APPENDIX A

Site Boring Logs (on CD)

BORING LOG

PROJECT King County Ground	Water Study - Enumclaw Page 1 of 2
Location North side	Boring No
Surface Elevation 818.39 ft.	Drilling Method Air Rotary
Total Depth85 ft.	Drilled By Unitas/Johnson
Date Completed 8/24/83	Logged By

WELL DETAILS	PENE- TRATION TIME/	DEPTH (FEET)	SA	MPLE	PERME- ABILITY	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
	RATE	(, 22, /	NO.	TYPE	TESTING			
	Sign (10	1 2	Bag		GM-MI SM-GM	0.0'-6.0' Gravelly sandy silt, tan, soft, saturated 6.0'-33.0' Gravelly silty sand, silty gravelly sand, dark grey, loose, well graded, with some cobbles,	•
	te.		3	**			wet.	
		20	4	н				
		. 3	5	"				
		30	6	71		GM	33.0'-38.0' Silty sandy	
x i ser			7	,,			gravel, dark grey, with some cobbles, wet to saturated.	DE .
Bentonite		40	8	.,		GM-MI SP	38.0'-42.0' Gravelly sandy silt, dark grey with some cobbles, wet to saturated.	
			9	"			42.0'-44.0' Sand, brown, fine to medium grained, poorly graded, with some	
	·	50	10	н		SW-GW	silt, damp. 44.0'-78.0' Gravelly sand, sandy gravel, brown, grey,	
			11	ti.			loose, well graded, dry to damp.	
Bentonite		60	12	**			•	
			13	"				
		70	14	"				

BORING LOG

PROJECT _ King County Ground Water Study - Enumclaw

Page 2 of 2

Boring No. MW-1

WI	ELL UETAILS	PENE - TRATION	DEPTH	SA	MPLE	PERME - ABILITY	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		TIME/ RATE	(FEET)	NO.	TYPE	TESTING			
el				15	Bag		SW-GW	0.	
Gravel			80	16	11		GM GW GM	78.0'-81.0' Silty sandy gravel, dark grey, loose, wet. 81.0'-83.0' Sandy gravel,	Temp.=
			90	17	es			grey, loose, coarse, water bearing (pumped 5 gpm) 83.0'-85.0' Silty sandy gravel, dark grey, loose, wet.	-
	. PVC screen,		100						:
	3" dia. 0.010" s		110						
			120						
			130						
			140					*	
51		1							

BORING LOG

PROJECT King County Ground Water Study - Enumclaw Page 1 of 1

Location West side Boring No. MW-2

Surface Elevation 796.51 ft. Drilling Method Air Rotary

Total Depth 65 ft. Drilled By Unitas/Johnson

Logged By CEWells

WELL DETAILS	PENE- TRATION TIME/	DEPTH (FEET)	SA	MPLE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
	RATE	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	NO.	TYPE	TESTING			
			7 1	Bag		SW-SP	0.0'-18.0' Sand, grey- brown, brown, medium to coarse, moderately well graded, loose, damp.	
		10	2	11		,		
			3	91				
riser		20	4	11		SW	18.0'-22.0' Gravelly sand, grey brown, medium to coarse, well graded sand, with 1/2"-3/4" gravel, some	
F. S.			5	н			silt, wet.	
Bentonite		30	6	"		SP-SM	31.0'-37.0' Sand, silty sand, brown, fine grained,	
$\otimes \otimes$			7	"			damp.	
	я	40	8	н		SW-SP	37.0'-62.0' Sand, dark grey, medium to coarse grained, moderately well graded, loose, damp to	
			9	PT			45 ft., saturated below 45 ft.	
2		50	10	**				
Sand Heav			11	#1			•	
ŭ J		60	12	н		SP-SM	62.0'-65.0' Sand, silty	
3" dia. PVC screen, 0.010"			13	**			sand, brown to grey-brown, fine to medium grained, moderately well graded, saturated.	EC=165
slots	}	70						

BORING LOG

Sweet, Edwards & Associates, Inc.

PROJECT King County Ground	Water Study - Enumclaw Page 1 of 2
LocationSoutheast corner	Boring No. MW-3
Surface Elevation 845.52 ft.	Drilling MethodAir Rotary
Total Depth 110 ft.	Drilled By Unitas/Johnson
Date Completed8/26/83	Logged By

WELL DETAILS	PENE- TRATION	DEPTH	SA	MPLE	PERME- ABILITY	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
WELL DETAILS	TIME/ RATE	(FEET)	NO.	TYPE	TESTING			
- X			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.	
$\otimes \otimes$		10	2	61				
			3	65		SW	13.0'-22.0' Sand, gravelly sand, grey brown, fine to coarse, well graded, with some cobbles, damp.	
		20	4	**			22.0'-28.0' Silty sandy gravel, brown, hard, wet.	
			5	н				25
		30	6	н		GW-Sw	28.0'-33.0' Gravelly sand, snady gravel, grey, hard, with some cobbles, dry.	
Bentonite			7	"		SW-SP	33.0'-42.0' Sand, dark brown, medium to coarse, moderately well graded, small amount of gravel to	
Bentch I.a. Pw		40	8	"		SW-SP	1/2" diameter, loose, damp. 42.0'-94.0' Sand, brown to dark brown, moderately	
	***		9	n			poorly graded to well graded, occasional gravel-	÷
		50	10	n			ly zones with gravel to 1/2" diameter, loose, damp.	
	X X		11	*				
	P	60	12	11			•8	
			13	**				
$ $ \otimes \otimes	Š	70	14					

BORING LOG

PROJECT King County Ground Water Study - Enumclaw Page 2 of 2

Boring No. MW-3

WELL DETAILS	PENE - TRATION TIME/	DEPTH (FEET)	SA	MPLE	PERME- ABILITY	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
	RATE	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	NO.	TYPE	TESTING			
riser			15	Bag	·		# (9)	
Bentonite		80	16	99		r:sw-sp	¥	
Ben 3 4	a .	90	17 18	11				
))	19	11		SP	94.0'-11.0' Sand, dark grey, poorly graded to	
Sand Heave		100	20	**			moderately poorly graded, loose, wet to saturated. Angular coal fragments occured below 107 ft.	
l's			21	,,				3-4 gpm
		110	22	***			_	T=11°C EC= 75
PVC screen,		120						
3" dia.		130						
		140					ā	
							a .	

BORING LOG

PROJECT ENUMCLAW LANDFILL

Page $\frac{1}{}$ of $\frac{2}{}$

Location North of Sonneson house

Surface Elevation Top PVC 771.65 ft.

Total Depth 95 feet

Date Completed 8/4/86

Boring No. MW-4

Drilling Method Air Rotary

Drilled By Johnson Drilling Co.

Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/	DEPTH (FEET)	s/	MPLE	PERME- ABILITY	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
	RATE	(PECI)	NO.	TYPE	TESTING			GUALITY
	d Slurry		- 5	Cutti	ngs	SW/GM	0-14' SILTY GRAVEL/SILTY SAND, dark yellowish brown, with fine sand, gravel, cobbles, and boulders, wet to moist,	∇
	Cement and Bentonite	_ 10	_10				saturated 10 ft.	
	Cer	_ 20	_15	01		SW	14-20' GRAVELLY SAND, dark olive gray, with some silt and sand, well graded, lost moisture at 18 feet.	
			-25	11		GW	20-51' SANDY GRAVEL, dark yellowish brown, little to no fines, medium to coarse	∇
80 PVC		- 30	-30				sand and gravel, well graded, saturated at 25 ft	
2" sch.	Heave		-35	11				
	Y PVC	- 40	-40	11			-Sand is fine to coarse color change to olive gray	EC = 180
	Slurr.	- 50	-45 -50					
	Bentonite		-55			GC	51-65' CLAYEY GRAVEL/ GRAVEL with clay lenses, olive gray.	
] 8	- 60	-60	"		CL	55-58' SILTY CLAY/ trace of sand and gravel, olive gray, lost water.	
	-Sand -2" sch.		-65	11		SP	58-95' SAND, dark yellowish brown to olive gray, trace of silt and clay,	
	 	70	-70	"			poorly graded, saturated.	EC = 105

BORING LOG

PROJECT ____ENUMCLAW LANDFILL

Page 2 of 2

Boring No. _MW-4

	_								
	WELL DETAILS	PENE - TRATION TIME/	DEPTH (FEET)	L	MPLE	PERME - ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		RATE		NO.	TYPE				
Bentonite		J	- 70	- 70	Cutti	ngs	:	58-95' See page 1 for description.	
-Bent		O" PVC		_ 75	11				
		Sand 3 0.010"	- 80	_80	Ħ		SP		
Heave-		slotted		-85	**			Coal chips appear less	
and		80	- 90	90				than 1/8" diameter.	
Sand		2" sch.							
	0	(7	100					Total depth 95 feet.	
	vesho	3	- 100		ē				
	th dri								
	casing with driveshoe-		-						
	steel								
	. 80								
			-						
								· ·	
	i							2.1	

BORING LOG

PROJECT _ ENUMCLAW LANDFILL

Page 1 of 1

Location Norht of Sonneson home.

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

Total Depth 35 feet

Date Completed 8/6/86

Boring No. MW-5

Drilling Method Air Rotary

Drilled By Johnson Drilling Co.

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

Date Comp	ieted _	0, 0, 00				Log	ged By G. S. Mack/E.M. Wes	
WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	NO.	TYPE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
***	rete-		-5	Cutti	ngs	SW/GW	0-8' GRAVELLY SAND/SANDY GRAVEL, dark yellowish brown, medium to coarse sand and gravel, well graded, moist.	
	Concret	- 10	-10 -15	90		GM/GW	8-20' SILTY GRAVEL, medium brown, boulders greater than 8 inch at top, increase silt at bottom.	¥
	Pellets Chips—	- 20	-20	48			Saturated at 10 feet, dry at 15 feet, and saturated at 20 feet. 25-35' SAND AND GRAVEL,	EC = 15
	. 80 PVC—Bentonite P Bentonite	20	- 25	11		GW/GP	numerous cobbles.	
	2" sch. 8 Ben Be		-30 -35	11				
Sand —		- 40				æ	2	
tted 0.010"		-						
80 slott								
2" sch.	<u>-</u>							

BORING LOG

PROJECT ENUMCIAW LANDFILL

Pag	e	of	2

Location Main gate, east side.

Surface Elevation Top PVC 838.16 ft.

Total Depth 125 feet

Date Completed 8/14/86

Boring No. MW-6

Drilling Method Air Rotary

Drilled By Johnson Drilling Co.

Logged By G. S. Mack

WELL D	ETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SA NO.	TYPE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		Slurry		- 5		ings	GW	0-15' SANDY GRAVEL, olive gray, some boulders, medium to coarse sand, well graded, dry.	
		Bentonite	10	-10	"				,
		Ben	- 20	-15 -20	31		sw	15-20' GRAVELLY SAND, dark olive gray, fine to medium sand, well graded, moist.	
		W.	20	_25	***			20-57' SANDY GRAVEL, medium gray, medium to coarse gravel with some cobbles, clay and silt	:
		ğ.	- 30	_30	111		GW/GM	layers, well graded, dry.	
	iser	drive shoe casing	ă	_35	20				
	PVC F	with 8" c	- 40	-40				٠	
	Sch.	casing '	- 50	_45 _50	"				
		steel o		_55	99			_ increase in fine material	
		Bentonite	- 60	-60	*		SM/GM	57-61' SILTY SAND, with gravel, olive gray, well graded, dry, gravel layer at base.	
		Ā		-65	**		SP/SW	61-125' See page 2 for description.	
	3 🛭		- 70	-70	**				22

BORING LOG

PROJECT ENUMCIAW LANDFILL

Page_2_ of_2_

Boring No. MW-6

				_			T		
	WELL DETAILS	PENE - TRATION TIME/	DEPTH (FEET)	<u> </u>	MPLE	PERME - ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		RATE		NO.	TYPE	IESTING			
al Heave		Heave) PVC casing	- 70	70 75	Cutti	ngs	SP/SW	61-125' SAND, dark yellowish brown, fine to medium sand with silt and some gravel layers, moderately poorly graded, slightly	
Natura		and H 010") de 8"	- 80	-80	**			damp. moisture in sand.	 _
		d d ir		– 85	11			Δ	
		s]	90	-90	17			- cuttings are wet.	
		Sch. enton		-95				- saturated.	EC = 120
		2 B	- 100	-10			s :0		
		Sand	- 110 ,,					fine to coarse sand.gravel appears in sand	
		П		-11				coal chips appear.	
		Heave —	120	-120					
		Natural	- 130					Total depth 125 feet.	
			-						

DESIGN COMPANY

Cold Engineering Planning Landscape Architecture

911 Western Avenue Suine 302 Seeme, WA 98104 Phone 206,223,0326

Principals: Maureen A. Kwolek, PE Pag Staehek, RLA Tom von Schrader, PE John W. Rundall, PE June 15, 1993

Mr. Bernard Breyen Scoccolo 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 onsite 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

welst

Doug Hartsock, EMCON Northwest

f:93002\scooc.le8

ONNER: Name ENUNCIAN LANOFILL - Address 28600	SE 440TH ST ENUMCIAN, WA 98022-
21 LOCATION OF WELL: County PIERCE) / // 6 (2a) STREET AUDRESS OF WELL for nearest address) 288010 SE ##OTH	- NW 1/4 SE 1/4 Sec 19 7 20 N., R 7E WM ST
(3) PROPOSED USE: MONITORING	(10) WELL LOG
(4) TYPE OF WORK: Owner's number of well MW-6A- (If more than one) 6A- MEN WELL Method: ROTARY	Formation: Describe by color, character, size of material and structure, and show thickness of adulfers and the kind
	and nature of the naterial in each stratus penetrated, with at least one entry for each change in formation.
Orilled 120 it. Openth of completed well 108 it.	MATERIAL FROM ; TO
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.	BROWN GRAVEL & SAND 47 60
Perforations: MO Type of perforator used S1/E of perforations in. by in. perforations from ft. to ft.	PROTECTIVE CASING EL 839-31 PVC CASING
Screens: YES Hanufacturer's Name Type PYC Diam. 2 slot size 10 from ft. to 108 ft. Diam. slot size from ft. to ft.	EI. 83791 EL 835.76
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? Method of sealing strata off (7) PUNP: Manufacturer's Name Type H.P.	BRANNOM HAYES PRILLING (206) 266-6110
tal Water Levels: Land-surface elevation 835:76	The of our 2 is
Static lavel 80 ft. below top of well Date 0749/93	To gee, por deel
Artesian water controlled by	TOP of PUC? Yee, por Seel Begans 11/22/93
	Nork started 07/08/93 Completes 07/09/93
19) WELL IESTS: Drawdown is amount water level is lowered below static level. Was a pump test made? NO. If yes, by whom? field: gal./min with ft. drawdown after hrs. Recovery data	WELL CONSTRUCTOR LEGITIFICATION: I constructed and/or accept resonability for construction of this well, and its compliance with all washington well construction standards. Materials used and the information reported above are true to by best knowledge and belief.
Time Water Level Time Water Level Time Water Level	NAME HAYES DRILLING, INC. (Person, fire, or corporation) (Type or print)
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 Leaperature of water Was a chemical analysis made? NO	ADDRESS 556 ERSHIG RD. 8DW, WA [SIGNED]
Dark Market Mark	3109
Post-It* brand fax transmittal memo 7671 ** of pages > 5	* ***

Dept.

Fax " 825 - 2521

BORING LOG

PROJECT _ ENUMCLAW LANDFILL

Page $\frac{1}{2}$ of $\frac{2}{2}$

Location On bench near north fence

Surface Elevation Top PVC 813.36 ft.

Total Depth 120 feet

Date Completed 8/22/86

Boring No. MW-7

Drilling Method Air Rotary

Drilled By Johnson Drilling Co.

Logged By G.S. Mack

						,			
WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SA NO.	TYPE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY	
	HATE		NO.	TYPE		GW	0-13' SANDY GRAVEL, tan, boulders to 6 inches,		
Ri ser	-		- 5	Cutti	ngs		trace of fines, well graded, dry.		
PVC PVC	Slurry—	- 10	-10	88	ı			2	
Signal Si			-15	11		SW	13-20" GRAVELLY SAND, medium gray, trace fines, fine to coarse, well		
* * * * * * * * * * * * * * * * * * * *	Bentonite	- 20	-20	91			graded, dry, charcoal or coal at 16 ft.		
			-25	n		SP	20-62' <u>SAND</u> , dark yellow- ish brown, gravel layers, generally poorly graded, coal pieces, 25-33' dark		
- A		- 30	-30	••			brown.		
٠.0 أ	S		-35				fine to coarse sand.		
\$ lotte	e Chips	:	-40				-fine to medium sand, dark brown.		
8	Bentonite		-45				,		
. ĕ &	ğ		-50 -55				Dark yellowish brown, damp.		
			-60	**					
	nd		-65	**	a•≀	SW	62-92' See page 2 for description.		
	Sand			11			-	$\overline{\nabla}$	

BORING LOG

PROJECT ENUMCIAW LANDFILL

Page_2_of_2_

Boring No. MW-7

WELL DETAILS	PENE - TRATION	DEPTH	SA	MPLE	PERME -	SYMBOL	LITHOLOGIC DESCRIPTION	WATER
	TIME/ RATE	(FEET)	NO.	TYPE	TESTING			QUALITY
************	1,	- 70	_70 _75	Cutti	ngs ·	SW	62-92' GRAVELLY SAND/SAND, with gravel layers, dark brown, medium to coarse sand, well graded, saturated at 70 ft.	
	Sand- Pea gravel	_ 80	_80	Ħ			:4	EC = 130
	Bentonite, I	90	_ 85 - 90	21		(B)		
			- 95	11		GP/GW	92-97' SANDY GRAVEL, dark yellowish brown, gravel to 2 inches, moderately	EC = 145
	pea gravel	- 100	-10		(poorly graded, saturated. 97-116' CLAYEY SAND, olive gray, with gravel or gravel layers and silt,	
	and	SC/GC little water flo						
	—Bentonite		-11	5 "		GP	- Gravel increases. 116-120' GRAVEL, olive gray, some clay and silt,	EC = 240
casing with driveshoe		- 120	-120) "			moderately poorly graded, wet. Total depth 120 feet.	
8" steel cas								

BORING LOG

PROJECTENUMCLAW LANDFILL	Page_1_ of 2
Location Gierke Top PVC	Boring No. MW-8
Surface Elevation 787.14 ft.	Drilling Method 5" ODEX
Total Depth 56 feet	Drilled By Kring Drilling
Date Completed	Logged By G.S. Mack

WELL DETAILS	PENE- TRATION TIME/	DEPTH (FEET)	ļ,	MPLE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
	RATE		NO.	TYPE		sw	0-5' SILTY SAND, yellow- ish brown, with some gravel, well graded.	
Envirogel ————————————————————————————————————		- 5	5	SS		SP	5-56' SAND, yellowish gray to olive gray, mottled, fine to medium sand, trace of silt, poorly graded, damp.	zi .
Bentonite Env		-10	10	SS				
2" Sch. 8		- 15	15	SS				
		- 20	20	SS				
Heave		25	25	SS			25 ft. charcoal or coal : - chips less than 1/4", - trace of gravel and silt.	
Sand He		- 30	29	SS				
		- 35	34	SS				

BORING LOG

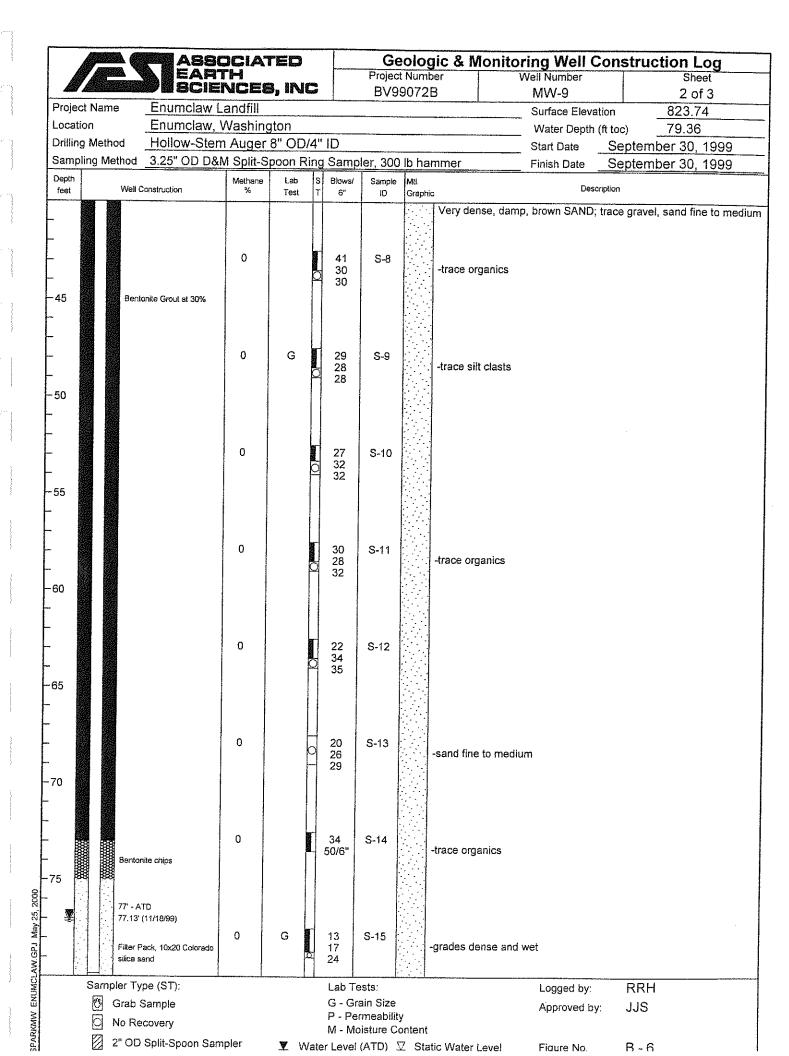
PROJECT __ENUMCLAW LANDFILL

Page 2 of 2

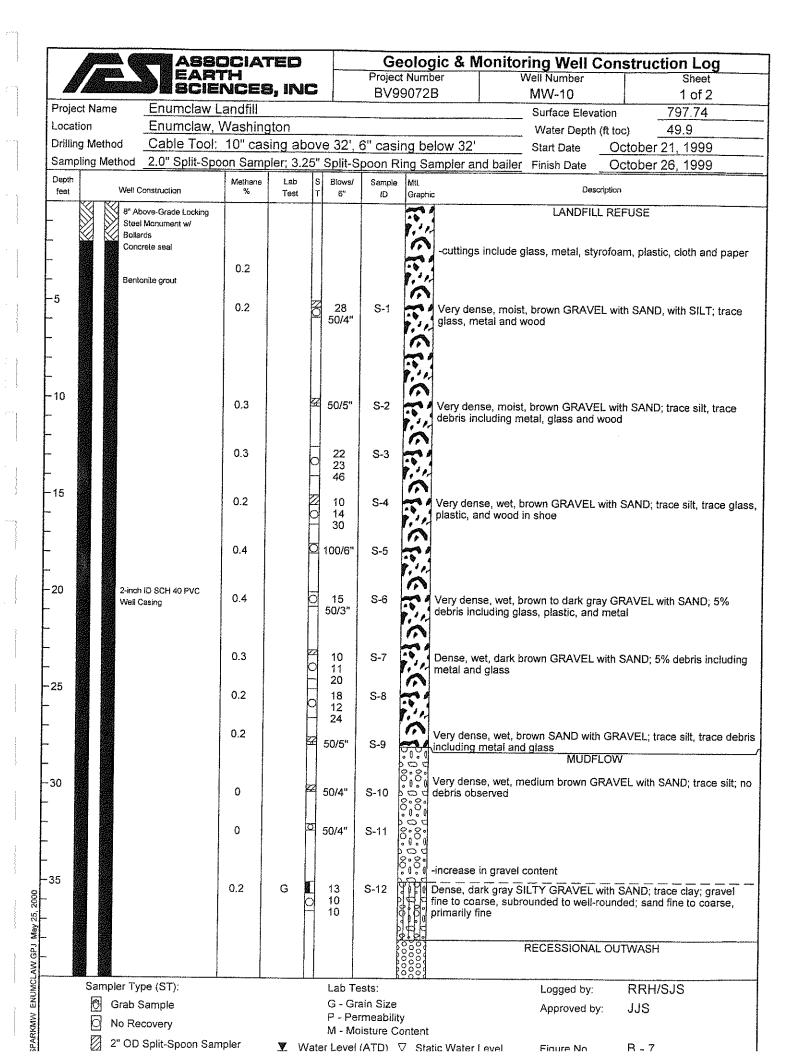
Boring No. __MW-8

WELL DETAILS	PENE - TRATION	DEPTH (FEET)	SA	MPLE	PERME - ABILITY	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
	TIME/ RATE	(, 221,	NO.	TYPE	TESTING			
Bentonite 7		-35			Č.		5-56' <u>SAND</u> , continued.	
Sand————————————————————————————————————		-4 0				SP	-42 ft. heaving sands.	
S.	3	-4 5						
PVC Screen		-50						
Sand Heave		-55						
2" Sch. 40 S.		-60						
: ::		-						

M.	ASE ASE	CIAT	red	-	(Geolog	gic & M	onitoring Well Cons	struction Log
		nces	, INC	-		ect Numl /99072	1	Well Number MW-9	Sheet 1 of 3
roject Na	me Enumclaw L	andfill	***************************************					Surface Elevation	823.74
cation	Enumclaw, \	Washing	ton					Water Depth (ft toc	79.36
iling Me	ethod <u>Hollow-Sten</u>	n Auger	8" OD/	4" ID					ptember 30, 1999
mpling	Method 3,25" OD D&I	VI Split-S	poon Ri	ing Sa	mpler, 3	00 lb ha	mmer		ptember 30, 1999
pth et	Well Construction	Methane %	Lab Test		ows/ Sam	. 1	io	Description	
M	8" Above-Grade Locking) GSI	╫	, 10		ğ	FILL	
	Steel Monument w/ Boltards Concrete Seal Bentonite chips	0						very gravelly and cobbly sier from 4 to 7 feet	
		C		M = 2	77 S-1	200 - 100 -	Very den	MUDFLOW se, moist, brown GRAVEL with	
		0		50	5 S-2	2 2			
	2-inch ID SCH 40 PVC	0	G		9 S-3	00-200-200-200	The state of the s		
	Well Casing	0		O 2 50	4 S-4 /5"	- 00 - 00 - 00 - 00 - 00 - 00 - 00 - 0			
					ł				
		0		2 2 2	5	j	Very dens	RECESSIONAL OU se, damp, brown SAND; trace र	
	Bentonile Grout at 30%	0		2 2 2 2	3		-sand fine	to coarse	
		0		20 22 25	3		-grades m	oist	
Sa	ampler Type (ST):				ab Tests:			Logged by:	RRH
6	Grab Sample				- Grain S			Approved by:	JJS
Ī					- Permea		•	•	
 27	2" OD Split-Spoon Sar	nnle+	-				t atic Water∃	Level Figure No.	B - 6



Project Name Location Drilling Methor Sampling Met		NCEE andfill Vashing	3, INI	C		Project BV99	Numb	er	V	Vell Number	Unstr	uction Log Sheet
Location Drilling Methor Sampling Methor Depth	Enumclaw La Enumclaw, V Hollow-Stem	andfill Vashing				P\/Q0	2020					
Location Drilling Methor Sampling Methor Depth	Enumclaw, V Hollow-Stem	Vashing				D 4 2 3	3U/ZI	3		MW-9		3 of 3
Drilling Methor Sampling Met	Hollow-Stem									Surface Elevat	ion	823.74
Sampling Met		Augor	gton						·	Water Depth (79.36
Depth		Auger		/4"	ID		**************	***************************************		Start Date		mber 30, 1999
Depth						ler. 300	lb hai	mmer		Finish Date	***************************************	mber 30, 1999
		Methane	Lab	s	Blows/	Sample	Mil.					30, 1000
	Well Construction	%	Test	Т	6"	ID	Graphic	c		Descr	iption	
85	Filter Pack, 10x20 Colorado silica sand Well Screen 2" ID SCH 40 PVC, 0.01" slot size	0	o		10 27 28	S-16 S-17		-grades v			Ce grave	l, sand fine to mediun
90	Threaded end cap, 2" ID SCH 40 PVC				25 29							
95		0						Bottom of of 90 feet.	boring a	t 90.1 ft. depth.	Monitori	ng well installed to de
110	na projektivo di											
						and the state of t						
115	The second secon			***************************************								
												7
Sampl	er Type (ST):			Щ	Lab Te	ests:				Logged by:	RF	RH
	orab Sample lo Recovery				P - Pe	ain Size rmeabilit pisture C				Approved by		



	ASSC PARK	CIAT	red		Ge	olog	gic & M			onst	ruction Log	
	EART SCIE		e inic		Projec		I	V	Vell Number		Sheet	
			2) 21 A#		BV9	9072	Б		MW-10		2 of 2	
ject Nam									Surface Eleva		797.74	
tion	Enumclaw, V				OL OIL .				Water Depth	-	49.9	
ing Meth									Start Date		ber 21, 1999	
pling Me	ethod 2.0" Split-Spo	on Samp	oler; 3.2	<u>5" Sp</u>	it-Spoon R	ing Sa	ampler and	d bailer	Finish Date	<u>Octo</u>	ber 26, 1999	
***************************************	Well Construction	Methane %	Lab Test	1 1	ows/ Sample 6" ID	Mtt. Graphi	ic		Desc	cription		
	Hydrated bentonite chips	0.1			.5 0.40	0000						
					55 S-13	0000	d q					
					2	0000	gravel ar	nd cobble	content increa	sing; ha	rder drilling	
		0.4				1000	decrease -	e in fines	; clearer bail wa	ater		
8					1	1000	d				1.4	
18	₿			***************************************		3000	4					
						3000	d					
	47' - ATD	0.1			5 S-14 /2"	1000	9				i di	
	47.54' (11/18/99)			"	"	1000	-increase	in sand	content; little fin	ies	· · · · · · · · · · · · · · · · · · ·	
		0.1				8000					•	
						1000	ð					
		0		Marci	0 S-15	1000	Vanidana		20 AV/EL / favor a			
88		Ů			0 S-15	1000	subround	se, gray (ed to wel	JRAVEL, IEW S Il-rounded, prim	anu, gra ariiv ma	avel fine to coarse, clas afic lithologies; sand fine	(S e to
					0	000	coarse, p	rimarily n	nedium to coan	se .		
		-Wandard				8000	ą Į				v.Ž	
7.	≱ † .					000	-slight inc	rease in	fines			
						000					1	
1	Filter Pack, 10x20 Colorado	}		Ц		000	<u> </u>				•	
4	silica sand	0.1			5 S-16	3000	4				\mathcal{J}_{i}	
3.					5	1000	d d					
]		0				1000	g -slight inc. g areine is -	rease in : -50% ma	nnes, sand and ific, 30% quartz	tine gra	ivel; mineralogy of sand	1
	Well screen 2" ID SCH 40					620	1					
	PVC, 0.01" slot size						Dense, lig	iht gray S	SAND; little silt;	sand fin	e to medium, very	
			_		0 0 47	ļ: ···	angular to	subroun	ided; no beddin	g		
<u> </u>		0	G	1							27	
=	-]			1							- 13 13	
-												
Ξ.		0									·	
=						i						
	Threaded end cap, 2" ID SCH 40 PVC						grades ve	ery dense	e, few silt			
Q Y	¥I	0	G	1	7 S-18	: · · ·	-few grave	-				
200	Slough Backfill			2	5	-						
							Bottom of	boring a	t 66.5 ft. depth.		and the second	
											temporarily installed	
					-		through th	ie landfill	debris to a dep	th of 32	feet. Bentonite grout	
	******						to complet	niea in 11. te the bo	J-Inch casing ar ring to 66.5 fee	nnulus. t Monit	A 6-inch casing was us oring well installed to	ea
							depth of 6		g to 00.0 100	t. MOIII	oning non motalied to	
		İ										
	A second											
	and the same of th											
			ļ									
		!	***									
		Photometer (
0	plar Type (CT):				ab Tasta				نالدحجم]	1	RRH/SJS	
	pler Type (ST):				ab Tests:	,			Logged by:			
<u>"</u>	Grab Sample				- Grain Size - Permeabil				Approved t	by: •	JJS	
0	No Recovery				- Permeaun I - Moisture (-	t					
	2" OD Split-Spoon San	npler	<u>▼</u> ∨	Vater L	evel (ATD)	∑ St	atic Water I	Level	Figure No.	[3 - 7	

BORING LOG

PHOSECI ZHOREZHA MARKET 122	Paye Of
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)	S/	TYPE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
WELL DETAILS	25' of Auger twisted off Bentonite Slurry BULLAN TWENTY BULL TANKED TO STANKED TO STANKE		NO.	TYPE Soil ""	ABILITY TESTING	SYMBOL	0-4' SANDY GRAVEL, cover material. 4-20' REFUSE, mixed with sandy gravel, metal, glass, ash, wood products, little organic material. 20-55' SANDY GRAVEL, grayish brown with silt and boulders, well graded, dry.	QUALITY
<i>9999999</i>	Heave	- 60 - 70						

BORING LOG

PROJECT _ENUMCLAW LANDFILL	Page <u>1</u> of <u>1</u>
Location Lower level of trees	Boring No. RP-2
Surface Elevation NA	Drilling Method 4" Hollow Stem Auger
Total Depth 7 feet	Drilled By Kring Drilling Co.
Date Completed 6/20/86	Logged By G.S. Mack

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

BORING LOG

PROJECT ENUMCIAW LANDFILL

Page 1 of 1

Location Western section in trees.

Top PVC 814.64 ft

Surface Elevation 814.33 ft.

Drilling Method 4" Hollow Stem Auger

Total Depth 38.5 feet

Drilled By Kring Drilling Co.

Date Completed 7/1/86

Logged By G.S. Mack

Boring No. RP-3

≧ Date Comp	etea _	//1/86			Logged By G.S. Mack			
WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SA NO.	MPLE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
1	Traction Sand— 13" slotted 0.020" PVC — Bentonite Chips — Bentonite Pellets — Concrete—	- 10 - 20 - 30 - 40	17. 22. 27. 32.	5 "		GW	O-1.4' SANDY GRAVEL, with boulders, cover. 1.4-29' REFUSE, corroded metal, burnt paper, wood fragments, little organic material. 29-38.5' SANDY GRAVEL, medium brown with silt, moist. Total Depth 38.5 feet.	

BORING LOG

PROJECT ENUMCLAW LANDFILL

Page $\frac{1}{}$ of $\frac{1}{}$

Location Near East side fence.
Top PVC 857.92 ft.

Surface Elevation 857.17 ft.

Total Depth 38.5 feet

Date Completed 7/2/86

Boring No. RP-4

Drilling Method 4" Hollow Stem Auger

Drilled By Kring Drilling Co.

Logged By G.S. Mack

Congrete	WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SA NO.	AMPLE TYPE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
3/4" PVC Riser————————————————————————————————————	PVC	Traction Sand—— Bentonite Chips 3/4" PVC Riser— Bentonite Pellets—	- 10 - 20 - 30	23.	5 Ref 5 Soi 5 "		SP/SW CL SW	0-2.2' GRAVELLY SAND, with some silt and boulders, medium sand, cover. 2.2-25' REFUSE, metal, old tires, glass, wood, organic material. 25-30' SAND, gray with reddish brown streaks, occasional gravel and silt. 30-31' SILTY CLAY, with gravel, grayish brown. 30-38.5' GRAVELLY SAND, medium gray with streaks of orangish brown and black, with silt, well graded. Total Depth 38.5'.	

BORING LOG

PROJECT _ ENUMCLAW LANDFILL

Page $\underline{1}$ of $\underline{1}$

Location Central upper plateau

Top PVC 857.92 ft.

Surface Elevation 857.17 ft.

Total Depth 42 feet

Date Completed 7/7/86

Boring No. RP-5

Drilling Method 4" HOllow Stem Auger

Drilled By Kring Drilling Co.

Logged By G.S. Mack

WELL DETAI	LS PENE	ON DEPTH	s	AMPLE	PERME- ABILITY	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
3/4" 0.020" slot PVC-7	Le TRATI	ON DEPTH	NO.	TYPE		SYMBOL	0-0.8' SANDY GRAVEL WITH SILT, cover material. 0.8-42' REFUSE, glass, plastic, metal, wood products, organic material.	WATER QUALITY
3/4" PVC Riser—3/40" slot PVC PVC Riser—3/400" slot PVC	Traction Sand————————————————————————————————————	_ 30 _ 40 _ 50	1	Refus			Total Depth 42 feet Auger hit refusal. Abandoned April 1987 by removing casings and tremie backfill w/cement grout.	
14" 0.020"		-						

BORING LOG

PROJECTENUMCLAW LANDF	ILL Page 1 of 2
Location On north fence line	Boring No. G-6
Top PVC Surface Elevation819.90, 820.09, 820.	
Total Depth 40 feet	Drilled ByKring Drilling
Date Completed1-14-87	Logged By G.S. Mack

	Date Comp	oleted _	1-14-	87			Log	ged By G.S. Mack	
3 Sand	WELL DETAILS	PENE- TRATION TIME/	DEPTH (FEET)	S	AMPLE	PERME - ABILITY	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
and		RATE	(, , , ,	NO.	TYPE	TESTING			MOALITY
ogel								0-2' <u>FILL</u> .	
d Envirogel		. 40 PVC Risers-	- 5				SM	2-9' SILTY SAND, medium yellowish brown, fine to coarse sand, some gravel well graded, moist.	
Slurry r-Sand		3/4" Sch.	- 10	,			SM	9-18' SILTY SAND, light olive gray to dark blueish gray, very fine to fine sand, some gravel, moderately well graded,	
-Bentonite			- 15					moderately well graded,	
YSand		80 PVC Screen-	· 20				SW	18-40' GRAVELLY SAND, light olive gray to olive gray, fine to coarse sand, trace of silt, wet to 35 ft., damp 35 ft. to 40 ft.	
Bentonite Slurry		Slotted Sch.	25						
Sand		3/4"	35						

BORING LOG

PROJECT __ENUMCLAW LANDFILL

____ Page 2 of 2

Boring No. __G-6

			,			1		
WELL DETAILS	PENE - TRATION TIME/ RATE	DEPTH (FEET)	S/ NO.	TYPE	PERME - ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
-	Sand —	-35				SW	18-40' GRAVELLY SAND, continued.	
	Sa	-4 0						
		-4 5						
,		-50						
		_						
		-			e e			
		-						9

BORING LOG

CA	Sweet, Edw	erds & Associates, Inc.
C	PROJECT_	ENUMCLAW LANDFILL

____ Page $\frac{1}{}$ of $\frac{2}{}$

Location North fence line Boring No. G-7

Top PVC

Surface Elevation 820.89, 820.97.821.05 ft.Drilling Method 5" ODEX

Total Depth 40 feet Drilled By Kring Drilling

Date Completed 1-15-87 Logged By G.S. Mack

Concrete	WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	SA NO.	TYPE	PERME - ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
Ų.		\nearrow						0-3' <u>FILL</u> , gravel, sand, wood chips.	
Slurry		Sand . 40 PVC Risers	- 5				SM	3-21' SILTY SAND, dark yellowish brown to yellowish brown, fine sand, some gravel in places, trace of clay, moist.	
Bentonite S		3/4" Sch.	- 10	4					
d		PVC Screen_	- 15						
/Sand		Sch. 80 P	- 20					21 401 97771 9777 21444	
rBentonite Slurry		3/4" Slotted	- 25				SW	21-40' SILTY SAND, olive gray to dark olive gray, fine to medium sand, some gravel, trace of clay, less gravel at depth, moist.	
Sand			- 30			à			
Sa			35						

BORING LOG

PROJECT __ENUMCLAW LANDFILL

Page $\frac{2}{}$ of $\frac{2}{}$

Boring No. G-7

WELL DETAILS	PENE - TRATION TIME/ RATE	DEPTH (FEET)	<u> </u>	AMPLE TYPE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
-	Sand—	-35				SW	21-40' SILTY SAND, continued.	
		-40						
		-4 5					ı	
		-						
8		-						

BORING LOG

	save comp						Log	ged By G.S. Mack	
	WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)	S/ NO.	TYPE	PERME- ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
Sand		→						0-2' <u>FILL</u> .	
Bentonite and		PVC Risers	- 5				SP	2-12' SILTY SAND, dark yellowish brown, fine sand with some gravel, trace of clay, well graded, wet.	
		_	- 10						
Bentonite Slurry		3/4" 5	- 15				GP	12-40' GRAVEL, light olive gray to light blueish gray, some boulders, trace of silt and clay.	
Bent Bent		PVC Screen	- 20						
onite Slurry		80 Slotted	25			ö			3:
-Bentonite		3/4" Sch.	30					8	
Sand		<u> </u>	35					36 ft. increasing in silt.	

BORING LOG

PROJECT ENUMCIAW LANDFILL

Page_2_of_2

Boring No. ___G-8

WELL DETAILS	PENE - TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE NO. TYPE		PERME - ABILITY TESTING	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		- 35					12-40' GRAVEL, continued.	
						GP		
]				GP	51	
	Sand-							
	Sa	-40						
		-45						
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BORING LOG

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 TIME! (FEET)		SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER OUALITY			
		RATE		NO.	TYPE	COOKI					
Manual and Associated Street Communication of the C			- 5	Grand.	SPT	6/6/5	Sm	0-13 <u>SILTY SAND</u> , light olive grey to moderate brown, with some gravel, well graded, moist.			
e Chips		ted PVC Gas Probe-									
Bentonite		Slotted Inch Gae	-10	2	SPT	5/6/7					
Ber		Inch 1/2						-12' increase in gravel			
		18	-15	3	SPT	3/4/5		13-31 <u>SILTY SAND</u> , medium grey to greenish grey to olive grey, sand is medium to fine, well graded occasional gravel, boulders.			
والإرادارة والمحاددة والمحاددة والمحادثة والمحادثة والمحادثة والمحادثة والمحادثة والمحادثة والمحادثة والمحادثة		Gravel —	⁻ 20	4	SPT	3/4/24	SM				
		Pea	⁻ 25	5	SPT	13/18/ 13		·			
0000000		Chips .—	-30	6	SPT	50 for 6"		Boulders to several feet diameter.			
	Total Depth = 31 feet	Bentonite	.35					SPT = Standard Penetration Test			

Sweet, Edwards & Associates, Inc. BORING LOG 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 PENE-TRATION SAMPLE DEPTH BLOW WELL DETAILS SYMBOL WATER TIME! (FEET) UTHOLOGIC DESCRIPTION COUNT QUALITY RATE NO. TYPE 0-7 <u>FILL</u>, sandy gravel with trace of silt, moderate yellowish brown, dry wood chips. 26/14/ SS 5 7-18 SANDY GRAVEL, moderate yellowish brown. SS light olive grey when sat-4/6/9 - 10 urated, coarse sand, trace silt, gravel to sev-년 8 8 eral inches, boulders to GW several feet, well graded. SS 45 for Perched 15

SS

SS

SS

SS

5

6

7

20

25

30

35

8/8/9

9/16/

12/17/

16

21

SP/GW

GW

SW

SEA-300-02a

18-22 SAND/SANDY GRAVEL,

moderate yellowish brown

fine to coarse sand inter-

bed with layers of gravel and sand, poor to well

22-27 SANDY GRAVEL, mottl-

olive grey, fine to coarse sand, gravel subangular to subrounded, well grad-

27-37 GRAVELLY SAND, olive grey, fine to coarse sand, gravel subangular to subrounded, well graded.

ed light grey to moderate yellowish brown to light

graded, moist.

ed, moist.

moist.

BORING LOG



PROJECT __Enumclaw Landfill

Page 2_ of ^_

Boring No. G - 10

		Boring No. 4 - 10							
	WELL DETAILS	PENE - TRATION TIME/ RATE	DEPTH (FEET)	SAMPLE		BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER QUALITY
		RATE		NO.	TYPE	COOMI			ACATILI
Gravel			- 35				SW	GRAVELLY SAND - Description above.	
60 C-						00/47/		37-75 SANDY GRAVEL, yellow ish grey to light olive	
diminitary and the designation of the second		Probe-	- 40	8	SS	32/17/ 7		grey, weathered, sand is fine with some coarse, gravel is subangular to rounded up to 0.3-inches. Dry, well	
		Gas Pr	The state of the s						Magnado (Firefilm aguarida sententes)
		Juch	- 45	9	SS	50 for 6"		graded. - 45 feet boulders	ne girinda and an an an an an an an an an an an an an
Chips	, , , , , , ,	1/2		10	SS	50 for		vo rece bourders	
9			- 50		<i>-</i> 22	6"			
Bentonite			•				GW		gaffin werg filter ann gyf dei ar an gyf ar ar an gyf ar ar an gyf ar ar an gyf ar ar an gyf ar ar ar an gyf a
Be		pd PVC	- 55	11	SS	50 for 6"			
		ch Slotted							
Indigane middle mywegonau		8 fnch	- 60	12	SS	50 for 6"			
		in construction of the con				novelebile annual promote prom			ones (Charles in 1886 in 1884 prins general Charles
			65	13	SS	50 for 6"	on the second se		STATE OF THE PROPERTY AND THE PROPERTY A
									- Secund physical physical control physi
		Gravel-	70	14	SS	50 for 5"			ALL POPULATION CONTROL TO THE PARTY OF THE P
		25			٠	2 Section of the sect	n de la constante de la consta		Tare Vision
		Ž	The state of the s						

BORING LOG

PROJECT __Enumclaw Landfill

Page 3 of 3

Boring No. G - 10

	PENE -		@ 6	MPLE				
WELL DETAILS	TRATION TIME/ RATE	DEPTH (FEET)	HO.		BLOW COUNT	Symbol .	LITHOLOGIC DESCRIPTION	WATER QUALITY
	TO THE THE THE THE THE THE THE THE THE THE	- [:] 70					SANDY GRAVEL cont.	
						GW		
	Gravel-		15	SS	9/37/		·	
Total Depth =	9 1				40		SS = Split Spoon Sample driven with Jar Hammer.	
75 feet	Pea							•
		-						
					-			
		'a			·	-		
		-						-
						•	•	•
								•
					-			
				CHI DA LI PARTE DE LA CONTRACTOR DE LA C	•			
		Sales Sales and Advanced Sales						
The second secon								
		<u> </u>			l l			

BORING LOG

PROJECT Enumclaw Landfill

Page 1 of

Location South side south of road

Boring No. G - 11

Surface Elevation____

Drilling Method 8 inch Air Rotary

Total Depth 80 feet

Drilled By _Tacoma Pump and Drill

Logged By G.S. Mack

Date Completed 12/3/87

Cas P	WELL DETAILS	PENE- TRATION TIME/	DEPTH (FEET)	<u></u>	AMPLE	BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER OUALITY
F-1/2 inch		Bentonite Chips	-5	NO.	TYPE Cutti		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	Cutti	ng			
		Slotted PVC	- 15	3	Cutti	ng		12-43 SANDY GRAVEL, moderate yellowish brown to medium grey with some boulders and cobbles, trace of silt, well graded, dry.	
		8 inch Slot	- 20	***************************************	Cutti	ng	AND THE REAL PROPERTY AND AND AND AND AND AND AND AND AND AND		
nite Chips		1	· 25 _	5	Cutti	ng	GW		
Bentoni		Pea Gravel	· 30	6	Cutti	ng			
			35	7	Cuttin	ng			

BORING LOG

PROJECT Enumclaw Landfill

Page $\frac{2}{}$ of $\frac{3}{}$

Boring No. G - 11

	WELL DETAILS	PENE - TRATION TIME / RATE	DEPTH (FEET)	SA NO.	TYPE	BLOW COUNT	Symbol	LITHOLOGIC DESCRIPTION	WATER OUALITY
			- 35	7	Cutti	ng		12-43 <u>SANDY GRAVEL</u> , cont.	
							GW		
		1 Gravel	- 40	8	Cutti	ng			
h Gas Probe		Pea	- 45	9	Cutti	ng		43-80 <u>SAND</u> , moderate yel- lowish brown, fine to med- ium sand, with some gravel, moderately poorly graded.	•
1/2 inch		S	- 50	10	Cuttir	ig	SP		
		Bentonite Chips	- 55	comity comity	Cuttir	g			
Slotted PVC -		Вел	-60	12	Cuttir	g ·		- little gravel	-
18 fuch S1			-65	13	Cuttir	g			
		Pea Gravel	- 70	14	Cuttir	g			

BORING LOG

PROJECT __Enumclaw Landfill

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Boring No. G - 11

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

G12 missing

pecific Location rilling Method Depth Elevation Method 5 - 770 10 - 765 - 15 - 760 15 - 760 17 - 760 18 - 760	Enumon Enumon Aumai	ARTH CIENCES, INC Inclaw Landfill Inclaw, Washington In Residence E B-61 Hollow-Stem A	Project Number BV99072B	Well Number GP-13 Surface Eleva Water Depth	Sheet 1 of 1 ation (ft) 775		
teographic Location pecific Location pecific Location rilling Method Depth Elevation feet	Enumon Enumon Aumai Mobile	iclaw Landfill iclaw, Washington in Residence	Bv990/2B	Surface Eleva			
teographic Location pecific Location pecific Location rilling Method Depth Elevation feet	Aumai Mobile	iclaw, Washington in Residence			ition (ft) <u>775</u>		
pecific Location rilling Method Depth Elevation Method 5 - 770 10 - 765 - 15 - 760 15 - 760 17 - 760 18 - 760	Aumai Mobile	ın Residence		Water Denth			
rilling Method Depth Elevation feet	Mobile Methane	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					
Depth Elevation Meret	Methane	<u>e B-61 Hollow-Stem A</u>		Start Date	September 28, 1999		
feet feet			uger, 4" ID, 6" OD	Finish Date	September 28, 1999		
10 - 765		Prob	e Decommissioning Construction	t	Remarks		
-	0 0	Hydrated Benton Bentonite Slurry	nite Chips (20% Solids by Weight)				
F 1,	0.1			,			
	0.1			Address			
	DAMES SALES				C IC		
Completion Ma	14-1 1		Static Water Level	Logged by:			
Native So			▼ Water Level (ATD)	Approved b	oy: JJS		

BORING LOG

SHOTECL SHRINGTEN PRINCIPLE	Page 1 of 1
Location Northeast of Sonneson's House	Boring No. G - 13 4-1/4 inch Hollow S
Surface Elevation	Drilling Method Auger
Total Depth 25 feet	Drilled By Tacoma Pump & Drilling
Date Completed November 9, 1987	Logged By G.S. Mack

						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	rog	ged by G.S. Mack	
Cement	WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)		AMPLE	BLOW COUNT	JOBMYZ	LITHOLOGIC DESCRIPTION	WATER QUALITY
Ī		HAIL		NO.	TYPE				
Chlps		7	- 5			·		0-26 SANDY GRAVEL, moderate yellowish brown. Coarse to fine sand, trace of silt, gravel is subangular to subrounded,	
ن نيد		d PVC Probe	-	1	no sar	ple		moist, very well graded.	
Bentoni		otte Gas							
		ich Sl Inch	10				6W		
		inch 72 in					Un	A.	1
		8 -			-				
				2	DM				
			- 15						
		7							
]	- 20					430	1
		Grave		3	DM			200 200) 1
		I					Ì		į
		Pea							·
			-25	4	nu nu				_ ▽
	Total Depth = 25 feet			4	MO			DM = Split Core Barrel Sample using Standard Hammer.	and the second s
of Tables Consults			20			1			. ;
1		<u> </u>	30						
	77		<u>}</u> .					J	
-							į	- Annual Property of the Control of	i i
Produces		ļ			ļ				
à.							j		

		ASS	DCIATED	Probe	Decommissioni	ng Diagram
		EAR	TH NCES, INC	Project Number	Well Number	Sheet
			-	BV99072B	GP-14	1 of 1
Project Nar		Enumclav			Surface Elev	
		Gierke Re	v, Washington		Water Depti	
Specific Lo		**		was All ID Oll OD	Start Date	September 28, 1999
Drilling Met	1	ethane	61 Hollow-Stem A	uger, 4" (D, 6" OD	Finish Date	September 28, 1999
feet	feet	% EACO	Probe ∑⊖1 Native Soil	e Decommissioning Construction	on	Remarks
5 - 5	785	0	Hydrated Benton	iite Chips		Water level from grade based measured depth to water from TOC and estimated casing stickup on day of decommissioning.
15	770	0				
25	760	o ♀	26.9' (9/28/99)			
30	755		Bentonite Slurry (20% Solids by Weight)		
35	750	0				
40	745).4				
Cor	npletion M	aterial:	DARFORM ST.	7 Chatia William 2	Logged by	: SJS
图	Native S			Static Water Level Water Level (ATD)	Approved	
	Bentonite			- FIGURE MOYOR (FEED)	F-F	
		Slurry				

BORING LOC

Location A	ROJEC					·	Page 1 of	2
						_ Bo	oring No. G - 14 4-1/4 inch Hollow Filling Method Stem Auger	
Surface El						_ Dr	rilling Method Stem Auger	-
Total Dept					+ (LONG)	_ Dr	Illed By Tacoma Pump & Drilling	
Date Comp	leted.	Novemb	er	5 <u>. 198</u>	37		gged By G.S. Mack	
WELL DETAILS	PENE- TRATION TIME/ RATE	DEPTH (FEET)		AMPLE TYPE	BLCW COUNT	SYMBO	OL LITHOLOGIC DESCRIPTION WATER	
Fruit Sand	1/2 Inch Gas Probe	- 5 - 10	1 2	DM .DM		\$P	0-1 SOIL, moderate yel- lowish brown, organic material. 1-20 SAND, olive grey to moderate yellowish brown, medium to fine sand, laminated light and dark minerals, poorly graded, dry.	
18 inch Slotted PVC	A Company		5 [DM DM		SP	20-40 SAND, olive grey, to moderate yellowish brown, fine to medium sand, trace of coarse sand and gravel, coal chips.	AMERICAN AND AND AND AND AND AND AND AND AND A

BORING LOG

PROJECT Enumclaw Landfill	Page 1 of 2
Location North Fence Line	Boring No. <u>G - 15</u>
Surface Elevation	Drilling Method 5 inch ODEX
Total Depth 60 feet	Drilled By Kring Drilling
Date Completed November 19,1987	Logged By G.S. Mack

,							e-03	ged by <u>G.S. Mack</u>	
	WELL DETAILS	PENE- TRATION TIME/	DEPTH (FEET)	-	MPLE (BLOW COUNT	SYMBOL	LITHOLOGIC DESCRIPTION	WATER OUALITY
	XXXX IXI KXXX	RATE		NO.	TYPE				
Bentonite Slurry		inch Gas Probe ──	. 5					See G - 9 for Geology	
		1/2	- 10						
Bentonite Chips	XXXX X XXX	Heave	- 15 - 20						
		- T	25	en en en en en en en en en en en en en e					
Slotted PVC		Pea Grave	30	de democratic production according to consequent according to the consequence of the cons			SP	30-37 SAND, light olive brown to dark yellowish	
18 fnch			35	7	SS			30-37 SAND, light olive brown to dark yellowish brown, fine to medium sand, trace of gravel and silt, poorly graded, moist.	

Page 2 of.2.

Boring No. G - 15

	WELL DETAILS	PENE - TRATION TIME/	DEPTH (FEET)	s/	MPLE	BLOW	SYMBOL	LITHOLOGIC DESCRIPTION	WATER
•	2 . 6 . 61	RATE	(,,,,,	NO.	TYPE	COUNT			OUALITY
be _		11	35	7	\$\$		SP	SAND, continued.	
1/2 inch Gas Probe		Chips Pea Grave	- 40 - 45	9	SS		GW	37-56 SANDY GRAVEL, weathered, dark yellowish orange to moderate reddish brown, iron stain, fine to medium sand, with trace of silt, well graded, moist.	
ch Slotted PVC		Bentonite C	- 50	10	SS				
18 Inch		Gravel ——/	55				GW	Boulders 56-60 SILTY GRAVEL, light olive grey, weathered, some fine sand, boulders, well graded.	
	Total Depth = 60 feet	Pea Gra	60	12	SS			SS = Split Spoon Sample using Jar Hammer.	
			65						





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

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



March 19, 1990 Project S01-04.02

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 Enviroplug 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)

Mr. Tim Spencer March 19, 1990 Page 2

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 Oceola 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.

Gregory S. Mack Staff Geologist

GSM/klm

Enclosure

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

Air Rotary Greg Mack BORING NO. PAGE

REFERENCE ELEV. TOTAL DEPTH DATE COMPLETED GP-16 1 OF 4

80.00° 2/19/90

		- 05 11141	-44			DATE COMPLETED 2/19/90
SAMPLE NUMBER	SAMPLING METHOD	GROUND WATER LEVELS	OEPTH IN FT.	COLUMN LOGIC FITHO-	WELL DETAILS	LITHOLOGIC DESCRIPTION
2	C		5-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4			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) @ 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 C		15 - 15 - 15 - 15 - 15 - 15 - 15 - 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)



PROJECT NAME LOCATION **DRILLED BY DRILL METHOD**

R.W. Beck **Enumclaw Landfill** Tacoma Pump & Drill

Air Rotary Greg Mack BORING NO.

PAGE

GP-16 2 OF 4

REFERENCE ELEV. TOTAL DEPTH

80.00 2/19/90

SAMPL NUMBE		GROUND WATER LEVELS	DEPTH IN FT.	COLUMN FOGIC TITHO-	DETAILS	LITHOLOGIC DESCRIPTION
5	c		25 - 4			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)



PROJECT NAME LOCATION DRILLED BY DRILL METHOD LOGGED BY

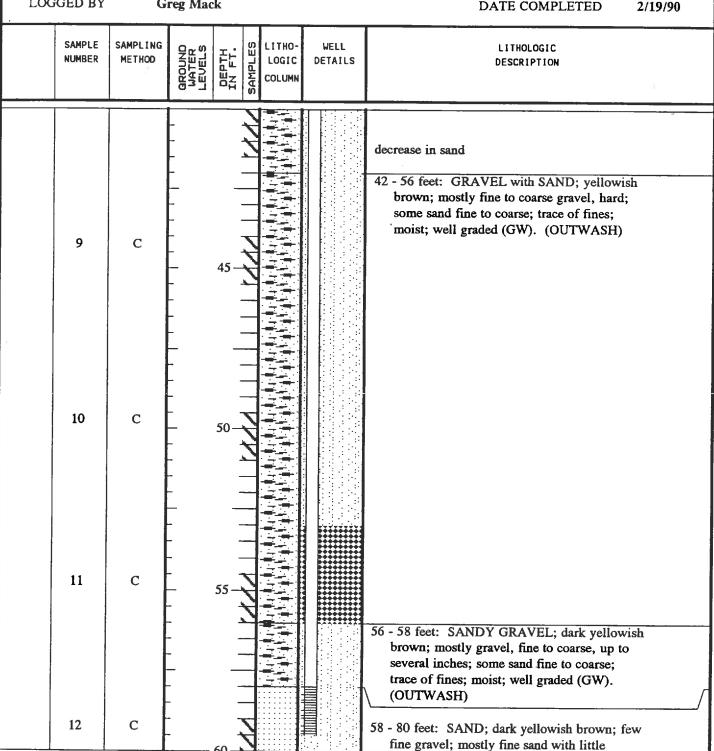
R.W. Beck Enumclaw Landfill Tacoma Pump & Drill

Air Rotary Greg Mack BORING NO.

PAGE

REFERENCE ELEV. TOTAL DEPTH DATE COMPLETED 3 OF 4 80.00'

GP-16





PROJECT NAME LOCATION DRILLED BY DRILL METHOD R.W. Beck **Enumciaw Landfill** Tacoma Pump & Drill

Air Rotary Greg Mack BORING NO.

PAGE

GP-16 4 OF 4

REFERENCE ELEV.

TOTAL DEPTH

80.00 2/19/90

SAMP NUMB		GROUND WATER LEVELS	DEPTH IN FT.	COLUM COLUM LOGIC	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	С	- - - - - -	70 —	Z Z Z		
15	С		75—			@ 72 feet: Increase in moisture.
		_ - -	-			@ 78 feet: Water discharging with cuttings. Bottom of boring at 80 feet.







Project Name Enumcial Value Stem Auger 8** ODA** ID Enumcial Value Stem Auger 8** OD		ASSC	CIAT	red			Geo	logic &	Gas Probe Co	nstrı	ıction Loa
Enumciative Water Depth (https) Enumciative Water Depth (https) Hollow-Stem Augus 2° CDI4" ID Sampling Method 3,25" CD DAM Split-Spoon Ring Sampler Sampling Method 3,25" CD DAM Split-Spoon Ring Sampler Sampling Method 3,25" CD DAM Split-Spoon Ring Sampler Sampling Method 3,25" CD DAM Split-Spoon Ring Sampler Sampling Method 3,25" CD DAM Split-Spoon Ring Sampler Fill Fill Fill Water David Dam Split-Spoon Ring Sampler Fill Grandles very gravelly and cobbby drills cassier from 4 to 7 feet MUDFLOW Approved bentantic drips O Water David Dam Split-Spoon Ring Sampler D Water David Dam Split-Spoon Ring Sampler Grandles very gravelly and cobbby drills cassier from 4 to 7 feet MUDFLOW Water David Dam Split-Spoon Ring Sampler Water David Dam Split-Spoon Ring Sampler D Water David Dam Split Dam Split-Spoon Ring Sampler D Water David Dam Split-Spoon Ring Sampler D Water David Dam Split-Spoon Ring Sampler D Water David Dam Split-Spoon Ring Sampler D Water David Dam Split-Spoon Ring Sampler D Water David Dam Split-Spoon Ring Sampler D Water David Dam Split-Spoon Ring Sampler D Water David Dam Split Dam		LART	'H	- ima		Project	t Numb	er	Weil Number		Sheet
Cocaline Enumeria W. Water Depth (th bgs) Start Date Cocober 1, 1999 Start Date C	Decimal), NVL		BV9	90721	<u> </u>			
Draining Method — Hollow-Sterm Auger 8" ODA" ID Start Date October 1, 1999 Story Date Colonic Coloni	_							····			
Sampler Method: 3.26" CD D&M Spiti-Spoon Ring Sampler Con Pote Continuous Method: 1.10 S Special Sample Method: Description Fill Description Fill Description Fill Proposed Secretary of School Spiti-Spoon Ring Sampler Fill Proposed Secretary Spiti-Spoon Ring Sampler Fill Proposed Secretary Spiti-Spoon Ring Sampler Fill Proposed Secretary Spiti-Spoon Ring Sampler Fill Proposed Secretary Spiti-Spoon Ring Sampler Fill Proposed Secretary Spiti-Spoon Ring Sampler Fill Proposed Secretary Spiti-Spoon Ring Spiti-Spoon Spiti-Spiti-Spoon Ring Spiti-Spit										-	
Members Member						1					
Sampler Type (ST): Sample		100 3.25 UD DAIV			7	7	1		Finish Date	Oc	tober 1, 1999
Sampler Type (ST): Sampler Type (ST): Grab Sample O Sampler Type (ST): Sampler Type (ST): Grab Sample O Sampler Type (ST): Sampler Type (ST): Grab Sample O Sampler Type (ST): Sampler Type (Sas Probe Construction	1		1		1	:			
Sampler Type (ST): Sampler Type (ST): Sampler Type (ST): Lab Tests: Grab Sample O Sample Type (ST): Lab Tests: Grap Sample O Sampler Type (ST): Lab Tests: Grap Sample O Sampler Type (ST): Lab Tests: Grap Sample O Recovery MUDFLOW Wery dense, moist, brown GRAVEL with SILT; few sand O Sampler Type (ST): Lab Tests: Grap Sample O Recovery More Content Approved by: Approved by: JJS More Content Mudpflow Approved by: RRH Approved by: JJS More Content Approved by: JJS More Content Mudpflow Approved by: JJS More Content Approved by: JJS More Level (Date of Measurement)		Steel Monument w/ Bollards	C					-grades ve			
Sampler Type (ST): Lab Tests: Logged by: RRH Sampler Type (ST): Lab Tests: Logged by: JJS M- Moisture Content M- Approved by: JJS M- Moisture Content M- Moisture Content M- Approved by: JJS M- Moisture Content M- Moisture Co			J	Application of the state of the				-drills easi	er from 4 to 7 feet		
West screen data 10 SCH as Device Out state size		Filter pack, pea gravel	The first control of the second						МОС	DFLOW	
Hydroted bentonite chips Description D			0				00 7 00 7 00 00 00 00 00 00 00 00 00 00	Very dense	e, moist, brown GRAV	EL with	SILT; few sand
Sampler Type (ST): Lab Tests: Logged by: RRH Grab Sample G - Grain Size M - Moisture Content Water Level (Date of Measurement)	2 0 0 2 0 0	łydrated bentonite chips	0				7.001.001.001.001.001.001.001.001.001.00				
Grab Sample G - Grain Size Approved by: JJS No Recovery ✓ Water Level (Date of Measurement)	<u> </u>	r Type (ST):	0		Lab Te	ests:			I gaged by	-	RRH
○ No Recovery M - Moisture Content Water Level (Date of Measurement)											
□ 2" OD Split Space Samples Water Level (Date of Measurement)					M - Mo		ontent		Approved	Jy.	JJO
			oler						ement) Figure No.		B - 8

		A SSC		red				Geo	ogic &	Gas Probe Co	nstr	
A		EART SCIE	NCES	3. INI				Numb 9072E		Well Number GP-19		Sheet 2 of 2
Disin	ct Name			-3 a			DV9	90/20	<u> </u>	Surface Elev		······································
Locat		Enumclaw L		ıton					*****			824.24
	ion g Metho				IAIT	ID				Water Depth		***************************************
	g Metho iling Met						lor			Start Date Finish Date		tober 1, 1999 tober 1, 1999
	inig we	Inou 3.23 OD Dan	1	Lab		Blows/	T	Mil.	***************************************	Finish Date		Rober I, 1999
Depth feet	०००० त	Gas Probe Construction	Methane %	Test	S T	6" Slows/	Sample ID	Graphic		Des	cription	
		Hydrated bentonite chips	0			25 24 28	S-1	1 - 000 - 00	Very dense	e, damp, brown GRAV	EL wit	h SAND; few silt
-								∳[Ы.		RECESSION	AL O	JTWASH
									-drills easie	er 26-27 ft. due to SAN	ID con	tent
		Filter pack, pea gravel	0		IOI	50/5"			-gravels in	auger		
-30		Well screen 3/4" ID SCH 80 PVC, 0.04" slot size				0. 10. 10. 10. 10. 10. 10. 10. 10. 10. 1			-drills like S	AND		
-			0		0	50/3"			-gravels in a	auger		
•												
										oring at 32.5 ft. depth.		
									GP-19 local MW-9 was	ted approximately 5 fe used for lithology desc	et sou riptior	th of MW-9. The log for a for GP-19.
35			Ì						Nested gas	probes installed in bo	rehole	per Ecology variance.
									Gas probe i	nstalled at 10 feet dep	oth and	I 32 feet depth.
						Heretophylane en en en en en en en en en en en en e						
		der Time /CT\-			Ш	105 7	ostar	<u> </u>		المصميد ا		DDH
		oler Type (ST):				Lab T	ests: rain Size			Logged by		RRH
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		2" OD Split Spoon San	npler				ater Lev			Figure No.		B-8

		CIAT			<u> </u>	5	000	iogic c	& Gas Probe Con	struction Log
	EART	TH VCES	3. IN	c			ct Numb 99072		Well Number GP-20	Sheet 1 of 2
roject Name						₩ V C	73012	<u> </u>	Surface Elevat	L
ocation	Enumclaw, V		aton						Water Depth (***************************************
rilling Metho			***************************************			······································			Start Date	October 19, 1999
ampling Me				Sa	mpler.	300 lb	hamm	er and h		October 21, 1999
epth		Methane	Lab	s	7	Sample	7	<u> </u>		
eet	Gas Probe Construction	%	Test	7	6"	ID	Graphi	c	Descr	iption
	8" Above-Grade Locking	The state of the s							FII	
	Steel Monument w/ Bollards							Grass/T	opsoil over GRAVEL; trace	e sand
	Concrete seal									
	Bentonite chips							No land	fill material in bailer cutting	s from 0 to 5 feet.
					İ					
								1		
		0		I	36	S-1		Very de	nse, moist, brown GRAVE	L with SAND, with SILT, few
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2.000.000.000.000.000.000.000.000.000.0]	Prist a 2 d l l M	
								No landi	fill material in bailer cutting	s from 5 to 10 feet.
PR PR PR										
b b b	Filter pack, pea gravel									
	riller pack, pea graver							Brown S	AND with GRAVEL; trace	silt
					50/511					
		0		P	50/5"	S-2				
		o								
	Well screen 3/4" ID SCH 80							No landf	iil material in bailer cutting:	s from 10 to 15 feet.
	PVC, 0.04" slot size						888			
								GRAVE!	_ with SAND	
	Threaded end cap, 3/4" ID		_	-		•				
	SCH 80 PVC	0	G	A	50/5"	S-3		Very den	ise, moist, brown SAND; tr	ace silt; sand fine to mediur
1 - 1 ()										
		Herrerram								
		0					5001		MUDFI	OW
	Bentanite chips	1	G	å	100/6"	S-4	0000	Very den	se, moist, brown GRAVEL	with SAND and SILT
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	No Recovery					oisture (. 000
,	2" OD Split Spoon Sam	mlas					rel (Date		urement) Figure No.	B - 9

		ASSC		red				Geol	ogic 8	Gas I	Probe Cor	nstrı	uction Log
	// =	SCIET	'H VCES	s. INI	C		_	Numb 9072E		V	Vell Number GP-20		Sheet
Droio	ct Name	Enumclaw La	~~~~~	~3 +1 m	450		D V 9	90725)		Surface Eleva		2 of 2 801.55
Local		Enumclaw, V		nton			·····				Water Depth		
1	ng Metho							······	·····		Start Date		tober 19, 1999
1	oling Met				Sa	mpler,	300 lb h	namme	er and ba	iler	Finish Date		tober 21, 1999
Depth feet	The state of the s	Gas Probe Construction	Methane %	Lab Test	S	Blows/	Sample (D	Mtl. Graphic			Des	cription	
1001	8888 18		0	143(-L	L	S-6	0000		se, moist	, brown GRAV	EL wit	h SAND and SILT
-30		Filter pack, pea gravel	0			75/6"	S-7	0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 =	-less fine	es, rounde	RECESSION od gravel e, well rounded	IAL OL	
_		Well screen 3/4" ID SCH 80 PVC, 0.04" slot size	0	G		50/6" 50/3"	S-8	000000000000000000000000000000000000000	Very den	se, gray (GRAVEL; few \$	SAND	x -
-35 -			0		0	40 50/4"	S-9	000000000000000000000000000000000000000					
_ _ _ _		Threaded end cap, 3/4" ID SCH 80 PVC Bentonile chips	Andrew Comment of the					000000000000000000000000000000000000000	-rounded	to well-ro	unded gravels	and co	obbles; trace sand
			0		8	50/5"	S-10						
-									Bottom o	f boring at	t 40 ft. depth.		
		1							Nested g	as probes	installed in bo	rehole	per Ecology variance.
-									Gas prob	e installed	d at 15 feet der	oth and	f 37 feet depth.
-			1										
-45			ĺ										
_	***************************************												
						ĺ	!	NAME OF THE OWNER, WHEN THE OW					
~													
		ler Type (ST):				Lab T					Logged by		RRH
		Grab Sample					rain Size Ioisture C				Approved	by:	JJS
	=	lo Recovery				Şν	/ater Lev	el (Date	e of Meas	urement)			
	2	" OD Split Spoon Sam	ipier				Vater Lev			,	Figure No.		B-9

/a		Z	ABI	BOCIATED RTH ENCES, INC	Project Number	Exploration Number 1	n Lo	og			Shee	et .
			M SCI		BV99072B	SB-1					1 0	
Projec Locatio		ame		Enumclaw I Enumclaw,	<u>andfill</u> Washington		Grou		rface E	levatio	n (ft)	~ 802
Oriller/ Hamm				Tacoma Pump 300 lb/30 in	and Drilling/Mobile B-61 Hollow-Ste ches		Date -	Start/F	Finish eter (in	09/2	9/199 inch	9-09/29/
Depth, ft	S	Samples	Graphic Symbol	This log is p (AESI) for the report for conflocation of the conditions of data present	art of the report prepared by Associate named project and should be read implete interpretation. This summan his exploration and at the time of exploration and at the time of exploration at this location with the placed are a simplification of actual control.	ated Earth Sciences I together only with that y applies only to the cloration. Subsurface cassage of time. The ditions encountered.	Well Completion	Blows/ 6"			vs/Fo	ot
	200	S-1	• • • • •	Dry brown SAN	DESCRIPTION ID with roots and organics; sand fine	- to coorse			10	20	30	40
	8	0										
				Dry, tan GRAVE few cobbles	EL with SAND; gravel fine to coarse,	sand fine to coarse,				1000		
5	3	S-2	00-00-00-00-00-00-00-00-00-00-00-00-00-	Landfill material	(cloth) appeared in auger cuttings a	t 6 feet).				The second secon		
10	83	S-3	1.00.00.00.00.00.00.00.00.00.00.00.00.00	-grades trace co	obbles		Andrew to the state of the stat		Populari Anna de La Caración de Caración d			
			00,000	-grades very har	d, little return			And the fact of th				
15		S-4		-grades slightly !	noist			er en seu man men men de de de de de de de de de de de de de				
20		S -5	00,000,00			-		Aprilland and a state of the st				
	*		000000000000000000000000000000000000000	-grades softer								
25		CJ-CJ				_	10	00/6"	A THE PROPERTY OF THE PROPERTY		THE PROPERTY OF THE PROPERTY O	50+
				between 0 to 25 i	nditions prevented drive samples from	m being collected					And the second s	
San		No R	pe (ST) lecover		Lab tests: C - Chemica P - Permed	oility				Logged	-	sjs jis

	<u> </u>		<u>A</u> S	BOCIATED THE	Duelle at Name 1	Exploratio	<u>n Lo</u>	g		Sheet					
			SCI	ENCES, INC	Project Number BV99072B	Exploration Nu SB-2	mber				Sheet 1 of				
Project I	Nam	e		Enumclaw Lan	dfill		Grou	nd Su	rface El	levation		~ 80	0		
Location Driller/E		 .	n.t	Enumciaw, Wa	shington	* 10 01 00	Datur	n							
Hamme				300 lb/30 inche	l Drilling/Hollow-Stem Auger, 4 S	" ID, 8" OD	Date Hole		rınısh eter (in)		1/1999 inch	9-10/C)4/199		
Depth, ft	S	Samples	Graphic Symbol	This log is part of (AESI) for the name report for complete location of this econditions may	of the report prepared by Assor amed project and should be re ete interpretation. This summ: exploration and at the time of e change at this location with the are a simplification of actual co	ciated Earth Sciences ad together only with that ary applies only to the xploration. Subsurface passage of time. The	Well Completion	Blows/ 6"		Blow	s/Foo	ŧ	Methane %		
ا م	Τ ,	သီ	ტთ	data presented	are a simplification of actual co DESCRIPTION	onditions encountered.	-	В		20	20	40	Met		
	+		ا اب		LANDFILL DEBRIS				10	20	30	40 	-		
(,	;~ ¶	3.43.43.43.43.43.43.43.43.43.43.43.43.43					5 8 22					0		
5	SS	-2 -3	いうこうこうで	-Glass, metal, cloth few cobbles and gra	, plastic debris with est. 20% G vels	RAVEL in SAND matrix;		22 30 34				50+	0		
		-4-5	でであるがある。	-cobble and gravel of Bottom of boring at Backfilled with hydra	7.5 feet.			28 32 33				50+	0		
Sam O I	N 3.	o Ri 25"	e (ST) ecover OD D Samp	ry &M Split-Spoon Ring	P - Perm Sampler M - Moist ∑ Static		1 <u>1</u>			Logged Approv Figure	ed by:	RRH JJS B - 11			

	SOCIATED		Exploratio	n Log			-
	RTH IENCES, INC	Project Number BV99072B	Exploration Nu SB-3	ımber		Shee 1 of	
Project Name	Enumclaw	Landfill		Ground Surf	l face Ele		~ 802
Location Driller/Equipment	Tacoma Pump	Washington p and Drilling/Hollow-Stem Auger, 4" I	ח איי טח	Datum Date Start/F			9-10/04/19
Hammer Weight/Dro	p <u>300 lb/30 ir</u>	nches		Hole Diamet		4 inch	9-10/04/19
Depth, ft 1 0 Samples Graphic Symbol	This log is r (AESI) for the report for confidential ocation of the conditions report data preser	part of the report prepared by Associa the named project and should be read omplete interpretation. This summary this exploration and at the time of exp may change at this location with the p nted are a simplification of actual cond	ted Earth Sciences together only with that / applies only to the loration. Subsurface assage of time. The ditions encountered.	Well Completion Blows/ 6"		Blows/Foo	Methane %
	_	DESCRIPTION		0	10	20 30	40
000000000000000000000000000000000000000	-No recovery	eet; backfilled with Bentonite chips. t refusal at 4.0 feet; backfilled with Ben	ntonite chips.	50/4"			
Sampler Type (ST No Recover 3.25" OD D Grab Samp	ry &M Split-Spoon R		pility	<u> </u>	Α	ogged by: approved by: figure No.	RRH JJS B - 12

Table B-1 Survey Data Enumclaw Landfill

				Elevation								
Well or Probe	Northing	Easting	Top of Monument		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						
TAT AA - T O												
GP-19	11007.80	11437.88	827.03	826.31 S	826.45 D	824.24						

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.



PROJECT NO. S01-04.02 TEST PIT NO.

Pit #1

SHEET 1 OF 1

PROJE	CT	Enumo	law L	andfill	LOCATIONSOUTH	ıs i de	Fence line LOGGER Mack			
ELEV	ATION_									
				Backhoe			DATE EXCAVATED 18 Oct. 1988			
WATE	WATER LEVEL AND DATE APPROX. DIMENSIONS: Length Width Maximum Depth 7 ft.									
	LOW	SAM	PLE	SOIL DESCRIPTION			COMMENTS			
ELEVATION (DEPTH BEL SURFACE	INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PL PARTICLE SIZE, DISTRIBUTION MOISTURE CONTENT, RELATIV OR CONSISTENCY, STRUCTURE USCS GROUP SYMBOL	COLOR, E DENSITY	SYMBOLIC LOG	DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE. GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION			
	1 -			Top Soil, dark brown, ab organic material.	undant		_			
	2 _			Silty Sand, upper part yellowish brown grading -olive grey, at 2 feet, p	to light atches of -		-			
	3 _			yellowish brown, with so rounded to subangular co boulders, massive, dry ((Oceola Mud Flow)	bbles and		Water seeps, water ponds ⁻ at surface.			
	4 -				-		-			
	5 _				+		_			
	6 -						-			
	7 -			Total depth 7 feet.			-			
	8 -			-	1		-			
	9 -				4		•			
	10 _			-	1					
	-			-	1					
				-						



PROJECT NO.	
501.04.0	3

TEST PIT NO.

Pit # 2

SHEET 1 OF 1

PROJECT Enumcla	w Landfill	LOCATION South fence line	LOGGER Mack
ELEVATION		CONTRACTOR	
EXCAVATION METHOD		DATE EXCAV	ATED 18 Oct. 1988
		APPROX, DIMENSIONS: Length Width	
	-		

	LOW	SAM	PLE	SOIL DESCRIPTION		COMMENTS
ELEVATION (ELEVATION DEPTH BEL SURFACE () INTERVAL TYPE AND		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 -		(4	_	.⊅i	<u> </u>
	5 —			-		-
	6 -			-		
	7 -					_
	8 -			Silty sand, pale olive, with some subrounded cobbles and boulders, massive, dry. (SM) (Oceola Mud Flow)		-
	9 -			-		_
	10 —			-		_
	11 -			-		_
	12 -			Total depth 12 feet.		_
	13 -			-		-
	14 -			-		-
	15 —			<u> </u>		UE 200.07



PROJE	CT NO.	
5	01-04.03	

SHEET 1 OF 1

PROJEC	ст <u>Е</u> 1	numc l	aw La	ndfill LOCATION SOU	th fe	nce line	LOGGER	Mack
ELEVA	TION			Backhoe CONTRACTOR			10.0.	4000
						DATE EXCAVATED		
WATER	LEVEL	AND DA	ATE	APPROX. DIMENSIONS: Length		Width	Maximum Dep	oth 10 ft
	*	SAM	PLE	SOIL DESCRIPTION		CO	MMENTS	
ELEVATION (DEPTH BELOW SURFACE ()	INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL	SYMBOLIC	DIFFICULTY IN E RUNNING GRAVI COLLAPSE OF W/ DEBRIS ENCOUN SEEPAGE GRAD/ TESTS, INSTRUM	EL CONDITIO ALLS, SAND H TERED, WATI ATIONAL COI	N, IEAVE, ER
	1 -			Refuse, demolition waste, wood, concrete blocks, sheet metal, bed - springs, burned garbage.				-
	2 -			-				-
a.	3 -	53		-				-
	4 -			-				-
	5 —							_
	6 -			-				-
	7 -			-				_
	8 -			- -				-
	9 -			-				-
	10 -	İ						_
	11 -			Total depth 10 feet.				-
	. 12 -							-
	13 -							-
	J.			_				75
	14 -						lá.	-
	1.4	2000 1						



PROJECT NO. S01-04.02

TEST PIT NO. Pit # 4

SHEET 1 OF 1

ELEVA	TION			ndfill LOCATIO				LOGGER	Mack		
EXCAV	ATION N	METHO[<u> </u>	ackhoe			DATE EXCAVATED	18 Oct.	1988		
WATER	ATER LEVEL AND DATE Meximum Depth 8 ft_										
_	36	SAM	PLE	SOIL DESCRIPTION			co	MMENTS			
ELEVATION (DEPTH BELC SURFACE ()	INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PLASTICIT' PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSIT OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL		SYMBOLIC LOG	DIFFICULTY IN RUNNING GRAV COLLAPSE OF W DEBRIS ENCOUN SEEPAGE, GRAD TESTS, INSTRUM	EL CONDITIO ALLS, SAND I ITERED, WAT IATIONAL CO	N, HEAVE, ER		
	1 -			Cover, sandy gravel, moderate yellowish brown, with some co		•			-		
	2 -			Refuse, iron, burned garbage, alternating layers of dusky r	bed				_		
	3 -			to dusky brown or black.	-				-		
	5 -	9							-		
	6 -	5			_				_		
	7 -			·							
	9 -	7 ON		Total depth 8 feet.	-				_		
	10 -	8		9	_				_		
	11 -		1		-				_		
	12 -			-	_						
	13 -				-				_		
					_				_		



PRO.	ECT	NO	•	
	501	-0	14	n

SHEET 1 OF

					Loca	ATION S	outh	of gate	_ LOGGER _	Mack
ELEVA	TION _			Backhoe	CON					
								DATE EXCAVATI		
WATER		AND D	ATE		APPROX. DIMENSI	ONS: Length		Width	Maximum Di	epth
2	80	SAN	PLE		SOIL DESCRIPTION				OMMENTS	
ELEVATION	DEPTH BELOW SURFACE ()	INTERVAL	TYPE AND NUMBER	PARTICL MOISTUR OR CONS	ME, GRADATION OR PLASTI LE SIZE, DISTRIBUTION, COL RE CONTENT, RELATIVE DE SISTENCY, STRUCTURE, IOUP SYMBOL	OR,	SYMBOLIC LOG	DIFFICULTY IN RUNNING GRA COLLAPSE OF DEBRIS ENCOL SEEPAGE. GRA TESTS, INSTRU	VEL CONDITION WALLS, SAND INTERED, WAT DATIONAL CO	ON, HEAVE, TER
	1 -			Top Soil gravel.	l, dark brown, sand	and -				-
	3 -			boulders	nd, medium grey, wi and cobbles, sligh damp, well graded.	itly				-
	4 -			(Oceola 1	Mud Flow)	(3/1)				-
	5 -			_		-				-
	6 -			-						
	7 -									_
	9 -			brown with fine to cand bould		and is				_
	10 -			_Total dep	pth 9 feet.	-				_
	11 -			_		1				-
	12 -					1				
	13 -			-		+				-



PROJECT	NO.	
	\$01-04.02	

SHEET 1 OF

1

PROJECT Enumcla			mclaw	Landfill LOCATION	West of	G-11 LOGGER Mack		
EXCAV	ATION	AETHOL	,	Backhoe CONTRACTO	OR	DATE EXCAVATED 17 Oct. 1988		
				APPROX. DIMENSIONS: L				
ELEVATION ()	DEPTH BELOW SURFACE ()	INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL	SYMBOLIC LOG	DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE. GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION		
	1 _			Topsoil, dark brown, organic material.		_		
	2 -			Silty Sand, olive grey, with so subangular cobbles and boulders massive. (SM) (Oceola Mud Flow)	me •	-		
	3 -			_		-		
	4 -	į		Sandy Gravel, moderate yellowish		-		
	5 —			brown, gravel is subrounded to subangular, with some cobbles. (GW) (Outwash Deposits)	+	_		
	6 -					-		
	7 -				-	-		
	8 -					-		
	9 _				-	-		
	10 —			Total depth 10 feet.		_		
	11 -				1			
	12 -					-		
	13 -							
	15							



PROJECT	NO).	
SO:	1-()4.	02

SHEET 1 OF 1

PROJECT Enumclaw Landfill LOCATION Southwest of fence LOGGER Mack ELEVATION CONTRACTOR													
EXCAVATION METHOD Backhoe DATE EXCAVATED 18 Oct. 1988													
WATER LEVEL AND DATE APPROX. DIMENSIONS: Length Width Maximum Dep													
ELEVATION (DEPTH BELOW SURFACE ()	SAMPLE		SOIL DESCRIPTION		COMMENTS							
		INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL	SYMBOLIC	DIFFICULTY IN EXCAVATION, RUNNING GRAVEL CONDITION, COLLAPSE OF WALLS, SAND HEAVE, DEBRIS ENCOUNTERED, WATER SEEPAGE. GRADATIONAL CONTACTS, TESTS, INSTRUMENTATION							
	1 -			Sandy Gravel, moderate yellowish brown to yellow grey, with some - subangular to subrounded cobbles - and boulders. (GW) (Outwash)									
	2 -			Ciltu Curul wallaniah awar		-							
	3 -	Grab		Silty Gravel, yellowish grey, subangular to subrounded gravel, cobbles. Each grain is coated with silt, little sand. (GM)		*							
	4 -			(Outwash)									
	5 —	Tube		_		_							
	6 -			_		_							
	7 -			-		_							
	8 -			-		_							
	9 -			_		-							
	10 —			Total depth 10 feet.		_							
	11 -			-		-							
	12 -			-		-							
	13 -			-									
	14 -	e.		-		-							



PROJECT	NO.
S01-0	04.02

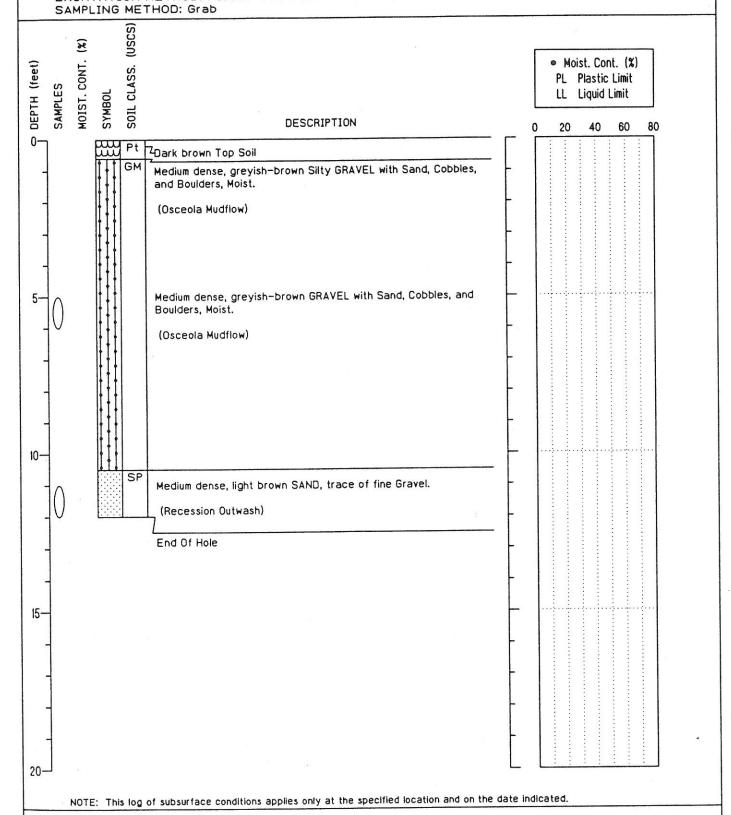
SHEET 1 OF 1

PROJECT Enumclaw Landfill LOCATION Southwest fence line LOGGER Mack											
ELEVATION CONTRACTOR											
				Backhoe		DATE EXCAVATE	ь <u>18 Oct. 198</u>	8			
WATER	LEVEL	AND DA	ATE	APPROX. DIMENSIONS: Ler	ngth	Width	_ Maximum Depth _C	-			
	M	SAMPLE		SOIL DESCRIPTION		COMMENTS					
ELEVATION	DEPTH BELOW SURFACE ()	INTERVAL	TYPE AND NUMBER	SOIL NAME, GRADATION OR PLASTICITY, PARTICLE SIZE, DISTRIBUTION, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, STRUCTURE, USCS GROUP SYMBOL	SYMBOLIC	COLLAPSE OF W	VEL CONDITION, VALLS, SAND HEAVI NTERED, WATER DATIONAL CONTAC				
	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 -			_	1			-			
	7 -							-			
	8 -			Total depth 8 feet.	\dashv			-			
	9 -			_				-			
	10 -			-	+			-			
	11 -				+			-			
,	12 -				+			-			
	13 -			_	-			_			
	14 -			- 9	-			-			

TEST PIT LOG

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

TOTAL DEPTH: 12.0 Feet SURFACE ELEVATION: 831 Feet



PROJECT: Enumclaw Landfill

TEST PIT: TP-1

PROJECT NUMBER: 92021, Task 2

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

PAGE: 1 OF 1

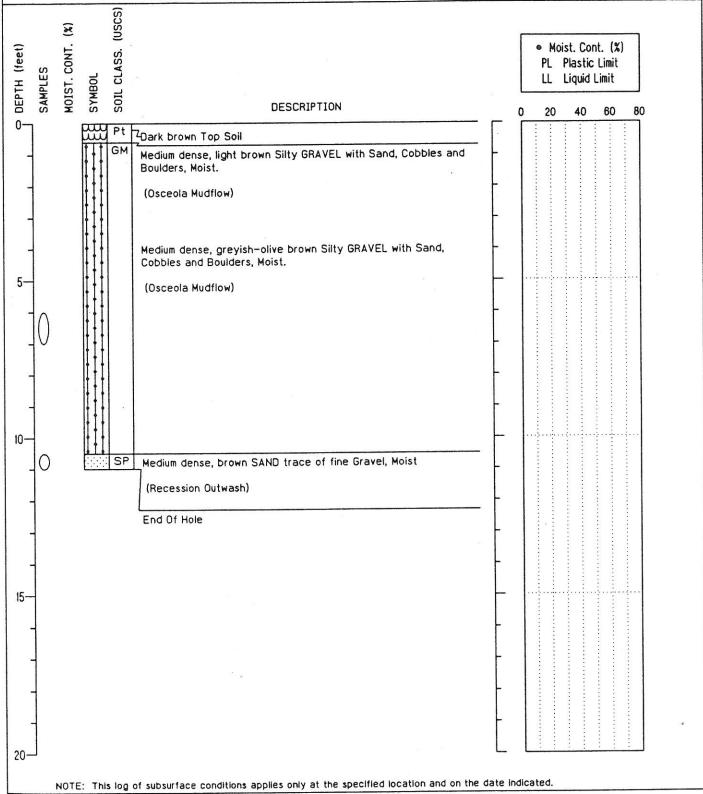
DATE COMPLETED: 2/26/92 LOGGED BY: Chris Behrens

TEST PIT LOG

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

SAMPLING METHOD: Grab

TOTAL DEPTH: 11.0 Feet SURFACE ELEVATION: 831 Feet



PROJECT: Enumclaw Landfill

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

DATE COMPLETED: 2/26/92 LOGGED BY: Chris Behrens

TEST PIT: TP-2

PROJECT NUMBER: 92021, Task 2

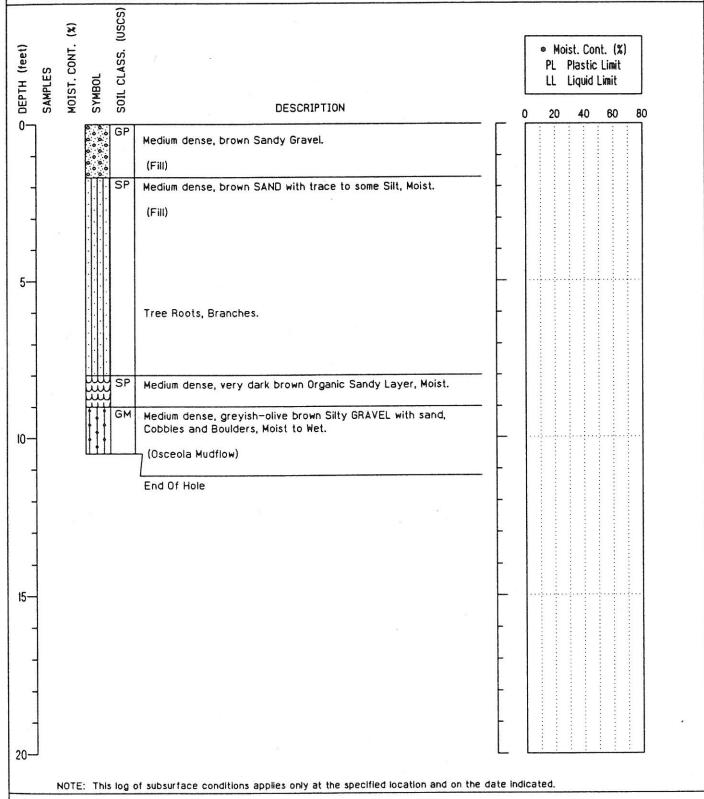
TEST PIT LOG

EXCAVATION COMPANY: King County

EXCAVATION METHOD: Rubber-Tire Backhoe

SAMPLING METHOD: Grab

TOTAL DEPTH: 10.5 Feet SURFACE ELEVATION: 782 Feet



PROJECT: Enumclaw Landfill

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

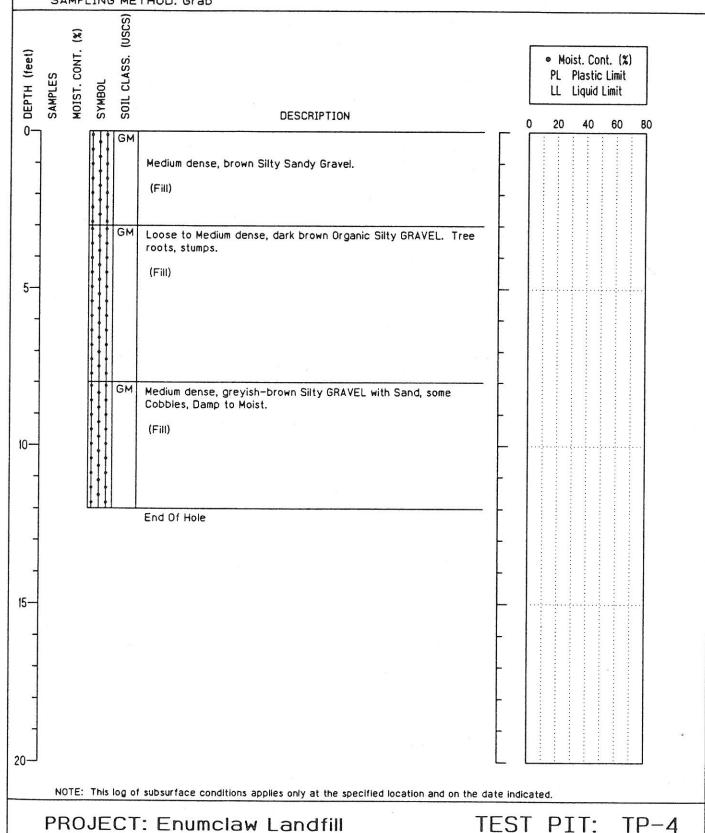
DATE COMPLETED: 2/26/92 LOGGED BY: Chris Behrens TEST PIT: TP-3

PROJECT NUMBER: 92021, Task 2

TEST PIT LOG

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

TOTAL DEPTH: 12.0 Feet SURFACE ELEVATION: 784 Feet



PROJECT: Enumclaw Landfill

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

PROJECT NUMBER: 92021, Task 2

DATE COMPLETED: 2/26/92 LOGGED BY: Chris Behrens

TEST PIT LOG HONG WEST & ASSOCIATES, INC. TOTAL DEPTH: 12.0 Feet EXCAVATION COMPANY: King County SURFACE ELEVATION: 823 Feet EXCAVATION METHOD: Rubber-Tire Backhoe SAMPLING METHOD: Grab (nscs) MOIST, CONT. Moist, Cont. (%) SOIL CLASS. DEPTH (feet) PL Plastic Limit SAMPLES LL Liquid Limit DESCRIPTION 80 60 20 40 건Loose to Medium dense, brown Silty SAND and GRAVEL, some Cobbles and small Boulders, Damp to Moist. Landfill refuse; mainly glass, ceramics, metal, old bricks, and concrete, Moist. (Demolition Fill) 10-End Of Hole 15-20-NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated. TEST PIT: TP-5 PROJECT: Enumclaw Landfill LOCATION: S.E. 440th St. Enumclaw WA PROJECT NUMBER: 92021, Task 3 DATE COMPLETED: 2/27/92

LOGGED BY: Chris Behrens

TEST PIT LOG HONG WEST & ASSOCIATES, INC. EXCAVATION COMPANY: King County EXCAVATION METHOD: Rubber-Tire Backhoe TOTAL DEPTH: 12.0 Feet SURFACE ELEVATION: 821 Feet SAMPLING METHOD: Grab MOIST. CONT. (%) DEPTH (feet) Moist. Cont. (%) PL Plastic Limit LL Liquid Limit DESCRIPTION 20 80 60 GM Loose to Medium dense, greyish-olive brown Silty SAND and GRAVEL, some Boulders and Cobbles, Damp to Moist. (Fill) Landfill refuse; wood, glass, metal, mixed with fill. Moist. End Of Hole 15-20-NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated. TP-6 TEST PIT: PROJECT: Enumclaw Landfill LOCATION: S.E. 440th St. Enumclaw, WA PROJECT NUMBER: 92021, Task 3

PAGE: 1 OF 1

DATE COMPLETED: 2/27/92

LOGGED BY: Chris Behrens

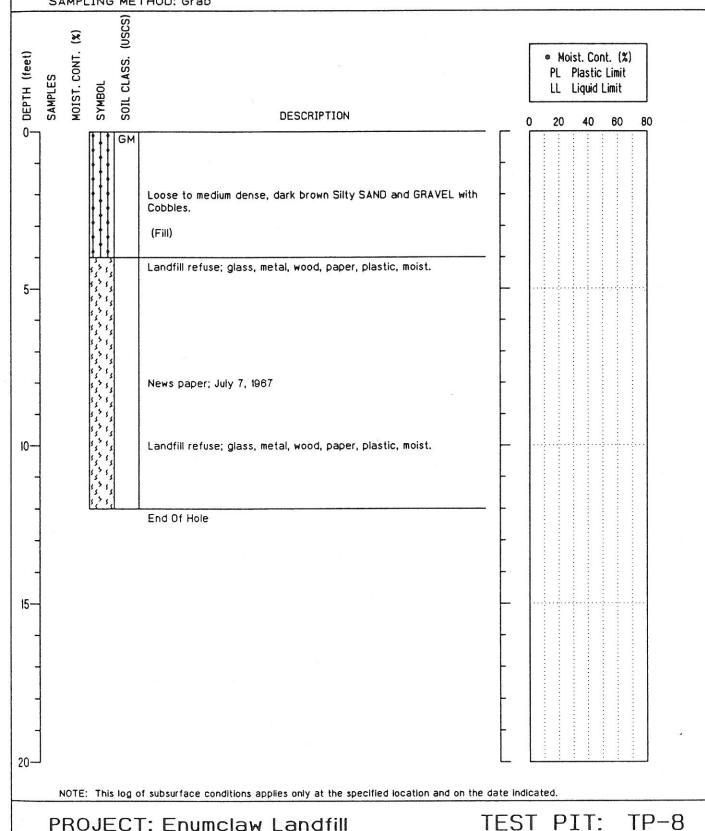
TEST PIT LOG HONG WEST & ASSOCIATES, INC. TOTAL DEPTH: 12.0 Feet EXCAVATION COMPANY: King County EXCAVATION METHOD: Rubber-Tire Backhoe SURFACE ELEVATION: 825 Feet SAMPLING METHOD: Grab × MOIST, CONT. Moist. Cont. (%) DEPTH (feet) PL Plastic Limit SAMPLES SYMBOL LL Liquid Limit DESCRIPTION 20 40 80 Medium dense, dark brown Silty SAND, and GRAVEL with Cobbles, trace of Boulders, Damp to Moist. (Fill) Landfill refuse; tires, cans, bottles, mixed with soil. Sheen observed on water surface, moderately strong petroleum hydrocarbon odor. Moist to wet. Perched Water; Clay, Silt Seam at 4-4.3 ft. Landfill refuse; glass, metal, wood. Mixed with soil, Moist. 5-10-End Of Hole 15-20-NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated. TEST PIT: TP-7 PROJECT: Enumclaw Landfill PROJECT NUMBER: 92021, Task 3 LOCATION: S.E. 440th St. Enumclaw, WA DATE COMPLETED: 2/27/92

LOGGED BY: Chris Behrens

TEST PIT LOG

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

TOTAL DEPTH: 12.0 Feet SURFACE ELEVATION: 828 Feet



PROJECT: Enumclaw Landfill

PROJECT NUMBER: 92021, Task 3

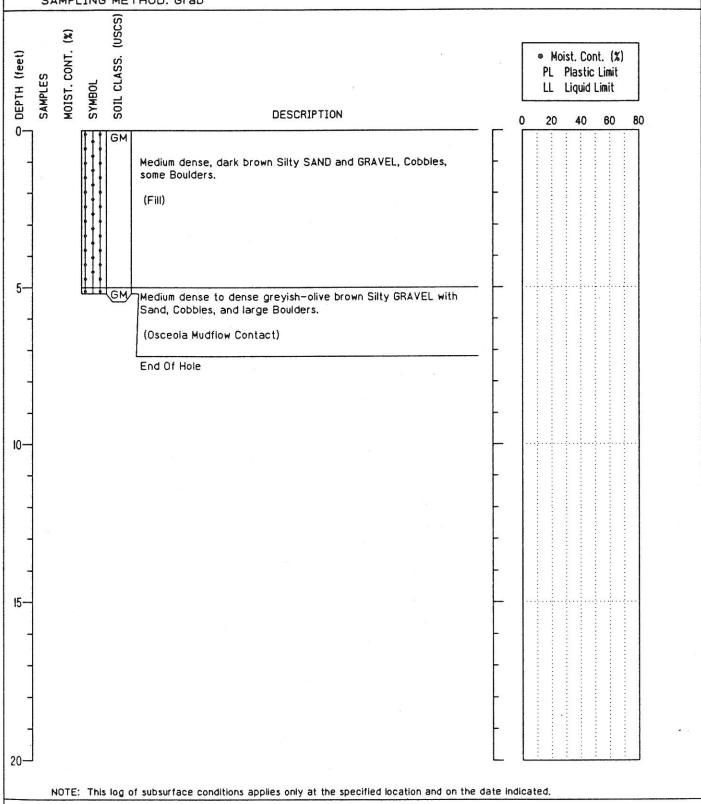
LOCATION: S.E. 440th St. Enumclaw, WA DATE COMPLETED: 2/27/92 LOGGED BY: Chris Behrens

TEST PIT LOG

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

SAMPLING METHOD: Grab

TOTAL DEPTH: 5.2 Feet SURFACE ELEVATION: 830 Feet



PROJECT: Enumclaw Landfill

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

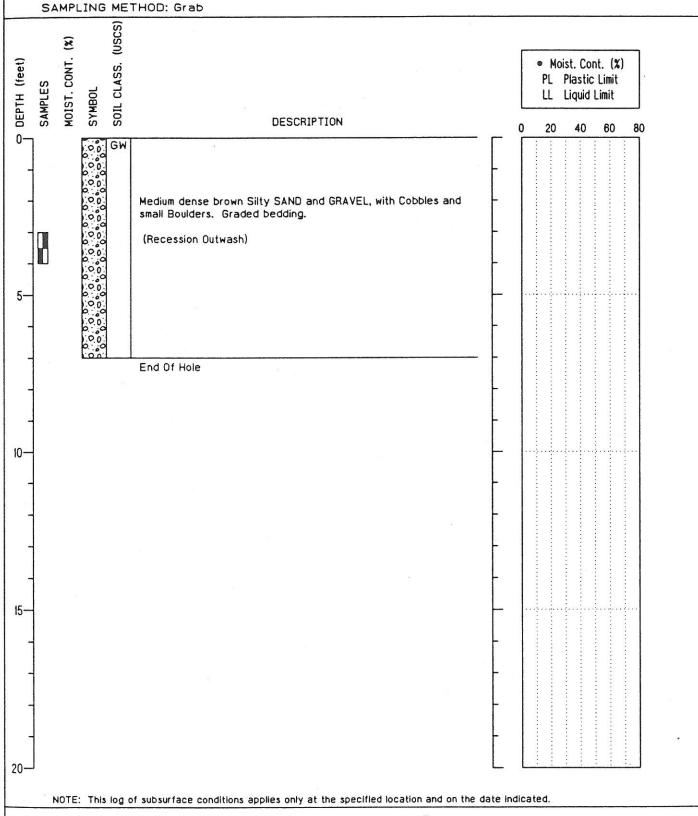
DATE COMPLETED: 2/27/92 LOGGED BY: Chris Behrens TEST PIT: TP-9

PROJECT NUMBER: 92021, Task 3

TEST PIT LOG

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

TOTAL DEPTH: 7.0 Feet SURFACE ELEVATION: 800 Feet



PROJECT: Enumclaw Landfill

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

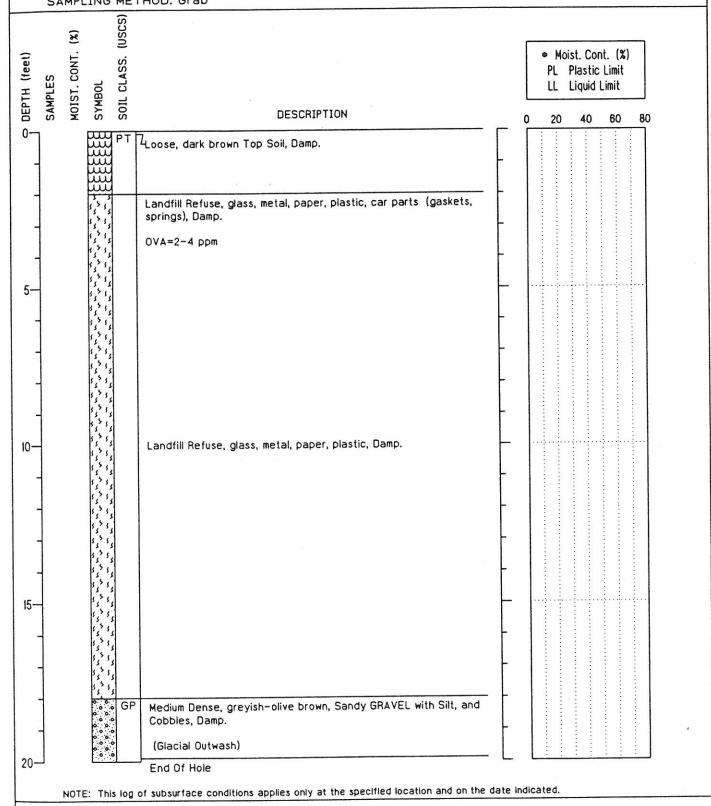
DATE COMPLETED: 2/27/92 LOGGED BY: Chris Behrens TEST PIT: TP-10

PROJECT NUMBER: 92021, Task 2

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



PROJECT: Enumclaw Landfill

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

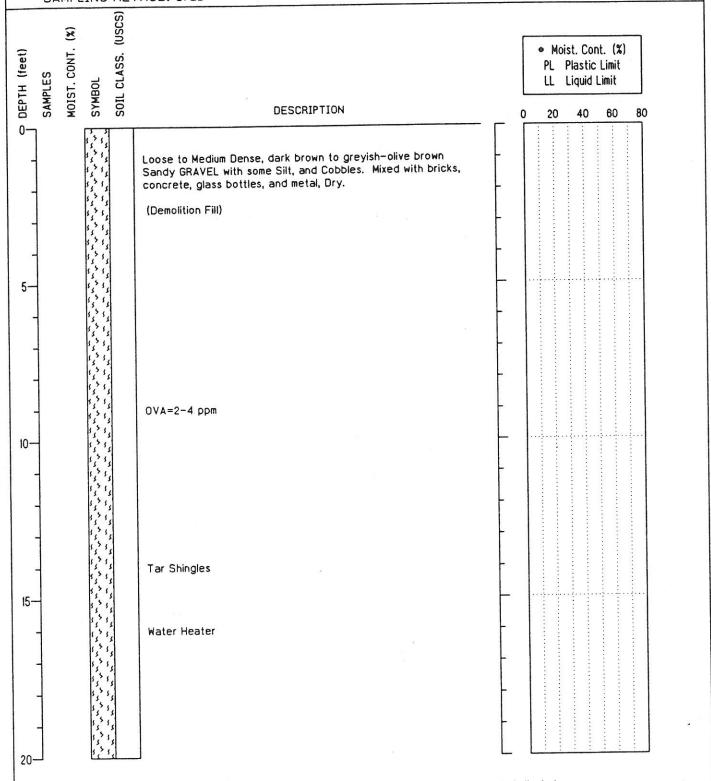
DATE COMPLETED: 3/5/92 LOGGED BY: Chris Behrens TEST PIT: TP-11

PROJECT NUMBER: 92021, Task 3

TEST PIT LOG

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

TOTAL DEPTH: 26.0 Feet SURFACE ELEVATION: 817 Feet



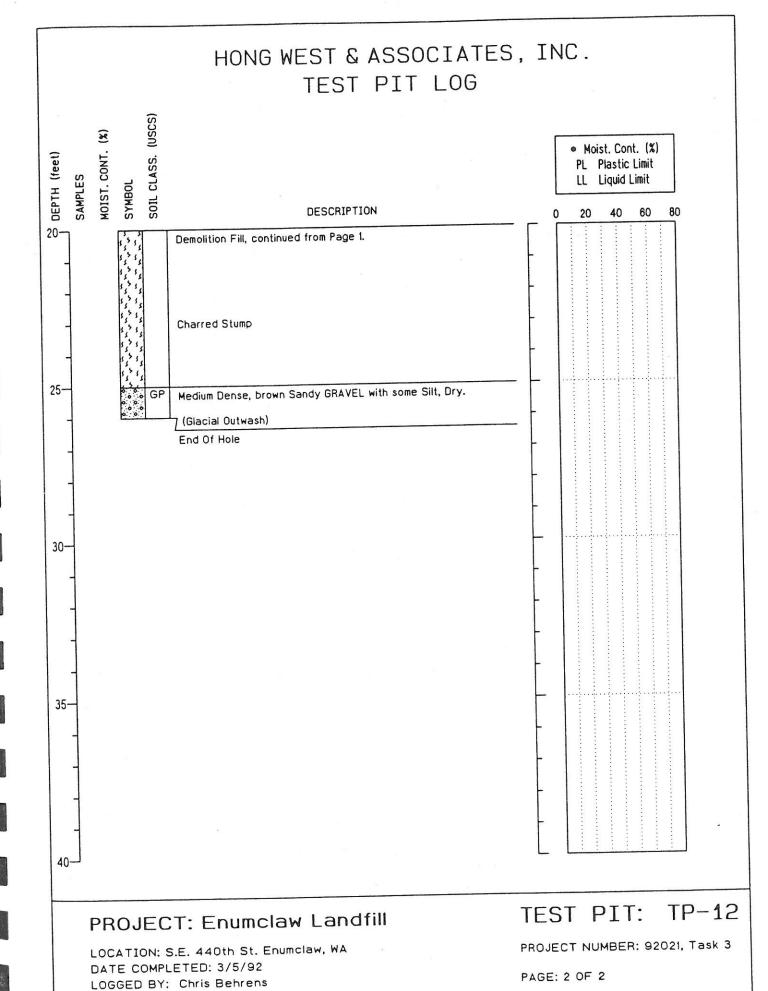
NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated.

PROJECT: Enumclaw Landfill

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

DATE COMPLETED: 3/5/92 LOGGED BY: Chris Behrens TEST PIT: TP-12

PROJECT NUMBER: 92021, Task 3

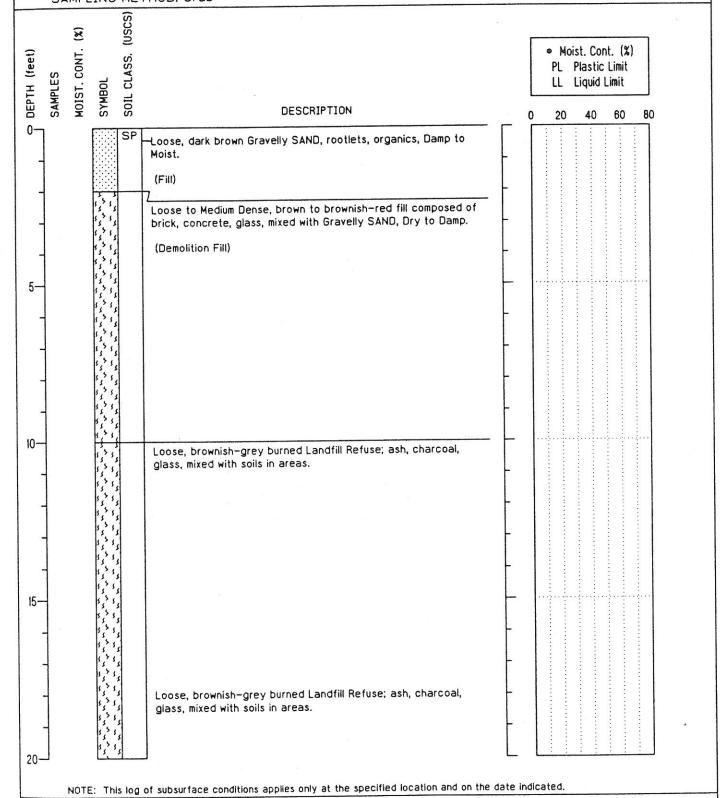


TEST PIT LOG

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

TOTAL DEPTH: 30.0 Feet SURFACE ELEVATION: 812 Feet

SAMPLING METHOD: Grab

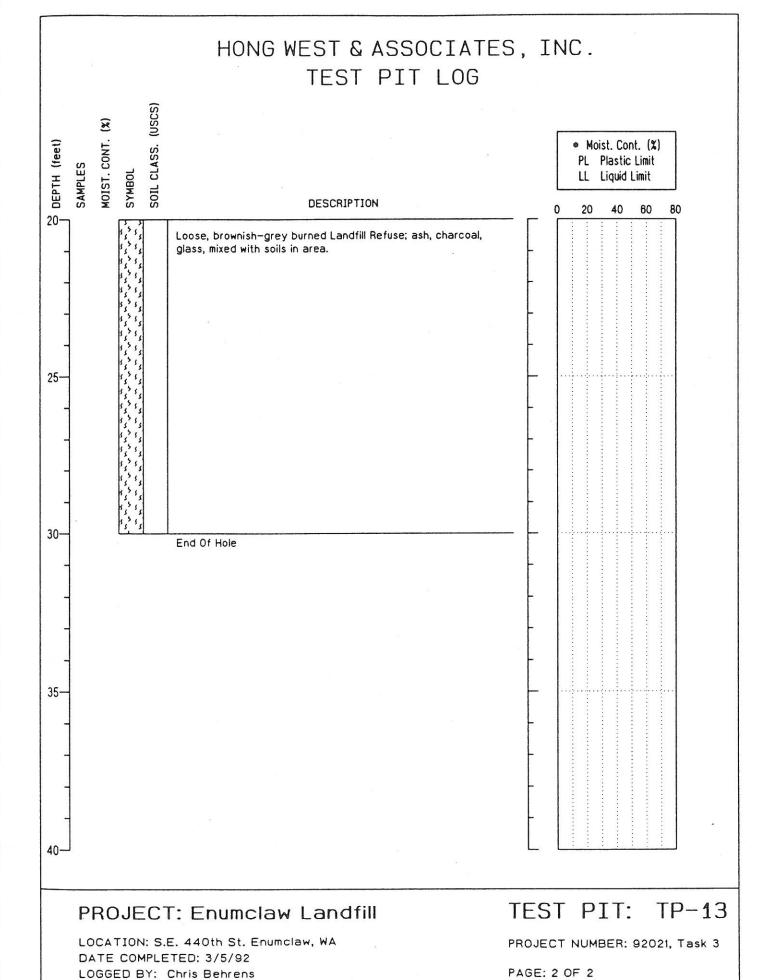


PROJECT: Enumclaw Landfill

TEST PIT: TP-13

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

DATE COMPLETED: 3/5/92 LOGGED BY: Chris Behrens PROJECT NUMBER: 92021, Task 3



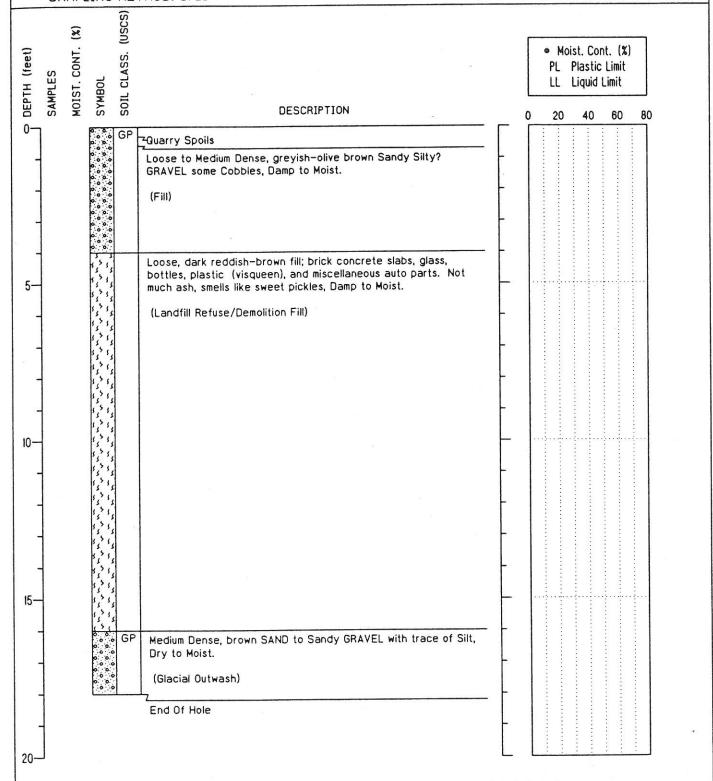
TEST PIT LOG

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

PROJECT NUMBER: 92021, Task 3

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

PAGE: 1 OF 1

DATE COMPLETED: 3/5/92 LOGGED BY: Chris Behrens

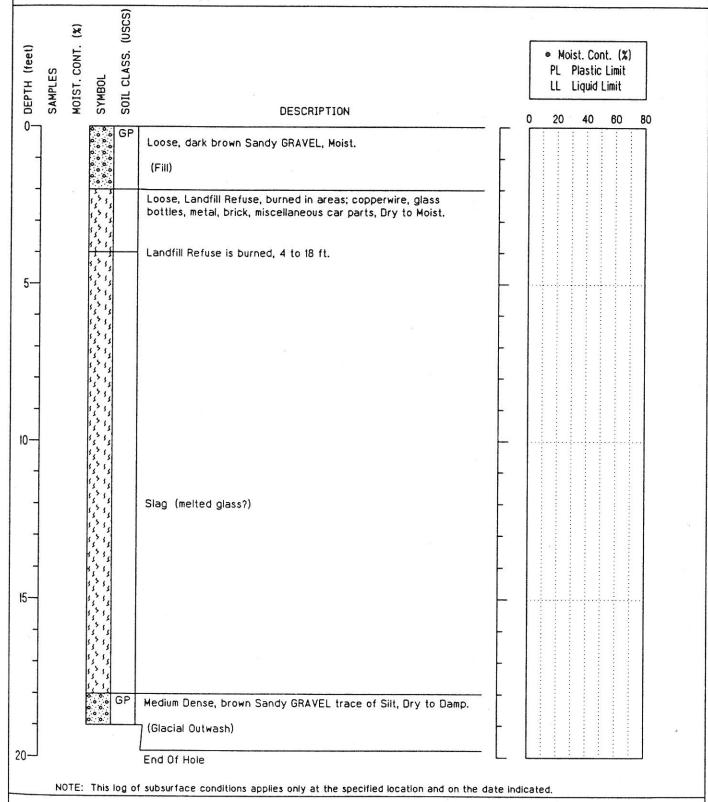
TEST PIT LOG

EXCAVATION COMPANY: King County

EXCAVATION METHOD: CAT-225, Track Backhoe

SAMPLING METHOD: Grab

TOTAL DEPTH: 19.0 Feet SURFACE ELEVATION: 827 Feet



PROJECT: Enumclaw Landfill

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

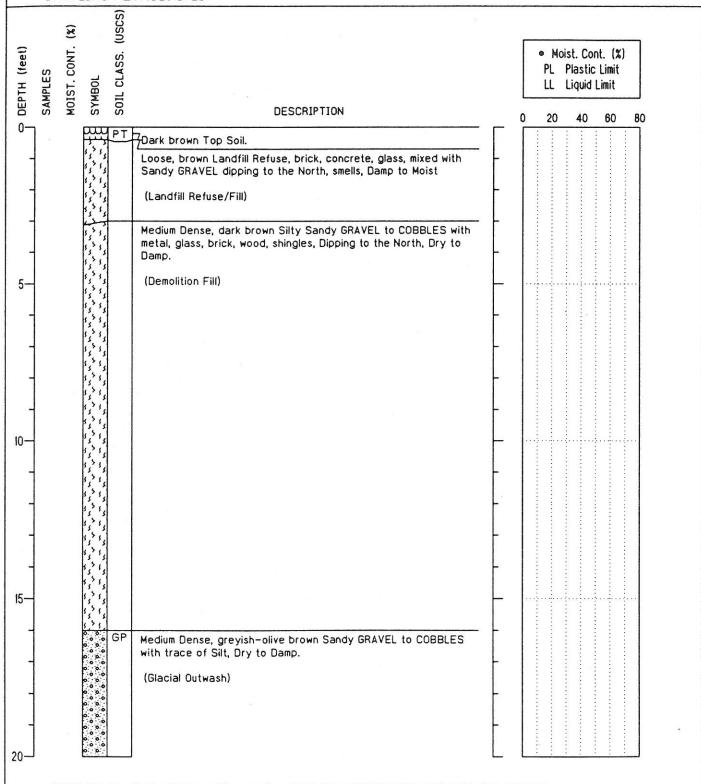
DATE COMPLETED: 3/5/92 LOGGED BY: Chris Behrens TEST PIT: TP-15

PROJECT NUMBER: 92021, Task 3

HONG WEST & ASSOCIATES, INC. EXCAVATION COMPANY: King County EXCAVATION METHOD: CAT-225, Track Backhoe SAMPLING METHOD: Grab

TEST PIT LOG

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

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

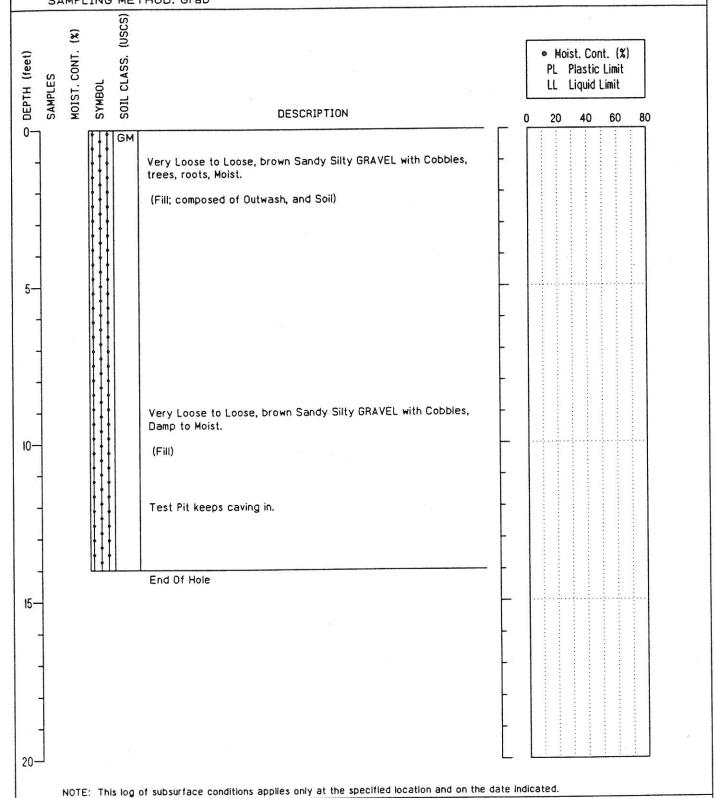
DATE COMPLETED: 3/5/92 LOGGED BY: Chris Behrens TEST PIT: TP-16

PROJECT NUMBER: 92021, Task 3

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



PROJECT: Enumclaw Landfill

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

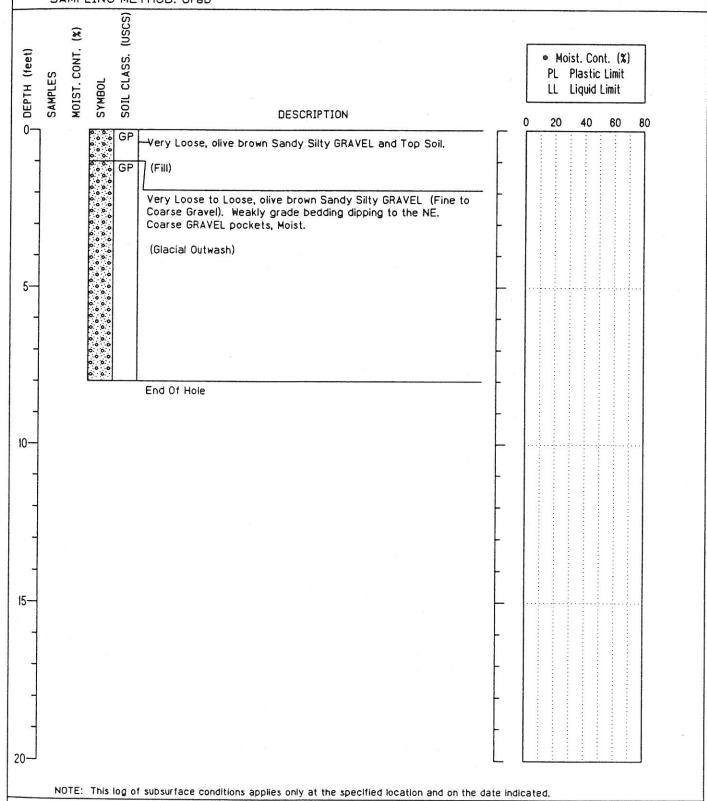
DATE COMPLETED: 3/5/92 LOGGED BY: Chris Behrens TEST PIT: TP-17

PROJECT NUMBER: 92021, Task 2

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



PROJECT: Enumclaw Landfill

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

DATE COMPLETED: 3/5/92 LOGGED BY: Chris Behrens TEST PIT: TP-18

PROJECT NUMBER: 92021, Task 2

HONG WEST & ASSOCIATES, INC. TEST PIT LOG TOTAL DEPTH: 16 Feet EXCAVATION COMPANY: King County EXCAVATION METHOD: Backhoe SURFACE ELEVATION: 782 Feet SAMPLING METHOD: grab SOIL CLASS. (USCS) 8 MOIST, CONT. Moist. Cont. (%) DEPTH (feet) PL Plastic Limit SAMPLES LL Liquid Limit DESCRIPTION 40 60 80 Very loose, olive brown Sandy GRAVEL with some silt. (Fill) 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) 5-10-

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

PROJECT: Enumclaw Landfill

End Of Hole

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

DATE COMPLETED: 8/5/92

LOGGED BY: SEG

15-

20-

TEST PIT: TP-19

PROJECT NUMBER: 92021, Task 2