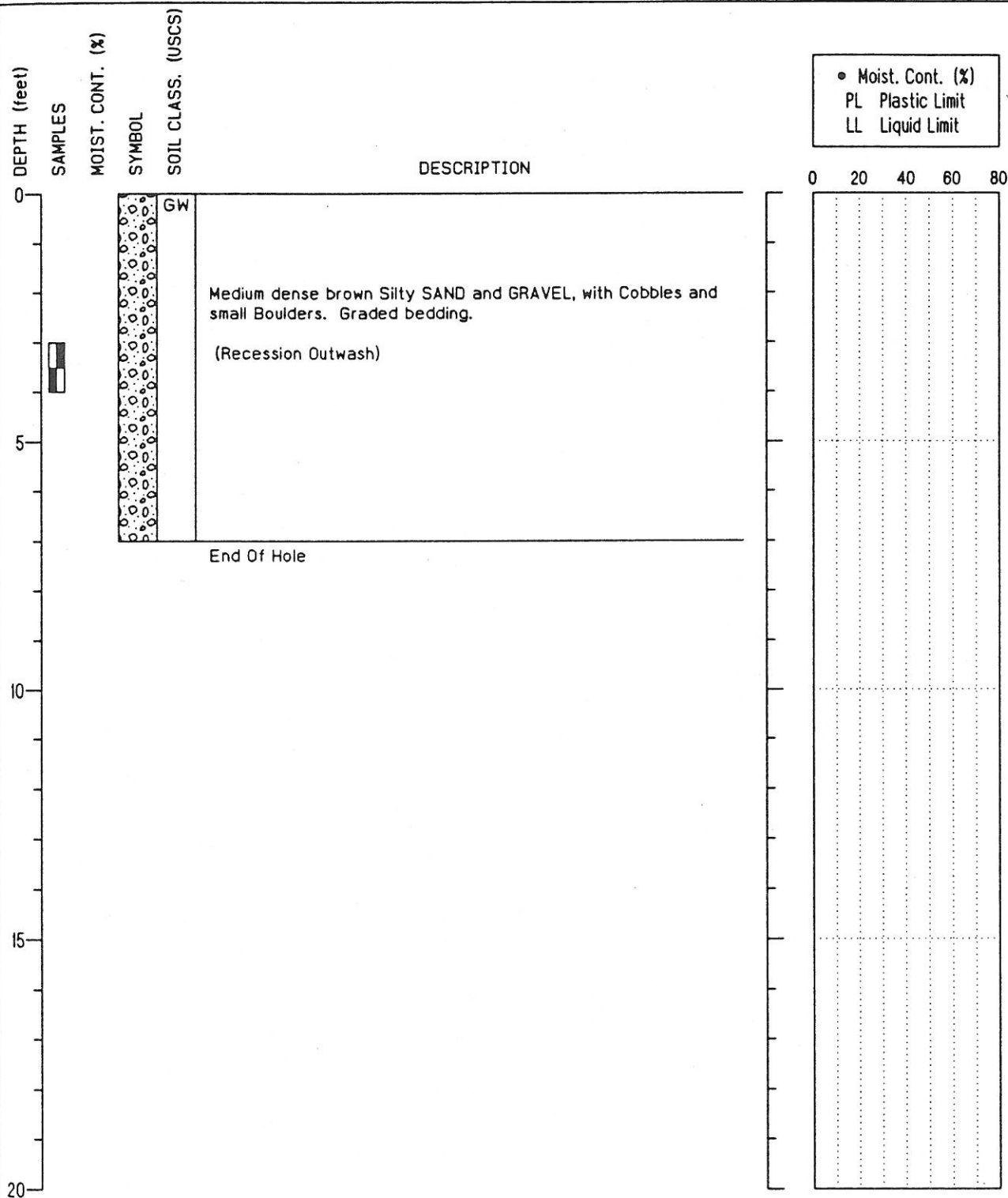
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Rubber-Tire Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 7.0 Feet
SURFACE ELEVATION: 800 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-10

LOCATION: S.E. 440th St. Enumclaw, WA

PROJECT NUMBER: 92021, Task 2

DATE COMPLETED: 2/27/92

LOGGED BY: Chris Behrens

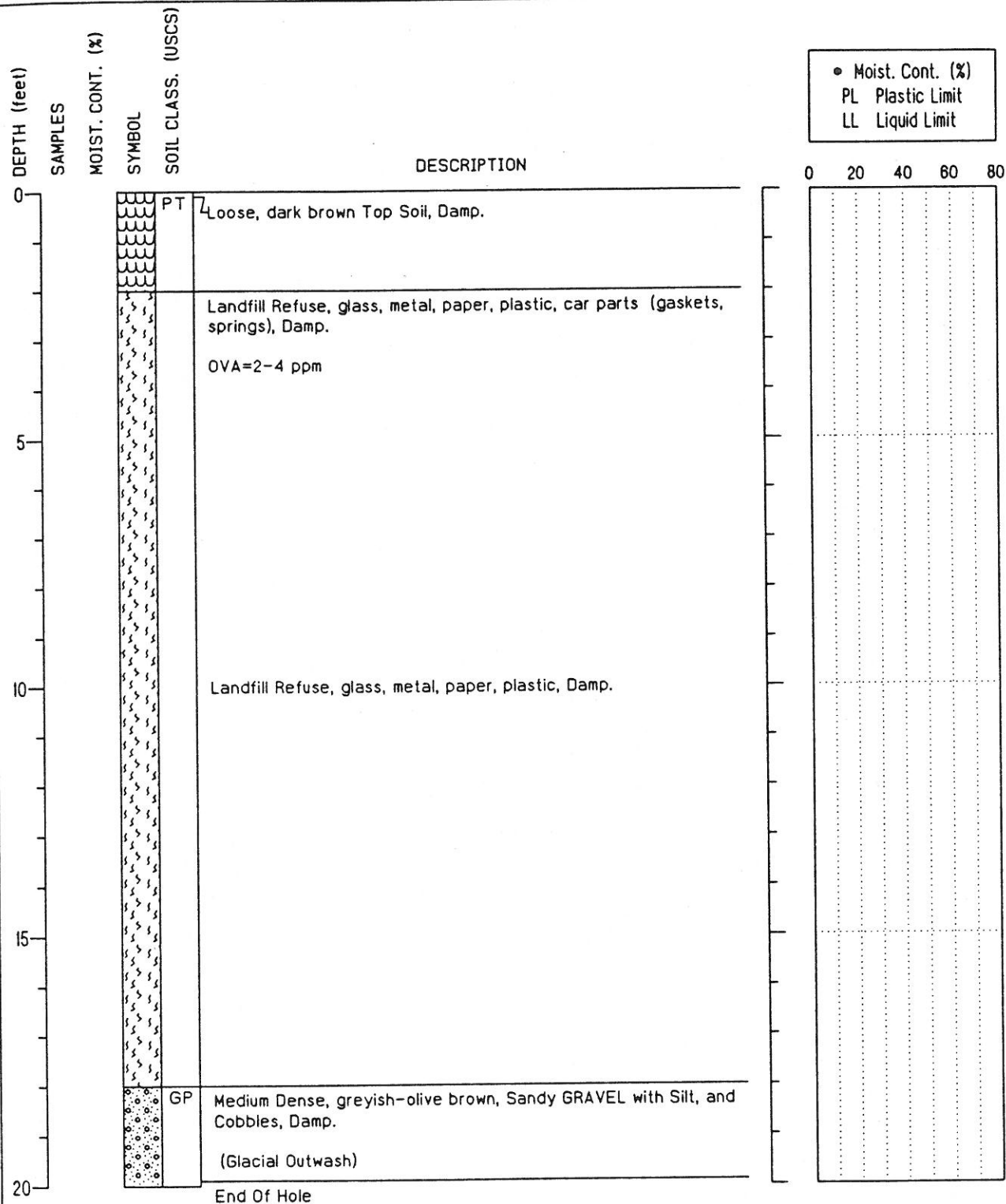
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: CAT-225, Track Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 20.0 Feet
SURFACE ELEVATION: 826 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-11

LOCATION: S.E. 440th St. Enumclaw, WA

PROJECT NUMBER: 92021, Task 3

DATE COMPLETED: 3/5/92

LOGGED BY: Chris Behrens

PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

EXCAVATION COMPANY: King County
EXCAVATION METHOD: CAT-225, Track Backhoe
SAMPLING METHOD: Grab

TEST PIT LOG

TOTAL DEPTH: 26.0 Feet
SURFACE ELEVATION: 817 Feet

DEPTH (feet)	SAMPLES	MOIST. CONT. (%)	SYMBOL	SOIL CLASS. (USCS)	DESCRIPTION	Moist. Cont. (%)	PL Plastic Limit	LL Liquid Limit
0					Loose to Medium Dense, dark brown to greyish-olive brown Sandy GRAVEL with some Silt, and Cobbles. Mixed with bricks, concrete, glass bottles, and metal, Dry. (Demolition Fill)			
5								
10					OVA=2-4 ppm			
15					Tar Shingles			
20					Water Heater			

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

LOCATION: S.E. 440th St. Enumclaw, WA
DATE COMPLETED: 3/5/92
LOGGED BY: Chris Behrens

TEST PIT: TP-12

PROJECT NUMBER: 92021, Task 3

PAGE: 1 OF 2

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

DEPTH (feet)	SAMPLES	MOIST. CONT. (%)	SYMBOL	SOIL CLASS. (USCS)	DESCRIPTION	• Moist. Cont. (%) PL Plastic Limit LL Liquid Limit 020406080
20					Demolition Fill, continued from Page 1.	
					Charred Stump	
25			GP		Medium Dense, brown Sandy GRAVEL with some Silt, Dry.	
					(Glacial Outwash)	
					End Of Hole	
30						
35						
40						

PROJECT: Enumclaw Landfill

LOCATION: S.E. 440th St. Enumclaw, WA

DATE COMPLETED: 3/5/92

LOGGED BY: Chris Behrens

TEST PIT: TP-12

PROJECT NUMBER: 92021, Task 3

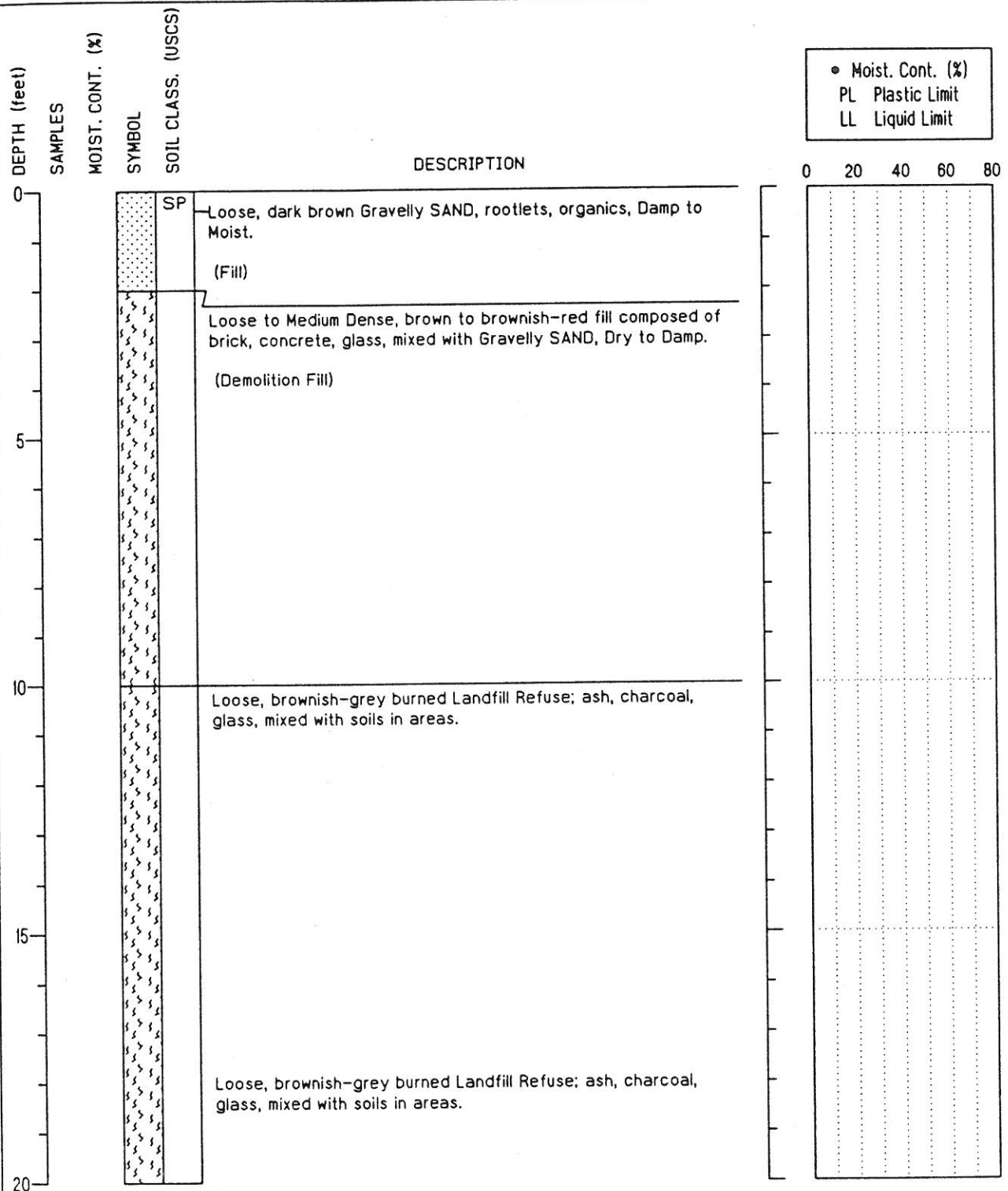
PAGE: 2 OF 2

HONG WEST & ASSOCIATES, INC.

EXCAVATION COMPANY: King County
EXCAVATION METHOD: CAT-225, Track Backhoe
SAMPLING METHOD: Grab

TEST PIT LOG

TOTAL DEPTH: 30.0 Feet
SURFACE ELEVATION: 812 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

LOCATION: S.E. 440th St. Enumclaw, WA
DATE COMPLETED: 3/5/92
LOGGED BY: Chris Behrens

TEST PIT: TP-13

PROJECT NUMBER: 92021, Task 3

PAGE: 1 OF 2

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

DEPTH (feet)	SAMPLES	MOIST. CONT. (%)	SYMBOL	SOIL CLASS. (USCS)	DESCRIPTION	• Moist. Cont. (%) PL Plastic Limit LL Liquid Limit
						0 20 40 60 80
20			~		Loose, brownish-grey burned Landfill Refuse; ash, charcoal, glass, mixed with soils in area.	
25			~			
30			~		End Of Hole	
35			~			
40			~			

PROJECT: Enumclaw Landfill

LOCATION: S.E. 440th St. Enumclaw, WA
 DATE COMPLETED: 3/5/92
 LOGGED BY: Chris Behrens

TEST PIT: TP-13

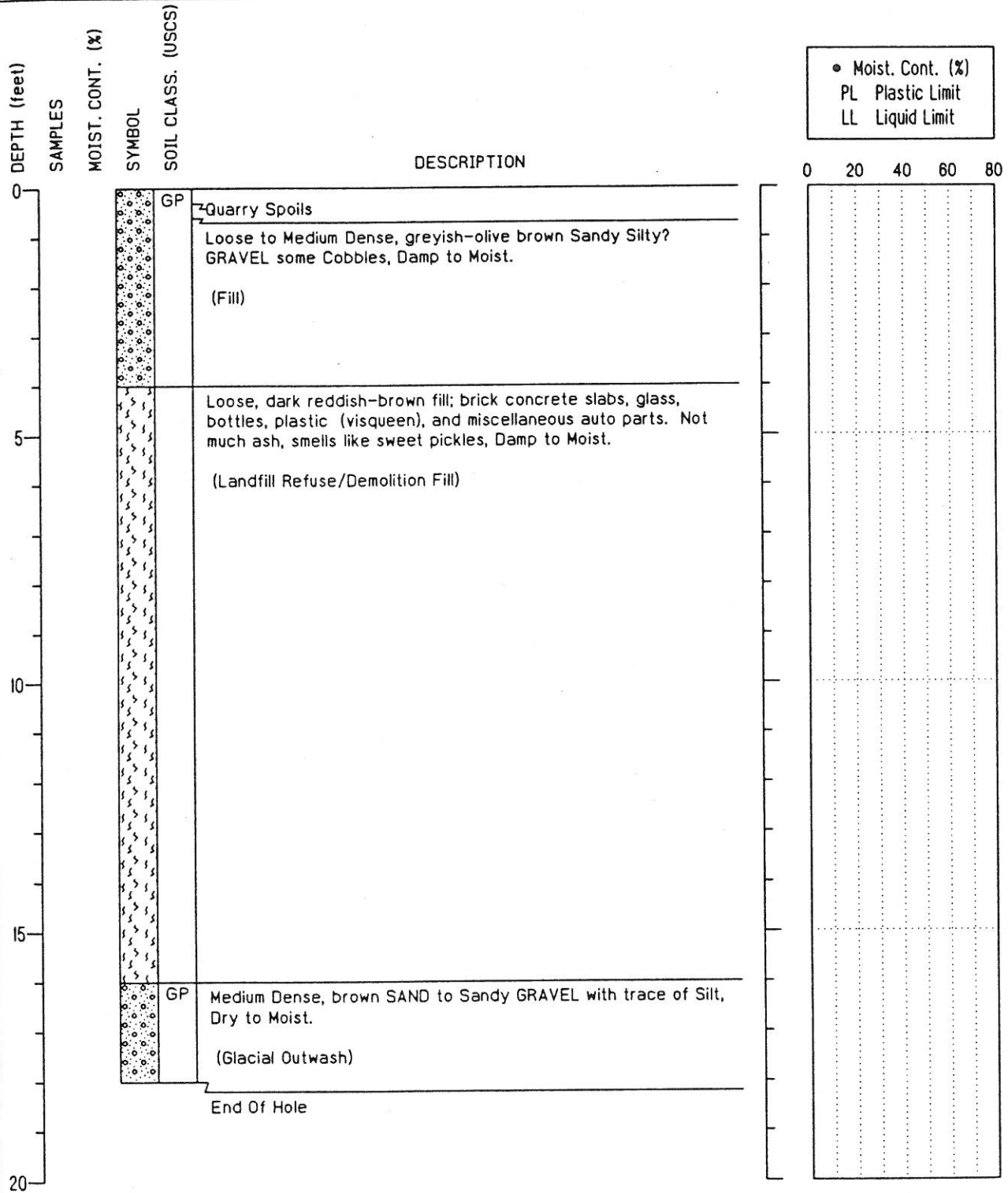
PROJECT NUMBER: 92021, Task 3
 PAGE: 2 OF 2

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: CAT-225, Track Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 20.0 Feet
SURFACE ELEVATION: 823 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-14

LOCATION: S.E. 440th St. Enumclaw, WA

PROJECT NUMBER: 92021, Task 3

DATE COMPLETED: 3/5/92

LOGGED BY: Chris Behrens

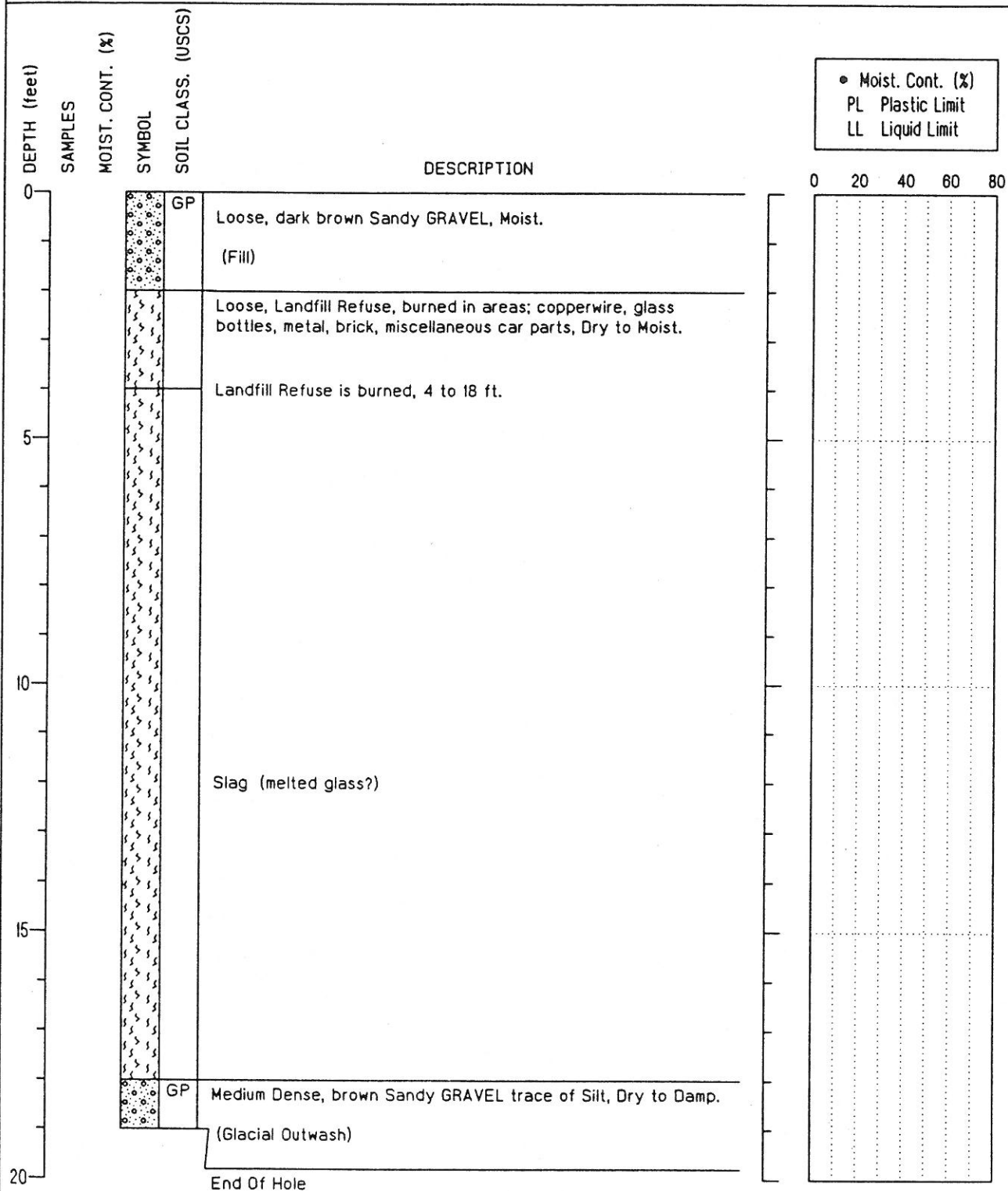
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: CAT-225, Track Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 19.0 Feet
SURFACE ELEVATION: 827 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-15

LOCATION: S.E. 440th St. Enumclaw, WA

PROJECT NUMBER: 92021, Task 3

DATE COMPLETED: 3/5/92

LOGGED BY: Chris Behrens

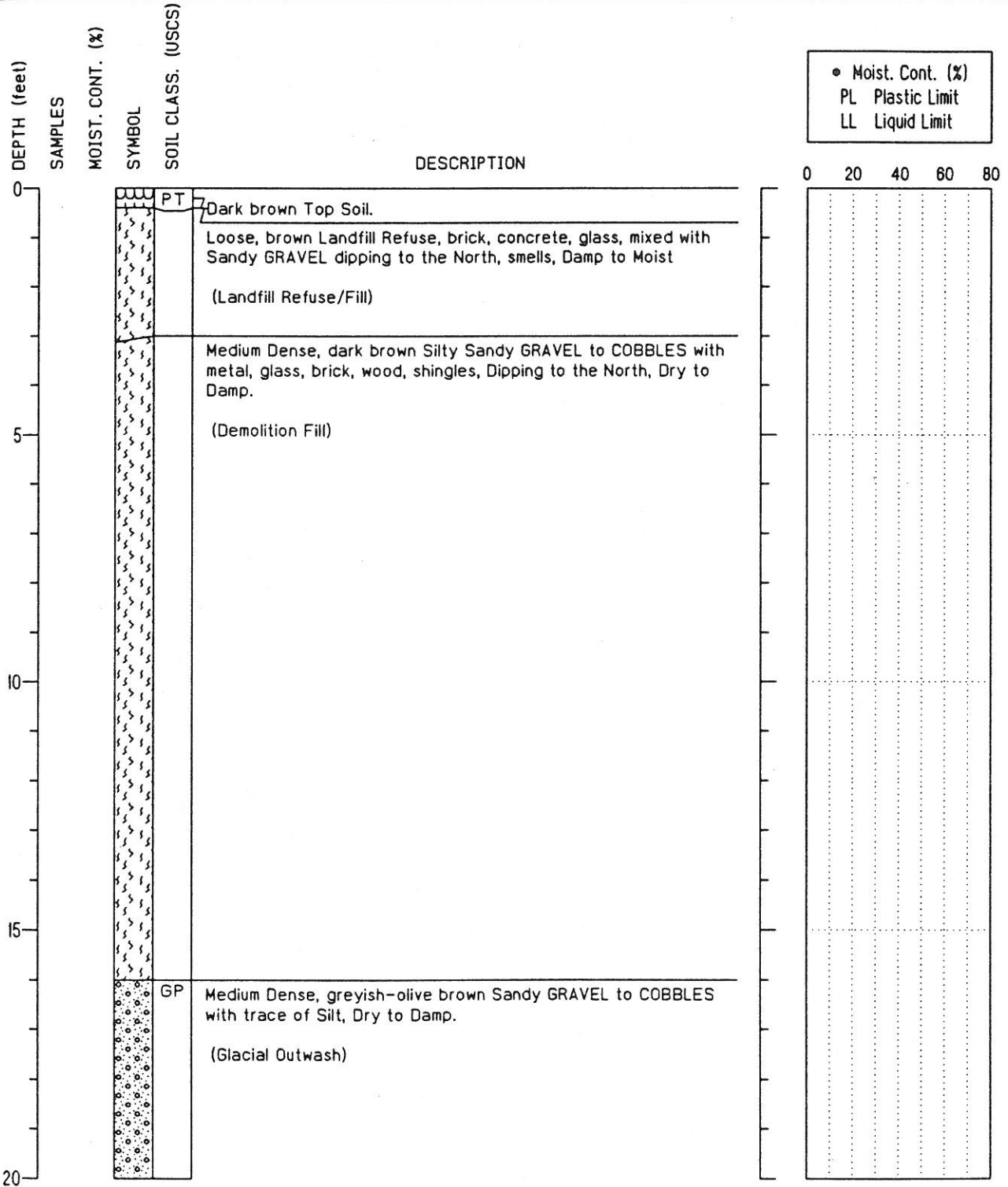
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: CAT-225, Track Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 20.0 Feet
SURFACE ELEVATION: 830 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-16

LOCATION: S.E. 440th St. Enumclaw, WA

PROJECT NUMBER: 92021, Task 3

DATE COMPLETED: 3/5/92

LOGGED BY: Chris Behrens

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HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: CAT-225, Track Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 14.0 Feet
SURFACE ELEVATION: 790 Feet

DEPTH (feet)	SAMPLES	MOIST. CONT. (%)	SYMBOL	SOIL CLASS. (USCS)	DESCRIPTION	Moist. Cont. (%) PL Plastic Limit LL Liquid Limit
0				GM	Very Loose to Loose, brown Sandy Silty GRAVEL with Cobbles, trees, roots, Moist. (Fill; composed of Outwash, and Soil)	0 20 40 60 80
5						
10					Very Loose to Loose, brown Sandy Silty GRAVEL with Cobbles, Damp to Moist. (Fill)	
15					Test Pit keeps caving in.	
20					End Of Hole	

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-17

LOCATION: S.E. 440th St. Enumclaw, WA

PROJECT NUMBER: 92021, Task 2

DATE COMPLETED: 3/5/92

LOGGED BY: Chris Behrens

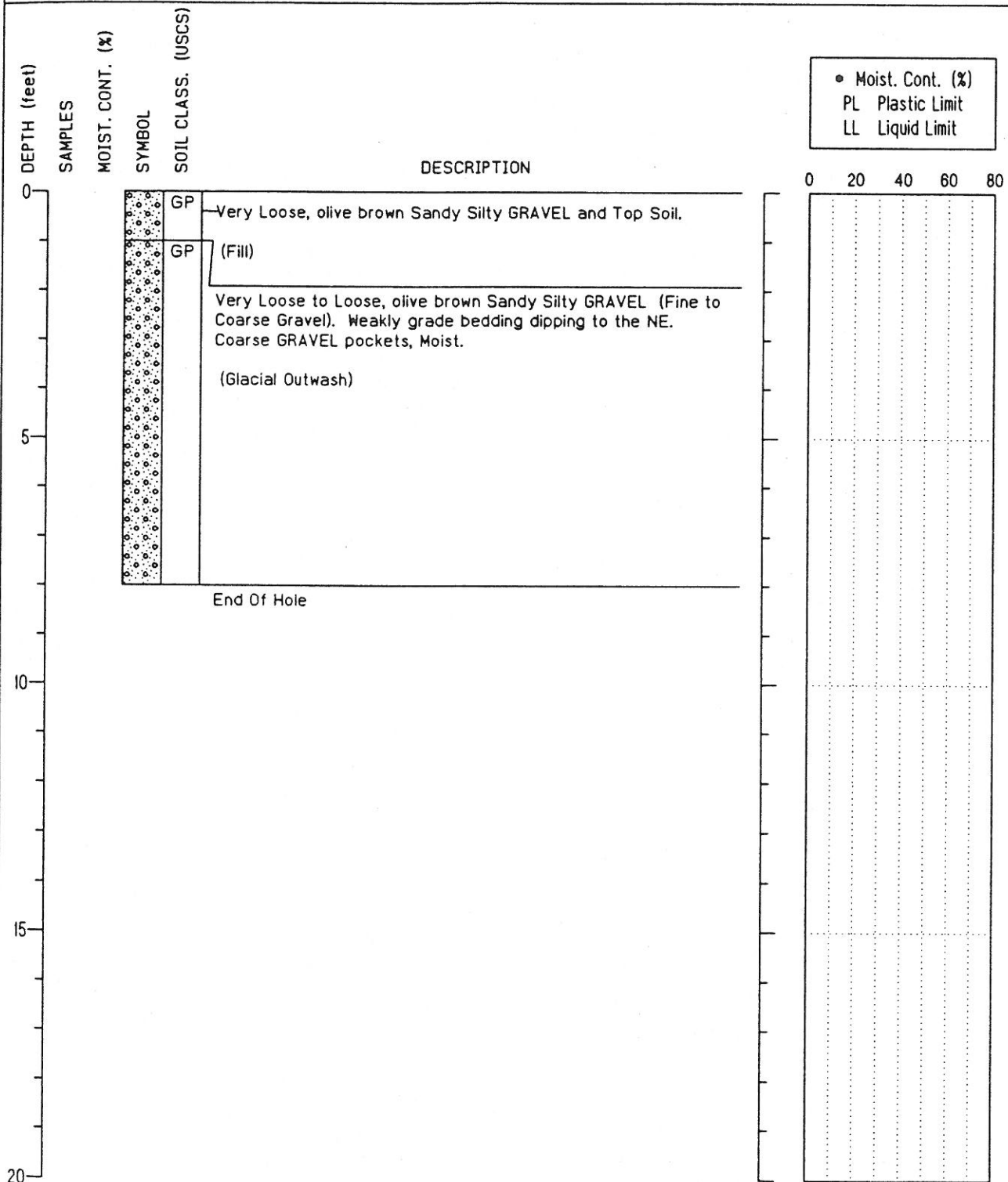
PAGE: 1 OF 1

HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: CAT-225, Track Backhoe
SAMPLING METHOD: Grab

TOTAL DEPTH: 8.0 Feet
SURFACE ELEVATION: 804 Feet



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-18

LOCATION: S.E. 440th St. Enumclaw, WA

PROJECT NUMBER: 92021, Task 2

DATE COMPLETED: 3/5/92

LOGGED BY: Chris Behrens

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HONG WEST & ASSOCIATES, INC.

TEST PIT LOG

EXCAVATION COMPANY: King County
EXCAVATION METHOD: Backhoe
SAMPLING METHOD: grab

TOTAL DEPTH: 16 Feet
SURFACE ELEVATION: 782 Feet

DEPTH (feet)	SAMPLES	MOIST. CONT. (%)	SYMBOL	SOIL CLASS. (USCS)	DESCRIPTION	Moist. Cont. (%) PL Plastic Limit LL Liquid Limit
0				GP	Very loose, olive brown Sandy GRAVEL with some silt. (Fill)	
5				GP	Medium dense, olive brown, Sandy GRAVEL (Fine to Coarse Gravel). Weakly to very strongly graded bedding dipping northerly. Pockets of coarse gravel to cobble sized material are visible at the base of each bed and the material grades finer upwards. (Glacial Outwash)	
10						
15						
20					End Of Hole	

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

TEST PIT: TP-19

LOCATION: S.E. 440th St., Enumclaw, WA

PROJECT NUMBER: 92021, Task 2

DATE COMPLETED: 8/5/92

LOGGED BY: SEG

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