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REMEDIAL DESIGN PACKAGE NO. 1 SOILS, SUBSURFACE GAS AND GROUND WATER REMEDIAL DESIGN

WASTE DISPOSAL, INC. SUPERFUND SITE SANTA FE SPRINGS, CALIFORNIA

Prepared for

United States Environmental Protection Agency
Remedial Project Manager

Prepared by

TRC

Irvine, California

Representing

The Waste Disposal, Inc. Group (WDIG)

Project No. 30747
April 2, 2002

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WASTE DISPOSAL, INC. SUPERFUND SITE
PREFINAL (90%) DESIGN REPORT (REVISION 1.0)
SOILS, SUBSURFACE GAS AND GROUND WATER REMEDIAL DESIGN

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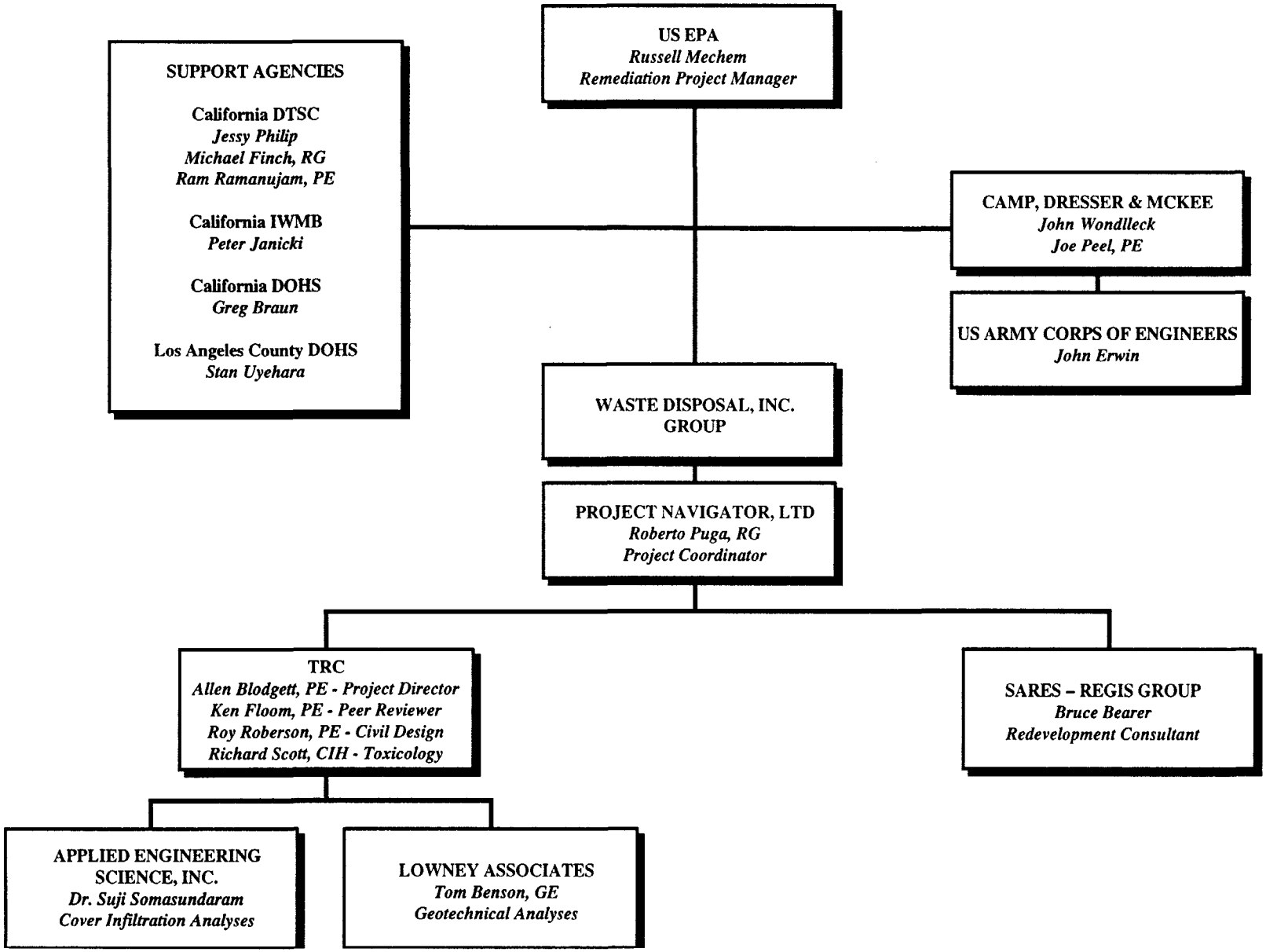
PROJECT ORGANIZATION CHART
WASTE DISPOSAL INC. SUPERFUND SITE



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- Capacity of RCRA Subtitle C-Equivalent Cap Drainage Layer and Pipes
- Capacity of 12-Inch Diameter Stormwater Drain Pipe
- Slope Stability Analysis - Static; Seismic
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SITE GEOTECHNICAL DATA SUMMARY
WASTE DISPOSAL, INC. SUPERFUND SITE

Geotechnical data have been generated for the Waste Disposal, Inc. (WDI) site (Site) during various investigations performed at the Site. These data have been drawn upon to form a basis for some of the calculations necessary for the Remedial Design. These geotechnical data are summarized as follows:

- A total of 489 test borings have been performed at the Site by consultants working on behalf of the United States Environmental Protection Agency (USEPA) and the WDI Group (WDIG). A review was performed of the logs of these borings to evaluate the thickness of fill material and waste material existing at the Site, and to evaluate the classification of the fill material. The results of this review are presented in Attachment A along with a map showing the locations of the borings.
- In 1989 the USEPA drilled over 100 test borings using hollow-stem augering techniques. In addition to the above uses, these logs were used to provide blow count and soil type data (Table 2) for deeper native soils to be used in the liquefaction analysis for the Site. Logs of these borings are presented in Attachment B.
- The above data were used to construct four generalized cross-sections showing typical subsurface soil and ground water conditions at the Site. These cross-sections are presented in the attached figures.
- During an investigation of the Site performed in 1997/1998 by the WDIG, borings were drilled in Areas 4 and 7 to obtain soil samples for geotechnical testing. Logs of these borings and the geotechnical laboratory report are presented in Attachment C.
- In 2000/2001 the WDIG performed a Supplemental Subsurface Investigation at the Site. Samples from borings drilled using hollow-stem augering techniques were collected for geotechnical laboratory analyses. Logs of these borings and the geotechnical laboratory reports are presented in Attachment D.
- In 2001/2002 WDIG collected three samples of existing fill soils at the Site for geotechnical testing to evaluate properties for infiltration analyses. These laboratory reports are presented in Attachment E.

The data described above was examined by geotechnical engineers to determine typical parameters to be used in calculations to support the Remedial Design for closure of the Site. The recommended values for the design parameters are presented in Table 1. A summary of blow count and soil type data for deeper native soils is presented in Table 2. This data is recommended as the basis, along with the seismic shaking conditions that will be calculated for the Site, for the liquefaction analysis for the Site.

TABLE 1

SUMMARY TABLE OF DESIGN PARAMETERS
WASTE DISPOSAL, INC. SUPERFUND SITE

MATERIAL	AVERAGE MOIST UNIT WEIGHT (pcf)	AVERAGE COHESION (psf)	AVERAGE FRICTION ANGLE (degrees)	AVERAGE COEFFICIENT OF COMPRESSIBILITY (1/psf)	PERMEABILITY (cm/sec)
Fill Soil (Primarily Silty Sand/Sandy Silt)	120	250	20	0.002	2.7E-05
Waste (Primarily Bentonitic Drilling Muds)	100	250	10	0.004	2.7E-06
Shallow Native Soil (Silty Sands)	115	150	30	0.001	1.0E-05
Deeper Native Soil (Denser Sands)	125	0	40	0.00025	--

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Table 2. Liquefaction Data Summary

Boring Number	Surface Elevation (feet)	To Groundwater		Sample Depth (feet)	Blow Count (blows/foot)	USCS Symbol
		Depth (feet)	Elevation (feet)			
SB-005	149.61	41	108.61	40	50	SP
				45	50	SP
				50	54	SP
				55	54	SP
SB-008	153.76	48	105.76	45	50	SW
				50	50	SW
				55	(loose)	SW
				60	(loose)	SW
SB-016	167.47	58	109.47	55	50	CL
				60	50	SP
				65	81	SP
SB-017	167.01	58	109.01	55	50	SM/SP
				60	50	SP
				65	50	SP
				70	50	SP
SB-026	167.76	63	104.76	60	50	SW
				65	71	SW
				70	69	SW
SB-029	158.63	51	107.63	50	50	SM
				55	(med. dense)	SP
				60	(med. dense)	SP
SB-030	154.78	47	107.78	45	69	SP
				50	50/4"	SP
				55	50/4"	SP
				60	50/4"	SP
SB-036	166.92	59 2	107.9	60	77	SP
				65	46	SP-SM
SB-046	163.63	57	106.63	55	92	SP
				60	38	SP
				65	42	SP
SB-054	153.77	50	103.77	50	60	SP
				55	55	SP
				60	55	SP
SB-062	155.49	48 _	106.99	50	71	SP
				55	61	SP
				60	75	SP
SB-072	154.91	49	105.91	50	55	SP
				55	92	SP
				60	24	SP
SB-073	154.98	49	105.98	50	55	SP
				55	92	SP
				60	(med. dense)	SP
				65	(med. loose)	SP
				70	(med. loose)	SP
				75	(med. dense)	SP
				80	62	SM
				85	58	SM
				90	51	SM
				95	78	SM
				100	62	SM
				105	69	SP
				110	75	SP
				115	76	SP
				120	79	SP
				125	92	SP
				130	76	CL

Boring Number	Surface Elevation (feet)	To Groundwater		Sample Depth (feet)	Blow Count (blows/foot)	USCS Symbol
		Depth (feet)	Elevation (feet)			
SB-075	157.77	53	104.77	50	65	CL-SM
				55	50	SP
				60	(med-dense)	SM
SB-093	157.23	58	99.23	55	51	SP
				60	92	SP
				65	70	SP
SB-094	157.03	58	99.03	55	50	SP
				60	92	SP
				65	64	SP
				70	45	SM-SC
				75	80	SP
				80	85	SP
				85	78	SP
				90	87	SP
				95	50	SP
				100	50	SP
				105	50	SP
				110	89	SP
SB-096	156.29	53	103.29	50	50	SP
				55	29	SP
				60	23	SP
				65	-	SP
SB-097	157.28	49 _	107.78	50	50	SP
				55	50	SP
				60	50	SP
				65	33	SP
SB-098	157.56	53	104.56	50	50	SP
				55	71	SP(55'), CL(56')
				60	50	SP
				65	90	SM(65'), CL(66')
SB-099	157.56	53	104.56	50	50	SP
				55	71	SP(55'), CL(56')
				60	50	SP
				65	90	SM(65'), CL(66')
SB-100	157.01	86	71	85	-	SC(86'), SP(89')
				90	(med. dense)	SP
				95	(med. dense)	SP
SB-101	163.32	55	108	55	50	SC
				60	(med. dense)	SP
				65	76	SM
				70	50	SP
				75	59	SP
				80	92	CL
SB-103	163.55	57	107	55	50	SP
				60	50	SP
SB-104	159.34	54	105	55	90	SP
				60	100	SP(60'),CL(61.6')
				65	92	SP
				70	61	SP
SB-105	159.16	54	105	55	90	SP
				60	100	SP(60'),CL(61.6')

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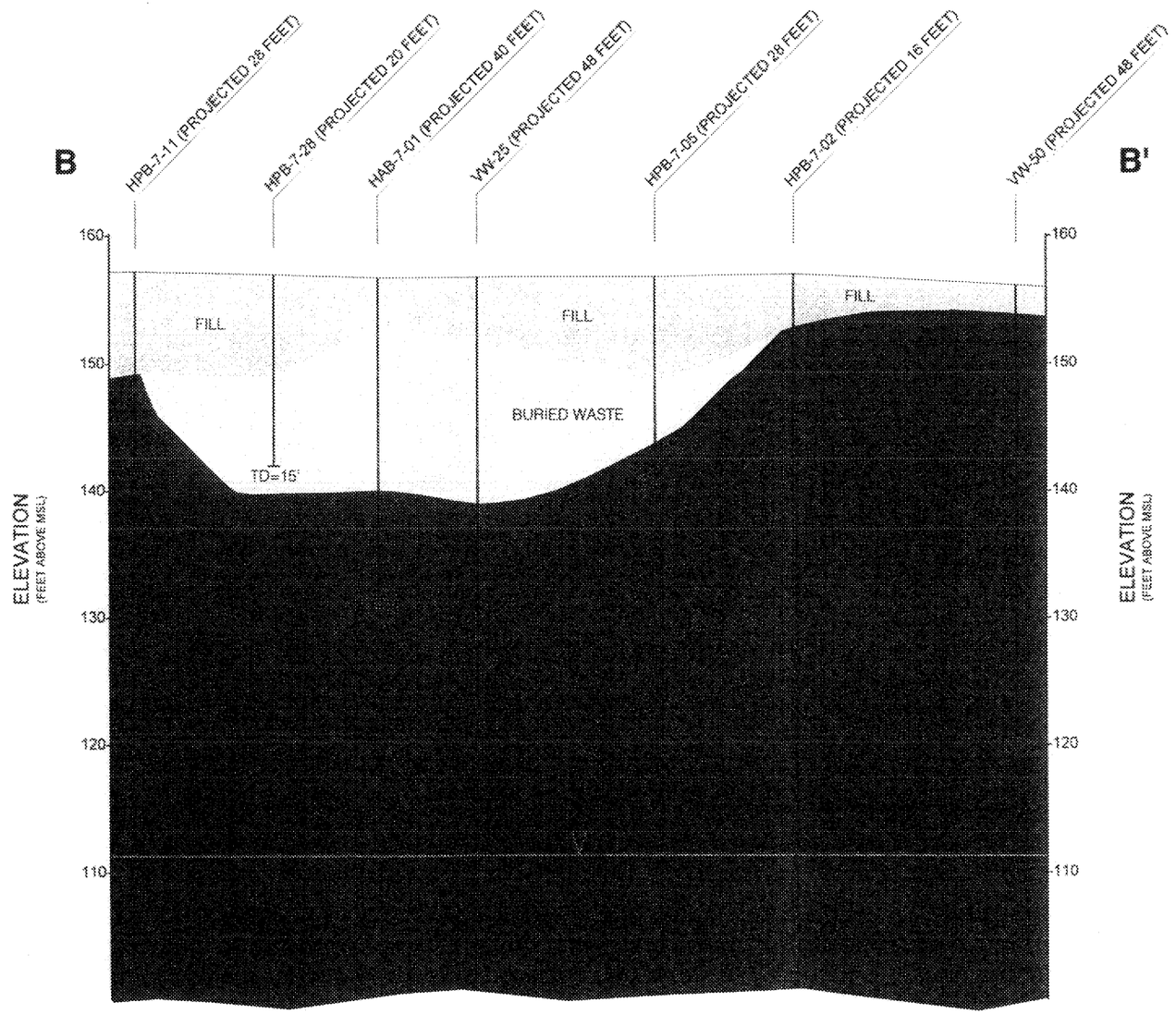

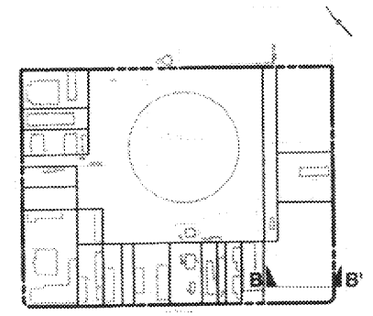

SECTION LOCATION MAP

LEGEND

	FILL
	BURIED WASTE
	NATIVE
HPB	WDIG HYDRAULICALLY-PUSHED BORINGS
HAB	WDIG HOLLOW-STEM AUGER BORING
VW-25	EPA VAPOR WELL
VW-50	WDIG VAPOR WELL
	GROUND WATER ELEVATIONS COLLECTED MARCH 2002

0 40 80 FEET
HORIZONTAL SCALE

0 10 20 FEET
VERTICAL SCALE

NOTE: IRREGULAR SURFACES MAY BE THE RESULT OF EXAGGERATION DUE TO DIFFERENT VERTICAL AND HORIZONTAL SCALES AND PROJECTION OF BORING DATA.

GENERALIZED CROSS SECTION B-B'
AREA 7

WASTE DISPOSAL, INC
SANTA FE SPRINGS, CALIFORNIA

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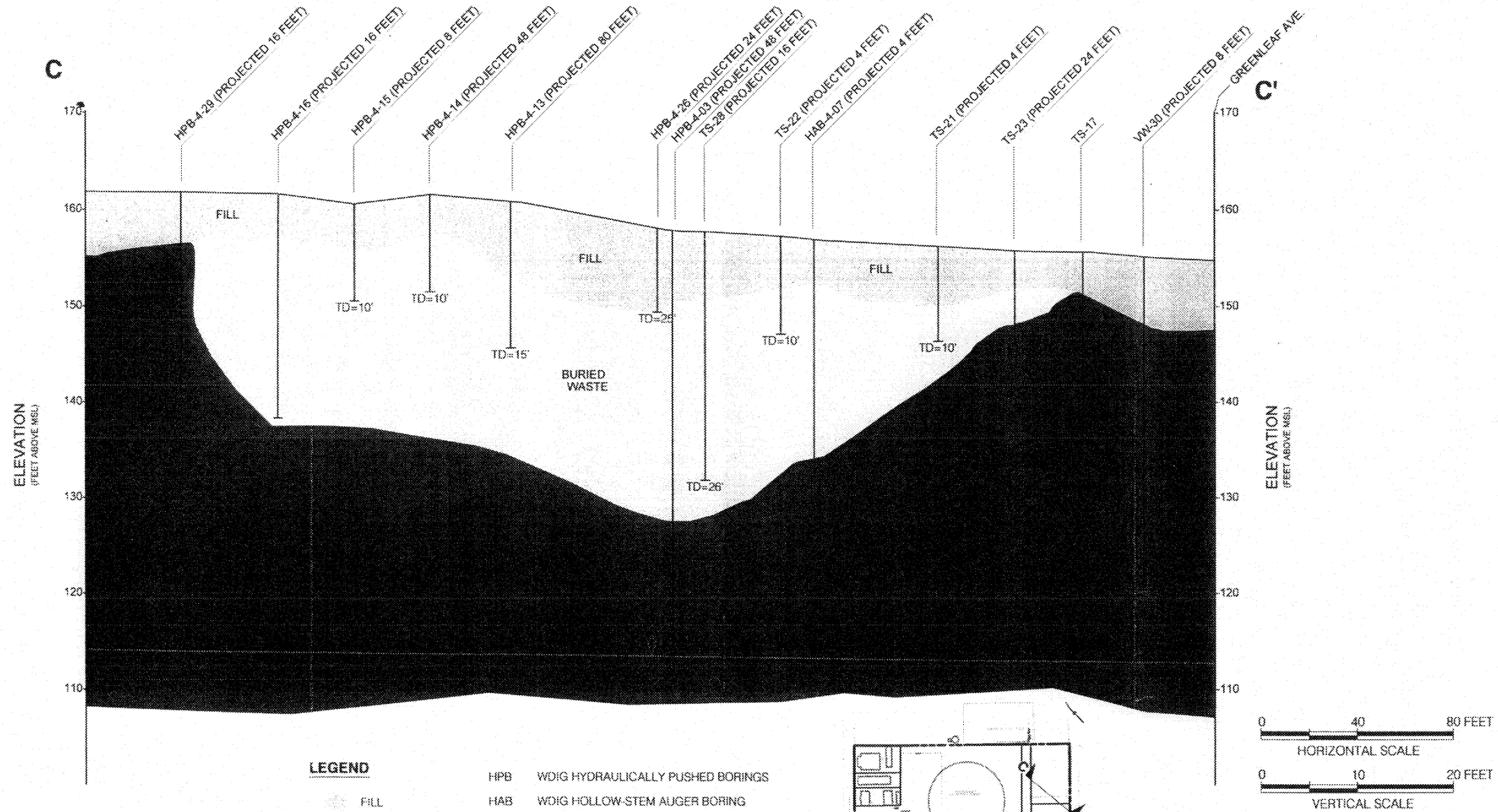
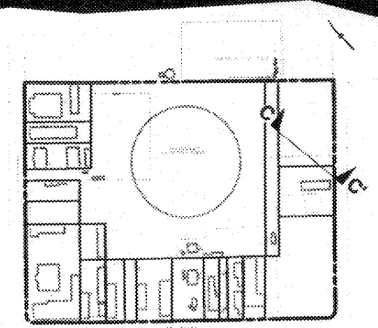


LEGEND

	FILL	HPB	WDIG HYDRAULICALLY PUSHED BORINGS
	BURIED WASTE	HAB	WDIG HOLLOW-STEM AUGER BORING
	NATIVE	VW	WDIG VAPOR WELL
		TS	WDIG GEOPROBE

GROUND WATER ELEVATIONS COLLECTED MARCH 2002.

NOTE: IRREGULAR SURFACES MAY BE THE RESULT OF EXAGGERATION DUE TO DIFFERENT VERTICAL AND HORIZONTAL SCALES AND PROJECTION OF BORING DATA.



SECTION LOCATION MAP

GENERALIZED CROSS SECTION C-C'
AREAS 4 AND 5

WASTE DISPOSAL, INC
SANTA FE SPRINGS, CALIFORNIA

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MEMORANDUM

Date: March 1, 2002

To: Allen Blodgett

From: Kim Waite, RG

Project: 30747

Subject: WDI Boring Log Summary

Test borings performed at the Waste Disposal, Inc. site (Site) located in Santa Fe Springs, California, are summarized on the attached spreadsheet. The spreadsheet has been divided into the eight areas of the Site. The boring number, bottom (i.e., thickness) of the fill material, fill material type, bottom of the waste, if present, and total depth are given for each boring. Please note that if more than one type of fill material was encountered in a boring, the predominant fill material type was bolded in the spreadsheet. If no fill material is given it is assumed that the boring was drilled entirely in native Site soils.

The total boring count by Site area is as follows:

- Area 1 – 80 borings
- Area 2 – 170 borings
- Area 3 – 12 borings
- Area 4 – 38 borings
- Area 5 – 33 borings
- Area 6 – 13 borings
- Area 7 – 37 borings
- Area 8 – 106 borings
- Total – 489 borings

A review of the boring logs was performed and indicates that the fill was logged as the following types of material:

- In approximately 68% of the boring logs the fill material was classified as silty sand/sandy silt (SM/ML)

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- In approximately 5% of the boring logs the fill material was classified as coarser material (i.e., sand [SP], sandy gravel [GP] or clayey gravel [GC])
- In approximately 18% of the boring logs the fill material was classified as fine-grained soil (i.e., clayey silt [ML] or silty clay [CL])
- In approximately 9% of the boring logs the fill material was classified as other material (i.e., either there was no fill present [1% of the borings], it consisted of broken concrete or asphalt [4% of the borings] or there was no log made of the boring [4% of the borings])

Please call me if you have any questions.

Attachment

AREA 1

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
GW-2	1	**gravel**		55
GW-1				60
SB-21	5	**gravel**		35
SB-22	5	**gravel**		35
SB-31	5	**sand**		35
SB-32	5	**silty sandy clay**		35
VW-3	0.5	**asphalt**	20	35
SB-43	5	**gravelly sand** clayey sand		35
SB-44	10	**silty clay**		35
SB-53	5	**silty clay & gravel**	15	35
GW-9	5	**concrete**	12.5	60
SB-63	5	**sandy silt**		35
VW-10	10	**clayey silt** silt		40
VW-11	10	**silty sand**		45
GW-10	15	**silty sand** silty clay		61.5
GW-11	10	**silty sand**		131.5
VW-16	5	**silty sand**		35.5
VW-17	10	**silty clay**		35
VW-18	5	**concrete**		40
GW-22	5	**silty sand**		80
TS-50	6.1	**silty sand**	10.1	14
TS-51	10.9	**silty sand**		14
TS-52	2	**silty sand**		14
TS-53	3.3	**silty sand**		12
TS-54	4.4	silty sand **clay**	7	12
TS-55	5.3	**silty sand**	10	12
TS-73	6	**silty clay**		12
TS-74	6	**silty sand**		12
TS-75	6	**silty sand**		14
TS-76	4	**silty sand**		14
TS-77	6.7	**silty sand**		14
TS-78	4.3	**silty sand**		14
TS-79	3.1	**silty sand**		14
TS-108	5.1	**silty sand**		16
TS-109	8.1	**silty sand**		16
TS-110	2.6	**silty sand**		16
TS-111	3.8	**silty sand**		16
TS-151	6	**silty clay**		16
TS-152	3.5	**silty sand**	4	16
TS-153	6.3	**silty clay** silty sand clayey silt		18
VW-35	10	silt silty sand **clay** silty clay		35

Notes:
Bolded fill type is the predominant type.
Depths are measured from surface.
If fill type is not designated, it is assumed that the boring was installed in native material.

AREA 1

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
VW-36	1.5	**clay**		30
VW-37	5	silty clay **silty sand**		30
VW-38	26	silty sand **silty clay** sandy silt silty clay silt silty clay	35	35
VW-39	0.5	**silty sand**		30
VW-40	5.5	silty sand **silty clay**		35
VW-44	1.5	**silty sand**	3	30
VW-46	11	silty clay silty sand **clay**		30
VW-62	13	sandy clay **silty clay**		31.5
VW-63	4	**sandy clay**	6	29
DP-1	8	silty sand sandy clay **silty sand**		21
DP-2	6	**silty sand**		21
DP-3	9	**silty sand**		21
DP-4	5	**silty sand**		21
DP-8	4.5	**asphalt**	20	24
HSA-1	6	**silt**	15.5	40
HSA-2	5	**asphalt**	17	40
HSA-3	5	**sandy silt**		35
DP-12	2.5	**gravelly sand**		20
DP-13	6	**clay** silty clay		20
DP-14	2.5	**concrete**	11	16
DP-15	1.5	**concrete**	14	20
DP-16	6	gravelly sand **sandy clay**		16
DP-17	4	**gravelly sand**	12	16
HSA-4	3	**silt**	11	35
DP-24	1.5	**silty sand**	9.5	16
DP-25	1.5	**concrete**	14	20
IDP-7	2.5	**silty sand**	9.5	16
IDP-11	7	silty sand **silty clay**		20
IDP-12	1.5	**silty sand**	3.5	20
IDP-13	1.5	silty sand	10.5	20
DP-26	10	sand **clay**		25
DP-27	5	**silt**	9	19

Notes:
Bolded fill type is the predominant type.
Depths are measured from surface.
If fill type is not designated, it is assumed that the boring was installed in native material.

AREA 1

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
DP-32	4	**sandy silt**	5.5	21
DP-39	3.5	**silty sand**	7	20
DP-40	3	**silty sand**	5.5	19
DP-41	2	**silt**	2.5	21
DP-42	4.5	**clay**	7	21
IDP-18	3.5	**sandy clay**	4	16
GW-32				127

Notes:
Bolded fill type is the predominant type.
Depths are measured from surface.
If fill type is not designated, it is assumed that the boring was installed in native material.

AREA 2

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
VW-1	15	**silt** **sandy silt**	20	35
SB-10	16	silty sand **gravelly sand**	17.5	35
SB-11	30	silt **clay** silt sand		35
SB-12	20.5	**silty sand** clayey silt		36.5
SB-14	12	**sand**	15	15
SB-15	10	**sand**	20	
GW-31	5.8	**silty sand**	6.4	65
GW-4	10	**silty sand**	30	71.5
SB-18	15	**silty sand** silty sand & gravel	20	35
VW-2	15	**sandy silt** silty clay sandy silt	20	35
SB-20	5	**sandy silt**	20	35
SB-23	5	**clayey silt**	17.5	40
SB-24	5	no sample	22.5	35
SB-25	10	**silty sandy clay**	25	35
GW-3	5	**silty sand**	16	70
VW-5	10	**sandy silt** clayey silt		35
SB-34	6	**asphalt**	25.5	37
VW-4	10	**sandy silt**	25	25
GW-5	5	**silty sand**		65
SB-37	3	**silty clay**	20	20
SB-38	6	**silty sand**	18	18
SB-39	6	**silty sand**	18	18
SB-40	7.5	**sandy silt**	17.5	35
SB-45	5	**asphalt**	15	40
GW-8	5	**silty clay**	20	65
SB-47	9	**silty clay** silty sand	20	20
VW-9	6	**silty clay**	20	20
SB-49	10	**silty sand**	21.5	21.5
SB-50	7.5	**silty clay** silt	12.5	45
SB-55	10	**sandy silt**	22.5	35
VW-8	7.5	**sandy silt**		35
SB-57	15	sandy silt & gravel **sandy clay & silt**	30	45
PB-2	5	**sandy silt**	23	23
SB-59	5	**sandy silt**	37.5	40
VW-15	5	**silty clay**		45

Notes:
Bolded fill type is the predominant type.
Depths are measured from surface.
If fill type is not designated, it is assumed that the boring was installed in native material.

AREA 2

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
SB-66	7.5	**sand** sandy silt	37.5	45
SB-67	15	**silty sand**	40	45
SB-68	10	**silt**	22.5	25
SB-69	5	**silty clay**	15	35
GW-16	7.5	**sandy silt & gravel**	22.5	79
GW-15	7.5	**sandy silt & gravel**	22.5	70
SB-107	15	**silty clay**	20	20
SB-108	10	**silty sand**	18	18
TS-13	4	**silty sand**	10	20
TS-14	8	**silty sand**	17.1	20
TS-29	6	**silty sand**	12	12
TS-30	10	silty sand **silty clay** clay	16	22
TS-31	5.5	**silty sand**	16	16
TS-32	5.7	**silty sand**	14	18
TS-33	3.7	**silty sand**	12	12
TS-34	3.7	**silty sand**	12.7	16
TS-35	3.5	**silty sand**	10	14
TS-36	1.9	**silty sand**	4.1	10
TS-37	4.5	**silty sand**		14
TS-38	7.1	**silty sand**	17.5	20
TS-39	13	**silty sand**	21.4	22
TS-40	6	**silty sand** clay	18	20
TS-41	9	**silty sand** silty clay	16.9	18
TS-42	6.7	**silty sand** silty clay	15.2	16
TS-43	6	**silty sand** silty clay	10	10
TS-44	10	**silty sand** silty clay silt	15.7	16
TS-46	5.7	**silty sand** silty clay silty sand	8	8
TS-47	6	**silty sand** silty clay	8	8
TS-48	6.9	**silty sand**	16.9	18
TS-49	4.5	silty sand **silty clay**	12	14
TS-56	No Log			
TS-57	10.8	**silty sand** silty clay sandy clay silty sand	17.8	10

Notes:
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If fill type is not designated, it is assumed that the boring was installed in native material.

AREA 2

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
TS-58	5	**silty sand** silty clay	10	16
TS-59	5.7	silty sand **silty clay** silty sand	12	14
TS-60	5.2	**silty sand** silty clay	11.8	14
TS-61	7	**silty clay**	11.7	14
TS-62	9	silty sand silty clay **silty sand**	12.8	16
TS-63	4.1	**silty sand**	10.3	14
TS-64	10.4	**silty sand** silty clay	14	14
TS-65	7.2	**silty sand** silty clay		18
TS-66	7.5	**silty sand**	16	18
TS-67	11.2	**silty sand**	18	18
TS-68	12	**silty sand**	18	20
TS-69	6.5	**silty sand**	18	20
TS-70	12	**silty sand** gravel	18	20
TS-71	11.4	**silty sand**		18
TS-72	10.4	**silty sand**		18
TS-80	10.1	**silty sand**		20
TS-81	14.8	**silty sand**		20
TS-82	15.8	**silty sand**		24
TS-83	16.6	**silty sand**		22
TS-84	17	**silty sand**		22
TS-85	11.8	**silty sand**		20
TS-90	2.4	**silty sand**		20
TS-91	5	**silty sand**	12	26
TS-100	5	silty sand **clay**	10.8	14
TS-118	4.4	**silty sand**	15.3	18
TS-123	8	**silty sand**	14	16
TS-124	No Log			
TS-125	8	**silty sand**	15.4	16
TS-126	5.4	**silty sand**	15.1	16
TS-127	No Log			
TS-128	No Log			
TS-129	No Log			
TS-130	No Log			
TS-131	No Log			
TS-132	No Log			
TS-133	No Log			
TS-134	No Log			
TS-135	No Log			
TS-140	No Log			

Notes:
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AREA 2

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
TS-141	No Log			
TS-144	5.2	**silty sand**	8.9	20
TS-145	7.6	**silty sand**		18
TS-146	2	**silty clay**		18
TS-148	10	**silty clay** clay	12	20
TS-149	10.7	**silty clay**	16	20
TS-150	2.3	**clayey silt**		14
VW-41	1	**silty clay**		20
VW-42	No Log			
VW-43	5	**silty clay**	10	33
VW-45	5.6	**silty sand**	18	30
VW-47	5.6	**silty sand**	12	30
VW-48	5	**silty sand**	19	35
NSP-1	4	**silty sand**	10	10
NSP-2	5	**silty sand**	10	10
NSP-3	6	**sandy silt**	9.5	9.5
NDP-1	5	**silty sand**	23	23
NDP-2	7	**silty sand**	21	21
NDP-3	5	**silty sand**	20	20
SSP-1	7	**sandy silt**	10	10
SSP-2	9	**sandy silt**	10	10
SSP-3	7	**sandy silt**	10	10
SDP-1	7	**silty sand**	23	23
SDP-2	10	**silty sand**	23	23
SDP-3	7	**silty sand**	23	23
EX-1	9	**silty sand**	23.9	23.9
EX-2	8	**silty sand**	23.4	23.4
EX-3	6	**sandy silt**	10	10
EX-4	5	**silty sand**	20	20
EX-5	4	**sandy silt**	10	10
EX-6	5	**silty sand**	20.5	20.5
P-1	8	**silty sand**	23.2	23.2
P-2	8	**silty sand**	22.4	22.4
P-3	8	**silty sand**	22.9	22.9
P-4	8	**silty sand**	22.4	22.4
AIV-1	7.5	**silty sand**	17	33
AIV-2	7.5	**silty sand**	17	33
AIV-3	7	**sandy silt**	16	33
AIV-4	5	**sandy silt**	16	33
DVW-1	7	**sandy silt**	17	33
DVP-1	8	**sandy silt**	17	33
DMP-1	7	**silty sand**	15.25	33
DMP-2	8	**sandy silt**	17	33
DMP-3	7	**sandy silt**	17	33
SVW-1	5	**sandy silt**		5
SVP-1	5	**sandy silt**		5
SMP-1	5	**sandy silt**		5
SMP-2	5	**sandy silt**		5

Notes:
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AREA 2

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
SMP-3	5	**sandy silt** gravel		5
SVW-1 (RV)	4.5	**silty sand** sandy clay	5	5
SVP-1 (RV)	5	**silty sand** sandy clay		5
SMP-1 (RV)	5	**silty sand** sandy clay		5
SMP-2 (RV)	5	**silty sand** sandy clay		5
SMP-3 (RV)	5	**silty sand** sandy clay		5
RW-1	10	**sandy silt**	22.5	22.5
RW-2	5	**sandy silt**	20	20
RW-3	9	**sandy silt**	20	20
RW-4	12	**sandy silt**	22.5	22.5
RW-5	12	**sandy silt**	24.7	24.7
RW-6	12	**sandy silt**	21.6	21.6
RW-7	10	**sandy silt**	21.5	21.5
RW-8	8	**sandy silt**	26	26
RW-9	12	**sandy silt**	21	21
RW-10	12	**sandy silt**	21	21
GW-33	12	**silty clay**		60

Notes:
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AREA 3

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
SB-13	20	**silty sand** silt		35.5
VW-6	5	**sandy silt**		35
TS-86	20	**silty sand**		20
TS-87	8.4	**silty sand**		12
TS-88	6	**silty sand**		18
TS-89	8.6	**silty sand**		20
TS-92	8.3	**silty sand**		20
TS-93	11.8	**silty sand**		16
TS-94	2.3	**silty sand**		14
TS-95				12
TS-147	3.1	**silty sand**		20
VW-28	6	**silty sand**		25

Notes:
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AREA 4

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
GW-6	9.5	**silty sand**	20	67.5
GW-7	10	**silty sand**		60
SB-41	5	**silty sand**	25	40
SB-42	5	**silty sand**		35
SB-51	5	**sandy clay**		35
HPB-4-13	8	**silty sand**	11	15
HPB-4-14	4	**silty sand**	10	10
HPB-4-15	5	**silty sand**	10	10
HPB-4-16	5	**silty sand**	24	24
HPB-4-17	3.5	**silty sand**		15
HPB-4-18	9	**silty sand**		15
HPB-4-19	7	**silty sand**		15
HPB-4-20	5	**silty sand**		15
HPB-4-21	3.5	**silty sand**		15
HPB-4-22	7	**silty sand**	15	15
HPB-4-23	6	silty sand **sand**	12	15
HPB-4-24	8	silty sand silt **silty sand**		15
HPB-4-25	3	**silty sand**	11	11
HPB-4-26	8.5	**silty sand**		8.5
HPB-4-27	4.5	**silty sand**		15
HPB-4-29	5	**silty sand**		21
HAB-4-02	5	**silty sand**	16	20
HAB-4-03	7	**silty sand** silt	30	40
HAB-4-04	4	**silty sand**	23	40
HAB-4-05	5	**silty sand**	14	20
HAB-4-06	9	**silty sand**		20
HAB-4-07	5	**silty sand**	23	25
TS-21	6	gravelly sand silty sand **sandy gravel**	10	10
TS-22	5.6	sandy gravel **silty sand**	10	10
TS-23	3.9	silty sand **silty clay**	7.6	10
TS-24	5.5	**silty sand**	8.3	10
TS-26	6	silty sand sand silt **silty sand**		16
TS-27	5.9	silty sand **sand**	22	22
TS-28	7.3	silty sand **clay**	26	26
TS-96	6	**silty sand**		18
TS-137	No Log			
TS-143	9.6	**silty sand**	29.4	30
VW-29	6.5	**silty sand**		35

Notes:
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AREA 5

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
VW-7	5	**sand**		35
GW-21	5	**silty clay**		60
TS-1	8.9	sandy silt silt sand **silty clay** clay	21	27
TS-2	5.6	sandy silt **sand** clay	23	26
TS-3	3.5	silty sand **sand** silty sand silty clay	13	20
TS-4	10	**silty sand** silty clay		19.5
TS-5	7.6	**silty sand** silty clay	15	22
TS-6	5.3	silty sand **silty clay** clay	12	22
TS-7	6	silty sand **silty clay** clay	21.9	24
TS-9	6	**sandy silt** silty clay	16	22
TS-10	6.8	**silty sand** silty clay silty sand sand silt silty sand	23.9	26
TS-11	5.3	**silty sand** silty clay	23.9	26
TS-12	6	**silty sand** clay		20
TS-15	1.4	**silty sand**	12	18
TS-17	4	**silty sand** sand silty sand sand silty clay		20
TS-25	8.1	**sandy clay**	10	10
TS-138	No Log			
VW-30	7	**silty clay**		35
VW-51	8	**silty clay**	23.5	35
AIV-1	7	**sandy silt**	24	33

Notes:
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AREA 5

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
AIV-2	8	**sandy silt**	23	33
AIV-3	14	**sandy silt**		33
AIV-4	13	**sandy silt** sandy clay	27	33
DVW-1	7	**sandy silt**	18	33
DVP-1	7	**sandy silt**	16	33
DMP-1	7	**sandy silt**	17	33
DMP-2	14	**sandy silt**		33
DMP-3	13	**sandy silt** sandy clay	21	33
SVW-1	5	**sandy silt**		5
SVP-1	5	**sandy silt**		5
SMP-1	5	**sandy silt**		5
SMP-2	5	**sandy silt**		5
SMP-3	5	**sandy silt**		5

Notes:
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AREA 6

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
SB-61	15	**silty clay** clay		35
SB-70	7.5	**sandy silt**	10	35
VW-12				35
SB-78	5	**sandy clay**		35
VW-26	5	**silty clay**		35
TS-8	6	silty sand		20
TS-16	1.8	**sand** silty sand	8.6	20
TS-18	1	silty sand		20
TS-19	8	**silty sand** silty clay		16
TS-20	8	**silty sand**		10
TS-97	5	**silty sand**		16
TS-98	3.5	**silty sand**	4	14
VW-31	7	**silty clay**		35

Notes:
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AREA 7

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
VW-24	2.5	**asphalt**		35
VW-25	5	**silty clay**	17.5	35
SB-91	10	**silty clay**		35
GW-28	5	**silty sand**		66.5
GW-29	5	**silty sand**		66.5
GW-30	5	**silty sand**		96
HPB-7-01	5	**silty sand**	12	15
HPB-7-02	4	**silty sand**		15
HPB-7-03	11	**silty sand**		15
HPB-7-04	3	**silty sand**		15
HPB-7-05	8	**silty sand** sandy silt	13	15
HPB-7-06	5	**clayey sand** silty sand		15
HPB-7-07	9	**silty sand** silt	14	15
HPB-7-08	2	**silt**		2
HPB-7-09	4	**silty sand**		15
HPB-7-10	14	**silty sand**		15
HPB-7-11	8	**silty sand**		15
HPB-7-12	3	**silty sand**		15
HPB-7-28	8	**silty sand**	15	15
HAB-7-01	3.5	**silty sand**	16.5	25
TS-136	No Log			
VW-32	2	**silty clay**		35
VW-50	2	**sand**		35
AIV-1	7	**silty sand**	18	33
AIV-2	7	**silty sand** sandy clay	18	33
AIV-3	9	**silty sand**	17	33
AIV-4	8	**silty sand**	17	33
DVW-1	4	**silty sand**	18	33
DVP-1	6	**silty sand**	18	33
DMP-1	5	**silty sand**	16	33
DMP-2	3	**silty sand**	18	33
DMP-3	14	**silty sand** concrete	20	33
SVW-1	4.5	**silty sand**	5	5
SVP-1	5	**silty sand**		5
SMP-1	5	**silty sand**		5
SMP-2	5	**silty sand**		5
SMP-3	5	**silty sand**		5

Notes:
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AREA 8

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
GW-13	3	**silty sand**	10	60
GW-14	10	**gravel**		55
VW-13	3	**sandy silt**	20	35
VW-19	7.5	**silty sand**		45
VW-14	5	**concrete**	15	35
VW-20	7.5	**silty sand**		35
VW-21	5	**silt**		35
VW-22	5	**silt**		25
VW-23	5	**asphalt**	20	45
GW-23	2.5	**silty clay**		65
GW-24	2.5	**silty clay**		115
GW-26	5	**silty sand**		66.5
GW-27	10	**silty sand**		66.5
GW-18	7	**silty clay**	15.5	74
GW-19	7	**silty clay**	15.5	60
TS-45	8	**silty sand** silty clay	15	16
TS-99	2.8	**silty sand**		10
TS-101	3.4	**silty sand**		14
TS-102	8.6	silty sand sand **clay**	12	14
TS-103	5.3	**silty sand**	10	14
TS-104	6.7	**silty sand** silty clay	11	14
TS-105	7.5	**silty sand** silty clay	10.1	14
TS-106	10	**silty sand** silty clay silty clay	13.9	16
TS-107	7.3	**silty sand**	15.5	18
TS-112	4.5	**silty sand** silty clay	10	12
TS-113	4.6	**silty sand**	6	12
TS-114	1	**silty sand**		12
TS-115	3.6	**silty sand**	10	12
TS-116	4.4	**silty sand**		12
TS-117	2	**silty sand**	9.4	12
TS-119	5	**silty sand**		14
TS-120	5.5	**silty sand**	7.3	12
TS-121	3.7	**silty sand**		12
TS-122	8.4	**silty sand** silty clay sand sandy clay		18
TS-139	No Log			
TS-142	No Log			

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AREA 8

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
VW-27	3	**silty clay**		34
VW-33	5	**silty clay**		35
VW-34	27	silty sand silty clay silty sand silt **sand**		45
VW-49	5	**silty sand**		35
VW-52	No Log			
VW-53	7	**silty sand** silty clay	12	30
VW-54	10.5	**silty clay**	11	34
VW-55	3	silty sand **silty clay**	4	31
VW-56	9	**silty sand**		31
VW-57	3	**silty sand**	4	31.5
VW-58	2	**asphalt**		31
VW-59	4	**clay**		31
VW-60	7.5	silty sand silty clay **clay**	8.5	32
VW-61	4	**silty clay**		34
AIV-1	6	**silty sand**		33
AIV-2	8	**silty sand**		33
AIV-3	16	silty sand clayey sand **sandy clay**		38
AIV-4	8	silty sand sand **sandy clay**	19	38
DVW-1	6	silty sand **sand** sandy clay	15	33
DVP-1	4	**silty sand**		33
DMP-1	5	**silty sand** clayey sand	12	33
DMP-2	4	**silty sand** sand		33
DMP-3	8	**silty sand**		33
SVW-1	5	**silty sand** sand silty sand sandy clay		5
SVP-1	5	**silty sand** sandy clay		5
SMP-1	5	**silty sand** sandy clay		5

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AREA 8

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
SMP-2	5	**silty sand** sandy clay		5
SMP-3	5	**silty sand** sandy clay		5
DP-5	14	silt **silty clay** clay	15.5	21
DP-6	10.5	**silt** clay silty clay	17	21
DP-7	9	silt **silty clay** clay		21
DP-9	5	**silty sand** silty clay	11	20
DP-10	5	**silty gravel**	19	20
DP-11	3.5	**silty sand**	14	20
HSA-5	3.5	**silt**	14	40
HSA-6	1.5	**asphalt**	15	40
HSA-7	3	**silt**	9	35
IDP-1	2	**clayey silt**	11	20
IDP-2	3	**silty clay**	11	20
IDP-3	10	**sandy silt**		20
IDP-4	2	**concrete**	10	20
IDP-5	2.5	**silt**	10.5	20
IDP-6	12	**silty sand**		20
DP-18	10	**silty clay**		20
DP-19	9	**sandy silt**	10	20
DP-20	9	**silty sand**	14.5	20
DP-21	1	**concrete**	15	20
DP-22	3.5	**silty gravel**	9	20
DP-23	6.5	**sandy clay**	8	20
IDP-8	4.5	**silt**	11.5	20
IDP-9	9	silty sand clayey silt **sandy silt**		20
IDP-10	6	**silty sand**	11.5	20
DP-28	4.5	**silt**	6.5	16
DP-29	4	**sandy silt**	14	20
DP-30	4	**silty clay**	9	20
DP-31	2	**silt**	13.5	20
HSA-8	2	**sandy silt**	16	35
DP-33	9	**silty clay** clay		21
DP-34	5	**sandy clay**	12.5	21
DP-35	5	**sandy clay**	10	21
DP-36	5	**sandy silt**	7	21
DP-37	9	**silty sand**		21

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AREA 8

Boring No.	Bottom Fill	Fill Type	Bottom Waste	Total Depth
DP-38	6	**silty sand**	7.5	21
DP-43	5	**sandy clay**	10	17
IDP-14	5	**sandy clay**	19	20
IDP-15	5	**sandy clay**	15	20
IDP-16	4.5	**sandy silt**	19	20
IDP-17	4	**sandy silt**	5	5
IDP-19	2	**concrete**	5	5
IDP-20	1	**concrete**	11	20

Notes:
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EBASCO SERVICES INCORPORATED

FINAL
SOIL CHARACTERIZATION REPORT

WASTE DISPOSAL INC.
SANTA FE SPRINGS, CA
VOLUME III
(APPENDIX C)

MAY 1989

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Ebasco Services Incorporated

3632E

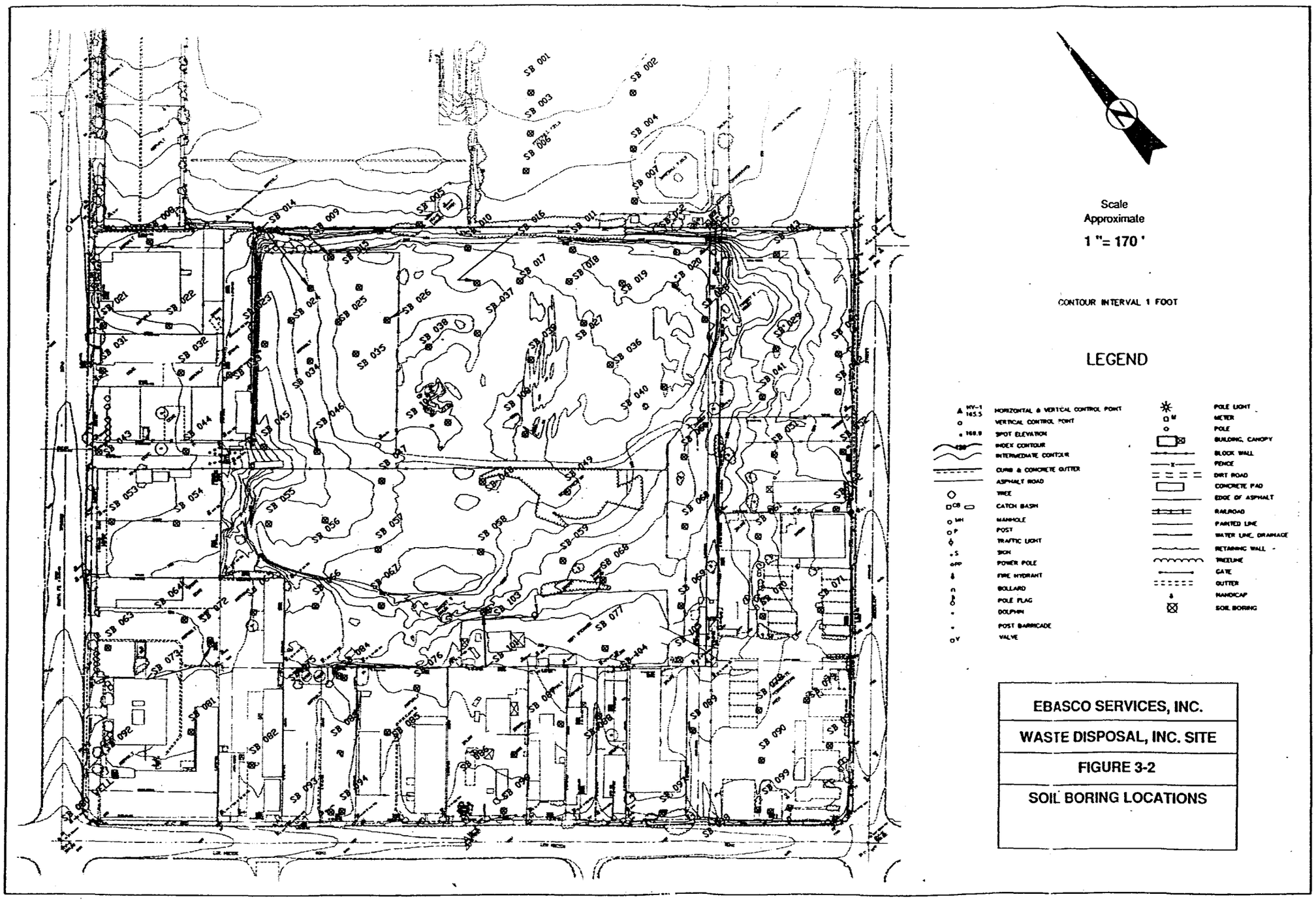
Of the 6 borings which were drilled on the high school athletic field, 2 were approximately 6 feet in depth. All other borings on the site averaged about 35 feet total depth below ground surface. However, in some areas, borings were completed just above groundwater.

3.4 SAMPLING PROCEDURES

Soil samples were collected during drilling operations with a split-spoon sampler. The split-spoon sampler was lined with stainless-steel tubes 2.5 inches in diameter. The soil sample contained in the liners was trimmed, covered with aluminum foil and capped with a plastic cover. Soil samples were collected at a minimum of once every 5 feet drilled and at lithologic changes. A minimum of 3 samples per boring were collected for laboratory analysis. One sample per boring was collected for non-CLP laboratory analysis. Unless contaminants were encountered at a shallower depth, this sample was the deepest sample. However, if contaminants were encountered at a shallower depth, samples were collected for non-CLP analysis at each of these locations. Generally, 1 sample from near the surface and/or in the middle of each sump, 1 at mid-depth and/or at the bottom of each sump, and 1 deep, or in the "clean area" below each sump was collected.

Complete field lithologic logs of all borings were kept (Appendix C). These logs included the following information:

- Physical characterization and grain size distribution of sample
- Stratigraphic boundaries
- Presence of any visible contaminants
- Details relevant to split-spoon sampling
- Color changes
- Moisture content
- Groundwater elevation
- Thickness of individual units
- Any other conditions encountered during drilling (i.e., changes in drilling rate, etc.)



EBASCO SERVICES, INC.

WASTE DISPOSAL, INC. SITE

FIGURE 3-2

SOIL BORING LOCATIONS

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-001
BORING LOCATION: ATHELETIC FIELD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/11/88 0855
DATE/TIME COMPLETED: 09/11/88 1008
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 147.7899
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND, SILT, CLAY		0 0 0	0.0	0	N	RB	SM	M	MH	0.0	WAIT ON OVA TO BE CALIBRATED. NO SURFACE CLP SAMPLE COLLECTED. DITCH SAMPLE ONLY. GRASS & BROWN TOP SOIL. 0859
5	MED SAND, FINE SAND, SILT	01 02 03	14 20 20	0.0	0	N	RB	SM	M-L	SM	0.8	RED BROWN SANDY SILT WITH NO VISIBLE EVIDENCE OF CONTAMINATION. CLP SAMPLE COLLECTED. 0902
10	CRS SAND, MED SAND, FINE SAND, SILT, CLAY	04 05 06	20 25 35	0.0	0	N	B	SM	M-L	SW-CL	0.8	MINOR RED BROWN SAND & RED BROWN CLAY. NO EVIDENCE OF CONTAMINATION. CLP SAMPLE COLLECTED. 0912
15	SILT, CLAY		10 25 50	1.0	0	N	RB	SM	L	CL	0.8	RED BROWN SILTY CLAY TO RED BROWN CLAY. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 0921
20	SILT, CLAY	07 08 09	10 16 26	0.0	0	N	RB	SM	L	CL	0.8	RED BROWN STIFF CLAY WITH TRACES OF RED BROWN SILTY CLAY IN INTERVALS. NO VISIBLE CONTAMINATION. CLP SAMPLE COLLECTED. 0932
25	MED SAND, FINE SAND		50 100 0	0.3	0	N	B/RB	SM	M	SP	0.2	RED BROWN TO LIGHT BROWN, MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION. IRON STAINED. NO SAMPLES COLLECTED. 0943
30	SILT, CLAY		14 21 40	0.6	0	N	B	SM	M	ML-SM	0.6	LIGHT BROWN SANDY SILT WITH MINOR CLAY AND MINOR FINE SAND INTERVALS. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 0954
35	SILT, CLAY		22 75 0	0.9	0	N	B	SM	NR	SM	0.6	NO SAMPLE RECOVERY. DITCH SAMPLES = LIGH BROWN SANDY SILT AS ABOVE. NON CLP SAMPLE NOT COLLECTED DUE TO NO SAMPLE RECOVERY. END OF HOLE. 1006
40			0 0 0	0.0	0						0.0	END OF HOLE. 1008

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-002
BORING LOCATION: ATHELETIC FIELD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/17/88 0850
DATE/TIME COMPLETED: 09/17/88 0925
TOTAL DEPTH: 11.50
SURFACE ELEVATION: 148.3136
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X		0 0 0	0.0	0	N	RB	MO	M,M	CL	0.0	SILTY CLAY WITH GRAVEL (2%), RED/BROWM, DAMP, MEDIUM DENSE, GRASS TO APPROX 3".
5	X--X	01 02	12 10 9	0.0	0	N	RB	DR	M,M	CL	0.0	SILTY CLAY WITH GRAVEL (2%), RED/BROWN, DRY, MEDIUM DENSE.
10	X--X	04 05 06	14 50 0	0.0	0	N	B	SM	H,H	SP	0.0	BROWN, DAMP, DENSE. NO WATER. AT 11.5' FINE SAND.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-003
BORING LOCATION: ATHELETIC FIELD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/17/88 1105
DATE/TIME COMPLETED: 09/17/88 1125
TOTAL DEPTH: 11.50
SURFACE ELEVATION: 148.3217
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT X--X		0 0 0	0.0	0	N	RB	DR	L,L	CL	0.0	SILTY CLAY, MEDIUM DENSE, RED BROWN DAMP, WITH PEBBLES. GRASS APPROXIMATELY 3". 1105
5	MED SAND X--X, FINE SAND X--X, SILT X	01 02 03	11 17 25	0.0	0	N	RB	SM	M,M	SP	0.0	MEDIUM GRAINED SAND, RED BROWN, DAMP, MEDIUM DENSE, POORLY CEMENTED. 1110
10	CRS SAND X	04 05 06	12 15 17	0.0	0	N	YB	SM	H,H	SP	0.0	COARSE GRAINED SAND, YELLOW BROWN, DAMP, MEDIUM DENSE, LOOSE, POORLY CEMENTED. NO WATER, NO CAVING. CLP SAMPLE 1125

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-004
BORING LOCATION: ATHELETIC FIELD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/17/88 0940
DATE/TIME COMPLETED: 09/17/88 1010
TOTAL DEPTH: 11.50
SURFACE ELEVATION: 148.8650
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT X--X CLAY		0 0 0	0.0	0	N	RB	DR	M,M	CL	0.0	SILTY CLAY WITH GRAVEL (3%), RED BROWN, DENSE,DAMP, GRASS APPROXIMATELY 3". 0940
5	SILT X--X CLAY	01 02 03	19 24 28	0.0	0	N	B	SM	M,M	CL	0.0	SILTY CLAY (CONTINUED). CLP SAMPLE. 0955
10	CRS SAND X--X MED SAND X--X FINE SAND	04 05 06	18 22 29	0.0	0	N	B	SM	H,H	SP	0.0	AT 10'5" FINE GRAINED SAND, BROWN, DAMP, DENSE, POORLY CEMENTED. AT 11'0" MEDIUM GRAINED SAND. AT 11'3" COARSE GRAINED SAND,BROWN,DENSE,DAMP, POORLY CEMENTED. NO WATER, NO CAVING.NON CLP. 1010

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-005
BORING LOCATION: FEDCO
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/15/88 1405
DATE/TIME COMPLETED: 09/16/88 0845
TOTAL DEPTH: 55.00
SURFACE ELEVATION: 149.6096
WATER DEPTH: 41.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	PORE/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT--CLAY	01 02 03 04	12 22 50	0.0	0	N	RB	SM	L,M	CL	0.0	ASPHALT (3"), GRAVEL BASE (9") AT 1' SILTY CLAY, RED BROWN, DAMP,DENSE. CLP SAMPLE. DUPLICATE INORGANIC SAMPLE. 1415
5	SILT--CLAY		12 33 40	0.0	0	N	RB	SM	L,M	CL	0.0	SILTY CLAY, REDDISH BROWN TO BROWN,DAMP, DENSE, AT 9' SILTY SAND.
10	FINE SAND--SILT--CLAY	05 06 07 08	17 22 22	0.0	0	N	LB	SM	MH	SM	0.0	SILTY SAND, LIGHT BROWN, DAMP, MEDIUM DENSE. CLP SAMPE. DUPLICATE INORGANIC SAMPLE. 1430
15	FINE SAND		14 22 24	0.0	0	N	RB	SM	M,M	SM	0.0	FINE SAND, RED BROWN, DAMP, MEDIUM DENSE
20	CRS SAND	09 10 11 12	9 15 31	0.0	0	N	G	SM	H,H	SP	0.0	@ 18'0" COARSE SAND, GRAY, DAMP, MEDIUM DENSE. CLP SAMPLE. DUPLICATE INORGANIC SAMPLE. 1502
25	FINE SAND--SILT--CLAY		0 0 0	0.0	0	N	LB	SM	M,M	SM	0.0	SILTY SAND, SEEDED WITH MINOR CLAY, LIGHT BROWN, DAMP, MEDIUM DENSE.
30	MED SAND--FINE SAND--SILT	13 14 15	18 35 50	0.0	0	N	RB	SM	M,M	SM	0.0	SILTY FINE GRAINED SAND, RED BROWN, DAMP, MEDIUM DENSE. CLP SAMPLE. 0800
35	CRS SAND		17 20 24	0.0	0	N	YB	SM	H,H	SP	0.0	COARSE GRAINED SAND, YELLOW/TAN, DAMP, MEDIUM DENSE TO DENSE.
40	CRS SAND--MED SAND--FINE SAND	16 17 18	24 50 0	0.0	0	N	YB	WT	M,M	SP	0.0	AT 40' FINE GRAINED SILTY SAND, BROWN, MOIST. AT 41'3" COARSE GRAINED SAND WITH COBBLES, WET, YELLOW BROWN. NON CLP SAMPLE 0815
45	CRS SAND--MED SAND		28 50 0	0.0	0	N	YB	WT	H,H	SP	0.0	COARSE GRAINED SAND, YELLOW/BROWN, WET MEDIUM DENSE TO DENSE. AT 46' MEDIUM GRAINED SAND.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-005
BORING LOCATION: FEDCO
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/15/88 1405
DATE/TIME COMPLETED: 09/16/88 0845
TOTAL DEPTH: 55.00
SURFACE ELEVATION: 149.6096
WATER DEPTH: 41.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50			X						28 50 4	0.0	0	N	YB	WT	H,H	SP	0.0	COARSE GRAINED SAND WITH PEBBLES, YELLOW BROWN, WET, MEDIUM DENSE TO DENSE.
55			X						28 50 5	0.0	0	N	YB	WT	H,H	SP	0.0	COARSE GRAINED SAND, YELLOW BROWN, WET, MEDIUM DENSE TO DENSE. WATER AT 41'. HEAVING BELOW 41'. 0845

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-006
BORING LOCATION: ATHELETIC FIELD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/17/88 1030
DATE/TIME COMPLETED: 09/17/88 1050
TOTAL DEPTH: 11.50
SURFACE ELEVATION: 149.0418
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X		0 0 0	0.0	0	N	RB	DR	LM	CL	0.0	GRASS TO APPROX 3". SILTY CLAY WITH PEBBLES, RED/BROWN DAMP, MEDIUM DENSE,ROOTLETS. ARCHIVE SAMPLE TAKEN.
5	X--X	01 02 03	8 12 18	10.0	0	N	B	DR	MM	SP	0.0	FINE SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY, CEMENTED. AT 7.5' MEDIUM GRAINED SAND. NON CLP SAMPLE. 1035
10	X--X	04 05 06	10 16 27	7.0	0	N	LB	DR	HH	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE, LOOSE, POORLY CEMENTED. CLP SAMPLE. NO WATER, NO CAVING 1050

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-007
BORING LOCATION: BASEBALL FIELD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/17/88 1052
DATE/TIME COMPLETED: 09/17/88 1240
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 149.7148
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND X--X		0 0 0	0.0	0	N	B		M	MH	0.0	SURFACE SAMPLE (GRAB). LIGHT BROWN TOPSOIL, NO HNU READING. 1052
5	CLAY X	01 02 03	33 71 6	0.0	0	W	DB		L	OH	0.0	RIG BREAKDOWN. NO VISIBLE CONTAMINATION, DARK BROWN CLAY, DENSE, STIFF, CLP SAMPLE. 1133
10	MED SAND X--X; CLAY X	04 05 06	20 30 35	0.0	0	N	G-B	SM	L-M	CL	0.0	NO VISIBLE CONTAMINATION. GRAY CLAY GRADING TO BROWN, MEDIUM GRAINED SAND WITH SILT. CLP SAMPLE. 1142
15	SILT X--X		17 30 35	0.0	0	N	G	SM	L	CL	0.0	NO VISIBLE CONTAMINATION. GRAY SILTY CLAY. NO SAMPLE COLLECTED. 1151
20	FINE SAND X--X; SILT X--X	07 08	12 21 21	0.3	0	N	B	SM	L-M	SP-SM	0.6	BROWN FINE GRAINED SAND WITH TRACES OF SILT AND CLAY. NO RECOVERY ON LAST INORGANIC SAMPLE. CLP SAMPLE. 1203
25	FINE SAND X--X; SILT X--X		70 0 0	0.2	0	N	B			SP-SM	0.3	CHECKED DITCH SAMPLE. NO RECOVERY, SAME AS ABOVE. NO SAMPLES COLLECTED. 1210
30	FINE SAND X--X; SILT X--X		38 52 0	0.2	2	N	G	SM	L	CL	0.2	GRAY CLAY WITH SILT AND MINOR FINE GRAINED SAND. NO VISIBLE CONTAMINATION. 1222
35	MED SAND X--X; SILT X	09 10 11	35 50 0	0.7	0	N	G-B	SM	M-L	SP-ML	1.4	GRAY MEDIUM TO COARSE GRAINED SAND GRADING TO BROWN SILT WITH CLAY. 1/3 RECOVERY ON ORGANIC. FULL RECOVERY ON INORGANICS. NON CLP SAMPLE. 1234

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-008
BORING LOCATION: S&L ENGINEERING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/16/88 1205
DATE/TIME COMPLETED: 09/16/88 1400
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 153.7600
WATER DEPTH: 48.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT	01 02 03	5 6 8	0.0	0	N	G-B	SM	M,M	SM	0.0	ASPHALT (APPROX 3"). BASE (APPROX 9"). AT 1' SILTY SAND, GREY BROWN, DAMP, SOFT TO MEDIUM DENSE. CLP SAMPLE. 1210
5	FINE SAND		5 6 7	0.0	0	N	B	SM	M,M	SM	0.0	SILTY FINE GRAINED SAND, BROWN, DAMP, MEDIUM DENSE.
10	FINE SAND	04 05 06	6 7 8	0.0	0	N	LB	SM	M,M	SM	0.0	FINE GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE. CLP SAMPLE. 1225
15	SILT, CLAY		18 30 30	0.0	0	N	LB	SM	M,M	CL	0.0	SILTY CLAY, LIGHT BROWN, DAMP, MEDIUM DENSE TO DENSE.
20	CLAY	07 08 09	13 23 30	0.0	0	N	G-B	SM	L,L	CL	0.0	LEAN CLAY, GREENISH BROWN, STIFF, DAMP CLP SAMPLE. 1245
25	FINE SAND		9 14 23	0.0	0	N	G-B	SM	M,M	SM	0.0	SILTY SAND, GREENISH BROWN, MEDIUM DENSE, DAMP.
30	MED SAND, FINE SAND	10 11 12	16 30 35	0.0	0	N	B	SM	M,H	SP	0.0	MEDIUM GRAINED SAND, BROWN, MEDIUM DENSE, DAMP. CLP SAMPLE.
35	MED SAND, FINE SAND		12 50 0	0.0	0	N	G-B	MO	H,H	SP	0.0	MEDIUM GRAINED SAND, GREEN BROWN, MEDIUM DENSE, DAMP.
40	CRS SAND	13 14 15	50 0 0	0.0	0	N	GR	MO	H,H	SP	0.1	AT 41' VERY COARSE GRAINED PEBBLY SAND, GRAY, MOIST, LOOSE. NON CLP SAMPLE. 1320
45	COBBLES, CRS SAND		30 50 0	0.0	0	N	T-G	MO	H,H	SW	0.0	VERY COARSE GRAINED PEBBLY SAND, TAN AND GRAY, MOIST, DENSE.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-008
BORING LOCATION: S&L ENGINEERING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/16/88 1205
DATE/TIME COMPLETED: 09/16/88 1400
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 153.7600
WATER DEPTH: 48.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	X--X--X		50 0 0	0.0	0	N	G-B	MO	H,H	SW	0.0	VERY COARSE GRAINED PEBBLY SAND, TAN AND GRAY, MOIST, LOOSE.
55	X--X--X		0 0 0	0.0	0	N	G-B	MO	H,H	SW	0.0	VERY COARSE GRAINED PEBBLY SAND, TAN AND GRAY, MOIST, LOOSE.
60	X--X--X		0 0 0	0.0	0	N	G-B	MO	H,H	SW	0.0	VERY COARSE GRAINED PEBBLY SAND, TAN AND GRAY, MOIST, LOOSE. WATER AT 48'. HEAVING AT WATER.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-009
BORING LOCATION: RV LOT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/28/88 0850
DATE/TIME COMPLETED: 09/28/88 1030
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 167.0152
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT		0 0 0	0.0	0	N	B	D	L	ML	0.0	CONCRETE ENCOUNTERED AT 1'. TAILINGS INCLUDED BROWN SILT. NO SAMPLE POSSIBLE. 0850
5	FINE SAND--SILT		0 0 0	0.5	0	N	T	D	L-M	ML	0.0	TAN SANDY SILT, MUCH DEBRIS (RED BRICK & CONCRETE), NO SAMPLE POSSIBLE. 0901
10	FINE SAND--SILT		0 0 0	2.8	0	N	BL	D	L	ML	1.4	TAILINGS INCLUDE BROWN SILT WITH TRACES OF CONCRETE,BRICKS AND RUBBLE. TOUGH DRILLING, NO SAMPLE POSSIBLE [NO SUMP MATERIAL]. 0906
15	SILT--CLAY	01 02 03	13 25 16	0.8	0	LH	DG-B	MW	L	ML	0.0	DARK GREY TO BLACK SILT WITH CLAY, MOIST TO WET, POSSIBLE SUMP MATERIAL. CLP SAMPLE. 0915
20	SILT--CLAY		30 55 0	10.0	0	N	B	M	L	ML	0.4	NO RECOVERY, BASEBALL SIZED CHUNCKS OF CONCRETE IN SAMPLER, BROWN CLAYEY SILT. 0935
25	FINE SAND--SILT	04 05 06	7 8 8	0.0	0	N	B-T	M	L	ML	0.4	BROWN TO TAN SANDY SILT WITH SOME CLAY, NO VISIBLE CONTAMINATION. CLP SAMPLE. 0955
30	MED SAND--FINE SAND		20 27 25	0.0	0	N	T	SM	M	SM	0.4	TAN SILTY SAND,NO VISIBLE CONTAMINATION. 1010
35	CRS SAND--MED SAND	07 08 09	35 65 0	0.9	0	N	T	SM	H	SD	1.1	TAN MEDIUM TO COARSE GRAIN SAND, NO VISIBLE CONTAMINATION. NON CLP SAMPLE. 1025

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: D. MELCHIOR

BORING NUMBER: SB-010
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/08/88 1345
DATE/TIME COMPLETED: 09/08/88 1530
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 166.2232
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X		X	X	X			18 15 20	10.0	0	N	B	DR	M	SM/GM	0.0	SILTY SAND WITH COBBLE, DARK BROWN, DRY, NO COHESIVE PROPERTIES. 1345
5		X			X				7 8 27	0.0	0		B	DR	M	SP	0.0	FINE SAND WITH COBBLES, DARK BROWN, DRY, POOR SAMPLE RECOVERY.
10	X	X							17 45 27	0.0	0	N	G	DR	H	GP	0.0	10-11.5' NO SAMPLE RECOVERY, ALL ROCKS.
15									28 50 45	0.0	0						0.0	CONCRETE AT 15'. NO SAMPLE COLLECTED. DRILLER WILL CONTINUE ON. CLEARED THE CONCRETE AT 16'. SAMPLE AT 16-17.5'. RECOVERY, OILY MATERIAL ON SIDE OF SPLIT SPOON ABOUT 1' THICK.
20				X	X	X		01 02 03	14 23 27	20.0	10	LH	B	SM	L	ML	24.0	BROWN FINE SAND AND SILT. MOIST AND COHESIVE. NON CLP SAMPLE. 1430
25			X					04 05 06	16 21 30	30.0	0	LH	B/T	DR	M/H	SP	16.5	25-26.5' SAND TRAP INSERTED SINCE ORIGINAL DRIVE GAVE NO RECOVERY. HNU=16 PPM. FINE SAND & SILT AT 25-26'. COARSE SAND AT 26-26.5'. COLLECTED WITH SAND TRAP. HNU=17 PPM. CLP SAMPLE.
30			X						30 40 50	460.0	4		T	DR	H	SP	17.0	30-31.5' COARSE SAND WITH NO COHESIVENESS COLLECTED WITH SAND TRAP. 1510
35			X					07 08 09	35 45 50	84.0	0		T	DR	H	SP	4.0	35-36.5' TAN COARSE TO VERY COARSE SAND. DRY WITH NO COHESIVENESS. COLLECTED WITH SAND TRAP. NON CLP SAMPLE. 1530

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: D. MELCHIOR

BORING NUMBER: SB-011
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/09/88 0935
DATE/TIME COMPLETED: 09/09/88 1105
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 164.9616
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND: X--X		3 15 17	0.0	0	N	B	DR	M	ML	0.0	DRY BROWN SILT AND FINE SAND FILL. SOME GRAVEL PRESENT.NO SAMPLE 1-1.5' 0935
5	COBBLES: X		0 0 0	0.0	0						0.0	CONCRETE RUBBLE AT 5', NO SAMPLE COLLECTED. PLASTIC SHEETING AND MORE RUBBLE TO 10'.
10	COBBLES: X; CLAY: X		17 23 17	0.0	0						0.0	DRIVE SAMPLE SHOWED RED CONCRETE TO 11-1 2.5'. AT 12.5' STARTED TO SEE CLAY FILL NO SAMPLE RECOVERY. 1000
15	FINE SAND: X--X	01 02 03	7 12 23	0.0	0	N	DB	SM	L	ML	1.0	DARK BROWN SILT, MOIST AND COHESIVE. EXCELLENT RECOVERY. 01,02,03 CLP SAMPLES FINE SAND DISTRIBUTED WITH SILT. OVA BREAKDOWN. SLIGHTLY MOIST. 1007
20	MED SAND: X	04 05 06	17 25 28	0.0	0	N	RB	SM	M	SW	0.0	HNU <1. REDDISH BROWN MEDIUM-GRAINED SAND. SLIGHTLY MOIST. NO COHESIVENESS MODERATE FINE AND COARSE SANDS AS WELL. RIG SMOKING DUE TO FRICTION. 20-21.5' 1020
25	CRS SAND: X; FINE SAND: X	07 08 09	15 25 45	0.0	0	N	RB	SM	M	SP	0.9	FINE SAND AT 25';25.5-26.5' COARSE TO VERY COARSE TAN SAND. SLIGHT MOISTURE, NO COHESIVENESS. CLP SAMPLE. 1035
30	SILT: X	10 11 12	13 35 50	0.0	0	N	BG	SM	LM	ML	0.6	BROWN AND GRAY SILT. VERY COHESIVE, NO PRESENCE OF SAND. SILTS ARE DISTRIBUTED IN BLOBS. APPEARS TO BE NATIVE MATERIAL. 30-31.5' 1050
35	FINE SAND: X--X	13 14 15	35 55 75	0.0	0	N	T	SM	L	SM	0.0	FINE TAN SAND AND SILT. GOOD RECOVERY 35-36.5'. NON-CLP SAMPLES. 1105

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-012
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/09/88 0945
DATE/TIME COMPLETED: 09/09/88 1120
TOTAL DEPTH: 36.50
SURFACE ELEVATION: 163.1101
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		01 02 03	25 29 16	0.2	0	N	B	DR	MM	SM	0.0	SILTY SAND WITH PEBBLES. BLACK ASPHALTIC MATERIAL MIXED IN AS FILL. CLP SAMPLE. 0950
5			23 17 19	0.0	0	N	B	DR	MM	SM	0.0	SAMPLE TAKEN WITH NO RECOVERY BECAUSE OF COBBLE AND CONCRETE.
10			4 4 5	0.0	0	N	B	SM	MM	SM	0.0	SILTY SAND, DAMP, BROWN, MEDIUM DENSE. ALLUVIUM.
15		04 05 06	15 20 23	0.0	0	N	LB	DR	MM	SM	0.0	SILTY SAND, LIGHT BROWN, MEDIUM DENSE, DAMP. CLP SAMPLE. 1030
20			10 9 7	1.6	0	N	RB	SM	MM/H H	SM/ SP	0.0	CLAYEY SILT AT 20-20.5'. MEDIUM TO COARSE GRAINED SAND BELOW.
25			19 23 30	0.5	0	N	YG	SM	LL	SM/ SC	0.0	MEDIUM GRAINED SAND AT TOP, CLAYEY SAND BELOW.
30			12 22 35	0.0	0	N	RB	SM	MM	SM	0.0	FINE GRAIN SAND, YELLOW BROWN, MEDIUM DENSE, DAMP.
35		07 08 09	20 32 48	0.0	0	N	YB	SM	MM	SP	0.0	COARSE GRAINED SAND AT TOP, FINE TO MEDIUM GRAINED BELOW. NO WATER, NO CAVING. NON CLP SAMPLE. 1115

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: D. MELCHIOR

BORING NUMBER: SB-013
BORING LOCATION: OPEN FIELD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/09/88 1335
DATE/TIME COMPLETED: 09/09/88 1515
TOTAL DEPTH: 35.50
SURFACE ELEVATION: 156.2903
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	FILL WITH CONCRETE AND RUBBLE 0-2'.
5	FINE SAND: X--X	01 02 03	8 8 7	0.0	0	N	DB	DR	M-L	SM	0.0	DARK BROWN SILTY SAND WITH ABOUT 5% PEA GRAVEL. APPEARS TO BE FILL. NONE ARE COHESIVE. 5-6.5'. 1340
10	SILT: X	04 05 06	14 20 29	0.0	0	N	DB	DR	L	ML	0.0	DARK BROWN VERY COHESIVE SILT WITH VERY LITTLE SAND. 10-11.5'. CLP SAMPLE. 1350
15	SILT: X--X; CLAY: X	07 08 09	10 15 20	0.0	0	N	G	SM	L	ML	0.0	BROWN/GRAY COHESIVE SILTS WITH LITTLE OR NO SAND PRESENT, SOME CLAY. 1405
20	CRS SAND: X; SILT: X		0 0 0	0.0	0	N	DB	SM	H	SP	0.0	AT 17', ENCOUNTERED SANDS WITH SOME GRAVEL UNTIL 18.5'. SILTS UNTIL 20'. NO SAMPLE COLLECTED. NO ODOR IN CUTTINGS.
25	MED SAND: X		35 35 48	0.0	0				M	SP	0.0	NO SAMPLE RECOVERY. TAN MEDIUM SAND. 25-26.5'. 1435
30	MED SAND: X	10 11 12	40 55 60	0.0	0	N	T	DR	M	SP	0.0	TAN MEDIUM-GRAINED SAND. NO COHESIVENESS SAMPLE COLLECTED WITH SAND TRAP. 30-31.5'. CLP SAMPLE. 1455
35	MED SAND: X--X; FINE SAND: X	13 14	49 100 0	0.0	0	N	T	DR	M	SP	0.6	SAMPLE 13 AND 14 NON-CLP INORGANICS. NO SAMPLE RECOVERY FOR ORGANIC SLEEVE. TAN TO LIGHT BROWN MEDIUM TO FINE SAND. 35-36.5'. 1505

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-014
BORING LOCATION: TRAILER PARK
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/29/88 0815
DATE/TIME COMPLETED: 09/29/88 0848
TOTAL DEPTH: 15.00
SURFACE ELEVATION: 166.0095
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0		X--X		X					0 0 0	0.0	0	N	B	DR	WK		0.0	ASPHALT TO 3". ROUGH DRILLING. BROWN SAND AND RUBBLE CONCRETE. CONSTRUCTION DEBRIS FILL. NO SAMPLE COLLECTED.	0815
5				X					0 0 0	0.0	0	N	B	DR	WK	SP	2.0	BROWN SAND AND RUBBLE, CONCRETE. FILL IS CONSTRUCTION DEBRIS. NO SAMPLES COLLECTED.	0820
10				X					0 0 0	320.0	9	HC	BR	DR-WT	WK	SP	1.2	BROWN SAND AND RUBBLE, CONCRETE. FILL IS CONSTRUCTION DEBRIS. NO SAMPLE COLLECTED.	0830
15								01 02	0 0 0	1000.0	100	HC	B/BL	WT	WK		3.0	BLACK-GRAY LIQUID ENCOUNTERED AT 12'. BAILED SAMPLE AT 0848. BREATHING ZONE OVA=80PPM. SECOND READING 0850=100% LEL. CLP LIQUID SAMPLE.	0836

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-015
BORING LOCATION: TRAILER PARK
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/27/88 0717
DATE/TIME COMPLETED: 09/30/88 0835
TOTAL DEPTH: 20.00
SURFACE ELEVATION: 167.0842
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X							0 0 0	0.0	0						0.0	CONCRETE AND RUBBLE FILL AT SURFACE BENEATH 3" OF ASPHALT. NO SAMPLES COLLECTED AT SURFACE. DIFFICULT PENETRATION. 0717
5		X--X	--X						0 0 0	50.0	1	NK	B	DR	WK	SP	3.2	CUTTINGS= SAND W CONCRETE RUBBLE TO 8'. BLACK CUTTINGS AT 8' (SUMP). NO SAMPLES POSSIBLE. 0739
10			X						0 0 0	1000.0	40	M-H C	BL	MO	WK	SP	0.8	BLACK CUTTINGS. BROWN SANDY MATERIAL MIXED WITH CUTTINGS. NO CLP SAMPLE COLLECTED. LOSE FILL--SUMP. 0745
15		X--X			X--X		X	01 02 03	0 0 0	1000.0	100	S-H C	BL	WT/ MO	L		5.6	COLLECTED 3 API JAR SAMPLES, NO OTHERS POSSIBLE. ASPHALT, CONCRETE, AND BROWN SANDY MATERIAL. CLP LIQUID SAMPLE. 0752
20							X	04 05 06	0 0 0	1000.0	100	S-H C	BL	SOU PY	LOW		18.0	9-30-88--BLACK SOUPY SUMP MATERIAL, HIGH CLP LIQUID SAMPLES COLLECTED. LEAVE AUGERS IN HOLE AND ABANDON AT 0806 HOURS. 0806

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-016
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/03/88 1120
DATE/TIME COMPLETED: 10/03/88 1510
TOTAL DEPTH: 65.00
SURFACE ELEVATION: 167.4722
WATER DEPTH: 58.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0					X			01 02 03 04	30 22 30	0.0	0	N	LB	D	MM	SM	0.0	SILTY SAND, LIGHT BROWN, DRY, MEDIUM DENSE,POORLY CEMENTED, FRIABLE. #4 IS AN ORGANIC DUPLICATE. CLP SAMPLES. 1135
5						X	X	05 06 07	21 27 34	0.0	0	N HC	DB-BL	D-M	MM-L L	SM-OH	0.0	SILTY SAND, DARK BROWN, DRY, MEDIUM DENSE, POORLY CEMENTED. AT 5.8'TO 6.4' BLACK MUD WITH MODERATE HYDROCARBON ODOR. SAMPLE FROM THIS INTERVAL. NON CLP SAMPLES. 1155
10							X	08 09 10 11	21 27 34	0.0	0	N	DB-BL	D-M	MM-L L	SM-OH	0.0	SILTY SAND, DARK BROWN, DRY, MEDIUM DENSE, MODERATELY WELL CEMENTED. CLP SAMPLE. 1155
15					X	X	X	12 13 14	4 8 8	0.5	0	HC	DG	D	MM	SM	0.1	SILTY SAND, DARK GRAY, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED. CLP SAMPLES. 1325
20					X	X	X	15 16 17 18	7 8 13	1.0	0	SHC	DG-BR	D	ML	SM	0.0	SILTY SAND, DARK GRAY/BROWN, DAMP, MEDIUM DENSE, MODERATE TO WELL CEMENTED. NON CLP SAMPLES. 1335
25					X	X	X	19 20 21 22	12 14 25	3.5	40	SHC	DG-BR	D	MM	SM	1.0	SILTY SAND, DARK GREEN/BROWN, DAMP, MEDIUM DENSE, MODERATE TO WELL CEMENTED. CLP SAMPLES. 1345
30			X	X					14 22 38	220.0	0	N	YT-YB	D	HH	SP	2.0	FINE SAND, YELLOW/TAN, DAMP, MEDIUM DENSE, POORLY CEMENTED. AT 31' MEDIUM SAND, YELLOW/BROWN, DAMP, MEDIUM DENSE, POORLY CEMENTED.
35			X	X		X		23 24 25 26	35 50 0	1000.0	0	N	YT	D	HH	SP	2.0	MEDIUM GRAINED SAND, YELLOW/TAN, DAMP, POORLY CEMENTED, FRIABLE. CLP SAMPLES. 1410
40			X	X		X			30 50 0	1000.0	40	N	YT	D	HP	SP	2.0	MEDIUM GRAINED SAND, YELLOW/TAN, DAMP, POORLY CEMENTED, FRIABLE. AT 41',COARSE GRAINED SAND, GREY, DAMP, MEDIUM DENSE, POORLY CEMENTED.
45					X	X	X	27 28 29 30	20 50 0	1000.0	50	N	DG-GY	D	MM	SP	1.0	FINE SAND, DARK GREENISH/GRAY, DAMP, MEDIUM DENSE,MODERATE TO WELL CEMENTED. CLP SAMPLES. 1433

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-016
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/03/88 1120
DATE/TIME COMPLETED: 10/03/88 1510
TOTAL DEPTH: 65.00
SURFACE ELEVATION: 167.4722
WATER DEPTH: 58.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	SILT, CLAY		20 26 32	1000.0	10	N	G-GR	D	LL	CL	1.0	SILTY CLAY, GREENISH/GRAY, DAMP, MEDIUM DENSE, WELL CEMENTED.
55	CRS SAND, MED SAND, FINE SAND		50 0 0	1000.0	40	N	DG-GR	MO	LL	CL	2.0	FAT CLAY, DARK GREENISH/GRAY, MOIST, STIFF, WELL CEMENTED. AT 56' COARSE GRAINED SAND, YELLOW/BROWN, MEDIUM DENSE POORLY CEMENTED.
60	CRS SAND, MED SAND, SILT		50 0 0	1000.0	35	N	Y/B	WT	HH	SP	3.0	MEDIUM TO COARSE GRAINED SAND WITH PEBBLES AND GRAVEL, YELLOW/BROWN, MOIST, MEDIUM DENSE/DENSE, POORLY CEMENTED.
65	COBBLES, CRS SAND, MED SAND		24 35 46	1000.0	50	N	Y/T	WT	HH	SP	1.0	COARSE SAND, YELLOW/TAN, WET, MEDIUM DENSE, POORLY CEMENTED. WATER AT 58', HEAVING BELOW WATER.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-017
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/23/88 1415
DATE/TIME COMPLETED: 09/25/88 0940
TOTAL DEPTH: 71.50
SURFACE ELEVATION: 167.0120
WATER DEPTH: 58.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		01 02 03	19 18 26	0.0	0	N	B	DR	MM	SM	0.0	SILTY SAND, BROWN, DRY, MEDIUM DENSE, LOOSE, WITH RUBBLE, COBBLES, AND PEBBLES. CLP SAMPLES. 1422
5			0 0 0	0.0	0	N	B	DR	MM	SM	0.0	SILTY SAND, BROWN, DRY, MEDIUM DENSE, LOOSE, WITH RUBBLE, COBBLES AND PEBBLES.
10		04 05	8 16 12	20.0	0	N	DG	SM-MO	LL	SM	1.0	SILTY SAND, DARK GRAY, SLIGHT HYDROCARBON ODOR, DAMP, SOFT (APPEARS CONTAMINATED). CLP SAMPLES. 1435
15		06 07	3 5 4	60.0	5	MH	DG	MO	LL	SM	15.0	SILTY SAND, DARK GREY, SLIGHT HYDROCARBON ODOR, DAMP, SOFT (APPEARS CONTAMINATED). NON CLP SAMPLE. 1443
20			28 46 50	1000.0	35	MH	DG	MO	LL	SM	2.5	SAME EXCEPT CONCRETE AT 20.3'. POOR SAMPLE RECOVERY. NO SAMPLE.
25			30 28 40	70.0	10	SH	GN-G	SM	MM	SM	8.0	FINE GRAINED SILTY SAND, GREENISH GREY, DAMP, MEDIUM DENSE, SLIGHT HYDROCARBON ODOR.
30		08 09 10	18 32 40	300.0	5	SH	G	SM	MM	SP	50.0	MEDIUM GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED. CLP SAMPLE. 1525
35		11 12 13	24 36 40	300.0	10	N	R/B	SM-MO	MM	SP	5.0	MEDIUM GRAINED SAND, RED/BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED. CLP SAMPLE 1548
40			40 50 0	0.0	0	N	G/B	SM-MO	HH	SP	0.0	COARSE GRAINED SAND, GREY-BROWN, DAMP, MEDIUM DENSE, POORLY CEMENTED.
45			36 40 50	0.0	0	N	LB	DR	MM	SM	0.0	SILTY SAND, LIGHT BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-017
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/23/88 1415
DATE/TIME COMPLETED: 09/25/88 0940
TOTAL DEPTH: 71.50
SURFACE ELEVATION: 167.0120
WATER DEPTH: 58.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50						X--X			14 19 26	0.0	0	N	GB	DR	LL	CL	0.0	SILTY CLAY, GREENISH BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED.
55				X			X		27 50 0	0.0	0	N	LB	MO	LL	SM/ SP	0.0	FINE SAND, LIGHT BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED. AT 56' COARSE GRAINED SAND, LIGHT BROWN, MOIST, MEDIUM DENSE, MODERATELY/POORLY CEMENTED.
60			X--X						35 50 0	0.0	0	N	G/B	WT	HH	SP	0.0	COARSE GRAINED SAND, GRAY BROWN, WET, MEDIUM DENSE, POORLY CEMENTED.
65			X--X						50 0 0	3.0	0	N	G/B	WT	HH	SP	1.5	COARSE GRAINED SAND, GRAY BROWN, WET, MEDIUM DENSE, POORLY CEMENTED.
70			X--X						50 0 0	1.5	0	N					1.0	GROUNDWATER AT 58'. HEAVING BELOW GROUNDWATER. 0920

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-018
BORING LOCATION: NORTH SIDE
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/04/88 1100
DATE/TIME COMPLETED: 10/04/88 1230
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 165.4217
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0	X--X	01 02 03	9 28 19	0.0	0	N	BR	DR	L-M	SM	0.0	NO VISIBLE CONTAMINATION. BROWN, SILTY SAND, SOME ROCKS, DRY. IR SAMPLE. CLP SAMPLE.	1105
5	X--X--X		0 0 0	0.0	0	N	BR	DR	L-M	SM	0.0	NO SAMPLE RECOVERED. SILTY SAND & GRAVEL MIXTURE.	1109
10	X--X--X		0 0 0	0.0	0	N	DB	DR	L-M	SM	0.0	NO SAMPLE RECOVERED. DARK BROWN SILTY SAND & GRAVEL MIXTURE.	1115
15	X--X	04 05 06	7 11 27	500.0	45	M	B	M	L	CL	50.0	SLUDGE - CONTAMINATED BLACK, SUMP MATERIAL, CLAYEY SILT. IR SAMPLE. NON CLP SAMPLE.	1115
20	X--X	07 08 09	15 32 25	1000.0	10	N	BR	SM	L	SM	45.0	NO VISIBLE CONTAMINATION. BROWN, FINE SAND & SILT & CLAY MIXTURE. CLP SAMPLE.	1138
25	X--X		15 30 30	10.0	5	N	BR	SM	L-M	SP	10.0	NO VISIBLE CONTAMINATION. GRAYISH BROWN FINE SAND (6") & CLAYEY SAND (6"). NO SAMPLE COLLECTED.	1150
30	X--X--X		17 50 0	10.0	15	N	BR	SM	L-M	SP	5.0	NO VISIBLE CONTAMINATION. BROWN, FINE SAND & CLAY. NO SAMPLE COLLECTED.	1201
35	X--X	10 11 12	50 0 0	70.0	5	N	BR	M	M	SW	12.0	NO VISIBLE CONTAMINATION. TAN TO BROWN MEDIUM COARSE SAND. NON CLP SAMPLE.	1215

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-019
BORING LOCATION: NORTH SIDE
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/04/88 0910
DATE/TIME COMPLETED: 10/04/88 1120
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 165.1507
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X	01 02 03	10 10 15	0.0	0	N	BR	DR	L-M	ML	0.0	BROWN, SANDY SILT, CHUNKS OF CONCRETE, NO VISIBLE CONTAMINATION. IR SAMPLE. CLP SAMPLE. 0915
5	X--X		6 8 10	0.0	0	N	BR	SM	L	CL	0.0	BROWN, SILTY CLAY, NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 0923
10	X--X		0 0 0	0.0	0	N	BR	SM	L-M	ML	0.0	ENCOUNTERED CONCRETE, NO SAMPLE POSSIBLE. TAILINGS INCLUDE BROWN, SANDY SILT.
15	X--X	04 05 06	5 12 13	1000.0	70	N	BR	SM	L	ML	0.0	HNU NOT FUNCTIONAL, CONTAMINATION VISIBLE, SUMPY SLUDGE, BROWN CLAYEY SILT NON CLP SAMPLE. 0940
20	X--X--X	07 08 09	5 4 3	1000.0	10	N	BR	SM	L-M	CL	0.0	NO VISIBLE CONTAMINATION, BROWN, SANDY CLAY. CLP SAMPLE. IR SAMPLE. NO READING ON HNU - NOT FUNCTIONAL. 0954
25	X--X		9 18 21	125.0	5	N	BR	SM	M	SP	0.0	NO VISIBLE CONTAMINATION, BROWN, FINE TO MEDIUM SAND. NO SAMPLE COLLECTED. 1000
30	X--X		35 55 0	0.0	0	N	BR	SM	M	SP	0.0	NO VISIBLE CONTAMINATION. BROWN, MEDIUM TO FINE SAND. NO SAMPLE COLLECTED. 1010
35	X--X	10 11 12	12 50 0	1.0	0	N	BR	SM	M	SP	2.0	NO VISIBLE CONTAMINATION. BROWN, FINE TO MEDIUM SAND. IR SAMPLE. NON CLP SAMPLE. 1020

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-020
BORING LOCATION: MET TOWER
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/03/88 1605
DATE/TIME COMPLETED: 10/04/88 0850
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 164.7202
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X	01 02 03 04	8 14 9	0.0	0	N	T-BR	DR	L-M	ML	0.0	TAN TO BROWN SANDY SILT, DRY, LOOSE. NO VISIBLE CONTAMINATION. CLP SAMPLE. INORGANIC DUPLICATE. 1510
5	X--X	05 06 07	6 9 12	110.0	3	SH	DB-B	MO	L	CL	0.0	DARK BROWN TO BLACK SILTY CLAY. CONTAMINATION. CLP SAMPLE. 1520
10	X--X		3 3 4	16.0	3	SH	B	MO	L		8.0	SLUDGE, BLACK, SUMP MATERIAL, NO RECOVERY. 1529
15	X--X		0 0 0	0.0	0	SH	B	MO	L		0.0	CONCRETE ENCOUNTERED. BLACK SLUDGE NO SAMPLE POSSIBLE. 1540
20	X--X	08 09 10	29 0 50	80.0	6	N	BR	SM	L	CL	15.0	BROWN, SILTY CLAY. NO VISIBLE CONTAMINATION. CLP SAMPLE. 1555
25	X--X--X		55 0 6	100.0	0	N	T	SM	H	SP	15.0	TAN MEDIUM TO COARSE GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 0816
30	X X		28 50 0	10.0	0	N	T	SM	L	CL	0.0	TAN, CLAY WITH FINE SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 0830
35	X--X	11 12 13	36 0 60	10.0	0	N	T	SM	H	SP	0.0	TAN, FINE TO MEDIUM GRAIN SAND. NO VISIBLE CONTAMINATION. IR SAMPLE. NON CLP SAMPLE. 0842

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-021
BORING LOCATION: SLEEK CRAFT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/16/88 1035
DATE/TIME COMPLETED: 09/16/88 1200
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 152.8000
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0									0 0 0	0.0	0						0.0	NO SAMPLE COLLECTED AT SURFACE. ASPHALT AND CONCRETE/GRAVEL. NO READINGS 1047
5						X--X		01 02 03	11 15 20	0.3	0	N	RB	SM	L	CL	0.5	REDDISH BROWN CLAY WITH SOME MINOR SILT. CONTAMINATION NOT VISIBLE. CLP SAMPLES. 1050
10					X--X--X			04 05 06	6 6 7	0.0	0	N	LB	SM	L	ML/ CL	0.0	LT. BROWN CLAYEY/SILT TO SILTY CLAY. NO CONTAMINATION VISIBLE. CLP SAMPLES. 1059
15						X--X			9 11 19	0.0	0	N	LB	SM	L	CL	0.0	LT. BROWN CLAY. VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1107
20							X	07 08 09	17 27 41	0.0	0	N	LB	SM	L	CL	0.5	LT. BROWN CLAY. VISIBLE CONTAMINATION. CLP SAMPLE. 1116
25						X--X			10 21 25	1.0	0	N	LG	SM	L	CL	0.0	LT. BROWN TO GREY SILTY CLAY. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1128
30					X--X				25 30 35	0.7	0	N	LB	MO	M	SM/ ML	0.0	FINE GRAINED SAND AND SILT OR SANDY SILT NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1136
35						X--X		10 11 12	39 65 6	0.0	0	N	LG	MO	M	ML	0.0	PARTIAL RECOVERY. LT. GREY SILT WITH MINOR CLAY. NO VISIBLE CONTAMINATION. NON-CLP SAMPLES COLLECTED. 1154

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-022
BORING LOCATION: SLEEK CRAFT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/16/88 1415
DATE/TIME COMPLETED: 09/16/88 1530
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 153.5500
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	PORE/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT		0 0 0	0.0	0		DG	SM	CL	SW	0.0	ASPHALT (3") BASE 6" . SILTY SAND WITH PEBBLES OR GRAVEL. NO RECOVERY. 3 INCHES OF CONCRETE AT 3 FEET.
5	SILT--CLAY	01 02 03	9 15 20	10.0	3	N	RB	SM	LL	CL	2.0	REDDISH BROWN SILTY CLAY. CLP SAMPLES. 1425
10	SILT--CLAY	04 05 06	6 6 6	10.0	0	N	LB	SM	LL	CL	0.0	SILTY CLAY, BROWN TO LIGHT BROWN. CLP SAMPLES. 1438
15	SILT--CLAY	07 08 09	10 15 35	8.0	0	N	G	SM	LL	CL	1.0	SILTY CLAY, GRAY. CLP SAMPLES. 1446
20	SILT--CLAY		25 35 35	4.0	0	N	G	SM	LL	CL	0.0	SILTY CLAY, GRAY NO SAMPLES. 1455
25	SILT--CLAY	10 11 12	21 70 0	0.0	0	N	G	SM	LL	CL	0.0	SILTY CLAY, GRAY. CLP SAMPLES. 1510
30	SAND--FINE SAND, CLAY		0 0 0	0.0	0	N	G	SM	M	SP	0.0	GRAY, MEDIUM GRAINED SAND. NO SAMPLES. 1518
35	SAND--FINE SAND, CLAY	13 14 15	33 60 0	0.0	0	N	G	SM	M	SP	0.0	GRAY, MEDIUM GRAINED SAND. NON-CLP SAMPLES. NO WATER, NO CAVING. 1525

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-023
BORING LOCATION: R.V. LOT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/27/88 1330
DATE/TIME COMPLETED: 09/27/88 1532
TOTAL DEPTH: 40.00
SURFACE ELEVATION: 163.0374
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0					X--X	X--X			0 0 0	0.0	0	N	BR	SM	M	ML	0.0	ENCOUNTERED WIRE DEBRIS, BRICK, TAILINGS WITH BROWN SANDY SILT AND SOME CLAY. NO SAMPLE POSSIBLE. 1340
5						X--X		01 02 03	4 6 6	500.0	5	SH	DBR /B	MO	L	ML	0.4	DARK BROWN CLAYEY SILT, CONTAMINATION PRESENT. NOT ENOUGH SAMPLE FOR DUPLICATE CLP SAMPLES. 1348
10						X--X		04 05 06	6 6 6	1000.0	90	SH	DGR /B	MO	L	ML	12.0	POSSIBLE SUMP. DARK GRAY TO BLACK SILT WITH CLAY. CONTAMINATION PRESENT. NO DUPLICATE. CLP SAMPLES. 1355
15					X--X	X--X		07 08 09	10 20 37	1000.0	7	SH	DBR	MO	L	ML	13.0	DARK BROWN WITH MINOR BLACK STREAKS. STIFF, CLAYEY SILT. CONTAMINATION PRESENT. NON-CLP SAMPLES. 1405
20					X--X	X--X		10 11 12 13	19 30 43	800.0	5	LH	DBR /T	MO	L	SM	30.0	DARK BROWN TO TAN SANDY SILT WITH SOME CLAY. INORGANIC DUPLICATE COLLECTED. CLP SAMPLES. 1420
25				X--X					7 19 30	420.0	5	N	T/G RN	SM	M/H	SP	3.8	TAN TO GREEN, FINE TO MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1435
30			X--X						30 55 0	1000.0	10	N	GRN	SM	H	SP	0.2	GREEN, MEDIUM TO COARSE SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1445
35			X--X					14 15 16	60 0 0	1000.0	8	N	G	SM	H	SP	0.0	GRAY MEDIUM TO COARSE SAND. NO VISIBLE CONTAMINATION. NON-CLP SAMPLES. 1457
40		X--X	X--X					17 18 19	65 0 0	0.0	6	N	G	SM	H	SP	0.0	COARSE-GRAINED SAND. GRAY WITH SOME PEBBLES. NO VISIBLE CONTAMINATION. NO DUPLICATES. CLP SAMPLES. 1532

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-024
BORING LOCATION: R.V. LOT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/17/88 0909
DATE/TIME COMPLETED: 10/17/88 1020
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 164.7535
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0									0 0 0	0.0	0						0.0	NO SAMPLE.
5			X		X--X			01 02 03	10 20 3	1000.0	85	SH	DB	MO	L	ML	0.0	CONTAMINATION PRESENT. DARK BROWN SILT AND CLAY. SOME WOOD AND BRICK DEBRIS. CLP SAMPLES. 0914
10			X		X--X			04 05 06 07	0 0 0	100.0	20	N	DGRN	WT	M	SM	10.0	COLLECTED VIAL (#4) AND JAR (#5) OF FREE PRODUCT. DARK GREY SAND WITH SILT AND GRAVEL. BRICKS, LIQUID PRESENT. CONTAMINATION. INORGANIC DUPLICATES COLLECTED--CLP. 1030
15					X--X--X			10 11 12 13	17 27 34	1000.0	100	N	DG	MO/WT	L	CL	30.0	DARK GRAY CLAY WITH SILT AND FINE SAND. FAIRLY SLUDGY. SOME MINOR LIQUID. CONTAMINATION PRESENT. INORGANIC DUPLICATE SAMPLE COLLECTED. 1050
20						X--X		14 15 16	17 22 22	1000.0	15	SH	YB	SM	L	CL	5.0	2 INCHES OF SLUDGE UPPER LEVEL. YELLOW BROWN SILTY CLAY. MANY BLACK STREAKS. CONTAMINATION PRESENT. CLP SAMPLES. 0850
25				X				17 18 19	10 10 14	1000.0	0	SH	YB	SM	M	SP	8.5	YELLOW-BROWN FINE SAND. NO VISIBLE CONTAMINATION. CLP SAMPLES 0905
30				X					25 55 0	1000.0	0					SP	18.0	NO RECOVERY. SAND. 1000
35			X					27 28 29	60 0 0	1000.0	0	N	Y	WT	H	SP	0.0	YELLOW COARSE-GRAINED SAND. NO VISIBLE CONTAMINATION. CLP SAMPLE. 1020

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-025
BORING LOCATION: R.V. LOT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/18/88 1320
DATE/TIME COMPLETED: 10/18/88 1610
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 166.6877
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0									0 0 0	0.0	0						0.0	NO SAMPLE COLLECTED.
5					X--X--X			01 02 03	13 25 0	180.0	4	N	DB/T	SM	L/M	CL	0.0	SILTY SANDY CLAY. SOME GRAVEL AND WOOD CHIPS. POSSIBLE CONTAMINATION. NO DUPLICATES. CLP SAMPLES. 1325
10								04 05 06 07	2 2 3	1000.0	51	SH	BLK	WT	L		40.0	BLACK SLUDGE. SOME CONTAMINATION. CLP INORGANIC DUPLICATE COLLECTED. 1340
15						X		08 09 10 11	5 14 7	1000.0	100	SH	BL/BR	MO/WT	L	CL	20.0	UPPER 6" BLACK SLUDGE. SUMP MATERIAL. LOWER 12" DARK BROWN SILT WITH CLAY. CONTAMINATION PRESENT THROUGHOUT. INORGANIC CLP DUPLICATE COLLECTED. 1420
20						X--X		12 13 14	20 30 27	140.0	100	SH	BR	MO	L	CL	13.0	DARK BROWN SILTY CLAY WITH SOME BLACK STREAKS. CONTAMINATION. NO DUPLICATES. CLP SAMPLES. 1455
25					X--X--X			15 16 17	60 0 0	1000.0	48	NR	GRN	SM	L	CL	50.0	GREEN SILTY CLAY WITH SOME FINE SAND. NO DUPLICATES. CLP SAMPLES. 1515
30				X					12 24 36	110.0	37	NR	G	SM	M/H	SP	12.0	GRAY FINE TO MEDIUM-GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1546
35				X--X				18 19 20	35 55 0	1.0	10					SP	7.0	GRAY COARSE SAND WITH PEBBLES. NO VISIBLE CONTAMINATION. CLP SAMPLES. 1600

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-026
BORING LOCATION: R.V. LOT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/19/88 1050
DATE/TIME COMPLETED: 10/19/88 1522
TOTAL DEPTH: 70.00
SURFACE ELEVATION: 167.7628
WATER DEPTH: 63.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND: X--X		10 12 18	7.0	0	N	BR	SM/MO	LL	SM	0.2	SILTY SAND WITH CONCRETE AND ASPHALT, BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED, POOR RECOVERY, NO SAMPLE. 1102
5	FINE SAND: X--X--X	01 02 03 04	1 1 1	30.0	10	HC	B	MO	LL	OH	7.0	MUD, BLACK, MOIST, SOFT, STRONG HYDROCARBON ODOR. NO DUPLICATE. CLP SAMPLES. 1115
10	MED SAND: X; SILT: X	05 06 07 08	7 10 14	1000.0	0	HC	T	SM/MO	MM	SM	0.0	SILTY SAND, BROWN/TAN, MEDIUM DENSE, DAMP, WELL CEMENTED. FILL MATERIAL. 1123
15	FINE SAND: X--X		10 10 10	1000.0	25	SL/HC	LB	SM/MO	MM	SM	10.0	SILTY SAND, LIGHT BROWN, DAMP, MODERATELY WELL CEMENTED, SLIGHT HYDROCARBON CONTAMINATION.
20	FINE SAND: X--X	09 10 11 12	12 18 26	1000.0	40	N	RB	SM/MO	MM	SM	12.0	SILTY SAND, RED/BROWN, DAMP, MODERATELY WELL CEMENTED, NO APPARENT CONTAMINATION. 1145
25	FINE SAND: X--X	13 14 15 16	24 36 48	1000.0	20	SL HC	G/B	SM/MO	LL	SM	10.0	FINE SAND, GREEN/BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED, BLACK ORGANIC RICH MATERIAL APPEARS MODERATELY CONTAMINATED. CLP SAMPLES. 1200
30	FINE SAND: X--X		20 25 28	1000.0	90	N	Y/T	SM/MO	MM	SM	7.0	FINE SAND, YELLOW/TAN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED. GREY IN COLOR AT 31' TO 31.8' .
35	CRS SAND: X--X--X	17 18 19 20	32 50 0	1000.0	10	N	GR/G	SM/MO	HH	SP	0.0	COARSE SAND, GREEN/GRAY, DAMP, MEDIUM DENSE, POORLY CEMENTED. 1332
40	CRS SAND: X--X		28 34 40	1000.0	0	N	G	SM/MO	HH	SP	0.0	COARSE SAND, GREY, DAMP, MEDIUM DENSE, POORLY CEMENTED.
45	CRS SAND: X--X--X		27 48 50	1000.0	0	N	GR/T	SM/MO	HH	SP	0.2	COARSE SAND, GREEN/TAN, WET, MEDIUM DENSE, POORLY CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-026
BORING LOCATION: R.V. LOT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/19/88 1050
DATE/TIME COMPLETED: 10/19/88 1522
TOTAL DEPTH: 70.00
SURFACE ELEVATION: 167.7628
WATER DEPTH: 63.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50			35 50 0	1000.0	0	N	DGR	SM/MO	MM	SP	0.4	COARSE SAND CONTINUED, AT 51.3' FINE SAND, DARK GREEN, DAMP, MODERATELY WELL CEMENTED.
55			14 18 27	1000.0	15	N	G/BR	SM/MO	LL	SC	3.0	CLAYEY SILT, GREEN/BROWN, DAMP, WELL CEMENTED.
60			26 50 0	1000.0	25	N	GRN/G	MO	HH	SW	3.0	COARSE SAND WITH PEBBLES AND GRAVEL, GREEN GREY, MOIST TO WET, DENSE, LOOSE, POORLY CEMENTED.
65			34 26 45	1000.0	0	N	T	WT	HH	SW	3.0	COARSE SAND WITH GRAVEL AND PEBBLES, TAN, WET, POORLY CEMENTED.
70			18 27 42	1000.0	0	N	T	WT	HH	SW	3.0	COARSE SAND, SAME AS ABOVE. GROUND WATER AT 63'. HEAVING BELOW WATER.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-027
BORING LOCATION: FIELD,NEAR RES.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/01/88 0950
DATE/TIME COMPLETED: 10/01/88 1146
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 166.4917
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X--X	01 02 03 04	8 30 50	0.0	0	N	BR	D	L	CL/ ML	0.4	BROWN CLAY, DRY SANDY SILT, SOME GRAVEL. NO VISIBLE CONTAMINATION. CLP ORGANIC DUPLICATE COLLECTED. 0955
5	X--X		5 15 0	2.6	0	N	BR	SM	L	CL/ ML	0.4	OBSTACLE ENCOUNTERED (CONCRETE BLOCK). BROWN CLAYEY SILT WITH MINOR SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1005
10	X--X	05 06 07 08	9 10 15	1.0	0	N	BR	SM	L	ML	1800.0	BROWN SANDY SILT WITH MINOR CLAY. NO VISIBLE CONTAMINATION. CLP ORGANIC DUPLICATES COLLECTED. 1015
15	X--X		12 18 20	0.4	0	N	BR	MO	L	ML	6.0	BROWN SANDY SILT WITH CLAY. NO VISUAL CONTAMINATION. NO SAMPLES COLLECTED. 1025
20	X--X	09 10 11 12	18 32 40	10.0	0	N	BR	MO	L	ML	0.8	BROWN SANDY SILT WITH CLAY. NO VISUAL CONTAMINATION. CLP ORGANIC DUPLICATES COLLECTED. 1040
25	X--X		19 28 45	10.0	2	N	G/G RN	SM	H	SP	0.0	GREEN TO GRAY MEDIUM TO COARSE GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1123
30	X		55 0 0	2.2	2	N	GR	SM	H	SP	0.0	MEDIUM-GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1135
35	X--X	13 14 15	35 60 2	4.9	2	2	GR	SM	H	SP	0.0	GREEN, MEDIUM TO COARSE SAND. NO VISIBLE CONTAMINATION. NON-CLP SAMPLES COLLECTED. 1146

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-028
BORING LOCATION: MET TOWER AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/03/88 0830
DATE/TIME COMPLETED: 10/03/88 0955
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 165.4103
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND: X--X	01 02 03	13 21 18	0.0	0	N	BR	DR	L/M	ML	0.0	CONCRETE ENCOUNTERED. BROWN SANDY SILT, DRY, DENSE, SOME GRAVEL. CLP SAMPLES, NO DUPLICATE. 0830
5	SILT, CLAY: X--X	04 05 06	15 11 17	10.0	2	LH	BR/B	SM	L/M	ML	0.0	DARK BROWN TO BLACK SILT AND CLAY. STIFF. POSSIBLE CONTAMINATION. CLP SAMPLES. 0839
10	FINE SAND, SILT, CLAY: X--X--X	07 08 09 10	4 5 7	0.9	0	N	T	SM	L/M	CL	0.0	TAN SAND WITH CLAY. NO VISIBLE CONTAMINATION. CLP INORGANIC DUPLICATE COLLECTED. 0848
15	FINE SAND, SILT, CLAY: X--X--X		15 27 22	3.6	2	N	BR	SM/MO	L	ML/CL	0.0	BROWN SILT AND CLAY WITH MINOR SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 0858
20	FINE SAND, SILT, CLAY: X--X--X	11 12 13	50 70 0	0.9	0	N	B/G	SM	L	ML/CL	0.0	BROWN TO GRAY SILT AND CLAY WITH MINOR SAND. NO VISIBLE CONTAMINATION. CLP SAMPLE. 0907
25	CRS SAND: X		19 25 30	0.7	0	N	T	SM	H	SP	0.0	TAN, COARSE GRAINED SAND, SOME PEBBLES. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 0930
30	FINE SAND: X		37 50 0	0.8	0	N	T	SM	H	SP	0.0	TAN FINE GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 0943
35	MED SAND: X	14 15 16	25 50 0	0.4	0	N	T	SM	H	SP	0.0	TAN MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION. NO DUPLICATE. NON-CLP SAMPLES. 0955

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME:	WASTE DISPOSAL INC.	BORING NUMBER:	SB-029	DATE/TIME STARTED:	09/09/88 0938
LOCATION:	SANTA FE SPRINGS CALIFORNIA	BORING LOCATION:	RESERVOIR AREA	DATE/TIME COMPLETED:	09/14/88 1200
		DRILLING CONTRACTOR:	DATUM	TOTAL DEPTH:	67.50
CLIENT NAME:	EPA	DRILLING METHOD:	HSA	SURFACE ELEVATION:	158.6310
SITE MANAGER:	D. MELCHIOR	BIT SZ/HAMMER WT/DROP:	7"/140#/30"	WATER DEPTH:	51.00
LOGGED BY:	G. GALLOWAY	SAMPLE RETRIEVAL SYS:	SPLIT SPOON		

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0									0 0 0	0.0	0						0.0	
0		X	X			X	X		4 5 12	0.0	0	N	RB	DR	L,M	SM	0.0	SILTY SAND WITH ROCKS AND PEBBLES, RED BROWN, DRY, MEDIUM DENSE. 1343
5		X	X	X	X			01 02 03	8 8 4	0.0	0	N	G	DR	H,H	SP	0.0	MEDIUM COARSE GRAINED SAND, GRAY, DRY, MEDIUM DENSE, CHIPS AND BLOCKS OF TILE AND CEMENT. CLP SAMPLE. 1400
10							X	04 05 06	1 1 4	1.0	0	HC	DG	SM/MO	L,L	CL	0.0	AT 9.5 FEET SOFT, DARK GRAY CLAY (MUD), DAMP TO MOIST. NON CLP SAMPLE. 1415
15							X	07 08 09	2 2 3	300.0	100	HC	DG	MO	L,L	CL	40.0	HOLE IS ABOVE 100% LEL. FOR 45 MINUTES WE WILL ABANDON AND ALLOW TO VENT. NON CLP SAMPLE. 1425
20					X	X	X	10	1 0 0	1.0	100	HC	DG-YB	SM-MO	LL-MM	CL-SP	30.0	MEDIUM GRAINED SANDS WITH CLAY. ALLUVIUM ALLUVIUM. POOR SAMPLE RECOVERY-ONLY ONE SAMPLE SLEEVE COLLECTED. NON CLP SAMPLE. 1022
25					X	X	X	11 12 13	2 3 4	0.0	100	HC	DG	MO	MM	SC	17.0	DARK GRAY TO GRAY, SILTY CLAY WITH TRACES OF SUMP MATERIAL. 1111
30				X	X			14 15 16	17 34 48	0.0	75	SHC	G	SM-MO	MM	SM	0.0	DARK GRAY MEDIUM GRAINED SAND AND SILT. HYDROCARBON SUMP CONTAMINATION. 1126
35			X	X					25 50 0	0.0	70	N	T	SM-MO	HH	SP	35.0	GRAY TO TAN COARSE GRAINED SAND. MEDIUM DENSE, DAMP.
40				X					24 34 44	0.0	***	N	DG	SM-MO	M-H	SP	0.0	DARK GRAY SILTY FINE SAND AND CLAY. MEDIUM DENSE.

FIELD BORING LOG

OFS NUMBER:

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-029
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/09/88 0938
DATE/TIME COMPLETED: 09/14/88 1200
TOTAL DEPTH: 67.50
SURFACE ELEVATION: 158.6310
WATER DEPTH: 51.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
45	X--X--X--X		27 50 0	0.0	65	N	B	SM	HH	SP	40.0	MEDIUM TO COARSE GRAINED SAND, GOLDEN BROWN, VERY DENSE, DAMP.
50	X--X--X	17 18 19	30 50 0	0.0	40	N	G	WT	HH	SM	30.0	AT 50' MEDIUM GRAINED SAND, GREEN, VERY DENSE, WET. NON CLP SAMPLE. 1222
55	X--X		0 0 0	0.0	28	N	YB	WT	HH	SP	30.0	AT 55' COARSE GRAINED SAND, YELLOW/GREEN, MEDIUM DENSE, WET.
60	X--X		0 0 0	0.0	0					SP	0.0	GROUNDWATER AT 50', CAVING AT 52'. INSTALLED MONITORING WELL.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-030
BORING LOCATION: RESEVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/14/88 1345
DATE/TIME COMPLETED: 09/15/88 0915
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 154.7821
WATER DEPTH: 47.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			23 45 0	0.0	0	N	B	DR	M,M	SM	0.0	ARTIFICIAL FILL (OAF). SILTY SAND, LIGHT BROWN, DRY, LOOSE, ROOT & COBBLES, CONCRETE FRAGMENTS, 30% SAMPLE RECOVERY.
5		01 02 03	9 16 26	0.0	0	N	LB	DR	M,M	SM	0.0	ARTIFICAL FILL (OAF). SILTY SAND, LIGHT BROWN, DRY, LOOSE, ROOT & COBBLES, CONCRETE FRAGMENTS,100% SAMPLE RECOVERY. CLP SAMPLE. 1410
10			6 9 9	0.0	0	N	RB	SM	M,H	SM	0.0	SILTY FINE GRAINED SAND, RED/BROWN, DAMP MEDIUM DENSE, FINE ROOTLETS SCATTERED.
15		04 05 06 07	12 30 40	0.0	0	N	YG	SM	M,H	SP	0.0	FINE TO COARSE GRAINED SAND, YELLOW/ GREEN DAMP, MEDIUM DENSE. AT 18' 4"THICK SILTY CLAY. CLP SAMPLE. 1435
20			14 27 26	0.0	0	N	YB	SM	M,H	CL	0.0	SILTY CLAY, ORANGE/BROWN, DAMP, MEDIUM DENSE.
25		08 09 10 11	18 35 47	12.0	0	N	LG	SM	H,H	CL-SP	0.0	SILTY CLAY TO 26', AT 26' COARSE GRAIN SAND, LIGHT GRAY, DAMP, DENSE. CLP SAMPLE. 1508
30		12 13 14 15	17 37 50	21.0	50	N	GY	SM	H,H	SP	0.0	FINE TO MEDIUM GRAIN SAND,GREENISH GRAY, DAMP, DENSE. NON CLP SAMPLE. 1535
35		16 17 18 19	45 50 50	71.0	5	N	GN	SM	H,H	SP	0.0	FINE GRAIN SAND, GREENISH GRAY, DAMP, DENSE. CLP SAMPLE. 1540
40		20 21 22 23	25 35 50	1000.0	5	N	GY	SM	H,H	SP	0.0	FINE TO MEDIUM GRAIN SAND, GREEN/GRAY, DAMP, DENSE. SHUT DOWN FOR THE NIGHT. AT 0839 09/15/88 CONTINUE BORING. 1550
45		24 25	25 30 39	0.0	0	N	Y/G	M	H,H	SD	0.0	AT 0830 09/15/88 CONTINUE DRILLING FROM 40' DEPTH. COARSE GRAIN SAND, YELLOW/ GRAY, MOIST, MEDIUM DENSE/DENSE, WATER ENCOUNTERED AT 49'. NON CLP SAMPLE. 0830

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-030
BORING LOCATION: RESEVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/14/88 1345
DATE/TIME COMPLETED: 09/15/88 0915
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 154.7821
WATER DEPTH: 47.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	X--X		23 50 0	0.0	0	N	Y/B	WT	H,H	SP	0.0	BLOWS 23/6", 50/4"
55	X--X		45 50 0	0.0	0	N	Y/B	WT	H,H	SP	0.0	BLOWS 45/6", 50/4"
60	X--X		45 50 0	0.0	0	N	Y/B	WT	H,H	SP	0.0	BLOWS 45/6", 50/4" TOTAL DEPTH 60'. WATER AT 47'. HEAVING BELOW WATER TABLE. AT 0915 STARTED INSTALLING WELL.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-031
BORING LOCATION: NEAR BOAT YARD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/30/88 1400
DATE/TIME COMPLETED: 09/30/88 1520
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 152.8200
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0					SP	0.0	CONCRETE TO 6" AND FILL. DARK BROWN SANDY CUTTINGS. NO SAMPLE COLLECTED.
5	X--X	01 02 03	10 16 19	0.4	0	M	DB	DR	L	CL	0.0	DENSE, DARK BROWN SILTY CLAY, NO VISIBLE CONTAMINATION. CLP SAMPLES COLLECTED. 1409
10	X--X	04 05 06	6 0 7	0.4	0	N	RB	DR	L	CL	8.0	DENSE RED BROWN SILTY CLAY; NO VISIBLE CONTAMINATION. CLP SAMPLES. 1421
15	X--X		0 0 0	0.3	0	N	B	DBR	L	ML	0.6	DARK BROWN CLAYEY SILT; NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1434
20	X--X	07 08 09	9 32 35	0.5	0	N	LB	DBR	L	ML	1.4	LIGHT BROWN CLAYEY SILT. NO VISIBLE CONTAMINATION. CLP SAMPLE COLLECTED. 1440
25	X--X		9 16 3	0.0	0	N	G	DR	L	CL	1.0	GRAY SILTY CLAY. 1451
30	X--X	10 11	20 35 0	0.0	0	N		DR	L	SP	2.2	NO RECOVERY, FINE SANDS, GRAYISH. 2 GRAB SAMPLES TAKEN AT 30'-31', ORGANIC AND INORGANIC. 1500
35	X--X	12 13 14	11 0 65	1.7	0	N	GR	SM	MH	SP	5.0	GRAY, MEDIUM TO FINE SAND, DAMP. SAMPLE TAKEN; NON CLP ORGANIC, INORGANIC ARCHIVED. 1520

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-032
BORING LOCATION: SLEEK CRAFT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/07/88 0830
DATE/TIME COMPLETED: 10/07/88 1015
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 153.6000
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS / COBBLES / CRS SAND / MED SAND / FINE SAND / SILT / CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT--CLAY		0 0 0	0.0	0		B/D B	SM	L	CL	0.0	ASPHALT 1/2", CONCRETE 8", SANDY/SILTY CLAY. NO SAMPLE RECOVERED. 0840
5	FINE SAND--SILT--CLAY	01 02 03 04	5 10 13	75.0	0		B	SM	L	CL	1.0	NO VISIBLE CONTAMINATION. BROWN SILTY CLAY TO SANDY CLAY, STIFF AND DENSE. ORGANIC DUPLICATE. CLP SAMPLE. 0900
10	FINE SAND--SILT--CLAY	05 06 07 08	7 7 10	2.0	0		B	SM	L-M	SC	1.0	NO VISIBLE CONTAMINATION. BROWN CLAYEY SAND TO FINE SAND. MEDIUM STIFF & MEDIUM DENSE. DUPLICATE ORGANIC. CLP SAMPLE. 0910
15	FINE SAND--SILT		30 32 30	0.0	0		B	SM	L	CL	1.0	NO VISIBLE CONTAMINATION. BROWN SANDY CLAY, DENSE & STIFF. NO SAMPLE COLLECTED. 0920
20	FINE SAND--SILT	09 10 11 12	16 32 38	1.4	0	N	B	SM	L	SC	1.0	NO VISIBLE CONTAMINATION. BROWN CLAYEY SAND,DENSE AND STIFF TO VERY FINE SANDS. DUPLICATE ORGANIC, CLP ORGANIC. 0931
25	MED SAND--FINE SAND--CLAY		30 60 0	2.0	0	N	B	SM	L	SC	1.0	NO VISIBLE CONTAMINATION. BROWN, CLAYEY SANDS, FINE TO MEDIUM GRAINED, MEDIUM DENSE, MEDIUM STIFF. NO SAMPLE COLLECTED. 0942
30	MED SAND--FINE SAND--CLAY		40 50 0	2.0	0	N	B	SM	L-M	SC	1.0	NO VISIBLE CONTAMINATION. BROWN, CLAYEY SANDS FINE TO MEDIUM GRAINED, MEDIUM DENSE, MEDIUM STIFF. NO SAMPLE RECOVERED. 0955
35	CRS SAND--MED SAND	13 14 15	35 60 0	0.0	0	N	G/B	SM	M-H	GP	1.0	NO VISIBLE CONTAMINATION. GREENISH BROWN, GRAVELY TO COARSE GRAINED SAND. NON CLP SAMPLE COLLECTED. 1007

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TILFORD

BORING NUMBER: SB-033
BORING LOCATION: SLEEK CRAFT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/06/88 1500
DATE/TIME COMPLETED: 10/06/88 1630
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 154.8900
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS / COBBLES / CRS SAND / MED SAND / FINE SAND / SILT / CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND X--X--X		0 0 0	0.0	0	SH	B	SM	L-M	ML	0.0	ASPHALT ON TOP. CONTAMINATION UNDER .5' OF ASPHALT. BLACK SILT & GRAVEL. NO SAMPLE RECOVERED. 1515
5	FINE SAND X--X--X	01 02 03 04	6 4 4	2.0	2	SH	B	SM	L	ML	7.0	CONTAMINATION, BLACK, SANDY SILT, MEDIUM DENSE. DUPLICATE INORGANIC. NON CLP SAMPLE. IR SAMPLE. 1520
10	FINE SAND X--X--X	05 06 07 08	10 0 0	10.0	0	MH	BR	SM	L	SC	5.6	SLIGHT CONTAMINATION. BROWN, SANDY CLAY, DENSE. NON CLP SAMPLE. DUPLICATE INORGANIC. IR SAMPLE. 1535
15	MED SAND X--X--X--X	09 10 11 12	15 23 30	10.0	0	LH	GRN /B	SM	L-M	SC	2.2	SLIGHT CONTAMINATION. GREENISH BROWN, CLAYEY SANDS, FINE TO MEDIUM GRAINED SANDS. NON CLP SAMPLE. DUPLICATE INORGANIC. IR SAMPLE. 1545
20	MED SAND X--X	13 14 15	20 50 0	10.0	0	N	GRN /B	SM	M	SP	1.5	NO VISIBLE CONTAMINATION. GREENISH BROWN. FINE TO MEDIUM GRAINED SAND. MEDIUM DENSE. IR SAMPLE. CLP SAMPLE. 1555
25	MED SAND X--X		32 50 0	1.0	0	N	GRN /B	SM	M	SP	1.2	NO VISIBLE CONTAMINATION.GREENISH BROWN, DENSE, FINE TO MEDIUM GRAINED SAND. NO SAMPLE COLLECTED. 1605
30	MED SAND X--X		30 65 0	4.0	0	N	GRN /B	SM	M	SP	0.6	NO VISIBLE CONTAMINATION. GREENISH BROWN, MEDIUM TO COARSE GRAINED SANDS. NO SAMPLE COLLECTED. 1616
35	COBBLES X--X--X	16 17 18 19	27 39 36	1.0	0	N	GRN /B	SM	M-H	SP	0.0	NO VISIBLE CONTAMINATION. GREENISH BROWN, COARSE GRAINED SANDS. NON CLP SAMPLE. DUPLICATE INORGANIC. IR SAMPLE. 1625

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-034
BORING LOCATION: R.V. LOT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/19/88 1410
DATE/TIME COMPLETED: 10/20/88 0955
TOTAL DEPTH: 37.00
SURFACE ELEVATION: 165.4081
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS / COBBLES / CRS SAND / MED SAND / FINE SAND / SILT / CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	ASPHALT. NO SAMPLE COLLECTED.
5	X--X		0 0 0	0.0	0						0.0	SUMP MATERIAL 6' PLUS CONCRETE ENCOUNTERED. NO SAMPLE POSSIBLE.
10		01	0 0 0	0.0	0						0.0	CONCRETE ENCOUNTERED, MANY PIECES OF BRICK. WATER SAMPLES COLLECTED. 1450
15	X--X	02 03 04	5 5 5	1000.0	40	SH	DG-B	WT	L	CL	15.0	DARK GRAY CLAY WITH SOME SILT, LOWER 6" BLACK SLUDGE, VERY WET UPPER 12" CLP SAMPLE. 1510
20			25 30 45	1000.0	15	SH					150.0	NO RECOVERY, LIQUID PRESENT. 0828
25	X--X--X	05 06 07 08	19 21 27	1000.0	45		DG/Y	MO/WT	L-M	CL/ML	75.0	POSSIBLE CONTAMINATION. UPPER 6" WET, DARK GRAY CLAY GRADING TO SANDY SILT. LOWER 12" GRAY SILTY FINE SAND GRADING TO YELLOW FINE TO MEDIUM GRAIN SAND. CLP SAMPLE. INORGANIC DUPLICATE. 0855
30	X		40 52 0	1.1	0					SP	3.2	NO RECOVERY, LOOSE SAND. 0910
35	X--X	09 10 11	30 60 0	3.4	0	0	BR	SM	H	SP	1600.0	GRAY COARSE GRAINED SAND WITH SOME PEBBLES. CLP SAMPLE. NO DUPLICATE. 0930

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-035
BORING LOCATION: R.V. LOT
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/28/88 1100
DATE/TIME COMPLETED: 09/28/88 1415
TOTAL DEPTH: 25.00
SURFACE ELEVATION: 167.1398
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0	X	X							0 0 0	0.0	0	0					0.0	NO SAMPLE.	
5	X	X							0 0 0	0.0	0	N	BR	SM	L-M	SM	0.0	MUCH RUBBLE, CONCRETE BRICKS, BROWN SANDY SILT. NO SAMPLE.	
10	X	X					X		9 13 4	320.0	2	MHN	B	WT	L		64.0	TAILINGS INCLUDE BLACK MUD. SUMP MATERIAL LODGED IN SAMPLER. NO RECOVERY.	1133
15	X	X			X--X--X			01 02 03	7 11 16	40.0	0	SH	D G R	MO	L	ML	3.0	DARK GRAY SILT WITH CLAY AND TRACES OF FINE SAND, CONTAMINATED. CLP SAMPLE.	1142
20	X	X			X--X--X			04 05 06	9 9 11	1000.0	100	SH	D G R	MO	L	ML	57.0	DARK GRAY SILT WITH CLAY AND TRACES OF FINE SAND, CONTAMINATED. CLP SAMPLE.	1337
25	X	X							0 0 0	1000.0	0						60.0	ENCOUNTERED CONCRETE BARRIER. STOPPED HERE, NO SAMPLE.	1415

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-036
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/03/88 0720
DATE/TIME COMPLETED: 10/03/88 0958
TOTAL DEPTH: 65.00
SURFACE ELEVATION: 166.9218
WATER DEPTH: 59.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	CRS X--X; CLAY X	01 02 03 04	28 40 60	0.0	0	N	LB	DR	M,M	SM	0.0	SILTY SAND, LIGHT BROWN, DRY, MEDIUM DENSE, POORLY CEMENTED WITH COBBLE & DEBRIS (5%). SAMPLE #4 IS ORGANIC DUPLICATE. CLP SAMPLE. 0755
5	FINE SAND X--X; SILT X--X		7 11 14	0.0	0	N	RB	DR	L,L	CL	0.0	SILTY CLAY, RED/BROWN, DRY, MEDIUM DENSE, MODERATELY WELL CEMENTED.
10	SILT X--X	05 06 07 08	9 11 14	8.0	0	N	LB	SM	L,L	CL	0.0	SILTY CLAY, LIGHT BROWN, DAMP, MEDIUM DENSE. MODERATE TO WELL CEMENTED. CLP SAMPLE. 0810
15	SILT X--X		7 8 12	10.0	0	N	B	SM	L,L	CL	0.0	SILTY CLAY, BROWN, DAMP, MEDIUM DENSE, WELL CEMENTED.
20	SILT X--X	09 10 11 12	11 24 30	8.0	0	N	B	SM	L,L	CL	0.0	SILTY CLAY, BROWN, DAMP, MEDIUM DENSE, WELL CEMENTED. CLP SAMPLE. 0825
25	FINE SAND X--X; SILT X--X		17 26 26	16.0	0	N	B	SM	L,L-M,M	CL-SP	0.0	FINE SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED. AT 25.5' TO 26' SILTY CLAY, BROWN,DAMP, MEDIUM DENSE. AT 26' MEDIUM GRAINED SAND, BROWN,DAMP, DENSE, POOR/MODERATELY WELL CEMENTED.
30	MED SAND X--X; SILT X--X		25 50 0	30.0	0	N	DK GR	MO	L,L-H,H	SM-SP	0.0	AT 30' SILTY SAND, DARK GRAY, MOIST, DENSE, MODERATELY TO WELL CEMENTED. AT 31' COARSE GRAINED SAND, TAN, MOIST, DENSE, POORLY CEMENTED.
35	COBBLES X--X; CRS SAND X--X; FINE SAND X	13 14 15 16	27 50 0	0.0	0	N	L G R	MO	M,M	SP	0.0	MEDIUM GRAINED SAND,LIGHT GREENISH/GRAY, DENSE, MODERATELY CEMENTED. NON CLP SAMPLE. 0855
40	MED SAND X		25 50 0	0.0	0	N	L G R	MO	M,M-L,L	SP-CL	0.0	MEDIUM GRAINED SAND (CONTINUED). AT 41' LEAN CLAY, GREENISH GRAY, STIFF, WELL CEMENTED.
45	MED SAND X--X; SILT X--X		24 27 29	0.0	0	N	DG/G	MO	M,M	CL	0.0	SILTY CLAY, DARK GREEN/GRAY, DAMP, DENSE, MODERATELY TO WELL CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-036
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/03/88 0720
DATE/TIME COMPLETED: 10/03/88 0958
TOTAL DEPTH: 65.00
SURFACE ELEVATION: 166.9218
WATER DEPTH: 59.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	X--X--X		27 35 42	3.4	0	N	DG/G	DR	M,L	CL	0.0	SILTY CLAY, DARK GREEN/GRAY, DAMP, MEDIUM DENSE, MODERATELY TO WELL CEMENTED.
55	X--X		26 35 44	0.0	0	N	DG/G	MO	M,M	SP	0.0	FINE TO MEDIUM GRAINED SAND, DARK GREEN/GRAY, MOIST, MEDIUM DENSE, MODERATELY WELL CEMENTED.
60	X--X--X		26 42 35	2.0	0	N	G/G RN	WT	H,H	SP	0.5	MEDIUM TO COARSE GRAINED SAND, GREENISH/GRAY, WET, MEDIUM DENSE, POORLY CEMENTED.
65	X--X--X		10 20 26	4.0	0	N	G/G RN	WT	H,H-M,M	SP-SM	0.0	MEDIUM GRAIN SAND, GREENISH/GRAY, WET, MEDIUM DENSE, POORLY CEMENTED. AT 66' FINE GRAINED SILTY SAND,GREEN/GRAY, WET, MEDIUM DENSE, MODERATELY WELL CEMENTED. ENCOUNTERED WATER AT 59'. NO HEAVING.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-037
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/04/88 1404
DATE/TIME COMPLETED: 10/04/88 1515
TOTAL DEPTH: 20.00
SURFACE ELEVATION: 167.1711
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X				X	X	01 02 03	7 19 14	0.0	0	N	DB	DR	L-M	CL	0.0	NO VISIBLE CONTAMINATION NEAR SURFACE. ENCOUNTERED SOME SLUDGE APPROXIMATELY 3' TO 5'. DARK BROWN, SILTY CLAY AND ROCKS. IR SAMPLE. CLP SAMPLE. 1407
5						X	X		0 0 0	0.0	0	N	DB	DR	L-M	CL	0.0	VISIBLE CONTAMINATION, SOME SLUDGE. DARK BROWN, SILTY CLAY, CONCRETE, ROCKS, NO SAMPLE RECOVERED. 1410
10			X	X		X	X		0 0 0	0.0	0	N	DB/B	DR	L-M	CL	0.0	CONTAMINATED, SLUDGE, DARK BROWN, MIXTURE OF SILTY CLAY, SAND, COBBLES AND ROCKS. NO SAMPLE RECOVERY. 1415
15						X	X		0 0 0	0.0	0	LH	B	M	L	CL	0.0	BLACK, SLUDGE, SUMP, SILTY CLAY. AUGER STUCK IN HOLE. 1430

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME:	WASTE DISPOSAL INC.	BORING NUMBER:	SB-038	DATE/TIME STARTED:	09/13/88 1030
LOCATION:	SANTA FE SPRINGS CALIFORNIA	BORING LOCATION:	RESERVOIR AREA	DATE/TIME COMPLETED:	09/13/88 1430
		DRILLING CONTRACTOR:	DATUM	TOTAL DEPTH:	18.00
CLIENT NAME:	EPA	DRILLING METHOD:	HSA	SURFACE ELEVATION:	167.7116
SITE MANAGER:	D. MELCHIOR	BIT SZ/HAMMER WT/DROP:	7"/140#/30"	WATER DEPTH:	0.00
LOGGED BY:	G. GALLOWAY	SAMPLE RETRIEVAL SYS:	SPLIT SPOON		

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X		X	X	X		01 02 03	1 1 2	0.0	0	N	BR	DR	M,M	SM	0.0	18" BUCKET RIG INSIDE RESERVOIR TO INVESTIGATE CONCRETE. SILTY SAND, BROWN, DRY, LOOSE. AT 2.5' REFUSAL AT CONCRETE, SWITCHED TO HSA AFTER APPROXIMATELY 1 CORING WITH BUCKET RIG. CLP SAMPLES. 1035
5		X		X	X	X		04 05 06	0 0 0	1000.0	45	HC	BR B	DR DM	H,H L,L	SM	0.0	AT 6' BLACK ORGANIC RICH MUDS. NON CLP SAMPLES. 1310
10		X	X					07 08 09	0 0 0	1000.0	100	HC	BR	WT	H,H	CL	0.0	BLACK, WET. NON CLP SAMPLE. 1350
15						X	X	10 11 12 13	0 0 0	1000.0	100	HC	BR	WT	H,H	CL	0.0	FREE PRODUCT AT 16 FEET. FREE PRODUCT IN SAMPLE. 1430

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-039
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/13/88 0915
DATE/TIME COMPLETED: 09/13/88 1445
TOTAL DEPTH: 18.00
SURFACE ELEVATION: 167.1105
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X			X	X	X	01 02 03	1 1 1	0.0	0	N	BR	DR	M,M	SM	0.0	18" BUCKET AUGER INSIDE RESERVOIR. DRILLED TO CLEAR CONCRETE FOR HSA TO 6 FOOT DEPTH. SILTY SAND, BROWN, DRY, MEDIUM DENSE TO LOOSE. AT 4' CONCRETE.
5		X	X	X				04 05 06	1 1 1	5.0	0	HC	BR/BL	MO	L,L	PT	0.0	AT 6' BLACK ORGANIC RICH MUD. ABANDON WITH BUCKET RIG AND TRY WITH HSA.
10		X					X	07 08	2 3 1	1000.0	100	HC	BL	WT	L,L	CL	0.0	SUMP MATERIAL, BLACK MUCK WITH CONCRETE FRAGMENTS AND BLOCKS. 1425
15		X					X	10 11	2 3 1	1000.0	100	HC	BL	WT	L,L	CL	0.0	SUMP MATERIAL, BLACK MUCK WITH CONCRETE FRAGMENTS AND BLOCKS. NO WATER, CAVING MUDS, NO FREE PRODUCT. 1445

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-040
BORING LOCATION: MET TOWER AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/03/88 1125
DATE/TIME COMPLETED: 10/05/88 0930
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 165.9016
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0	FINE SAND, SILT, CLAY		0 0 0	0.0	0	N	T	DR	M	ML	0.0	VERY MUCH CONCRETE RUBBLE, NO SAMPLE POSSIBLE, TAN, SANDY SILT.	1125
5	SILT, CLAY	01 02 03	10 17 33	1000.0	75	MH	BL/BR	MO	L	CL	4.0	ASPHALT ENCOUNTERED, DARK BROWN TO BLACK SILTY CLAY. CONTAMINATION PRESENT. CLP SAMPLE. NO DUPLICATE.	1135
10	FINE SAND, SILT, CLAY	04 05 06	2 3 1	1000.0	10	SH	DB/B	MO-WT	L	CL	40.0	SILTY, SANDY CLAY, DARK BROWN TO BLACK, CONTAMINATION PRESENT. CLP SAMPLE. NO DUPLICATE.	1145
15	SILT, CLAY	07 08 09 10	7 15 18	10.0	2	MH	DB/BR	MO	L	ML	8.0	DARK BROWN TO BROWN SILT WITH CLAY. SOME BLACK STREAKS, MINOR CONTAMINATION POSSIBLE. NONCLP SAMPLE, INORGANIC DUPLICATE	1155
20	FINE SAND, SILT, CLAY	11 12 13 14	10 10 35	150.0	0	N	DB/BR	SM	L	CL	11.5	FINE ROOT HAIRS INCLUDED. SILTY CLAY WITH MINOR FINE STIFF SAND. BROWN TO DARK BROWN. INORGANIC DUPLICATE. CLP SAMPLE.	1207
25	FINE SAND		30 50 0	100.0	0	N	GRN	SM	M	SP	4.6	FINE GRAIN SAND, GREEN, NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED.	1228
30	FINE SAND		25 50 0	1000.0	0	N	T	SM	M-H	SP	0.0	TAN, FINE GRAINED SAND, NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED.	1244
35	CRS SAND	15 16 17	35 60 0	1.5	0	SH	BR/GB	MO	M	SP	0.0	0912 10/5/88. CONTAMINATION PRESENT IN HOLE. BLACK SLUDGE, SUMP MATERIAL, SOFT SOIL, CONTAMINATION LEFT IN HOLE FROM PREVIOUS DRILLING. NON CLP SAMPLE. TAN, MED TO COARSE GRAINED SAND.	0912

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-041
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/19/88 1105
DATE/TIME COMPLETED: 09/19/88 1340
TOTAL DEPTH: 40.00
SURFACE ELEVATION: 158.5018
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT, CLAY	01 02 03	8 11 17	0.0	0	N	BR	SM	M	SM	0.0	BROWN TO LIGHT BROWN FILL MATERIAL(OAF), SILTY SAND. CLP SAMPLE. 1111
5	FINE SAND, SILT, CLAY	04 05 06	7 5 11	1000.0	0	SH	BL	SM	M-L	OL-ML	1.8	BLACK, STIFF, CLAY LIKE, VISIBLE CONTAMINATION. LAST 6" BROWN SILT & SAND. NON CLP SAMPLE. 1122
10	FINE SAND, SILT		0 0 0	30.0	0	LH	BR	SM	M-L	SM	0.2	CONCRETE ENCOUNTERED AT 10'. NO SAMPLE POSSIBLE. DARK SILTY SAND IN TAILINGS. 1132
15	CLAY	07 08 09	3 4 5	1000.0	0	SH	BL	WT	L	OH	0.4	BLACK MUD, VISIBLE CONTAMINATION, SUMP MATERIAL. 1150
20	FINE SAND, SILT	10 11 12	2 3 3	1000.0	0	SH	BL	SM	M	OH-ML	2.5	FIRST SLEEVE SAME AS PREVIOUS; SECOND AND THIRD WERE GRAY SILT WITH FINE SAND. ZERO IN BREATHABLE OVA ZONE. CLP SAMPLE. 1205
25	SILT, CLAY	13 14 15	4 3 5	1000.0	0	SH	G	SM	M-L	CL-ML	4.0	GRAY SILTY CLAY AND CLAYEY SUMP MATERIAL WITH SOME BLACK STREAKS. CLP SAMPLE. 1222
30	FINE SAND, SILT		5 4 5	1000.0	10	N	G	SM	M	SM	7.0	GRAY SILTY SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1240
35	CRS SAND, MED SAND, FINE SAND	16 17 18	38 60 6	1000.0	100	N	G	SM	M	SM	0.0	NO VISIBLE CONTAMINATION. GRAY FINE TO COARSE SAND. NON CLP SAMPLE. 1300
40	FINE SAND, SILT, CLAY	19 20 21	37 54 6	1000.0	60	N	G/GRN	SM	M-L	ML	0.0	GRAY GREEN SILT WITH CLAY AND MINOR FINE GRAINED SAND. ZERO OVA ON BREATHING ZONE. 1332

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-042
BORING LOCATION: ATLAS STEEL
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/19/88 0850
DATE/TIME COMPLETED: 09/19/88 1015
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 153.8000
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0					X	X			24 26 14	10.0	0		B	SM		SM	1.6	EXPLOSIMETER=0. CONCRETE LODGED IN FIRST TWO SLEEVES. NO SAMPLE RETRIEVED. DITCH MATERIAL, BROWN SILT & SAND.
5					X	X	X	01 02 03	10 10 10	10.0	0	N	DB	SM	L-M	ML	20.0	DARK BROWN SILT WITH CLAY AND FINE SAND. CLP SAMPLE. 0910
10					X	X	X	04 05 06	7 10 14	0.5	0	N	G	SM	L-M	ML	0.0	GRAY SILT WITH CLAY AND FINE SAND. CLP SAMPLE. 0918
15						X	X		11 21 16	0.0	0	N	B	SM	L	CL	0.0	GRAY SILT WITH CLAY. NO SAMPLE COLLECTED. 0925
20				X		X		07 08 09	7 21 29	0.0	0	N	B	SM	M	SM	0.0	GRAY, MEDIUM GRAINED SAND WITH SILT. 0935
25				X					27 28 20	0.0	0	N	G	SM	M	SP	0.0	GRAY, MEDIUM GRAINED SAND. CHECKED TAILINGS. NO RECOVERY. 0946
30				X	X				56 0 0	0.0	0	N	G	SM	M-H	SP	0.0	FINE TO MEDIUM GRAINED SAND, GRAY, NO SAMPLE COLLECTED. 0955
35			X		X	X		10 11 12	20 40 25	0.0	0	N	B	SM	M	SM	0.0	FINE GRAINED SAND WITH SILT, SOME GRAVEL. NON CLP SAMPLE. 1010

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-043
BORING LOCATION: DRIVEWAY
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/30/88 1001
DATE/TIME COMPLETED: 09/30/88 1130
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 152.8300
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY		0 0 0	0.0	0	N	LB-RB	DR-SM	H-L	SW	0.0	DRILL THROUGH 5" CONCRETE. DRILL THROUGH FILL/CONCRETE. FILL IS BROWN, MEDIUM TO COARSE GRAIN SAND WITH PEBBLES & GRAVEL IN UPPER 3". UNDERLAYING RED BROWN CLAYER FILL. NO SAMPLE COLLECTED. 1001
5		01 02 03	8 10 16	1.4	3	N	RB	SM-M	L	CL	1.4	RED BROWN SILTY CLAY AND CLAYEY SILT. NO VISIBLE CONTAMINATION. SOME RED SAND. CLP SAMPLES COLLECTED. 1012
10			36 0 0	36.0	4	N	LB	SM-DR	L	ML	3.6	LIGHT BROWN SANDY SILT WITH MINOR CLAY. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1027
15		04 05 06	13 11 39	8.0	2	N	LB	SM-DR	L	ML	0.0	LIGHT BROWN CLAYEY SANDY SILT. NO VISIBLE CONTAMINATION. CLP SAMPLE COLLECTED. 1045
20		07 08 09	12 5 6	1.0	0	N	LB	DR	L	ML	0.4	LIGHT BROWN SILTY CLAY TO CLAYEY SILT. NO VISIBLE CONTAMINATION. CLP SAMPLE COLLECTED. 1052
25			10 20 20	0.8	4	N	LB	DR	L	SM	0.0	LIGHT BROWN CLAYEY SILTY SAND TO SANDY SILT WITH CLAY. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1103
30			7 9 11	0.2	0	HC	G	SM	H	SP	0.0	MEDIUM TO FINE GRAINED MICACEOUS QUARTZ SAND, NO VISIBLE CONTAMINATION, NO SAMPLE COLLECTED. 1116
35		10 11	87 6 0	0.8	0	SL-HC	G	SM	H	SP	1.4	MEDIUM TO COARSE GRAINED SAND, LOOSE; QUARTZ RICH, SOME HYDROCARBON ODOR. NON CLP SAMPLE. PARTIAL SAMPLE RECOVERY. COMPLETE AS GAS WELL. 1130

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-044
BORING LOCATION: MERSIT'S EQUIP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/29/88 1005
DATE/TIME COMPLETED: 09/29/88 1153
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 153.5700
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	FILL; BLACK CLAYEY ASPHALTIC MATERIAL MIXED WITH CONCRETE,PEBBLES, AND CONSTRUCTION MATERIAL. NO SAMPLE COLLECTED. 1005
5	X--X X--X		0 0 0	7.0	6	N	BL/RB	MO-DR	L	CL	0.8	FILL BLACK SILTY ASPHALTIC CLAY AND CONCRETE MIXED WITH CONSTRUCTION MATERIAL. NO SAMPLE COLLECTED DUE TO CONCRETE. 1013
10	X X X--X	01 02 03	65 0 0	30.0	2	N	B/RB	DR-SM	L	CL	0.4	POORLY SORTED SILTY CLAY WITH PEBBLES OR CLAYEY SILT WITH PEBBLES. NO VISIBLE CONTAMINATION. CLP SAMPLES COLLECTED; PARTIAL RECOVERY. 1028
15	X--X--X		40 60 80	130.0	8	N	BR	DR	L	ML	0.6	STIFF CLAYEY SILT GRADING TO SILTY SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1044
20	X--X--X	04 05 06	20 35 20	290.0	5	N	BR	DR	L	ML	0.4	BROWN SILT WITH MINOR CLAY GRADING AT 21.5 TO A FINE SANDY SILT; NO VISIBLE CONTAMINATION; CLP SAMPLES COLLECTED. 1100
25	X		35 50 0	1000.0	10	N	BR	DR	L	ML	0.4	SILT SAMPLE DESCRIBED FROM CONTINUOUS CORE. NO SAMPLE RECOVERY. 1112
30	X--X--X		50 0 0	200.0	0	N	BR	DR	H	SW	0.4	MEDIUM TO COARSE GRAINED QUARTZ SAND WITH MINOR FINE SAND. DROPPED CEC PROBE DOWN HOLE; LOW SAMPLE RECOVERY. 1127
35	X--X--X	07 08 09	50 60 0	0.2	11	N	B	DR	H	SW	0.0	COARSE GRAINED SAND WITH SOME FINE GRAINED SAND; NO VISIBLE CONTAMINATION NON-CLP SAMPLE; PARTIAL RECOVERY. END OF HOLE. 1153

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-045
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/20/88 1345
DATE/TIME COMPLETED: 10/20/88 1630
TOTAL DEPTH: 45.00
SURFACE ELEVATION: 160.3400
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	NO SAMPLE, ASPHALT 1345
5	CLAY	01 02 03	4 4 3	200.0	0	N	DG	MO	L	CL	0.0	DARK GRAY SILTY CLAY; CONTAMINATION PRESENT; CLP SAMPLE. 1400
10	FINE SAND, SILT, CLAY	04 05 06 07	3 3 4	30.0	0	N	DG	MO	L	CL	4.6	DARK GRAY SILTY CLAY WITH SOME FINE SAND INORGANIC DUPLICATE. CONTAMINATION PRESENT. CLP SAMPLE. 1440
15	FINE SAND, SILT, CLAY		15 20 30	80.0	15	N	DBR	SM	L	CL	12.0	DARK BROWN SILTY CLAY WITH SOME FINE SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1422
20	FINE SAND, SILT, CLAY	08 09 10 11	13 27 35	15.0	0	N	DG-Y	MO-SM	L-M	CL	8.5	NO VISIBLE CONTAIMINATION. DARK GRAY, FINE SAND AND SILT IN (UPPER 6"). GREY TO FINE SAND IN (LOWER 12"). INORGANIC DUPLICATE. 1438
25	MED SAND, FINE SAND		15 30 16	12.0	0	N	Y-G	SM	M	SP	1.5	YELLOW TO GRAY, FINE TO MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1450
30	CRS SAND		47 61 0	1000.0	25	N	G	SM	H	SP	0.2	COARSE GRAY SAND WITH SOME GRAVEL. NO VISIBLE CONTAMINATION; NO SAMPLE COLLECTED. 1505
35	CRS SAND, CLAY	12 13 14	50 0 0	1000.0	5	N	GY-G	SM	L-M	SC	0.2	YELLOW COARSE TO MEDIUM GRAINED GRAYISH SAND WITH GRAY CLAY. NO VISIBLE CONTAMINATION. 1525
40	CRS SAND		39 86 0	1000.0	5	N	T	SM	H	SP	0.2	TAN, COARSE SAND WITH PEBBLES. NO VISIBLE CONTAMINATION; NO SAMPLE COLLECTED. 1540
45	CRS SAND, MED SAND	15 16 17	50 100 0	75.0	5	N	YG-G	SM	H	SP	0.2	YELLOWISH GRAY TO GRAY, MEDIUM TO COARSE GRAINED SAND. NO VISIBLE CONTAMINATION. 1610

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. GORDON

BORING NUMBER: SB-046
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/18/88 1316
DATE/TIME COMPLETED: 10/19/88 0840
TOTAL DEPTH: 65.00
SURFACE ELEVATION: 163.6274
WATER DEPTH: 57.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	CLAY	01 02 03 04	16 12 16	220.0	2	MH	BR	SM	L	OL	1.0	WELL LOCATION APPROX. 20' WEST OF RESERVOIR BOUNDARY AS SHOWN ON ASPHALT SURFACE. FILL. SILT CLAY, HIGH ORGANICS, MINOR GRAVEL. CLP SAMPLE. 1316
5	CLAY		5 6 10	1000.0	7	MH	RB	D	L	OL	1.5	SHY/CLAY: REDDISH BROWN, MOTTLED, MINOR CONTAMINATION, GRAYISH BROWN DISCOLORATION. CLP SAMPLE. 1327
10	CLAY	05 06 07	5 6 10	1000.0	25	MH	RB	D	L	OL	10.0	SHY/CLAY: REDDISH BROWN, MINOR CONTAMINATION. BLACK DISCOLORATION. CLP SAMPLE. 1340
15	CLAY	08 09 10 11	6 10 22	800.0	15	MH	RB	D	L	OL	6.0	SHY/CLAY: REDDISH BROWN TO BLACK, MORE CONTAMINATION VISIBLE THAN ABOVE; CLP SAMPLE. 1350
20	MED SAND--FINE SAND, CLAY	12 13 14 15	6 5 18	30.0	15	N	RB	D	L	CL	3.0	SHY/CLAY: REDDISH BROWN, MOTTLED; NO CONTAMINATION VISIBLE; FIRM TO STIFF; CLP SAMPLE. 1352
25	CRS SAND--MED SAND		7 10 14	50.0	2	N	LG	D	H	SW	1.5	SAND: FINE TO MEDIUM, LIGHT GRAY TO GREEN GRAY, COARSENS DOWNWARD; L590 GRAVEL. 1355
30	CRS SAND	16 17 18 19	8 10 15	1000.0	25	MH	GG	D	H	SW	5.0	SAND: DARK GRAY TO BLACK; SW WIND 6 MPH; 761MM MERCURY; HUMIDITY 60%; CLP SAMPLE. 1400
35	CRS SAND	20 21 22 23	11 12 12	1000.0	25	MH	LG	D	H	SW	5.0	SAND: GREENISH GRAY; COARSE, VISIBLE CONTAMINATION. CLP SAMPLE. 1420
40	COBBLES		12 24 36	1000.0	0	MH	LG	D	H	SW	6.0	SAND: GREENISH GRAY. MEDIUM TO COARSE WITH 65% GRAVEL. VISIBLE CONTAMINATION. CLP SAMPLE. 1440
45	COBBLES--CRS SAND--MED SAND		25 50 55	1000.0	0	NMH	LG	D	H	SW	3.0	SAND: VERY COARSE; LIGHT GRAY, GREENISH GRAY; VISIBLE CONTAMINATION. 1440

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. GORDON

BORING NUMBER: SB-046
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/18/88 1316
DATE/TIME COMPLETED: 10/19/88 0840
TOTAL DEPTH: 65.00
SURFACE ELEVATION: 163.6274
WATER DEPTH: 57.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	X--X--X	24 25 26 27	30 50 0	3.0	0	N	LG	SM	H	SW	3.0	SAND: VERY COARSE, LIGHT GRAY, SLIGHT VISIBLE CONTAMINATION. CLP SAMPLE. 1450
55	X--X--X		25 42 50	1.2	0	N	G	D	H, H	SP	0.6	COARSE GRAINED SAND, GRAY, MOIST; DENSE, POORLY CEMENTED; GROUNDWATER ENCOUNTERED AT 57 FEET. 1450
60	X--X--X		38 0 0	0.0	0	N	G	D	H, H	SP	0.6	COARSE GRAINED SAND, GRAY, MOIST; DENSE, POORLY CEMENTED; GROUNDWATER ENCOUNTERED AT 57FEET. 1450
65	X--X--X		42 0 0	0.0	0	N	G	D	H, H	SP	0.6	COARSE GRAINED SAND, GRAY, MOIST; DENSE, POORLY CEMENTED; GROUNDWATER ENCOUNTERED AT 57 FEET. 1450

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-047
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/21/88 0800
DATE/TIME COMPLETED: 09/21/88 0945
TOTAL DEPTH: 20.00
SURFACE ELEVATION: 165.2856
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X--X X	01 02 03 04	50 0 0	0.0	0	N	LB	DR	M, M	SC	0.0	SILTY CLAY WITH COBBLES, LIGHT BROWN, DRY, MEDIUM DENSE, POORLY CEMENTED. CLP SAMPLES. 0810
5	X--X--X X		40 30 0	1000.0	20	HC	BR	DR	L,M	SM	0.0	SILTY SAND, WITH COBBLES, BROWN, DRY, MEDIUM DENSE, POORLY CEMENTED, BLOCKS OF CONCRETE, POOR SAMPLE RECOVERY.
10	X--X--X	05 06	50 0 0	1000.0	30	HC	BR	WT	M,M	CL	0.0	AT 9' APPROXIMATELY 4" OF FREE PRODUCT, ON TOP OF CONCRETE BLOCKS. SAMPLE #6 IS A LIQUID SAMPLE, NON CLP SAMPLE. 0850
15		07 08 09 10	2 3 1	1000.0	40	HC	BL	WT	L,L	CL	0.0	FREE PRODUCT ON TOP OF CONCRETE BLOCKS. 0920
20	X	11 12 13 14	1 3 4	1000.0	60	HC	BR	WT	L,L	CL	0.0	FREE PRODUCT ON TOP OF CONCRETE BLOCKS. 0940

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-048
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/21/88 1425
DATE/TIME COMPLETED: 09/21/88 1525
TOTAL DEPTH: 20.00
SURFACE ELEVATION: 167.2603
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X--X X	01 02 03 04	6 8 12	0.0	0	HC	LB	DR	M,M	CL	0.0	SILTY CLAY WITH COBBLES, LIGHT BROWN, DRY, POORLY CEMENTED, CLP SAMPLE. 1430
5	X--X--X X	05 06 07	9 18 32	1000.0	17	HC	BR	MO	L,L	CL	40.0	SAME TO 6' THEN ASPHALTIC MATERIAL, PLUS CONCRETE BLOCKS. CLP SAMPLE. 1440
10	X--X--X X	08 09 10	0 0 0	1000.0	80	HC	GRN-G	MO	L,L	CL	20.0	MUD, GREEN/GRAY, MOIST, SOFT. CLP SAMPLE. 1450
15	X--X--X X	11 12 13	0 0 0	1000.0	0	HC	DG	WT	L,L	CL	6.0	MUD, DARK GRAY, WET, SOFT. NON CLP SAMPLE. 1502
20	X--X--X X	14 15 16 17	0 0 0	1000.0	100	HC	DG	WT	L,L	CL	12.0	MUD, DARK GRAY, WET, SOFT. CLP SAMPLE. NO WATER, NO FREE PRODUCT, VADOSE WELL INSTALLED. 1515

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-049
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/21/88 1110
DATE/TIME COMPLETED: 09/21/88 1220
TOTAL DEPTH: 21.50
SURFACE ELEVATION: 166.8203
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS / COBBLES / CRS SAND / MED SAND / FINE SAND / SILT / CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X--X X	01 02 03 04	12 24 30	0.0	0	N	LB	DR	M,M	SM	0.0	SILTY SAND WITH PEBBLES AND COBBLES (RUBBLE), LIGHT BROWN, DRY, MEDIUM DENSE, LOOSE. CLP SAMPLE. 1115
5	X--X X	05 06 07	22 17 28	1000.0	0	SHC	B/DG	DR	M,M	SM	0.0	SILTY SAND WITH PEBBLES AND COBBLES (RUBBLE), LIGHT BROWN, DRY, MEDIUM DENSE, LOOSE. HYDROCARBON STAINING AT BOTTOM. CLP SAMPLE. 1122
10	X--X--X	08 09 10	24 40 8	1000.0	40	N	B	WT	H,H	SM	0.0	COARSE GRAINED SAND WITH CONCRETE FRAGMENTS, BLACK, ORGANIC RICH. CLP SAMPLE. 1135
15	X--X--X X	11 12 13 14	32 40 12	1000.0	0	N	B	WT	H,H	SM	0.0	COARSE GRAINED SAND WITH CONCRETE FRAGMENTS. BLACK, ORGANIC RICH. NUMBER 1605 LIQUID SAMPLE. NON CLP SAMPLE. 1155
20	X--X--X	15 16 17 18	32 28 43	1000.0	23	N	B	WT	H,H	SM	0.0	MUD, BLACK. CLP SAMPLE. 1215

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-050
BORING LOCATION: ATLAS STEEL
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/23/88 1010
DATE/TIME COMPLETED: 09/23/88 1220
TOTAL DEPTH: 45.00
SURFACE ELEVATION: 163.1232
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X	01 02 03	42 18 27	0.0	0	N	DB	SM	L	ML	0.0	DARK BROWN SILT WITH CLAY, STIFF, NO VISIBLE CONTAMINATION. CLP SAMPLES. 1015
5	X		0 0 0	1000.0	0		B			ML	8.0	CONCRETE ENCOUNTERED. NO SAMPLES POSSIBLE. BROWN SILT IN TAILINGS. 1025
10	X--X	04 05 06	4 4 6	1000.0	0	MH	DG	MO	L	ML	11.0	DARK GRAY SILT WITH CLAY, SOME BLACK STREAKS. CONTAMINATION PRESENT. CLP SAMPLES. 1035
15	X--X	07 08 09	13 25 35	1000.0	0	N	DG	MO	L	WL/CL	6.0	DARK GRAY SILT AND CLAY. NO VISIBLE CONTAMINATION. CLP SAMPLES. 1045
20	X--X--X--X	10 11 12	20 20 35	1000.0	0	N	T	SM	H	SM	9.5	TAN,FINE TO MEDIUM GRAINED SAND WITH SILT. NO VISIBLE CONTAMINATION. CLP SAMPLES. 1100
25	X		35 60 0	1000.0	50	N	G	SM	H	SP	1.2	GRAY, FINE GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1112
30	X--X--X		45 56 0	1000.0	10	N	G	D	H	SP	0.6	GRAY, FINE TO MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1125
35	X--X--X	13 14 15	37 50 0	1000.0	30	N	G/GRN	SM	H	SP	1.8	GRAY, FINE TO MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION. NON CLP SAMPLES COLLECTED. 1140
40	X--X--X	16 17 18	35 50 0	1000.0	35	N	T/G	MO	L	ML	1.0	TAN TO GRAY CLAYEY SILT. NO VISIBLE CONTAMINATION. CLP SAMPLES COLLECTED. 1155
45	X--X	19 20 21	11 18 25	1000.0	30	N	T	MO	L	ML	1.2	TAN SILT WITH FINE GRAINED SAND. NO VISIBLE CONTAMINATION. CLP SAMPLES. 1215

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-051
BORING LOCATION: ATLAS STEEL
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/15/88 0850
DATE/TIME COMPLETED: 09/15/88 1121
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 156.7234
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	PORE/PEM	USCS SYMB	HNU	DESCRIPTION
0			X		X	X	X	01 02 03	12 8 9	38.0	0	N	DB	DR	L	SC	0.2	SAND AND CLAY WITH PEBBLES AND CONCRETE CHIPS. POOR SORTING. CLP SAMPLES. 0903
5				X	X				3 5 6	10.0	0	N	DB/G	DR	L	CL	0.8	GRAY SAND 6" UNDERLIES DARK BROWN CLAY (SILTY) WITH CARBONACEOUS MATERIALS AND IRON (FERRIC) STAINS. NO SAMPLES COLLECTED. 0912
10		X				X	X	04 05 06	17 23 30	10.0	0	N	DB	MO	L	CL	1.0	SILTY CLAY WITH PEBBLES. NO VISIBLE CONTAMINATION. CLP SAMPLE COLLECTED. 0926
15					X	X	X		7 9 13	10.0	0	N	G	MO	L	ML	0.8	SANDY SILT WITH CLAY AND SILTY CLAY. POORLY SORTED. NO SAMPLE RECOVERY. 0936
20						X	X	07 08 09	8 12 21	10.0	0	N	DG	MO	L	CL	0.8	DARK GRAY SILTY CLAY. NO CONTAMINATION EVIDENT. CLP SAMPLES. 0948
25			X	X	X				24 28 40	8.8	0	N	DG	MO	H	SP	0.8	MEDIUM TO COASE-GRAINED QUARTZ SAND. NO SAMPLES COLLECTED. 1002
30		X	X	X				10 11 12 13	40 60 65	9.0	10	N	DG	MO	H	SP	0.2	DARK GRAY COARSE TO MEDIUM SAND. NON-CLP SAMPLES COLLECTED. 1016
35		X	X	X				14 15 16	25 26 21	1000.0	80	HHC	DG	MO	H	SP	0.8	# 14 IS DUPLICATE; LESS THAN HALF INCH RECOVERY. 90% LEL NEAR SURFACE AT 1121. 27.9% IN BREATHING ZONE, OVER 100% IN HOLE. 1050

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-052
BORING LOCATION: ATLAS STEEL
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/15/88 1405
DATE/TIME COMPLETED: 09/16/88 0849
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 154.5544
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0		01 02 03	27 21 22	0.0	0	N	B	DR	L	SW	0.4	OVA FAILURE. HARD SAND, CLAY WITH PEBBLES AND CONSTRUCTION DEBRIS. CLP SAMPLE COLLECTED.	1426
5			9 10 11	0.0	4	N	DB/G	DR	L	CL	2.0	DARK BROWN TO GRAY HARD CLAY. NO CONTAMINATION VISIBLE. NO SAMPLES COLLECTED.	1437
10		04 05 06	9 11 11	0.0	0	N	DB	DR	L	SM	1.0	UNSORTED BROWN, SILTY SAND/ NO VISIBLE CONTAMINATION. CLP SAMPLES COLLECTED.	1448
15			12 11 20	0.0	0	N	G	DR	L	MH	1.0	GRAY, MICAEOUS CLAY WITH BROWN SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED.	1500
20		07 08 09	11 14 40	0.0	9	N	G	DR	L	SP	0.2	INORGANIC 3" SAMPLES NOT COLLECTED DUE TO POOR RECOVERY. MEDIUM TO FINE SAND. MICACEOUS. CLP SAMPLE AND DUPLICATE.	1511
25			35 63 0	3.0	0	N	G	DR	H	SP	1.0	GRAY COARSE SAND, QUARTZ RICH. NO CONTAMINATION. NO SAMPLES COLLECTED.	0827
30			35 57 0	1.5	0	N	G	DR	H	SP	1.0	GRAY COARSE SAND, QUARTZ RICH. NO CONTAMINATION. NO SAMPLES COLLECTED.	0840
35		10	19 26 30	0.4	0	N	G	DR	L	CL/ML	0.5	GREY CLAY WITH SILT. SET UP TO INSTALL VADOSE WELL. NON CLP SAMPLE.	0849

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-053
BORING LOCATION: MERSIT'S EQUIP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/06/88 1106
DATE/TIME COMPLETED: 10/06/88 1330
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 153.4183
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0	SILT, CLAY	01 02 03	30 19 15	2.4	2	N	B/D B	DR	L/M	ML	0.2	NO VISIBLE CONTAMINATION. GRAVEL, SILT AND CLAY MIXTURE. BROWN TO DARK BROWN. IR SAMPLE. CLP SAMPLES COLLECTED.	1200
5	FINE SAND, SILT, CLAY	04 05 06 07	9 11 14	4.0	0	LH	B/D B	SM	L	SC	1.4	CONTAMINATION PRESENT. BROWN TO DARK BROWN SANDY CLAY. NON CLP SAMPLES AND DUPLICATE COLLECTED. IR SAMPLE.	1220
10	FINE SAND, SILT, CLAY	08 09 10	9 10 12	3.6	0	LH	B/D B	SM	L	SC	0.4	CONTAMINATION PRESENT. BROWN TO DARK BROWN SANDY CLAY, DENSE. CLP SAMPLES. IR SAMPLE.	1230
15	COBBLES, FINE SAND, SILT, CLAY	11 12 13	22 100 0	2.4	0	N	GRN -B	SM	L	SC	2.0	NO VISIBLE CONTAMINATION. GREENISH BROWN SANDY CLAY AND GRAVEL, DENSE. IR SAMPLE CLP SAMPLES.	1240
20	FINE SAND, SILT, CLAY	14 15 16 17	9 22 17	3.2	0	N	GRN -B	SM	L	SC	0.4	SLIGHT CONTAMINATION PRESENT. GREENISH BROWN, SANDY CLAY, DENSE. IR SAMPLE. NON-CLP SAMPLES.	1255
25	CRS SAND, MED SAND	18 19 20	22 32 35	3.4	0	N	GRN -B	SM	M	SP	0.2	NO VISIBLE CONTAMINATION. GREENISH BROWN MEDIUM TO COARSE GRAINED SAND. CLP SAMPLES. IR SAMPLE.	1305
30	CRS SAND, MED SAND		30 100 0	4.0	0	N	GRN -B	SM	M	SW	0.0	NO VISIBLE CONTAMINATION. GREENISH BROWN MEDIUM TO COARSE GRAINED SAND. NO SAMPLES COLLECTED.	1317
35	CRS SAND, MED SAND	21 22 23 24	29 60 0	2.2	0	N	GRN -B	SM	M	SW	0.0	NO VISIBLE CONTAMINATION. GREENISH BROWN MEDIUM TO COARSE GRAINED SAND. NON CLP SAMPLES, DUPLICATE, AND IR SAMPLE. COLLECTED.	1325

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-054
BORING LOCATION: MERSIT'S EQUIP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/13/88 0902
DATE/TIME COMPLETED: 10/13/88 1210
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 153.7671
WATER DEPTH: 50.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			25 1 0	0.0	0	N	G		L		0.0	CONCRETE. NO RECOVERY. 0902
5		01 02 03 04	2 4 0	20.0	5	SH	DB/BL	WT	L		0.0	DARK BROWN TO BLACK SLUDGE. VISIBLE CONTAMINATION. ORGANIC DUPLICATE. NON CLP SAMPLE. 0920
10	X--X--X--X	05 06 07	12 19 32	950.0	7	N	BR	MO	L	ML	100.0	BROWN SANDY SILT WITH SOME CLAY. MINOR BLACK STREAKS. POSSIBLE CONTAMINATION. CLP SAMPLES. 0940
15	X--X--X		19 25 30	600.0	20	N	BR	SM	L/M	ML	0.0	BROWN SANDY SILT WITH SOME CLAY. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 0957
20	X--X	08 09 10	15 20 25	100.0	5	N	BR	SM	L	CL	0.0	BROWN SILTY CLAY WITH MINOR SAND. NO VISIBLE CONTAMINATION. CLP SAMPLES COLLECTED. 1014
25	X--X--X		15 17 20	40.0	0	N	T	SM	H	SM	0.0	TAN, FINE TO MEDIUM GRAINED SAND WITH MINOR SILT. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1028
30	X--X		25 50 0	4.0	0	N	T	SM	H	SP	0.0	TAN, COARSE GRAINED SAND WITH SOME PEBBLES. NO SAMPLES COLLECTED. 1100
35	X--X	11 12 13 14	24 50 0	0.0	5	N	T	SM	H	SP	0.0	NON CLP ORGANIC DUPLICATE. TAN, COARSE GRAINED SAND WITH PEBBLES. NO VISIBLE CONTAMINATION. 1110
40	X--X		35 50 0	30.0	5	N	T	SM	H	SP	0.0	TAN, COARSE GRAINED SAND WITH PEBBLES IN UPPER 6" AND LOWER 6": FINE GRAINED SAND. NO SAMPLES COLLECTED. 1120
45	X--X--X--X		20 25 40	1000.0	15	LH	BR	SM/MO	M/L	SP/CL	0.0	BROWN FINE GRAINED SAND GRADING TO BROWN CLAY. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1130

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-054
BORING LOCATION: MERSIT'S EQUIP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/13/88 0902
DATE/TIME COMPLETED: 10/13/88 1210
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 153.7671
WATER DEPTH: 50.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	▮	▮	X	--X				15	20 25 35	750.0	20	N	T	WT	H	SP	0.0	TAN, MEDIUM TO COARSE GRAINED SAND. NO VISIBLE CONTAMINATION. GRAIN SIZE SAMPLE COLLECTED. GROUNDWATER AT 50'. 1145
55	▮	▮	X					16	21 25 30	1000.0	35	N	T/G	WT	H	SP	0.0	TAN TO GREY COARSE GRAINED SAND WITH PEBBLES. NO VISIBLE CONTAMINATION. GRAIN SIZE SAMPLE COLLECTED. 1200
60	▮	▮	X						20 25 30	1000.0	15	N	G	WT	H	SP	0.0	GREY COARSE GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED. 1210

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-055
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/05/88 1028
DATE/TIME COMPLETED: 10/05/88 1415
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 164.3761
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X	01 02 03	24 24 0	0.0	0	N	T	DR	L	SM	0.0	ASPHALT, ROCKS AND TAN SANDY SILT. NO IR SAMPLE RECOVERED. CLP SAMPLES COLLECTED. 1030
5	X--X	04 05 06	15 15 13	5.0	0	N	B/D B	DR	L	SM	0.0	ASPHALT, ROCKS, BROWN TO DARK BROWN SANDY SILT. IR SAMPLE. CLP SAMPLES COLLECTED. 1040
10	X--X	07 08 09 10	6 4 4	1000.0	4	MH	BL	M	L	SM	50.0	CONTAMINATION PRESENT. GRAYISH BROWN TO BLACK SANDY SILT. SLUDGE, SUMP MATERIAL. NON CLP, ORGANIC DUPLICATE, AND IR SAMPLE COLLECTED. 1050
15	X--X	11 12 13	5 5 25	1000.0	100	SH	BL	M	L	SM	55.0	CONTAMINATION PRESENT. BLACK SANDY SILT. SUMPY SLUDGE. CLP AND IR SAMPLES. 1105
20	X--X	14 15 16	15 22 30	0.0	10	LH	BR	SM	L	SC	19.0	SLIGHT CONTAMINATION PRESENT. BROWN, SANDY CLAY. CLP AND IR SAMPLES. 1310
25	X--X	17 18 19 20	28 34 39	0.0	25	N	BR	SM	L/M	SP	52.0	NO VISIBLE CONTAMINATION. BROWN,FINE SANDS TO MEDIUM GRAINED SAND. NON CLP AND ORGANIC DUPLICATE SAMPLES COLLECTED. 1335
30	X--X		28 50 0	0.0	40	N	BR/ GR	SM	M	SP	7.0	NO VISIBLE CONTAMINATION. GREENISH BROWN MEDIUM TO COARSE GRAINED SAND. NO SAMPLES COLLECTED. 1350
35	X--X--X	21 22 23 24	34 66 0	0.0	30	N	BR/ GR	SM	M/H	SP	4.2	NO VISIBLE CONTAMINATION. GREENISH BROWN, COARSE GRAINED SAND. NON CLP, ORGANIC DUPLICATE, AND IR SAMPLES COLLECTED. 1410

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-056
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/05/88 1500
DATE/TIME COMPLETED: 10/06/88 0930
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 164.5539
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0	X--X	01 02 03	9 10 11	0.0	0	N	BR	DR	L	SM	0.6	NO VISIBLE CONTAMINATION. BROWN, SANDY SILT, LOOSE, DIRT, ROCKS. CLP AND IR SAMPLES COLLECTED.	1505
5	X--X		0 0 0	0.0	0	N	BR	DR	L	SM	4.2	NO VISIBLE CONTAMINATION. BROWN, SANDY SILT, CHUNKS OF CONCRETE. NO SAMPLE RECOVERY.	1513
10	X--X--X	04 05 06	10 10 10	0.0	0	N	BR	SM	L	SC	0.0	NO VISIBLE CONTAMINATION. BROWN, SANDY CLAY, DENSE. CLP AND IR SAMPLES COLLECTED.	1525
15	X--X--X		10 20 32	5.6	0	N	BR/DB	SM	L	SM	0.0	NO VISIBLE CONTAMINATION. BROWN TO DARK BROWN SANDY SILT, MEDIUM DENSE. NO SAMPLES COLLECTED.	0800
20	X--X	07 08 09	40 60 0	10.0	2	N	BR	SM	L	SM	0.0	NO VISIBLE CONTAMINATION. BROWN SANDY SILT, MEDIUM DENSE. CLP AND IR SAMPLES COLLECTED.	0820
25	X--X--X	10 11 12 13	25 34 29	7.6	2	LH	BR/GB	SM	L/M	SC	30.0	SLIGHTLY CONTAMINATED. BROWN TO GRAYISH BROWN, SANDY CLAY TO FINE SAND. NON CLP AND IR SAMPLES COLLECTED.	0840
30	X--X	14 15 16	30 40 40	3.5	2	N	GR/B	SM	M/H	SP	1.2	NO VISIBLE CONTAMINATION. GREENISH BROWN, MEDIUM TO COARSE GRAINED SANDS. CLP AND IR SAMPLES COLLECTED.	0905
35	X--X	17 18 19	47 69 0	2.2	0	N	GRN	SM	M/H	SP	0.6	NO VISIBLE CONTAMINATION. GREENISH BROWN TO OLIVE GREEN, MEDIUM TO COARSE SANDS. NON CLP AND IR SAMPLES COLLECTED. NO DUPLICATE RECOVERY. NO DUPLICATE RECOVERY.	0920

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-057
BORING LOCATION: 150' W OF CARGO
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/12/88 1125
DATE/TIME COMPLETED: 10/12/88 1500
TOTAL DEPTH: 45.00
SURFACE ELEVATION: 166.0728
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0	FINE SAND, SILT, CLAY	01 02 03	10 20 32	0.0	0	N	BR	DR	L/M	SM	0.0	NO VISIBLE CONTAMINATION. GRAVEL AND SANDY SILT MIXTURE, LOOSE. CLP SAMPLES COLLECTED.	1130
5	FINE SAND, SILT, CLAY		9 10 12	0.0	0	N	BR	DR	L	SC	0.0	NOT CONTAMINATED. SANDY CLAY AND SILT MIXTURE, BROWN. NO SAMPLE COLLECTED.	1135
10	FINE SAND, SILT, CLAY		0 0 0	1000.0	70	N	BR	DR	L	SC	110.0	SANDY CLAY AND SILT MIXTURE, BROWN, LOOSE. ENCOUNTERED CONCRETE AT APPROXIMATELY 10'. NO SAMPLES RECOVERED.	1150
15		04 05	12 20 0	200.0	0	SH	BL	WT	L		45.0	BLACK SLUDGE CONTAMINATION. CONCRETE ENCOUNTERED. NON CLP SAMPLES.	1331
20	FINE SAND, SILT, CLAY	06 07 08	24 30 0	80.0	15	MH	BL/DB	WT/SM	L	SC	11.0	TOP 3" IS BLACK SLUDGE, LOWER 9" IS DARK BROWN SILTY CLAY. PARTIAL CONTAMINATION. CLP SAMPLES COLLECTED.	1345
25	SILT, CLAY	09 10 11	20 50 0	800.0	80	N	DB/DG	SM	L	CL	40.0	DARK BROWN TO DARK GRAY SILTY CLAY. CONTAMINATION PRESENT. CLP SAMPLES COLLECTED.	1400
30	MED SAND, CLAY		35 50 0	1000.0	75	N	DG	SM/MO	L	CL	100.0	DARK GRAY CLAY WITH SAND. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED.	1417
35	CRS SAND	12 13 14	14 34 0	1000.0	60	N	G	SM	H	SP	50.0	GRAY, COARSE GRAINED SAND WITH SOME PEBBLES. NO VISIBLE CONTAMINATION. NON CLP SAMPLES COLLECTED.	1431
40	CRS SAND, SILT, CLAY		20 45 0	1000.0	70	N	G	SM	H/L	SP	20.0	TOP 6" IS GRAY, COARSE SAND WITH PEBBLES LOWER 6" IS GRAY CLAY. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED.	1445
45	FINE SAND, CLAY	15 16 17	50 0 0	1000.0	0	N	DG	SM	M	SP	0.0	DARK GRAY FINE GRAINED SAND WITH TRACES OF CLAY. NO VISIBLE CONTAMINATION. NON CLP SAMPLES COLLECTED.	1500

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-058
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/11/88 1145
DATE/TIME COMPLETED: 10/20/88 1440
TOTAL DEPTH: 23.00
SURFACE ELEVATION: 167.6700
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X--X--X	01 02 03	9 10 12	20.0	0	LH	DB/BL	SM	DR/SM	SM	1.0	VISIBLE CONTAMINATION. DARK BROWN TO BLACK SANDY SILT, EMBEDDED WITH FRAGMENTS OF GRAVEL. NON CLP SAMPLE COLLECTED. 1155
5	X X--X	04 05 06	17 8 35	1000.0	100	SH	BL	SM	L/M	SM	0.0	VISIBLE CONTAMINATION. BLACK SANDY SILT TO GRAVELLY SILT. SOME SMALL PIECES OF CONCRETE. NON-CLP SAMPLES COLLECTED. FREE PRODUCT AT 8'. 1205
10	X--X--X--X	07	0 0 0	400.0	5	HC	BL	OL	HHM	SW	4.0	NO SAMPLE RECOVERY. BAILED LIQUID SAMPLE. GALLOWAY TAKES OVER LOGGING FROM 10'-20' 1400
15	X--X--X	08 09 10 11	0 0 0	1000.0	45	HC	BL	OL	HH	SP	40.0	MUD, BLACK, WET,SOFT, ROCKS AND PEBBLES. 1402
20	X--X--X	12 13 14 15	0 0 0	1000.0	30	HC	BL	OL	HH	SP	30.0	MUD, BLACK, WET,SOFT, ROCKS AND PEBBLES. RECOVERY WELL INSTALLED. 1422

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-059
BORING LOCATION: TIMMONS LUMBER
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/11/88 0850
DATE/TIME COMPLETED: 10/11/88 1045
TOTAL DEPTH: 40.00
SURFACE ELEVATION: 164.1412
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0		01 02 03	6 7 11	300.0	0	MH	DB/BL	DR/SM	L	SM	4.0	VISIBLE CONTAMINATION. DARK BROWN TO BLACK SANDY SILT. TRACES OF WHITE POWDER. DENSE TO LOOSE AT 1'. NON-CLP SAMPLES COLLECTED.	0855
5		04 05 06 07	9 10 11	375.0	0	MH	BL	DR/SM	L	SM	75.0	VISIBLE CONTAMINATION. DARK BROWN TO BLACK SANDY SILT. DENSE. CLP AND DUPLICATE INORGANIC SAMPLES COLLECTED.	0910
10		08 09 10	9 11 14	140.0	15	MH	BL/DB	DR/SM	L	SM	120.0	VISIBLE CONTAMINATION. DARK BROWN TO BLACK SANDY SILT. DENSE. NON CLP SAMPLES COLLECTED.	0920
15		11 12 13 14	14 20 30	20.0	0	MH	DB/BL	DR/SM	L	SM	20.0	VISIBLE CONTAMINATION. DARK BROWN TO BLACK SANDY SILT. CLP AND DUPLICATE INORGANIC SAMPLES COLLECTED.	0930
20		15 16 17	8 12 15	100.0	18	MH	DB/GB	SM	L	SM	45.0	VISIBLE CONTAMINATION. DARK BROWN TO GREEN SANDY SILT. NON CLP SAMPLES COLLECTED.	0945
25		18 19 20 21	10 15 20	26.0	30	MH	DB/GB	SM	L	SM	19.6	VISIBLE CONTAMINATION. DARK BROWN TO GRAY SANDY SILT TO FINE SAND. CLP AND DUPLICATE INORGANIC SAMPLES COLLECTED.	0955
30		22 23 24 25	28 50 0	10.0	15	SH	DB/GB	SM	L/M	SM	12.0	SLIGHT VISIBLE CONTAMINATION. DARK BROWN TO GREEN SANDY SILT TO FINE TO MEDIUM GRAINED SAND. CLP AND DUPLICATE INORGANIC SAMPLES COLLECTED.	1006
35		26 27 28	50 0 0	2.5	0	SH	DB/GB	SM	M	SP	0.0	SLIGHT VISIBLE CONTAMINATION. DARK BROWN TO GREENISH BROWN, MEDIUM TO COARSE GRAINED SANDS. CLP SAMPLES COLLECTED. NO DUPLICATE SAMPLE RECOVERY.	1020
40		29 30 31	35 28 23	26.0	0	N	GB	SM	M	SP	0.0	NO VISIBLE CONTAMINATION. GREENISH BROWN, MEDIUM TO COARSE GRAINED SANDS. NON CLP SAMPLES COLLECTED.	1035

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-060
BORING LOCATION: ATLAS STEEL
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/22/88 1105
DATE/TIME COMPLETED: 09/22/88 1455
TOTAL DEPTH: 45.00
SURFACE ELEVATION: 163.0696
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X				X	X	01 02 03	9 19 28	0.1	0	N	DB	SM	L	ML	0.0	NO VISIBLE CONTAMINATION. DARK BROWN SILT WITH CLAY. SOME PEBBLES. PIECES OF RED BRICK. CLP SAMPLES COLLECTED. NOT ENOUGH RECOVERY FOR DUPLICATE. 1112
5						X	X		7 7 9	100.0	0	N	DB	SM	L	ML	4.0	NO VISIBLE CONTAMINATION. DARK BROWN SILT WITH CLAY. NO SAMPLES COLLECTED. 1122
10						X	X	04 05 06 07	4 5 6	10.0	0	N	DB	SM/MO	L	ML	4.0	NO VISIBLE CONTAMINATION. DARK BROWN SILT WITH CLAY. CLP AND DUPLICATE SAMPLES COLLECTED. 1130
15						X	X		14 23 30	18.0	0	N	DB	MO	L	ML	3.0	NO VISIBLE CONTAMINATION. DARK BROWN SILT WITH CLAY. NO SAMPLES COLLECTED. 1150
20					X	X		08 09 10 11	13 14 9	10.0	0	N	BR/T	SM	L/M	SP	1.0	NO VISIBLE CONTAMINATION. BROWN TO TAN FINE GRAINED SAND WITH SILT CLP AND DUPLICATE SAMPLES COLLECTED. 1200
25				X	X	X	X		15 25 40	75.0	35	N	T/BR	SM	M/L	SM/SC	1.2	NO VISIBLE CONTAMINATION. TAN, MEDIUM TO FINE GRAINED SAND GRADING TO SILT WITH FINE SAND AND CLAY. NO SAMPLES COLLECTED. 1215
30			X	X					45 23 51	1000.0	0	N	B/T	SM	H	SP	4.8	NO VISIBLE CONTAMINATION. BROWN TO TAN MEDIUM TO COARSE GRAINED SAND. NO SAMPLES COLLECTED. 1225
35			X	X		X	X	12 13 14 15	17 32 50	1000.0	0	N	B	SM	M	SP/CL	0.0	NO VISIBLE CONTAMINATION. BROWN MEDIUM TO COARSE SAND INTERBEDDED WITH SILTY CLAY. NON CLP AND DUPLICATE SAMPLES COLLECTED. 1242
40					X	X	X	16 17 18 19	15 15 25	1000.0	0	N	T	SM/MO	L	CL	3.8	NO VISIBLE CONTAMINATION. TAN, STIFF CLAY WITH SILT. CLP AND DUPLICATE SAMPLES COLLECTED. 1430
45							X	20 21 22 23	15 23 45	1000.0	0	N	BR/G	MO	L	CL	0.6	NO VISIBLE CONTAMINATION. BROWN TO GRAY STIFF CLAY WITH MINOR SILT. CLP AND DUPLICATE SAMPLES COLLECTED. 1446

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-061
BORING LOCATION: DRUM AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/14/88 1400
DATE/TIME COMPLETED: 09/14/88 1615
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 157.5863
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT, CLAY	01 02 03	8 9 9	20.0	0	H	DB	MO	L	OL/PT	3.0	7" OF CONCRETE (NOT REINFORCED). DARK BROWN SILTY CLAY AND ORGANIC MATTER (PEAT OR BARK MATERIAL). CLP SAMPLES COLLECTED. 1413
5	CLAY		4 6 11	15.0	5	H	DB/G	MO	L	CL	1.3	DARK BROWN TO GRAY CLAY WITH SOME PEBBLES. NO SAMPLES COLLECTED. 1435
10	CLAY	04 05 06	13 40 50	13.0	0	H	DG	WT/MO	L	CL	2.6	DARK GRAY CLAY WITH ORGANIC MATTER. CLP SAMPLES COLLECTED. 1450
15	SILT, CLAY		7 12 15	3.4	0	N	RB	MO	L	CL	1.4	WOOD CHIPS. RED BROWN CLAY TO SILTY CLAY NO ODOR. STIFF. NO SAMPLES COLLECTED. 1503
20	SAND, MED SAND, FINE SAND	07 08 09	20 21 35	6.1	0	N	LB	DR	M/H	SW/CL	0.6	SAND WITH SOME MINOR CLAY LENSES. MODERATE SORTING. QUARTZ RICH. CLP SAMPLES COLLECTED. 1516
25	COBBLES, CRS SAND, MED SAND, FINE SAND		73 0 0	0.9	0	N	LRB	DR	M/H	SW	0.6	COARSE TO FINE SAND WITH PEBBLES. NO SAMPLES COLLECTED. 1531
30	SILT, CLAY		35 65 0	3.6	0	N	LRB	DR	L	ML/CL	0.4	RED BROWN CLAYEY SILT AND SILTY CLAY. NO SAMPLES COLLECTED. 1550
35	FINE SAND, SILT, CLAY	10 11 12	7 15 15	1.7	0	N	DB/B	DR	L	ML	0.6	CLAYEY SILT TO SILTY CLAY. 1606

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-062
BORING LOCATION: ATLAS STEEL
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/01/88 0750
DATE/TIME COMPLETED: 10/01/88 1025
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 155.4928
WATER DEPTH: 48.50

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0	MED SAND, SILT, CLAY	01 02 03 04	8 10 14	1.5	0	N	DB	DR	LL	CL	0.0	ASPHALT (7.5"). BASE (2"). SILTY CLAY, DARK BROWN, DRY, STIFF, WELL CEMENTED. SAMPLE #4 IS ORGANIC DUPLICATE. CLP SAMPLES COLLECTED.	0800
5	MED SAND, SILT, CLAY		14 24 24	1.5	0	N	BR	DR	LL	CL	0.0	SILTY CLAY, BROWN, DRY, STIFF, WELL CEMENTED.	
10	SILT, CLAY	05 06 07	10 18 20	0.0	0	N	RB	DR	LL	CL	0.0	SILTY CLAY, RED/BROWN, STIFF, WELL CEMENTED. CLP SAMPLES COLLECTED.	0825
15	SILT, CLAY		17 27 34	2.0	0	N	GB	DR	LL	CL	0.0	LEAN CLAY, GREENISH BROWN, STIFF, WELL CEMENTED.	
20	MED SAND, FINE SAND, SILT, CLAY	08 09 10 11	12 20 24	0.0	0	N	RB	DR	ML	SW	0.0	MEDIUM TO COARSE GRAINED SAND WITH CLAY, RED/BROWN, DAMP,MEDIUM DENSE, MODERATELY TO WELL CEMENTED. #11 IS ORGANIC DUPLICATE.	0845
25	CRS SAND		17 27 30	0.0	0	N	YB	SM/ MO	HH	SP	0.0	COARSE SAND, YELLOW BROWN, MOIST, MEDIUM DENSE, POORLY CEMENTED. AT 25.5' TO 26' LEAN CLAY.	
30	CRS SAND, SILT, CLAY		22 50 0	0.0	0	N	YB	SM/ MO	HH	SP	0.0	COARSE GRAINED SAND, YELLOW BROWN, MOIST MEDIUM DENSE, POORLY CEMENTED. AT 30'5" TO 30'9" SILTY CLAY.	
35	SILT, CLAY	12 13 14 15	12 19 17	0.0	0	N	GB	MO	LL	CL	0.0	FAT CLAY, GREEN BROWN, MOIST, STIFF, WELL CEMENTED. THIN SILTY CLAY INTERBEDS LESS THAN 2" THICK (20%) NON CLP SAMPLES COLLECTED.	0914
40	SILT, CLAY		14 14 30	0.0	0	N	OB	SM/ MO	LM	SC	0.0	SILTY CLAY, ORANGISH BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED.	
45	MED SAND, FINE SAND		27 50 0	0.0	0	N	OB	SM/ MO	MM	SP	0.0	MEDIUM GRAINED SAND, ORANGISH BROWN, MOIST, MEDIUM DENSE, MODERATELY WELL CEMENTED. GROUNDWATER AT 48'5".	

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-062
BORING LOCATION: ATLAS STEEL
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/01/88 0750
DATE/TIME COMPLETED: 10/01/88 1025
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 155.4928
WATER DEPTH: 48.50

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	X--X--X		18 29 42	0.0	0	N	G	WT	HH	SP	0.0	MEDIUM GRAINED SAND, GRAY, WET, MEDIUM DENSE, POORLY CEMENTED.
55	X--X--X		14 23 38	0.0	0	N	GB	WT	HH	SP	0.0	VERY COARSE GRAINED SAND WITH PEBBLES AND GRAVEL, GREY BLACK, WET, POORLY CEMENTED.
60	X--X--X		26 34 41	0.0	0	N	GB	WT	HH	SP	0.0	VERY COARSE GRAINED SAND WITH PEBBLES AND GRAVEL, GREY BLACK, WET, POORLY CEMENTED. WATER AT 48.5', HEAVING BELOW WATER.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-063
BORING LOCATION: ATHELETIC FIELD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/26/88 1230
DATE/TIME COMPLETED: 09/26/88 1400
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 153.6319
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X	01 02 03 04	5 10 16	8.0	0	N	DBR	SM-WT	L-M	SM	5.0	DARK BROWN SANDY SILT, SOME GRAVEL, SLIGHTLY MOIST TO WET. CLP SAMPLE. ORGANIC DUPLICATE. 1235
5	X--X		8 9 13	10.0	0	N	BR	MO	L	ML	6.0	BROWN, CLAYEY SILT, MOIST, NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1245
10	X--X--X	05 06 07 08	6 5 5	10.0	0	N	BR	MO	L	ML	2.2	BROWN, SANDY SILT WITH SOME CLAY. CLP SAMPLE. ORGANIC DUPLICATE. 1253
15			16 34 50	10.0	0	N	T	MO	L	ML	2.5	TAN, SILT WITH CLAY AND MINOR FINE SAND. NO VISIBLE CONTAMINATION NO SAMPLE COLLECTED. 1305
20		09 10 11 12	10 15 20	9.0	0	N	T	DR	L	CL	1.6	TAN SILTY CLAY, STIFF, DRY, HARD. NO VISIBLE CONTAMINATION. CLP SAMPLE. ORGANIC DUPLICATE. 1314
25	X--X--X		6 7 10	10.0	0	N	G-T	MO	L	ML	1.0	GRAY TO TAN CLAYEY SILT WITH MINOR FINE SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1327
30	X--X		22 23 27	10.0	0	N	T	SM	MO-H	SM	0.8	TAN SILTY SAND. NO VISIBLE CONTAMINATION NO SAMPLE COLLECTED. 1337
35	X--X	13 14 15 16	25 25 55	8.0	0	N	T-G	MO	L	CL	0.6	TAN TO GRAY SILTY CLAY. NO VISIBLE CONTAMINATION. NON CLP SAMPLE. ORGANIC DUPLICATE. 1352

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-064
BORING LOCATION: ATHELETIC FIELD
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/26/88 1230
DATE/TIME COMPLETED: 09/26/88 1400
TOTAL DEPTH: 40.00
SURFACE ELEVATION: 154.6974
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0						X	X	01 02 03 04	18 18 26	10.0	0	N	DG-BL	MO	L	ML	1.2	DARK GRAY TO BLACK CLAYEY SILT. NO VISIBLE CONTAMINATION. CLP SAMPLE. ORGANIC DUPLICATE. 1435
5					X	X			14 24 20	1000.0	0	N	BL	DR	L	ML	20.0	DARK GRAY TO BLACK SILT WITH FINE SAND AND RUBBLE (CEMENT AND ASPHALT). NO SAMPLE COLLECTED. 1445
10						X	X	05 06 07	14 21 25	1000.0	0	N	BR	SM	L	CL	0.0	BROWN, SILTY CLAY. NO VISIBLE CONTAMINATION. NOT ENOUGH FOR DUPLICATE. CLP SAMPLE. 1455
15						X	X		12 26 40	100.0	0	N	BR	SM	L	CL	0.0	BROWN SILTY CLAY (MINOR SILT). NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1505
20							X	08 09 10 11	21 20 50	10.0	0	N	G-T	SM-DR	L	CL	0.0	NO VISIBLE CONTAMINATION. GRAY TO TAN CLAY WITH MINOR SILT. CLP SAMPLE. ORGANIC DUPLICATE. 1512
25					X	X			8 21 32	6.0	0	N	G-T	MO	L	ML	0.0	GRAY TO BROWN SANDY SILT. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1525
30					X	X			40 55 0	60.0	0	N	T	SM	L-M	SM	0.0	TAN SILTY SAND. NO VISIBLE CONTAMINATION NO SAMPLE COLLECTED. 1535
35			X					12 13	50 0 0	1000.0	0	N	T	SM	M-H	SM	0.0	TAN, MEDIUM GRAINED SAND, NO VISIBLE CONTAMINATION. NON CLP SAMPLES. 1545
40									0 0 0	0.0	0						0.0	LOW READINGS. NO SAMPLE COLLECTED. 0830

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-065
BORING LOCATION: C&E DIE & FAB
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/07/88 1150
DATE/TIME COMPLETED: 10/07/88 1355
TOTAL DEPTH: 45.00
SURFACE ELEVATION: 157.9569
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	FIRST SAMPLE COLLECTED AT 5 FEET. 1150
5	FINE SAND: X--X	01 02 03 04	3 4 5	12.0	0	N	DB	SM	L	SM	0.0	NO VISIBLE CONTAMINATION. DARK BROWN SILTY SAND, SLIGHTLY MOIST, MEDIUM DENSE TO LOOSE. CLP SAMPLE. DUPLICATE ORGANIC TAKEN. 1155
10	FINE SAND: X--X	05 06 07 08	4 4 8	1.0	0	N	DB	SM	L	ML	1.0	NO VISIBLE CONTAMINATION. DARK BROWN SILT WITH SAND. MEDIUM DENSE TO LOOSE, SLIGHTLY MOIST. CLP SAMPLE. DUPLICATE ORGANIC SAMPLE. 1200
15	CRS SAND: X--X; MED SAND: X--X; FINE SAND: X--X	09 10 11	18 46 60	1.5	0	N	B	SM	L-M	CL-SM	0.0	BROWN SILTY CLAY TO COARSE SAND AT BOTTOM OF SAMPLER, VERY DENSE, STIFF, SLIGHTLY MOIST. SLIGHT CONTAMINATION VISIBLE. NON CLP SAMPLE. 1225
20	CRS SAND: X--X	12 13 14	27 28 29	20.0	10	N	LB	SM	M-M	SM	1.5	LIGHT BROWN COARSE SAND, DENSE, SLIGHTLY MOIST, WEAKLY CEMENTED. NO CONTAMINATION VISIBLE. NO DUPLICATE RECOVERED. CLP SAMPLE. 1230
25	COBBLES: X--X		33 56 0	0.0	20	N	LB	SM	H	GP	0.4	LIGHT BROWN COARSE GRAVELLY SANDS,LOOSE, SLIGHTLY MOIST. NO VISIBLE CONTAMINATION. NO SAMPLE RETAINED. 1245
30	COBBLES: X--X	15 16 17	38 50 0	1000.0	11	N	LB	SM	H	GP	0.0	LIGHT BROWN COARSE GRAVELLY SAND, DENSE, SLIGHTLY MOIST. SLIGHT CONTAMINATION VISIBLE. NON CLP SAMPLE. 1300
35	MED SAND: X--X	18 19 20	100 0 0	1000.0	10	N	LB	SM	M-H	SP	0.0	FINE TO MEDIUM SAND, POORLY GRADED, DENSE,SLIGHTLY MOIST. NO VISIBLE CONTAMINATION. NON CLP SAMPLE. 1330
40	MED SAND: X--X; FINE SAND: X--X	21 22 23	18 55 0	1000.0	10	N	LB	SM-ML	M-L	SM	0.0	LIGHT BROWN, MEDIUM SAND TO SILT, DENSE, SLIGHTLY MOIST. NO VISIBLE CONTAMINATION. NON CLP SAMPLE. 1355
45	CRS SAND: X--X	24 25 26	38 59 0	1000.0	5	N	LB	SM	M	SM	0.0	COARSE TO MEDIUM SAND, DENSE, SLIGHTLY MOIST.NO VISIBLE CONTAMINATION. NON CLP SAMPLE. BOTTOM OF BORING 45'. VADOSE MONITORING WELL INSTALLED. SEE WELL CONSTRUCTION SHEET FOR DETAILS.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-066
BORING LOCATION: C&E DIE & FAB
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/12/88 1100
DATE/TIME COMPLETED: 10/12/88
TOTAL DEPTH: 45.00
SURFACE ELEVATION: 160.9758
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			15 21 16	1.2	0	N	BR	DR	H-M	GP-SM	7.0	LOOSE SAND. NO CONTAMINATION VISIBLE. NO SAMPLE RETAINED.
5		01 02 03	12 20 24	3.0	0	N	OG	SM	M-L	GP-SM	2.2	SANDY SILT, LOOSE, SOME ASPHALT SHIPS, SLIGHT MOISTURE, FILL, VISIBLE CONTAMINATION. NON CLP SAMPLE.
10			5 3 3	30.0	60	MH	B	WT	L	OH	20.0	BLACK SLUDGE, WET, VISCOUS, NO SAMPLE RETAINED IN TUBE. CONTAMINATED.
15			0 0 0	54.0	85	SH	B	WT	L	OH	60.0	BLOWS NOT RECORDED. BLACK SLUDGE, VISCOUS, NO SAMPLE RETAINED. VISIBLE CONTAMINATION.
20		04 05	19 17 35	60.0	50	MH	8	WT	L	OH	32.0	BLACK SLUDGE AND ASPHALT, WET, LOOSE. VISIBLE CONTAMINATION. NON CLP SAMPLE.
25		06 07 08	23 30 25	1000.0	0	SH	BG	SM	H	SP	20.0	MEDIUM TO COARSE SANDS,BROWISH GRAY RO GREEN,DENSE, SLIGHTLY MOIST. VISIBLE CONTAMINATION. CLP SAMPLE.
30		09 10 11	66 0 0	1000.0	0	SH	LG/B	SM	H	GW	40.0	COARSE GRAVELLY SANDS, DENSE, SLIGHTLY MOIST. SLIGHT CONTAMINATION VISIBLE. NON CLP SAMPLE.
35		12 13 14	35 56 0	1000.0	0	MH	LB	SM	M	SP-SM	32.0	FINE TO COARSE SAND, DENSE, GREENISH GRAY TO BROWN, SLIGHTLY MOIST, MODERATE CONTAMINATION VISIBLE. CLP SAMPLE.
40		15 16 17	25 35 35	1000.0	0	LH	RB-GB	SM	M-L	SP	28.0	UNIFORM FINE SAND, DENSE, POORLY GRADED, MOTTLED DARK GRAY AND RED BROWN, SLIGHTLY MOIST. NON CLP SAMPLE.
45		18 19 20	80 0 0	1000.0	0	MH	LB-RB	SM	L	SM	40.0	FINE TO MEDIUM SAND. SAME AS ABOVE. MOTTLED, SLIGHTLY MOIST, POOORLY GRADED. CLP SAMPLE. FINISHED BORING AT 45' DEPTH.

FIELD BORING LOG

DFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-067
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/11/88 1500
DATE/TIME COMPLETED: 10/12/88 0900
TOTAL DEPTH: 45.00
SURFACE ELEVATION: 163.0838
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND X--X	01 02 03 04	6 11 14	1.0	0	N	BR	DR	H	SM	0.8	SILT AND SAND. BROWN, LOOSE, DRY SURFACE SOIL DEVELOPMENT, MISCELLANEOUS CONCRETE CHUNKS AT SURFACE (FILL MATERIAL). INORGANIC DUPLICATE TAKEN. CLP SAMPLE.
5	FINE SAND X--X		10 0 0	0.0	0	N	BR	DR	M	SM	0.8	BLOWS 10/5" SAME AS ABOVE. NO VISIBLE CONTAMINATION. NO SAMPLE RETAINED. HIT ROCK AT 6" DEPTH WITH SAMPLER.
10	BOULDERS X--X--X--X--X--X--X--X		10 0 0	0.8	0	N					4.5	BLOWS 10/0" CONCRETE DUST SHOWN ON END OF SAMPLER, MUST BE CONCRETE BLOCK, NO SAMPLE RECOVERED. FILL.
15	SILT X--X	05 06 07	18 25 40	880.0	25	SF	DG-BL	SM	L	ML-CL	40.0	SILT AND CLAY. DARK GRAY TO BLACK, PETROLEUM SLUDGE AND DRILLING MUD, MEDIUM DENSE. NON CLP SAMPLE.
20	MED SAND X--X--X	08 09 10	40 0 0	240.0	23	SI	BR	SM	L	ML	26.0	SILT WITH A TRACE OF CLAY AND SAND, VERY DENSE, WELL INDURATED, SLIGHT MOISTURE, NO INORGANIC DUPLICATE RETAINED IN SLEEVE. CLP SAMPLE.
25	MED SAND X	11 12 13	40 80 0	2.4	0	N	GR-G	SM	M	SP	13.0	MEDIUM SAND, GRAY GREEN, DENSE, SLIGHTLY MOIST, POORLY GRADED, VISIBLE CONTAMINATION. CLP SAMPLE.
30	MED SAND X	14 15 16	65 0 0	0.0	0	N	GR-G	SM	M-H	SP	1.4	MEDIUM SAND, GRAY GREEN, UNIFORM, POORLY GRADED, DENSE, VISIBLE CONTAMINATION. NON CLP SAMPLE.
35	FINE SAND X--X--X	17 18 19	40 31 30	0.0	5	N	G	SM	L	ML	0.0	SILT, GREENISH GRAY, DENSE, SLIGHTLY MOIST, UNIFORM, VISIBLE CONTAMINATION. NON CLP SAMPLE.
40	FINE SAND X--X--X	20 21 22	30 18 25	0.0	0	N	G	SM	L	ML-SM	0.6	INTERBEDDED FINE SAND AND SILT, GRAY GREEN, MEDIUM DENSE, SLIGHT MOISTURE, VISIBLE CONTAMINATION. CLP SAMPLE.
45	MED SAND X--X--X	23 24 25	37 50 0	0.0	0	N	GR-G	SM	L-M	ML-SM	0.6	INTERBEDDED SAND & SILT, DARK GREENISH GREY, DENSE, SLIGHTLY MOIST, MODERATELY GRADED. CLP SAMPLE. BORING COMPLETED AT 45' DEPTH. NOT A VADOSE WELL.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-068
BORING LOCATION: TIMMONS LUMBER
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/23/88 1400
DATE/TIME COMPLETED: 09/26/88 0910
TOTAL DEPTH: 25.00
SURFACE ELEVATION: 162.2918
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0					X	X		01 02 03	60 0 0	0.0	0	N	T	DR	M	SM	0.0	TAN SILT WITH FINE SAND, DRY, LOOSE. 1420
5						X			13 0 0	1000.0	25	N	T	DR	M	ML	180.0	TAN SILT, DRY, LOOSE. NO SAMPLES COLLECTED. 1443
10									0 0 0	1000.0	30	SH	BL	MO	L		50.0	CONCRETE ENCOUNTERED, NO SAMPLE POSSIBLE LIQUID ON HAMMER. BLACK STICKY MATERIAL IN TAILINGS. SUMP. 1500
15								04 05 06	0 0 0	450.0	5	SH	BL	WT	L		6.0	BLACK, SOUPY, MUDDY, SUMP MATERIAL. CONTAMINATED. JAR SAMPLES COLLECTED. 1515
20					X	X	X	07 08 09	11 11 15	1000.0	35	SH	G/BL	WT	L	OH	150.0	DARK GRAY CLAY WITH SILT. FREE PRODUCT SOME BLACK STREAKS. CLP SAMPLES COLLECTED. 1540
25					X	X	X	10 11 12 13	20 26 50	1000.0	70	SH	G	MO	L	ML	170.0	GRAY SILT CLAY WITH FINE SAND. FREE PRODUCT. NO CONTAMINATION VISIBLE IN SOIL SAMPLES. NON CLP SAMPLES COLLECTED. BREATHING ZONE HAD OVA READINGS OF 10 PPM. ALSO INCLUDES SB-068-014. 0840

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-069
BORING LOCATION: E.D.M. METHODS
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/21/88 1320
DATE/TIME COMPLETED: 09/21/88 1450
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 161.1919
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X--X	01 02 03	25 17 50	0.0	0	N	T-B	SM	L	ML	0.0	TAN SILT WITH CLAY AND SAND AND SOME GRAVEL (1ST SLEEVE); GRAYISH TO BROWN SILTY CLAY (2ND & 3RD SLEEVE); NO VISIBLE CONTAMINATION. CLP SAMPLE. 1320
5	X--X	04 05 06 07	5 6 8	80.0	25	LH	DG-BL	MO	L	ML-CL	8.0	DARK GRAY TO BLACK SILT AND CLAY, MOIST POSSIBLE SUMP; CONTAMINATION VISIBLE, NON CLP SAMPLE. 1330
10	X--X	08 09 10 11	2 3 3	350.0	45	LH	DG	MO-WT	L	ML-CL	6.0	DARK GRAY SILT AND CLAY, SUMP MATERIAL, CONTAMINATION VISIBLE; NON CLP SAMPLE. 1340
15	X--X	12 13 14	15 23 28	12.0	5	LH	DB-DG	MO	L	CL	1.0	DARK BROWN TO DARK GRAY SILTY CLAY; APPEARS UNCONTAMINATED. CLP SAMPLE. 1352
20	X--X	15 16 17 18	9 9 18	13.0	0	N	T	MO	L	SM	1.2	TAN SILT WITH FINE SAND; NO VISIBLE CONTAMINATION; LAST SLEEVE GRAY CLAY. CLP SAMPLE. 1403
25	X		47 82 0	3.4	0	N	T	MO	M-H	SP	0.0	TAN, MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION; NO SAMPLE COLLECTED. 1415
30	X--X		47 70 0	540.0	22	N	T	MO	M	SP	0.0	TAN, MEDIUM TO COARSE GRAINED SAND; NO SAMPLE COLLECTED. 1430
35	X--X	19 20 21	39 70 0	80.0	3	N	T	SM-MO	H	SP	0.5	TAN, MEDIUM TO COARSE GRAINED SAND; NO VISIBLE CONTAMINATION; NON CLP SAMPLE. 1445

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: D. MELCHIOR

BORING NUMBER: SB-070
BORING LOCATION: SANTA FE SPRING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/10/88 0920
DATE/TIME COMPLETED: 09/10/88 1050
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 157.0802
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0					X	X			0 0 0	0.0	0	N	DB			OL	0.0	DARK BROWN SILTS AND SAND WITH SMALL PEBBLES. WOOD FRAGMENTS FOUND IN CUTTINGS TO ABOUT 4'
5						X	X	01 02 03	5 6 7	0.0	0	N	DB	MO	L	OL	0.6	DARK BROWN CLAY WITH SOME SILT. MOIST & VERY COHESIVE. SAMPLE NOT RECOVERED,ONLY 1/2 TUBE(ORGANIC) & ONLY 1 INORGANIC. AT 7.5' DARK GRAY TO BLACK MATERIAL WITH A SLIGHT OILY LOOK. CLP SAMPLE.
10							X		8 17 12	0.0	0	N	B	MO	L	OL	1.0	DRILLED TO 10', HNU SHOWED 1 PPM, EXP 0; MAY BE NATIVE CLAY; SAMPLE COLLECTED 10-11.5', SHOWED CHOCOLATE BROWN CLAY WITH SOME SILT; VERY COHESIVE 0945
15					X	X		04 05 06	17 50 50	0.0	0	N	B	MO	L	SM	1.2	BROWN SILT WITH ABOUT 20% MEDIUM SAND AT 16-16.5'; 15-16' GRAY SILT WITH INTERSPERSED BROWN SILT & SOME SAND; 17-20' MEDIUM GRAINED TAN SAND WAS SEEN IN CUTTINGS. CLP SAMPLE. 0950
20				X				07 08 09	50 70 0	0.0	0	N	T	SM	M	SP	3.0	MEDIUM GRAINED TAN SAND WITH SOME COARSE SAND (~20%); USED SAND TRAYS TO COLLECT 20-21.5'; 21.5-25' TAN TO GRAY MEDIUM GRAINED SAND. 1005
25			X	X				10 11 12	40 90 0	0.0	0	N	T	SM	M	SP	3.5	MEDIUM AND COARSE GRAIN SAND; SOME 5% PEBBLES; TAN TO BROWN;SAND TRAP USED TO COLLECT; SIMILAR TO 30'; SOME GRAVEL ENCOUNTERED AT 29'. 1020
30				X				13 14 15	451 100 0	0.0	0	N	T	SM	M	SP	4.0	MEDIUM AND COARSE GRAIN SAND; TRAP USED; GOOD RECOVERY; 35' ENCOUNTERED GRAY CLAY 1030
35							X	16 17	35 55 0	0.0	0	N	T	SM	L	CL	5.6	DENSE GRAY CLAY AT 35'; PULLED AUGERS AT 10:50 1045

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: D. MELCHIOR

BORING NUMBER: SB-071
BORING LOCATION: SANTA FE SPRING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/10/88 1315
DATE/TIME COMPLETED: 09/10/88 1430
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 156.6106
WATER DEPTH: 0.00

GRAPHIC LOG									SAMPLE DATA										DESCRIPTION	
	BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU		
0							X		0 0 0	0.0	0	N	DB	MO	L	CL	0.5	0-5' DARK BROWN SILTY CLAY COHESIVE CONSOLIDATED; NO SAND. NO SAMPLE COLLECTED.	
5						X--X			0 0 0	0.0	0	N	B	SM	L	CL	0.0	CHOCOLATE BROWN SILTS AND CLAY WITH ABOUT 10% SAND (MEDIUM) TO 10'.	
0						X		01 02 03	13 17 17	0.0	0	N	B	SM	L	CL	1.0	10-11.5' CHOCOLATE BROWN SILTS AND CLAY WITH VERY LITTLE SAND SILT WITH DECREASING CLAY UNTIL 15'. CLP SAMPLE.	1315
15						X			17 60 0	0.0	0	N	LB	SM	L	ML-SM	1.5	15-16.5' LIGHT BROWN SILTS AT 15'GRADING INTO FINE SAND AT 16'; VERY COHESIVE; NO SAMPLE RETAINED; GRADES INTO MEDIUM SAND BY 20'.	1335
20				X--X				04 05 06	40 70 0	0.0	0	N	T	DR	M	SP	3.0	20-21.5' TAN UNCONSOLIDATED MEDIUM GRAIN SAND; SOME FINES. CLP SAMPLE.	1350
25			X--X						0 0 0	0.0	0	N	T	DR	M-H	SP	3.5	25' MEDIUM TO COARSE GRAIN SAND; SOME GRAVEL; UNCONSOLIDATED BECOMES COARSER AS WE GET DEEPER; MORE GRAVEL APPEARS.	1400
30			X--X						0 0 0	0.0	0	N	T	DR	H	SP	3.0	COARSE SAND WITH SOME MEDIUM GRAINS AND PEBBLES;POORLY SORTED AND UNCONSOLIDATED TAN COLOR	1405
35			X			X		07 08 09	17 32 40	0.0	0	N	G	MO	L	SM-ML	3.0	MEDIUM SAND WITH SILT & SOME CLAY, GRAY BROWN WITH SOME MOISTURE TO 35';LOST KIT DOWN THE HOLE; SAMPLE COLLECTED AT 35-36.5'. AT 35-36.5' STIFF GRAY CLAY WAS ENCOUNTERED. NON CLP SAMPLE.	1415

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME:	WASTE DISPOSAL INC.	BORING NUMBER:	SB-072	DATE/TIME STARTED:	09/27/88 1400
LOCATION:	SANTA FE SPRINGS CALIFORNIA	BORING LOCATION:	SANTA FE SPRING	DATE/TIME COMPLETED:	09/28/88 0850
		DRILLING CONTRACTOR:	DATUM	TOTAL DEPTH:	61.50
CLIENT NAME:	EPA	DRILLING METHOD:	HSA	SURFACE ELEVATION:	154.9074
SITE MANAGER:	D. MELCHIOR	BIT SZ/HAMMER WT/DROP:	7"/140#/30"	WATER DEPTH:	49.00
LOGGED BY:	G. GALLOWAY	SAMPLE RETRIEVAL SYS:	SPLIT SPOON		

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X	X	X		X		01 02 03 04	5 6 8	30.0	0	N	DB	SM	M,L	SM	0.0	ASPHALT(3") BASE (6"); ARTIFICIAL FILL MATERIAL: SILTY SAND, DARK BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED, (04) DUPLICATE. CLP SAMPLE. 1415
5						X			22 27 50	0.0	0	N	DG	SM	L,L	SM	0.0	@ 4'-7' RUBBLE & DEBRIS FILL, WOOD, BRICK,CONCRETE, ETC. NO SAMPLE COLLECTED
10		X	X		X				35 42 50	0.0	0	SHC	DG	SM	L,L	SC	0.0	@ 10' BRICK & BLOCKS CONTINUE - WE WILL COLLECT THESE SAMPLES IN COMPANION; DARK GRAY SILTY CLAY, DAMP, MEDIUM DENSE; GW MONITORING WELL.
15		X	X			X			42 50 50	0.0	0	N	BR	SM	M,M	SP	0.0	FINE SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED.
20							X	05 06 07 08	8 12 18	14.0	0	N	G-B	SM	L,L	CL	0.0	LEAN CLAY, GREEN/BROWN, DAMP, STIFF (08 DUPLICATE); CLP SAMPLE. 1454
25				X	X	X			12 24 33	20.0	0	N	B	SM	M,M	SP	0.0	FINE SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED.
30				X	X	X			18 25 37	600.0	0	N	LB	SM	H,H	SP	0.0	MEDIUM GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE, MODERATELY TO POORLY CEMENTED.
35			X		X			09 10 11 12	34 48 50	1000.0	0	N	LB	SM	H,H	SP	1.0	COARSE GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE/DENSE, POORLY CEMENTED; 12 IS A DUPLICATE. NON CLP SAMPLE. 1535
40			X	X	X				30 30 50	0.0	0	N	LB	SM	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE/DENSE, POORLY CEMENTED; 12 IS A DUPLICATE. NON CLP SAMPLE.
45			X	X	X	X			30 50 0	0.0	0	N	LB	SM	M,M	SP	4.0	FINE TO MEDIUM GRAINED SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-072
BORING LOCATION: SANTA FE SPRING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/27/88 1400
DATE/TIME COMPLETED: 09/28/88 0850
TOTAL DEPTH: 61.50
SURFACE ELEVATION: 154.9074
WATER DEPTH: 49.00

GRAPHIC LOG									SAMPLE DATA										DESCRIPTION
	BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY		SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	
50			X	X	X	X				20 25 30	0.0	0	N	B	WT	M,M	SP	0.0	FINE TO MEDIUM GRAINED SAND, BROWN, WET, MEDIUM DENSE, MODERATELY CEMENTED.
55		X	X	X						27 42 50	10.0	0	N	LB	WT	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, WET, MEDIUM DENSE, POORLY CEMENTED.
60		X	X	X						4 6 18	0.0	0	N	LB	WT	H,H	SP	0.0	COARSE GRAINED SAND WITH PEBBLES AND GRAVEL, LIGHT BROWN, WET, MEDIUM DENSE, LOOSE, POORLY CEMENTED.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-073
BORING LOCATION: DIALOG AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/27/88 0945
DATE/TIME COMPLETED: 09/27/88
TOTAL DEPTH: 131.50
SURFACE ELEVATION: 154.9775
WATER DEPTH: 49.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND, SILT		0 0 0	0.0	0	N	DB	SM	ML	SM	0.0	ASPHALT(3"), BASE(6") WITH SAMPLE 5', 10',15' DUE TO POOR RECOVERY IN SB-072; SILTY SAND, DARK BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED.
5	COBBLES, CRS SAND, MED SAND	01 02 03 04	50 0 0	15.0	0	SH	BK	MO	LL	OH	0.0	BLACK MUD, CONCRETE, BLOCKS. NO SAMPLE RECOVERY.1-4 ARE GRAB SAMPLES. CUTTINGS 5-7" DEPTH; #4 DUPLICATE INORGANIC. 1000
10	CRS SAND, MED SAND, FINE SAND	05 06 07	5 8 12	60.0	0	SHC	DB	MO	LL	SC	0.0	SILTY CLAY, DARK BROWN, MOIST, SOFT, WELL CEMENTED. 1010
15	CRS SAND, MED SAND, SILT		12 26 39	5.0	0	WHC	BB	SM	MM	SP	0.0	FINE SAND, BROWN, DAMP, MODERATELY WELL CEMENTED.
20	SILT, CLAY		0 0 0	0.0	0						0.0	SEE LOG SB-072
25	FINE SAND, SILT		0 0 0	0.0	0						0.0	SEE LOG SB-072
30	CRS SAND, FINE SAND, SILT		0 0 0	0.0	0						0.0	SEE LOG SB-072
35	CRS SAND, FINE SAND		0 0 0	0.0	0						0.0	SEE LOG SB-072
40	CRS SAND, MED SAND, FINE SAND		0 0 0	0.0	0						0.0	SEE LOG SB-072
45	MED SAND, FINE SAND, SILT		30 50 0	0.0	0	N	LBR	SM-MO	MM	SP	4.0	LIGHT BROWN FINE TO MEDIUM GRAINED SAND. WET, MEDIUM DENSE, MODERATELY CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-073
BORING LOCATION: DIALOG AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/27/88 0945
DATE/TIME COMPLETED: 09/27/88
TOTAL DEPTH: 131.50
SURFACE ELEVATION: 154.9775
WATER DEPTH: 49.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	PORE/PEM	USCS SYMB	HNU	DESCRIPTION
50	X--X--X		20 25 30	0.0	0	N	BR	WT	MM	SP	0.0	BROWN, FINE TO MEDIUM GRAINED SAND, WET MEDIUM DENSE, MODERATELY CEMENTED.
55	X--X--X		27 42 50	10.0	0	N	LBR	WT	HH	SP	0.0	LIGHT BROWN, COARSE GRAINED SAND. WET, MEDIUM DENSE, POORLY CEMENTED.
60	X		0 0 0	0.0	0	N	B	WT	HH	SP	0.0	AT 62' COARSE GRAINED SAND, BROWN, WET, MEDIUM DENSE, POORLY CEMENTED.
65	X--X--X--X		0 0 0	0.0	0	N	B	WT	M	SP	0.0	MEDIUM GRAINED SAND, BROWN, WET, MEDIUM DENSE, LOOSE, POORLY CEMENTED.
70	X X--X		0 0 0	0.0	0	N	B	WT	M,M	SP	0.0	SAME
75	X--X--X--X		0 0 0	0.0	0	N	B	WT	M,L	SP	0.0	FINE GRAINED SAND, BROWN, WET, MEDIUM DENSE, MODERATELY WELL CEMENTED.
80	X--X--X--X		26 28 34	0.0	0	N	B	WT	M,M	SM	0.0	SILTY, FINE GRAINED SAND, BROWN, WET, MEDIUM DENSE, WELL CEMENTED
85	X--X--X		33 27 31	0.0	0	N	B	WT	M,M	SM	0.0	FINE SAND, BROWN, WET, MEDIUM DENSE, MODERATELY WELL CEMENTED.
90	X--X--X		17 25 26	0.0	0	N	B	WT	M,M	SM	0.0	FINE SAND, BROWN, WET, MEDIUM DENSE, MODERATELY WELL CEMENTED.
95	X--X--X		19 35 43	0.0	0	N	B	WT	M,M	SM	0.0	FINE SAND, BROWN, WET, MEDIUM DENSE, MODERATELY WELL CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 3

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-073
BORING LOCATION: DIALOG AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/27/88 0945
DATE/TIME COMPLETED: 09/27/88
TOTAL DEPTH: 131.50
SURFACE ELEVATION: 154.9775
WATER DEPTH: 49.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
100	FINE SAND, CLAY		24 27 35	0.0	0	N	B	WT	M,M	SM	0.0	FINE SAND, BROWN, WET, MEDIUM DENSE, MODERATLY WELL CEMENTED.
105	FINE SAND, SILT, CLAY		17 26 43	0.0	0	N	GB	WT	H,H	SP	0.0	COARSE SAND, GRAY/BROWN, WET, MEDIUM DENSE, POORLY CEMENTED.
110	CRS SAND, FINE SAND, SILT, CLAY		24 27 48	0.0	0	N	GB	WT	H,H	SP	0.0	COARSE SAND, GRAY/BROWN, WET, MEDIUM DENSE, POORLY CEMENTED.
115	MED SAND, FINE SAND, CLAY		26 34 42	0.0	0	N	B	WT	M,M	SP	0.0	FINE SAND, BROWN, WET, MEDIUM DENSE, MODERATELY WELL CEMENTED.
120	COBBLES, CRS SAND, MED SAND, SILT		26 34 45	0.0	0	N	GB	WT	H,H	SP	0.0	VERY COARSE GRAINED SAND, GRAY/BROWN, WET, MEDIUM DENSE, POORLY CEMENTED; PEBBLES & GRAVEL (<5%).
125	CRS SAND, MED SAND, SILT, CLAY		34 42 50	0.0	0	N	B	WT	M,M	SP	0.0	FINE TO MODERATE GRAINED SAND, BROWN, WET, MEDIUM DENSE, MODEATELY WELL CEMENTED.
130	SILT, CLAY		26 32 44	0.0	0	N	B	WT	M,M	CL	0.0	@128' LEAN CLAY, RED/BROWN, DAMP, STIFF @131' PEBBLES/GRAVEL WITH FINE CLAY MATRIX.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-075
BORING LOCATION: SANTA FE SPRING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/06/88 1150
DATE/TIME COMPLETED: 10/07/88 1050
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 157.7671
WATER DEPTH: 53.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0						X	X	01 02 03 04	0 0 0	0.0	0	SAC	B	SM	L,L	OH	0.0	SILTY SAND WITH CONCRETE BLOCKS AND RUBBLE, LIGHT BROWN, DAMP, MEDIUM DENSE, POOR SAMPLE RECOVERY AT 2' TO 3'. GRAB SAMPLE OF CUTTINGS,MUD,BLACK,HYDROCARBON ODOR, DAMP, SOFT, WELL CEMENTED. NONCLP.	1155
5						X	X	05 06 07 08	3 3 5	1000.0	10	HCC	B	SM	L,L	OH	25.0	MUD, BLACK, HYDROCARBON RICH,DAMP, SOFT, CEMENTED. NON CLP SAMPLE.	1200
10						X	X	09 10 11	6 12 21	300.0	15	SHC	DG	SM	L,L	CL	10.0	LEAN CLAY, DARK GRAY, DAMP, MEDIUM DENSE, WELL CEMENTED. CLP SAMPLE.	1210
15						X	X		9 17 23	40.0	5	N	RB	SM	M,M	SM	6.0	SILTY SAND, RED/BROWN, DAMP, MEDIUM DENSE, WELL CEMENTED.	
20		X		X	X	X		12 13 14	14 35 47	0.0	0	N	OB	SM	M,M	SP	0.0	MEDIUM GRAINED SAND, ORANGE/BROWN, DAMP, MODERATELY WELL CEMENTED. CLP SAMPLE.	0930
25		X		X	X	X			23 40 50	14.0	0	N	T	SM	H,H	SP	1.0	VERY COARSE GRAINED SAND, TAN, DAMP, DENSE, LOOSE, POORLY CEMENTED.	
30		X		X	X	X			23 50 0	12.0	40	N	T	MO	H,H	SP	0.0	VERY COARSE GRAINED SAND, TAN, DAMP, DENSE, LOOSE, POORLY CEMENTED.	
35		X		X	X	X		15 16 17	27 40 45	0.0	0	N	T	SM	M,M	SP	0.0	MEDIUM GRAINED SAND, TAN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED. AT 36' FINE GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED. NON CLP SAMPLE.	
40		X		X					33 50 0	0.0	0	N	T	SM	H,H	SP	0.0	MEDIUM GRAINED SAND, TAN, DAMP, MEDIUM DENSE, CEMENTED TO POORLY CEMENTED.	
45				X	X	X			40 0 0	0.0	0	N	T	MO	H,H	SP	0.0	COARSE GRAINED SAND, TAN, MOIST, MEDIUM DENSE/DENSE, LOOSE, POORLY CEMENTED.	

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-075
BORING LOCATION: SANTA FE SPRING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/06/88 1150
DATE/TIME COMPLETED: 10/07/88 1050
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 157.7671
WATER DEPTH: 53.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50				X--X			X		20 30 35	0.0	0	N	B	SM	L,L-M,L	CL-SM	0.0	SILTY CLAY, BROWN, MEDIUM DENSE/DENSE, DAMP, MODERATELY TO WELL CEMENTED. AT 51' FINE SAND.
55		X		X					50 0 0	0.0	0	N	T	WT	H,H	SP	0.0	FINE SAND, BROWN, WET, MEDIUM DENSE/DENSE, MODERATELY WELL CEMENTED. AT 56' COARSE SAND, TAN, WET, MEDIUM DENSE/DENSE, POORLY CEMENTED.
60		X				X			0 0 0	0.0	0	N	B	WT	M,M	SM	0.0	FINE SAND, BROWN, WET, MEDIUM DENSE/DENSE, MODERATELY WELL CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. GORDON

BORING NUMBER: SB-076
BORING LOCATION: SANTA FE SPRING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/18/88 0820
DATE/TIME COMPLETED: 10/18/88 1048
TOTAL DEPTH: 55.00
SURFACE ELEVATION: 157.9156
WATER DEPTH: 52.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0						X	X		0 0 0	0.0	0	N	B	DR	LL	SM	5.0	ASPHALT (2"), DRILLERS REMOVED LARGE CONCRETE BLOCK (0826);FILL MATERIAL: AGGREGATE BASE(4'),1' GRAVEL AND SOIL, BROWN, DRY. NO SAMPLE DUE TO POOR RECOVERY
5									0 0 0	0.2	0	N	G	DR	LL	GW	6.0	CONCRETE BLOCKS. NO SAMPLE DUE TO POOR RECOVERY 0845
10							X	01 02 03 04	6 6 9	0.0	0	N	DB	SM	LL	OL	2.0	SILTY CLAY: DARK BROWN, ROOTED, NO VISIBLE CONTAMINATION, SOFT, SLIGHTLY MOIST,DARK ORGANICS; INORGANIC DUPLICATE CLP SAMPLE. 0854
15							X		16 14 55	0.2	0	N	RB	DR	LL	CL	2.0	CLAY; RED BROWN, MINOR SAND, (L590), NO VISIBLE CONTAMINATION, MEDIUM DENSE, STIFF.
20					X			05 06 07 08	14 23 28	0.2	0	N	YB	SM	HL	SW	2.0	SAND: FINE, YELLOW BROWN, WELL SORTED, LOOSE, NO VISIBLE CONTAMINATION; INORGANIC DUPLICATE.CLP SAMPLE. 0907
25			X						22 55 30	0.0	0	N	LG	SM	H	SW	0.1	SAND: VERY COARSE, LIGHT, NO VISIBLE CONTAMINATION, DRY, VERY DENSE, WELL SORTED. GRAVEL OR PEBBLES.
30			X	X	X	X		09 10 11 12	18 40 50	0.0	0	N	LG	DR	H	SW	1.0	SAND: FINE TO VERY COARSE, LIGHT GRAY, MEDIUM DENSE, DRY, NO VISIBLE CONTAMINATION. DUPLICATE & CLP SAMPLE. 0925
35			X						30 20 20	0.0	0	N	LG	DR	H	SW	0.2	SAND: FINE TO MEDIUM, RED BROWN TO LIGHT GRAY, WELL SORTED, NO VISIBLE CONTAMINATION.
40			X					13 14 15 16	30 50 0	0.2	0	N	LG	DR	H	SW	0.6	SAND: FINE TO MEDIUM, RED BROWN TO LIGHT GRAY, NO VISIBLE CONTAMINATION; DENSE, DRY; INORGANIC DUPLICATE; CLP SAMPLE. 0940
45			X						25 25 50	0.2	0	N	LG	DR	H	SW	0.8	SAND: MEDIUM DENSE, MICACEAUS, LIGHT GRAY, <549 GRAVEL. NO CONTAMINATION.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. GORDON

BORING NUMBER: SB-076
BORING LOCATION: SANTA FE SPRING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/18/88 0820
DATE/TIME COMPLETED: 10/18/88 1048
TOTAL DEPTH: 55.00
SURFACE ELEVATION: 157.9156
WATER DEPTH: 52.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50		X			X				15 20 30	0.2	0	N	LG	WT	H-L	SW	0.6	SAND: FINE TO VERY COARSE, LIGHT GRAY, WELL SORTED, NO CONTAMINATION. 1000
55		X							0 0 0	0.2	0	N	LG	WT	H	SW	0.0	SAND: VERY COARSE, LIGHT GRAY, 5% PEBBLES, LOOSE.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-077
BORING LOCATION: SANTA FE SPRING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/20/88 0950
DATE/TIME COMPLETED: 10/20/88
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 160.4650
WATER DEPTH: 0.00

GRAPHIC LOG									SAMPLE DATA										DESCRIPTION
	BOULDERS	COBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY		SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	
0				X			X		01 02	4 4 3	0.0	0	SH	B	SM	M	O-SP	0.0	RED BROWN MISCELLANEOUS FILL FROM 0'-3'+ AT 3'-5' BLACK ORGANIC SILTY MATERIAL. BLACK GLOSSY SHARDS ON SAND/SILT MATRIX APPEARS HIGHLY CONTAMINATED. VERY HIGH CGI AND OVA READINGS.
5							X			0 0 0	40.0	0	HC	B	WT	LL	OH	0.0	AT 5': MUD, BLACK, WET, SOFT.
10						X--X			04 05 06 07	4 5 7	44.0	0	HC	B	MO	LL	OH	0.0	MUD, BLACK, MOIST, SOFT, WELL CEMENTED. CLP INORGANIC DUPLICATE. 1002
15					X--X	X--X			08 09 10 11	3 5 5	0.0	0	HC-SL	DG	MO	LL	SM	0.0	FINE SAND, DARK GRAY, MOIST, SOFT, WELL CEMENTED, CONTAMINATED NATIVE MATERIALS APPEAR. CLP SAMPLE. 1010
20				X--X	X--X	X--X			12 13 14 15	9 20 23	0.0	0	N	GB	MO	MM	SM	0.0	FINE SAND, GRAY/BROWN, MOIST, MEDIUM DENSE/DENSE, MODERATE CONTAMINATION TO SLIGHTLY CONTAMINATED AT BOTTOM. CLP SAMPLE. 1024
25			X--X							25 50 0	10.0	0	N	Y-T	DR	HH	SP	0.0	COARSE SAND, YELLOW TAN, DAMP, MEDIUM DENSE, POORLY CEMENTED.
30			X--X				X			26 12 23	0.0	0	N	T	DR	HH,LL	SP, CL	0.0	COARSE SAND, TAN, DAMP, MEDIUM DENSE. AT 31' LEAN CLAY, TAN, MEDIUM DENSE.
35			X						16 17 18	50 0 0	0.0	3	N	YT	DR	HH	SP	0.0	AT 35' COARSE SAND, YELLOW/TAN, DAMP, MEDIUM DENSE/DENSE, LOOSE, POORLY CEMENTED. CLP SAMPLE. 1058

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-078
BORING LOCATION: H&H CONTRACTORS
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/13/88 1458
DATE/TIME COMPLETED: 09/14/88 0926
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 157.8300
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND, SILT, CLAY	01 02 03	11 7 7	0.0	0	N	BR	DR	L	SC	0.8	ASPHALT CHIPS AND SAND WITH CONSTRUCTION MATERIAL AND BROWN CLAY. CLP SAMPLE. 1500
5	SILT, CLAY		8 14 20	0.0	0	N	DB	DR	L	CL	1.0	DARK BROWN, STIFF CLAY. NO ODOR. NO SAMPLES COLLECTED. 1521
10	SILT, CLAY	04 05 06	5 7 12	10.0	0	N	DB	DR	L	CL	2.0	DARK BROWN, STIFF CLAY. NO ODOR. CLP SAMPLE. 1535
15	CRS SAND, MED SAND, FINE SAND		14 18 23	10.0	0	N	BR-G	DR	M-H	SP	3.5	BROWN TO GRAY QUARTZ SAND EMBEDDED WITH FRAGMENTS OF ANGULAR PEBBLES. NO SAMPLE COLLECTED. 1547
20			13 34 50	0.0	0						0.0	0829
25	MED SAND, FINE SAND		40 65 0	0.0	0	N	BR	DR	M	SP	0.2	MEDIUM BROWN, FINE SAND, STIFF WITH TRACES OF QUARTZ SAND. PARTIAL RECOVERY. NO SAMPLES COLLECTED. 0841
30	MED SAND, FINE SAND, SILT		90 0 0	0.0	0	N	BR	DR	M	SP	0.4	MEDIUM BROWN TO FINE SAND, STIFF WITH TRACES OF QUARTZ SAND. PARTIAL RECOVERY. NO SAMPLES COLLECTED. 0904
35	FINE SAND, SILT	07 08 09	35 100 0	0.0	0	N	BR	MO	L-M	SM	0.4	MEDIUM TO LIGHT BROWN, FINE SANDY SILT. PARTIAL RECOVERY. NON CLP SAMPLE. 0913

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: L. SAWYER

BORING NUMBER: SB-079
BORING LOCATION: SANTA FE SPRING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/13/88 0915
DATE/TIME COMPLETED: 09/13/88 1102
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 157.0606
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	KNU	DESCRIPTION
0					X	X	X	01 02 03	24 14 12	0.2	0	N	DB	DR	L	CL-ML	2.0	DARK BROWN SILTY CLAY TO CLAYEY SILT PLUS SCRAP 1-1.5; CLP SURFACE HAS SCRAP IRON MATERIALS 0923
5						X	X		9 12 14	0.8	0	N	DB	MO	L	CL	4.0	NO SAMPLE TAKEN; DEPOSITS OF BROWN CLAY. NO SAMPLES TAKEN. 0937
10					X		X	04 05 06	21 22 24	4.0	0	N	MB	DR-SM	L	CL	8.0	MEDIUM BROWN CLAY; DRY TO SLIGHTLY MOIST CLP SAMPLE. 0946
15						X	X		12 20 30	3.0	0	N	MB	DR	L	CL	9.0	SAMPLES NOT COLLECTED; BROWN CLAY, IRON OXIDE STAINS, STIFF, DRY. 0956
20				X			X	07 08 09	18 45 39	3.0	0	N	MB	MO	M	SC-SM	13.0	CLAYEY SAND WITH SILT MEDIUM BROWN WITH IRON STAINING; CLP SAMPLE. 1011
25				X	X				23 36 40	3.0	0	N	MB	SM	H	SP	3.0	SAMPLES NOT COLLECTED, WELL SORTED BROWN SAND. 1027
30		X	X		X				30 36 42	8.0	0	N	B-O	DR	H	SW	0.0	SAMPLES NOT COLLECTED, COARSE SAND WITH ROUNDED GRANITIC LITHOFRAGS, LEAN SAND LOOSE, WELL SORTED 1043
35			X		X			10 11	25 49 40	72.0	2	N	B-O	DR	H	SP	2.0	NON-CLP SAMPLE; MEDIUM BROWN SAND, WELL SORTED WITHOUT COBBLES 1102

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-080
BORING LOCATION: DIALOG AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/25/88 1300
DATE/TIME COMPLETED: 09/25/88 1345
TOTAL DEPTH: 35.50
SURFACE ELEVATION: 157.1524
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS / COBBLES / CRS SAND / MED SAND / FINE SAND / SILT / CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT		7 8 14	1.0	0	N	BR	DR	M,M	SM	0.0	ARTIFICIAL FILL (OAF), SILTY SAND, BROWN DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED.
5	FINE SAND		0 0 0	0.0	0						0.0	NO SAMPLE COLLECTED.
10	FINE SAND, SILT, CLAY		6 7 7	0.0	0	N	DB	DR	MM	SM	0.0	SAME, EXCEPT DARKER BROWN.
15	CRS SAND, SILT		0 0 0	0.0	0					GP	0.0	AT 15' COBBLES AND PEBBLES WITH SILTY FINE GRAINED MATRIX, 2" THICK.
20	FINE SAND, SILT, CLAY		26 40 50	0.0	0	N	BR	DR	MM	SM	2.0	SILTY SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED.
25	FINE SAND, SILT, CLAY		0 0 0	0.0	0						0.0	
30	FINE SAND, SILT, CLAY		0 0 0	0.0	0						0.0	
35	FINE SAND, SILT, CLAY		14 28 26	0.0	0	N	BR	DR	MM	SC	0.0	SILTY CLAY, BROWN, DAMP, MEDIUM DENSE, MODERATELY TO WELL CEMENTED. TOTAL DEPTH 35'5"/NW/NC

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-081
BORING LOCATION: DIALOG AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/27/88 0930
DATE/TIME COMPLETED: 09/27/88 1050
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 155.5551
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0						X	X	01 02 03 04	8 9 10	3.2	0	N	BR	MO	L	CL	1.2	BROWN, SILTY CLAY, STIFF, NO VISIBLE CONTAMINATION. CLP SAMPLE. INORGANIC DUPLICATE.	0933
5						X	X		5 10 15	0.2	0	N	BR	MO	L	CL	1.8	BROWN, SILTY CLAY, STIFF, NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED.	0940
10					X		X	05 06 07 08	4 14 29	0.0	2	N	T	SM	L	CL	0.2	TAN, SILTY CLAY WITH MINOR FINE GRAINED SAND, NO VISIBLE CONTAMINATION. INORGANIC DUPLICATE. CLP SAMPLE.	0949
15							X		18 56 0	0.1	0	N	G	SM	L	CL	0.6	GRAY, CLAY WITH MINOR SILT, STIFF, NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED.	0957
20					X	X	X	09 10 11	35 55 0	0.2	0	N	T-G	SM	L	ML	0.4	TAN TO GRAY SILT WITH CLAY (MINOR FINE SAND) NO VISIBLE CONTAMINATION. NOT ENOUGH FOR DUPLICATE. CLP SAMPLE.	1010
25					X	X			47 60 0	0.1	0	N	T	MM	LM	SM	0.9	TAN SILTY SAND,NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED.	1025
30					X	X	X		12 12 20	0.2	0	N	T	MO	L	CL	0.4	TAN, SANDY CLAY WITH SOME SILT. NO VISIBLE CONTAMINATION. NO SAMPLES COLLECTED.	1040
35					X	X	X	12 13 14 15	14 5 27	11.0	0	N	TN	MO	L	CL	0.0	TAN CLAY WITH SILT AND MINOR FINE SAND. NO VISIBLE CONTAMINATION. INORGANIC DUPLICATE. NON CLP SAMPLE.	1050

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-082
BORING LOCATION: STANSELL BROS.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/15/88 0800
DATE/TIME COMPLETED: 10/15/88 0951
TOTAL DEPTH: 40.00
SURFACE ELEVATION: 158.2203
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0						X	X		0 0 0	0.0	0						0.0	CONCRETE AT SURFACE; FIRST SAMPLE TAKEN AT 5' DEPTH.
5						X	X		4 3 5	0.0	0	N	DB	SM	L	ML	0.0	CLAYEY SILT, DARK BROWN, UNIFORM, LOOSE, SLIGHTLY MOIST. NO VISIBLE CONTAMINATION NO SAMPLE RETAINED.
10						X	X	01 02 03 04	9 11 21	0.0	0	N	RB-LB	SM	L	ML	0.0	CLAY & SILT, RED BROWN TO BROWN,DENSE ROOT CASTS, SLIGHT IRON STAINING, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION ORGANIC DUPLICATE. CLP SAMPLE.
15						X	X		15 22 30	1.0	0	N	LB	DR	L	ML	0.0	CLAY & SILT, SAME AS ABOVE; LIGHT BROWN, DRY; NO VISIBLE CONTAMINATION. NO SAMPLE RETAINED.
20					X			05 06	30 30 54	0.0	0	N	LB-RB	SM	L	SP	0.4	FINE SAND. LIGHT BROWN TO RED BROWN, UNIFORM, SLIGHT IRON STAINING, DENSE, SLIGHTLY MOIST, POORLY GRADED. ORGANIC DUPLICATE. CLP SAAMPLE.
25						X		09 10 12	45 37 40	1.0	0	N	GR-G	SM	L	SM	0.4	FINE SAND/SILT. GREENISH GRAY, UNIFORM, POORLY SORTED, DENSE, SLIGHTLY MOIST, VISIBLE CONTAMINATION. ORGANIC DUPLICATE TAKEN. CLP SAMPLE.
30						X		13 14 16	7 12 20	0.0	0	N	GR-G	SM	L	SM	0.4	FINE SAND/SILT. SAME AS ABOVE, ORGANIC DUPLICATE TAKEN. CLP SAMPLE.
35						X		17 18	35 32 50	24.0	0	N	GR-G	SM	L	SM	0.4	SAME AS ABOVE. NO DUPLICATE TAKEN. CLP SAMPLE.
40			X		X			20 21	39 0 0	0.2	0		LB		M	SW	0.3	MEDIUM TO COARSE SAND. LIGHT BROWN, DENSE,UNCEMENTED, MEDIUM GRADED, LIGHT IRON STAINING. CLP SAMPLE. FINAL DEPTH 40'.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-083
BORING LOCATION: TOXO
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/11/88 0915
DATE/TIME COMPLETED: 10/11/88
TOTAL DEPTH: 45.00
SURFACE ELEVATION: 157.6002
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	
5	MED SAND, FINE SAND, SILT	01 02 03 04	2 5 3	1.0	0	N	BR	SM	M-L	SM-ML	0.4	COARSE TO MEDIUM SAND INTERBEDDED WITH SILT. DARK BROWN, SLIGHTLY MOIST, UNCEMENTED. INORGANIC DUPLICATE. CLP SAMPLE. NO VISIBLE CONTAMINATION.
10	FINE SAND, SILT	05 06 07 08	21 26 36	1.0	0	N	RB	SM	L	ML	0.6	REDDISH BROWN SANDY SILT, DENSE, UNCEMENTED, NO VISIBLE CONTAMINATION. SLIGHTLY MOIST. CLP SAMPLE. INORGANIC DUPLICATE TAKEN.
15	SILT	09 10 11	16 27 37	0.0	0	N	BR	SM	L	ML	0.0	BROWN, SANDY SILT, DENSE, SLIGHTLY MOIST MINOR CONTAMINATION VISIBLE. NON CLP SAMPLE.
20	FINE SAND	12 13 14	14 19 27	0.0	0	N	LB	SM	M	SM	0.0	LIGHT BROWN, SILTY FINE SAND, SLIGHTLY MOIST, MEDIUM DENSE, NO VISIBLE CONTAMINATION. CLP SAMPLE.
25	CRS SAND		50 66 0	1.2	0	N	LB	SM	H	SM	0.6	MEDIUM TO COARSE SAND WITH TRACES OF GRAVEL, DENSE, UNCEMENTED, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION. NO SAMPLE RETAINED.
30	FINE SAND		40 50 0	38.0	8	N	RB-LB	SM	M	SM	0.0	UNIFORM FINE SAND, POORLY GRADED, MEDIUM DENSE TO DENSE, SLIGHLY MOIST, SLIGHTLY MOTTLED. IRON STAINING. NO VISIBLE CONTAMINATION. NO SAMPLE RETAINED.
35	FINE SAND	15 16 17	40 65 0	100.0	5	N	RB-LB	SM	L-M	SM-ML	0.0	FINE SAND TO SILT, MODERATELY GRADED, MEDIUM DENSE, UNCEMENTED, SLIGHTLY MOIST CONTAMINATION VISIBLE. NON CLP SAMPLE.
40	MED SAND, FINE SAND	18 19 20	38 50 0	10.0	3	N	LB-BR	SM	M-M	SM-SP	0.4	FINE TO MEDIUM SAND, MEDIUM DENSE TO DENSE, UNCEMENTED, SLIGHTLY MOIST, POORLY GRADED. MINOR VISIBLE CONTAMINATION. NON CLP SAMPLE.
45	MED SAND	21 22 23	39 50 0	0.4	0	N	LB	SM	M-H	SP	0.4	MEDIUM TO COARSE SAND, DENSE, UNCEMENTED MODERATELY GRADED, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION; NON CLP SAMPLE. INSTALLED VADOSE MONITORING WELL. FINAL DEPTH 45'. NO GROUNDWATER ENCOUNTERED.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-084
BORING LOCATION: TOXO
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/13/88 0900
DATE/TIME COMPLETED: 10/13/88 1030
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 157.7270
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	CONCRETE AT SURFACE; FIRST SAMPLE AT 5' DEPTH
5		01 02 03 04	4 4 6	1000.0	42	MH	B	WT	L	OH	0.0	DRILLING MUD SLUDGE; BLACK CLAYEY MATERIAL, VISCOUS, WET, LOOSE. VISIBLE CONTAMINATION; ORGANIC DUPLICATE TAKEN. NON CLP SAMPLE.
10		05 06 07	5 9 14	100.0	12	LH	B-G	SM	L	ML	3.0	MOTTLED GRAY AND BLACK SILT, SLIGHTLY MOIST, LOOSE, VISIBLE CONTAMINATION. CLP SAMPLE.
15			13 29 36	100.0	10	N	RB	SM	L	SM-M	1.0	SANDY SILT, RED BROWN, MEDIUM DENSE, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION NO SAMPLE RETAINED.
20		08 09 10	18 28 36	100.0	4	N	RB	SM	L-M	SM	1.0	SILTY SAND, RED BROWN, MEDIUM DENSE, SLIGHTLY MOIST, SLIGHT CONTAMINATION VISIBLE. CLP SAMPLE.
25			35 60 0	0.1	0	N	LB	SM	M-H	SP	1.0	LIGHT BROWN, COARSE SAND, DENSE, UNCEMENTED, POORLY GRADED, SLIGHTLY MOIST. NO SAMPLE RETAINED.
30			40 60 0	0.1	0	N	LB	SM	M-H	SP	0.0	COARSE SAND; SAME AS ABOVE; NO VISIBLE CONTAMINATION; NO SAMPLE RETAINED;
35		11 12 13 14	24 34 21	0.0	0	N	LB-RB	SM	L	SM	0.0	FINE SAND, UNIFORM, DENSE TO MEDIUM DENSE, LIGHT BROWN, MOTTLED WITH RED BROWN. IRON STAINING. NO VISIBLE CONTAMINATION. VADOSE MONITORING WELL INSTALLED. NON CLP SAMPLE.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-085
BORING LOCATION: TERRY TRUCKING
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/14/88 0900
DATE/TIME COMPLETED: 10/14/88 1025
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 157.2480
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0									0 0 0	0.0	0						0.0	FIRST SAMPLE COLLECTED AT THE 5-FOOT DEPTH.
5				X		X		01 02 03 04	6 6 9	0.0	0	N	BR	SM	L	SM	0.0	BROWN SILTY SAND, MEDIUM DENSE, SLIGHTLY MOIST, ONE BURNT WOOD CHIP, MINOR VISIBLE CONTAMINATION. ORGANIC DUPLICATE TAKEN. CLP SAMPLE.
10				X		X		05 06 07	13 17 19	0.3	0	N	RB	SM	L	SM	0.2	SILTY SAND, RED BROWN, SAME AS ABOVE, SLIGHTLY MORE DENSE, MINOR DARK CONTAMINATION VISIBLE. NO DUPLICATE TAKEN. CLP SAMPLE.
15				X		X		08 09 10 11	14 27 36	1.0	0	N	RB	SM	L	SM	0.3	SILTY SAND; SAME AS ABOVE. MINOR CONTAMINATION VISIBLE. DUPLICATE ORGANIC TAKEN. CLP SAMPLE.
20				X	X				17 19 35	1.6	0	N	LB	SM	L-M	SM	0.0	INTERBEDED MEDIUM AND FINE SAND. DENSE, UNCEMENTED, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION. NO SAMPLES TAKEN.
25			X	X				12 13 14	55 0 0	0.0	0	N	LB	SM	M	SP	0.0	COARSE SAND WITH OCCASIONAL FINE GRAVEL, DENSE, SLIGHTLY MOIST, MODERATELY GRADED POSSIBLE CONTAMINATION. DARK BROWN. CLP SAMPLE.
30				X	X				53 0 0	0.0	0	N	LB	SM	M-L	SM	0.3	FINE SAND, UNIFORM, POORLY GRADED, WELL SORTED, DENSE, SLIGHTLY MOIST; NO VISIBLE CONTAMINATION. NO SAMPLES RETAINED.
35					X			15 16 17 18	32 38 40	0.2	0	N	LB-RB	SM	M-L	SM	0.3	FINE SAND, SAME AS ABOVE; NO VISIBLE CONTAMINATION. ORGANIC DUPLICATE TAKEN. CLP SAMPLE.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-086
BORING LOCATION: TIMMONS LUMBER
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/15/88 1107
DATE/TIME COMPLETED: 10/15/88
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 157.2874
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0									0 0 0	0.0	0						0.0	ASPHALT AT SURFACE APPROX 2". FIRST SAMPLE AT 5' DEPTH.
5						X--X		01 02 03 04	2 3 3	13.0	0	SH	GR-G	SM	L	ML	0.5	SILT, DARK GREENISH GRAY, UNIFORM,LOOSE, POORLY GRADED, VISIBLE CONTAMINATION. CLP SAMPLE. ORGANIC DUPLICATE TAKEN. DUP TAKEN.
10						X--X		05 06 07	12 17 20	5.4	3	N	RB	SM	L	ML-CL	1.0	INTERBEDDED CLAY AND SILT, RED BROWN, DENSE, SLIGHTLY MOIST, VISIBLE CONTAMINATION. CLP SAMPLE. NO DUPLICATE TAKEN.
15						X		08 09 10 11	13 17 30	8.0	0	N	RB	SM	L	ML	0.0	SILT, RED BROWN, DENSE, UNIFORM, IRON STAINED WITH LIGHT CONTAMINATION. SLIGHTLY MOIST. CLP SAMPLE. ORGANIC DUPLICATE TAKEN.
20				X				12 13	29 80 0	0.4	0	N	RB	SM	L	SP	0.0	MEDIUM SAND, RED BROWN, DENSE, WELL SORTED, POORLY GRADED, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION. NO SAMPLES TAKEN.
25				X				15	56 0 0	0.0	0	N	LG	SM	LM	SP	0.0	MEDIUM SAND. SAME AS ABOVE. NO VISIBLE CONTAMINATION.
30		X--X							60 0 0	1.3	0	N	LB	SM	M	SP	0.0	COARSE SAND WITH SOME GRAVEL, DENSE, UNCEMENTED,BROWN, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION. NO SAMPLE RETAINED.
35									27 32 71	0.3	0	N	LB-RB	SM	M-L	SM	0.0	FINE SAND, LIGHT BROWN, DENSE, UNIFORM, SLIGHTLY MOIST, ABUNDANT IRON , NO VISIBLE CONTAMINATION. CLP SAMPLE. ORGANIC DUPLICATE TAKEN.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-087
BORING LOCATION: CAL. REAMER.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/18/88 0820
DATE/TIME COMPLETED: 10/18/88 1005
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 158.3616
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X	01 02 03 04	9 8 10	0.2	0	N	LB	DR	L-M	ML	0.8	LIGHT BROWN SILT, GRAVEL, NO VISIBLE CONTAMINATION. CLP SAMPLE. INORGANIC DUPLICATE. 0825
5	X--X		15 0 0	22.0	0	N	BR	SM	L	CL	4.0	BROWN SILTY CLAY WITH FINE SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 0835
10	X--X	05 06 07 08	8 8 13	0.2	0	N	BR	SM-MD	L	CL	0.4	CLAY WITH SILT AND FINE SAND. NO VISIBLE CONTAMINATION. INORGANIC DUPLICATE. CLP SAMPLE. 0850
15	X		35 60 0	0.6	0	N	GR-BL	SM	L	CL	0.6	GRAYISH BROWN SILTY CLAYS, STIFF, NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 0900
20	X	09 10 11	18 25 50	0.0	0	N	GR	SM	H	SP	0.4	GRAY, MEDIUM GRAINED SAND, NO VISIBLE CONTAMINATION. NO DUPLICATE. 0915
25	X--X		0 0 0	0.0	0	N	LB	SM	H	SP	0.4	LIGHT BROWN FINE TO MEDIUM SAND, NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 0930
30			18 25 43	0.4	0	N	B-T	SM	L	SP	0.2	BROWN CLAY WITH TAN COARSE GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 0942
35	X--X	12 13	56 0 0	0.2	0	N	LB	SM	H	SP	0.0	LIGHT BROWN MEDIUM TO COARSE GRAINED SAND. NO VISIBLE CONTAMINATION. NO DUPLICATE. CLP SAMPLE. 0955

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-088
BORING LOCATION: DAVCO AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/14/88 1200
DATE/TIME COMPLETED: 10/14/88 1420
TOTAL DEPTH: 45.00
SURFACE ELEVATION: 157.8898
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	2" ASPHALT AT SURFACE. FIRST SAMPLE AT 5 FEET.
5	FINE SAND: X--X--X	01 02 03	4 5 5	38.0	2	SH-MH	DG	SM	L	OL-SM	0.6	SILTY CLAY WITH FINE SAND, LOOSE, SLIGHTLY MOIST, VISIBLE CONTAMINATION,NO ARCHIVED SAMPLES, DUPLICATE ORGANIC CLP TAKEN.
10	SILT: X--X	04 05 06 07	22 41 90	380.0	2	SH	RB	SM	L	ML	4.4	CLAYEY SILT, RED BROWN, VERY DENSE, SLIGHT MOIST, SLIGHT VISIBLE DARK BROWN DISCOLORATION. VISIBLE CONTAMINATION. ORGANIC DUPLICATE TAKEN. CLP SAMPLE.
15	SILT: X	08 09 10	58 0 0	100.0	0	N	BR	SM	L	ML	1.5	SILT, BROWN, DENSE, SLIGHTLY MOIST, VISIBLE CONTAMINATION. CLP SAMPLE. NO DUPLICATE.
20	MED SAND: X--X	11 12 13	55 0 0	1000.0	4	N	LB	SM	M	SP	0.2	COARSE TO MEDIUM SAND, DENSE, LIGHT BROWN, UNCEMENTED, SLIGHTLY MOIST, MODERATELY GRADED. CLP SAMPLE.
25	CRS SAND: X	14 15 16	54 0 0	1000.0	5	N	LB	SM	M-H	SP	1.4	SAND, COARSE, DENSE, LIGHT BROWN, POORLY GRADED, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION. CLP SAMPLE.
30	FINE SAND: X	17 18 19	66 0 0	1000.0	5	N	BR	SM	M-L	SM	1.4	FINE SAND, BROWN, DENSE, UNCEMENTED, SLIGHTLY MOIST, POORLY GRADED, SLIGHT GREEN DISCOLORATION, POSSIBLE CONTAMINATION. CLP SAMPLE.
35	COBBLES: X--X	20 21 22	42 50 0	1000.0	5	N	LB	SM	M-H	GP-SP	1.6	COARSE SAND WITH GRAVEL, DENSE, LIGHT BROWN, SLIGHTLY MOIST, UNCEMENTED, NO VISIBLE CONTAMINATION. CLP SAMPLE.
40	FINE SAND: X	23 24 25	68 0 0	1000.0	5	N	LB	SM	M	SM	0.4	FINE SAND, LIGHT BROWN, UNIFORM, DENSE, SLIGHTLY MOIST, POORLY GRADED, NO VISIBLE CONTAMINATION. CLP SAMPLE.
45	CRS SAND: X--X	26 27 28	70 28 0	1000.0	2	N	LB	SM	M-H	SP	1.2	MEDIUM TO COARSE SAND, LIGHT BROWN, DENSE, UNCEMENTED, MODERATELY GRADED, POORLY SORTED, NO VISIBLE CONTAMINATION. CLP SAMPLE. INSTALLED VADOSE MONITOR WELL, SEE WELL INSTALLATION SHEET.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: K. TILFORD

BORING NUMBER: SB-089
BORING LOCATION: RICK'S SMOG
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/13/88 1430
DATE/TIME COMPLETED: 10/13/88
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 156.8209
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0			0 0 0	0.0	0						0.0	BLACKTOP ASPHALT SURFACE. FIRST SAMPLE AT 5' DEPTH.
5	SILT	01 02 03	4 4 10	0.0	0	N	LB	SM	L	ML	0.0	SILT WITH MINOR CLAY, REDDISH BROWN, LOOSE TO MEDIUM DENSE, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION. CLP SAMPLE.
10	CLAY	04 05 06	16 16 25	0.0	0	N	LB	SM	L	ML-CL	0.3	INTERBEDDED CLAY AND SILT, RED BROWN, DENSE, SLIGHTLY MOIST TO DRY. CLP SAMPLE.
15	FINE SAND		8 8 8	0.0	0	N	LB-RB	SM	L-M	SM	0.4	FINE SAND, LOOSE, UNCEMENTED, LIGHT BROWN TO RED BROWN, POORLY GRADED, SPARSE, SMALL DRY PODS. NO VISIBLE CONTAMINATION. NO SAMPLE RETAINED.
20	CRS SAND	07 08 09	26 56 0	0.0	0	N	LB	SM	M	SP	0.0	COARSE SAND WITH OCCASIONAL FINE GRAVELS LIGHT BROWN, DENSE, SLIGHTLY MOIST, UNCEMENTED, POORLY GRADED. CLP SAMPLE.
25	CRS SAND, MED SAND, FINE SAND, SILT, CLAY	10 11 12	25 25 25	0.0	0	N	BR	SM	ML	SP-GC	0.4	COARSE SANDS GRADE TO CLAYEY GRAVELS IN TIP OF SAMPLER, DENSE, SLIGHTLY MOIST, MINOR BROWN STREAKS, POSSIBLE SLIGHT CONTAMINATION. CLP SAMPLE.
30	COBBLES, CRS SAND	13 14	56 0 0	0.0	0	N	DB	SM	M-H	SP	0.0	COARSE GRAVELLY SAND, DENSE, UNCEMENTED SLIGHTLY MOIST, DARK BROWN, APPEARS TO BE ORGANIC STAINED.VISIBLE CONTAMINATION NO ARCHIVE SAMPLE. CLP SAMPLE.
35	MED SAND	15 16	65 0 0	0.0	0	N	LB	SM	M-L	SM	0.0	FINE SAND WITH SILT, LIGHT BROWN, DENSE, MODERATELY GRADED, SLIGHTLY MOIST, NO VISIBLE CONTAMINATION. FINAL DEPTH 35', VADOSE MONITORING WELL INSTALLED, FOR DETAILS SEE WELL INSTALLATION SHEET.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME:	WASTE DISPOSAL INC.	BORING NUMBER:	SB-090	DATE/TIME STARTED:	09/14/88 1030
LOCATION:	SANTA FE SPRINGS CALIFORNIA	BORING LOCATION:	CAMPBELL PROP.	DATE/TIME COMPLETED:	09/22/88 0935
		DRILLING CONTRACTOR:	DATUM	TOTAL DEPTH:	35.00
CLIENT NAME:	EPA	DRILLING METHOD:	HSA	SURFACE ELEVATION:	156.7212
SITE MANAGER:	D. MELCHIOR	BIT SZ/HAMMER WT/DROP:	7"/140#/30"	WATER DEPTH:	0.00
LOGGED BY:	T. TOMCZYK	SAMPLE RETRIEVAL SYS:	SPLIT SPOON		

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X				X	X	01 02 03	34 24 38	90.0	0	N	DB-BL	DR	L	CL	1.5	SURFACE ASPHALT AND SILTY CLAY AND PEBBLES, HARD, CLP SAMPLES. 1034
5						X	X	04 05 06	2 3 4	1000.0	10	SH	DG	WT	L	CL	1.0	VISIBLE CONTAMINATION IN SILTY CLAY. MOIST TO WET. STEEL SHAVINGS AND BLACK ASPHALT MATERIAL IN CUTTINGS. NON CLP SAMPLE. 1048
10							X	07 08 09	0 0 0	1000.0	70	SH	DG	WT	L	OH	0.0	DRILLING MUD ENCOUNTERED, DARK GRAY SOUPY AT 7'. TOOK LEL READING AT 11:09. NO BLOW COUNTS TAKEN, VISIBLY CONTAMINATED. MOVE OFF HOLE AT 11:45. 1107
15							X		0 0 0	30.0	45	MH	DG	WT	L	OH	10.6	DRILLING MUD, VISIBLY CONTAMINATED, WET NO SAMPLE POSSIBLE (TOO WET) 0830
20					X	X		10 11 12 13	36 55 0	30.0	5	N	G	SM	M-H	SM	65.0	GRAY FINE SAND WITH SILT. NO VISIBLE CONTAMINATION. DUPLICATE TAKEN. CLP SAMPLE. 0847
25				X	X				22 52 0	70.0	8	N	G	SM	M-H	SP	400.0	GRAY FINE TO MEDIUM GRAIN SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 0905
30				X					25 28 35	8.0	0	N	G	SM	H	SP	20.0	GRAY MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 0919
35			X		X	X		14 15 17	25 66 0	9.6	0	N	G	SM	H	SP	1.6	GRAY COARSE SAND WITH SOME GRAVEL (LAST SLEEVE (4) FINE AND MEDIUM SAND WITH SILT. NO VISIBLE CONTAMINATION. NON CLP SAMPLE TAKEN. DUPLICATE TAKEN. (INORGANIC) 0932

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: T. TOMCZYK

BORING NUMBER: SB-091
BORING LOCATION: CAMPBELL PROP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/20/88 1000
DATE/TIME COMPLETED: 09/21/88 1110
TOTAL DEPTH: 35.00
SURFACE ELEVATION: 156.8315
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	SILT, CLAY	01 02 03	17 12 8	0.0	0	N	DB	SM	L	CL	0.2	DARK BROWN SILTY CLAY. NO VISIBLE CONTAMINATION. CLP SAMPLE COLLECTED. 1012
5	SILT, CLAY		14 19 25	0.4	0	N	B	SM	L	ML	0.2	BROWN SILT WITH CLAY AND MINOR FINE SAND. NO SAMPLE COLLECTED. 1021
10	SILT, CLAY	04 05 06	28 28 26	0.4	0	N	B	SM	L	ML	1.4	BROWN TO TAN SILT WITH CLAY. NO VISIBLE CONTAMINATION. CLP SAMPLE. 1034
15	SILT, CLAY		40 100 0	0.4	0	N	T-G	DR	L	CL	2.4	TAN TO GRAY SILTY CLAY, STIFF, NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1049
20	FINE SAND	07 08 09	31 45 60	0.3	0	N	G	MO	M	ML	2.4	TAN FINE SAND AND SILT. NO VISIBLE CONTAMINATION. CLP SAMPLE. END 09/20/88, RIG DOWN. 1107
25	MED SAND		37 60 0	0.0	0	N	T	MO	M-H	SP	0.0	09/21/88 TAN MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1032
30	MED SAND		37 57 0	0.0	0	N	T	MO	H	SP	0.2	MEDIUM GRAINED SAND. NO VISIBLE CONTAMINATION. NO SAMPLE COLLECTED. 1046
35	CRS SAND, MED SAND	10 11	70 0 0	0.2	0	N	T	MO	H	SP	0.0	TAN MEDIUM COARSE GRAIN SAND. NO VISIBLE CONTAMINATION. NOT ENOUGH SAMPLE FOR DUPLICATE. NON CLP SAMPLE. 1058

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-092
BORING LOCATION: DIALOG AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/23/88 0820
DATE/TIME COMPLETED: 09/23/88 1020
TOTAL DEPTH: 80.00
SURFACE ELEVATION: 156.9423
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		01 02 03	7 8 14	1.0	0	N	B	DR	MM	SM	6.0	ASPHALT (3"), BASE (6") ARTIFICIAL FILL (OAF), SILTY SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED. 0830
5			0 0 0	0.0	0						0.0	
10		04 05 06	6 7 7	0.0	0	N	DB	DR	MM	SM	0.0	SAME EXCEPT DARKER BROWN. 0837
15			0 0 0	0.0	0						0.0	AT 15' COBBLES AND PEBBLES AND SILTY/FINE GRAIN MATRIX 2' THICK. 0837
20		07 08 09	26 40 50	0.0	0	N	BR	DR	MO	SM	0.0	SILTY SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED. 0853
25			0 0 0	0.0	0						0.0	
30			0 0 0	0.0	0						0.0	
35		10 11 12 13	14 28 26	0.0	0	N	B	SM	MM	SC	0.0	SILTY CLAY, BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED. 0910
40			0 0 0	0.0	0	N	B	SM	MM	SM	0.0	SILTY FINE GRAIN SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED.
45			0 0 0	0.0	0	N					0.0	

FIELD BORING LOG

OFS NUMBER:

SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-092
BORING LOCATION: DIALOG AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/23/88 0820
DATE/TIME COMPLETED: 09/23/88 1020
TOTAL DEPTH: 80.00
SURFACE ELEVATION: 156.9423
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50					X	X	X		0 0 0	0.0	0	N					0.0	
55					X	X	X		0 0 0	0.0	0	N					0.0	
60					X	X	X		0 0 0	0.0	0	N		MO			0.0	MOIST
65					X	X	X		0 0 0	0.0	0	N		WT	HH	SP	0.0	
70				X	X	X			0 0 0	0.0	0						0.0	
75					X	X	X		0 0 0	0.0	0	N					0.0	
80				X	X	X			0 0 0	0.0	0	N					0.0	FINISH DRILLING AT 1020. TOTAL DEPTH 80'/WATER AT 68'/SEE NOTEBOOK FOR WELL INSTALLATION.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-093
BORING LOCATION: TOXO
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/04/88 0810
DATE/TIME COMPLETED: 10/04/88 1050
TOTAL DEPTH: 65.00
SURFACE ELEVATION: 157.2309
WATER DEPTH: 58.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0						X	X	01 02 03	8 10 17	0.0	0	N	LB	SM	LL	SC	0.0	ASPHALT (2"). SILTY CLAY, LIGHT BROWN, DAMP, MEDIUM DENSE, LOW TO MODERATELY CEMENTED. CLP SAMPLE. 0810
5						X	X		15 30 34	0.0	0	N	RB	SM	LL	CL	0.0	CLAY, RED/BROWN, DAMP, STIFF, WELL CEMENTED.
10						X	X	04 05 06	14 14 17	0.0	0	N	RB	SM	LL	SC	0.0	SILTY CLAY, RED/BROWN, DAMP, DENSE, WELL CEMENTED. CLP SAMPLE.
15									0 0 0	0.0	0						0.0	
20		X				X		07 08 09	14 22 50	0.0	0	N	YB	MO	HH	SM	0.0	COARSE SAND TO 20'. AT 20' SILTY SAND WITH PEBBLES, YELLOW/BROWN, MEDIUM DENSE/DENSE, MODERATELY TO WELL CEMENTED CLP SAMPLE. 0845
25						X	X		10 14 18	0.0	0	N	YB/B	MO	MM-LL	SM-CL	0.0	SILTY SAND CONTINUED TO 26'. AT 26' CLAY, BROWN, DAMP, STIFF, WELL CEMENTED.
30					X	X			27 50 0	0.0	0	N	B	MO	MM	SM	0.0	SILT, SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY TO WELL CEMENTED.
35					X	X		10 11 12	30 50 0	0.0	0	N	B	DR	ML	SM	2.0	FINE SILTY SAND, BROWN, DAMP, MEDIUM DENSE, MODERATELY CEMENTED. 0905
40				X					25 37 50	0.0	0	N	T/B	MO	MM	SP	2.0	MEDIUM GRAIN SAND, TAN/BROWN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED.
45			X	X					50 50 0	0.0	0	N	T	D	HH	SP	0.0	MEDIUM GRAINED SAND, TAN, DAMP, MEDIUM DENSE, DENSE, LOOSE, POORLY CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-093
BORING LOCATION: TOXO
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/04/88 0810
DATE/TIME COMPLETED: 10/04/88 1050
TOTAL DEPTH: 65.00
SURFACE ELEVATION: 157.2309
WATER DEPTH: 58.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	X--X--X--X		50 0 0	3.6	0	N	T	MO	HH	SP	0.0	COARSE GRAIN SAND, TAN, MOIST, DENSE, LOOSE, POORLY CEMENTED.
55	X--X--X--X		50 0 0	3.0	0	N	T	MO	HH	SP	0.0	COARSE GRAIN SAND, TAN, MOIST, COARSE, LOOSE, POORLY CEMENTED.
60	X--X--X		35 42 50	0.0	0	N	T	WT	HH	SP	0.0	MEDIUM GRAINED SAND, TAN, WET, LOOSE, POORLY CEMENTED.
65	X--X		28 34 36	0.0	0	W	T	WT	MM	SP	0.0	FINE GRAINED SAND, TAN, WET, MODERATELY WELL CEMENTED. TOTAL DEPTH 65'/ WATER AT 58'/CAVING AT 60'-63'.

#END SESSION 5315 ET=1:36:17.4 PT=0.8 IO=0.3

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-094
BORING LOCATION: TOXO
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/04/88 1140
DATE/TIME COMPLETED: 10/05/88 0850
TOTAL DEPTH: 115.00
SURFACE ELEVATION: 157.0283
WATER DEPTH: 58.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PERM	USCS SYMB	HNU	DESCRIPTION
45				X					50 50 0	0.0	0	N	T	MO	HH	SP	0.0	SEE BORING LOG SB-093 FOR DEPTHS 0 TO 45 FEET. MEDIUM GRAIN SAND, TAN,DAMP, MEIUM DENSE/DENSE, LOOSE, POORLY CEMENTED.
50			X	X	X	X			50 0 0	0.0	0	N	T	MO	HH	SP	0.0	COARSE GRAIN SAND, TAN, MOIST, DENSE, LOOSE, POORLY CEMENTED.
55			X	X	X	X			50 0 0	3.0	0	N	T	MO	HH	SP	0.0	COARSE GRAIN SAND, TAN, MOIST, COARSE, LOOSE, POORLY CEMENTED.
60			X	X	X	X			35 42 50	0.0	0	N	T	WT	HH	SP	0.0	MEDIUM GRAIN SAND, TAN, WET, LOOSE, POORLY CEMENTED.
65			X	X	X	X			24 28 36	0.0	0	N	T	WT	MM	SP	0.0	FINE GRAIN SAND, TAN, WET, MODERATELY WELL CEMENTED.
70						X			22 18 27	0.0	0	N	B	MO	LL	SM-SC	0.0	SILTY SAND, BROWN, MOIST, MEDIUM DENSE, MODERATELY WELL CEMENTED. AT 73' SILTY CLAY, TAN, DAMP, WELL CEMENTED.
75						X			34 42 38	0.0	0	N	L	WT	HH	SP	0.0	AT 75' COARSE GRAIN SAND, LIGHT BROWN, WET, POORLY CEMENTED.
80			X				X		26 35 50	0.0	0	N	LB	WT	HH	SP	0.0	VERY COARSE SAND, LIGHT BROWN, WET, POORLY CEMENTED, HEAVING SAND.
85			X						43 50 28	0.0	0	N	B	WT	HH	SP	0.0	COARSE GRAIN SAND, BROWN, WET, MEDIUM DENSE/DENSE, LOOSE, POORLY CEMENTED.
90			X						28 39 48	0.0	0	N	B	WT	HH	SP	0.0	COARSE SAND, BROWN, WET, DAMP, LOOSE, POORLY CEMENTED, HEAVING.

FIELD BORING LOG

OFS NUMBER:

SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-094
BORING LOCATION: TOXO
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/04/88 1140
DATE/TIME COMPLETED: 10/05/88 0850
TOTAL DEPTH: 115.00
SURFACE ELEVATION: 157.0283
WATER DEPTH: 58.00

GRAPHIC LOG									SAMPLE DATA										DESCRIPTION
	BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY		SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	
95					X	X	X			26 50 0	0.0	0	N	B	WT	MM	SP	0.0	FINE GRAIN SAND, BROWN, WET, MEDIUM DENSE/DENSE. MODERATELY WELL CEMENTED.
00			X	X	X	X	X			50 0 0	0.0	0	N	T	WT	HH	SP	0.0	COARSE GRAIN SAND, TAN, WET,DAMP,LOOSE, POORLY CEMENTED.
05			X	X	X	X				50 0 0	0.0	0	N	T/B	WT	HH	SP	0.0	VERY COARSE GRAIN SAND WITH COBBLES AND PEBBLES, TAN/BROWN, WET, DENSE, LOOSE, POORLY CEMENTED.
10			X	X	X	X				38 39 50	0.0	0	N	T	WT	HH	SP	0.0	VERY COARSE SAND, TAN, WET, DAMP, LOOSE, POORLY CEMENTED. TOTAL DEPTH 113'/WATER AT 58'/CAVING AND HEAVING AT 60'.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-096
BORING LOCATION: TIMMONS LUMBER
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/20/88 0855
DATE/TIME COMPLETED: 09/20/88
TOTAL DEPTH: 66.50
SURFACE ELEVATION: 156.2903
WATER DEPTH: 53.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0					X	X	X	01 02 03	3 4 5	0.0	0	N	LB	SM	MM	SM	0.0	ASPHALT (3"); BASE (9"); FILL(QAF): SILTY SAND, LIGHT BROWN, DAMP, MEDIUM DENSE. CLP SAMPLE. 0855
5					X	X	X		2 3 6	0.0	0	N	BR	SM	MM	SM	0.0	SILTY, FINE GRAINED SAND, BROWN, DAMP, MEDIUM DENSE.
10				X	X	X	X	04 05 06	11 17 23	0.0	0	N	BR	SM	MM	SM	0.0	SILTY, FINE GRAINED SAND, BROWN, DAMP, MEDIUM DENSE. CLP SAMPLE. 0911
15				X	X	X	X		12 14 16	0.0	0	N	LB	SM	MH	SM	0.0	FINE GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE.
20				X	X	X	X	07 08 09	14 30 40	0.0	0	N	LB	SM	MM	SP	0.0	MEDIUM GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE. CLP SAMPLE. 0930
25			X						17 16 20	0.0	0	N	BR	SM	HH	SP	0.0	COARSE GRAINED SAND, BROWN, DAMP, MEDIUM DENSE, POORLY CEMENTED
30			X				X	10 11 12	9 25 40	0.0	0	N	BR	DR	HH	SP	0.0	COARSE GRAINED SAND, BROWN, DAMP, MEDIUM DENSE, POORLY CEMENTED; 4"THICK SILTY CLAY @ 30.5'. CLP SAMPLE. 0950
35			X			X			14 26 36	0.0	0	N	BR	DR	MM	SP	0.0	COARSE GRAINED SAND, BROWN, DAMP, MEDIUM DENSE, THIN SILTY SAND INTERBEDS
40				X		X		13 14 15	34 35 50	0.0	0	N	LB	DR	HH-M ,L	SP-SM	0.0	COARSE GRAINED SAND, @40.5' SILTY SAND, LIGHT BROWN, DAMP, MEDIUM DENSE, NON CLP SAMPLE. 1005
45		X	X		X	X			14 50 0	0.0	0	N	LB	MO	H,H	SP	0.0	COARSE GRAINED SAND, MOIST, MEDIUM DENSE POORLY CEMENTED WITH PEBBLES (<1%) 1005

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-096
BORING LOCATION: TIMMONS LUMBER
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/20/88 0855
DATE/TIME COMPLETED: 09/20/88
TOTAL DEPTH: 66.50
SURFACE ELEVATION: 156.2903
WATER DEPTH: 53.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50		16 17 18	21 50 0	0.0	0	N	BR	MO	M	SW	0.0	COARSE SAND, BROWN, MOIST, MEDIUM DENSE, POORLY CEMENTED, FINE & MEDIUM GRAINED INTERBEDS. CLP SAMPLES. 1018
55			6 12 17	0.0	0						0.0	PEBBLY/GRAVELLY COARSE GRAINED SAND; GREY/BROWN, WET, POORLY CEMENTED
60			7 8 15	0.0	0						0.0	SAME AS ABOVE.
65			0 0 0	0.0	0						0.0	SAME AS ABOVE. WATER AT 53'. HEAVING BELOW WATER TABLE.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-097
BORING LOCATION: RICK'S SMOG
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/22/88 0910
DATE/TIME COMPLETED: 09/22/88 1130
TOTAL DEPTH: 66.50
SURFACE ELEVATION: 157.2788
WATER DEPTH: 49.50

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		01 02 03 04	6 8 11	18.0	0	N	LB	DR	M,M	SM	1.0	ASPHALT(3"); BASE(6"); ARTIFICIAL FILL (QAF): SILTY SAND, LIGHT BROWN, DRY, MEDIUM DENSE, @1.7'-2' CONCRETE SLAB 0915
5			9 11 12	8.0	0	N	LB	DR	M,M	SM	6.4	SILTY SAND, LIGHT BROWN, DRY, MEDIUM DENSE, MODERATELY CEMENTED
10		05 06 07 08	19 27 40	10.0	0	N	GG	SM	L,L	SC	5.0	FAT CLAY, GREEN/GRAY, DAMP, STIFF; CLP SAMPLE. 0928
15			5 6 8	4.0	0	N	LB	SM	M,L	SM	3.0	FINE SILTY SAND, LIGHT BROWN, DAMP, MEDIUM DENSE.
20		09 10 11 12	30 50 0	3.0	0	N	GB	SM	L,L	SC	1.6	SILTY CLAY, GRAY BROWN, DAMP, MEDIUM DENSE. CLP SAMPLE. 0943
25			24 40 50	1.0	0	N	LB	SM	M M	SP	1.0	FINE TO MEDIUM GRAINED SAND, LIGHT BROWN DAMP, MEDIUM DENSE.
30		13 14 15 16	28 50 0	2.0	0	N	LB	SM	M M	SP	1.6	MEDIUM GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE. CLP SAMPLE. 1012
35			28 50 0	1.0	0	N	LT	MO	H,H	SP	0.8	COARSE GRAINED SAND, LIGHT TAN, MOIST, MEDIUM DENSE, POORLY CEMENTED.
40		17 18 19	42 50 0	2.0	0	N	LT	MO	H,H	SP	1.0	COARSE GRAINED SAND, LIGHT TAN, MOIST, MEDIUM DENSE, POORLY CEMENTED. NON CLP SAMPLE. 1045
45			20 38 40	2.0	0	N	YT	MO	H,H	SP	1.0	MEDIUM GRAINED SAND, YELLOW TAN, MOIST, MEDIUM DENSE, POORLY CEMENTED.

FIELD BORING LOG

OFS NUMBER:

SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-097
BORING LOCATION: RICK'S SMOG
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/22/88 0910
DATE/TIME COMPLETED: 09/22/88 1130
TOTAL DEPTH: 66.50
SURFACE ELEVATION: 157.2788
WATER DEPTH: 49.50

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50		20 21 22 23	42 50 0	0.0	0	N	YT	WT	H,H	SP	0.0	MEDIUM TO COARSE GRAINED SAND, YELLOW TAN, MOIST, MEDIUM DENSE, POORLY CEMENTED. GROUNDWATER AT 49.5'. CLP SAMPLE. 1102
55			43 50 0	0.0	0	N	GB	WT	H,H	SP	0.0	COARSE GRAINED SAND WITH PEBBLES AND GRAVEL; GRAY/BROWN, WET, POORLY CEMENTED
60			36 50 0	0.0	0	N	GB	WT	M,M	SP	0.0	COARSE GRAINED SAND WITH PEBBLES AND GRAVEL; GRAY/BROWN, WET, POORLY CEMENTED @60.5'-61.5' CLAYEY SILT, BROWN, WET, MEDIUM DENSE.
65			24 17 16	0.0	0	N	B	WT	M,M	SP	0.0	FINE GRAINED SAND, BROWN, WET, MEDIUM DENSE.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-098
BORING LOCATION: CAMPBELL PROP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/19/88 0850
DATE/TIME COMPLETED: 09/19/88 1105
TOTAL DEPTH: 66.50
SURFACE ELEVATION: 157.5622
WATER DEPTH: 53.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X		X	X	X		01 02 03	40 50 0	0.0	0	N	LB	DR	M,M	SM	0.0	SILTY FINE GRAINED SAND, BROWN, DRY, MEDIUM DENSE WITH PEBBLES. CLP SAMPLE COLLECTED. 0858
5						X	X		17 27 40	0.0	0	N	RB	DR	L,M	CL	0.0	SILTY CLAY, RED/BROWN, DRY, MEDIUM DENSE TO DENSE. 0858
10						X	X	04 05 06	32 50 0	0.0	0	N	LB	DR	L,L	CL	0.0	SILTY CLAY, LIGHT BROWN, DRY, DENSE 0915
15							X		17 38 50	0.0	0	N	G	DR	L,L	CL	0.0	FAT CLAY, GREEN/YELLOW, DRY, STIFF
20						X	X	07 08 09	17 40 50	0.0	0	N	GB	DR	L,L	CL	0.0	SILTY CLAY, GRAY/BROWN, DRY, DENSE 0940
25						X			17 30 40	0.0	0	N	LB	DR	M,L	SM	0.0	SILTY SAND, LIGHT BROWN, DRY, MEDIUM DENSE/DENSE.
30			X		X	X		10 11 12	20 40 49	0.0	0	N	LB	SM	H,H	SP	0.0	MEDIUM GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE/DENSE. 1002
35			X		X	X			25 38 50	0.0	0	N	LB	SM	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, DAMP, DENSE, POORLY CEMENTED
40			X		X	X		13 14 15	25 37 50	0.0	0	N	LB	MO	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, DAMP, DENSE, POORLY CEMENTED 1015
45			X		X	X			40 50 0	0.0	0	N	GB	MO	H,H	SP	0.0	COARSE GRAINED SAND, GRAY/BROWN, MOIST, MEDIUM DENSE/DENSE, POORLY CEMENTED

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-098
BORING LOCATION: CAMPBELL PROP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/19/88 0850
DATE/TIME COMPLETED: 09/19/88 1105
TOTAL DEPTH: 66.50
SURFACE ELEVATION: 157.5622
WATER DEPTH: 53.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50			X		X--X			16 17 18	50 50 0	0.0	0	N	LB	MO	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, MOIST, DENSE, POORLY CEMENTED. NON CLP SAMPLE.
55			X				X		22 26 45	0.0	0	N	LB	WT	HH,L L,M	SP, CL	0.0	COARSE GRAINED SAND, BROWN, WET, DENSE, POORLY CEMENTED @56' LEAN CLAY, BROWN, WET, STIFF @56.5' SILTY SAND, BROWN, WET, MEDIUM DENSE.
60			X						35 50 0	0.0	0	N	LB	WT	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, WET, DENSE, POORLY CEMENTED
65							X		35 40 50	0.0	0	N	LB-GB	WT	M,M, L,L	SM, CL	0.0	@65' FINE GRAINED SAND @66' FAT CLAY, GRAY/BROWN, WET, STIFF

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-099
BORING LOCATION: CAMPBELL PROP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/19/88 0850
DATE/TIME COMPLETED: 09/19/88 1105
TOTAL DEPTH: 66.50
SURFACE ELEVATION: 157.5622
WATER DEPTH: 53.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		X		X	X	X			40 50 0	0.0	0	N	LB	DR	M,M	SM	0.0	SILTY FINE GRAINED SAND, BROWN, DRY, MEDIUM DENSE WITH PEBBLES; CLP SAMPLE COLLECTED. 0858
5						X	X		17 27 40	0.0	0	N	RB	DR	L,M	CL	0.0	SILTY CLAY, RED/BROWN, DRY, MEDIUM DENSE TO DENSE. 0858
10						X	X		32 50 0	0.0	0	N	LB	DR	L,L	CL	0.0	SILTY CLAY, LIGHT BROWN, DRY, DENSE 0915
15							X		17 38 50	0.0	0	N	GY	DR	L,L	CL	0.0	FAT CLAY, GREEN/YELLOW, DRY, STIFF
20						X	X		17 40 50	0.0	0	N	GB	DR	L,L	CL	0.0	SILTY CLAY, GRAY/BROWN, DRY, DENSE 0940
25						X			17 30 40	0.0	0	N	LB	DR	M,L	SM	0.0	SILTY SAND, LIGHT BROWN, DRY, MEDIUM DENSE/DENSE.
30			X		X	X			20 40 49	0.0	0	N	LB	SM	H,H	SP	0.0	MEDIUM GRAINED SAND, LIGHT BROWN, DAMP, MEDIUM DENSE/DENSE. 1002
35			X		X	X			25 38 50	0.0	0	N	LB	SM	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, DAMP, DENSE, POORLY CEMENTED
40			X		X	X			25 37 50	0.0	0	N	LB	MO	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, DAMP, DENSE, POORLY CEMENTED 1015
45			X		X	X			40 50 0	0.0	0	N	GB	MO	H,H	SP	0.0	COARSE GRAINED SAND, GRAY/BROWN, MOIST, MEDIUM DENSE/DENSE, POORLY CEMENTED

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-099
BORING LOCATION: CAMPBELL PROP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 09/19/88 0850
DATE/TIME COMPLETED: 09/19/88 1105
TOTAL DEPTH: 66.50
SURFACE ELEVATION: 157.5622
WATER DEPTH: 53.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	CRS SAND X; FINE SAND X--X		50 50 0	0.0	0	N	LB	MO	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, MOIST, DENSE, POORLY CEMENTED; NON CLP SAMPLE.
55	CRS SAND X; CLAY X		22 26 45	0.0	0	N	LB	WT	HH,L L,M	SP, CL	0.0	COARSE GRAINED SAND, BROWN, WET, DENSE, POORLY CEMENTED @56' LEAN CLAY, BROWN, WET, STIFF @56.5' SILTY SAND, BROWN, WET, MEDIUM DENSE.
60	CRS SAND X		35 50 0	0.0	0	N	LB	WT	H,H	SP	0.0	COARSE GRAINED SAND, LIGHT BROWN, WET, DENSE, POORLY CEMENTED
65	CLAY X		35 40 50	0.0	0	N	LB, BB	WT, WT	M,M, L,L	SM, CL	0.0	@65' FINE GRAINED SAND @66' FAT CLAY, GRAY/BROWN, WET, STIFF

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-100
BORING LOCATION: CAMPBELL PROP.
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/26/88 1045
DATE/TIME COMPLETED: 10/28/88 1005
TOTAL DEPTH: 96.00
SURFACE ELEVATION: 157.0120
WATER DEPTH: 86.00

DEPTH IN FT	GRAPHIC LOG	SAMPLE DATA										DESCRIPTION
	BOULDERS / COBBLES / CRS SAND / MED SAND / FINE SAND / SILT / CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	
60	X--X X		0 0 0	0.0	0	N	LB	WT	M,H	SP	0.3	SEE SB-098 BORING LOG FOR DEPTHS 0-60'; BULK SAMPLE TAKEN @37' COARSE SAND (SP); BULK SAMPLE TAKEN @65'-70' FAT CLAY (CL) COARSE GRAINED SAND, LIGHT BROWN, WET, DENSE,POORLY CEMENTED
65	X	01	0 0 0	0.0	0	N	LB -T	WT	M,M-L,L	SM-CL	0.0	@65' FINE GRAINED SAND, LIGHT BROWN, WET, MEDIUM DENSE, @66' FAT CLAY, TAN, WET, DAMP TO DRY, GEOTECHNICAL SAMPLE.
70	X X--X		0 0 0	0.0	0		T	WT	MM,H H,L	SM, SP	0.0	@71' SILTY SAND, TAN, WET, MEDIUM DENSE, MODERATELY CEMENTED. @72' COARSE GRAINED PEBBLY SAND, TAN, WET, MEDIUM DENSE, POORLY CEMENTED; @73' SILTY CLAY, TAN, WET, MEDIUM DENSE, MODERATELY CEMENTED.
75	X--X--X--X		0 0 0	0.0	0		T	WT	MM,L L,L	SM, CL	0.0	@77' FINE SAND,TAN,WET,MEDIUM DENSE, MODERATELY CEMENTED. @78' FAT CLAY,TAN, DAMP, STIFF, WELL CEMENTED.
80	X--X--X X		0 0 0	0.0	0		T	WT	HH,L L	SP, CL	0.0	@80' FINE TO MEDIUM SAND,TAN,WET,MEDIUM DENSE, MODERATELY CEMENTED; @82' FAT CLAY TAN DAMP, STIFF, WELL CEMENTED.
85	X		0 0 0	0.0	0		T	MT	MM,H H	SC, SP	0.0	@86' SILTY CLAY,TAN,MOIST,MEDIUM DENSE, MODERATELY CEMENTED; @89' MEDIUM TO COARSE SAND, TAN, WET, MEDIUM DENSE, TO DENSE, POORLY CEMENTED.
90	X X--X		0 0 0	0.0	0		T	WT	H,H	SP	0.0	AT 89', MEDIUM TO COARSE SAND, TAN, WET MEDIUM DENSE/DENSE, POORLY CEMENTED.
95	X X--X		0 0 0	0.0	0					SP	0.0	SAME AS ABOVE.

FIELD BORING LOG

OFS NUMBER:

SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-101
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/17/88 0750
DATE/TIME COMPLETED: 10/17/88 1030
TOTAL DEPTH: 79.00
SURFACE ELEVATION: 163.3220
WATER DEPTH: 55.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
60			0 0 0	0.0	0	N	G/A	WT	M,M	SP	0.0	SEE SB-103 LOG FOR DEPTHS 0 TO 60' (~10' WEST OF SB-101); COARSE GRAINED SAND @ PEBBLES, GREEN/ BROWN,WET, MEDIUM DENSE, POORLY CEMENTED
65			26 34 42	0.0	0	N	LB	WT	MM	SM	0.0	FINE SAND, LIGHT BROWN, WET, MEDIUM DENSE, MODERATELY WELL CEMENTED
70			42 50 0	0.0	0	N	LB	WT	HH	SP	0.0	COARSE GRAIN SAND, LIGHT BROWN, WET, POORLY CEMENTED
75			44 59 0	0.0	0	N	B	WT	HH	SP	0.0	COARSE GRAIN SAND, BROWN, WET, POORLY CEMENTED
80			26 42 50	0.0	0	N	TB	DR	LL	CL	0.0	LEAN CLAY, LIGHT BROWN, DRY, WELL CEMENTED

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-103
BORING LOCATION: TIMMONS LUMBER
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/11/88 1430
DATE/TIME COMPLETED: 10/12/88 1045
TOTAL DEPTH: 70.00
SURFACE ELEVATION: 163.5523
WATER DEPTH: 57.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION	
0	SILT--CLAY	01 02 03	12 16 31	0.0	0	N	B	DR	L-M	SM	0.0	BROWN, SANDY SILT AND GRAVEL MIXTURE, LOOSE, CHUNKS OF ROCKS, SLIGHT CONTAMINATION; NON CLP SAMPLE.	1440
5	SILT--CLAY	04 05 06 07	21 28 38	10.0	0	N	B	DR	L	SC	0.0	BROWN, SANDY CLAY AND SILT & GRAVEL MIXTURE, TRACES OF WHITE POWDER. DUPLICATE INORGANIC. CLP SAMPLE.	1450
10	SILT--CLAY	08 09 10	11 22 22	12.0	0	N	B	DR	L	SC	0.0	BROWN, SANDY CLAY AND SILT MIXTURE; SLIGHT CONTAMINATION; NON CLP SAMPLE.	1500
15	SILT--CLAY	11 12 13	10 17 23	0.0	0	N	DB-GB	SM	L	SC	0.0	DARK BROWN TO GRAYISH BROWN, SANDY CLAY & SILT MIXTURE; CONTAMINATION PRESENT; NON CLP SAMPLE.	1510
20	SILT	14 15 16 17	9 7 11	0.0	0	N	DB-GB	SM	L	SC	0.0	DARK BROWN TO GRAYISH BROWN, SANDY CLAY CONTAMINATION PRESENT. DUPLICATE INORGANIC. CLP SAMPLE.	1520
25	MED SAND--FINE SAND	18 19 20 21	10 19 23	12.0	5	N	GB	SM	M	SP	0.0	GREENISH BROWN, FINE TO MEDIUM GRAINED SANDS. DUPLICATE INORGANIC. CLP SAMPLE. NO VISIBLE CONTAMINATION	1530
30	CRS SAND		30 50 0	1000.0	30	N	GB	SM	M	SP	0.0	GREENISH BROWN, MEDIUM TO COARSE GRAINED SANDS; NO SAMPLE COLLECTED NO VISIBLE CONTAMINATION	1530
35	FINE SAND	22 23 24	8 12 18	800.0	5	N	GB	SM	L	SC	0.0	GREENISH BROWN; SANDY CLAY TO FINE SANDS SLIGHT CONTAMINATION. NON CLP SAMPLE.	1555
40	CRS SAND	25 26 27	35 40 40	0.0	5	N	GB	SM	M-H	SW	0.0	GREENISH BROWN; COARSE GRAINED SANDS; NO VISIBLE CONTAMINATION; NON CLP SAMPLE.	0805
45	MED SAND		30 50 0	0.0	0	N	GB	SM	M	SP	0.0	GREENISH BROWN; MEDIUM GRAINED SANDS PEBBLES; NO VISIBLE CONTAMINATION; NO SAMPLE COLLECTED	0815

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: J. SADEGHIPOUR

BORING NUMBER: SB-103
BORING LOCATION: TIMMONS LUMBER
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/11/88 1430
DATE/TIME COMPLETED: 10/12/88 1045
TOTAL DEPTH: 70.00
SURFACE ELEVATION: 163.5523
WATER DEPTH: 57.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50	▌	▌			X--X				9 10 21	0.0	0	N	GB-B	SM	L-M	SC	0.0	GREENISH BROWN TO BROWN CLAYEY SANDS TO FINE GRAINED SANDS & PEBBLES; NO SAMPLE COLLECTED; NO VISIBLE CONTAMINATION 0825
55	▌	▌	X--X--X					28	20 50 0	0.0	0	N	GB	SM	M-H	SP	0.0	GREENISH BROWN, FINE TO COARSE GRAINED SANDS & PEBBLES, SAMPLE COLLECTED FOR GRAIN ANALYSIS; NO SAMPLE COLLECTED; NO VISIBLE CONTAMINATION 0835
60	▌	▌	X--X					29	50 0 0	0.0	0	N	GB	M	M-H	SP	0.0	GREENISH BROWN, COARSE GRAINED SANDS & PEBBLES; SAMPLE COLLECTED FOR GRAIN ANALYSIS; NO SAMPLE COLLECTED; NO VISIBLE CONTAMINATION; GROUNDWATER ENCOUNTERED AT 57'. 0845
65	▌	▌							0 0 0	0.0	0						0.0	BELOW GROUNDWATER. NO SAMPLE COLLECTED.
70	▌	▌							0 0 0	0.0	0						0.0	BELOW GROUNDWATER. NO SAMPLE COLLECTED.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-104
BORING LOCATION: H&H CONTRACTORS
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/14/88 0800
DATE/TIME COMPLETED: 10/14/88 1120
TOTAL DEPTH: 74.00
SURFACE ELEVATION: 159.3404
WATER DEPTH: 54.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI %LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	FINE SAND, SILT, CLAY	01 02 03	7 9 8	0.0	0	N	DB	DR	LL	SC	0.0	SILTY CLAY, DARK BROWN, DRY DENSE, WELL CEMENTED. 0805
5	FINE SAND, CLAY		3 5 4	0.0	0	N	B	DR	LL	SC	0.0	SILTY CLAY, BROWN, DRY, DENSE, WELL CEMENTED, DARK GREY MUD, DRILLING MUD AT 7'-9'.
10	FINE SAND, CLAY	04 05 06 07	2 1 3	0.0	5	SHC	G/DG	MO	MM	SM	0.0	AT 10' SILTY SAND, GREY TO DARK GRAY, MOIST, CEMENTED, CONTAMINATED. CLP SAMPLE. 0825
15	SILT, CLAY		3 6 12	100.0	0	SHC/N	G/DG	MO	MM/L L	SM-CL	0.0	CONTAMINATED NATIVE TO 15'5'. GRAY TO DARK GRAY, SILTY SAND, MODERATELY TO WELL CEMENTED. AT 15'5" LEAN CLAY, TAN, DAMP, MODERATELY STIFF, WELL CEMENTED.
20	FINE SAND	08 09 10 11	9 10 15	0.0	0	N	Y/T	MO	MM	SP	0.0	FINE SAND, YELLOW/TAN, DAMP, MEDIUM DENSE, MODERATELY WELL CEMENTED. CLP SAMPLE. #11 IS ORGANIC DUPLICATE. 0840
25	CRS SAND		20 45 50	0.0	0	N	Y/T	MO	MM	SP	0.0	VERY COARSE SAND, YELLOW/TAN, DAMP, DENSE, LOOSE, POORLY CEMENTED.
30	MED SAND		12 38 50	0.0	0	N	T	MO	LL/MM	SC/SP	0.0	AT 30' TO 31' SILTY CLAY WITH PEBBLES, WELL CEMENTED. AT 31' MEDIUM TO COARSE GRAINED SAND, TAN, MOIST, MEDIUM DENSE, MODERATELY WELL CEMENTED.
35	CLAY	12 13 14 15	17 19 39	0.0	0	N	LT	MO	LL	CL	0.0	LEAN CLAY, LIGHT TAN, DAMP, STIFF, WELL CEMENTED. CLP SAMPLE. 0910
40	CLAY		14 22 24	0.0	0	N	LT	MO	LL	CL	0.0	LEAN CLAY CONTINUED.
45	MED SAND, FINE SAND, SILT		22 29 38	0.0	0	N	T	MO	ML	SM	0.0	FINE SAND, TAN, MOIST, MEDIUM DENSE, MODERATELY WELL CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 2

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-104
BORING LOCATION: H&H CONTRACTORS
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/14/88 0800
DATE/TIME COMPLETED: 10/14/88 1120
TOTAL DEPTH: 74.00
SURFACE ELEVATION: 159.3404
WATER DEPTH: 54.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
50			X	X	X				20 50 0	0.0	0	N	LB	DR	MM	SP	0.0	MEDIUM GRAIN SAND, LIGHT BROWN, DAMP, MEDIUM DENSE, POORLY CEMENTED. AT 53'-54' LIGHT GRAY AND BACK TO LIGHT BROWN.
55			X	X	X				35 40 50	0.0	0	N	T	WT	HH	SP	0.0	VERY COARSE SAND WITH GRAVEL, TAN, WET, LOOSE, DENSE, POORLY CEMENTED.
60			X	X	X				26 42 58	0.0	0	N	T	WT	HH,L L,H	SP, CL	0.0	COARSE SAND, TAN, WET, DENSE, LOOSE, POORLY CEMENTED. AT 61'6" LEAN CLAY, TAN, STIFF, WELL CEMENTED. AT 62' COARSE SAND CONTINUED.
65			X	X					30 42 50	0.0	0	M	T	WT	HH	SP	0.0	MEDIUM TO COARSE GRAINED SAND, TAN, WET, MODERATE TO POORLY CEMENTED.
70					X	X	X		30 42 19	0.0	0	N	G	WT	HH	SP	0.0	COARSE GRAIN SAND, GRAY/BROWN WET, POORLY CEMENTED WITH PEBBLES. AT 73' SILTY SAND, BROWN,DAMP, MEDIUM DENSE. AT 74' SILTY CLAY, BROWN, SLIGHTLY DAMP. MEDIUM DENSE. CEMENTED.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-105
BORING LOCATION: H&H CONTRACTORS
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/14/88 1310
DATE/TIME COMPLETED: 10/14/88 1420
TOTAL DEPTH: 60.00
SURFACE ELEVATION: 159.1604
WATER DEPTH: 54.00

DEPTH IN FT	GRAPHIC LOG: BOULDERS	COBBLES	CRS SAND	MED SAND	FINE SAND	SILT	CLAY	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	PORE/PEM	USCS SYMB	HNU	DESCRIPTION
0									0 0 0	0.0	0						0.0	SEE SB-104 LOG AND WELL CONSTRUCTION SHEET FOR DETAILS. NO SAMPLES. TOTAL DEPTH 60'. GROUNDWATER AT 54'. CAVING BELOW GROUND WATER.

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-107
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/21/88 0810
DATE/TIME COMPLETED: 10/21/88 0928
TOTAL DEPTH: 20.00
SURFACE ELEVATION: 167.0406
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0		01 02 03	9 12 15	150.0	0	N	LB	DR	M,M	SC	70.0	SILTY CLAY WITH ROCKS AND BLOCKS, LIGHT BROWN, DRY, MEDIUM DENSE, POORLY CEMENTED. CLP SAMPLE. 0815
5			26 24 42	150.0	0	N	LB	DR	M,M	SC	70.0	SILTY CLAY WITH ROCKS AND BLOCKS, LIGHT BROWN, DRY, MEDIUM DENSE, POORLY CEMENTED. SAMPLE RECOVERY (CONCRETE).
10		04	27 50 0	10.0	0	N	LB	DR	M,M	SC	0.2	SILTY CLAY WITH ROCKS & BLOCKS, LIGHT BROWN,MEDIUM DENSE, POORLY CEMENTED. REFUSED, MOVE AHEAD ~5', TRY AGAIN, REFUSED, MOVE 10' MORE & RESAMPLED; RETAINED 1 SAMPLE. CLP SAMPLE. 0850
15		05 06 07	8 10 15	140.0	40	HC	BL	WT	L,L	OL	1.0	SILT, SAND, AND ROCKS, BLACK, WET, SOFT, WELL CEMENTED. CLP SAMPLE. 0909
20		08 09 10	0 0 0	26.0	0	HC	BL	MO	L,L	OL	1.0	RESIGNED @18'; MUD, BLACK, MOIST, WELL CEMENTED; GRAB SAMPLE. CLP SAMPLE. 0928

FIELD BORING LOG

OFS NUMBER: SHEET 1

PROJECT NAME: WASTE DISPOSAL INC.
LOCATION: SANTA FE SPRINGS CALIFORNIA
CLIENT NAME: EPA
SITE MANAGER: D. MELCHIOR
LOGGED BY: G. GALLOWAY

BORING NUMBER: SB-108
BORING LOCATION: RESERVOIR AREA
DRILLING CONTRACTOR: DATUM
DRILLING METHOD: HSA
BIT SZ/HAMMER WT/DROP: 7"/140#/30"
SAMPLE RETRIEVAL SYS: SPLIT SPOON

DATE/TIME STARTED: 10/21/88 0945
DATE/TIME COMPLETED: 10/21/88 1040
TOTAL DEPTH: 18.00
SURFACE ELEVATION: 167.0753
WATER DEPTH: 0.00

DEPTH IN FT	GRAPHIC LOG (BOULDERS, COBBLES, CRS SAND, MED SAND, FINE SAND, SILT, CLAY)	SAMPLE #	BLOWS 6"	OVA PPM	CGI % LEL	ODOR	COLOR	MOISTURE	POR/PEM	USCS SYMB	HNU	DESCRIPTION
0	X--X--X--X	01 02 03	8 6 6	0.0	0	N	LB	DR	M,M	SM	0.0	SILTY SAND, LIGHT BROWN, DRY, MEDIUM DENSE, MODERATELY WELL CEMENTED; CLP SAMPLE. 0950
5	X--X--X--X		50 50 0	30.0	0	N	LB	DR	M,M	SM	0.0	SILTY SAND, LIGHT BROWN, DRY, MEDIUM DENSE, MODERATELY WELL CEMENTED. NO SAMPLE OWING TO CONCRETE BLOCKS.
10	X X	04 05 06	35 0 0	1000.0	100	HC	BL	WT	H,H	OL	70.0	SAND WITH FRAGMENTS OF CONCRETE; BLACK WET, FREE PRODUCT; LET STAND, SAMPLE FREE PRODUCT AND RE-MEASURE. CLP SAMPLE. 1000
15	X--X	07 08 09	0 0 0	1000.0	100	SH	LG	MO-WT	L,L	OL	40.0	#6 IS LIQUID SAMPLE. MUD, LIGHT GRAY, MOIST, VERY SOFT. 1040

C

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B.2 AREA 4 HOLLOW-STEM AUGER BORING LOGS

BORING NO. HAB-4-02

SHEET 1 OF 1

DRILLING CO./RIG: WEST HAZMAT

SAMPLER TYPE AND DIMENSION: SPLIT SPOON 2.5"X18"

FIELD ENGINEER\ GEOLOGIST: C. VRABEL

EDITED BY: C. VRABEL

CHECKED BY:

COORDINATES N. NM E. NM

DATE BEGAN: 6-12-95 12:50

DATE FINISHED: 6-12-95 1:30

GROUND SURFACE EL.: NM

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE LITHOLOGY	DESCRIPTION
0			WDI-HAB	sm		Red brown silty fine sand, damp to dry, medium
5	115	18	4-02-05			- oil staining and odor
10	200	7	4-02-10	ml		Green brown silt, very soft, saturated, oil staining and odor
15	490	41	4-02-15			
20	30	70	4-02-20	sm		Gray silty fine sand, moist, medium dense to dense, slight oil odor - greenish gray

End of Boring: 20 feet.
No ground water.
No caving.
FID background 5.5 ppm.

94-256PPDR-04 REV. 7/5/95

CLIENT: WASTE DISPOSAL, INC.

PROJECT NO.: 94-256

LOCATION: SANTA FE SPRINGS, CALIFORNIA

ENVIRONMENTAL SOLUTIONS, INC.

BORING NO. HAB-4-03

SHEET 1 OF 1

DRILLING CO./RIG: WEST HAZMAT
SAMPLER TYPE AND DIMENSION: SPLIT SPOON 2.5"X18"
FIELD ENGINEER\ GEOLOGIST: C. VRABEL
EDITED BY: C. VRABEL
CHECKED BY:

COORDINATES N. NM E. NM
DATE BEGAN: 6-12-95 10:40
DATE FINISHED: 6-12-95 12:15
GROUND SURFACE EL.: NM

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE LITHOLOGY	DESCRIPTION
0			WDI-HAB	sm		Brown sitly fine to medium sand, damp to dry, loose - moist
5		21		ml		No recovery first and second attempt, water saturated
	950	13	4-03-07			- green gray and black silt, very soft, saturated, oil staining and odor
10	2775	8	4-03-10			
15	1850	10	4-03-15			
20	850	11	4-03-20			
25	400	13	4-03-25			
30	1200	73	4-03-30	sp		Light gray, slightly silty fine sand, micaceous, slight oil odor
35	210	84	4-03-35			
40	80	75	4-03-40			

End of Boring: 40 feet.
No ground water.
Minor caving.
FID background 5.0 ppm.

94-256PPDR-04 REV. 7/5/95

CLIENT: WASTE DISPOSAL, INC.

PROJECT NO.: 94-256

LOCATION: SANTA FE SPRINGS, CALIFORNIA

ENVIRONMENTAL SOLUTIONS, INC.

BORING NO. HAB-4-04

SHEET 1 OF 1

DRILLING CO./RIG: WEST HAZMAT
SAMPLER TYPE AND DIMENSION: SPLIT SPOON 2.5"X18"
FIELD ENGINEER\ GEOLOGIST: C. VRABEL
EDITED BY: C. VRABEL
CHECKED BY:

COORDINATES: N. 4094002.46 E. 4271566.71
DATE BEGAN: 6-12-95 9:10
DATE FINISHED: 6-12-95 10:15
GROUND SURFACE EL.: 155.38

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE LITHOLOGY	DESCRIPTION
0			WDI-HAB	sm		Brown silty fine to medium sand, dry to damp, loose to medium dense
5	400	10	4-04-05	ml		Black and green brown mottled silt, wet, soft, oil staining and slight oil odor
10	525	4	4-04-10			
15	535	5	4-04-15			
20	2100	8	4-04-20			
25	95	80	4-04-25	sp		Light yellow brown sand, moist, dense
30	6	77	4-04-30			
35	47	74	4-04-35			- slightly silty
40	7	80	4-04-40			

End of Boring: 40 feet.
No ground water.
No caving.
FID background 4.5 ppm.

94-256PPDR-04 REV. 7/5/95

CLIENT: WASTE DISPOSAL, INC.
PROJECT NO.: 94-256
LOCATION: SANTA FE SPRINGS, CALIFORNIA

ENVIRONMENTAL SOLUTIONS, INC.

BORING NO. HAB-4-05

SHEET 1 OF 1

DRILLING CO./RIG: WEST HAZMAT

SAMPLER TYPE AND DIMENSION: SPLIT SPOON 2.5"X18"

FIELD ENGINEER\ GEOLOGIST: C. VRABEL

EDITED BY: C. VRABEL

CHECKED BY:

COORDINATES N. NM E. NM

DATE BEGAN: 6-12-95 1:30

DATE FINISHED: 6-12-95 2:30

GROUND SURFACE EL.: NM

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE LITHOLOGY	DESCRIPTION
0			WDI-HAB	sm		Brown silty fine to medium sand, damp to dry, medium dense - oil staining and odor, moist
5	3750	13	4-05-05	ml		Green brown and black silt, very soft, wet to saturated, oil staining and odor
10	1250	23	4-05-10	sm		Black green silty fine sand, moist, dense, oil staining and odor
15	170	64	4-05-15	sp		Gray fine sand, moist, dense, oil odor
20	67	84	4-05-20			

End of Boring: 20 feet.
No ground water.
No caving.
FID background 6.0 ppm.

94-256PPDR-04 REV. 7/5/95

CLIENT: WASTE DISPOSAL, INC.

PROJECT NO.: 94-256

LOCATION: SANTA FE SPRINGS, CALIFORNIA

ENVIRONMENTAL SOLUTIONS, INC.

BORING NO. HAB-4-06

SHEET 1 OF 1

DRILLING CO./RIG: WEST HAZMAT

SAMPLER TYPE AND DIMENSION: SPLIT SPOON 2.5"X18"

FIELD ENGINEER\ GEOLOGIST: C. VRABEL

EDITED BY: C. VRABEL

CHECKED BY:

COORDINATES N. NM E. NM

DATE BEGAN: 6-12-95 2:40

DATE FINISHED: 6-12-95 3:10

GROUND SURFACE EL.: NM

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE LITHOLOGY	DESCRIPTION
0			WDI-HAB			Brown silty fine to medium sand with gravel, damp to dry, medium dense
						- wet
5	7	19	4-06-05	sm		
10	42	32	4-06-10	sp		Gray brown slightly silty medium to coarse sand, moist to dense
15	22	80	4-06-15			
20	6	72	4-06-20			

End of Boring: 20 feet.
No ground water.
No caving.
FID background 6.0 ppm.

94-256PPDR-04 REV. 7/6/95

CLIENT: WASTE DISPOSAL, INC.

PROJECT NO.: 94-256

LOCATION: SANTA FE SPRINGS, CALIFORNIA

ENVIRONMENTAL SOLUTIONS, INC.

BORING NO. HAB-4-07

SHEET 1 OF 1

DRILLING CO./RIG: WEST HAZMAT

SAMPLER TYPE AND DIMENSION: SPLIT SPOON 2.5"X18"

FIELD ENGINEER\ GEOLOGIST: C. VRABEL

EDITED BY: C. VRABEL

CHECKED BY:

COORDINATES N. NM E. NM

DATE BEGAN: 6-12-95 3:30

DATE FINISHED: 6-12-95 5:00

GROUND SURFACE EL.: NM

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE LITHOLOGY	DESCRIPTION
0			WDI-HAB	sm		Brown silty fine to medium sand, dry to damp, medium dense, some gravel
5	7	31	4-07-05	gp		Dark brown black gravel, oil saturated, dense
10	550	15	4-07-10	ml		Dark gray black gravelly silt, semi liquid, visible oil staining and slight odor (no ring sample)
15	1150	26	4-07-15			
20	1750	38	4-07-20	sp		Dark gray coarse sand, dense, moist, oil staining and odor
				sm		Green brown silty fine sand, moist, dense
25	350	67	4-07-25	sp		Fine to medium slightly silty sand with gravel, moist, dense

End of Boring: 25 feet.
No ground water.
Caving.
FID background 6.0 ppm.

94-256PPDR-04 REV. 7/6/95

CLIENT: WASTE DISPOSAL, INC.

PROJECT NO.: 94-256

LOCATION: SANTA FE SPRINGS, CALIFORNIA

ENVIRONMENTAL SOLUTIONS, INC.

B.4 AREA 7 HOLLOW-STEM AUGER BORING LOGS

BORING NO. HAB-7-01

SHEET 1 OF 1

DRILLING CO./RIG: WEST HAZMAT

SAMPLER TYPE AND DIMENSION: SPLIT SPOON 2.5"X18"

FIELD ENGINEER\ GEOLOGIST: C. VRABEL

EDITED BY: C. VRABEL

CHECKED BY:

COORDINATES: N. 4093420.54 E. 4271027.83

DATE BEGAN: 6-12-95 7:30

DATE FINISHED: 6-12-95 8:30

GROUND SURFACE EL.: 156.74

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE LITHOLOGY	DESCRIPTION
0			WDI-HAB	sm		Gray brown silty fine to coarse sand, damp to moist, medium dense
						- black, wet, visible hydrocarbon contamination
5	50.0	8	7-01-05			
						Green gray, silty fine sand, wet to saturated, slight oil odor
10	350.0	7	7-01-10	sm		
15	27.0	66	7-01-15			
				sp		Light yellow brown, fine to medium sand, moist, dense (poor sample)
20	2.0	78	7-01-20			
						Slightly silty (poor sample)
25	2.0	82	7-01-25			

End of Boring: 25 feet.
No ground water.
No caving.
FID background 2.5 ppm.

94-256PPDR-04 REV. 7/5/95

CLIENT: WASTE DISPOSAL, INC.

PROJECT NO.: 94-256

LOCATION: SANTA FE SPRINGS, CALIFORNIA

ENVIRONMENTAL SOLUTIONS, INC.

TABLE 4.1

GEOTECHNICAL RESULTS
WASTE DISPOSAL, INC. SUPERFUND SITE

SAMPLE LOCATION	DEPTH (feet)	LAYER	AIR CONDUCTIVITY (cm/sec)	HYDRAULIC CONDUCTIVITY (cm/sec)	USCS CLASSIFICATION
TS-136	10 - 11	Sump-Like	4.41E - 10	2.70E - 06	SM
	17 - 18	Native	1.59E - 06	5.90E - 07	ML
TS-137	8.5 - 9.2	Sump-Like	4.28E - 07	4.35E - 05	ML
	31.5 - 32.2	Native	4.04E - 04	7.06E - 04	SP
TS-138	11.3 - 12.0	Sump-Like	2.18E - 10	1.98E - 06	SP
	25.1 - 25.8	Native	2.16E - 04	1.07E - 04	SM
TS-139	6.0 - 7.0	Sump-Like	4.19E - 10	2.13E - 06	SM
	14.0 - 15.0	Native	1.14E - 08	4.49E - 06	SP
TS-141	15.0 - 15.6	Sump-Like	4.65E - 07	1.03E - 04	GP/SP
	18.0 - 19.0	Native	2.53E - 09	8.37E - 08	ML
TS-142	11.0 - 12.0	Sump-Like	8.70E - 09	3.33E - 06	SM
	16.0 - 17.0	Native	1.07E - 08	1.63E - 07	ML
TS-148	3.0 - 5.0	Fill	2.34E - 08	1.13E - 07	ML
	10.0 - 12.0	Sump-Like	9.50E - 09	3.07E - 07	ML
TS-25	0 - 3	Fill	1.38E - 06	–	ML
	7 - 10	Sump-Like	3.74E - 09	–	ML
TS-56	2 - 4	Fill	2.24E - 09	–	ML
	12 - 14	Sump-Like	2.13E - 10	–	ML

94-256/Rpts/ReDeInSuRe Rev. 2 (5/4/01/jb)

-- = Not tested

Note: Preliminary laboratory data; has not undergone rigorous QA/QC or validation. This data and associated interpretations are subject to change.

"Sump-Like" Layer ≡ Waste Material

PTS Laboratories, Inc.

Geotechnical Services

8100 Secura Way • Santa Fe Springs • CA 90670
Phone (562) 907-3607 • Fax (562) 907-3610

February 10, 1998

Mr. Richard Scott
Environmental Solutions
21 Technology Dr.
Irvine, CA 92718

Re: WDI
PTS File: 28017

Dear Mr. Scott:

Enclosed are final data for samples submitted from your WDI Project # 94-256. All analyses were performed by applicable ASTM, EPA or API. Samples will be retained for 30 days before disposal unless other arrangements are made. Per your request, also enclosed is an information packet on PTS Laboratories.

We appreciate the opportunity to be of service and trust these data will prove beneficial in the development of this project. Please feel free to call myself or Larry Kunkel, District Manager, should you have any questions or require additional information.

Sincerely,

PTS Laboratories, Inc.

Richard L. Young
Project/QC Manager

RLY: ih

encl.

PHYSICAL PROPERTIES DATA

(METHODOLOGY: ASTM D2216, API RP40)

PROJECT NAME: WDI
PROJECT NO: 94-256

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENT. (1)	MOISTURE CONTENT (% wt)	DENSITY BULK (g/cc)	DENSITY GRAIN (g/cc)	EFFECTIVE POROSITY, % Vb	PORE FLUID SATURATION, % Pv WATER (2)	PORE FLUID SATURATION, % Pv HYDROCARBON (3)	25.0 PSI CONFINING STRESS NATIVE PERMEABILITY TO AIR (millidarcy)	25.0 PSI CONFINING STRESS SPECIFIC PERMEABILITY TO WATER (millidarcy)	25.0 PSI CONFINING STRESS SPECIFIC HYDRAULIC CONDUCTIVITY (cm/s)
WDI-TS-136	10.0-11.0	V	72.6	1.08	2.63	58.9	79.0	20.4	SEE ATTACHED SHEETS		
WDI-TS-136	17.0-18.0	V	13.1	1.80	2.71	33.7	72.2	ND	SEE ATTACHED SHEETS		
WDI-TS-137	8.5-9.2	V	68.8	1.15	2.63	56.2	95.0	4.86	SEE ATTACHED SHEETS		
WDI-TS-137	31.5-32.2	V	7.5	1.65	2.67	38.1	27.6	7.42	SEE ATTACHED SHEETS		
WDI-TS-138	11.3-12.0	V	39.6	1.54	2.64	41.8	95.0	4.67	SEE ATTACHED SHEETS		
WDI-TS-138	25.1-25.8	V	6.6	1.65	2.69	38.7	29.2	ND	SEE ATTACHED SHEETS		
WDI-TS-139	6.0-7.0	V	65.1	1.21	2.61	53.6	84.0	15.6	SEE ATTACHED SHEETS		
WDI-TS-139	14.0-15.0	V	35.0	1.25	2.73	54.2	76.4	1.54	SEE ATTACHED SHEETS		
WDI-TS-141	15.0-15.6	V	44.8	1.39	2.64	47.4	77.4	12.6	SEE ATTACHED SHEETS		
WDI-TS-141	18.0-19.0	V	17.6	1.77	2.73	35.1	88.8	0.17	SEE ATTACHED SHEETS		
WDI-TS-142	11.0-12.0	V	27.5	1.49	2.65	43.9	69.2	8.70	SEE ATTACHED SHEETS		
WDI-TS-142	16.0-17.0	V	21.0	1.63	2.75	40.8	83.8	0.68	SEE ATTACHED SHEETS		
WDI-TS-148	3.0-5.0	V	24.3	1.51	2.62	42.2	86.5	2.16	SEE ATTACHED SHEETS		
WDI-TS-148	10.0-12.0	V	12.7	1.83	2.68	31.6	72.3	1.01	SEE ATTACHED SHEETS		

(1) Sample Orientation: H = Horizontal; V = Vertical

(2) 0.9986 gm/cc used for calculation
(3) 0.7500 gm/cc used for calculation

Vb = Bulk Volume, cc
Pv = Pore Volume, cc
ND = Not Detected

PTS Laboratories, Inc.

ERI, Inc.
PTS File Number: 28017

PERMEABILITY TO AIR DATA

(METHODOLOGY: API RP40)

PROJECT NAME: WDI
PROJECT NO: 94-256

SAMPLE NO.	DEPTH, ft	SAMPLE ORIENT. (1)	PRESSURE UPSTREAM psig	PRESSURE DOWN psig	TIME, sec	VOL, cc	Air Visc, cP	LENGTH, cm	DIAMETER cm	CALCULATED DATA Vb, cm3	L2/ Vb	PKG VOLUME, cc	AIR PERMEABILITY md
WDI-TS-136	10.0-11.0	V	15.00	0.000	226.27	0.100	0.0176	3.50	2.77	20.336	0.6024	0.7559	0.0030
WDI-TS-136	17.0-18.0	V	15.00	0.000	56.99	100.0	0.0176	3.62	2.96	24.167	0.5422	0.7431	10.84
WDI-TS-137	8.5-9.2	V	12.27	0.000	177.28	50.0	0.0176	3.12	2.27	12.063	0.8070	0.5637	3.3770
WDI-TS-137	31.5-32.2	V	0.0535	0.000	57.45	100.0	0.0176	4.90	2.93	32.180	0.7461	0.8584	6257
WDI-TS-138	11.3-12.0	V	15.00	0.000	663.74	0.100	0.0176	3.94	2.44	17.877	0.8684	0.5466	0.0015
WDI-TS-138	25.1-25.8	V	0.0397	0.000	113.43	100	0.0176	3.74	2.89	23.760	0.5887	0.7730	3366
WDI-TS-139	6.0-7.0	V	15.00	0.000	257.95	0.100	0.0176	3.52	2.67	18.944	0.6540	0.7644	0.0029
WDI-TS-139	14.0-15.0	V	15.00	0.000	127.78	2.000	0.0176	2.97	2.99	20.175	0.4372	0.6790	0.0780
WDI-TS-141	15.0-15.6	V	2.510	0.000	102.43	10.0	0.0176	3.43	2.60	17.421	0.6753	0.7901	6.245
WDI-TS-141	18.0-19.0	V	15.00	0.000	239.60	0.700	0.0176	3.38	2.92	21.849	0.5229	0.7858	0.0174
WDI-TS-142	11.0-12.0	V	15.00	0.000	99.31	1.000	0.0176	3.37	2.92	21.756	0.5220	0.8114	0.0599
WDI-TS-142	16.0-17.0	V	15.00	0.000	205.32	2.000	0.0176	4.00	2.82	24.270	0.6592	0.7132	0.0731
WDI-TS-148	3.0-5.0	V	15.00	0.000	202.73	5.000	0.0176	3.40	2.80	20.077	0.5758	0.8584	0.1618
WDI-TS-148	10.0-12.0	V	15.00	0.000	94.52	1.000	0.0176	3.50	2.92	22.721	0.5392	0.7175	0.0650

(1) Sample orientation: H = Horizontal, V = Vertical

PTS Laboratories, Inc.

ERI, Inc.
PTS File Number: 28017

PERMEABILITY TO WATER DATA

(METHODOLOGY: ASTM D5084)

PROJECT NAME: WDI
PROJECT NO: 94-256

SAMPLE NO.	DEPTH, ft	SAMPLE ORIENT. (1)	PRESSURE UPSTREAM psig	PRESSURE DOWN psig	TIME, sec	VOL, cc	Water Visc, cP	LENGTH, cm	DIAMETER cm	CALCULATED DATA Vb, cm3	L2/ Vb	PKG VOLUME, cc	WATER PERMEABILITY md	HYDRAULIC CONDUCTIVITY cm/sec
WDI-TS-136	10.0-11.0	V	20.000	0.000	320.07	2.00	0.9812	3.40	2.67	18.281	0.6324	0.7559	2.85	2.70E-06
WDI-TS-136	17.0-18.0	V	20.000	0.000	336.81	0.50	0.9812	3.69	2.90	23.630	0.5762	0.7431	0.617	5.90E-07
WDI-TS-137	8.5-9.2	V	15.600	0.000	176.09	10.00	0.9812	3.11	2.17	10.938	0.8842	0.5637	46.4	4.35E-05
WDI-TS-137	31.5-32.2	V	1.000	0.000	152.61	10.00	0.9812	4.87	2.86	30.428	0.7795	0.8584	736	7.06E-04
WDI-TS-138	11.3-12.0	V	20.000	0.000	358.71	1.00	0.9812	4.00	2.26	15.499	1.0323	0.5466	2.07	1.98E-06
WDI-TS-138	25.1-25.8	V	1.900	0.000	426.00	10.00	0.9812	3.77	2.81	22.607	0.6287	0.7730	112	1.07E-04
WDI-TS-139	6.0-7.0	V	20.000	0.000	317.29	1.50	0.9812	3.41	2.62	17.620	0.6599	0.7644	2.25	2.13E-06
WDI-TS-139	14.0-15.0	V	20.000	0.000	337.09	4.00	0.9812	3.30	2.81	19.786	0.5504	0.6790	4.71	4.49E-06
WDI-TS-141	15.0-15.6	V	2.280	0.000	351.72	10.00	0.9812	3.44	2.74	19.494	0.6070	0.7901	109	1.03E-04
WDI-TS-141	18.0-19.0	V	20.000	0.000	476.15	0.10	0.9812	3.45	2.80	20.458	0.5818	0.7858	0.088	8.37E-08
WDI-TS-142	11.0-12.0	V	20.000	0.000	190.46	1.50	0.9812	3.63	2.79	21.381	0.6163	0.8114	3.50	3.33E-06
WDI-TS-142	16.0-17.0	V	20.000	0.000	865.45	0.30	0.9812	4.04	2.79	23.986	0.6805	0.7132	0.170	1.63E-07
WDI-TS-148	3.0-5.0	V	20.000	0.000	346.08	0.10	0.9812	3.40	2.80	20.077	0.5758	0.8584	0.120	1.13E-07
WDI-TS-148	10.0-12.0	V	20.000	0.000	386.77	0.30	0.9812	3.60	2.87	22.572	0.5742	0.7175	0.321	3.07E-07

Sample orientation: H = horizontal, V = vertical

PTS Laboratories, Inc.

Environmental Solutions, Inc.
PTS File No: 28017

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D4464)

PROJECT NAME: WDI
PROJECT NO: 94-256

Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
WDI-TS-139	6.0-7.0	Fine sand	0.279	0.00	0.00	39.87	44.59	14.87	0.68	15.55
WDI-TS-148	10.0-12.0	Silt	0.045	0.00	0.00	6.25	29.01	53.91	10.84	64.75
WDI-TS-148	3.0-5.0	Silt	0.036	0.00	0.00	1.49	24.07	63.72	10.72	74.44
WDI-TS-142	16.0-17.0	Silt	0.026	0.00	0.00	0.61	12.52	73.38	13.50	86.88
WDI-TS-142	11.0-12.0	Fine sand	0.093	0.00	0.00	7.12	50.76	37.37	4.75	42.12
WDI-TS-141	18.0-19.0	Silt	0.033	0.00	0.00	0.71	23.28	63.75	12.26	76.01
WDI-TS-139	14.0-15.0	Fine sand	0.037	0.00	0.00	14.44	21.65	52.01	11.90	63.92
WDI-TS-138	11.3-12.0	Fine sand	0.119	0.00	0.00	20.97	39.81	33.55	5.67	39.22
WDI-TS-137	8.5-9.2	Silt	0.033	0.00	0.00	0.08	25.21	61.39	13.32	74.71
WDI-TS-136	17.0-18.0	Fine sand	0.050	0.00	0.00	2.38	39.53	49.28	8.80	58.08
WDI-TS-136	10.0-11.0	Fine sand	0.094	0.00	0.00	14.81	41.79	36.87	6.53	43.41

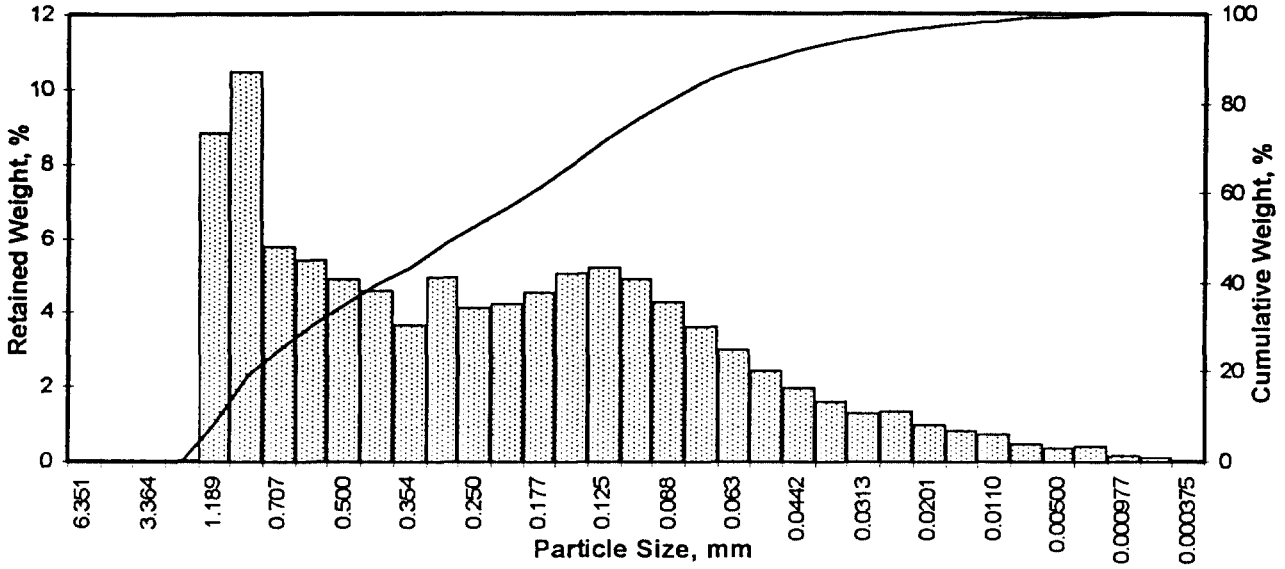
(1) based on Mean from Trask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-139
Project No:	94-256	**Depth, ft:**	6.0-7.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	8.79	8.79	8.79
0.0331	0.841	0.25	20	10.44	10.44	19.23
0.0278	0.707	0.50	25	5.75	5.75	24.98
0.0234	0.595	0.75	30	5.40	5.40	30.38
0.0197	0.500	1.00	35	4.91	4.91	35.29
0.0166	0.420	1.25	40	4.58	4.58	39.87
0.0139	0.354	1.50	45	3.68	3.68	43.55
0.0117	0.297	1.75	50	4.95	4.95	48.50
0.0098	0.250	2.00	60	4.14	4.14	52.63
0.0083	0.210	2.25	70	4.22	4.22	56.85
0.0070	0.177	2.50	80	4.54	4.54	61.39
0.0059	0.149	2.75	100	5.06	5.06	66.45
0.0049	0.125	3.00	120	5.20	5.20	71.65
0.0041	0.105	3.25	140	4.90	4.90	76.55
0.0035	0.088	3.50	170	4.29	4.29	80.84
0.0029	0.074	3.75	200	3.61	3.61	84.45
0.0025	0.063	4.00	230	2.97	2.97	87.42
0.0021	0.053	4.25	270	2.42	2.42	89.84
0.00174	0.0442	4.50	325	1.94	1.94	91.78
0.00146	0.0372	4.75	400	1.58	1.58	93.36
0.00123	0.0313	5.00	450	1.29	1.29	94.65
0.000986	0.0250	5.32	500	1.32	1.32	95.97
0.000790	0.0201	5.64	635	0.99	0.99	96.96
0.000615	0.0156	6.00		0.81	0.81	97.77
0.000435	0.0110	6.50		0.73	0.72	98.49
0.000308	0.00781	7.00		0.46	0.46	98.95
0.000197	0.00500	7.65		0.38	0.38	99.32
0.000077	0.00195	9.00		0.42	0.42	99.74
0.000038	0.000977	10.00		0.17	0.17	99.91
0.000019	0.000488	11.00		0.08	0.08	99.99
0.000015	0.000375	11.38		0.01	0.01	100.00
TOTALS				100.01	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	-0.57	0.0586	1.488
10	-0.19	0.0450	1.142
16	0.10	0.0369	0.936
25	0.50	0.0278	0.707
40	1.26	0.0164	0.418
50	1.84	0.0110	0.279
60	2.42	0.0073	0.186
75	3.17	0.0044	0.111
84	3.72	0.0030	0.076
90	4.27	0.0020	0.052
95	5.08	0.0012	0.029

Measure	Trask	Inman	Folk-Ward
Median, phi	1.84	1.84	1.84
Median, in.	0.0110	0.0110	0.0110
Median, mm	0.279	0.279	0.279
Mean, phi	1.29	1.91	1.88
Mean, in.	0.0161	0.0105	0.0107
Mean, mm	0.409	0.267	0.271
Sorting	0.396	1.812	1.763
Skewness	1.003	0.037	0.092
Kurtosis	0.273	0.562	0.869
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	39.87
Fine Sand	200	44.59
Silt	>0.005 mm	14.87
Clay	<0.005 mm	0.68
	Total	100

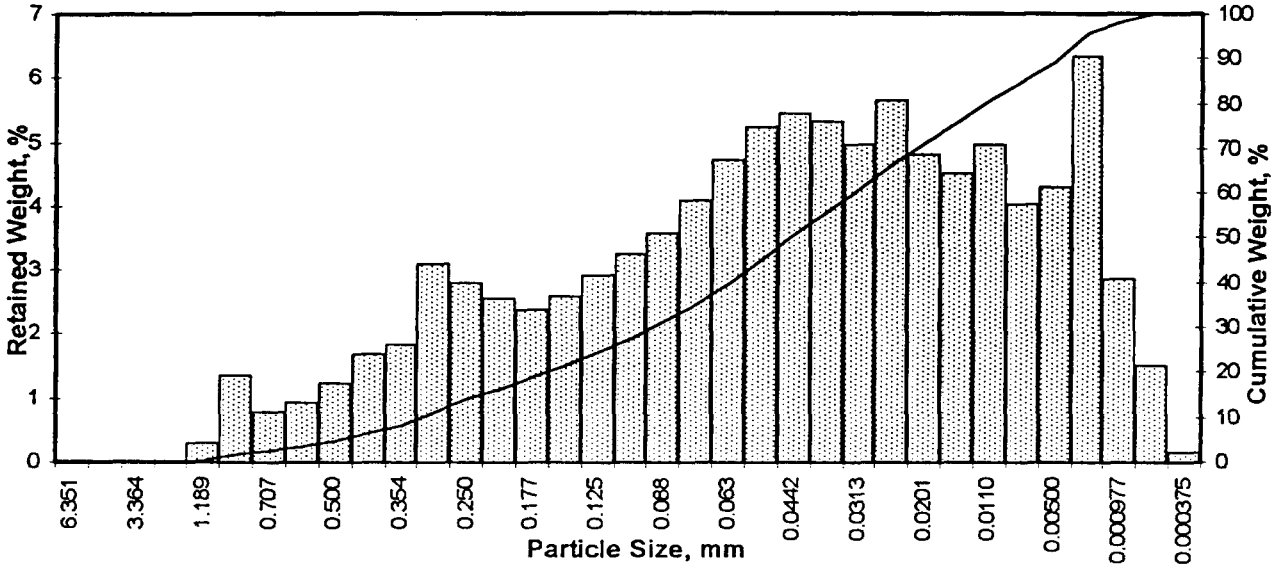
© PTS Laboratories, Inc.
Phone: (562) 907-3607 Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-148
Project No:	94-256	**Depth, ft:**	10.0-12.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.30	0.30	0.30
0.0331	0.841	0.25	20	1.34	1.34	1.64
0.0278	0.707	0.50	25	0.77	0.77	2.41
0.0234	0.595	0.75	30	0.93	0.93	3.35
0.0197	0.500	1.00	35	1.23	1.23	4.58
0.0166	0.420	1.25	40	1.67	1.67	6.25
0.0139	0.354	1.50	45	1.82	1.82	8.07
0.0117	0.297	1.75	50	3.10	3.10	11.17
0.0098	0.250	2.00	60	2.78	2.78	13.95
0.0083	0.210	2.25	70	2.55	2.55	16.50
0.0070	0.177	2.50	80	2.37	2.37	18.87
0.0059	0.149	2.75	100	2.57	2.57	21.44
0.0049	0.125	3.00	120	2.92	2.92	24.36
0.0041	0.105	3.25	140	3.23	3.23	27.59
0.0035	0.088	3.50	170	3.57	3.57	31.16
0.0029	0.074	3.75	200	4.09	4.09	35.25
0.0025	0.063	4.00	230	4.71	4.71	39.96
0.0021	0.053	4.25	270	5.24	5.24	45.21
0.00174	0.0442	4.50	325	5.45	5.45	50.66
0.00146	0.0372	4.75	400	5.33	5.33	55.99
0.00123	0.0313	5.00	450	4.95	4.95	60.94
0.000986	0.0250	5.32	500	5.66	5.66	66.60
0.000790	0.0201	5.64	635	4.80	4.80	71.40
0.000615	0.0156	6.00		4.50	4.50	75.90
0.000435	0.0110	6.50		4.95	4.95	80.85
0.000308	0.00781	7.00		4.02	4.02	84.87
0.000197	0.00500	7.65		4.29	4.29	89.16
0.000077	0.00195	9.00		6.33	6.33	95.50
0.000038	0.000977	10.00		2.85	2.85	98.35
0.000019	0.000488	11.00		1.50	1.50	99.85
0.000015	0.000375	11.38		0.15	0.15	100.00
TOTALS				99.98	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	1.06	0.0188	0.479
10	1.66	0.0125	0.317
16	2.20	0.0086	0.217
25	3.05	0.0048	0.121
40	4.00	0.0025	0.062
50	4.47	0.0018	0.045
60	4.95	0.0013	0.032
75	5.93	0.0006	0.016
84	6.89	0.0003	0.008
90	7.82	0.0002	0.004
95	8.89	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.47	4.47	4.47
Median, in.	0.0018	0.0018	0.0018
Median, mm	0.045	0.045	0.045
Mean, phi	3.87	4.55	4.52
Mean, in.	0.0027	0.0017	0.0017
Mean, mm	0.069	0.043	0.044
Sorting	0.369	2.345	2.359
Skewness	0.987	0.033	0.081
Kurtosis	0.167	0.670	1.115
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

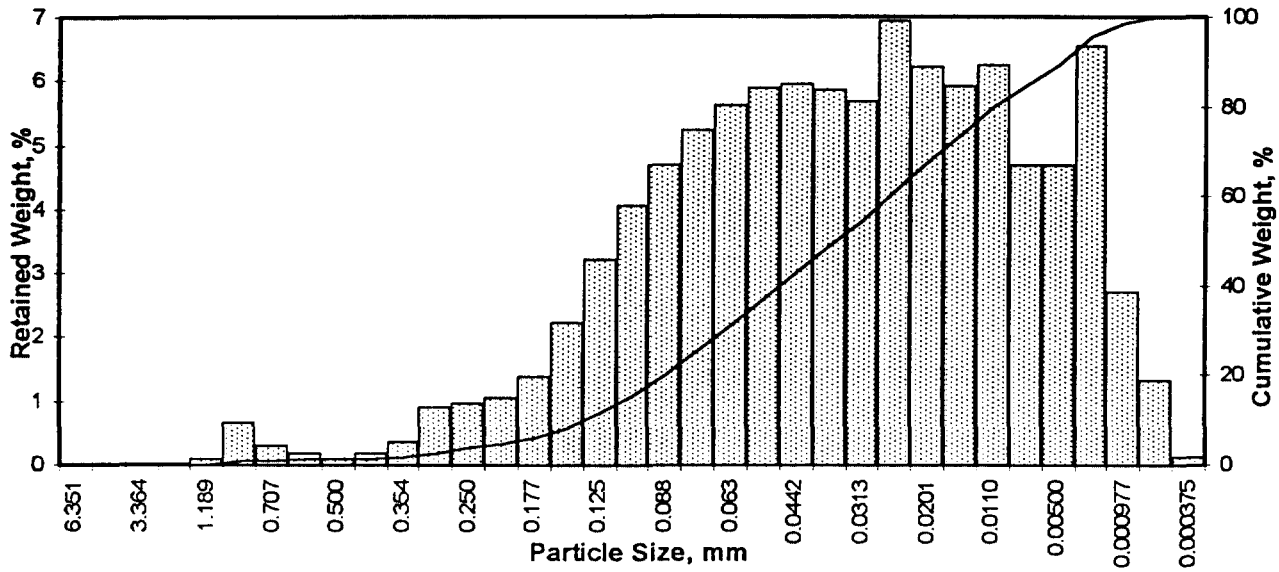
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	6.25
Fine Sand	200	29.01
Silt	>0.005 mm	53.91
Clay	<0.005 mm	10.84
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-148
Project No:	94-256	**Depth, ft:**	3.0-5.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.10	0.10	0.10
0.0331	0.841	0.25	20	0.65	0.65	0.76
0.0278	0.707	0.50	25	0.29	0.29	1.04
0.0234	0.595	0.75	30	0.17	0.17	1.21
0.0197	0.500	1.00	35	0.10	0.10	1.31
0.0166	0.420	1.25	40	0.17	0.17	1.49
0.0139	0.354	1.50	45	0.35	0.35	1.83
0.0117	0.297	1.75	50	0.89	0.89	2.72
0.0098	0.250	2.00	60	0.97	0.97	3.69
0.0083	0.210	2.25	70	1.06	1.06	4.75
0.0070	0.177	2.50	80	1.38	1.38	6.13
0.0059	0.149	2.75	100	2.22	2.22	8.35
0.0049	0.125	3.00	120	3.21	3.21	11.56
0.0041	0.105	3.25	140	4.07	4.07	15.63
0.0035	0.088	3.50	170	4.70	4.70	20.33
0.0029	0.074	3.75	200	5.23	5.23	25.56
0.0025	0.063	4.00	230	5.63	5.63	31.19
0.0021	0.053	4.25	270	5.89	5.89	37.08
0.00174	0.0442	4.50	325	5.95	5.95	43.02
0.00146	0.0372	4.75	400	5.87	5.87	48.89
0.00123	0.0313	5.00	450	5.68	5.68	54.57
0.000986	0.0250	5.32	500	6.93	6.93	61.50
0.000790	0.0201	5.64	635	6.23	6.23	67.73
0.000615	0.0156	6.00		5.91	5.91	73.64
0.000435	0.0110	6.50		6.25	6.25	79.89
0.000308	0.00781	7.00		4.70	4.70	84.59
0.000197	0.00500	7.65		4.69	4.69	89.28
0.000077	0.00195	9.00		6.55	6.55	95.83
0.000038	0.000977	10.00		2.71	2.71	98.54
0.000019	0.000488	11.00		1.33	1.33	99.87
0.000015	0.000375	11.38		0.13	0.13	100.00
TOTALS				100.01	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.30	0.0080	0.204
10	2.88	0.0054	0.136
16	3.27	0.0041	0.104
25	3.72	0.0030	0.076
40	4.37	0.0019	0.048
50	4.80	0.0014	0.036
60	5.25	0.0010	0.026
75	6.11	0.0006	0.014
84	6.94	0.0003	0.008
90	7.79	0.0002	0.005
95	8.83	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.80	4.80	4.80
Median, in.	0.0014	0.0014	0.0014
Median, mm	0.036	0.036	0.036
Mean, phi	4.47	5.10	5.00
Mean, in.	0.0018	0.0011	0.0012
Mean, mm	0.045	0.029	0.031
Sorting	0.437	1.834	1.907
Skewness	0.922	0.166	0.200
Kurtosis	0.233	0.781	1.122
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	1.49
Fine Sand	200	24.07
Silt	>0.005 mm	63.72
Clay	<0.005 mm	10.72
	Total	100

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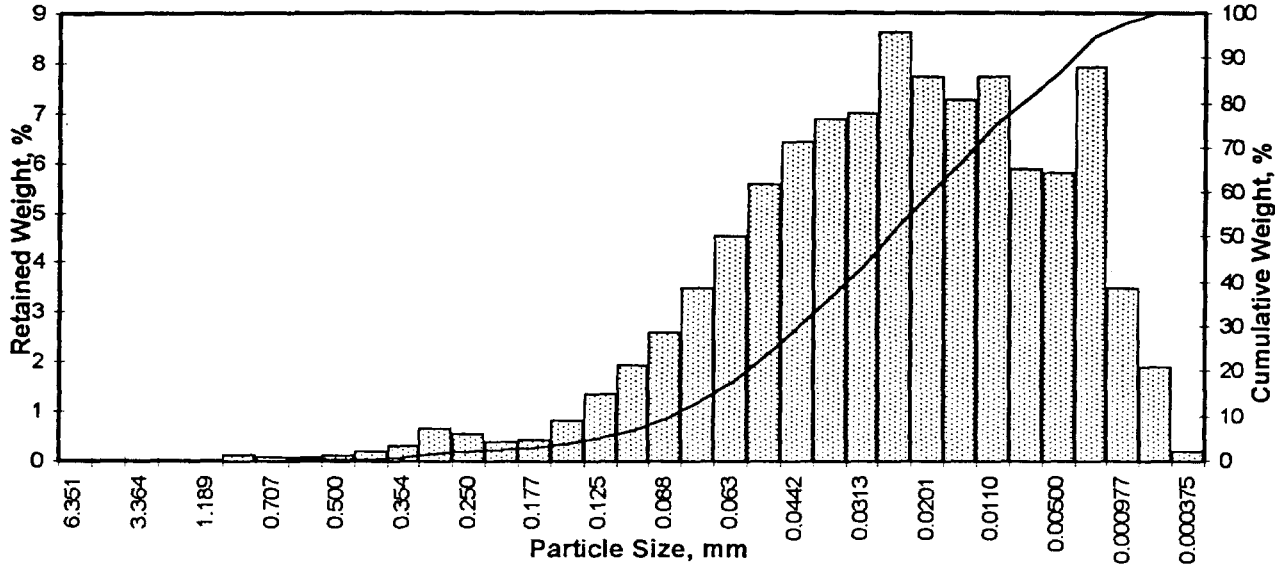
Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-142
Project No:	94-256	**Depth, ft:**	16.0-17.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.11	0.11	0.11
0.0278	0.707	0.50	25	0.09	0.09	0.20
0.0234	0.595	0.75	30	0.09	0.09	0.29
0.0197	0.500	1.00	35	0.11	0.11	0.39
0.0166	0.420	1.25	40	0.21	0.21	0.61
0.0139	0.354	1.50	45	0.32	0.32	0.93
0.0117	0.297	1.75	50	0.64	0.64	1.57
0.0098	0.250	2.00	60	0.53	0.53	2.10
0.0083	0.210	2.25	70	0.40	0.40	2.50
0.0070	0.177	2.50	80	0.44	0.44	2.94
0.0059	0.149	2.75	100	0.81	0.81	3.75
0.0049	0.125	3.00	120	1.37	1.37	5.12
0.0041	0.105	3.25	140	1.94	1.94	7.06
0.0035	0.088	3.50	170	2.59	2.59	9.65
0.0029	0.074	3.75	200	3.47	3.47	13.12
0.0025	0.063	4.00	230	4.52	4.52	17.64
0.0021	0.053	4.25	270	5.57	5.57	23.22
0.00174	0.0442	4.50	325	6.40	6.40	29.62
0.00146	0.0372	4.75	400	6.88	6.88	36.50
0.00123	0.0313	5.00	450	6.98	6.98	43.48
0.000986	0.0250	5.32	500	8.63	8.63	52.11
0.000790	0.0201	5.64	635	7.71	7.71	59.82
0.000615	0.0156	6.00		7.27	7.27	67.09
0.000435	0.0110	6.50		7.74	7.74	74.83
0.000308	0.00781	7.00		5.87	5.87	80.70
0.000197	0.00500	7.65		5.80	5.80	86.50
0.000077	0.00195	9.00		7.91	7.91	94.41
0.000038	0.000977	10.00		3.49	3.49	97.90
0.000019	0.000488	11.00		1.90	1.90	99.80
0.000015	0.000375	11.38		0.20	0.20	100.00
TOTALS				99.99	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.98	0.0050	0.127
10	3.52	0.0034	0.087
16	3.91	0.0026	0.067
25	4.32	0.0020	0.050
40	4.88	0.0013	0.034
50	5.24	0.0010	0.026
60	5.65	0.0008	0.020
75	6.51	0.0004	0.011
84	7.37	0.0002	0.006
90	8.24	0.0001	0.003
95	9.17	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	5.24	5.24	5.24
Median, in.	0.0010	0.0010	0.0010
Median, mm	0.026	0.026	0.026
Mean, phi	5.03	5.64	5.51
Mean, in.	0.0012	0.0008	0.0009
Mean, mm	0.031	0.020	0.022
Sorting	0.467	1.729	1.802
Skewness	0.886	0.229	0.249
Kurtosis	0.234	0.790	1.156
Grain Size Description (ASTM-USCS Scale)		**Silt** (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.61
Fine Sand	200	12.52
Silt	>0.005 mm	73.38
Clay	<0.005 mm	13.50
	Total	100

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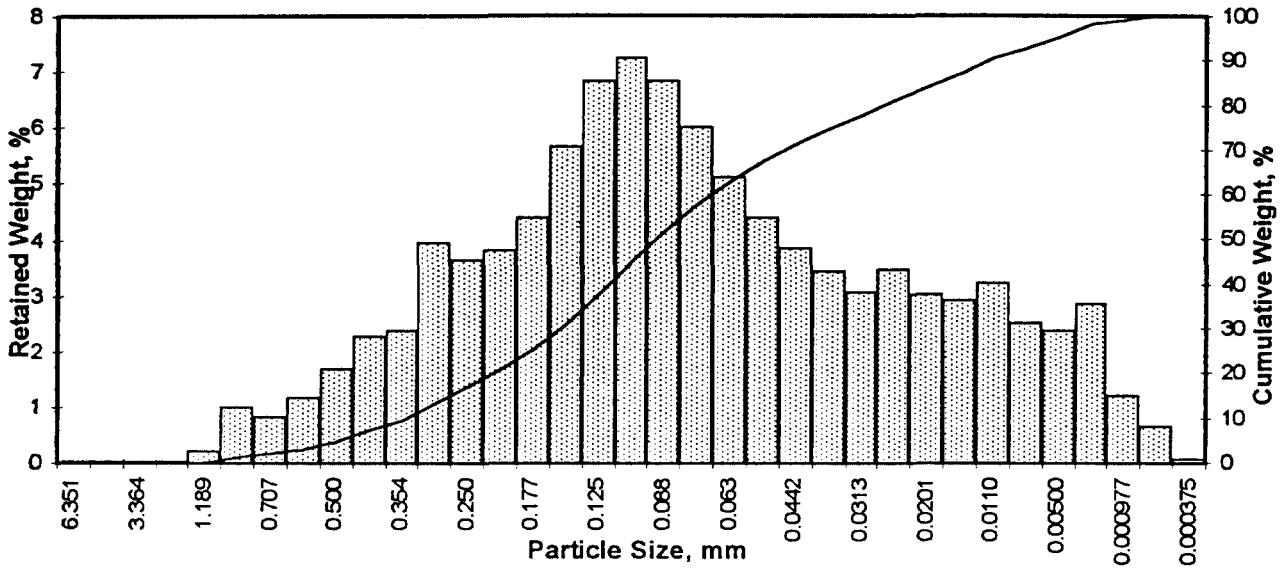
Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-142
Project No:	94-256	**Depth, ft:**	11.0-12.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.20	0.20	0.20
0.0331	0.841	0.25	20	1.00	1.00	1.20
0.0278	0.707	0.50	25	0.81	0.81	2.02
0.0234	0.595	0.75	30	1.18	1.18	3.20
0.0197	0.500	1.00	35	1.67	1.67	4.87
0.0166	0.420	1.25	40	2.25	2.25	7.12
0.0139	0.354	1.50	45	2.38	2.38	9.50
0.0117	0.297	1.75	50	3.95	3.95	13.44
0.0098	0.250	2.00	60	3.65	3.65	17.09
0.0083	0.210	2.25	70	3.82	3.82	20.91
0.0070	0.177	2.50	80	4.39	4.39	25.30
0.0059	0.149	2.75	100	5.68	5.68	30.98
0.0049	0.125	3.00	120	6.82	6.82	37.80
0.0041	0.105	3.25	140	7.25	7.25	45.05
0.0035	0.088	3.50	170	6.83	6.83	51.88
0.0029	0.074	3.75	200	6.00	6.00	57.88
0.0025	0.063	4.00	230	5.11	5.11	62.99
0.0021	0.053	4.25	270	4.40	4.40	67.39
0.00174	0.0442	4.50	325	3.84	3.84	71.23
0.00146	0.0372	4.75	400	3.43	3.43	74.66
0.00123	0.0313	5.00	450	3.06	3.06	77.72
0.000986	0.0250	5.32	500	3.48	3.48	81.20
0.000790	0.0201	5.64	635	3.02	3.02	84.22
0.000615	0.0156	6.00		2.91	2.91	87.13
0.000435	0.0110	6.50		3.24	3.24	90.37
0.000308	0.00781	7.00		2.50	2.50	92.87
0.000197	0.00500	7.65		2.38	2.38	95.25
0.000077	0.00195	9.00		2.86	2.86	98.11
0.000038	0.000977	10.00		1.19	1.19	99.30
0.000019	0.000488	11.00		0.64	0.64	99.94
0.000015	0.000375	11.38		0.07	0.06	100.00
TOTALS				100.01	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	1.01	0.0195	0.495
10	1.53	0.0136	0.346
16	1.93	0.0104	0.263
25	2.48	0.0070	0.179
40	3.08	0.0047	0.119
50	3.43	0.0036	0.093
60	3.85	0.0027	0.069
75	4.78	0.0014	0.036
84	5.62	0.0008	0.020
90	6.44	0.0005	0.011
95	7.58	0.0002	0.005

Measure	Trask	Inman	Folk-Ward
Median, phi	3.43	3.43	3.43
Median, in.	0.0036	0.0036	0.0036
Median, mm	0.093	0.093	0.093
Mean, phi	3.22	3.77	3.66
Mean, in.	0.0042	0.0029	0.0031
Mean, mm	0.108	0.073	0.079
Sorting	0.451	1.846	1.917
Skewness	0.871	0.184	0.224
Kurtosis	0.213	0.778	1.172
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

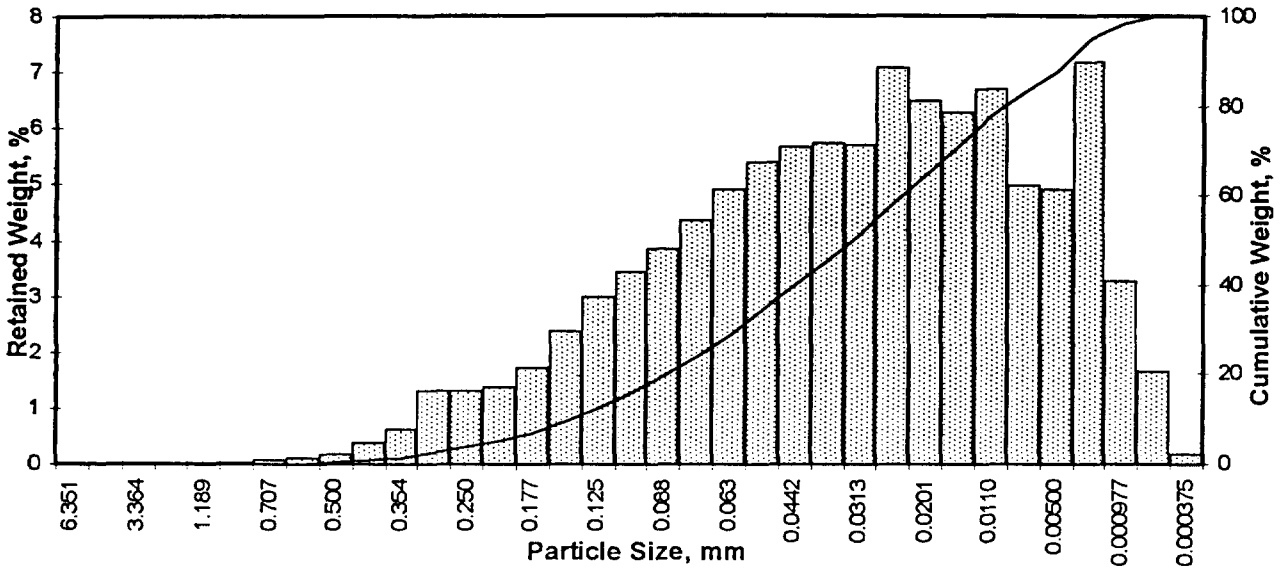
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	7.12
Fine Sand	200	50.76
Silt	>0.005 mm	37.37
Clay	<0.005 mm	4.75
	Total	100

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-141
Project No:	94-256	**Depth, ft:**	18.0-19.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.01	0.01	0.01
0.0278	0.707	0.50	25	0.06	0.06	0.07
0.0234	0.595	0.75	30	0.11	0.11	0.18
0.0197	0.500	1.00	35	0.17	0.16	0.35
0.0166	0.420	1.25	40	0.36	0.36	0.71
0.0139	0.354	1.50	45	0.61	0.61	1.32
0.0117	0.297	1.75	50	1.31	1.31	2.63
0.0098	0.250	2.00	60	1.30	1.30	3.93
0.0083	0.210	2.25	70	1.38	1.38	5.31
0.0070	0.177	2.50	80	1.71	1.71	7.02
0.0059	0.149	2.75	100	2.38	2.38	9.40
0.0049	0.125	3.00	120	2.99	2.99	12.39
0.0041	0.105	3.25	140	3.43	3.43	15.81
0.0035	0.088	3.50	170	3.83	3.83	19.64
0.0029	0.074	3.75	200	4.35	4.35	23.99
0.0025	0.063	4.00	230	4.91	4.91	28.90
0.0021	0.053	4.25	270	5.38	5.38	34.28
0.00174	0.0442	4.50	325	5.65	5.65	39.93
0.00146	0.0372	4.75	400	5.74	5.74	45.66
0.00123	0.0313	5.00	450	5.69	5.69	51.35
0.000986	0.0250	5.32	500	7.07	7.07	58.42
0.000790	0.0201	5.64	635	6.49	6.49	64.91
0.000615	0.0156	6.00		6.27	6.27	71.18
0.000435	0.0110	6.50		6.69	6.69	77.86
0.000308	0.00781	7.00		4.97	4.97	82.83
0.000197	0.00500	7.65		4.91	4.91	87.74
0.000077	0.00195	9.00		7.19	7.19	94.93
0.000038	0.000977	10.00		3.27	3.27	98.20
0.000019	0.000488	11.00		1.64	1.64	99.84
0.000015	0.000375	11.38		0.16	0.16	100.00
TOTALS				100.03	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.19	0.0086	0.218
10	2.80	0.0057	0.144
16	3.26	0.0041	0.104
25	3.80	0.0028	0.072
40	4.50	0.0017	0.044
50	4.94	0.0013	0.033
60	5.40	0.0009	0.024
75	6.29	0.0005	0.013
84	7.15	0.0003	0.007
90	8.07	0.0001	0.004
95	9.02	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.94	4.94	4.94
Median, in.	0.0013	0.0013	0.0013
Median, mm	0.033	0.033	0.033
Mean, phi	4.56	5.21	5.12
Mean, in.	0.0017	0.0011	0.0011
Mean, mm	0.042	0.027	0.029
Sorting	0.423	1.946	2.007
Skewness	0.931	0.137	0.166
Kurtosis	0.211	0.755	1.126
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.71
Fine Sand	200	23.28
Silt	>0.005 mm	63.75
Clay	<0.005 mm	12.26
	Total	100

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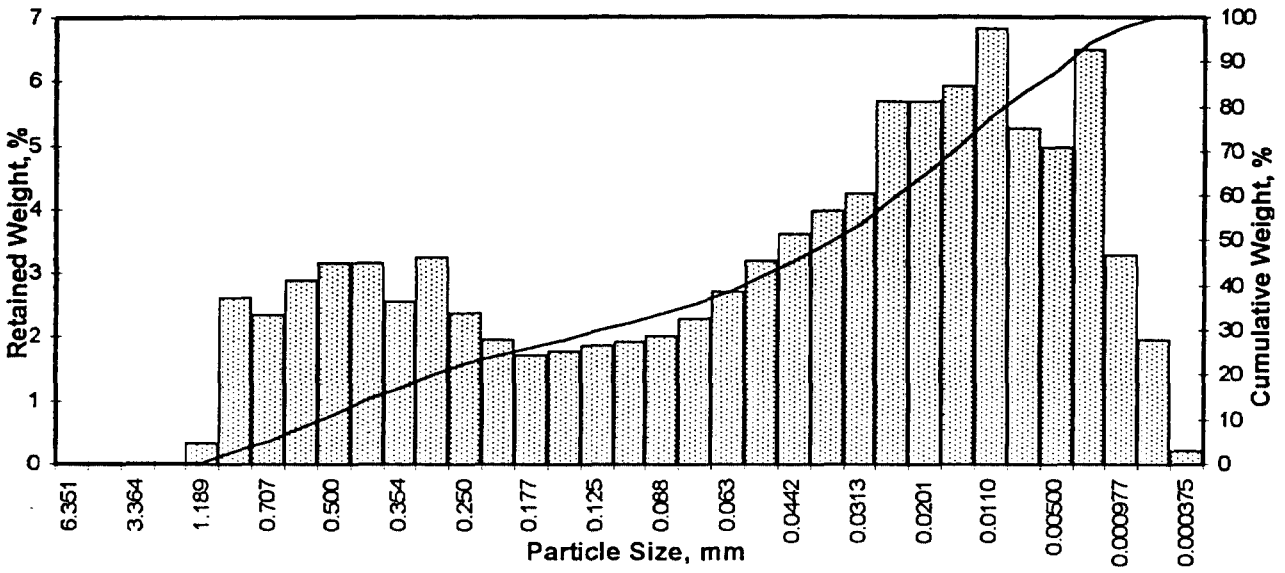
Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-139
Project No:	94-256	**Depth, ft:**	14.0-15.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.32	0.32	0.32
0.0331	0.841	0.25	20	2.60	2.60	2.92
0.0278	0.707	0.50	25	2.33	2.33	5.25
0.0234	0.595	0.75	30	2.88	2.88	8.13
0.0197	0.500	1.00	35	3.15	3.15	11.28
0.0166	0.420	1.25	40	3.16	3.16	14.44
0.0139	0.354	1.50	45	2.55	2.55	16.99
0.0117	0.297	1.75	50	3.25	3.25	20.24
0.0098	0.250	2.00	60	2.36	2.36	22.60
0.0083	0.210	2.25	70	1.94	1.94	24.54
0.0070	0.177	2.50	80	1.71	1.71	26.25
0.0059	0.149	2.75	100	1.77	1.77	28.02
0.0049	0.125	3.00	120	1.86	1.86	29.88
0.0041	0.105	3.25	140	1.91	1.91	31.78
0.0035	0.088	3.50	170	2.01	2.01	33.79
0.0029	0.074	3.75	200	2.29	2.29	36.08
0.0025	0.063	4.00	230	2.71	2.71	38.79
0.0021	0.053	4.25	270	3.18	3.18	41.97
0.00174	0.0442	4.50	325	3.62	3.62	45.59
0.00146	0.0372	4.75	400	3.97	3.97	49.56
0.00123	0.0313	5.00	450	4.23	4.23	53.79
0.000986	0.0250	5.32	500	5.68	5.68	59.47
0.000790	0.0201	5.64	635	5.67	5.67	65.14
0.000615	0.0156	6.00		5.92	5.92	71.06
0.000435	0.0110	6.50		6.83	6.83	77.89
0.000308	0.00781	7.00		5.25	5.25	83.14
0.000197	0.00500	7.65		4.96	4.96	88.10
0.000077	0.00195	9.00		6.48	6.48	94.58
0.000038	0.000977	10.00		3.28	3.28	97.86
0.000019	0.000488	11.00		1.94	1.94	99.80
0.000015	0.000375	11.38		0.20	0.20	100.00
TOTALS				100.01	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.47	0.0284	0.720
10	0.90	0.0211	0.536
16	1.40	0.0149	0.378
25	2.32	0.0079	0.201
40	4.09	0.0023	0.059
50	4.78	0.0014	0.037
60	5.35	0.0010	0.025
75	6.29	0.0005	0.013
84	7.11	0.0003	0.007
90	8.04	0.0001	0.004
95	9.13	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.78	4.78	4.78
Median, in.	0.0014	0.0014	0.0014
Median, mm	0.037	0.037	0.037
Mean, phi	3.23	4.26	4.43
Mean, in.	0.0042	0.0021	0.0018
Mean, mm	0.107	0.052	0.046
Sorting	0.253	2.854	2.739
Skewness	1.388	-0.182	-0.088
Kurtosis	0.176	0.516	0.893
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	14.44
Fine Sand	200	21.65
Silt	>0.005 mm	52.01
Clay	<0.005 mm	11.90
	Total	100

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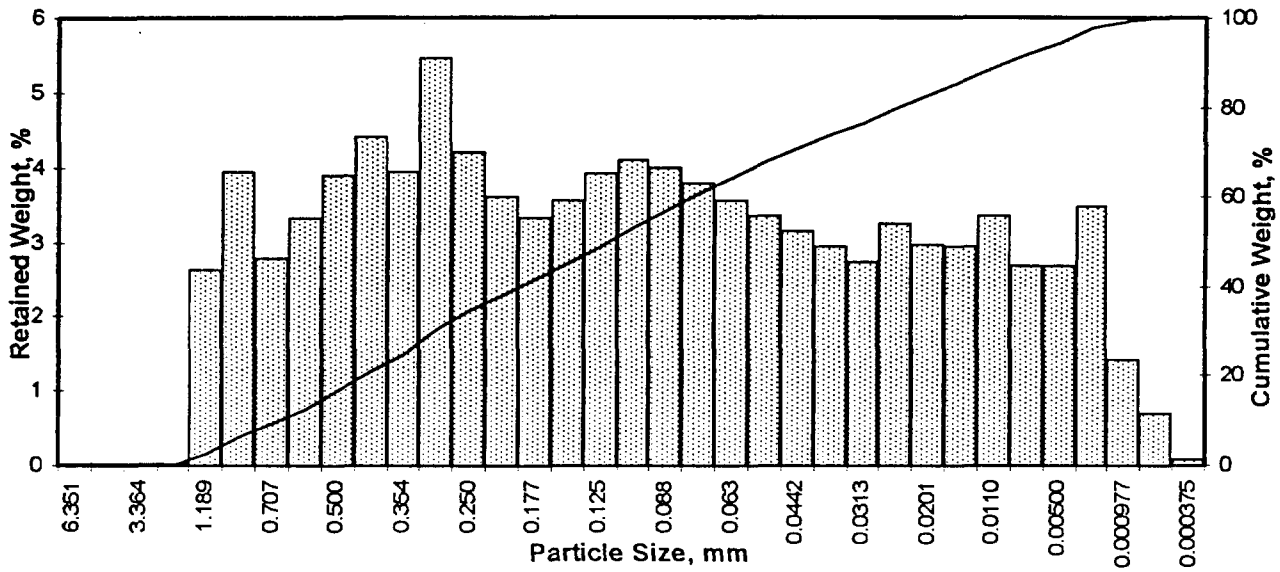
Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-138
Project No:	94-256	**Depth, ft:**	11.3-12.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	2.62	2.62	2.62
0.0331	0.841	0.25	20	3.93	3.93	6.55
0.0278	0.707	0.50	25	2.78	2.78	9.33
0.0234	0.595	0.75	30	3.33	3.33	12.66
0.0197	0.500	1.00	35	3.90	3.90	16.56
0.0166	0.420	1.25	40	4.41	4.41	20.97
0.0139	0.354	1.50	45	3.95	3.95	24.92
0.0117	0.297	1.75	50	5.45	5.45	30.36
0.0098	0.250	2.00	60	4.19	4.19	34.55
0.0083	0.210	2.25	70	3.60	3.60	38.15
0.0070	0.177	2.50	80	3.31	3.31	41.46
0.0059	0.149	2.75	100	3.55	3.55	45.01
0.0049	0.125	3.00	120	3.91	3.91	48.92
0.0041	0.105	3.25	140	4.09	4.09	53.01
0.0035	0.088	3.50	170	3.99	3.99	57.00
0.0029	0.074	3.75	200	3.78	3.78	60.78
0.0025	0.063	4.00	230	3.55	3.55	64.33
0.0021	0.053	4.25	270	3.35	3.35	67.68
0.00174	0.0442	4.50	325	3.14	3.14	70.82
0.00146	0.0372	4.75	400	2.94	2.94	73.76
0.00123	0.0313	5.00	450	2.73	2.73	76.49
0.000986	0.0250	5.32	500	3.25	3.25	79.74
0.000790	0.0201	5.64	635	2.96	2.96	82.70
0.000615	0.0156	6.00		2.93	2.93	85.63
0.000435	0.0110	6.50		3.35	3.35	88.97
0.000308	0.00781	7.00		2.68	2.68	91.65
0.000197	0.00500	7.65		2.68	2.68	94.33
0.000077	0.00195	9.00		3.47	3.47	97.80
0.000038	0.000977	10.00		1.42	1.42	99.22
0.000019	0.000488	11.00		0.71	0.71	99.93
0.000015	0.000375	11.38		0.07	0.07	100.00
TOTALS				100.02	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.05	0.0380	0.964
10	0.55	0.0269	0.683
16	0.96	0.0202	0.513
25	1.50	0.0139	0.353
40	2.39	0.0075	0.191
50	3.07	0.0047	0.119
60	3.70	0.0030	0.077
75	4.86	0.0014	0.034
84	5.80	0.0007	0.018
90	6.69	0.0004	0.010
95	7.91	0.0002	0.004

Measure	Trask	Inman	Folk-Ward
Median, phi	3.07	3.07	3.07
Median, in.	0.0047	0.0047	0.0047
Median, mm	0.119	0.119	0.119
Mean, phi	2.37	3.38	3.28
Mean, in.	0.0076	0.0038	0.0041
Mean, mm	0.193	0.096	0.103
Sorting	0.312	2.418	2.399
Skewness	0.922	0.131	0.182
Kurtosis	0.236	0.624	0.958
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	20.97
Fine Sand	200	39.81
Silt	>0.005 mm	33.55
Clay	<0.005 mm	5.67
	Total	100

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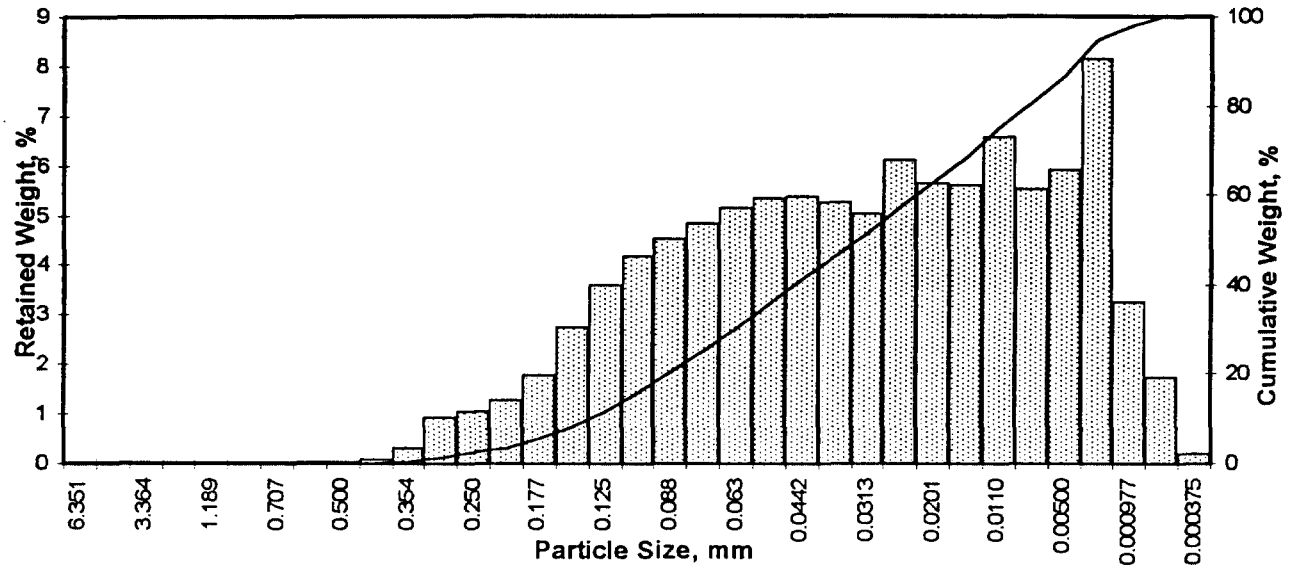
Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-137
Project No:	94-256	**Depth, ft:**	8.5-9.2

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.08	0.08	0.08
0.0139	0.354	1.50	45	0.31	0.31	0.39
0.0117	0.297	1.75	50	0.93	0.93	1.32
0.0098	0.250	2.00	60	1.06	1.06	2.38
0.0083	0.210	2.25	70	1.26	1.26	3.64
0.0070	0.177	2.50	80	1.76	1.76	5.40
0.0059	0.149	2.75	100	2.73	2.73	8.13
0.0049	0.125	3.00	120	3.61	3.61	11.74
0.0041	0.105	3.25	140	4.19	4.19	15.93
0.0035	0.088	3.50	170	4.52	4.52	20.45
0.0029	0.074	3.75	200	4.84	4.84	25.29
0.0025	0.063	4.00	230	5.13	5.13	30.42
0.0021	0.053	4.25	270	5.34	5.34	35.76
0.00174	0.0442	4.50	325	5.36	5.36	41.13
0.00146	0.0372	4.75	400	5.24	5.24	46.37
0.00123	0.0313	5.00	450	5.02	5.02	51.39
0.000986	0.0250	5.32	500	6.11	6.11	57.50
0.000790	0.0201	5.64	635	5.62	5.62	63.12
0.000615	0.0156	6.00		5.61	5.61	68.73
0.000435	0.0110	6.50		6.55	6.55	75.28
0.000308	0.00781	7.00		5.51	5.51	80.79
0.000197	0.00500	7.65		5.89	5.89	86.68
0.000077	0.00195	9.00		8.13	8.13	94.81
0.000038	0.000977	10.00		3.25	3.25	98.06
0.000019	0.000488	11.00		1.75	1.75	99.81
0.000015	0.000375	11.38		0.19	0.19	100.00
TOTALS				99.98	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	2.44	0.0072	0.184
10	2.88	0.0054	0.136
16	3.25	0.0041	0.105
25	3.73	0.0030	0.075
40	4.45	0.0018	0.046
50	4.93	0.0013	0.033
60	5.46	0.0009	0.023
75	6.48	0.0004	0.011
84	7.35	0.0002	0.006
90	8.20	0.0001	0.003
95	9.06	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.93	4.93	4.93
Median, in.	0.0013	0.0013	0.0013
Median, mm	0.033	0.033	0.033
Mean, phi	4.53	5.30	5.18
Mean, in.	0.0017	0.0010	0.0011
Mean, mm	0.043	0.025	0.028
Sorting	0.386	2.049	2.026
Skewness	0.885	0.181	0.215
Kurtosis	0.241	0.614	0.988
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.08
Fine Sand	200	25.21
Silt	>0.005 mm	61.39
Clay	<0.005 mm	13.32
	Total	100

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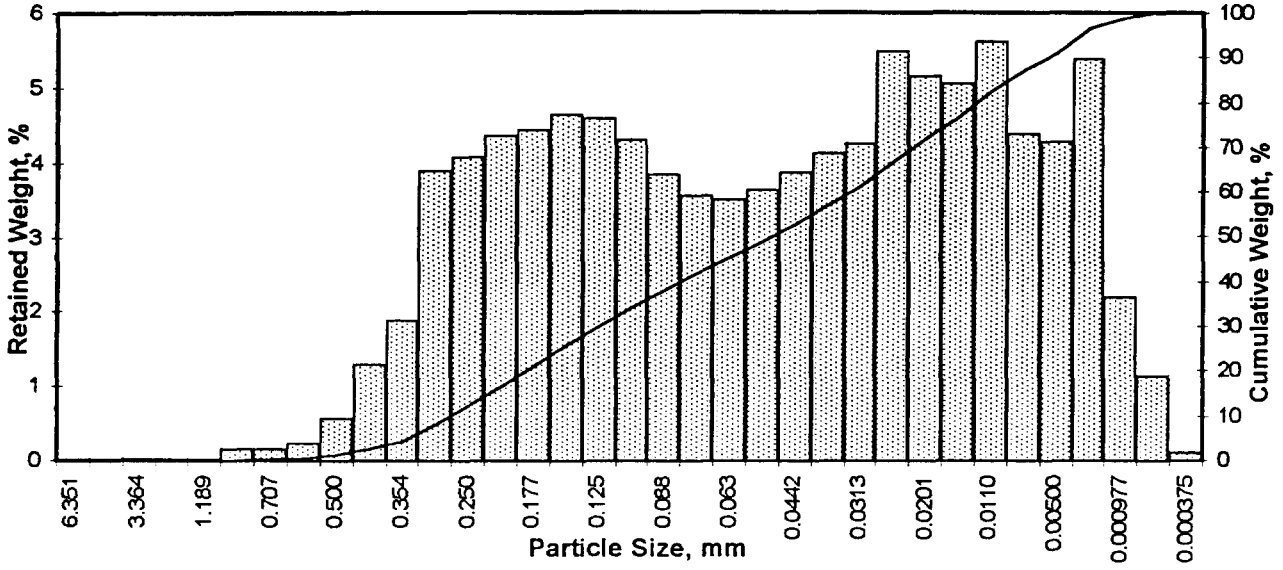
Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-136
Project No:	94-256	**Depth, ft:**	17.0-18.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.16	0.16	0.16
0.0278	0.707	0.50	25	0.14	0.14	0.30
0.0234	0.595	0.75	30	0.23	0.23	0.54
0.0197	0.500	1.00	35	0.57	0.57	1.10
0.0166	0.420	1.25	40	1.28	1.28	2.38
0.0139	0.354	1.50	45	1.88	1.88	4.26
0.0117	0.297	1.75	50	3.89	3.89	8.15
0.0098	0.250	2.00	60	4.08	4.08	12.23
0.0083	0.210	2.25	70	4.34	4.34	16.57
0.0070	0.177	2.50	80	4.43	4.43	21.00
0.0059	0.149	2.75	100	4.63	4.63	25.63
0.0049	0.125	3.00	120	4.59	4.59	30.22
0.0041	0.105	3.25	140	4.29	4.29	34.51
0.0035	0.088	3.50	170	3.85	3.85	38.36
0.0029	0.074	3.75	200	3.56	3.56	41.92
0.0025	0.063	4.00	230	3.49	3.49	45.41
0.0021	0.053	4.25	270	3.63	3.63	49.04
0.00174	0.0442	4.50	325	3.86	3.86	52.89
0.00146	0.0372	4.75	400	4.11	4.11	57.00
0.00123	0.0313	5.00	450	4.26	4.26	61.26
0.000986	0.0250	5.32	500	5.49	5.49	66.75
0.000790	0.0201	5.64	635	5.14	5.14	71.89
0.000615	0.0156	6.00		5.05	5.05	76.94
0.000435	0.0110	6.50		5.62	5.62	82.56
0.000308	0.00781	7.00		4.37	4.37	86.93
0.000197	0.00500	7.65		4.27	4.27	91.20
0.000077	0.00195	9.00		5.38	5.38	96.58
0.000038	0.000977	10.00		2.18	2.18	98.76
0.000019	0.000488	11.00		1.13	1.13	99.89
0.000015	0.000375	11.38		0.11	0.11	100.00
TOTALS				100.02	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	1.55	0.0135	0.342
10	1.86	0.0108	0.275
16	2.22	0.0085	0.215
25	2.72	0.0060	0.152
40	3.62	0.0032	0.082
50	4.31	0.0020	0.050
60	4.93	0.0013	0.033
75	5.86	0.0007	0.017
84	6.66	0.0004	0.010
90	7.46	0.0002	0.006
95	8.60	0.0001	0.003

Measure	Trask	Inman	Folk-Ward
Median, phi	4.31	4.31	4.31
Median, in.	0.0020	0.0020	0.0020
Median, mm	0.050	0.050	0.050
Mean, phi	3.56	4.44	4.40
Mean, in.	0.0033	0.0018	0.0019
Mean, mm	0.085	0.046	0.047
Sorting	0.336	2.224	2.181
Skewness	1.017	0.058	0.137
Kurtosis	0.251	0.586	0.919

Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	2.38
Fine Sand	200	39.53
Silt	>0.005 mm	49.28
Clay	<0.005 mm	8.80
	Total	100

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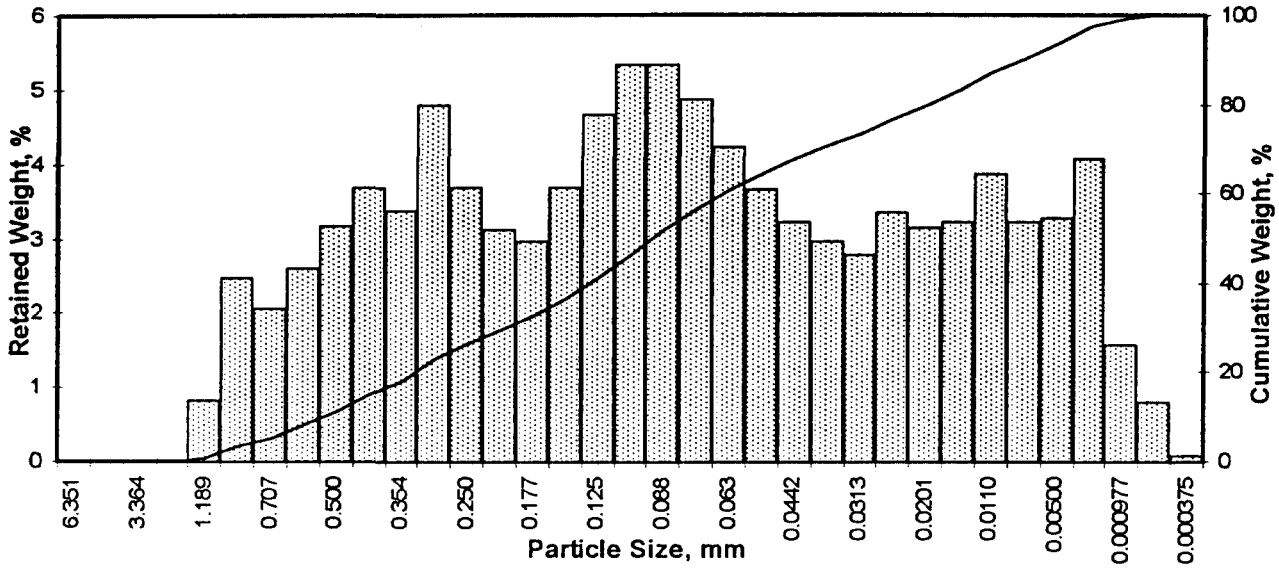
Particle Size Analysis - ASTM D4464M

Client:	Environmental Solutions, Inc.	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	WDI-TS-136
Project No:	94-256	**Depth, ft:**	10.0-11.0

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening Inches	Opening Millimeters	Phi of Screen	U.S. No.	Sample Weight, grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.83	0.83	0.83
0.0331	0.841	0.25	20	2.48	2.48	3.31
0.0278	0.707	0.50	25	2.05	2.05	5.36
0.0234	0.595	0.75	30	2.61	2.61	7.97
0.0197	0.500	1.00	35	3.17	3.17	11.14
0.0166	0.420	1.25	40	3.67	3.67	14.81
0.0139	0.354	1.50	45	3.37	3.37	18.18
0.0117	0.297	1.75	50	4.79	4.79	22.97
0.0098	0.250	2.00	60	3.68	3.68	26.65
0.0083	0.210	2.25	70	3.11	3.11	29.76
0.0070	0.177	2.50	80	2.97	2.97	32.73
0.0059	0.149	2.75	100	3.68	3.68	36.41
0.0049	0.125	3.00	120	4.67	4.67	41.08
0.0041	0.105	3.25	140	5.33	5.33	46.41
0.0035	0.088	3.50	170	5.32	5.32	51.73
0.0029	0.074	3.75	200	4.86	4.86	56.59
0.0025	0.063	4.00	230	4.21	4.21	60.80
0.0021	0.053	4.25	270	3.65	3.65	64.46
0.00174	0.0442	4.50	325	3.23	3.23	67.69
0.00146	0.0372	4.75	400	2.97	2.97	70.66
0.00123	0.0313	5.00	450	2.78	2.78	73.44
0.000986	0.0250	5.32	500	3.36	3.36	76.80
0.000790	0.0201	5.64	635	3.13	3.13	79.93
0.000615	0.0156	6.00		3.21	3.21	83.14
0.000435	0.0110	6.50		3.85	3.85	86.99
0.000308	0.00781	7.00		3.22	3.22	90.21
0.000197	0.00500	7.65		3.26	3.26	93.47
0.000077	0.00195	9.00		4.06	4.06	97.53
0.000038	0.000977	10.00		1.58	1.58	99.11
0.000019	0.000488	11.00		0.81	0.81	99.92
0.000015	0.000375	11.38		0.08	0.08	100.00
TOTALS				99.99	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
5	0.46	0.0287	0.729
10	0.91	0.0209	0.532
16	1.34	0.0156	0.395
25	1.89	0.0106	0.270
40	2.94	0.0051	0.130
50	3.42	0.0037	0.094
60	3.95	0.0025	0.065
75	5.15	0.0011	0.028
84	6.11	0.0006	0.014
90	6.97	0.0003	0.008
95	8.16	0.0001	0.004

Measure	Trask	Inman	Folk-Ward
Median, phi	3.42	3.42	3.42
Median, in.	0.0037	0.0037	0.0037
Median, mm	0.094	0.094	0.094
Mean, phi	2.74	3.73	3.62
Mean, in.	0.0059	0.0030	0.0032
Mean, mm	0.149	0.076	0.081
Sorting	0.323	2.387	2.360
Skewness	0.933	0.128	0.180
Kurtosis	0.231	0.613	0.968
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	14.81
Fine Sand	200	41.79
Silt	>0.005 mm	36.87
Clay	<0.005 mm	6.53
	Total	100

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PTS Laboratories, Inc.

ESI
PTS File No: 28017

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D422)

PROJECT NAME: WDI
PROJECT NO: 94-256

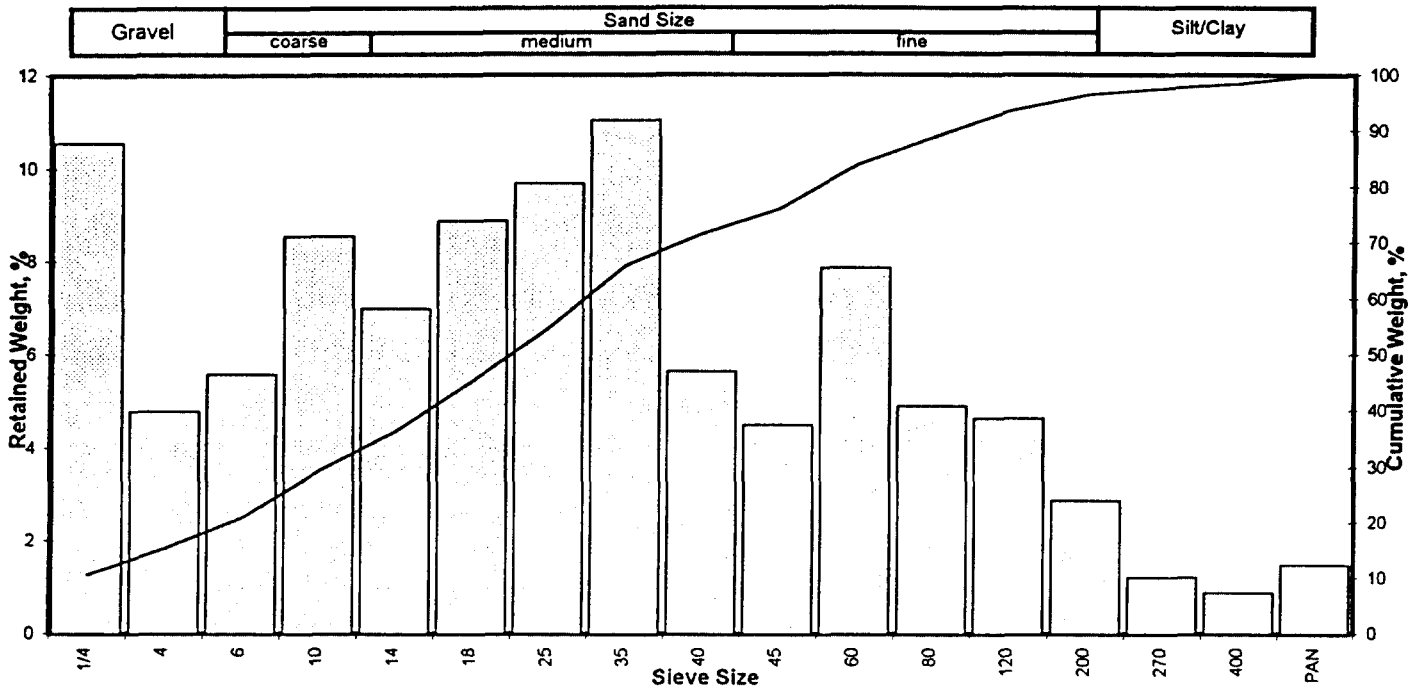
Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size mm	Particle Size Distribution, wt. percent				
				Gravel	Sand Size			Silt/Clay
					Coarse	Medium	Fine	
TS-138	25.1-25.8	Medium sand	0.845	15.32	14.11	42.20	24.80	3.56
TS-141	15-15.6	Boulder	1.576	34.44	12.38	27.66	18.81	6.71
TS-137	31.5-32.2	Medium sand	0.402	0.00	1.82	46.70	46.54	4.93

(1) based on Mean from Trask

PTS Laboratories, Inc.

Sieve Analysis Results - ASTM D422

Client:	ESI	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	TS-138
Project No:	94-256	**Depth, ft:**	25.1-25.8



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	1.57	10.55	10.55
0.1873	4.757	-2.25	4	0.71	4.77	15.32
0.1324	3.364	-1.75	6	0.83	5.58	20.90
0.0787	2.000	-1.00	10	1.27	8.53	29.44
0.0557	1.414	-0.50	14	1.04	6.99	36.42
0.0394	1.000	0.00	18	1.32	8.87	45.30
0.0278	0.707	0.50	25	1.44	9.68	54.97
0.0197	0.500	1.00	35	1.64	11.02	65.99
0.0166	0.420	1.25	40	0.84	5.65	71.64
0.0139	0.354	1.50	45	0.67	4.50	76.14
0.0098	0.250	2.00	60	1.17	7.86	84.01
0.0070	0.177	2.50	80	0.73	4.91	88.91
0.0049	0.125	3.00	120	0.69	4.64	93.55
0.0029	0.074	3.75	200	0.43	2.89	96.44
0.0021	0.053	4.25	270	0.18	1.21	97.65
0.0015	0.037	4.75	400	0.13	0.87	98.52
			PAN	0.22	1.48	100.00
TOTALS				14.88	100.00	100.00

Cumulative Weight Percent greater than: Weight percent	Phi Value	Inches	Millimeters
5			
10			
16	-2.19	0.1796	4.561
25	-1.39	0.1032	2.620
40	-0.30	0.0484	1.230
50	0.24	0.0333	0.845
60	0.73	0.0238	0.604
75	1.44	0.0145	0.369
84	2.00	0.0098	0.250
90	2.62	0.0064	0.163
95	3.38	0.0038	0.096

Measure	Trask	Inman	Folk-Ward
Median, phi	0.24	0.24	0.24
Median, in.	0.0333	0.0333	0.0333
Median, mm	0.845	0.845	0.845
Mean, phi	-0.58	-0.09	0.02
Mean, in.	0.0589	0.0420	0.0389
Mean, mm	1.495	1.068	0.988
Sorting	0.375	2.094	
Skewness	1.164	-0.161	
Kurtosis			

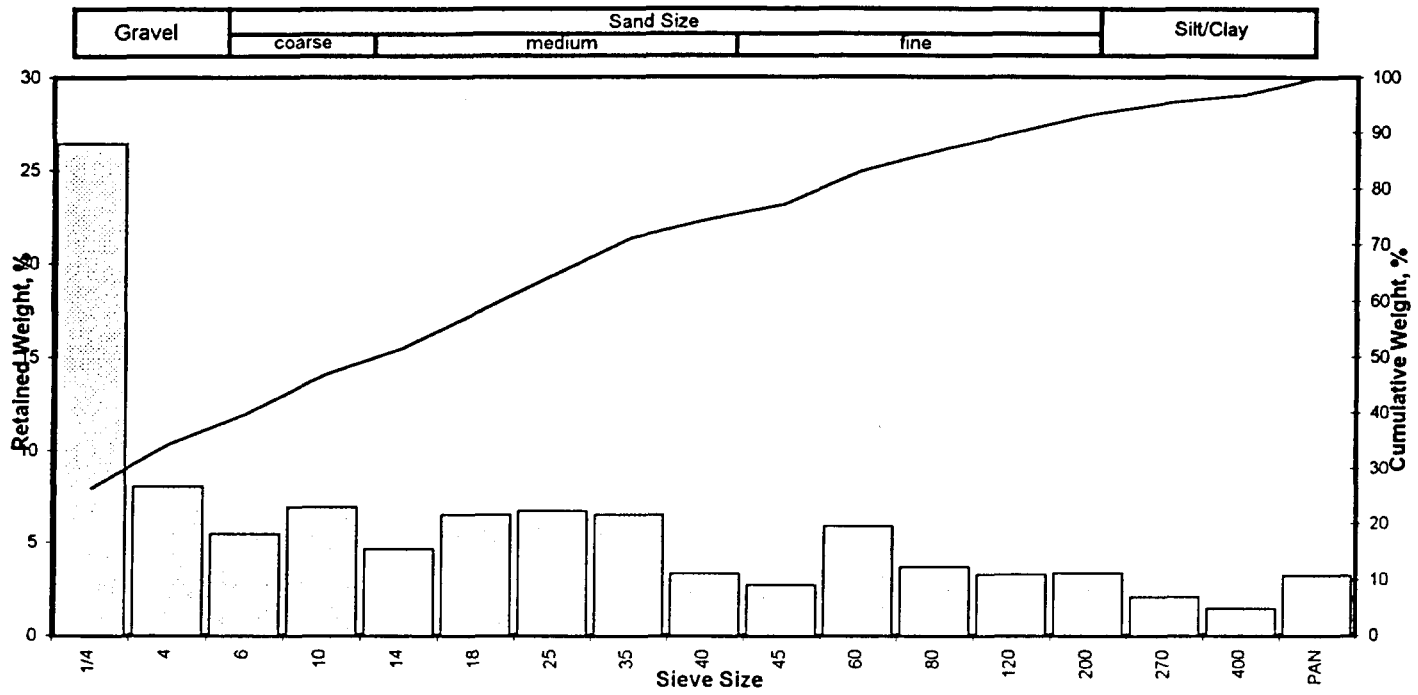
Grain Size Description (ASTM-USCS Scale)	Medium sand (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	15.32
Coarse Sand	10	14.11
Medium Sand	40	42.20
Fine Sand	200	24.80
Silt/Clay	<200	3.56
	Total	100

PTS Laboratories, Inc.

Sieve Analysis Results - ASTM D422

Client:	ESI	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	TS-1
Project No:	94-256	**Depth, ft:**	15-1[illegible]



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	3.82	26.42	26.42
0.1873	4.757	-2.25	4	1.16	8.02	34.44
0.1324	3.364	-1.75	6	0.79	5.46	39.90
0.0787	2.000	-1.00	10	1.00	6.92	46.82
0.0557	1.414	-0.50	14	0.67	4.63	51.45
0.0394	1.000	0.00	18	0.94	6.50	57.95
0.0278	0.707	0.50	25	0.97	6.71	64.66
0.0197	0.500	1.00	35	0.94	6.50	71.16
0.0166	0.420	1.25	40	0.48	3.32	74.48
0.0139	0.354	1.50	45	0.39	2.70	77.18
0.0098	0.250	2.00	60	0.85	5.88	83.06
0.0070	0.177	2.50	80	0.53	3.67	86.72
0.0049	0.125	3.00	120	0.47	3.25	89.97
0.0029	0.074	3.75	200	0.48	3.32	93.29
0.0021	0.053	4.25	270	0.30	2.07	95.37
0.0015	0.037	4.75	400	0.21	1.45	96.82
			PAN	0.46	3.18	100.00
TOTALS				14.46	100.00	100.00

Cumulative Weight Percent greater than: Weight percent	Phi Value	Inches	Millimeters
5			
10			
16			
25			
40	-1.74	0.1315	3.339
50	-0.66	0.0621	1.576
60	0.15	0.0354	0.900
75	1.30	0.0160	0.407
84	2.13	0.0090	0.229
90	3.01	0.0049	0.124
95	4.16	0.0022	0.056

Measure	Trask	Inman	Folk-Ward
Median, phi	-0.66	-0.66	-0.66
Median, in.	0.0621	0.0621	0.0621
Median, mm	1.576	1.576	1.576
Mean, phi			
Mean, in.			
Mean, mm			
Sorting			
Skewness			
Kurtosis			

Grain Size Description (ASTM-USCS Scale)	Boulder (based on Mean from Trask)

Description	Retained on Sieve #	Weight Percent
Gravel	4	34.44
Coarse Sand	10	12.38
Medium Sand	40	27.66
Fine Sand	200	18.81
Silt/Clay	<200	6.71
	Total	100

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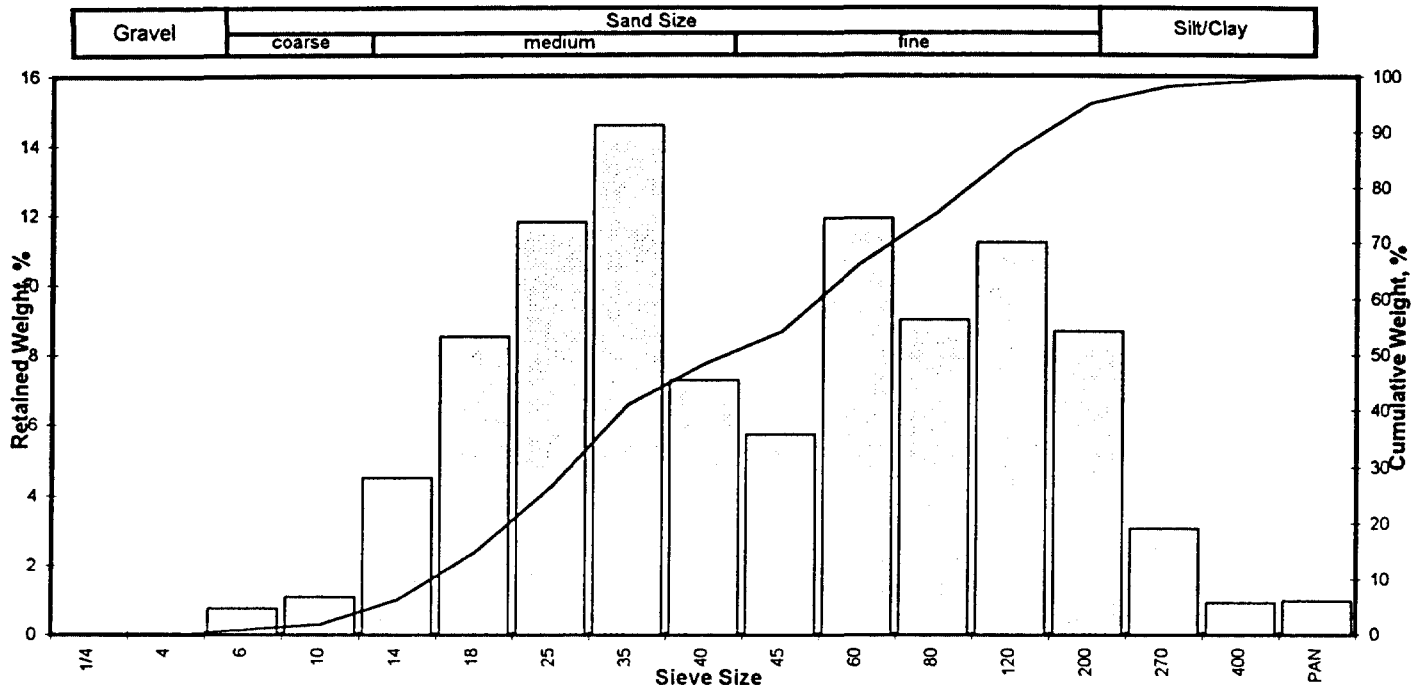
Sieve Analysis Results - ASTM D422

Client:	ESI	**PTS File No:**	28017
Project:	WDI	**Sample ID:**	TS-137
Project No:	94-256	**Depth, ft:**	31.5-32.2



Opening Inches	Opening Millimeters	Phi of Screen	U.S. Sieve No.	Sample Weight grams	Incremental Weight, percent	Cumulative Weight, percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.14	0.75	0.75
0.0787	2.000	-1.00	10	0.20	1.07	1.82
0.0557	1.414	-0.50	14	0.84	4.50	6.33
0.0394	1.000	0.00	18	1.59	8.53	14.85
0.0278	0.707	0.50	25	2.20	11.80	26.65
0.0197	0.500	1.00	35	2.72	14.58	41.23
0.0166	0.420	1.25	40	1.36	7.29	48.53
0.0139	0.354	1.50	45	1.07	5.74	54.26
0.0098	0.250	2.00	60	2.22	11.90	66.17
0.0070	0.177	2.50	80	1.68	9.01	75.17
0.0049	0.125	3.00	120	2.09	11.21	86.38
0.0029	0.074	3.75	200	1.62	8.69	95.07
0.0021	0.053	4.25	270	0.57	3.06	98.12
0.0015	0.037	4.75	400	0.17	0.91	99.03
			PAN	0.18	0.97	100.00
TOTALS				18.65	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Inches	Millimeters
5	-0.65	0.0617	1.566
10	-0.28	0.0480	1.218
16	0.05	0.0381	0.967
25	0.43	0.0292	0.742
40	0.96	0.0203	0.515
50	1.31	0.0158	0.402
60	1.74	0.0118	0.299
75	2.49	0.0070	0.178
84	2.89	0.0053	0.135
90	3.31	0.0040	0.101
95	3.74	0.0029	0.075

Measure	Trask	Inman	Folk-Ward
Median, phi	1.31	1.31	1.31
Median, in.	0.0158	0.0158	0.0158
Median, mm	0.402	0.402	0.402
Mean, phi	1.12	1.47	1.42
Mean, in.	0.0181	0.0142	0.0147
Mean, mm	0.460	0.361	0.374
Sorting	0.490	1.423	1.377
Skewness	0.904	0.110	0.108
Kurtosis	0.252	0.544	0.874
Grain Size Description (ASTM-USCS Scale)		Medium sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	1.82
Medium Sand	40	46.70
Fine Sand	200	46.54
Silt/Clay	<200	4.93
	Total	100

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Ship To: PTI
Attn: Sample Control

Page 2 of 3
Project Name: WDI
Project No.: 94-256
Site Location: SPS Ca
Date: 1/14/98

CHAIN OF CUSTODY RECORD

Boring/Well No.	Sample No.	Depth (ft)	Date	Time	Sample Type: Water	Sample Type: Solid	Sample Type: Other	Comp.	Grab.	Sample Containers: Vol.	No.	Type	Pres.	ASTM-RP-40	ASTM-D2216	HOLD					Remarks
WDI-TS-139	1	6-7	12/5	1320		✓				12"	1	lube	NA	X	X						① HOLD (SEE PAGE 1 OF 3)
WDI-TS-139	1	14-15	"	1345		✓				12"	1	"	"	X	X						
WDI-TS-140	1	8.6-9.3	"	1445		✓				9"	1	"	"			X					
WDI-TS-141	1	15-15.6	12/10	0950		✓				6"	1	"	"	X	X						
WDI-TS-141	1	18-19	"	1010		✓				12"	1	"	"	X	X						
WDI-TS-142	1	11-12	"	1050		✓				12"	1	"	"			X					
WDI-TS-142	1	16-17	"	1145		✓				12"	1	"	"			X					
WDI-TS-147	1	8-10	"	1445		✓				24"	1	"	"			X					
WDI-TS-148	1	3-5	"	1545		✓				24"	1	"	"	X	X						
WDI-TS-148	1	10-12	"	1600		✓				24"	1	"	"	X	X						
WDI-TS-149	1	4-5.3	12/11	0830		✓				16"	1	"	"			X					
WDI-TS-149	1	14-15	"	0840		✓				16"	1	"	"			X					
WDI-TS-150	1	4-6	"	1005		✓				24"	1	"	"			X					
WDI-TS-151	1	8-9.9	"	1150		✓				22.5"	1	"	"			X					
WDI-TS-152	1	8-10	"	1452		✓				24"	1	"	"			X					

Total Number of Samples Shipped: 15 Shipper's Signature

	Signature	Company	Date	Time
Relinquished by:		TRC	1/14/98	
Received by:		PTI	1/14/98	1:22 PM
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Special Instructions / Shipment / Handling/ Storage Requirements:

SEE PAGE 1 OF 3

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Irvine, California 92718

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Daytona Beach, Florida 32119

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1201 N. McDowell Boulevard
Petaluma, California 94954

☐ ENVIRONMENTAL SOLUTIONS, INC.
2815 Mitchell Drive, Suite 103
Walnut Creek, California 94598

CHAIN OF CUSTODY RECORD

Ship To: PTI
Attn: Sample Control

Page 1 of 3
Project Name: WD1
Project No.: 94-256
Site Location: SPS, CA
Date: 1/14/98

Boring/Well No.	Sample No.	Depth (ft)	Date	Time	Sample Type: Water	Solid	Other	Comp.	Grab.	Sample Containers: Vol.	No.	Type	Prcs.	ASTM-RP-40	ASTM-D2216	Hold (1)					Remarks
WD1-TS-130	1	12-13	12-3	845		✓				12"	1	Tube	NA			X					(1) HOLD ANALYSIS UNTIL
WD1-TS-132	1	8.6-9.3	"	1005		✓				9"	1	"	"	X	X						NOTIFIED BY
WD1-TS-133	1	8-9	"	1825		✓				12"	1	"	"			X					RICHARD SCOTT OR
WD1-TS-133	1	18.5-19.3	"	1150		✓				10"	1	"	"			X					ROBERTO PUGA OF
WD1-TS-134	1	10-11	"	1335		✓				12"	1	"	"			X					TRC
WD1-TS-135	1	10.4-11.1	"	1410		✓				9"	1	"	"			X					
WD1-TS-136	1	10-11	12/4	0800		✓				12"	1	"	"	X	X	~~X~~ Auc 12/22					
WD1-TS-136	1	17-18	"	0820		✓				12"	1	"	"	X	X						
WD1-TS-137	1	8.5-9.2	"	1000		✓				9"	1	"	" Auc 12/22	~~X~~	~~X~~	X					
WD1-TS-137	1	31.5-32.2	"	1100		✓				9"	1	"	"			X					
WD1-TS-138	1	11.3-12	"	1145		✓				9"	1	"	"			X					
WD1-TS-138	1	25.1-25.8	"	1240		✓				7"	1	"	"			X					
WD1-TS-144	1	11.3-12	12/5	0850		✓				9"	1	"	"			X					
WD1-TS-145	1	11.5-12	"	0945		✓				7"	1	"	"			X					
WD1-TS-146	1	11.4-12	"	1145		✓				8"	1	"	"			X					

Total Number of Samples Shipped: 15 Shipper's Signature:

	Signature	Company	Date	Time
Relinquished by:		TRC	~~[illegible]~~	
Received by:		PTI	1/14/98	1220
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

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Any questions contact:
R. Puga (TRC) 714-727-9336

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Petaluma, California 94954

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Walnut Creek, California 94598

CHAIN OF CUSTODY RECORD

Ship To: PTI
Attn: Sample Control

Page 3 of 3
Project Name: WDI
Project No.: 94-256
Site Location: SFS, Ca
Date: 1/14/98

Boring/Well No.	Sample No.	Depth	Date	Time	Sample Type: Water	Sample Type: Solid	Sample Type: Other	Comp.	Grab.	Sample Containers: Vol.	No.	Type	Pres.	ASTM-RP-40		ASTM-D2216	HOLD ①	ASTM-D2937	ASTM-D1140		Remarks
WDI-TS-153	1	6-7.8	12/11	1545		✓				20"	1	Tube	NA			X					①HOLD (See Page 1 of 3)
WDI-EX-1 (S.F.)	1	2-4	1/9	1100		↓				2'	1	Tube	↓	X			X	X			
WDI-EX-1 (S.F.)	1	15-17	↓	1130		↓				2'	1	Tube	↓	X			X	X			
WDI-EX-2 (S.F.)	1	4-6	↓	1300		↓				2'	1	Tube	↓	X			X	X			
WDI-EX-2 (S.F.)	1	15-17	↓	1330		↓				2'	1	Tube	↓	X			X	X			

Total Number of Samples Shipped: 1 Shipper's Signature: [signature]

	Signature	Company	Date	Time
Relinquished by:	[signature]	TRC	1/14/98	
Received by:	[signature]	PTI	1/14/98	1220
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

Special Instructions / Shipment / Handling/ Storage Requirements:

See Page 1 of 3

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Prepared for

United States Environmental Protection Agency

Prepared by

TRC

Irvine, California

Project No. 94-256

February 2001

TRC
21 Technology Drive
Irvine, California 92618
Telephone 949-727-9336
Facsimile 949-727-7399

TABLE 2.3B

BOREHOLE SOIL DATA
WASTE DISPOSAL, INC. SUPERFUND SITE

PARCEL	BOREHOLE ID	DATE DRILLED	BOREHOLE TOTAL DEPTH (feet)	DEPTH ENCOUNTERED			SENT FOR CHEMICAL ANALYSIS (Intervals sampled [feet])	SENT FOR GEOTECHNICAL ANALYSIS (Intervals sampled [feet])
				FILL (feet)	WASTE (feet)	NATIVE (feet)		
41	WDI-SB-IDP-1	10/9/00	20	0-2	2-11	11-20	x(5)	
41	WDI-SB-IDP-2	10/9/00	20	0-3	3-11	11-20	x (9, 20)	--
42	WDI-SB-IDP-3	10/9/00	20	0-10	--	10-20	x (5, 20)	--
32	WDI-SB-IDP-4	10/9/00	20	0-2	2-10	10-20	x (4, 20)	--
32	WDI-SB-IDP-5	10/9/00	20	0-2.5	2.5-10.5	10.5-20	x (6, 15)	--
12	WDI-SB-IDP-6	10/10/00	20	0-12	--	12-20	x (5, 15)	--
21	WDI-SB-IDP-7	10/12/00	16	0-2.5	2.5-9.5	9.5-16	x (5, 15)	--
44	WDI-SB-IDP-8	10/12/00	20	0-4.5	4.5-11.5	11.5-20	x (5, 9)	--
24	WDI-SB-IDP-9	10/13/00	20	0-9	--	9-20	--	--
24	WDI-SB-IDP-10	10/13/00	20	0-6	6-11.5	11.5-20	x (6, 11, 20)	--
22	WDI-SB-IDP-11	10/13/00	20	0-7	--	7-20	--	--
22	WDI-SB-IDP-12	10/13/00	20	0-1.5	1.5-3.5	3.5-20	x (5, 15)	--
22	WDI-SB-IDP-13	10/13/00	20	0-1.5	1.5-10.5	10.5-20	x (10, 20)	--
24	WDI-SB-IDP-14	10/14/00	20	0-5	5-19	19-20	x (5, 10, 20)	--
24	WDI-SB-IDP-15	10/14/00	20	0-5	5-15	15-20	--	--
24	WDI-SB-IDP-16	10/14/00	20	0-4.5	4.5-19	19-20	--	--
24	WDI-SB-IDP-17	10/14/00	5	0-4	4-5	ND	--	--
21	WDI-SB-IDP-18	10/27/00	16	0-3.5	3.5-4	4-16	--	--
3	WDI-SB-IDP-19	10/27/00	5	0-2	2-5	ND	--	--
32	WDI-SB-IDP-20	10/27/00	20	0-1	1-11	11-20	--	--
26	WDI-SB-HSA-1	10/3/00	40	0-6	6-15.5	15.5-40	--	x (5, 10, 20, 25, 30, 35, 40)
26	WDI-SB-HSA-2	10/3/00	40	0-5	5-17	17-40	--	x (5, 20, 25, 30, 35)
26	WDI-SB-HSA-3	10/4/00	35	0-5	--	5-35	--	x (15, 20, 25, 30)
26	WDI-SB-HSA-4	10/06/00	35	0-3	3-11	11-35	--	x (5, 10, 20, 25, 30)
26	WDI-SB-HSA-5	10/06/00	40	0-3.5	3.5-14	14-40	--	x (10, 15, 25, 30, 35, 40)
3	WDI-SB-HSA-6	10/06/00	40	0-1.5	1.5-2.5 8-15	15-40	--	x (10, 15, 20, 25, 30)
32	WDI-SB-HSA-7	10/06/00	35	0-3	3-9	9-35	--	x (5, 10, 20, 30, 35)
43	WDI-SB-HSA-8	10/14/00	35	0-2	2-16	16-35	--	x (15, 20, 25, 30)

TABLE 2

SUMMARY OF GEOTECHNICAL LABORATORY DATA
WASTE DISPOSAL, INC. SUPERFUND SITE

SAMPLE NUMBER BORING NO. - DEPTH (feet)	MATERIAL TYPE	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	GRAIN SIZE (%)		DIRECT SHEAR STRENGTH		UNCONFINED COMPRESSION STRENGTH (psf)
				Sand	Silt/Clay	Cohesion (psf)	Friction Angle (degrees)	
HSA-1-5	Fill	19.7	97.5	–	–	–	–	–
HSA-1-10	Waste	18.1	103.7	–	–	–	–	–
HSA-1-20	Native	9.2	93.6	–	–	–	–	806
HSA-1-25	Native	2.2	89.4	–	–	–	–	–
HSA-1-30	Native	12.2	95.9	–	–	–	–	–
HSA-1-35	Native	18.4	110.1	–	–	–	–	–
HSA-1-40	Native	8.9	105.6	–	–	–	–	–
HSA-2-5	Waste	12.1	109.3	–	–	–	–	–
HSA-2-10	Waste	–	–	–	–	–	–	–
HSA-2-15	Waste	23.4	100.2	–	–	–	–	4,579
HSA-2-20	Native	9.9	98.6	–	–	–	–	–
HSA-2-25	Native	5.6	113.1	95	7	156	39	–
HSA-2-30	Native	6.2	102.3	–	–	–	–	–
HSA-2-35	Native	18.1	99.4	–	–	–	–	–
HSA-2-40	Native	22.3	102.9	–	–	–	–	5,674
HSA-3-5	Native	14.6	109.6	–	–	–	–	1,685
HSA-3-10	Native	15.9	116.7	–	–	766	29	–
HSA-3-15	Native	16.0	116.3	–	–	–	–	–
HSA-3-20	Native	3.7	95.5	–	–	–	–	–
HSA-3-25	Native	2.2	88.2	–	–	–	–	–
HSA-3-30	Native	10.2	90.6	–	–	–	–	–
HSA-4-5	Waste	44.4	66.2	–	–	–	–	720
HSA-4-10	Waste	13.0	120.7	–	–	–	–	–
HSA-4-15	Native	12.5	104.0	–	–	–	–	1,022
HSA-4-20	Native	10.1	98.5	61	39	922	24	–
HSA-4-25	Native	3.4	94.0	–	–	–	–	–
HSA-4-30	Native	10.5	105.1	–	–	–	–	–

TRC
Customer-Focused Solution.

TABLE 2

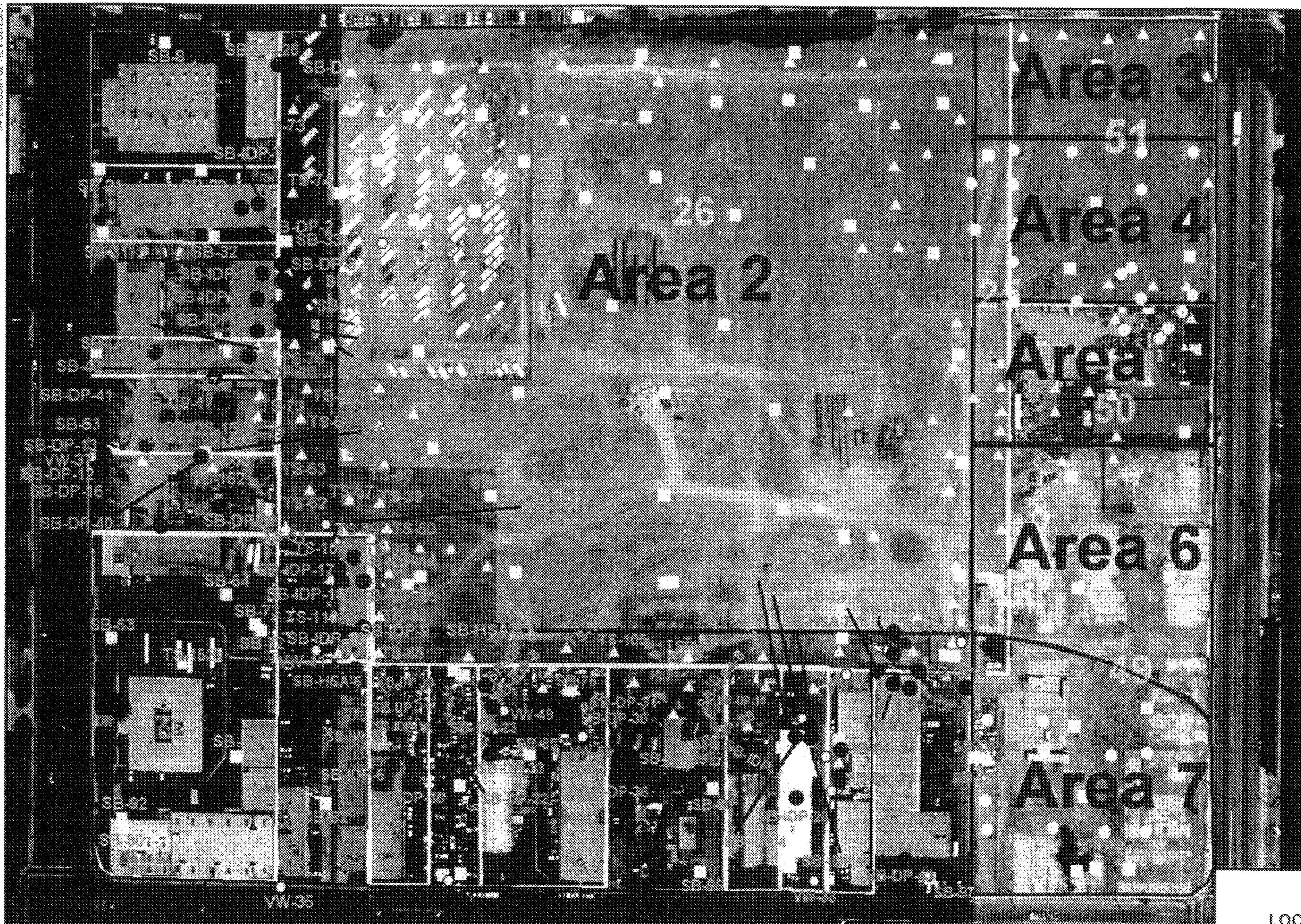
SUMMARY OF GEOTECHNICAL LABORATORY DATA
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

SAMPLE NUMBER BORING NO. - DEPTH (feet)	MATERIAL TYPE	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	GRAIN SIZE (%)		DIRECT SHEAR STRENGTH		UNCONFINED COMPRESSION STRENGTH (psf)
				Sand	Silt/Clay	Cohesion (psf)	Friction Angle (degrees)	
HSA-5-5	Waste	25.1	92.6	–	–	–	–	1,526
HSA-5-10	Waste	38.3	80.6	–	–	–	–	403
HSA-5-15	Native	13.1	122.8	–	–	–	–	–
HSA-5-20	Native	12.8	115.6	61	39	–	–	2,592
HSA-5-25	Native	4.8	107.5	–	–	–	–	–
HSA-5-30	Native	17.3	93.7	–	–	–	–	–
HSA-5-35	Native	17.7	103.0	–	–	–	–	–
HSA-5-40	Native	24.0	104.5	–	–	–	–	–
HSA-6-5	Fill	25.6	93.0	–	–	–	–	1,094
HSA-6-10	Waste	18.0	103.7	–	–	–	–	835
HSA-6-15	Native	17.2	110.4	69	31	672	29	–
HSA-6-20	Native	15.1	113.3	–	–	–	–	–
HSA-6-25	Native	6.2	99.9	–	–	–	–	–
HSA-6-30	Native	4.2	104.5	94	6	453	31	–
HSA-6-35	Native	8.3	88.6	79	21	–	–	187
HSA-7-5	Waste	19.2	107.3	–	–	–	–	1,584
HSA-7-10	Native	14.2	121.6	–	–	–	–	–
HSA-7-15	Native	35.5	84.9	–	–	–	–	3,485
HSA-7-20	Native	6.4	99.3	–	–	–	–	–
HSA-7-30	Native	16.4	105.4	–	–	–	–	–
HSA-7-35	Native	5.5	97.9	98	2	–	–	–

TABLE 2

SUMMARY OF GEOTECHNICAL LABORATORY DATA
WASTE DISPOSAL, INC. SUPERFUND SITE
(Continued)

SAMPLE NUMBER BORING NO. - DEPTH (feet)	MATERIAL TYPE	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	GRAIN SIZE (%)		DIRECT SHEAR STRENGTH		UNCONFINED COMPRESSION STRENGTH (psf)
				Sand	Silt/Clay	Cohesion (psf)	Friction Angle (degrees)	
HSA-8-2	Waste	–	–	–	–	–	–	–
HSA-8-4	Waste	–	–	–	–	–	–	–
HSA-8-6	Waste	–	–	–	–	–	–	–
HSA-8-10	Waste	15.7	115.9	70	30	–	–	10,786
HSA-8-15	Waste	24.6	95.6	–	–	–	–	–
HSA-8-20	Native	2.9	95.6	–	–	–	–	–
HSA-8-25	Native	4.5	96.9	–	–	–	–	–
HSA-8-30	Native	3.1	98.4	–	–	–	–	–
HSA-8-35	Native	–	–	–	–	–	–	–



LEGEND

○ BORING LOCATIONS BEFORE TM-14 PROGRAM

● BORING LOCATIONS UNDER TM-14 PROGRAM

REFERENCE: PROJECT NAVIGATOR, LTD.

LOCATIONS OF SSI BORINGS

WASTE DISPOSAL, INC.
SANTA FE SPRINGS, CALIFORNIA

TRC | FIGURE 2.1

SHEET 1 OF 1

BORING NO. WD1-SB-HSA-1

DRILLING CO.: West Hazmat
RIG TYPE: CME 75
SAMPLER TYPE: 140 hammer
AND DIMENSION: 30 in drop
FIELD ENGINEER\
GEOLOGIST: K. Waite
EDITED BY:
CHECKED BY:

COORDINATES N. NM E. nm
DATE BEGAN: 10/3/00
DATE FINISHED: 10/3/00
GROUND SURFACE EL.: nm

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE/LITHOLOGY	DESCRIPTION
0				ml	NA	silt, gravel - aphalt - no odor no staining.
5		6 8 11	SBR	ml		clayey silt - dk brown - no staining, no odor.
10	2 9.5		S	cl		clay, grey black - stained moderate odor.
15			NS			clay grey-black - stained moderate odor
20		16 18 28	SBR	ml		sand, grey - no staining, no odor (micaceous fine-grained)
25		28 50	SBR	SP		Sand - light brown - quartz, feldspar, mica - no staining no odor (coarse grained)
30		26 50	SBR			sand - brown coarse grained - qtz, feldspar, mica - slightly moist no staining no odor.
35		15 28 37	SBR	cl		clay - brown-red - fat stiff - trace of silt and sand no staining no odor
40		19 25 40	SBR			clay brown red - fat stiff - trace of silt no staining no odor.
45						

:37

:25

TD = 40 feet
SBR = Split Barrel Ring
S = Shelby tube

Groundwater not encountered

00-115SIP-05 REV. 4/21/00

CLIENT: Waste Disposal, Inc
PROJECT NO.: 94-256
LOCATION: Santa Fe Springs, CA

TRC

BORING NO. WD1-SB-HSA-2

SHEET 1 OF 1

DRILLING CO.: West Hazmat
RIG TYPE: CME 75
SAMPLER TYPE: 140lb hammer 30 in drop
AND DIMENSION:
FIELD ENGINEER\
GEOLOGIST: K. Waite / C. Chen
EDITED BY:
CHECKED BY:

COORDINATES N. NM E. NM

DATE BEGAN: 10/3/00
DATE FINISHED: 10/3/00
GROUND SURFACE EL.: NM

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE/LITHOLOGY	DESCRIPTION
1:30 0	NA			SM		asphalt - black - dry - silty - sandy asphalt - odor, stained
5		9 10 9	SBR			asphalt, black - dry - silty sand odor stained
10		NM	S	Cl		clay, black - stained odor
15		11 15 23	SBR			clay - black - stained odor.
20		19 28 25	SBR	Cl		clay, brown - no staining, no odor, moist
25		24 50	SBR	SP		sand, grey-brown coarse qtz, kspar mica - moist, no staining no odor
30		16 25 50	SBR			sand, grey brown - coarse - qtz, kspar mica - moist, no staining no odor.
35		17 22 36	SBR	SM		fine grained silty sand, brown qtz - kspar mica - moist, no staining no odor.
40		13 17 23	SBR	Cl		clay, brown, no staining no odor
.00p 45						

TD = 40 feet
SBR = Split Barrel Ring
S = Shelby Tube

No Ground water encountered
NM = Not Measured
NA = Not available

00-115SIP-05 REV. 4/21/00

CLIENT: Waste Disposal, Inc.
PROJECT NO.: 94-256
LOCATION: Santa Fe Springs, CA

TRC

BORING NO. WDI-SB-HSA-3

SHEET 1 OF 1

DRILLING CO.: WEST HAZMAT
RIG TYPE: CME 75
SAMPLER TYPE: HOLLOW STEM AUGER
AND DIMENSION:
FIELD ENGINEER\
GEOLOGIST: CARINA CHEN
EDITED BY:
CHECKED BY:

COORDINATES N. nm E. nm

DATE BEGAN: 10/4/00
DATE FINISHED: 10/4/00
GROUND SURFACE EL.: NM

	DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE/LITHOLOGY	DESCRIPTION
	0						2" ASPHALT
					sm		sandy silt w/gravel, brown, no odor, no staining
1:45	5	3.2 1.2	16 9	SBR	cl		silty clay, dark brown, no odor, no staining
	10		12 18 27	SBR	cl		sandy clay, brown, no odor, no staining
	15		16 20 28	SBR	ml		sand, brown, no odor, no staining
	20		17 39 50	SBR	sp		coarse grained sand, tan brown, no odor, no staining
	25		50	SBR	sp		coarse grained sand w/ gravel, brown, no odor, no staining
	30		10 14 21	SBR	sm		sandy silt, brown, no odor, no staining
2:30	35		37 50	~~SBR~~ NR	sm		sandy silt, brown, no odor, staining
							TD = 35 ft.
							nm = not measured
	40						NA = Not applicable
							ground water not encountered.
	45						

00-115SIP-05 REV. 4/21/00

CLIENT: Waste Disposal, Inc
PROJECT NO.: 94-256
LOCATION: Santa Fe Springs, CA

TRC

BORING NO. WDI-SB-HSA-4

SHEET 1 OF 1

DRILLING CO.: West Hazmat
RIG TYPE: CME 75
SAMPLER TYPE: Split-Barrel Ring
AND DIMENSION:
FIELD ENGINEER\
GEOLOGIST: K. Waite
EDITED BY:
CHECKED BY:

COORDINATES N. NM E. NM

DATE BEGAN: 10/6/00
DATE FINISHED: 10/6/00
GROUND SURFACE EL.: nm

	DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE/LITHOLOGY	DESCRIPTION
	0				ml		Silt, dk brown, asphalt, concrete
7:40		2.6 2.1			cl		clay, black-gray stained, strong odor, stiff.
	5		3 6 9	SBR	cl		clay, black-gray-stained, strong odor, moist
	10		12 24 38	SBR	cl		clay, black-gray stained strong odor, moist
					cl		clay, red-brown stiff no staining, slight odor.
	15		20 24 30	SBR	ml		clayey silt, tan - trace of sand, no staining, slight odor
	20		18 50	SBR	sm		silty sand, fine-grained, light tan, micaceous, no staining no odor.
	25	3.8 1.9	50	SBR	sp		sand, brown - coarse grained, qtz, feldspar, no staining no odor.
	30		35 50	SBR	sp		sand, brown coarse grained, qtz, feldspar, no staining no odor.
					cl		clay, red-brown, no staining no odor.
	35		50	NR	SW		sandy gravels, coarse grained, brown - no staining no odor.
							TD = 35'
:40	40						n.m = not measured Ground water not encountered. SBR: Split Barrel Ring NR: Not Recovered.
	45						

00-115SIP-05 REV. 4/21/00

CLIENT: Waste Disposal, Inc.

PROJECT NO.: 94-256

LOCATION: SFS, CA

TRC

BORING NO. WDI-SB-HSA-5

SHEET 1 OF 1

DRILLING CO.: West Hazmat
RIG TYPE: CME 75
SAMPLER TYPE: Split Barrel Ring
AND DIMENSION: 2½" x 1"
FIELD ENGINEER\ GEOLOGIST: K. Waite
EDITED BY:
CHECKED BY:

COORDINATES N. nm E. nm

DATE BEGAN: 10/6/00
DATE FINISHED: 10/6/00
GROUND SURFACE EL.: nm

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE/LITHOLOGY	DESCRIPTION
0				ml		silt, red brown - no staining, no odor
				cl		clay, black-gray, staining, moderate odor moist.
5	13 43	5 7 11				
10		3 4 4		cl		sandy clay - black - gray stained, moderate odor, moist
15		18 28 40		cl		sandy clay, red-brown - no staining, no odor
20		20 50		sc		clayey sand, red-brown - no staining, no odor
25		37 50		cl sp		sandy clay - red-brown - no staining, no odor sand - brown - coarse-grained - gravel, qtz, feldspar, mica no staining no odor.
30		50		sp		sand - coarse grained brown - gravel, qtz, feldspar, mica no staining no odor
35		15 19 25		sc		clayey sand - medium grained - brown, no staining, no odor
40		32 50		ml		sandy silt - brown - no staining no odor, micaceous TD = 40'
45						

00-115SIP-05 REV. 4/21/00

CLIENT: Waste Disposal, Inc.

PROJECT NO.: 04-256

LOCATION: SFS, CA

TRC

BORING NO. WDI-SB-HSA-6

SHEET 1 OF 1

DRILLING CO.: West Hazmat
RIG TYPE: CME 75
SAMPLER TYPE: Split-Barrel Ring
AND DIMENSION: 2½" x 1"
FIELD ENGINEER\ GEOLOGIST: K. Waite
EDITED BY:
CHECKED BY:

COORDINATES N. nm E. nm

DATE BEGAN: 10/6/00
DATE FINISHED: 10/6/00
GROUND SURFACE EL.: nm

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE/LITHOLOGY	DESCRIPTION
1:35 0				cl		0" asphalt clay, black-grey, stained, moderate odor.
				ml		clayey silt, brown-red, no odor no staining
	4 2					white silt puddy material (lime) (possible odor control?)
				ml		clayey silt, brown, trace of sand, no odor no staining
5	13 32	4 6 9				
				cl		sandy clay, black-gray-moderate odor, stained, moist
10		3 6 7				
				cl		sandy clay-black gray-moderate odor, stained, moist
15		50				silty clay, red brown, stiff-no odor, no staining.
20		14 19 21		cl		sandy clay, red brown stiff, no odor, no staining.
25		50		sp		sand, brown, coarse grained, gravel, qtz, k-spar mica, no odor no staining.
30		50		sp		sand, gray brown coarse-grained, gravel qtz, k-spar mica, no odor no staining.
						sandy silt, fine-grained, micaceous, brown, no odor, no staining.
35		50		ml		sandy silt, fine-grained, micaceous, brown, no odor, no staining.
40						
						TD = 35' nm = not measured
:40 45						

00-115SIP-05 REV. 4/21/00

CLIENT: Waste Disposal, Inc.

PROJECT NO.: 94-256

LOCATION: SFS, CA

TRC

BORING NO. WDI-SB-HSA-7

SHEET 1 OF 1

DRILLING CO.: West Hazmat
RIG TYPE: CME 75
SAMPLER TYPE: Split Barrel Ring
AND DIMENSION: 2½" x 1"
FIELD ENGINEER\
GEOLOGIST: K. Walke
EDITED BY:
CHECKED BY:

COORDINATES N. nm E. nm

DATE BEGAN: 10/6/00
DATE FINISHED: 10/6/00
GROUND SURFACE EL.: nm

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE/LITHOLOGY	DESCRIPTION
0				ml		3" asphalt, Silt, brown, gravel, asphalt, no odor, no staining.
				cl		sandy clay, black-gray, moderate odor, stained moist
5		3 5 12	SBR			
10	6 3	22 33 45	SBR	cl		clay, gray, stiff, stained, no odor,
15		50	SBR	ml		clayey silt, brown, trace sand, no staining no odor
20		30 50	SBR	cl		clay, brown, stiff, no staining, no odor
				sm		Silty sand, fine-grained, brown, no odor, no staining micaceous
25		50	NR	sm		silty sand, fine-grained, brown, no odor, no staining micaceous
30		27 50		sp		sand coarse grained, brown, qtz, feldspar, biotite, no staining no odor.
				sm		Sand, fine-grained, gray, micaceous
35		50		sw		sandy gravel - brown gray, coarse-grained no odor no staining -
40						
45						TD=35'

00-115SIP-05 REV. 4/21/00

CLIENT: Waste Disposal, Inc.

PROJECT NO.: 94-256

LOCATION: SFS, CA

TRC

BORING NO. WDI-SB-HSA-8 SHEET 1 OF 1

DRILLING CO.: West Hazmat
RIG TYPE: CME 75
SAMPLER TYPE: ~~Continuous Core~~
AND DIMENSION:
FIELD ENGINEER:
GEOLOGIST: K. Waite
EDITED BY:
CHECKED BY:

COORDINATES N. NM E. NM
DATE BEGAN: 10/14/00
DATE FINISHED: 10/14/00
GROUND SURFACE EL.: NM

DEPTH IN FEET	PID OR FID (ppm)	PENETRATION RESISTANCE (BLOWS PER FOOT)	SAMPLE NO. AND TYPE	U.S.C.S.	PROFILE/LITHOLOGY	DESCRIPTION
0	12 3			sm		2" asphalt black - burned wood. sandy silt.
		ST	ST	sm		sandy silt, black stained slight odor gravel, brick tile.
5	5 15	ST	ST	cl		clay, black stained slight odor pieces of brick
		ST 2	ST	cl		clay, black, stained, moderate odor, moist
10	26 350	16 31 50	SBR	cl		sandy clay, black, stained, dense - moderate odor
15		40 50	SBR	sm		sandy silt brown - no staining, no odor
20		31 50	SBR	sp		sand, coarse-grained, brown, no staining no odor, odor trace clay.
25		35 50	SBR	sp		sand, brown, trace clay, no staining, no odor. coarse grained
30		50	SBR	sp		sand, brown coarse-grained no staining no odor
35		50	SBR	sp		sand, brown, coarse-grained, no stained, no odor.
40						TD = 35' NM = Not measured Ground water not encountered.
45						measurement 45' from back fence 45' from side fire brake side fence

CLIENT: Waste Disposal, Inc.
PROJECT NO.: 94-256
LOCATION: SPS, CA

00-115SIP-05 REV. 4/21/00

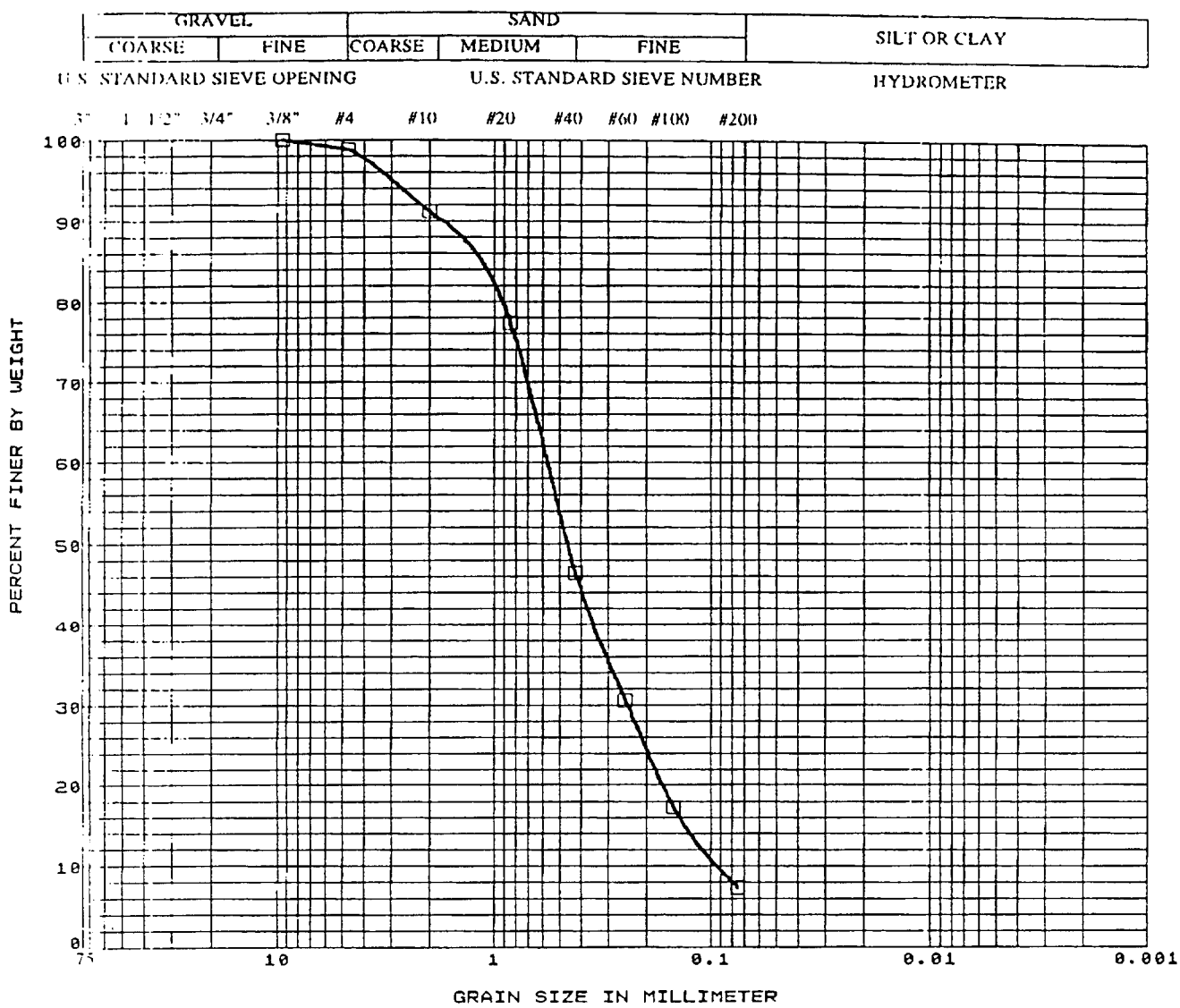
TRC

SUMMARY OF INDEX PROPERTIES TEST RESULTS

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: 1-18-01

KTL NO.: 01-056-001
CLIENT: TRC ENV. SOLUTIONS
SUMMARIZED BY: K. Tan

SAMPLE ID	DEPTH (FT)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	GRAIN SIZE DIST. GR:SA:FI
SA-1	5	19.7	97.5	
	10	18.1	103.9	
	25	2.2	89.4	
	30	12.2	95.9	
	35	18.4	110.1	
	40	8.9	105.6	
SA-2	5	12.1	109.3	
	20	9.9	98.6	
	25			1:92:7
	30	6.2	102.3	
	35	18.1	99.4	
SA-3	15	16.0	116.3	
	20	3.7	95.5	
	25	2.2	88.2	
	30	10.2	90.6	
SA-4	10	13.0	120.7	
	20			0:61:39
	25	3.4	94.0	
	30	10.5	105.1	
SA-5	15	13.1	122.8	
	25	4.8	107.5	
	30	17.3	93.7	
	35	17.7	103.0	
	40	24.0	104.5	
SA-6	15			0:69:31
	20	15.1	113.3	
	25	6.2	99.9	
	30			7:87:6
SA-7	10	14.2	121.6	
	20	6.4	99.3	
	30	16.4	105.4	
	35	5.5	97.9	5:93:2
SA-8	15	24.6	95.6	
	20	2.9	95.6	
	25	4.5	96.9	
	30	3.1	98.4	



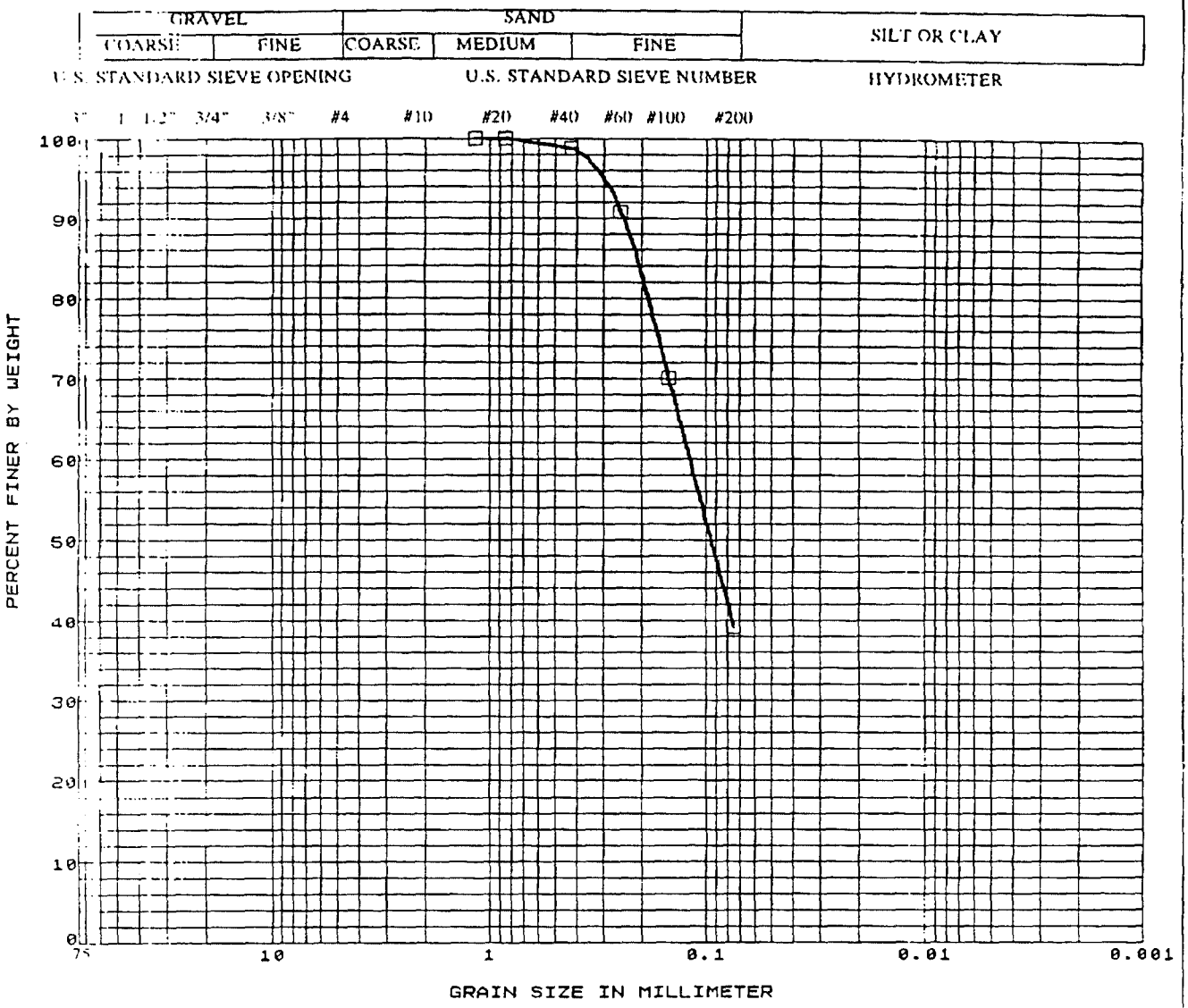
SYMBOL	SAMPLE ID.	DEPTH (ft)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	HSA-2	25	RING	SP-SM		

KEANTAN LABORATORIES	PROJECT NAME: WDI

GRAIN SIZE DISTRIBUTION CURVE

1/01

FIGURE



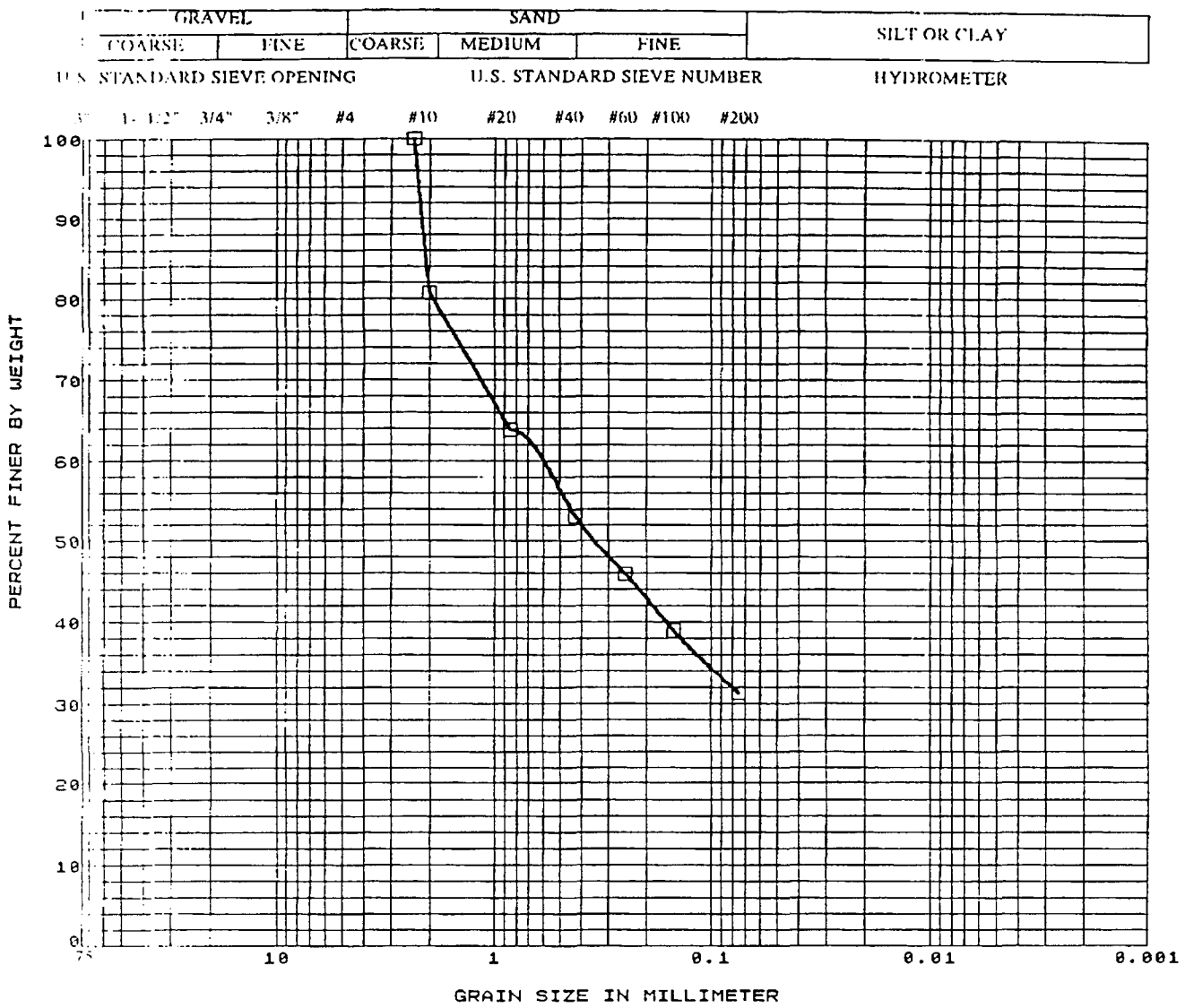
SYMBOL	SAMPLE ID.	DEPTH (ft)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	HSA-4	20	RING	SC		

KEANTAN LABORATORIES	PROJECT NAME: WDI

GRAIN SIZE DISTRIBUTION CURVE

1/01

FIGURE



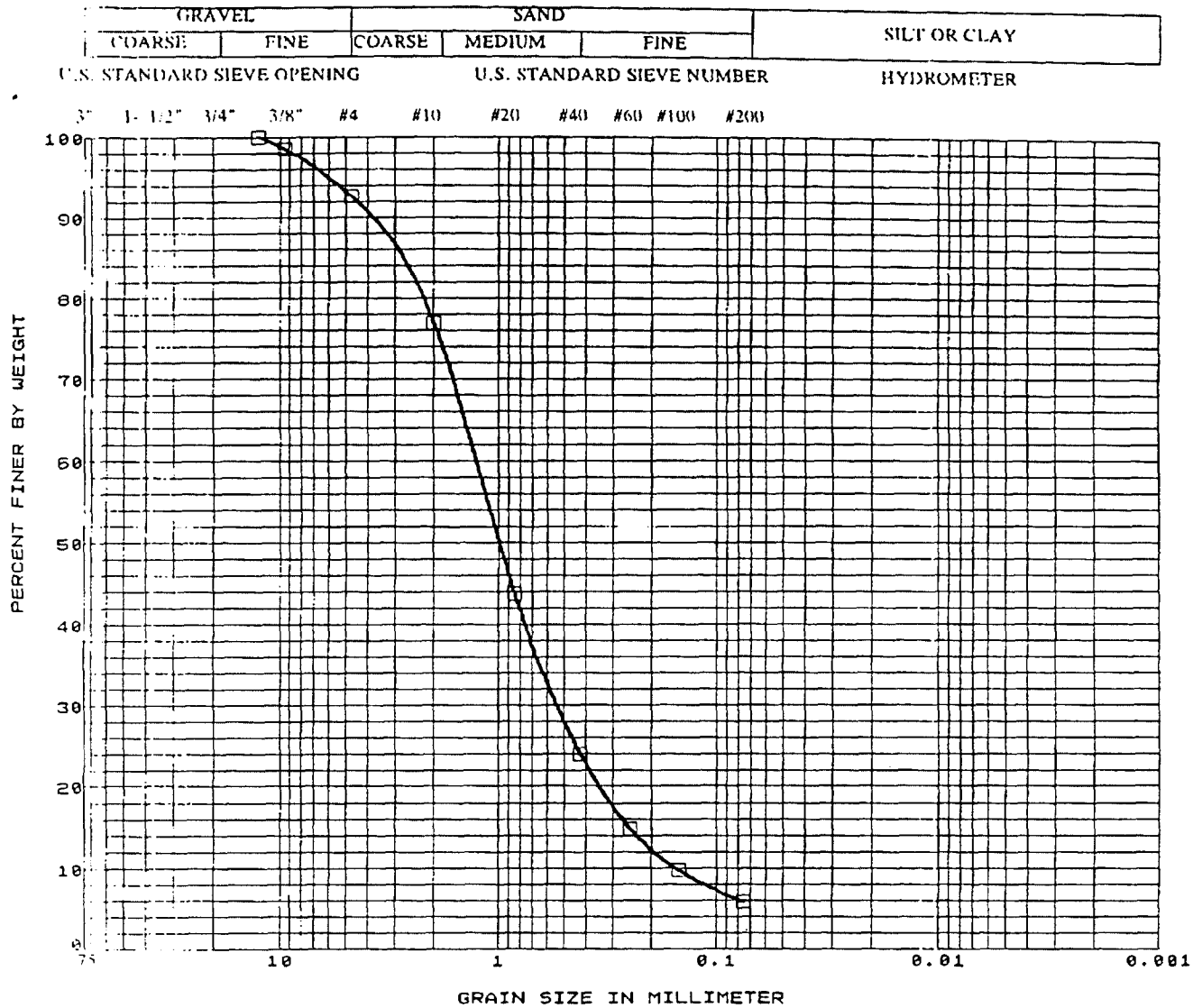
SYMBOL	SAMPLE ID.	DEPTH (ft)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
	HSA 6	15	RING	SC		

KEANTAN LABORATORIES	PROJECT NAME: WDI

GRAIN SIZE DISTRIBUTION CURVE

1/01

FIGURE

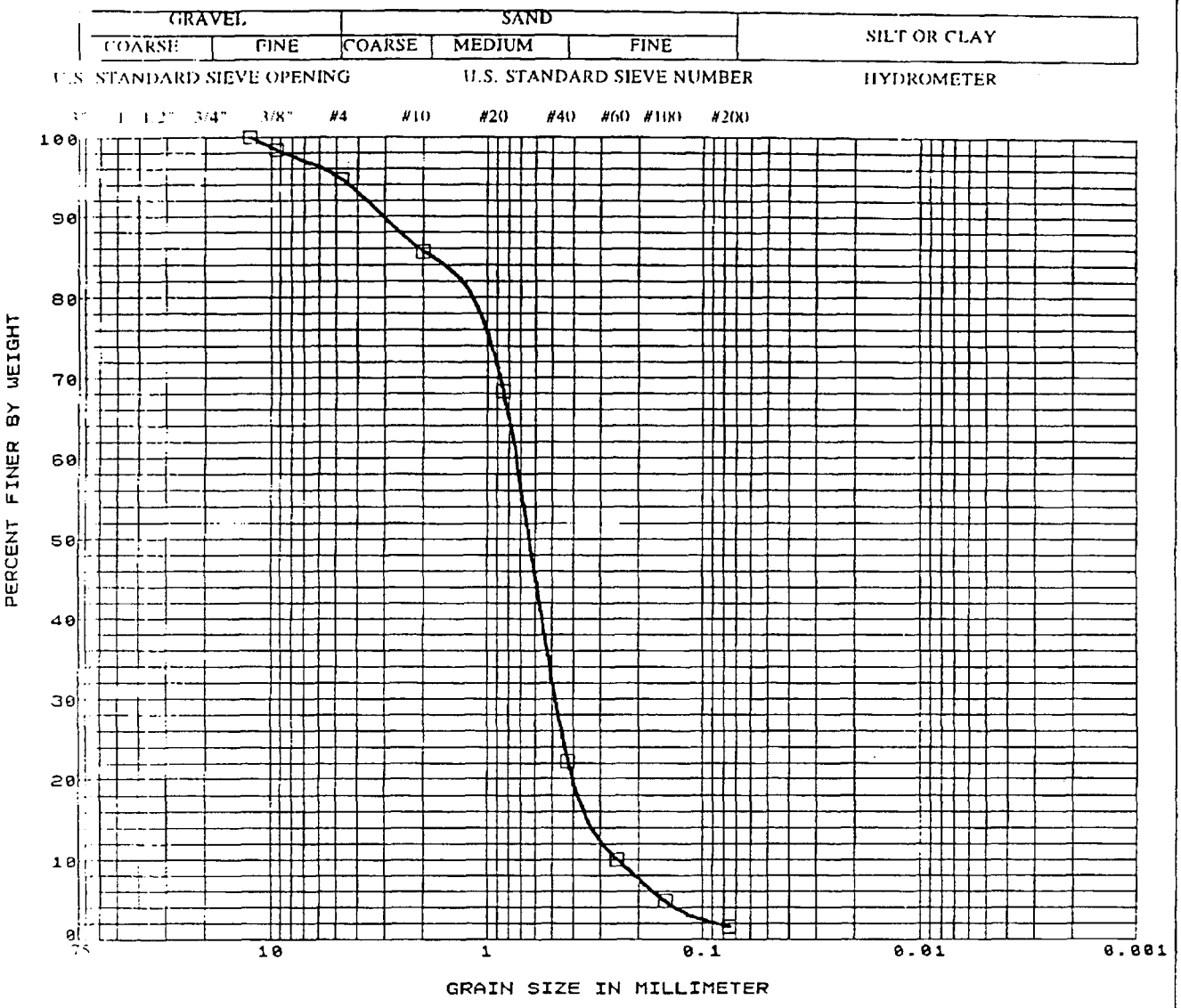


SYMBOL	SAMPLE ID.	DEPTH (ft)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
◻	HSA-6	30	RING	SP-SM		

KEANTAN LABORATORIES	PROJECT NAME: WDI

GRAIN SIZE DISTRIBUTION CURVE

1/01 FIGURE



SYMBOL	SAMPLE ID.	DEPTH (ft)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	HSA-7	35	RING	SP		

KEANTAN LABORATORIES	PROJECT NAME: WDI

GRAIN SIZE DISTRIBUTION CURVE

1/01

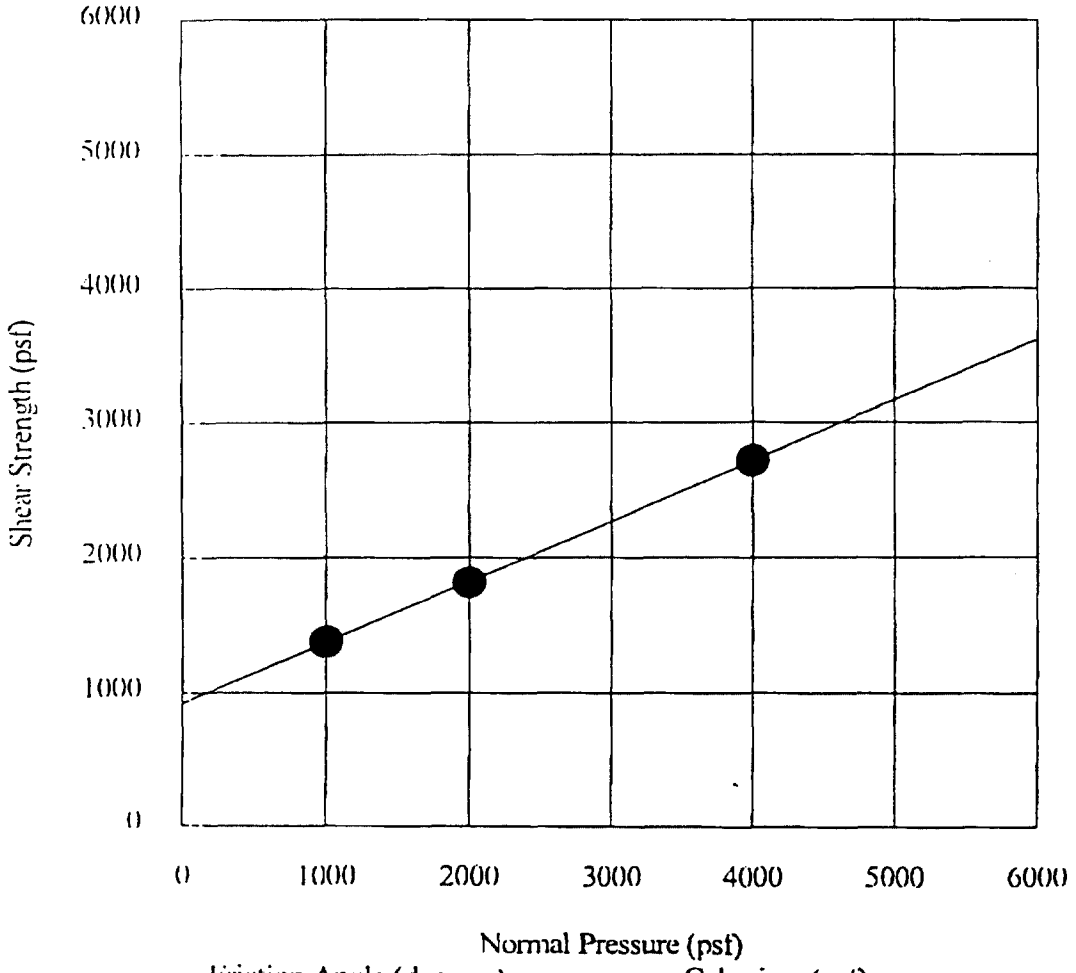
FIGURE

Direct Shear (CD) Test Results
ASTM D 3080

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: JAN 2001
BORING NO.: HSA-4
SAMPLE NO.: N/A
SAMPLE TYPE: RINGS
RING DIAMETER: 2.42 IN.
RING HEIGHT: 1.0 IN.
MOISTURE CONTENT: 10.1 percent

KTL NO.: 01-056-001
CLIENT: TRC
DEPTH (ft): 20
USCS CLASS.: SC

SATURATED: YES
DRY DENSITY: 98.5 pcf



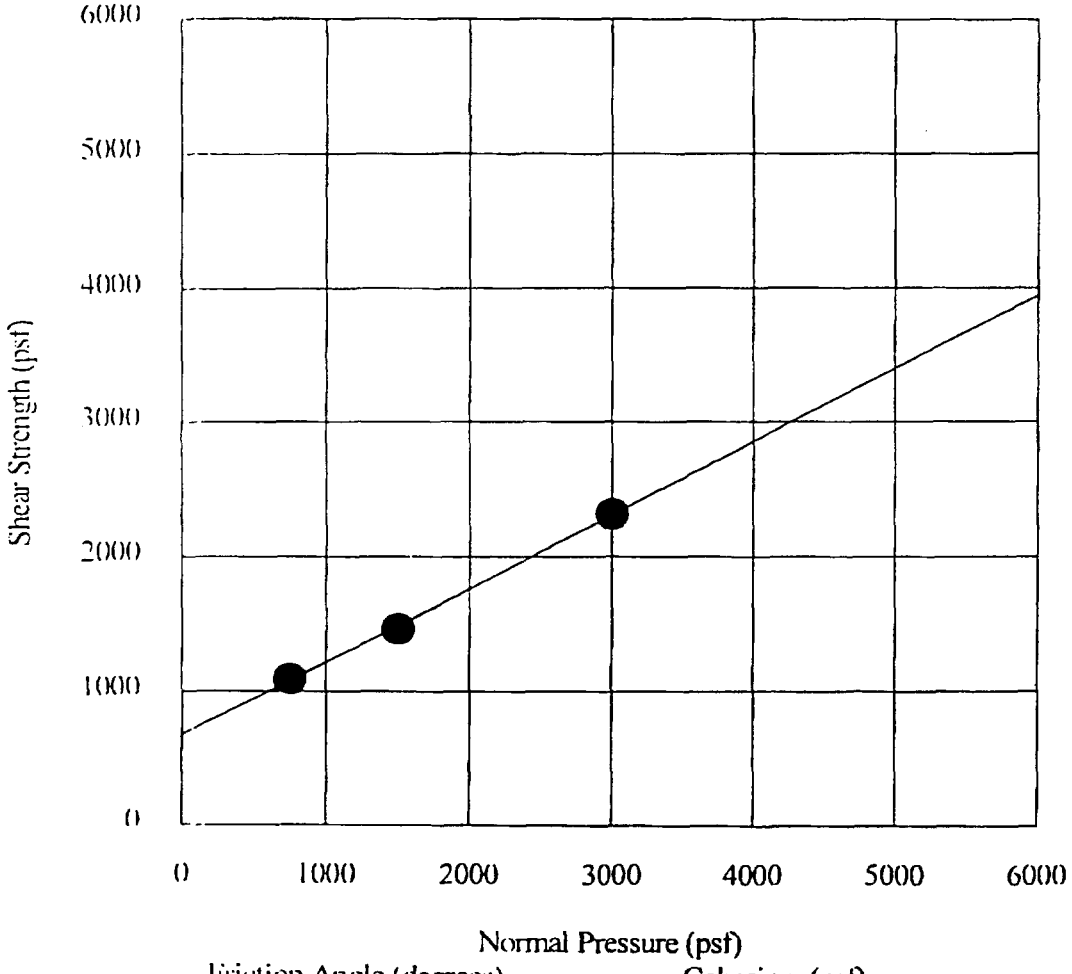
	Friction Angle (degrees)	Cohesion (psf)
Peak	24	922

Direct Shear (CD) Test Results
ASTM D 3080

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: JAN 2001
BORING NO.: HSA-6
SAMPLE NO.: N/A
SAMPLE TYPE: RINGS
RING DIAMETER: 2.42 IN.
RING HEIGHT: 1.0 IN.
MOISTURE CONTENT: 17.2 percent

KTL NO.: 01-056-001
CLIENT: TRC
DEPTH (ft): 15
USCS CLASS.: SC

SATURATED: YES
DRY DENSITY: 110.4 pcf



	Friction Angle (degrees)	Cohesion (psf)
Peak	29	672

Unconfined Compression Test Results
ASTM D 2166

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: JAN 2001

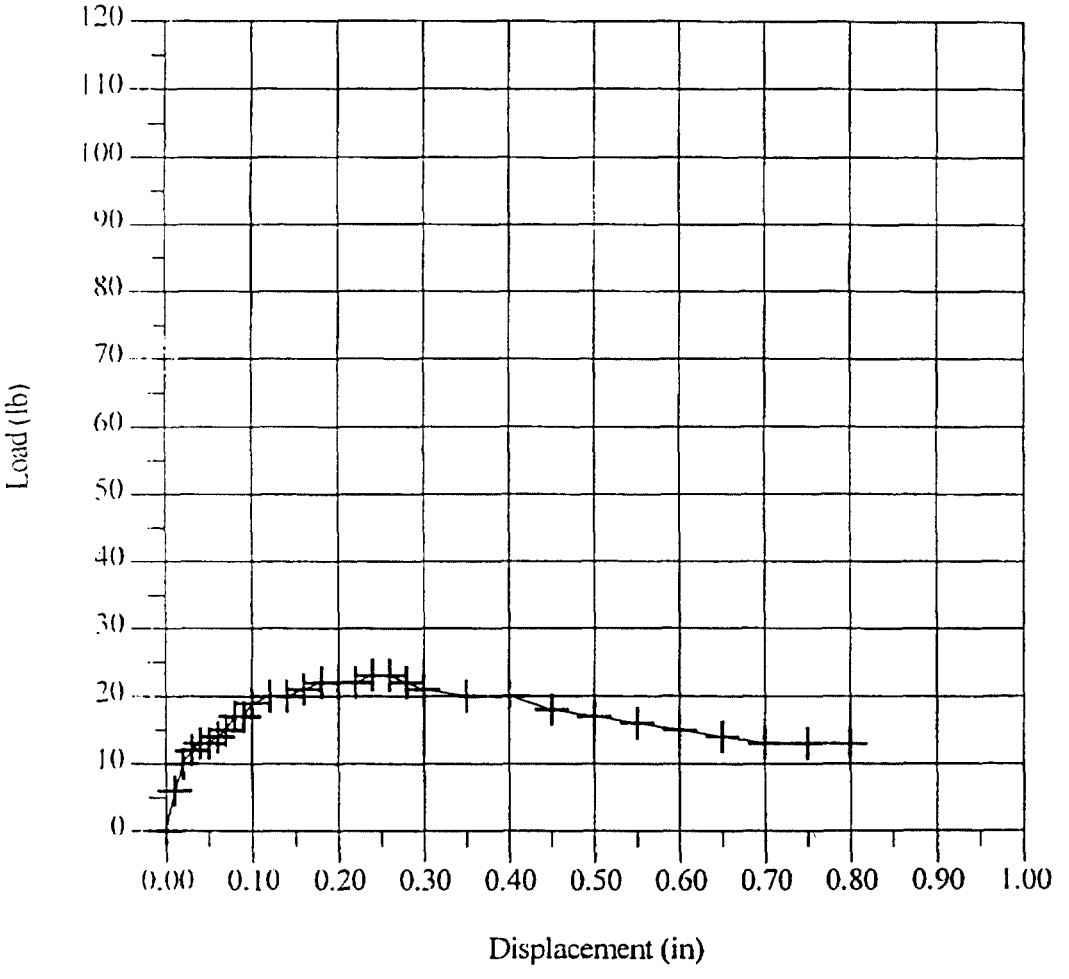
KTL NO.: 01-056-001
CLIENT: TRC

BORING NO.: HSA-4
SAMPLE NO.: n/a

DEPTH (ft): 5
USCS CLASS.: CL

SAMPLE TYPE: RING
DIAMETER: 2.42 IN.
HEIGHT: 4 IN.

MOISTURE CONTENT (%): 44.4
DRY DENSITY (pcf): 66.2



UNCONFINED COMPRESSIVE STRENGTH (psi): 5.0

Unconfined Compression Test Results
ASTM D 2166

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: JAN 2001

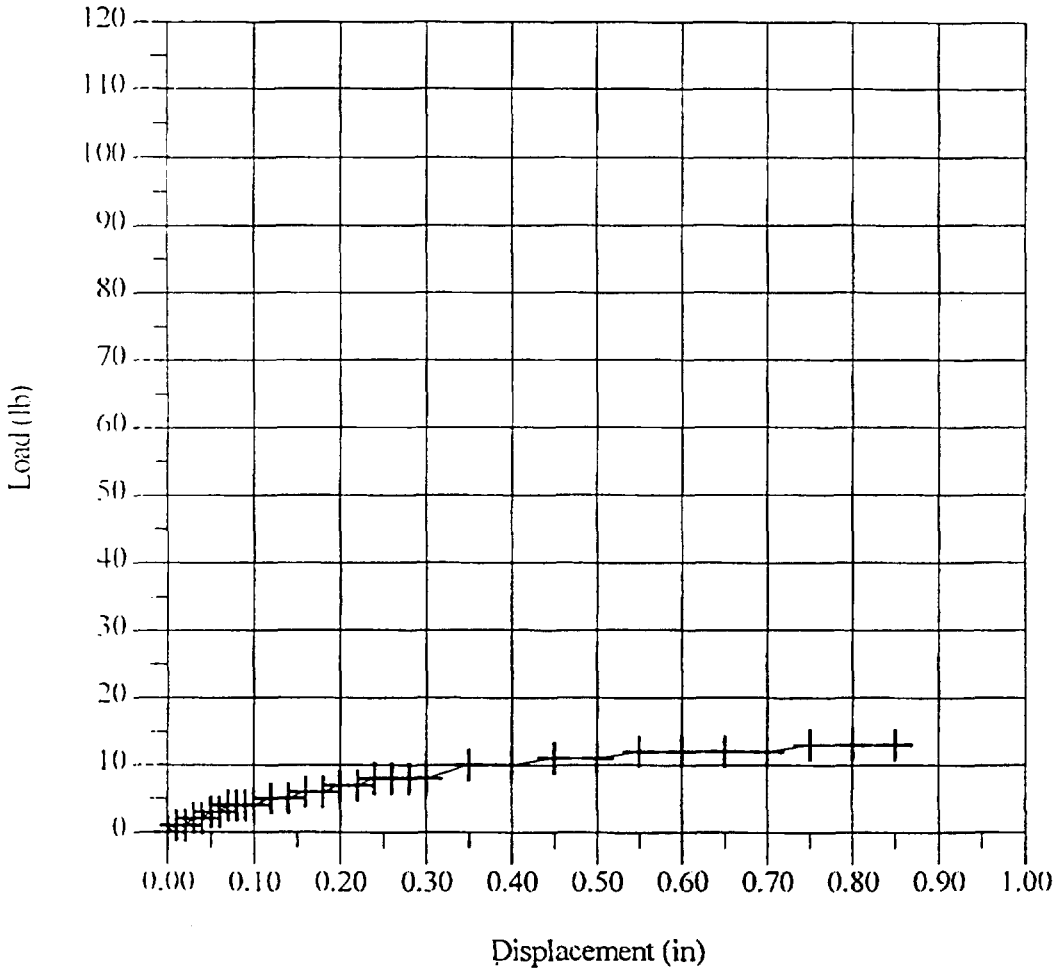
KTL NO.: 01-056-001
CLIENT: TRC

BORING NO.: HSA-5
SAMPLE NO.: n/a

DEPTH (ft): 10
USCS CLASS.: CL

SAMPLE TYPE: RING
DIAMETER: 2.42 IN.
HEIGHT: 5 IN.

MOISTURE CONTENT (%): 38.3
DRY DENSITY (pcf): 80.6



UNCONFINED COMPRESSIVE STRENGTH (psi): 2.8

Unconfined Compression Test Results
ASTM D 2166

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: JAN 2001

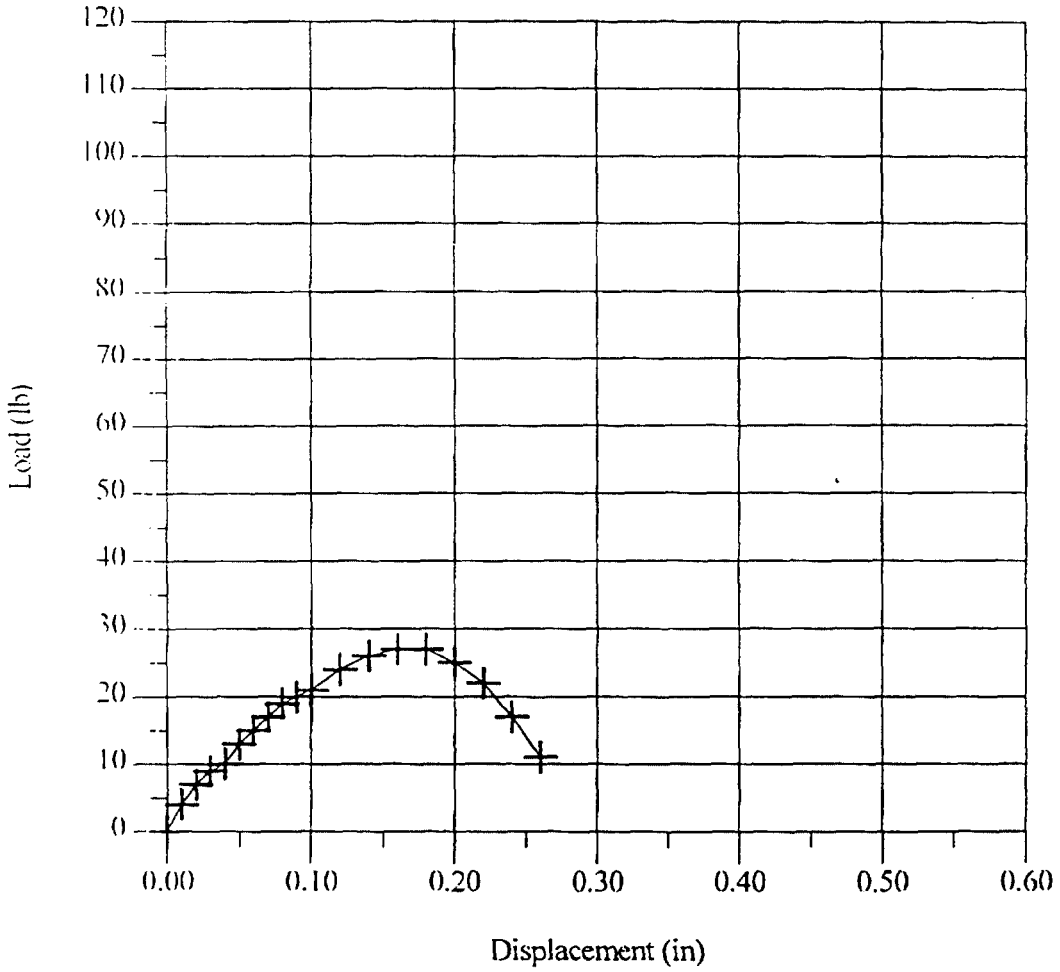
KTL NO.: 01-056-001
CLIENT: TRC

BORING NO.: HSA-6
SAMPLE NO.: n/a

DEPTH (ft): 10
USCS CLASS.: SM

SAMPLE TYPE: RING
DIAMETER: 2.42 IN.
HEIGHT: 5 IN.

MOISTURE CONTENT (%): 18.0
DRY DENSITY (pcf): 103.7



UNCONFINED COMPRESSIVE STRENGTH (psi): 5.8

Unconfined Compression Test Results
ASTM D 2166

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: JAN 2001

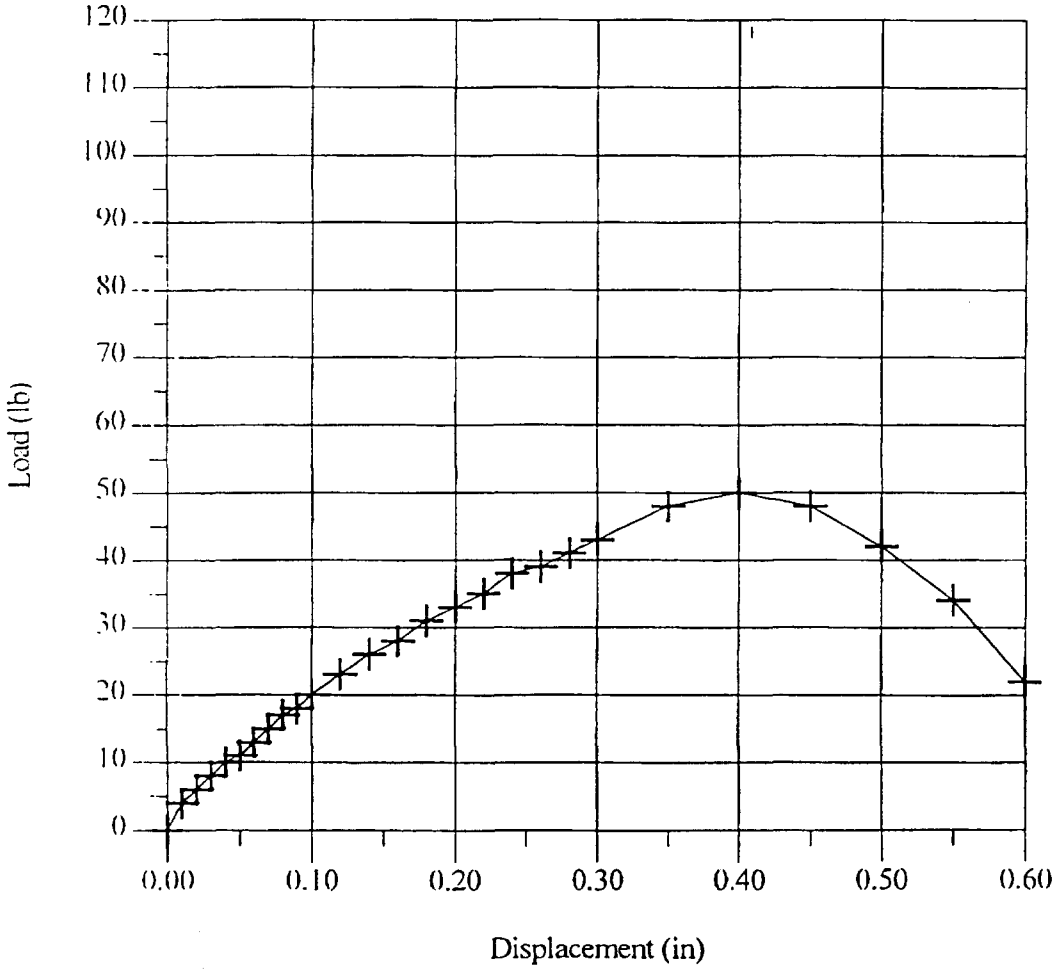
KTL NO.: 01-056-001
CLIENT: TRC

BORING NO.: HSA-7
SAMPLE NO.: n/a

DEPTH (ft): 5
USCS CLASS.: SC

SAMPLE TYPE: RING
DIAMETER: 2.42 IN.
HEIGHT: 5 IN.

MOISTURE CONTENT (%): 19.2
DRY DENSITY (pcf): 107.3



UNCONFINED COMPRESSIVE STRENGTH (psi): 11.0

KEANTAN LABORATORIES

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SUMMARY OF UNCONFINED COMPRESSION STRENGTH TEST RESULTS

PROJECT NAME: WDI KTL NO.: 01-056-001

PROJECT NO.: 94-256 CLIENT: TRC

DATE: 3-20-02 SUMMARIZED BY: K. Tan

SAMPLE ID	DEPTH (ft)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	UCS (psi)
SA-1	20	9.2	93.6	5.6
SA-2	15	23.4	100.2	31.8
SA-2	40	22.3	102.9	39.4
SA-3	5	14.6	109.6	11.7
SA-4	15	12.5	104.0	7.1
SA-5	5	25.1	92.6	10.6
SA-5	20	12.8	115.6	18.0
SA-6	5	25.6	93.0	7.6
SA-6	35	8.3	88.6	1.3
SA-7	15	35.5	84.9	24.2
SA-8	10	15.7	115.9	74.9

c:\My Documents\TRC\UCS

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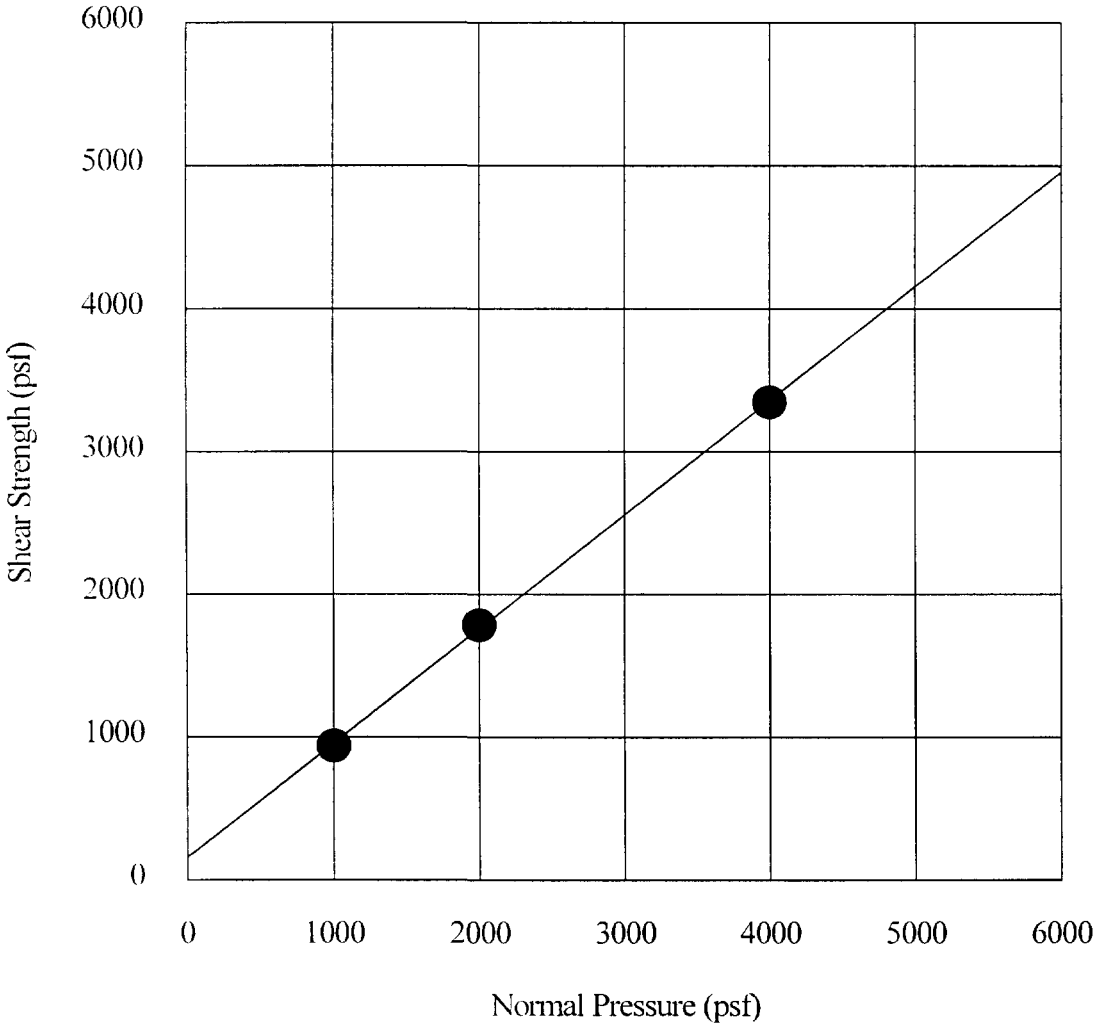
Direct Shear (CD) Test Results
ASTM D 3080

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: MARCH 2002
BORING NO.: HSA-2
SAMPLE NO.: N/A
SAMPLE TYPE: RINGS
RING DIAMETER: 2.42 IN.
RING HEIGHT: 1.0 IN.
MOISTURE CONTENT: 5.6 percent

KTL NO.: 01-056-001
CLIENT: TRC
DEPTH (ft): 25
USCS CLASS.: SP-SM

SATURATED: YES
DRY DENSITY: 113.1 pcf



	Friction Angle (degrees)	Cohesion (psf)
Peak	39	156

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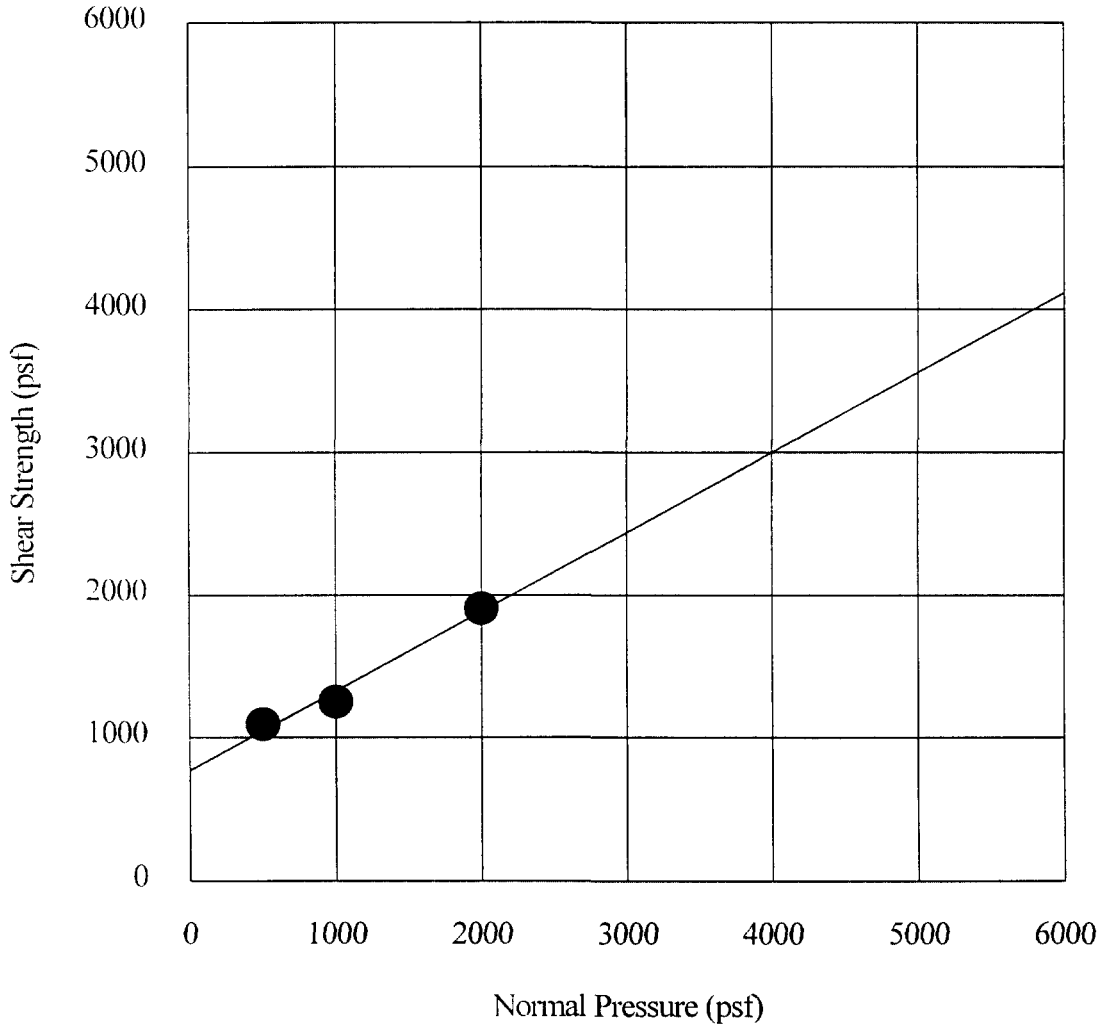
Direct Shear (CD) Test Results
ASTM D 3080

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: MARCH 2002
BORING NO.: HSA-3
SAMPLE NO.: N/A
SAMPLE TYPE: RINGS
RING DIAMETER: 2.42 IN.
RING HEIGHT: 1.0 IN.
MOISTURE CONTENT: 15.9 percent

KTL NO.: 01-056-001
CLIENT: TRC
DEPTH (ft): 10
USCS CLASS.: CL

SATURATED: YES
DRY DENSITY: 116.7 pcf



	Friction Angle (degrees)	Cohesion (psf)
Peak	29	766

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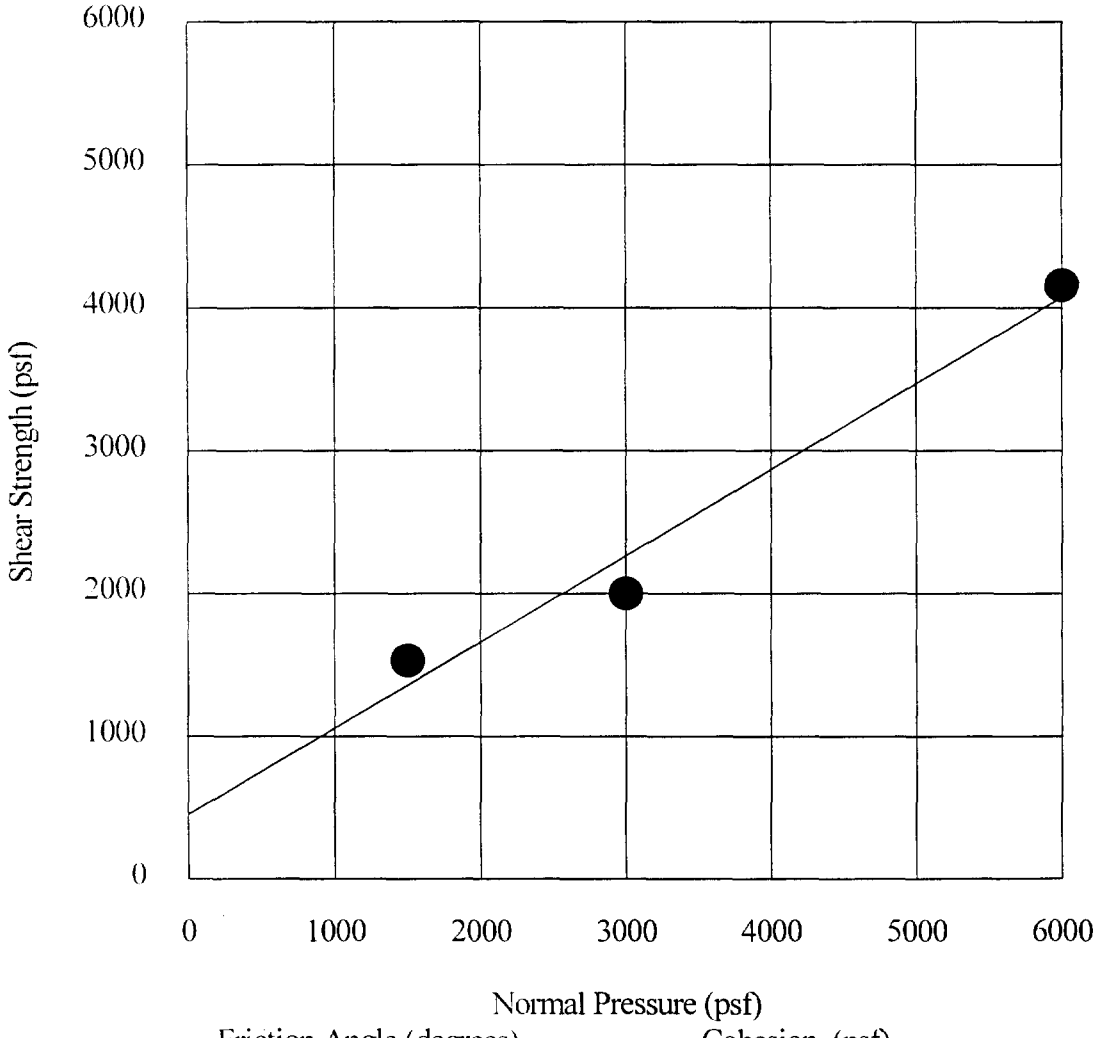
Direct Shear (CD) Test Results
ASTM D 3080

PROJECT NAME: WDI
PROJECT NO.: 94-256
DATE: MARCH 2002
BORING NO.: HSA-6
SAMPLE NO.: N/A
SAMPLE TYPE: RINGS
RING DIAMETER: 2.42 IN.
RING HEIGHT: 1.0 IN.
MOISTURE CONTENT: 4.2 percent

KTL NO.: 01-056-001
CLIENT: TRC
DEPTH (ft): 30
USCS CLASS.: SP-SM

SATURATED: YES
DRY DENSITY: 104.5 pcf



	Friction Angle (degrees)	Cohesion (psf)
Peak	31	453

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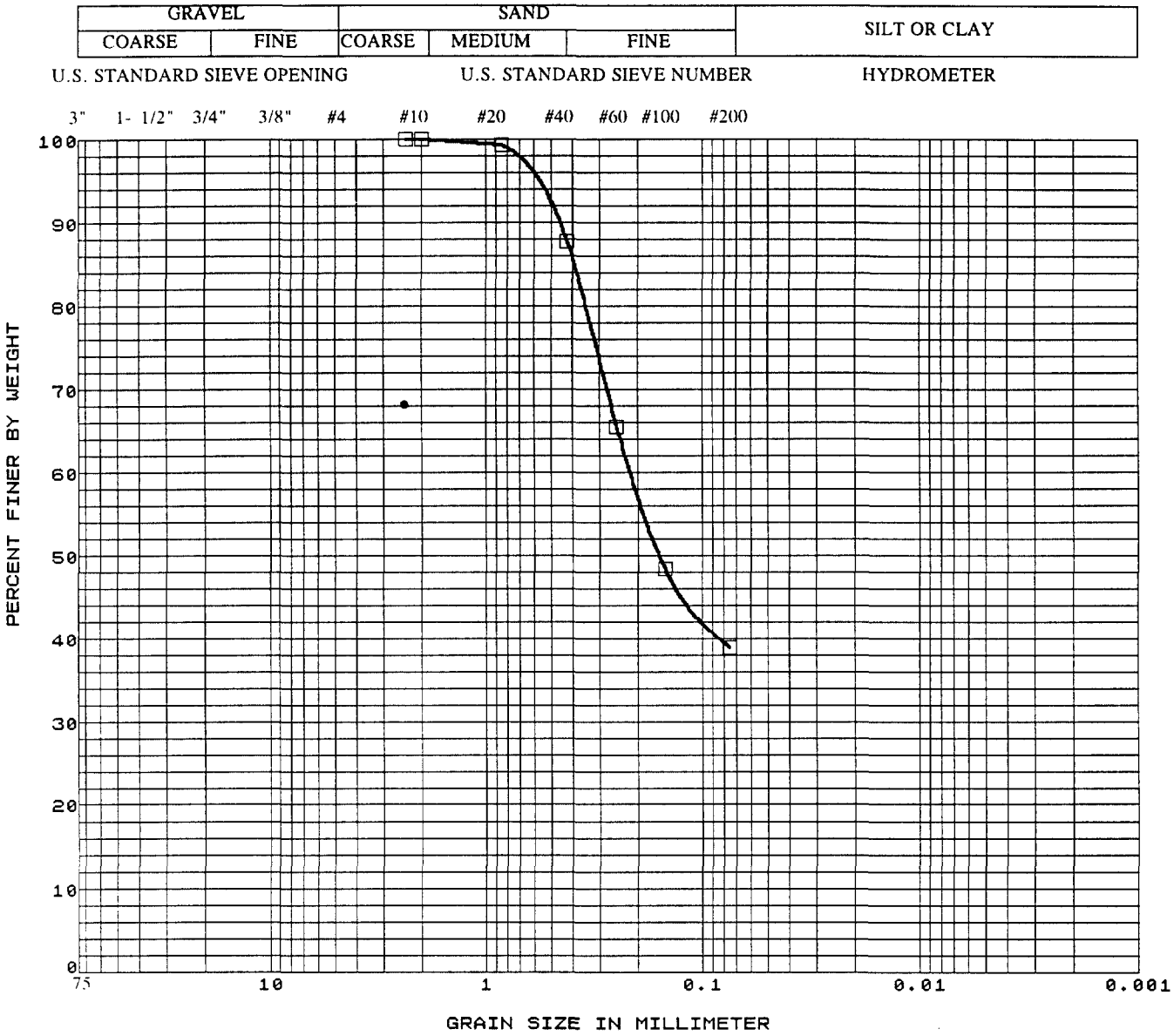


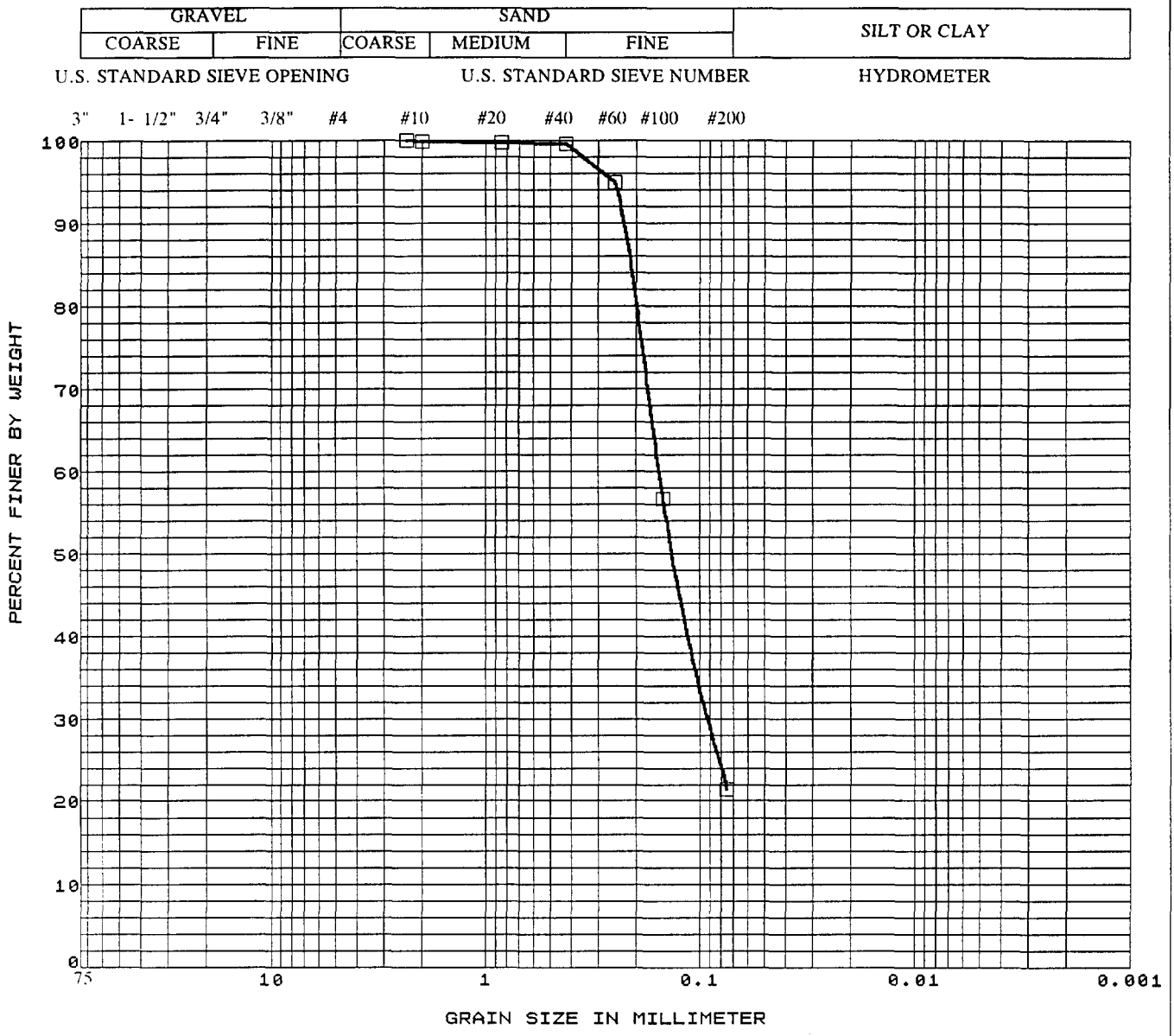
SYMBOL	SAMPLE ID.	DEPTH (ft)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	HSA-5	20	RING			

KEANTAN LABORATORIES	PROJECT NAME: WDI

GRAIN SIZE DISTRIBUTION CURVE

3/02

FIGURE



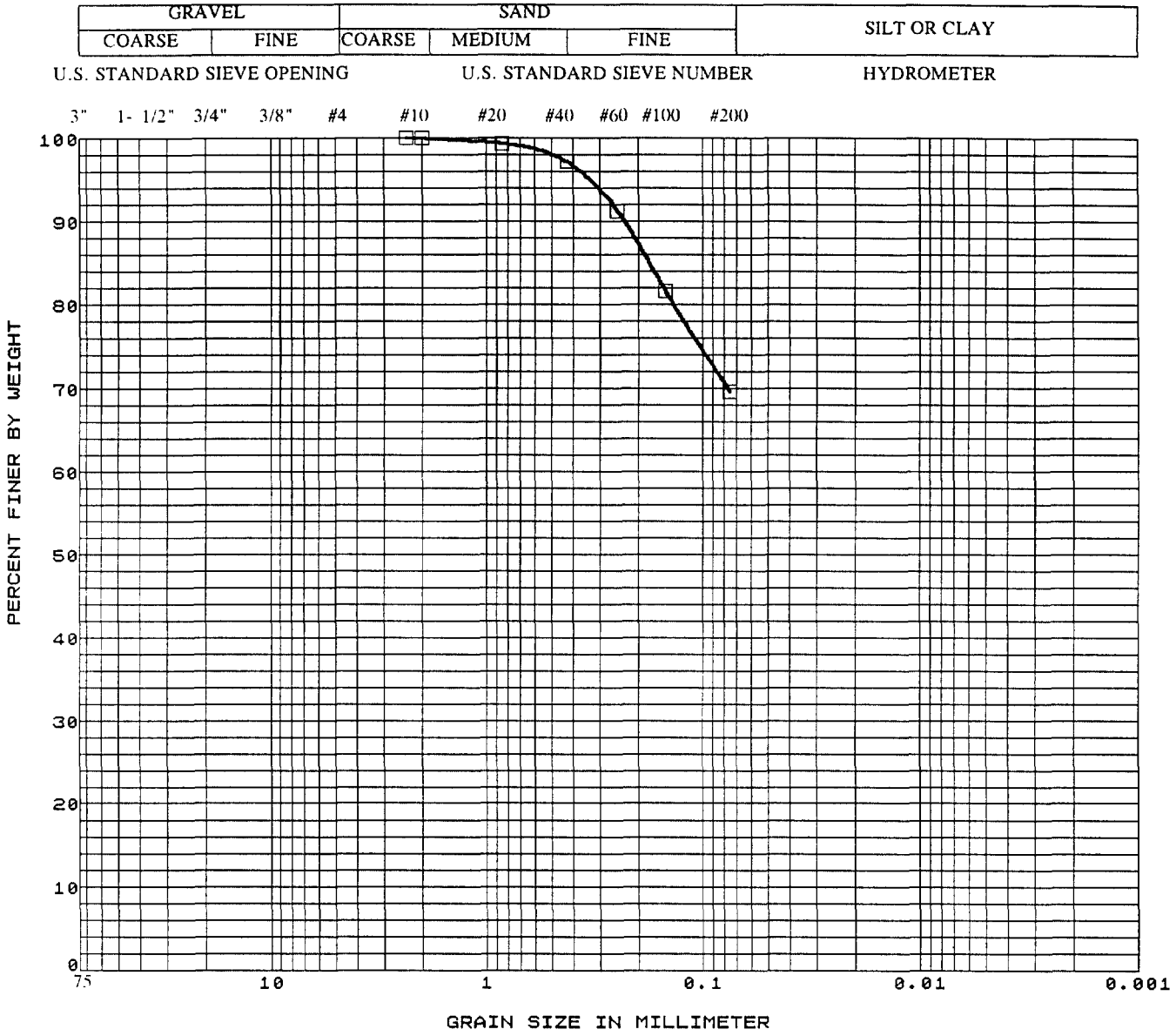
SYMBOL	SAMPLE ID.	DEPTH (ft)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	HSA-6	35	RING			

KEANTAN LABORATORIES	PROJECT NAME: WDI

GRAIN SIZE DISTRIBUTION CURVE

3/02

FIGURE



SYMBOL	SAMPLE ID.	DEPTH (ft)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□	HSA-8	10	RING			

KEANTAN LABORATORIES	PROJECT NAME: WDI

GRAIN SIZE DISTRIBUTION CURVE

3/02

FIGURE

and made from recycled paper.

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

Mountain View
Oakland
San Ramon
Fullerton

January 18, 2002
1651-8

TRC SOLUTIONS, INC.
21 Technology Drive
Irvine, California 92618

Attention: Mr. Allen E. Blodgett, GE
Project Director

RE: GEOTECHNICAL LABORATORY TEST RESULTS FOR "WDI LANDFILL CONTAINMENT DESIGN" SANTA FE SPRINGS, CALIFORNIA

Gentlemen:

We are pleased to present results of our geotechnical laboratory testing for your "WDI" project. Geotechnical test results are presented in an "Appendix B" format for easy insertion into most standard geotechnical reports. Our geotechnical laboratory is licensed by the City of Los Angeles, Department of Building and Safety, Materials Control Division, as a "Soils Testing Agency" No. 10149. In accordance with our December 13, 2001 "FAX Confirmation of Requested Services," your samples will be disposed of in 30 days. We appreciate the opportunity to be of service. If you have any questions concerning these test results, please call or contact me by phone or e-mail at tbenson@lowney.com.

Sincerely,

LOWNEY ASSOCIATES

Thomas C. Benson, Jr., G.E. 2091
Vice President

REGISTERED PROFESSIONAL ENGINEER
THOMAS C. BENSON, JR.
No. 2091
Exp. 3/31/05
GEOTECHNICAL
STATE OF CALIFORNIA

Copies: Addressee (2)

Enclosures: Appendix B, "Geotechnical Laboratory Testing" (8 pages)

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APPENDIX B
GEOTECHNICAL LABORATORY TESTING

The following geotechnical laboratory tests were performed on soil samples brought to the Lowney Associates geotechnical laboratory by TRC personnel.

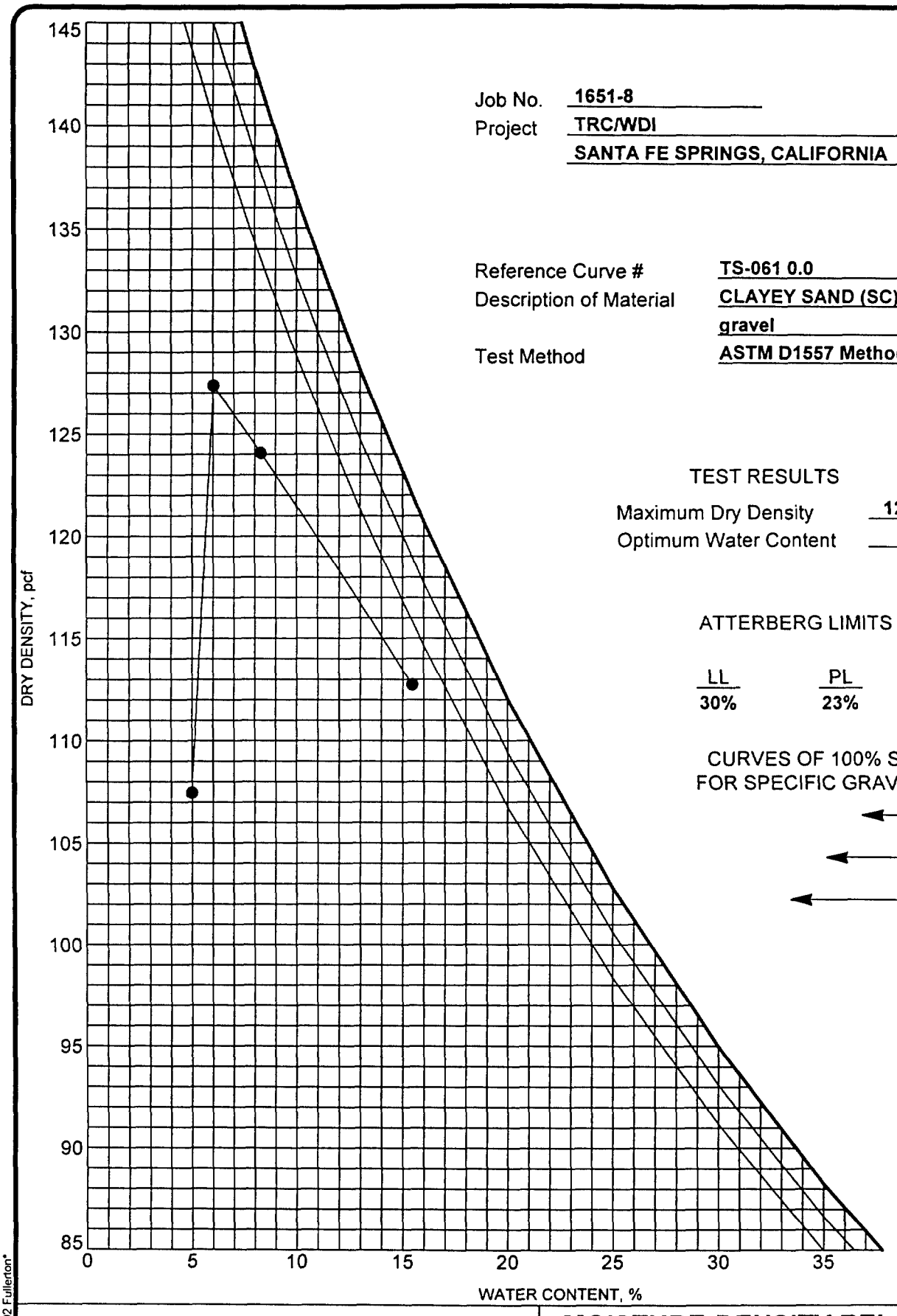
Compaction: Three laboratory compaction tests (ASTM D 1557-00) were performed on provided bulk soil samples to determine the maximum dry density and optimum moisture content. Results of these tests are presented graphically on the following "Moisture-Density Relationship" figures.

Gradations: Sieve and hydrometer analyses (ASTM D 422-63) were performed on the same three soil samples. These tests were performed to assist in the classification of the soil and to determine grain size distributions of the soils. Results of these tests are presented on the "Grain Size Distribution" figure.

Plasticity Index: Plasticity Index determinations (ASTM D 4318) were performed on the same three soil samples to measure the range of water contents over which these materials exhibit plasticity. The Atterberg Limits were used to classify the soil in accordance with the Unified Soil Classification System and to evaluate the soil expansion potential. Results of these tests are presented on the "Plasticity Chart and Data" figure.

Falling Head Permeability: Two falling head permeability tests were performed on remolded specimens, in general accordance with the ASTM D 5084-90 Standard Test Method. Specimen and test result data are presented on the attached two sheets titled "Hydraulic Conductivity."

* * * * * * * * *



Job No. 1651-8

Project TRC/WDI

SANTA FE SPRINGS, CALIFORNIA

Reference Curve # TS-061 0.0

Description of Material CLAYEY SAND (SC), trace fine gravel

Test Method ASTM D1557 Method A

TEST RESULTS

Maximum Dry Density 127.0 PCF

Optimum Water Content 6.0 %

ATTERBERG LIMITS

LL	PL	PI
30%	23%	7%

CURVES OF 100% SATURATION FOR SPECIFIC GRAVITY EQUAL TO:

2.80

2.70

2.60

LOWNEY ASSOCIATES
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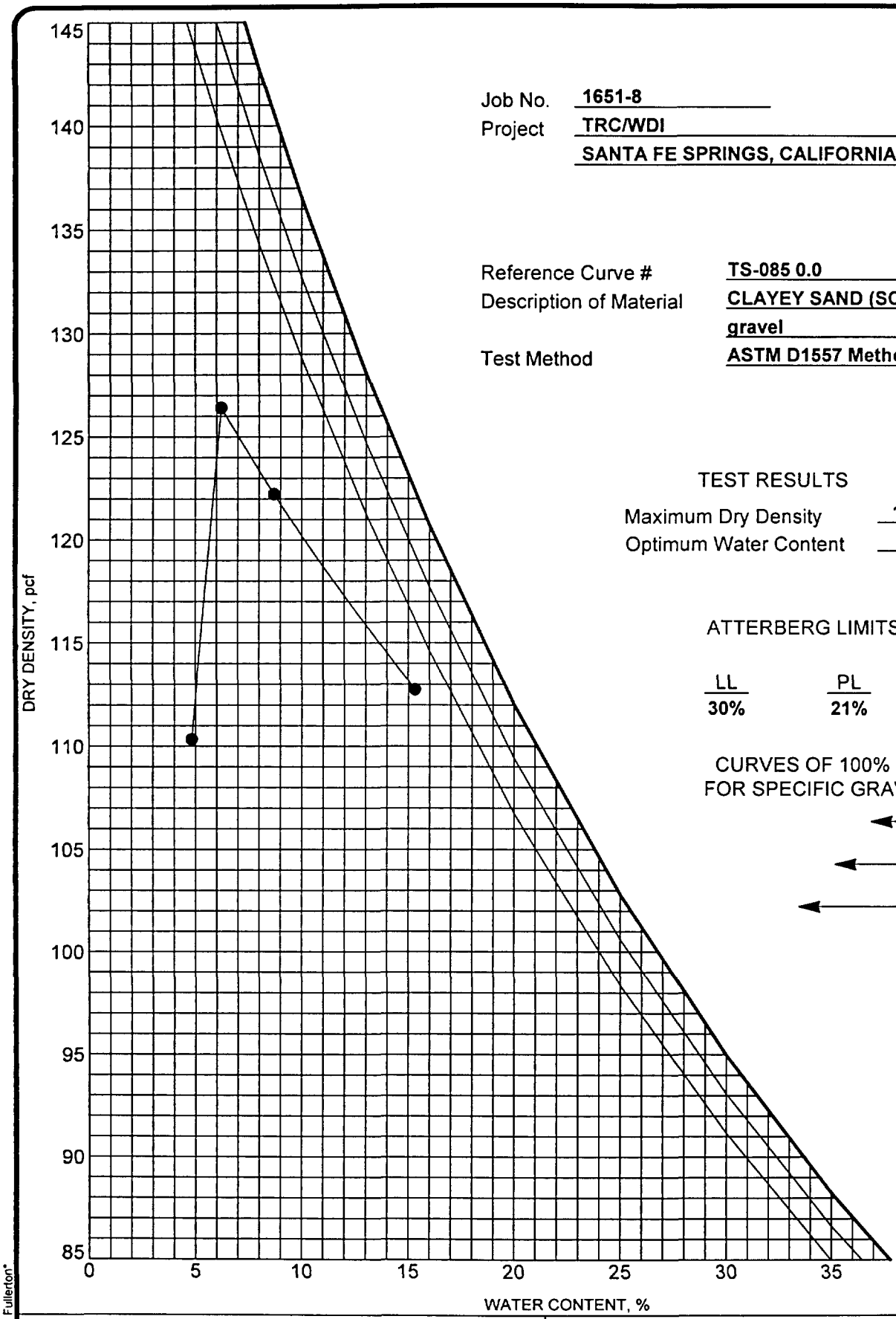
MOISTURE-DENSITY RELATIONSHIP

Project: TRC/WDI

Location: SANTA FE SPRINGS, CALIFORNIA

Project No.: 1651-8

LA CORP GDT 2/21/02 Fullerton*



Job No. 1651-8

Project TRC/WDI
SANTA FE SPRINGS, CALIFORNIA

Reference Curve # TS-085 0.0

Description of Material CLAYEY SAND (SC), trace fine gravel

Test Method ASTM D1557 Method A

TEST RESULTS

Maximum Dry Density 126.0 PCF

Optimum Water Content 6.0 %

ATTERBERG LIMITS

LL	PL	PI
30%	21%	9%

CURVES OF 100% SATURATION FOR SPECIFIC GRAVITY EQUAL TO:

2.80

2.70

2.60

LOWNEY ASSOCIATES
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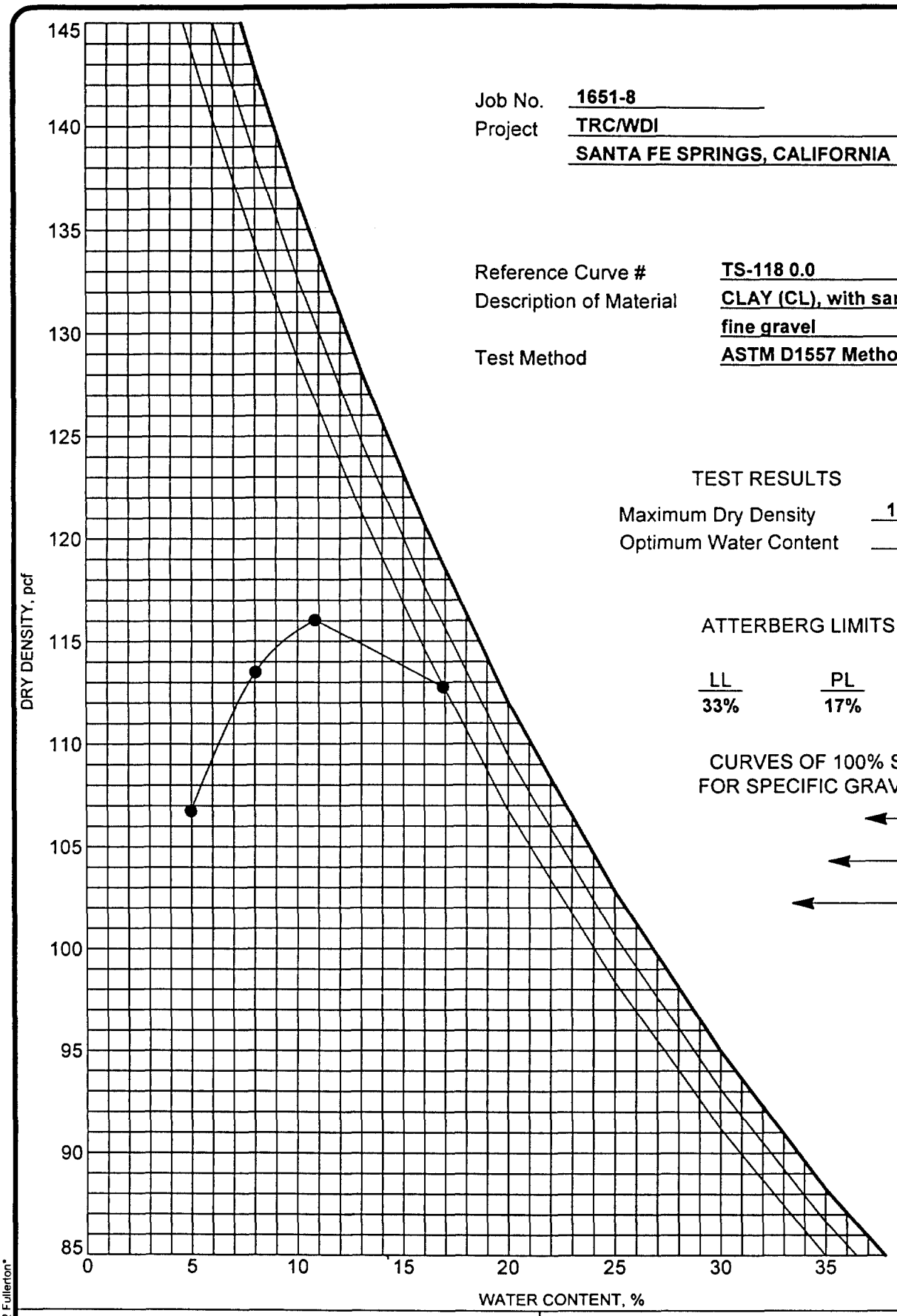
MOISTURE-DENSITY RELATIONSHIP

Project: TRC/WDI

Location: SANTA FE SPRINGS, CALIFORNIA

Project No.: 1651-8

LA CORP GDT 2/21/02 Fullerton*



Job No. 1651-8
Project TRC/WDI
SANTA FE SPRINGS, CALIFORNIA

Reference Curve # TS-118 0.0
Description of Material CLAY (CL), with sand and trace fine gravel
Test Method ASTM D1557 Method A

TEST RESULTS

Maximum Dry Density 116.0 PCF
Optimum Water Content 11.0 %

ATTERBERG LIMITS

LL	PL	PI
33%	17%	16%

CURVES OF 100% SATURATION FOR SPECIFIC GRAVITY EQUAL TO:

2.80
2.70
2.60

LOWNEY ASSOCIATES
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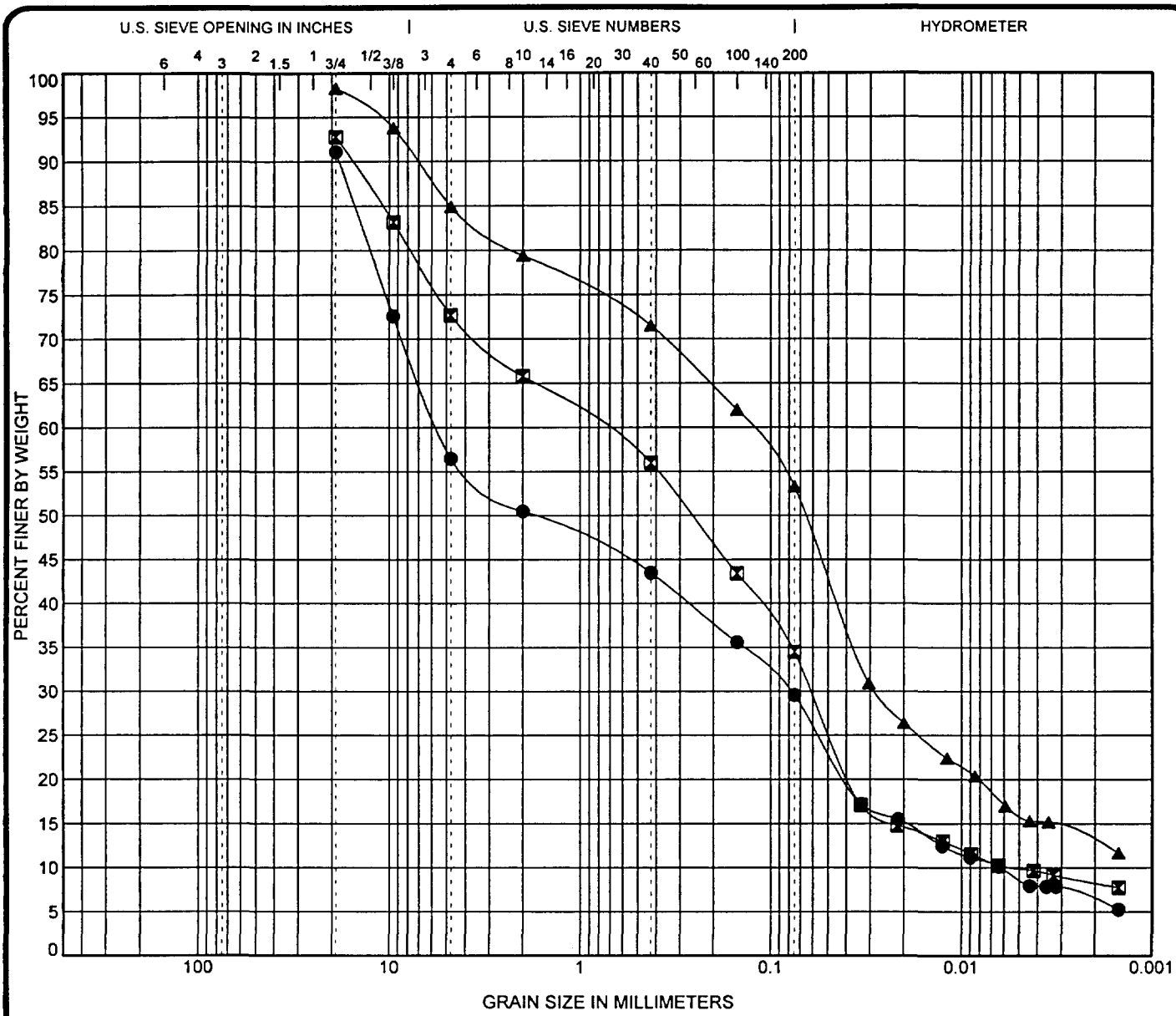
MOISTURE-DENSITY RELATIONSHIP

Project: TRC/WDI
Location: SANTA FE SPRINGS, CALIFORNIA
Project No.: 1651-8

LA CORP GDT 2/21/02 Fullerton*



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	LL	PL	PI	Cc	Cu
●	TS-061	0.0	CLAYEY SAND (SC), trace fine gravel	30	23	7	0.18	892.79
⊠	TS-085	0.0	CLAYEY SAND (SC), trace fine gravel	30	21	9	0.90	154.25
▲	TS-118	0.0	CLAY (CL), with sand and trace fine gravel	33	17	16		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	TS-061	0.0	19	5.522	0.079	0.006	34.6	26.9	20.8	8.8
⊠	TS-085	0.0	19	0.8	0.061	0.005	20.1	38.2	24.6	9.9
▲	TS-118	0.0	19	0.128	0.028		13.4	31.6	37.3	16.0

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

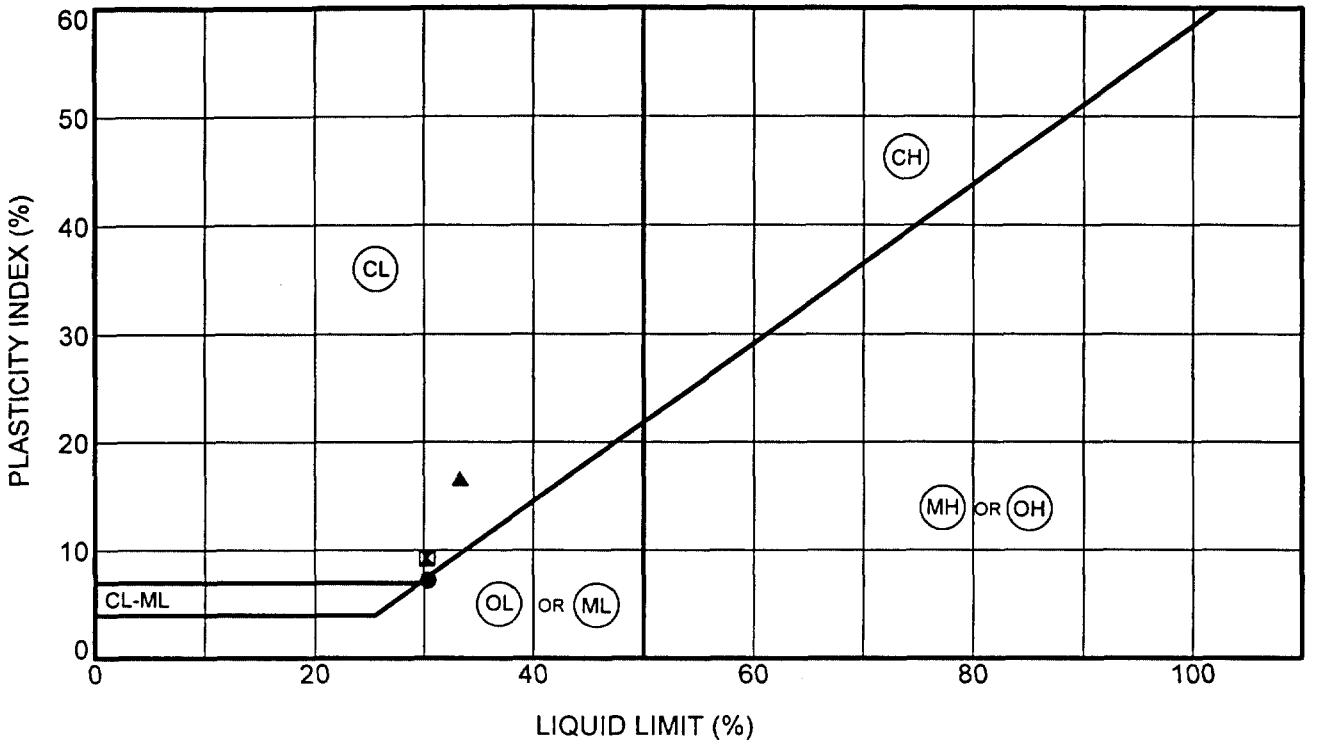
GRAIN SIZE DISTRIBUTION

Project: TRC/WDI

Location: SANTA FE SPRINGS, CALIFORNIA

Project No.: 1651-8

LA CORP.GDT 2/21/02 Fullerton*



Symbol	Boring No.	Depth (ft.)	Natural Water Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing No. 200 Sieve	Unified Soil Classification Description
●	**TS-061**	**0.0**		**30**	**23**	**7**	**30**	**CLAYEY SAND (SC), trace fine gravel**
⊠	**TS-085**	**0.0**		**30**	**21**	**9**	**35**	**CLAYEY SAND (SC), trace fine gravel**
▲	**TS-118**	**0.0**		**33**	**17**	**16**	**53**	**CLAY (CL), with sand**

LA CORP GDT 2/21/02 Fullerton*

LOWNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

PLASTICITY CHART AND DATA

Project: TRC/WDI

Location: SANTA FE SPRINGS, CALIFORNIA

Project No.: 1651-8

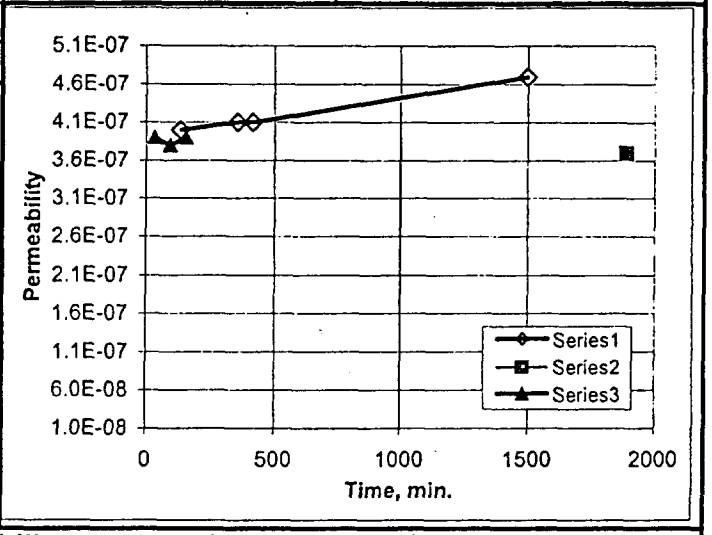
Hydraulic Conductivity
ASTM D 5084

Job No:	028-1056a	Boring:		Date:	01/16/02
Client:	Lowney	Sample:	T5-118	By:	MD
Project:	TRC/WDI	Depth'		Checked By:	DC
Soil Description:	brown sandy CLAY				

Sample Pressures:						*B: =	1
Cell:	53.5 psi	Bot. Cap:	49 psi	Top Cap:	48 psi	Gradient:	13

Method C: Falling Head / Rising Tailwater

Date	Minutes	Head, (in)	K,cm/sec
1/11/02	0	51.69	Start of Test
	133	48.54	4.00E-07
	356	43.39	4.10E-07
	416	41.99	4.10E-07
1/12/02	1496	23.09	4.70E-07
	0	24	
1/13/02	1890	10.8	3.70E-07
	0	51.69	
1/14/02	33	50.89	3.90E-07
	93	49.54	3.80E-07
	155	48.09	3.90E-07



Average Permeability: 2.E-07 cm/sec

Sample Data:	Initial		Final
Height, in	4.32		4.37
Diameter, in	4.00		4.08
Area, in2	12.55		13.07
Volume in3	54.23		57.13
Total Volume, cc	888.71		936.25
Volume Solids, cc	618.52		618.52
Volume Voids, cc	270.19		317.73
Void Ratio	0.44		0.51
Porosity, %	30.40		33.94
Saturation, %	61.48		96.72
Specific Gravity	2.70	Assumed	2.70
Wet Weight, gm	1836.1		1977.3
Dry Weight, gm	1670.0		1670.0
Tare, gm	0.00		0.00
Moisture, %	9.9		18.4
Dry Density, pcf	117.3		111.3

Note: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Hydraulic Conductivity
ASTM D 5084

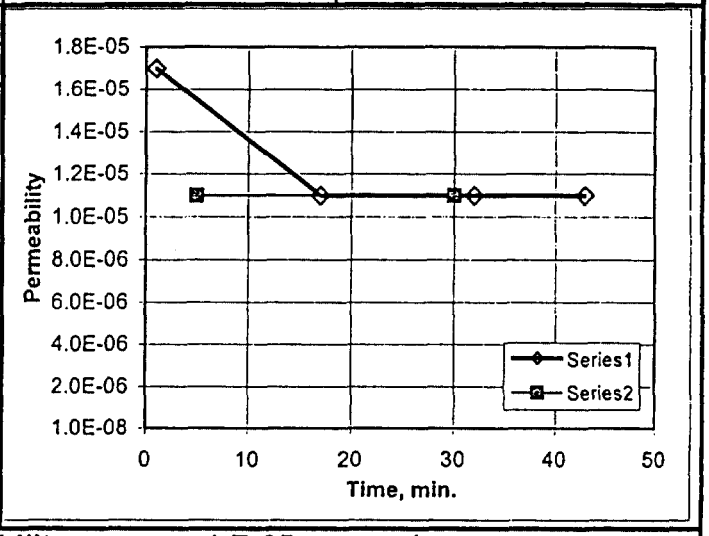
Job No:	028-1056	Boring:		Date:	01/16/02
Client:	Lowney	Sample:	T5-85	By:	MD
Project:	TRC/WDI	Depth'		Checked By:	DC

Soil Description: brown clayey SAND

Sample Pressures:						*B: =	1
Cell:	53.5 psi	Bot. Cap:	49 psi	Top Cap:	48 psi	Gradient:	13

Method C: Falling Head / Rising Tailwater

Date	Minutes	Head, (in)	K,cm/sec
1/11/02	0	51.69	Start of Test
	1	50.69	1.70E-05
	17	41.59	1.10E-05
	32	34.69	1.10E-05
	43	30.04	1.10E-05
	0	51.69	
	5	48.59	1.10E-05
	30	35.19	1.10E-05



Average Permeability: 1.E-05 cm/sec

Sample Data:	Initial		Final
Height, in	4.52		4.59
Diameter, in	4.00		4.01
Area, in2	12.55		12.63
Volume in3	56.74		57.97
Total Volume, cc	929.85		949.93
Volume Solids, cc	616.07		616.07
Volume Voids, cc	313.78		333.85
Void Ratio	0.51		0.54
Porosity, %	33.74		35.15
Saturation, %	34.80		95.58
Specific Gravity	2.70	Assumed	2.70
Wet Weight, gm	1772.6		1982.5
Dry Weight, gm	1663.4		1663.4
Tare, gm	0.00		0.00
Moisture, %	6.6		19.2
Dry Density, pcf	111.6		109.3

Note: *B=Delta Pore Press/Delta Cell Press (indication of saturation).

Invoice

Daniel B. Stephens & Associates, Inc.

Daniel B. Stephens & Associates, Inc.
Hydrologic Testing and Research Laboratory

Invoice To: Allen Blodgett
TRC
21 Technology Drive
Irvine, CA 92618

Remit To: Daniel B. Stephens & Associates, Inc.
Attn: Accounts Receivable
P.O. Box 565
Albuquerque, NM 87103
(505) 822-9400

Invoice No.: 009224
Invoice Date: January 21, 2002
Terms: Net 30 days
Project No.: L078.01

Reference: 01-123

Services For: January

Hours or Quantity	Description of Articles Provided or Services Performed	Unit	Unit Price	Sales Amount
2	Hydraulic Properties Package, including: • Sample preparation • Initial volumetric moisture content • Dry bulk density • Calculated total porosity • Saturated hydraulic conductivity • Moisture characteristics (7 pts.) • Calculated unsaturated hydraulic conductivity	Test	$575/test	$1,150.00
			Subtotal	**$1,150.00**
			Total Amount Due This Invoice	**$1,150.00**

Approved by: _____

January 21, 2002

Mr. Suji Somasundaram
Advanced Earth Sciences, Inc.
9261 Irvine Boulevard
Irvine, CA 92618

Dear Mr. Somasundaram:

Enclosed is the final report for the Waste Disposal Inc. Superfund site, Job # 01-123. Please review this report and provide any comments as samples will be held for a maximum of 30 days. After 30 days samples will be returned or disposed of in an appropriate manner.

All testing results were evaluated subjectively for consistency and reasonableness, and the results appear to be reasonably representative of the material tested. However, DBS&A does not assume any responsibility for interpretations or analyses based on the data enclosed, nor can we guarantee that these data are fully representative of the undisturbed materials at the field site. We recommend that careful evaluation of these laboratory results be made for your particular application.

We are pleased to provide this service to Advanced Earth Sciences, Inc. and look forward to future laboratory testing on other projects. If you have any questions about the enclosed data, please do not hesitate to call.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.

Daniel O'Dowd
Enclosure

Daniel B. Stephens & Associates, Inc.

6020 Academy NE, Suite 100 505-822-9400

Albuquerque, NM 87109 FAX 505-822-8877

L:\Lab\L078 TRC\Cover Letter.doc

Summary of Tests Performed

Laboratory Sample Number	Initial Soil Properties[1] (θ, ρ_d, ϕ)	Saturated Hydraulic Conductivity[2]		Moisture Characteristics[3]					Unsaturated Hydraulic Conductivity	Particle Size[4]			Effective Porosity	Particle Density	Air Permeability	1/3, 15 Bar Points and Water Holding Capacity	Atterberg Limits	Proctor Compaction
		CH	FH	HC	PP	TH	WP	RH		DS	WS	H						
TS-085 (1.72)	X	X		X	X		X	X	X									
TS-085 (1.82)	X	X		X	X		X	X	X									

[1] θ = Initial moisture content, ρ_d = Dry bulk density, ϕ = Calculated porosity
[2] CH = Constant head, FH = falling head
[3] HC = Hanging column, PP = Pressure plate, TH = Thermocouple psychrometer, WP = Water activity meter, RH = Relative humidity box
[4] DS = Dry sieve, WS = Wet sieve, H = Hydrometer

Summary of Initial Moisture Content, Dry Bulk Density Wet Bulk Density and Calculated Porosity

Sample Number	Initial Moisture Content Gravimetric (%, g/g)	Initial Moisture Content Volumetric (%, cm^3/cm^3)	Dry Bulk Density (g/cm^3)	Wet Bulk Density (g/cm^3)	Calculated Porosity (%)
TS-085 (1.72)	6.6	11.2	1.71	1.82	35.5
TS-085 (1.82)	7.1	12.7	1.80	1.92	32.2

Summary of Saturated Hydraulic Conductivity Tests

Sample Number	K_{sat} (cm/sec)	Method of Analysis	
		Constant Head	Falling Head
TS-085 (1.72)	2.7E-05	X	
TS-085 (1.82)	5.4E-06	X	

Summary of Moisture Characteristics of the Initial Drainage Curve

Sample Number	Pressure Head (-cm water)	Moisture Content (%, cm^3/cm^3)
TS-085 (1.72)	0	33.8
	24	33.5
	51	32.8
	135	27.6
	510	20.4
	14277	10.4
	851293	3.7
TS-085 (1.82)	0	31.9
	29	31.9
	128	30.8
	510	22.7
	7343	13.1
	16623	10.2
	851293	1.5

Summary of Calculated Unsaturated Hydraulic Properties

Sample Number	α (cm^{-1}) Calculated Value	N (dimensionless) Calculated Value	θ_r	θ_s
TS-085 (1.72)	0.0118	1.2788	0.0163	0.3457
TS-085 (1.82)	0.0045	1.2814	0.0000	0.3237

Raw Laboratory Data and Graphical Plots

Summary of Initial Moisture Content, Dry Bulk Density Wet Bulk Density and Calculated Porosity

Sample Number	Initial Moisture Content Gravimetric (%, g/g)	Initial Moisture Content Volumetric (%, cm^3/cm^3)	Dry Bulk Density (g/cm^3)	Wet Bulk Density (g/cm^3)	Calculated Porosity (%)
TS-085 (1.72)	6.6	11.2	1.71	1.82	35.5
TS-085 (1.82)	7.1	12.7	1.80	1.92	32.2

Daniel B. Stephens & Associates, Inc.

Data for Initial Moisture Content, Bulk Density, Porosity, and Percent Saturation

Job Name: TRC-Waste Disposal
Job Number: L078.01
Sample Number: TS-085 (1.72)
Ring Number: NA
Depth: NA

Test Date: 3-Jan-02

Field weight of sample* (g): 520.56
Tare weight, ring (g): 102.97
Tare weight, cap/plate/epoxy (g): 0.00

Dry weight of sample (g): 391.87
Sample volume (cm^3): 229.43
Assumed particle density: 2.65

Initial Volumetric Moisture Content (% vol): 11.2

Initial Gravimetric Moisture Content (% g/g): 6.6

Dry bulk density (g/cm^3): 1.71

Wet bulk density (g/cm^3): 1.82

Calculated Porosity (% vol): 35.5

Percent Saturation: 31.5

Comments:

* Weight including tares

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Data for Initial Moisture Content, Bulk Density, Porosity, and Percent Saturation

Job Name: TRC-Waste Disposal
Job Number: L078.01
Sample Number: TS-085 (1.82)
Ring Number: NA
Depth: NA

Test Date: 3-Jan-02

Field weight of sample* (g): 541.92
Tare weight, ring (g): 102.08
Tare weight, cap/plate/epoxy (g): 0.00

Dry weight of sample (g): 410.70
Sample volume (cm^3): 228.59
Assumed particle density: 2.65

Initial Volumetric Moisture Content (% vol): 12.7

Initial Gravimetric Moisture Content (% g/g): 7.1

Dry bulk density (g/cm^3): 1.80

Wet bulk density (g/cm^3): 1.92

Calculated Porosity (% vol): 32.2

Percent Saturation: 39.6

Comments:

* Weight including tares

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Summary of Saturated Hydraulic Conductivity Tests

Sample Number	K_{sat} (cm/sec)	Method of Analysis	
		Constant Head	Falling Head
TS-085 (1.72)	2.7E-05	X	
TS-085 (1.82)	5.4E-06	X	

Daniel B. Stephens & Associates, Inc.

Saturated Hydraulic Conductivity
Constant Head Method

Job name: TRC-Waste Disposal
Job number: L078.01
Sample number: TS-085 (1.72)
Ring number: NA
Depth: NA

Type of water used: TAP
Collection vessel tare (g)*:* 11.81
Sample length (cm)*:* 7.60
Sample diameter (cm)*:* 6.20
Sample x-sectional area (cm^2)*:* 30.20

Date	Time	Temp (°C)	Head (cm)	Q + Tare (g)	Q (cm^3)	Elapsed time (sec)	Ksat (cm/sec)	Ksat @ 20°C (cm/sec)
Test # 1:								
07-Jan-02	12:34:59	18.0	9.2	12.7	0.9	948	2.7E-05	2.8E-05
07-Jan-02	12:50:47							
Test # 2:								
08-Jan-02	08:30:58	18.0	9.2	12.7	0.9	1055	2.4E-05	2.5E-05
08-Jan-02	08:48:33							
Test # 3:								
08-Jan-02	11:54:15	18.5	9.2	12.3	0.5	550	2.6E-05	2.7E-05
08-Jan-02	12:03:25							

Average Ksat* (cm/sec)*: **2.7E-05**

Comments:

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Daniel B. Stephens & Associates, Inc.

Saturated Hydraulic Conductivity
Constant Head Method

Job name:	TRC-Waste Disposal	*Type of water used:*	TAP
Job number:	L078.01	*Collection vessel tare* (g):	10.97
Sample number:	TS-085 (1.82)	*Sample length* (cm):	7.57
Ring number:	NA	*Sample diameter* (cm):	6.20
Depth:	NA	*Sample x-sectional area* (cm^2):	30.20

Date	Time	Temp (°C)	Head (cm)	Q + Tare (g)	Q (cm^3)	Elapsed time (sec)	Ksat (cm/sec)	Ksat @ 20°C (cm/sec)
Test # 1:								
07-Jan-02	12:33:31	18.0	75.5	12.2	1.3	789	5.3E-06	5.5E-06
07-Jan-02	12:46:40							
Test # 2:								
08-Jan-02	08:30:18	18.0	75.5	12.7	1.7	1133	4.9E-06	5.1E-06
08-Jan-02	08:49:11							
Test # 3:								
08-Jan-02	11:54:50	18.5	75.5	11.9	0.9	550	5.3E-06	5.5E-06
08-Jan-02	12:04:00							

***Average Ksat* (cm/sec):** **5.4E-06**

Comments:

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: D. O'Dowd

Summary of Moisture Characteristics of the Initial Drainage Curve

Sample Number	Pressure Head (-cm water)	Moisture Content (%, cm^3/cm^3)
TS-085 (1.72)	0	33.8
	24	33.5
	51	32.8
	135	27.6
	510	20.4
	14277	10.4
	851293	3.7
TS-085 (1.82)	0	31.9
	29	31.9
	128	30.8
	510	22.7
	7343	13.1
	16623	10.2
	851293	1.5

Summary of Calculated Unsaturated Hydraulic Properties

Sample Number	α (cm^{-1}) Calculated Value	**N** (dimensionless) Calculated Value	θ_r	θ_s
TS-085 (1.72)	0.0118	1.2788	0.0163	0.3457
TS-085 (1.82)	0.0045	1.2814	0.0000	0.3237

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Hanging Column/Pressure Plate/Thermocouple

(Main Drainage Curve)

Job Name:	TRC-Waste Disposal	*Dry wt. of sample* (g):	391.87
Job Number:	L078.01	*Tare wt., screen & clamp* (g):	25.38
Sample Number:	TS-085 (1.72)	*Tare wt., ring* (g):	102.97
Ring Number:	NA	*Tare wt., epoxy* (g):	0.00
Depth:	NA	*Sample volume* (cm^3):	229.43

Saturated weight at 0 cm tension* (g): 597.84
Volume of water† in saturated sample (cm^3): 77.62
Saturated moisture content (% vol): 33.83
Sample bulk density (g/cm^3): 1.71

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Hanging column:	10-Jan-02 / 10:00	597.84	0.00	33.83
	14-Jan-02 / 09:25	597.10	23.50	33.51
	16-Jan-02 / 15:30	595.58	50.50	32.85
	19-Jan-02 / 15:00	583.64	134.60	27.64
Pressure plate:	21-Jan-02 / 09:00	567.04	509.90	20.41

Comments:

* Weight including tares
† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: R. Smith

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Water Activity Meter/Relative Humidity Box

(Main Drainage Curve)

Job Name: TRC-Waste Disposal
Job Number: L078.01
Sample Number: TS-085 (1.72)
Ring Number: NA
Depth: NA

Dry weight of water activity meter sample* (g): 155.85
Tare weight, jar (g): 113.61
Sample bulk density (g/cm^3): 1.71

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Water Activity Meter:	09-Jan-02 / 08:45	158.42	14277.2	10.39

Dry weight of relative humidity box sample* (g): 89.15
Tare weight (g): 38.35
Sample bulk density (g/cm^3): 1.71

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Relative humidity box:	21-Jan-02 / 09:00	90.26	851293	3.73

Comments:

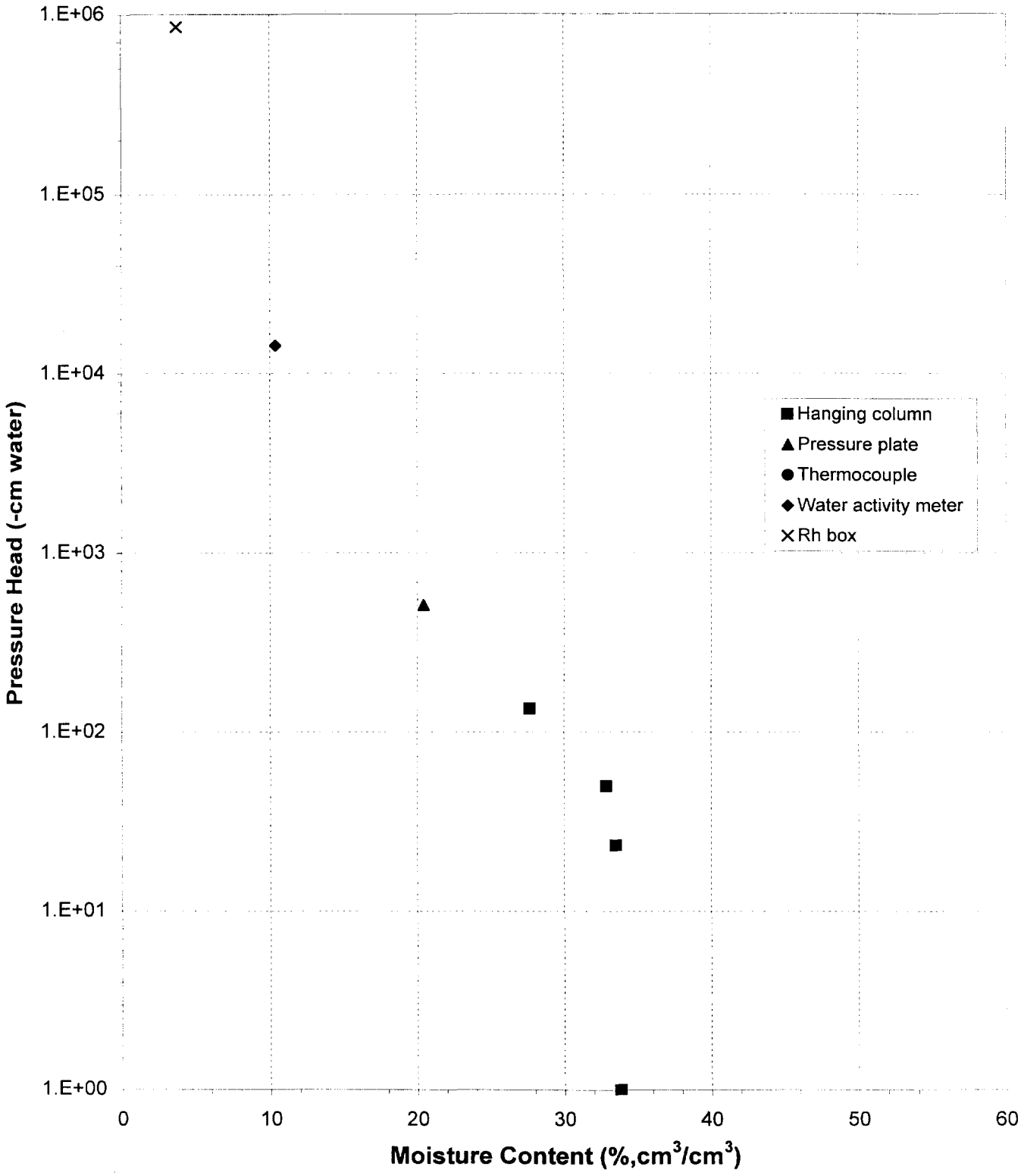
* Weight including tares

† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: R. Smith

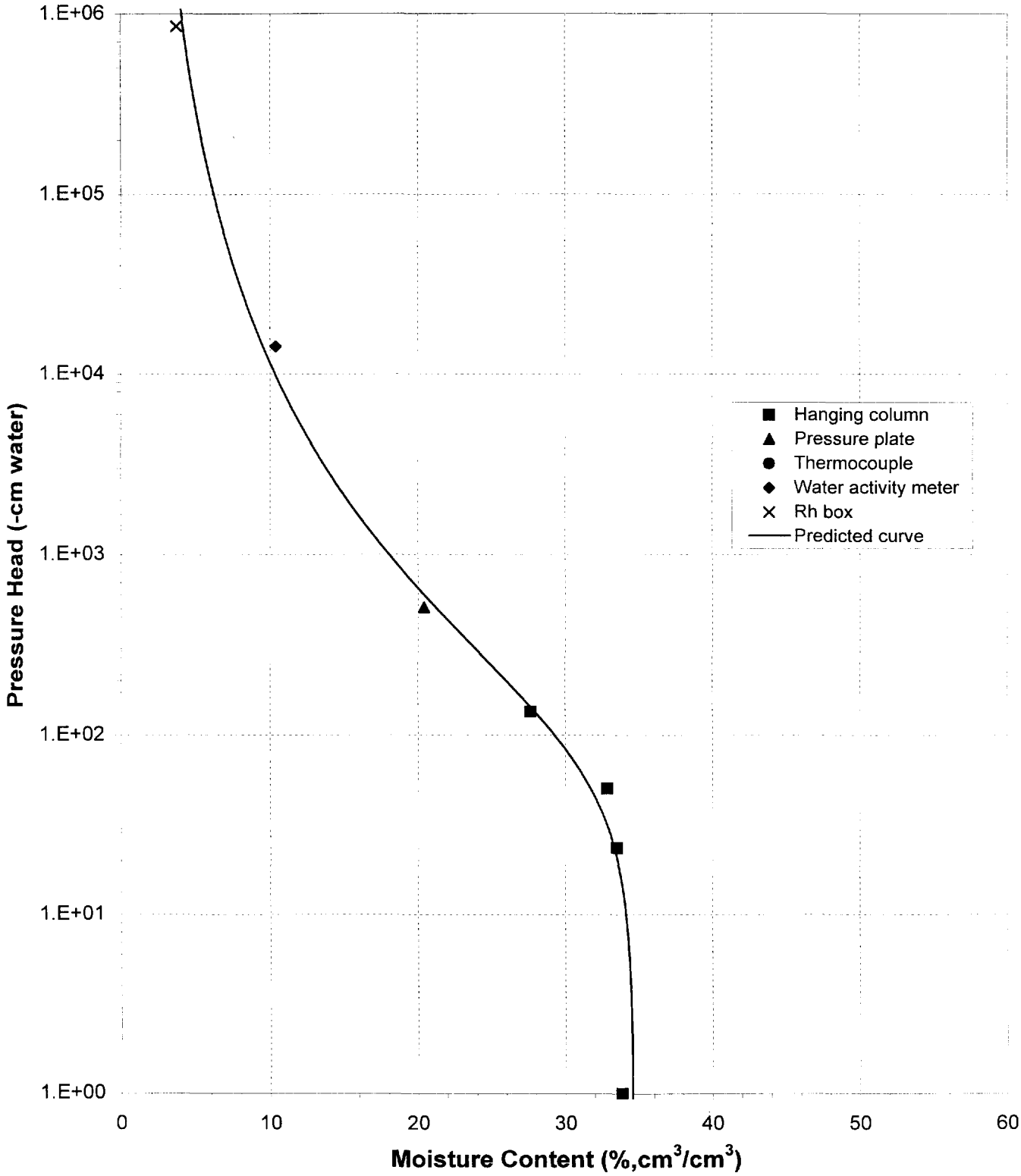
Water Retention Data Points

Sample Number: TS-085 (1.72)



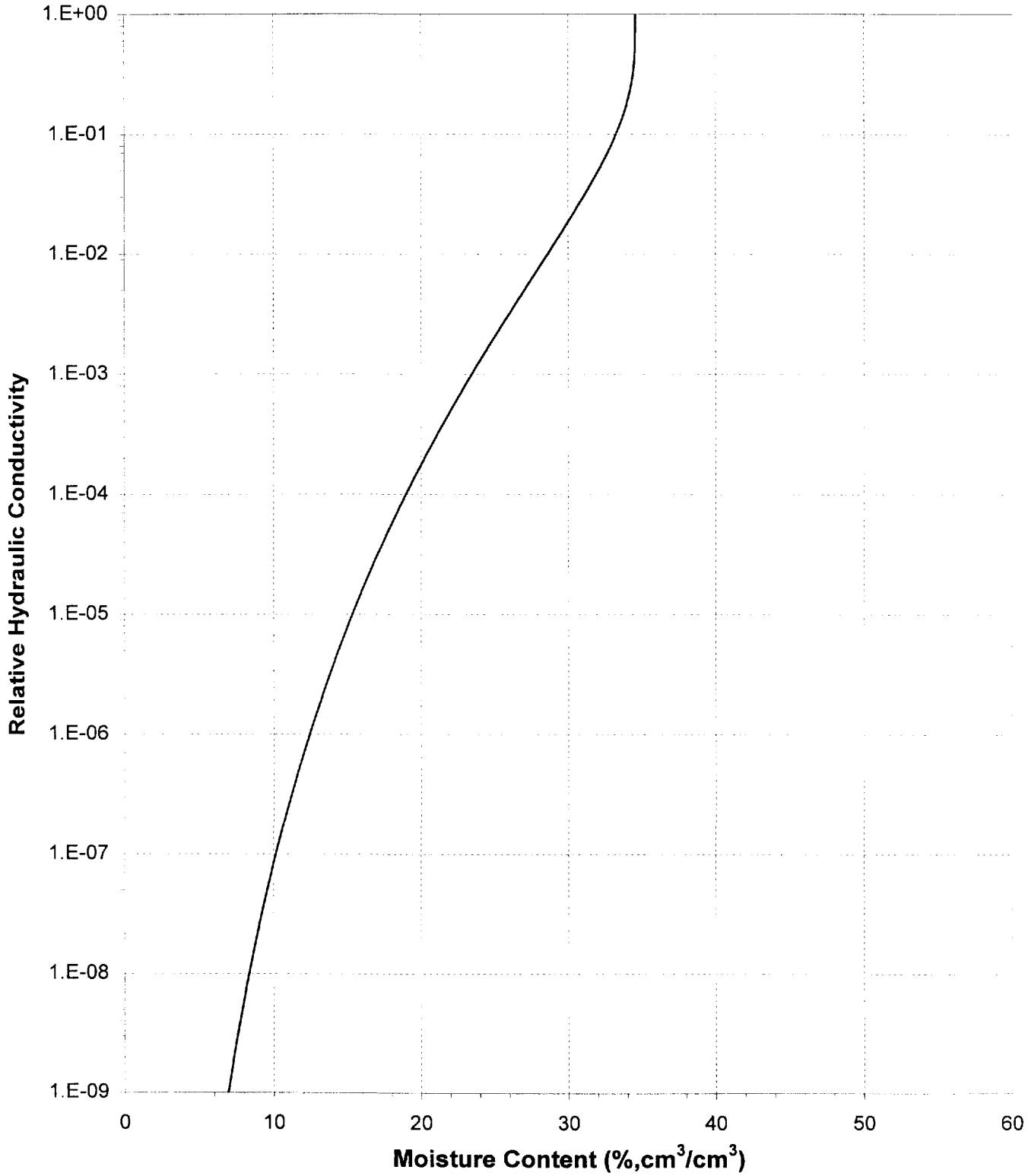
Predicted Water Retention Curve and Data Points

Sample Number: TS-085 (1.72)



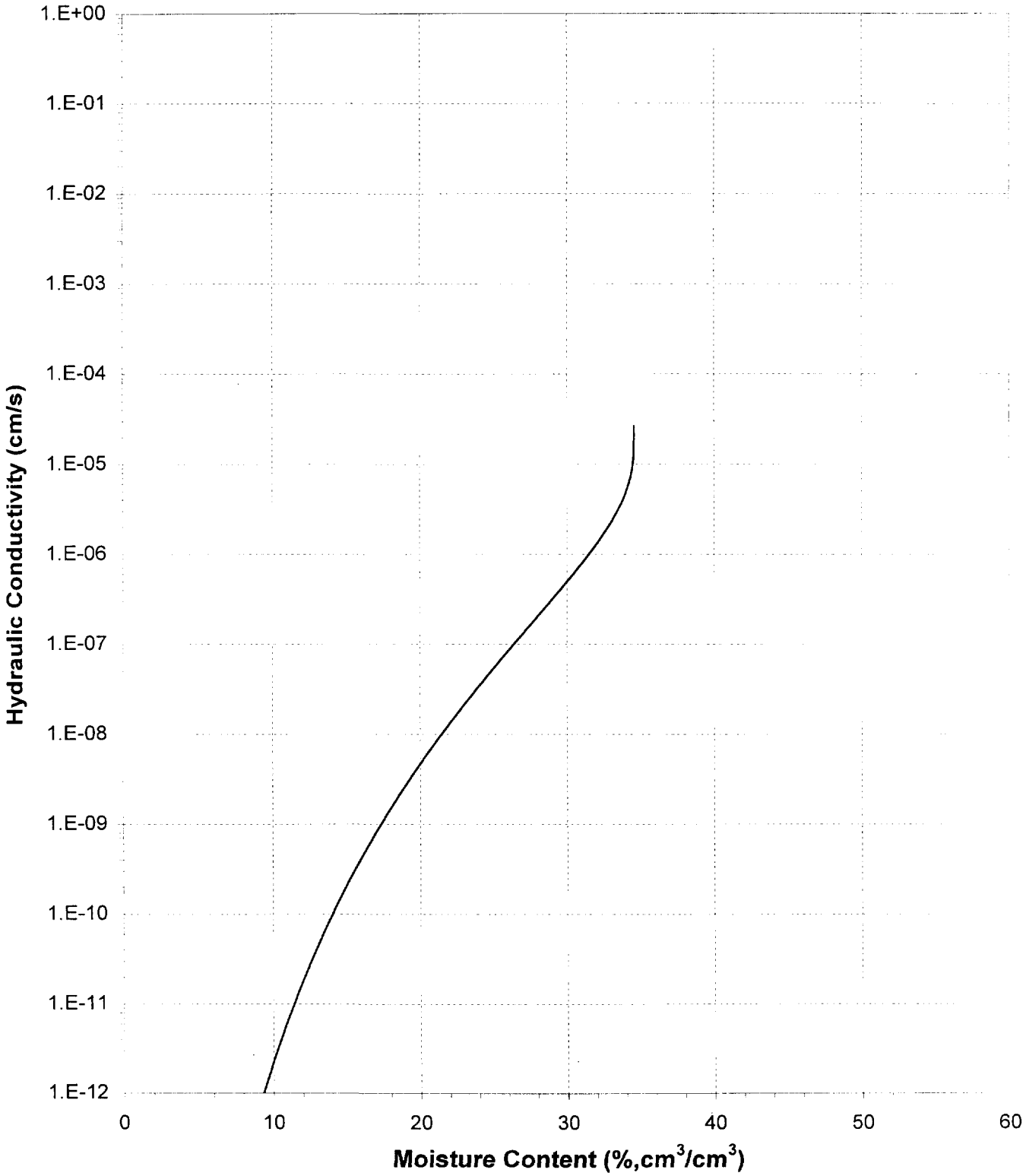
Plot of Relative Hydraulic Conductivity vs Moisture Content

Sample Number: TS-085 (1.72)



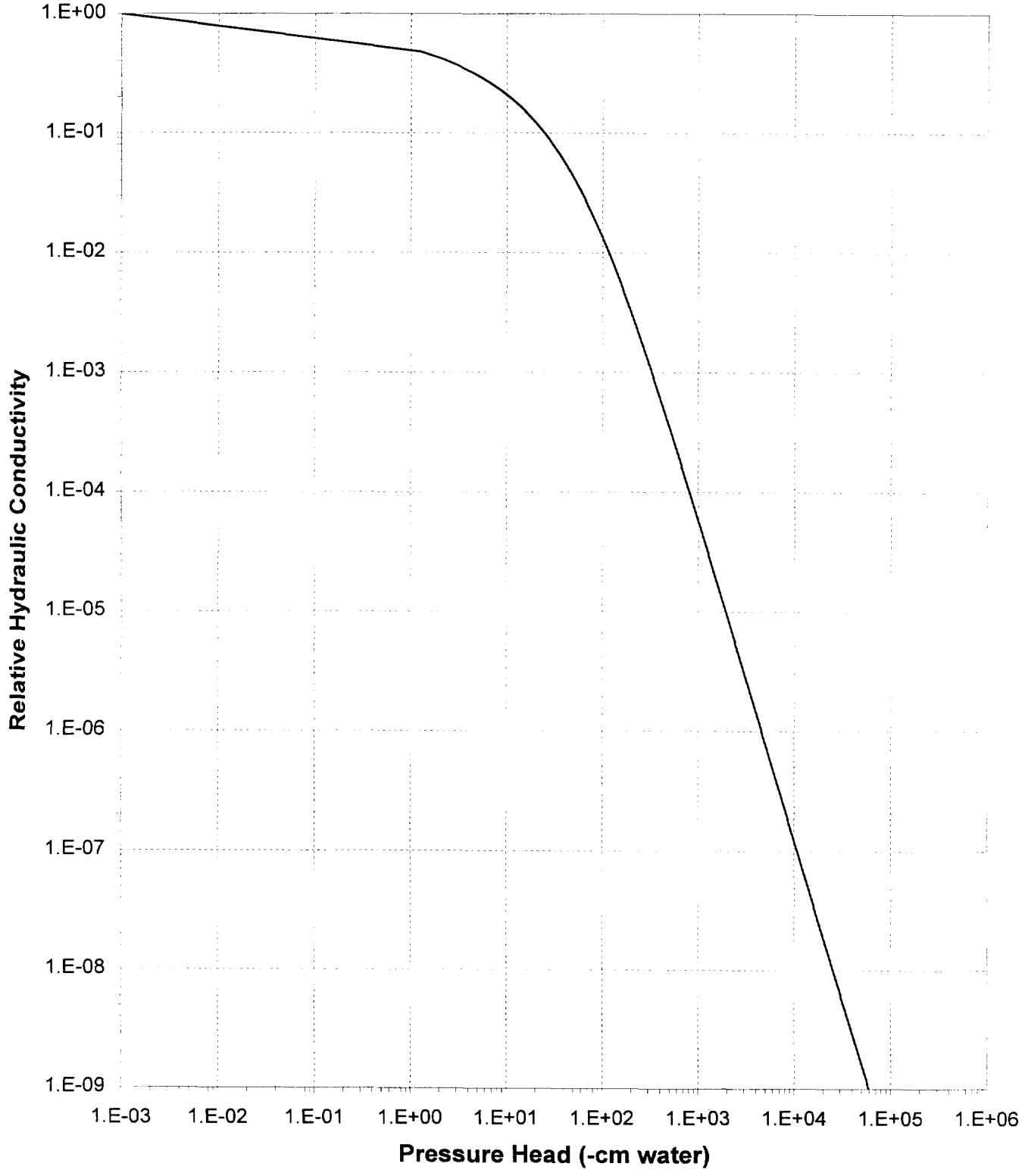
Plot of Hydraulic Conductivity vs Moisture Content

Sample Number: TS-085 (1.72)



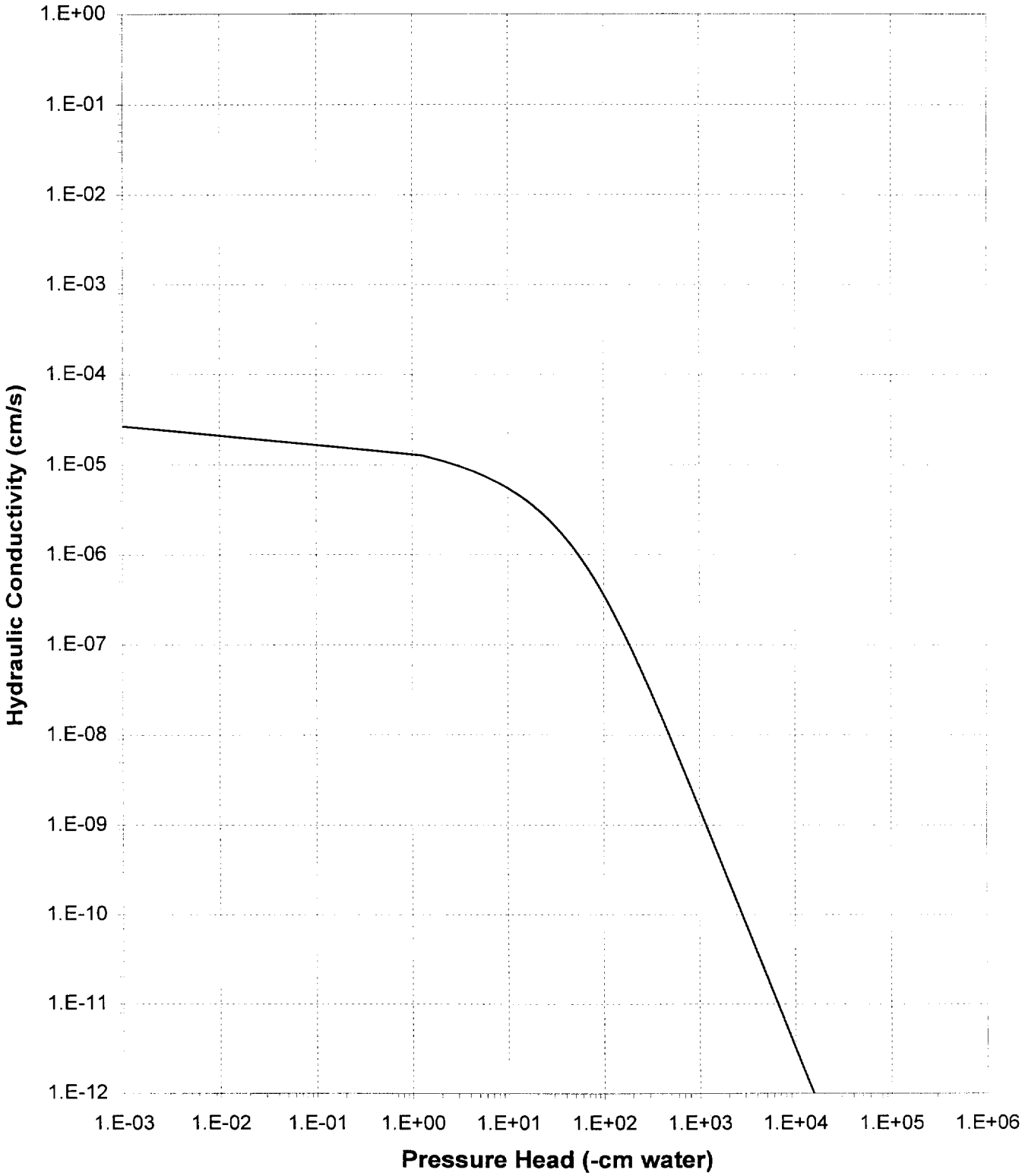
Plot of Relative Hydraulic Conductivity vs Pressure Head

Sample Number: TS-085 (1.72)



Plot of Hydraulic Conductivity vs Pressure Head

Sample Number: TS-085 (1.72)



Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Hanging Column/Pressure Plate/Thermocouple

(Main Drainage Curve)

Job Name:	TRC-Waste Disposal	*Dry wt. of sample* (g):	410.70
Job Number:	L078.01	*Tare wt., screen & clamp* (g):	26.38
Sample Number:	TS-085 (1.82)	*Tare wt., ring* (g):	102.08
Ring Number:	NA	*Tare wt., epoxy* (g):	0.00
Depth:	NA	*Sample volume* (cm^3):	228.59

Saturated weight at 0 cm tension* (g): 612.19
Volume of water† in saturated sample (cm^3): 73.03
Saturated moisture content (% vol): 31.95
Sample bulk density (g/cm^3): 1.80

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Hanging column:	10-Jan-02 / 10:00	612.19	0.00	31.95
	14-Jan-02 / 09:30	611.99	29.30	31.86
	19-Jan-02 / 15:00	609.46	127.80	30.75
Pressure plate:	21-Jan-02 / 09:00	591.07	509.90	22.71

Comments:

* Weight including tares
† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: R. Smith

Daniel B. Stephens & Associates, Inc.

Moisture Retention Data

Water Activity Meter/Relative Humidity Box

(Main Drainage Curve)

Job Name: TRC-Waste Disposal
Job Number: L078.01
Sample Number: TS-085 (1.82)
Ring Number: NA
Depth: NA

Dry weight of water activity meter sample* (g): 147.94
Tare weight, jar (g): 112.96
Sample bulk density (g/cm^3): 1.80

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Water Activity Meter:	08-Jan-02 / 15:00	150.50	7342.6	13.15
	09-Jan-02 / 11:00	149.92	16622.7	10.17

Dry weight of relative humidity box sample* (g): 98.54
Tare weight (g): 38.82
Sample bulk density (g/cm^3): 1.80

	Date/Time	Weight* (g)	Matric Potential (-cm water)	Moisture Content† (% vol)
Relative humidity box:	21-Jan-02 / 09:00	99.03	851293	1.47

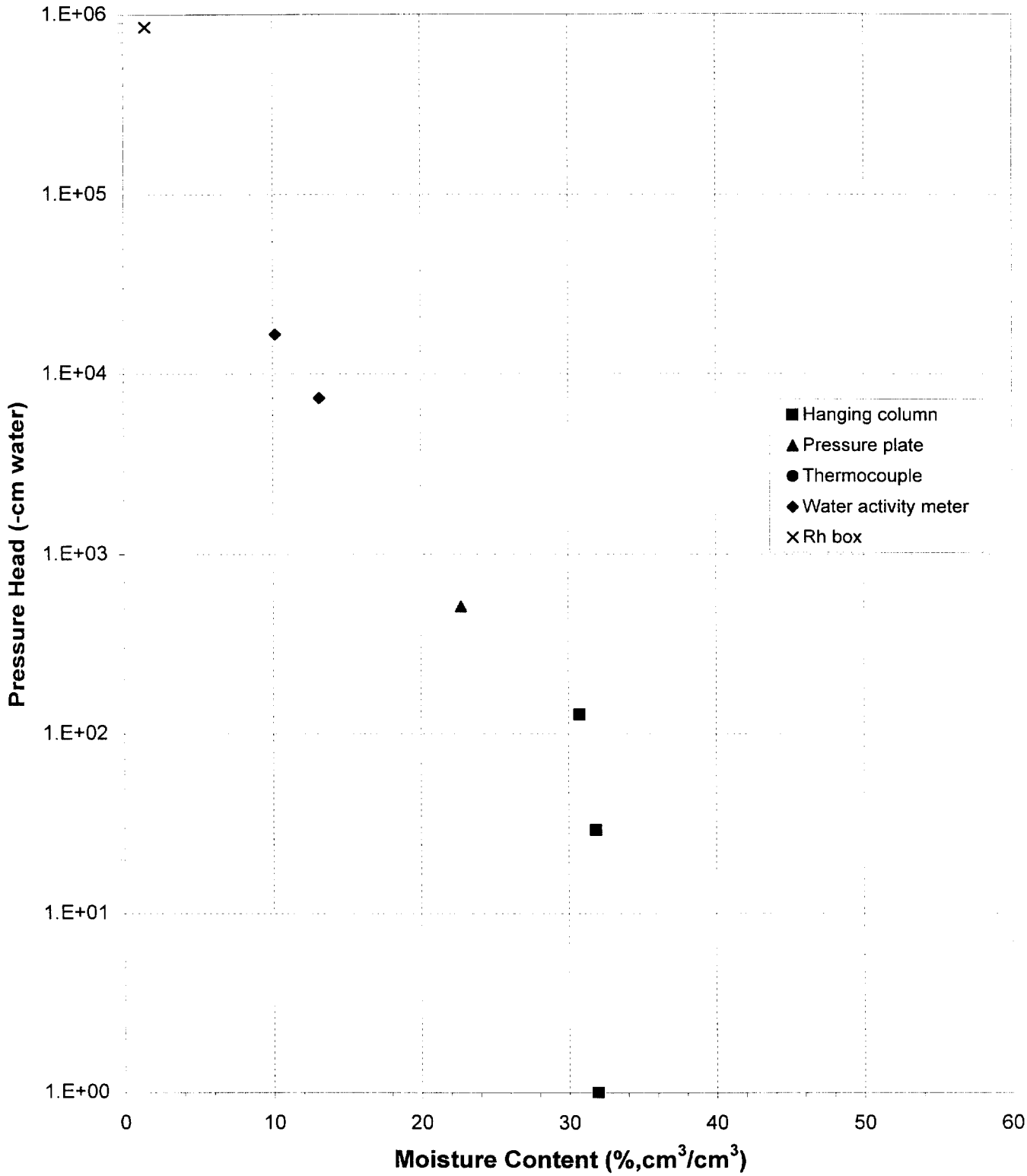
Comments:

* Weight including tares
† Assumed density of water is 1.0 g/cm^3

Laboratory analysis by: D. O'Dowd
Data entered by: D. O'Dowd
Checked by: R. Smith

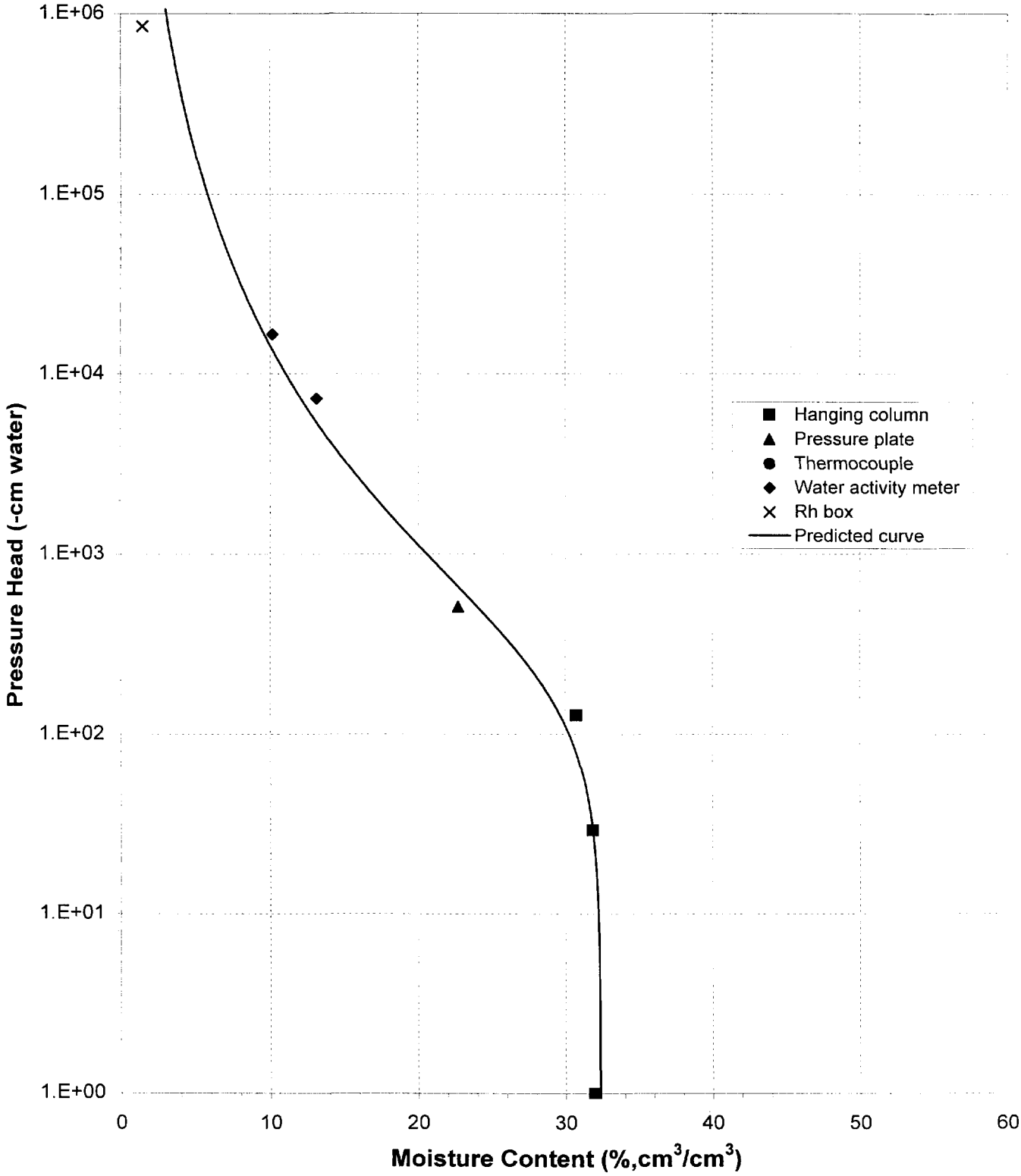
Water Retention Data Points

Sample Number: TS-085 (1.82)



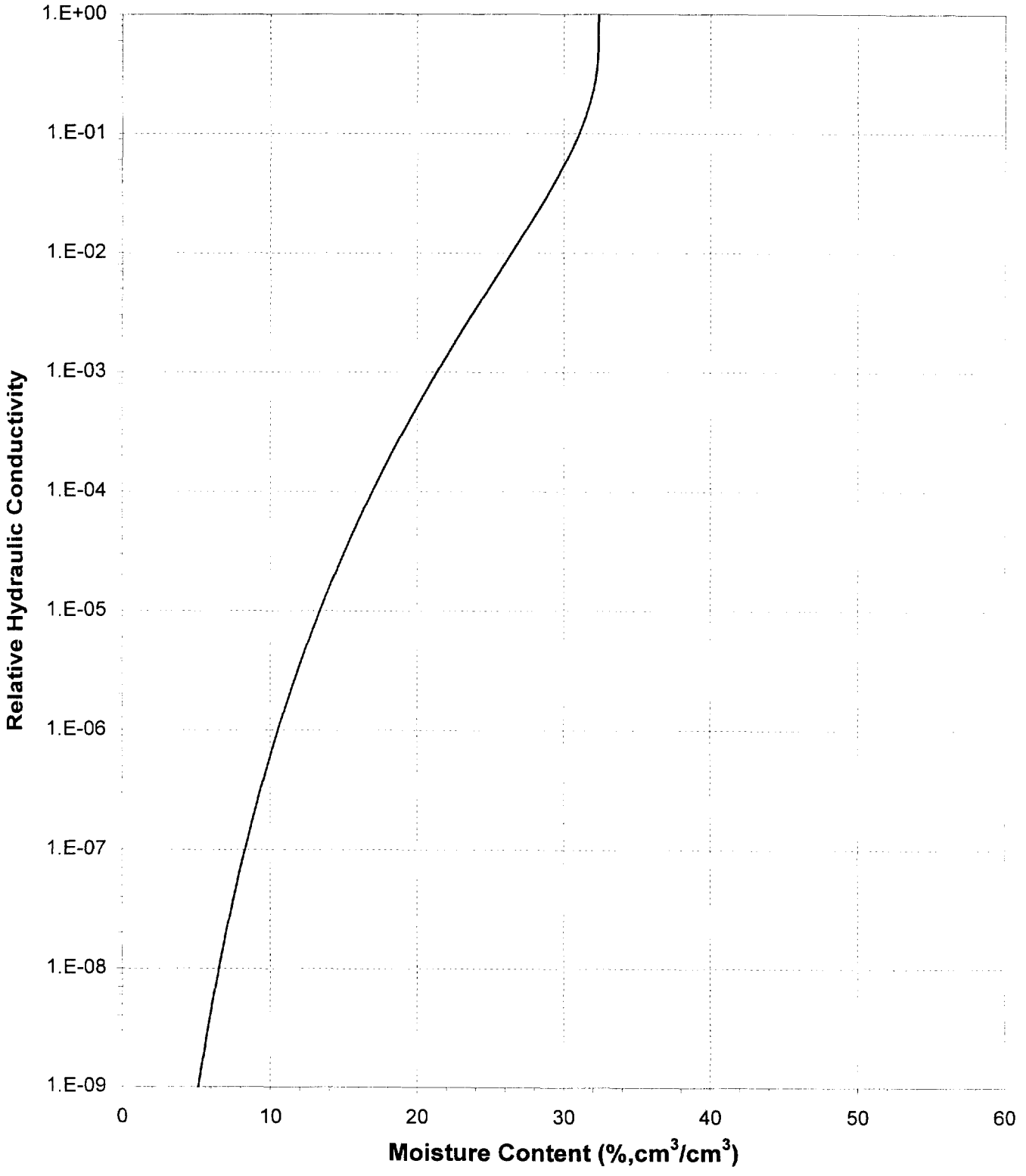
Predicted Water Retention Curve and Data Points

Sample Number: TS-085 (1.82)



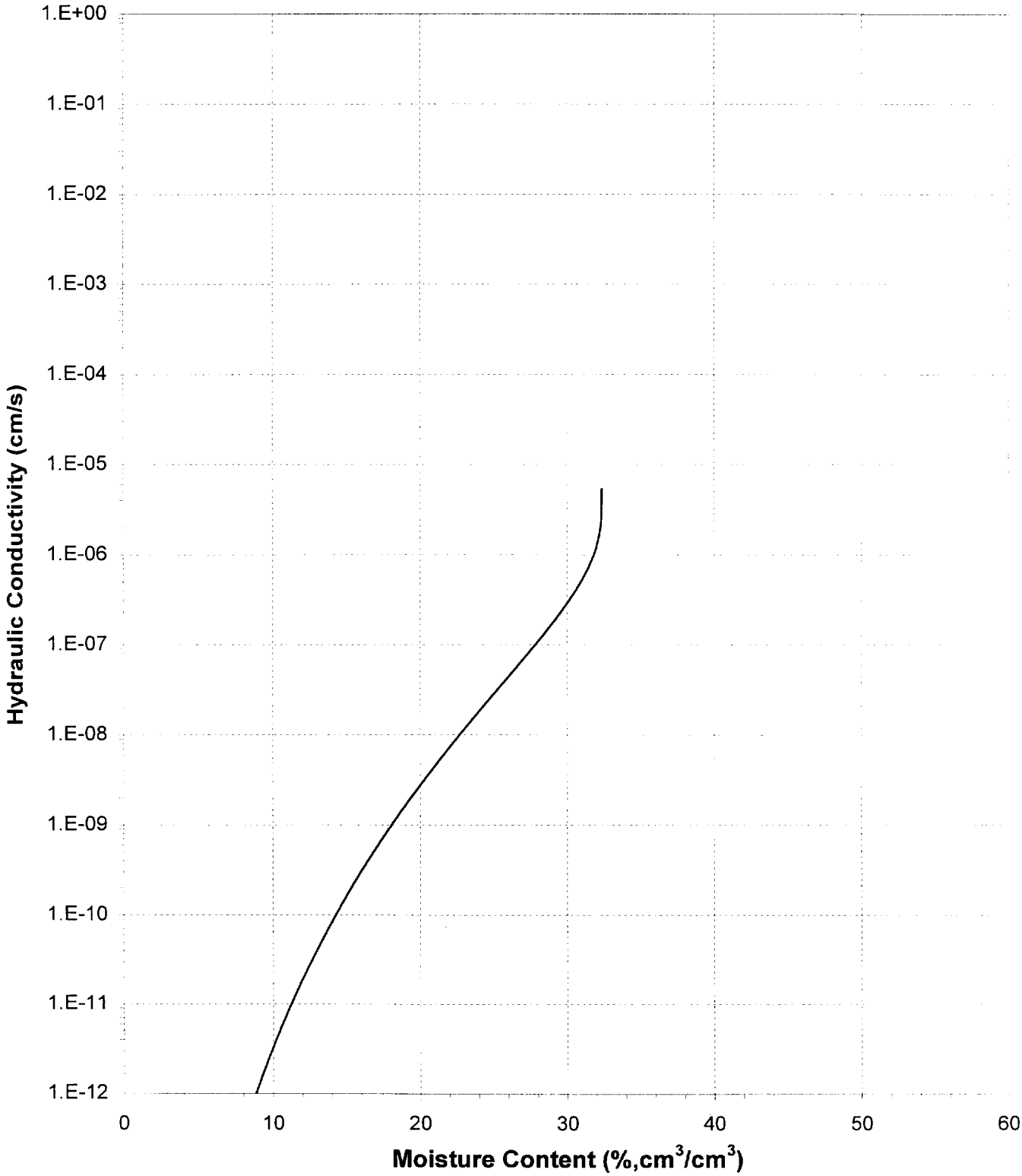
Plot of Relative Hydraulic Conductivity vs Moisture Content

Sample Number: TS-085 (1.82)



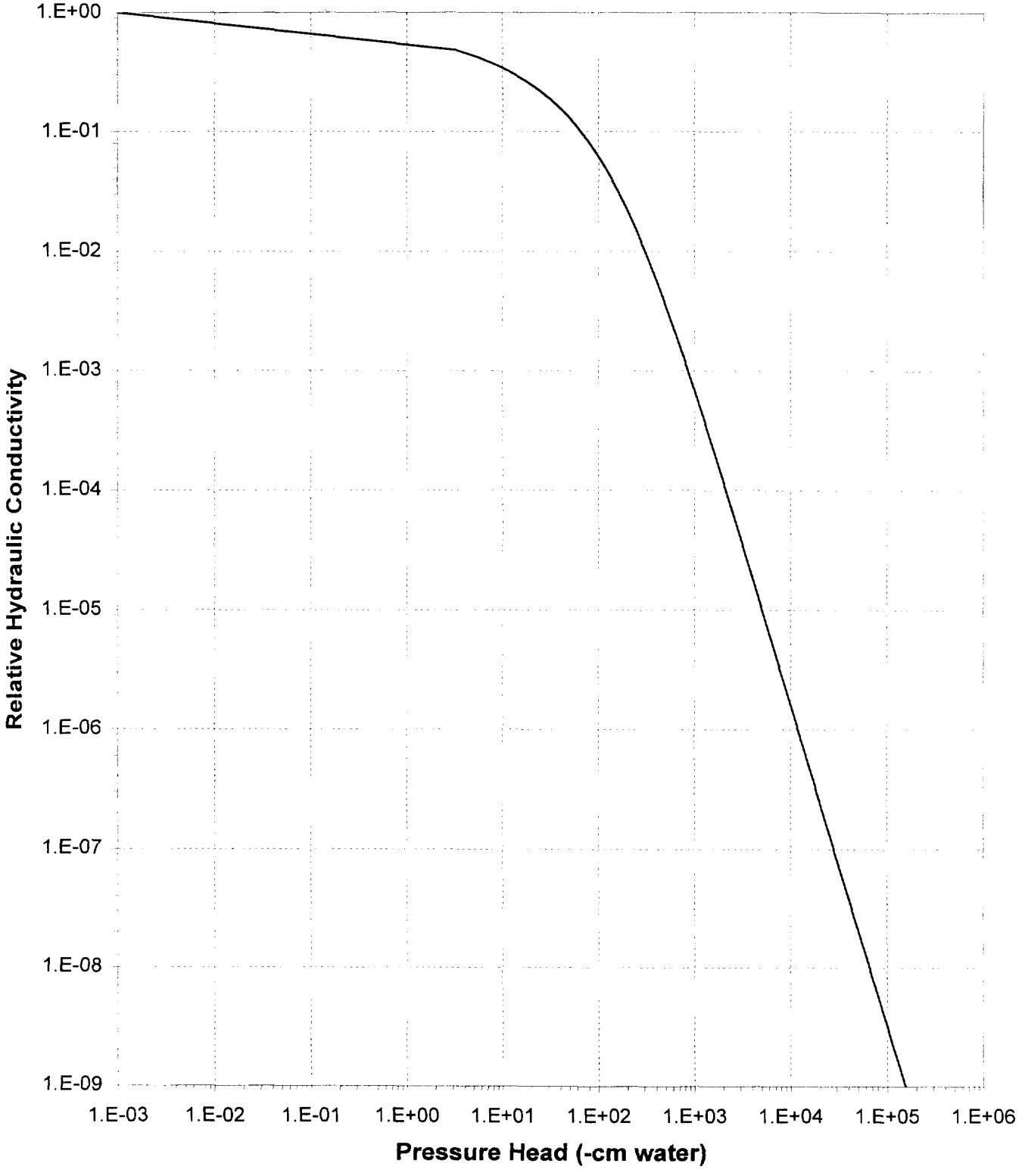
Plot of Hydraulic Conductivity vs Moisture Content

Sample Number: TS-085 (1.82)



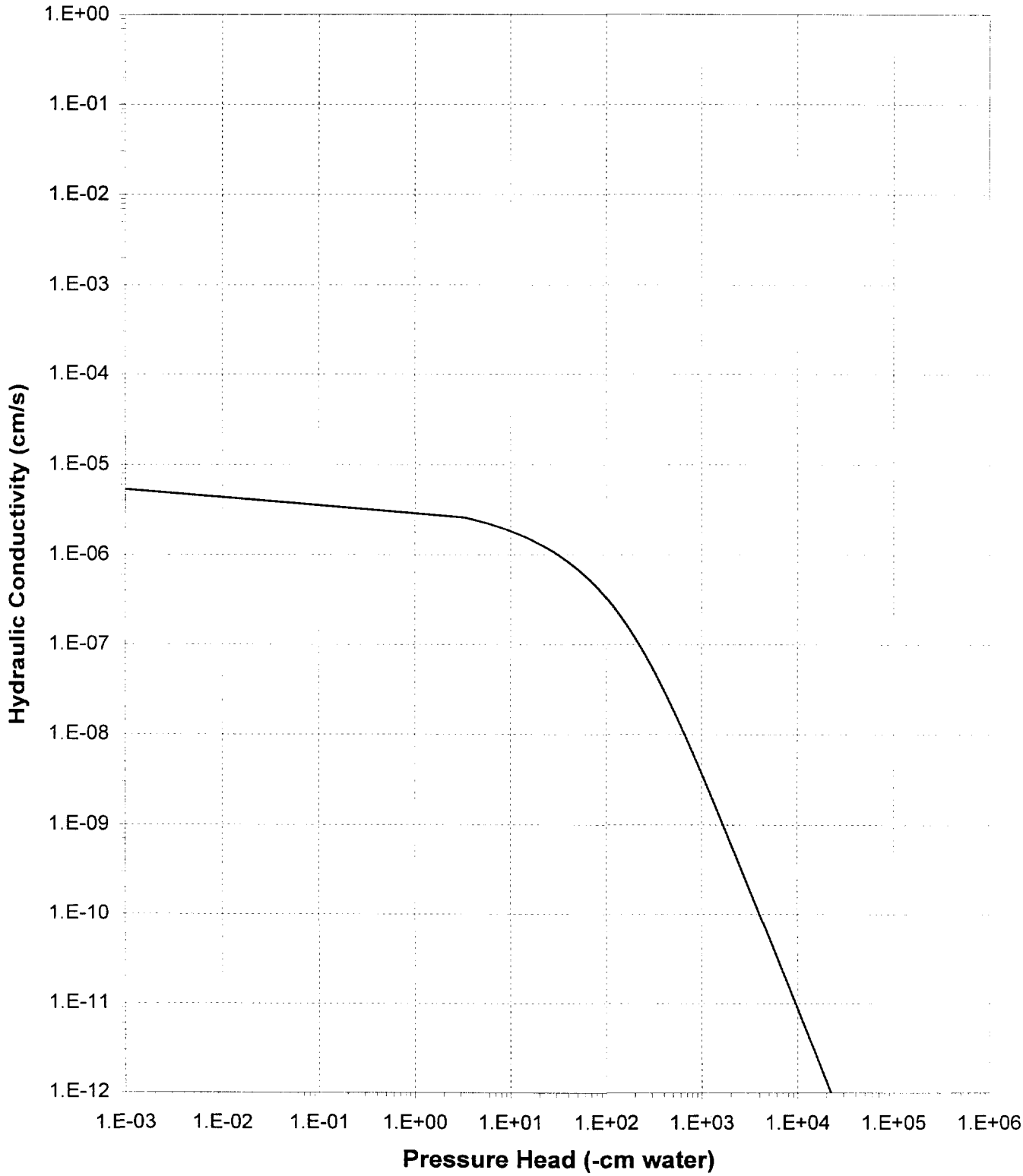
Plot of Relative Hydraulic Conductivity vs Pressure Head

Sample Number: TS-085 (1.82)



Plot of Hydraulic Conductivity vs Pressure Head

Sample Number: TS-085 (1.82)



APPENDIX B – Labaoratory Testing

LABORATORY TESTING

The results of laboratory testing performed in conjunction with this project accompany this appendix. The following laboratory tests were performed on representative samples in accordance with the latest applicable ASTM standards.

CLASSIFICATION

Soils were classified in accordance with ASTM Test Methods D2487 and D2488. The soil classification is presented in the test data and borehole logs.

IN SITU MOISTURE CONTENT AND DRY DENSITY

The field moisture content and in place dry density determinations were performed on relatively undisturbed samples obtained from the test borings. The moisture content was obtained in accordance with ASTM Test Method D2216. The in place dry density was computed using the net weight of the entire (ring) sample.

PARTICLE SIZE (GRADATION) ANALYSIS

Grain size distribution of soil samples were obtained in accordance with ASTM Test Method D422. The results of particle size analysis are graphically presented on the Gradation Curves accompanying this appendix. Gradation analysis tests were supplemented by fines content (percentage passing the #200 sieve) tests in accordance with ASTM Test Method D1140.

ATTERBERG LIMITS

The relative plasticity of a soil, the liquid limit, the plastic limit and plasticity index, were determined in accordance with ASTM Test Method D4318.

CONSOLIDATION TESTS

Consolidation tests were performed on selected relatively undisturbed samples in accordance with procedures outlined in ASTM Test Method D2435. The sample was placed in a consolidometer and loads were applied incrementally in geometric progression. The sample (2.4 inches in diameter and 1 inch in height) was permitted to consolidate under each load increment until the slope of the characteristic linear secondary compression portion of the thickness versus log of time plot was apparent.

The percent consolidation for each load cycle was recorded as the ratio of the amount of vertical compression to the original 1-inch height. Hydroconsolidation (collapse) and/or expansion characteristics were also evaluated by monitoring the change in volume with the addition of water while specimen was confined under a constant normal stress close to the in-situ vertical stress. The consolidation test results are graphically presented and included in this appendix.

DIRECT SHEAR TESTS

Direct shear tests were performed on selected relatively undisturbed soil samples. These samples which were saturated under surcharge equal to the applied normal force during testing. The apparatus used is in