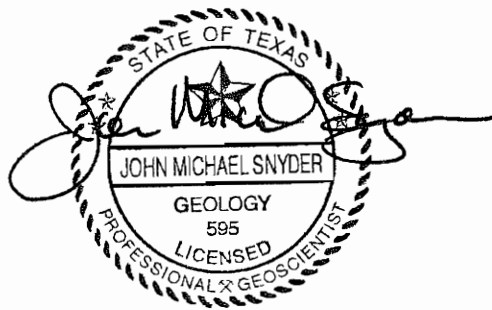


SKYLINE LANDFILL
APPENDIX E2
SITE EXPLORATION DATA

Boring Plan Approval Letter
Boring and Well Location Map
Logs of Borings, Piezometers, and Monitoring Wells

E2-1
E2-2
E2-3 through E2-284



4-12-2012

Bryan W. Shaw, Ph.D., *Chairman*
Buddy Garcia, *Commissioner*
Carlos Rubinstein, *Commissioner*
Mark R. Vickery, P.G., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 3, 2011

Mr. Walter C. Hunt, P.E.
Engineering Manager
North Texas, Oklahoma, and Arkansas Market Area
Waste Management of Texas, Inc.
P. O. Box 400
Ferris, Texas 75125-0400

Re: Waste Management Skyline Recycling and Disposal Facility – Dallas and Ellis
Counties
Municipal Solid Waste (MSW) – Permit No. 42C
Proposed Site Investigation
Tracking Nos. 14644996 and 14676474

Dear Mr. Hunt:

We received a revised soil boring plan (SBP) on April 26, 2011, for the referenced MSW landfill facility, in response to our letter dated April 11, 2011. The revised SBP is dated April 21, 2011, and was submitted on your behalf by Ms. Elizabeth Floyd, P.G., of Biggs & Mathews Environmental, Mansfield, Texas.

The revised SBP proposes 22 borings in an approximately 129.1-acre expansion area, including 106.8 acres of existing permitted landfill footprint proposed to be deepened, and 22.3 acres of the property that has not previously been part of the footprint. The revised SBP states that all of the borings will be drilled to an elevation at least 30 feet deeper than the elevation of the deepest excavation (proposed at 377 feet above sea level). Our review indicates that the revised plan complies with the Municipal Solid Waste Regulations; this letter constitutes approval of the plan.

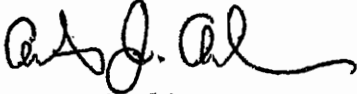
Please be advised that under Title 30 Texas Administrative Code, Chapter 330, Section 330.63(e)(4)(B), the uppermost aquifer and any hydraulically interconnected aquifers below the site must be identified, as well as the underlying confining unit. It is anticipated that this SBP, when implemented, will accurately characterize the in-situ geologic, hydrologic, and engineering properties of the surface and subsurface strata at this site. Although this plan appears to comply with the Municipal Solid Waste Regulations concerning site investigations, additional soil borings and piezometers could be required by the Commission if the data generated by this SBP is inconclusive.

If you should find it necessary to modify this approved SBP, another plan detailing any proposed modifications must be submitted to the Commission for approval before implementation of the modifications.

Mr. Walter C. Hunt, P.E.
Page 2
May 3, 2011

If you have questions regarding this letter, please contact me by telephone at (512) 239-4419, or in writing at the address on our letterhead (please include mail code MC 124 on the first line of our address).

Sincerely,

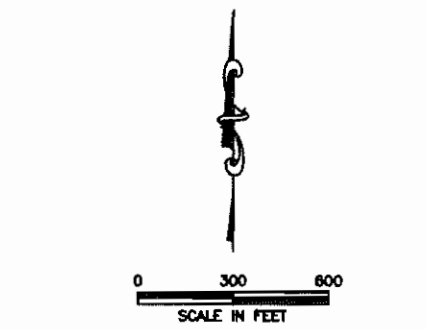
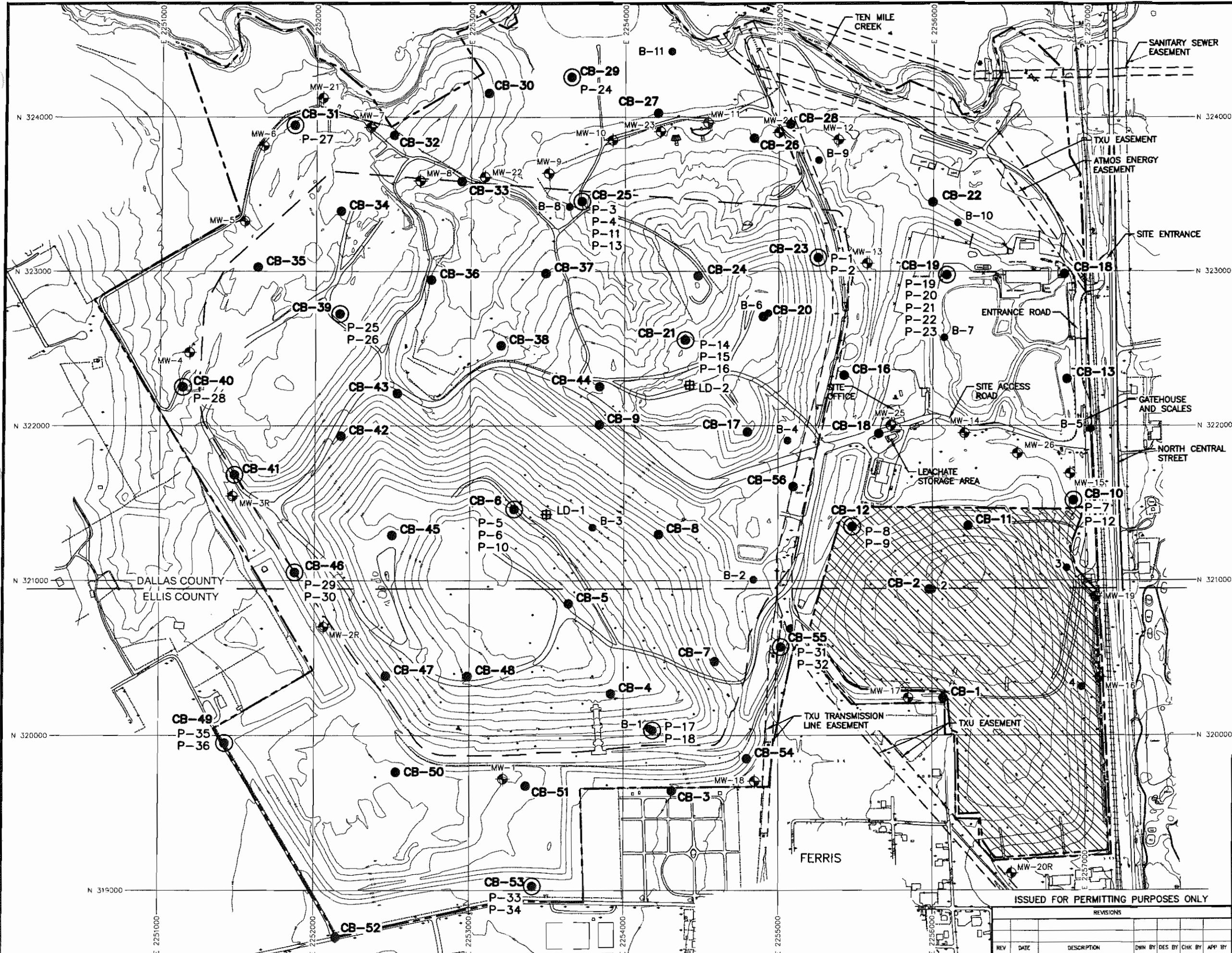


Arten J. Avakian, P.G.
Municipal Solid Waste Permits Section
Waste Permits Division
Texas Commission on Environmental Quality

AJA/fp

cc: Ms. Paula Carboni, Waste Management of Texas, Inc., Ferris
Ms. Elizabeth Floyd, P.G., Biggs & Mathews Environmental, Mansfield

J:\101\01\120\ATT\E2-2_BoringLocs.dwg Layout: Layout 1 User: scundiff



- LEGEND**
- PERMIT BOUNDARY
 - LANOFILL FOOTPRINT
 - MW-5 EXISTING MONITORING WELL
 - CB-17 BORING
 - P-1 PIEZOMETER
 - ⊕ LD-1 LARGE DIAMETER BORING
 - ▨ PRE-SUBTITLE D AREA WITH FINAL COVER

- NOTES:**
1. MONITORING WELL LOCATION MAP MODIFIED FROM ORIGINAL HDR DRAWING.
 2. EXISTING CONTOURS COMPILED BY AEROMETRIC FROM AERIAL PHOTOGRAPHY, FLOWN MARCH 6, 2011. COORDINATE SYSTEM IS BASED ON TEXAS STATE PLANE NAD 27, TEXAS NORTH CENTRAL ZONE, US FEET.



BORING AND WELL LOCATION MAP
WASTE MANAGEMENT OF TEXAS, INC.
SKYLINE LANDFILL
MAJOR PERMIT AMENDMENT



BIGGS & MATHEWS
ENVIRONMENTAL
CONSULTING ENGINEERS
 MANFIELD • WICHITA FALLS
 817-563-1144

ISSUED FOR PERMITTING PURPOSES ONLY				REVISIONS		TBPE FIRM NO. F-256	TBPG FIRM NO. 50222
DSN.	JMS	DATE :	02/12			FIGURE	
DWN.	SRC	SCALE :	GRAPHIC			E2-2	
CHK.	JMS	DWG :	E2-2_BoringLocs.dwg				
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY	

**BIGGS AND MATHEWS
BORINGS**

KEY TO SOIL CLASSIFICATION TERMS AND SYMBOLS



SOIL OR ROCK TYPES (shown in symbols column)

CLAY	LEAN CLAY	CLAY, sandy	CLAY, shaley	CLAY, silty	SILT	SILT, clayey	GRAVEL	GRAVEL, silty	GRAVEL, sandy	GRAVEL, clayey	SHALE	SHALE, clayey	SHALE, silty
SHALE, weathered	SHALE, gravelly	SAND	SAND, shaley	SAND, silty	SAND, clayey	SAND, gravelly	Sandstone	Limestone	Siltstone	Claystone	Solid Waste	Conglomerate	

DRILLING AND SAMPLING SYMBOLS:

A	Auger Sample	T	THD Cone Penetrometer
C	Double Tube Core Barrel		Example: T60 = 60 blows per 12"
D	Denison Sample		T4.5" = 100 blows per 4.5"
S	Split Barrel Sampler - 2" O.D., unless otherwise noted	U	Thin-walled Tube - 3" O.D., unless otherwise noted
	Example: 25 = 25 blows/12" after 6" seating interval;	W	Wash Sample
	50/7 = 50 blows per 7" after 6" seating interval;	PB	Pitcher Barrel
	REF = 50 blows <6"		

RELATIVE DENSITY OF COARSE-GRAINED SOILS

Penetration Resistance <u>Blows/foot</u>	Relative <u>Density</u>
0 - 4	Very loose
4 - 10	Loose
10 - 30	Medium dense
30 - 50	Dense
Over 50	Very dense

CONSISTENCY OF FINE-GRAINED SOILS

Unconfined Compressive <u>Strength, Qu, tsf</u>	<u>Consistency</u>
Less than 0.25	Very soft
0.25 to 0.50	Soft
0.50 to 1.00	Firm
1.00 to 2.00	Stiff
2.00 to 4.00	Very stiff
4.00 and higher	Hard

TERMS CHARACTERIZING SOIL STRUCTURE:

Slickensided:	Having inclined planes of weakness that are slick and glossy in appearance.
Fissured:	Containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
Laminated:	Composed of thin layers of varying color and texture.
Interbedded:	Composed of alternate layers of different soil types.
Calcareous:	Containing appreciable quantities of calcium carbonate.
Well graded:	Having wide range in grain sizes and substantial amounts of all intermediate particle sizes.
Poorly graded:	Predominantly of one grain size, or having a range of sizes with some intermediate size missing.

DEGREE OF WEATHERING:

Unweathered:	Rock in its natural state before being exposed to atmospheric agents.
Slightly weathered:	Noted predominantly by color change with no disintegrated zones.
Weathered:	Complete color change with zones of slightly decomposed rock.
Severely weathered:	Complete color change with consistency, texture, and general appearance approaching soil.

SUBSURFACE CONDITIONS:

Soil and rock descriptions on the boring logs are a compilation of field data as well as from laboratory testing of samples on those strata for which laboratory classification test results are presented on the boring logs. These classifications are based only on the actual samples tested, and the classification is then assigned to the remainder of the stratum interval based on visual classification. If laboratory classification test results are not presented on the boring log for a particular stratum, then that stratum was classified by visual-manual procedures only. The stratification lines represent the approximate boundary between materials and the transition can be gradual.

Classification of soils based upon visual-manual procedures was performed in general accordance with ASTM Standard D 2488. Classification of soils based upon laboratory test results was performed in general accordance with ASTM Standard D 2487.

Water-level observations have been made in the borings at the times indicated. It must be noted that fluctuations in the groundwater level may occur due to variations in rainfall, hydraulic conductivity of soil strata, construction activity, and other factors.

LOG OF BORING NO. CB-9

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253838.8 N 322008.5	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf	
Surface El.: 500.3 ft. msl Completion Depth: 165.0 ft. Date Boring Started: 8/22/11 Date Boring Completed: 8/22/11				MATERIAL DESCRIPTION									
***** Begin 1987 Boring Log - See Note 1 *****				4.25									
5	U		Hard tan & light gray CLAY (CH) w/ slickensides & gypsum crystals	4.5+									
10	U			4.5+									
15	U			4.5+		27		82	26	56			
20	U			4.5+									
25	U			4.5+									
30	U			4.5+									
35	U			4.5+		26		91	25	66			
40	U			462.7									
45	U			Hard dark gray CLAYSTONE (CH) fissures	4.5+								
50	U				4.5+		24		92	28	64		
55	U		4.5+										
60	U		4.5+										
65	U		4.5+										
70	U		***** End 1987 Boring Log ***** CLAY, dark gray, hard (CH)	432.7		20		65	26	39			
75	C1												
80	C2												
85	C3												
90	C4												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 502.7' - 432.7' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-9

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253838.8 N 322008.5	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 500.3 ft. msl Completion Depth: 165.0 ft. Date Boring Started: 8/22/11 Date Boring Completed: 8/22/11									
MATERIAL DESCRIPTION												
CLAY, dark gray, hard (CH) <i>(continued)</i>												
105	C5											
110												
115	C6											
120												
125	C7											
130												
135	C8											
140												
145	C9											
150												
155	C10											
160												
165	C11			335.3								
170												
175												
180												
185												
190												
195												
200												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 502.7' - 432.7' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-15

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2255654.4 N 321950.1	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 458.5 ft. msl Completion Depth: 125.0 ft. Date Boring Started: 8/10/11 Date Boring Completed: 8/11/11									
			MATERIAL DESCRIPTION									
5			CLAY, brown and tan (FILL) - shaly									
15				443.0								
18	U		***** Begin 1987 Boring Log - See Note 1 *****	4.5+								
19			Hard dark gray CLAY (CH)	440.0								
20	U		Hard tan & light gray CLAY (CH) w/ slickensides	4.5+								
25	U			4.5+		31		69	29	40		
25			Hard dark gray CLAYSTONE (CH) w/ scattered fossil fragments	433.0								
30	U			4.5+								
35	U			4.5+		21		70	28	42		
40	U			4.5+								
45	U			4.5+								
50	U			4.5+		19		65	27	38		
55	U		***** End 1987 Boring Log *****	403.0								
60	C1		CLAY, dark gray, hard (CH)									
65	C2											
70	C3											
75												
80	C4											
85												
90	C5											
95												
100	C6											

BME LOG NO PAGE# SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations

Date	Depth

Remarks: Grouted. Note 1: Elevation 443' - 403' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-15

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2255654.4 N 321950.1	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 458.5 ft. msl Completion Depth: 125.0 ft. Date Boring Started: 8/10/11 Date Boring Completed: 8/11/11									
			MATERIAL DESCRIPTION									
			CLAY, dark gray, hard (CH) <i>(continued)</i>									
105	C7											
110												
115	C8											
120												
125	C9			333.5								
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations

Date	Depth

Remarks: Grouted. Note 1: Elevation 443' - 403' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-16

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2255431.3 N 322328.0	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
Surface El.: 442.5 ft. msl												
Completion Depth: 110.0 ft.												
Date Boring Started: 8/18/11												
Date Boring Completed: 8/19/11												
MATERIAL DESCRIPTION												
		XXXX	CLAY, brown and tan (FILL)	440.4								
		U	***** Begin 1987 Boring Log - See Note 1 *****	437.9	4.0							
5		U	Hard dark gray CLAY (CH) w/roots & calcareous nodules		2.0	24		69	21	48		
		U	Stiff to hard tan & light gray CLAY (CH)									
10		U	w/scattered slickensides & gypsum		3.25							
15		U			4.5+	27		71	28	43		
20		U	Hard dark gray CLAYSTONE (CH)	423.4	4.5+							
25		U			4.5+	22		65	26	39		
30		U			4.5+	22		63	28	35		
35		U			4.5+							
40		U			4.5+							
45		U			4.5+							
50		U	***** End 1987 Boring Log *****	390.4	4.5+							
55		C1	CLAY, dark gray, hard (CH)									
60		C2										
65		C3										
70		C4										
75		C5										
80		C6										
85		C5										
90		C6										
95		C6										
100												

BME LOG NO PAGE# SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 440.4' - 390.4' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-16

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2255431.3 N 322328.0	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 442.5 ft. msl Completion Depth: 110.0 ft. Date Boring Started: 8/18/11 Date Boring Completed: 8/19/11									
			MATERIAL DESCRIPTION									
105	C7		CLAY, dark gray, hard (CH) <i>(continued)</i>									
110				332.5								
115												
120												
125												
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations

Date	Depth

Remarks: Grouted. Note 1: Elevation 440.4' - 390.4' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-17

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254800.5 N 321960.7	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 524.7 ft. msl Completion Depth: 190.0 ft. Date Boring Started: 8/1/11 Date Boring Completed: 8/2/11									
			MATERIAL DESCRIPTION									
5			CLAY, tan and brown with gray (FILL)									
10												
15												
20												
25												
30												
30			493.5									
30	u		491.6	4.5+								
35	u		***** Begin 1987 Boring Log - See Note 1 ***** Hard dark gray CLAY (CH)	2.5								
40	u		Very stiff to hard tan & light gray CLAY (CH) w/ gypsum	4.5+								
45	u			4.5+								
50	u			4.5+		23		73	28	45		
55	u			4.5+								
60	u			4.5+								
65	u			4.5+		23		79	29	50		
70	u			4.5+								
75	u		451.6	4.5+								
75	u		Hard dark gray CLAYSTONE (CH) w/ scattered fossil fragments	4.5+								
80	u			4.5+		20		85	27	58		
85	u			4.5+								
90	u			4.5+								
95	u			4.5+		18		87	27	60		
100				4.5+								

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 493.5' - 403.5' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-17

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254800.5 N 321960.7	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 524.7 ft. msl Completion Depth: 190.0 ft. Date Boring Started: 8/1/11 Date Boring Completed: 8/2/11									
			MATERIAL DESCRIPTION									
105	U		Hard dark gray CLAYSTONE (CH) w/ scattered fossil fragments (continued)	4.5+								
110	U			4.5+								
115	U											
120	U											
120			***** End 1987 Boring Log *****	403.5								
125	C1		CLAY, dark gray, hard (CH)									
130												
135	C2											
140												
145	C3											
150	C4											
155												
160	C5											
165												
170	C6											
175												
180	C7											
185												
190	C8			334.7								
195												
200												

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations

Date	Depth

Remarks: Grouted. Note 1: Elevation 493.5' - 403.5' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries.
 In situ, the transition may be gradual.

LOG OF BORING NO. CB-20

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254873.5 N 322663.8	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
Surface El.: 541.7 ft. msl Completion Depth: 205.0 ft. Date Boring Started: 8/3/11 Date Boring Completed: 8/5/11				MATERIAL DESCRIPTION								
5			CLAY, tan and brown (FILL)									
10												
15												
20												
25												
30												
35				506.1								
35	U		***** Begin 1987 Boring Log - See Note 1 *****	4.5+								
40	U		Hard dark gray CLAY (CH)	503.2								
40	U		Very stiff tan & light gray CLAY (CH)	3.0								
40	U		- w/ calcareous nodules & slightly silty @ 39.6'	4.0								
45	U		- silty @ 41.6' - 43.6'									
45	U		w/ calcareous nodules									
50	U		- dense @ 48.6'	N=30		19						
50	U		- w/ calcareous gravel at 48.6' - 51.6'	4.5+								
55	U		- w/ slickensides & calcareous nodules @ 53.6'	4.5+								
60	U			4.5+								
65	U			4.6		25		74	27	47		
70	U		w/ gypsum crystals	4.5+								
70	U			470.1								
75	U		Hard dark gray CLAYSTONE (CH)	4.5+								
80	U			4.5+		22		78	25	53		
85	U			4.5+								
90	U			4.5+								
95	U			4.5+								
100	U			4.5+								

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 506.1' - 406.1' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-20

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254873.5 N 322663.8	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 541.7 ft. msl Completion Depth: 205.0 ft. Date Boring Started: 8/3/11 Date Boring Completed: 8/5/11									
MATERIAL DESCRIPTION												
105	U		Hard dark gray CLAYSTONE (CH) <i>(continued)</i>	4.5+		18		79	27	52		
110	U			4.5+								
115	U			4.5+								
120	U		- w/ fossil fragments @ 118.5' - 120.5'	4.5+								
125	U			4.5+								
130	U			4.5+								
135	U		***** End 1987 Boring Log *****	4.5+								
				406.1								
140	C1	CLAY	CLAY, dark gray, hard (CH)									
145		CLAY										
150	C2	CLAY										
155		CLAY										
160	C3	CLAY										
165		CLAY										
170	C4	CLAY										
175	C5	CLAY										
180		CLAY										
185	C6	CLAY										
190		CLAY										
195	C7	CLAY										
200	C8	CLAY										

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 506.1' - 406.1' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-20

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254873.5 N 322663.8	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 541.7 ft. msl Completion Depth: 205.0 ft. Date Boring Started: 8/3/11 Date Boring Completed: 8/5/11									
			MATERIAL DESCRIPTION									
205	CB		CLAY, dark gray, hard (CH) <i>(continued)</i>	336.7								
210												
215												
220												
225												
230												
235												
240												
245												
250												
255												
260												
265												
270												
275												
280												
285												
290												
295												
300												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 506.1' - 406.1' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-21

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254391.9 N 322556.1	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
Surface El.: 521.3 ft. msl Completion Depth: 185.0 ft. Date Boring Started: 8/16/11 Date Boring Completed: 8/17/11				MATERIAL DESCRIPTION								
5			CLAY, tan (FILL)									
10												
15												
18				504.2	3.0							
20	U		***** Begin 1987 Boring Log - See Note 1 *****									
20	U		Very stiff dark gray CLAY (CH) w/ roots & gravel	1.25		28		65	25	40		
25	U		- stiff tan & dark gray @ 20' w/ ferrous & calcareous nodules very stiff tan w/clay, sand & gravel partings	495.3	2.75							
25	U		Hard tan & light gray CLAY (CH) w/ slickensides & calcareous nodules									
30	U		- w/ claystone seams @ 30' - 32'		4.5+							
35	U				4.5+							
40	U				4.5+	25		75	27	48		
45	U				4.5+							
45	U		w/gypsum crystals		4.5+							
50	U				4.5+							
55	U			464.2	4.5+							
60	U		Hard dark gray CLAYSTONE (CH) w/ fracture & is fissile									
65	U											
70	U					20		69	28	41		
75	U											
80	U											
85	U											
90	U											
95	U											
100	U											

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 504.2' - 404.2' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-21

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254391.9 N 322556.1	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 521.3 ft. msl Completion Depth: 185.0 ft. Date Boring Started: 8/16/11 Date Boring Completed: 8/17/11									
			MATERIAL DESCRIPTION									
105	U		Hard dark gray CLAYSTONE (CH) w/ fracture & is fissile <i>(continued)</i>			19		67	27	40		
110	U											
115	U		***** End 1987 Boring Log *****									
120	C1		CLAY, dark gray, hard (CH)									
125	C2											
130												
135	C3											
140												
145	C4											
150												
155	C5											
160												
165	C6											
170												
175	C7											
180												
185	C9											
185				404.2								
190												
195												
200												
				336.3								

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 504.2' - 404.2' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-23

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2255259.3 N 323089.6	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 447.6 ft. msl Completion Depth: 115.0 ft. Date Boring Started: 7/20/11 Date Boring Completed: 7/21/11									
			MATERIAL DESCRIPTION									
			***** Begin 1987 Boring Log - See Note 1 ***** "FILL"	446.6								
5	U		Hard tan CLAY (CH)			20		72	22	50		
	U		w/ ferrous & calcareous nodules, slickensides & gypsum crystals			24		74	27	47		
10	U											
	U		Hard dark gray CLAYSTONE (CH)	434.6								
15	U					20		66	27	39		
20	U					23		62	28	34		
25	U											
30	U											
35	U											
40	U											
45	U		***** End 1987 Boring Log ***** CLAY, dark gray, hard (CH)	402.6								
50	C1											
55												
60	C2											
65												
70	C3											
75												
80	C4											
85												
90	C5											
95												
100	C6											

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 447.6' - 402.6' previously drilled by HDR as part of the 1991 application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-23

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2255259.3 N 323089.6	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 447.6 ft. msl Completion Depth: 115.0 ft. Date Boring Started: 7/20/11 Date Boring Completed: 7/21/11									
			MATERIAL DESCRIPTION									
105	C7		CLAY, dark gray, hard (CH) <i>(continued)</i>									
110	C8											
115				332.6								
120												
125												
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 447.6' - 402.6' previously drilled by HDR as part of the 1991 application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries.
 In situ, the transition may be gradual.

LOG OF BORING NO. CB-24

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254472.6 N 322971.9	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 508.7 ft. msl Completion Depth: 175.0 ft. Date Boring Started: 7/18/11 Date Boring Completed: 7/19/11									
			MATERIAL DESCRIPTION									
			***** Begin 1987 Boring Log - See Note 1 *****									
5	U	CH	Hard dark gray CLAY (CH) w/ gypsum crystals, gravel, fossil fragments very stiff - w/ ferrous & calcareous nodules @ 3'	501.7								
10	U	CH	Hard tan & light gray CLAY (CH) - w/ some gravel @ 13'									
15	U	CH			4.5+							
20	U	CH			4.5+							
25	U	CH			4.5+	22		73	25	48		
30	U	CH			4.5+							
35	U	CH	w/ gypsum crystals		4.5+							
40	U	CH	w/ fossil fragments Hard dark gray CLAYSTONE (CH)	467.7								
45	U	CH			4.5+							
50	U	CH			4.5+	20		67	26	41		
55	U	CH			4.5+							
60	U	CH			4.5+							
65	U	CH			4.5+							
70	U	CH			4.5+							
75	U	CH			4.5+	19		75	26	49		
80	U	CH	- w/ fractures @ 78' - 80'		4.5+							
85	U	CH			4.5+							
90	U	CH			4.5+							
95	U	CH			4.5+							
100	U	CH	***** End 1987 Boring Log *****	408.7	4.5+							

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 508.7' - 408.7' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-24

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254472.6 N 322971.9	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 508.7 ft. msl Completion Depth: 175.0 ft. Date Boring Started: 7/18/11 Date Boring Completed: 7/19/11	MATERIAL DESCRIPTION								
105	C1		CLAY, dark gray, hard (CH)									
110	C2											
115	C3											
120	C4											
125	C5											
130	C6											
135	C7											
140	C8											
145	C9											
150	C10											
175				333.7								

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 508.7' - 408.7' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-25

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253720.5 N 323455.3	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
Surface El.: 441. ft. msl Completion Depth: 105.0 ft. Date Boring Started: 7/13/11 Date Boring Completed: 7/14/11				MATERIAL DESCRIPTION								
5	U		***** Begin 1987 Boring Log - See Note 1 ***** Hard tan & gray CLAY (CH) very stiff - w/ slickensides, gypsum nodules & oxidation streaks @ 3' - hard @ 8'	4.5+								
10	U			4.5+		23	74	28	46			
15	U			4.5+								
20	U			4.5+		21	70	26	44			
25	U			418.0	4.5+							
30	U		Hard dark gray CLAYSTONE (CH) w/ occasional fossils	4.5+		16	67	24	43			
35	U			4.5+								
40	U			4.5+		20	62	26	36			
45	U			4.5+								
50	U			391.0	4.5+							
55	C1		CLAY, dark gray, hard (CH)									
60	C2											
65	C3											
70	C4											
75	C5											
80	C6											

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Note 1: Elevation 441.0' - 391.0' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-25

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253720.5 N 323455.3	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 441. ft. msl Completion Depth: 105.0 ft. Date Boring Started: 7/13/11 Date Boring Completed: 7/14/11									
			MATERIAL DESCRIPTION									
105	C7		CLAY, dark gray, hard (CH) <i>(continued)</i>		336.0							
110												
115												
120												
125												
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Note 1: Elevation 441.0' - 391.0' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries.
 In situ, the transition may be gradual.

LOG OF BORING NO. CB-26

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254839.0 N 323864.5	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 422.7 ft. msl Completion Depth: 90.0 ft. Date Boring Started: 7/15/11 Date Boring Completed: 7/15/11									
MATERIAL DESCRIPTION												
	U		***** Begin 1987 Boring Log - See Note 1 ***** Hard tan CLAY (CH) - w/ roots to 2' & occasional gravel	4.5+								
5	U		- very stiff tan & dark gray @ 8'	4.0		26		70	26	44		
10	U			2.25								
15	U			1.00		28		73	26	47		
20	U		- w/ calcareous nodules @ 18'	1.00								
25	U		- w/ slickensides @ 23'	2.50		25		77	22	55		
30	U			4.5+								
			391.7									
	U		Hard dark gray CLAYSTONE (CH)	4.5+		21		71	27	44		
35	U			4.5+								
40	U			4.5+								
45	U		w/ fractures on bedding planes	4.5+								
50	U		***** End 1987 Boring Log *****	4.5+								
			372.7									
	C1		CLAY, dark gray, hard (CH)									
55												
60	C2											
65												
70	C3											
75												
80	C4											
85												
90	C5											
			332.7									

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 422.7' - 372.7' previously drilled by HDR as part of the 1991 permit application. 1987 log surface elevation of 444.5 ft msl apparently an error. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-27

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2254211.6 N 324027.0	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 418.1 ft. msl Completion Depth: 85.0 ft. Date Boring Started: 7/14/11 Date Boring Completed: 7/14/11									
			MATERIAL DESCRIPTION									
			***** Begin 1987 Boring Log - See Note 1 ***** Hard tan & dark gray CLAY (CH) - w/ some gravel to 5' - very stiff w/ slickenside @ 3' - 31' - w/ fossil fragments & calcareous nodules @ 8' - stiff w/ gypsum crystals & gravel @ 18' - very stiff @ 23'	4.5								
5	U			2.50								
10	U			3.25								
15	U			4.5+								
20	U			1.50		27		75	21	54		
25	U			2.75								
30	U			3.75		26		78	23	55		
			387.1									
35	U		Hard dark gray CLAYSTONE (CH)	4.5+								
40	U			4.5+		20		59	23	36		
45	U		- fissile @ 43'	4.5+								
50	U		w/ occasional fossil fragments	4.5+		16		60	24	36		
			368.1									
55	C1		CLAY, dark gray, hard (CH)									
60	C2											
65												
70	C3											
75												
80	C4											
85				333.1								
90												
95												
100												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 418.1' - 368.1' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-28

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2255075.4 N 323954.0	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 423.8 ft. msl Completion Depth: 90.0 ft. Date Boring Started: 7/18/11 Date Boring Completed: 7/18/11									
			MATERIAL DESCRIPTION									
	U	/	***** Begin 1991 Boring Log ***** Firm brown clay w/ roots and root holes (CH) 421.8									
5	U	/	Hard gray and tan clay w/ iron stained fissures					85	26	59	99.6	
10	U	/	Hard dark gray clay w/ occasional small shell fragments (CH) 412.8									
15	U	/						71	27	44		
20	U	/										
25	U	/										
30	U	/										
35	U	/	***** End 1991 Boring Log ***** CLAY, dark gray, hard (CH) (CH) 388.8									
40	C1	/										
45	C2	/										
50		/										
55	C3	/										
60		/										
65	C4	/										
70		/										
75	C5	/										
80		/										
85	C6	/										
90		/										
95		/										
100		/										

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 423.8' - 388.8' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-29

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253650.5 N 324260.7	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 405.5 ft. msl Completion Depth: 70.0 ft. Date Boring Started: 7/13/11 Date Boring Completed: 7/13/11									
MATERIAL DESCRIPTION												
	u		***** Begin 1991 Boring Log - See Note 1 ***** Firm brown clay w/ roots 20% Recovery (CH) 400.5									
5	u		Firm tan clay w/ occasional brown laminations and occasional small calcareous nodules 100% Recovery					70	22	48		
10	u		100% Recovery									
15	u		100% Recovery (CH) 385.5									
20	u		Stiff tan and gray clay w/ occasional small calcareous nodules 40% Recovery									
25	u		30% Recovery									
30	u		- w/ occasional tight iron stained fissures 100% Recovery (CH) 370.5									
35	u		***** End 1991 Boring Log *****									
40	u1		CLAY, tan and gray, stiff, with some gravel (CH) - seepage observed @ 37'									
45	u2		361.5									
50	c1		CLAY, dark gray, hard (CH)									
55	c2											
60	c3											
65	c4											
70			335.5									
75												
80												
85												
90												
95												
100												

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 405.5' - 370.5' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-30

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253113.3 N 324156.3	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 430.9 ft. msl Completion Depth: 95.0 ft. Date Boring Started: 8/9/11 Date Boring Completed: 8/9/11									
MATERIAL DESCRIPTION												
5	U		***** Begin 1991 Boring Log - See Note 1 ***** Stiff tan and yellow clay - Hard below 5' w/ occasional small calcareous nodules - w/ iron stain fissure									
15	U		Hard dark gray clay	(CH) 415.9								
45	U		***** End 1991 Boring Log *****	(CH) 380.9								
50	C1		CLAY, dark gray, hard (CH)									
60	C2											
70	C3											
80	C4											
85	C5											
90	C6											
95	C7			335.9								

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 430.9' - 380.9' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-32

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2252505.4 N 323884.1	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 441.1 ft. msl Completion Depth: 105.0 ft. Date Boring Started: 7/12/11 Date Boring Completed: 7/12/11									
			MATERIAL DESCRIPTION									
			CLAY, brown and tan (FILL)									
	U		438.3									
			***** Begin 1991 Boring Log - See Note 1 *****									
5	U		Stiff brown clay (CH)									
	U		436.3									
10	U		Stiff tan clay			30		76	24	52		
	U		428.3									
15	U		Very stiff dark gray clay (CH)									
	U		425.3									
20	U		w/ iron stain at 13.8'									
25	U		Hard dark gray clay									
30	U											
35	U											
40	U											
45	U		***** End of 1991 Boring Log *****									
			393.3									
50	C1		CLAY, dark gray, hard (CH)									
55												
60	C2											
65												
70	C3											
75												
80	C4											
85												
90	C5											
95												
100	C6											

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations

Date	Depth

Remarks: Note 1: Elevation 438.3' - 393.3' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-32

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2252505.4 N 323884.1	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 441.1 ft. msl Completion Depth: 105.0 ft. Date Boring Started: 7/12/11 Date Boring Completed: 7/12/11									
			MATERIAL DESCRIPTION									
105	C6	[Diagonal Hatching]	CLAY, dark gray, hard (CH) <i>(continued)</i>		336.1							
110												
115												
120												
125												
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Note 1: Elevation 438.3' - 393.3' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-33

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2252940.0 N 323584.4	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 432.9 ft. msl Completion Depth: 100.0 ft. Date Boring Started: 7/11/11 Date Boring Completed: 7/11/11									
			MATERIAL DESCRIPTION									
			***** Begin 1991 Boring Log - See Note 1 *****									
5	U		Stiff brown clay (CH) 429.4									
10	U		Very stiff tan and gray clay w/ selenite filled fissure									
15	U		- w/ vertical iron stained fissure (CH) 418.9									
20	U		Hard dark gray clay					65	23	42		
25	U											
30	U											
35	U											
40	U											
45	U		***** End 1991 Boring Log ***** (CH) 387.9									
50	C1		CLAY, dark gray, hard (CH)									
55	C2											
60	C3											
65	C4											
70	C5											
75	C6											
80	C7											
85	C8											
90	C9											
95	C10											
100	C11											

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 432.9' - 387.9' previous drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-36

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2252746.9 N 322946.1	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 437.7 ft. msl Completion Depth: 105.0 ft. Date Boring Started: 8/10/11 Date Boring Completed: 8/10/11	MATERIAL DESCRIPTION								
	U		***** Begin 1991 Boring Log - See Note 1 ***** Stiff brown clay (CH) 434.7									
5	U		Stiff tan and gray clay w/ calcareous nodules			30		71	23	48		
10	U		- w/ iron stained and selenite filled fissure at 10.0'									
			(CH) 424.7									
15	U		Hard dark gray clay			19		63	22	41		
20	U											
25	U											
30	U											
35	U											
40	U											
			(CH)									
45	U		***** End 1991 Boring Log *****									
			(CH) 392.7									
45	C1		CLAY, dark gray, hard (CH)									
50												
55	C2											
60												
65	C3											
70												
75	C4											
80												
85	C5											
90												
95	C6											
100												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 437.7' - 392.7' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-36

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2252746.9 N 322946.1	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 437.7 ft. msl Completion Depth: 105.0 ft. Date Boring Started: 8/10/11 Date Boring Completed: 8/10/11									
			MATERIAL DESCRIPTION									
105	C7	█	CLAY, dark gray, hard (CH) <i>(continued)</i>	332.7								
110												
115												
120												
125												
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO. PAGE # SKYLINE-OPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 437.7' - 392.7' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-37

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253487.3 N 322988.0	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 442.8 ft. msl Completion Depth: 110.0 ft. Date Boring Started: 8/5/11 Date Boring Completed: 8/9/11									
MATERIAL DESCRIPTION												
	U		***** Begin 1991 Boring Log - See Note 1 *****									
	U		Stiff brown clay w/ roots (CH) 439.8									
5	U		Very stiff tan and gray clay w/ occasional fine sand inclusions (CH) 433.8									
10	U		Hard dark gray clay - w/ thin claystone seam					64	26	38		
15	U											
20	U											
25	U											
30	U											
35	U											
40	U											
45	U											
50	U											
	U			***** End 1991 Boring Log ***** (CH) 392.8								
50	C1		CLAY, dark gray, hard (CH)									
55												
60	C2											
65												
70	C3											
75												
80	C4											
85												
90	C5											
95												
100	C6											

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 442.8' - 392.8' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-37

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253487.3 N 322988.0	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 442.8 ft. msl Completion Depth: 110.0 ft. Date Boring Started: 8/5/11 Date Boring Completed: 8/9/11									
		MATERIAL DESCRIPTION										
105	C6	CLAY, dark gray, hard (CH) (continued)										
110	C7			332.8								
115												
120												
125												
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO. PAGE.# SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 442.8' - 392.8' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-38

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253197.9 N 322520.2	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 448.5 ft. msl Completion Depth: 115.0 ft. Date Boring Started: 8/23/11 Date Boring Completed: 8/24/11									
MATERIAL DESCRIPTION												
	U		***** Begin 1991 Boring Log - See Note 1 *****	446.5								
	U		Stiff brown clay w/ roots (CH)									
5	U		Very stiff tan clay, w/ vertical iron stained and sand filled fissure (CH)	439.5								
10	U		Hard dark gray clay					61	24	37		
15	U											
20	U											
25	U											
30	U											
35	U											
40	U											
45	U											
50	U		***** End of 1991 Boring Log ***** (CH)	398.5								
50	C1		CLAY, dark gray, hard (CH)									
55	C2											
60	C3											
65	C4											
70	C5											
75	C6											
80												
85												
90												
95												
100												

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 448.5' -398.5' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-38

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253197.9 N 322520.2	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 448.5 ft. msl Completion Depth: 115.0 ft. Date Boring Started: 8/23/11 Date Boring Completed: 8/24/11									
			MATERIAL DESCRIPTION									
105	C7		CLAY, dark gray, hard (CH) <i>(continued)</i>									
110	C8											
115				333.5								
120												
125												
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 448.5' -398.5' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

LOG OF BORING NO. CB-43

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2252533.3 N 322210.2	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 439. ft. msl Completion Depth: 103.9 ft. Date Boring Started: 8/18/11 Date Boring Completed: 8/18/11									
			MATERIAL DESCRIPTION									
	U		***** Begin 1987 Boring Log - See Note 1 *****	437.0								
			Stiff brown clay w/ roots (CH)									
5	U		Very stiff tan and yellow clay w/ iron stains, calcareous nodules and selenite									
10	U		- w/ dark gray clay and selenite filled fissures at 10.5' and 11.0'									
15	U		Hard dark gray clay									
20	U											
25	U											
30	U											
35	U		***** End 1991 Boring Log *****	404.0								
			CLAY, dark gray, hard (CH)									
40	C1											
45												
50	C2											
55												
60	C3											
65												
70	C4											
75												
80	C5											
85												
90	C6											
95												
100	C7											

BME LOG NO. PAGE # SKYLINE.GPJ BEM DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations

Date	Depth

Remarks: Grouted. Note 1: Elevation 439.0' - 404.0' previously drilled by HDR as part of the 1991 permit application. Current surface elevation was 435.1. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-43

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2252533.3 N 322210.2	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 439. ft. msl Completion Depth: 103.9 ft. Date Boring Started: 8/18/11 Date Boring Completed: 8/18/11									
			MATERIAL DESCRIPTION									
	C7		CLAY, dark gray, hard (CH) <i>(continued)</i>	335.1								
105												
110												
115												
120												
125												
130												
135												
140												
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 439.0' - 404.0' previously drilled by HDR as part of the 1991 permit application. Current surface elevation was 435.1. Lithologic descriptions for that interval are from original boring log.



The stratification lines represent approximate strata boundaries.
 In situ, the transition may be gradual.

LOG OF BORING NO. CB-44

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253840.1 N 322255.2	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 501. ft. msl									
			Completion Depth: 165.0 ft.									
			Date Boring Started: 8/12/11									
			Date Boring Completed: 8/15/11									
MATERIAL DESCRIPTION												
	U		***** Begin 1991 Boring Log - See Note 1 *****									
	U		Stiff brown clay w/ roots (CH) 497.0									
5	U		Very stiff tan and gray clay									
10	U		- hard below 10.0'									
15	U		- w/ iron stains and selenite									
20	U		- w/ vertical selenite filled fissure			26	98.0	74	24	50		
25	U		- w/ iron stains									
30	U		- w/ selenite and iron stains									
35	U		(CH) 466.0									
40	U		Hard dark gray clay w/ vertical iron stained fissure									
45	U		- w/ iron stains to 45.0' (CH) 456.0									
50	U		Hard dark gray clay									
55	U											
60	U											
65	U											
70	U											
75	U					22		61	24	37		
80	U											
85	U											
90	U											
95	U											
100	U											

BME LOG NO PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 501.0' - 396.0' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-44

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2253840.1 N 322255.2	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 501. ft. msl Completion Depth: 165.0 ft. Date Boring Started: 8/12/11 Date Boring Completed: 8/15/11									
			MATERIAL DESCRIPTION									
	U		Hard dark gray clay (continued)									
105	U		***** End 1991 Boring Log *****									
	C1		CLAY, dark gray, hard (CH)									
110												
115	C2											
120												
125	C3											
130												
135	C4											
140												
145	C5											
150												
155	C6											
160												
165	C7											
170												
175												
180												
185												
190												
195												
200												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations

Date	Depth

Remarks: Grouted. Note 1: Elevation 501.0' - 396.0' previously drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-56

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2255099.8 N 321607.3	Hand Penetrometer, tsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			Surface El.: 472.9 ft. msl Completion Depth: 140.0 ft. Date Boring Started: 7/21/11 Date Boring Completed: 7/22/11									
MATERIAL DESCRIPTION												
5			CLAY, tan (FILL)									
10												
15												
15.1			456.1									
20	U		***** Begin 1991 Boring Log - See Note 1 ***** Firm brown clay w/ organic material (FILL)									
25	U		Very stiff tan and gray clay w/ weathered calcareous nodules and selenite (FILL)									
25	U		Hard tan and gray clay w/ iron stains (CH)			27		79	24	55		
30	U											
30	U		Hard dark gray clay (CH)									
35	U					22		69	30	39		
40	U											
45	U											
50	U											
55	U											
60	U		***** End 1991 Boring Log ***** (CH)									
60	U		410.9									
65			CLAY, dark gray, hard (CH)									
70	C1											
75												
80	C2											
85												
90	C3											
95												
100	C4											

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 456.1' - 410.9' drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.



LOG OF BORING NO. CB-56

Project Description: Skyline Recycling and Disposal Facility
1201 North Central Avenue, Ferris

Biggs and Mathews
 1700 Robert Road
 Mansfield TX 76063
 Phone: 817-563-1144
 Fax: 817-561-124

Depth, feet	Samples	Symbol / USCS	Location: E 2255099.8 N 321607.3	Hand Penetrometer, lsf	Penetration Blows/Foot	Moisture Content, %	Unit Dry Weight, lb/cu ft.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, lsf
			Surface El.: 472.9 ft. msl Completion Depth: 140.0 ft. Date Boring Started: 7/21/11 Date Boring Completed: 7/22/11									
			MATERIAL DESCRIPTION									
105	C4		CLAY, dark gray, hard (CH) <i>(continued)</i>									
110	C5											
115												
120	C6											
125												
130	C7											
135												
140	C8			332.9								
145												
150												
155												
160												
165												
170												
175												
180												
185												
190												
195												
200												

BME LOG NO. PAGE # SKYLINE.GPJ B&M DATA TEMPLATE.GDT 12/20/11

Drilling Contractor: **LandTec**
 Drilling Method: **Auger and Core**
 Sampling Method: **Core**
 Geologist/Engineer: **Jeremy Featherston**
 Project No.: **101.01.120**

Groundwater Observations	
Date	Depth

Remarks: Grouted. Note 1: Elevation 456.1' - 410.9' drilled by HDR as part of the 1991 permit application. Lithologic descriptions for that interval are from original boring log.

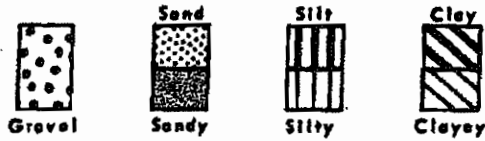


The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

**PREVIOUS BORINGS
CB-1 THROUGH CB-56**

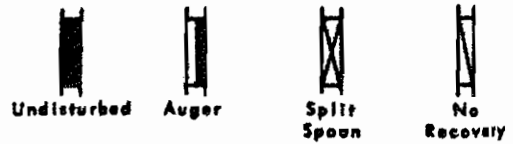
KEY TO SOIL CLASSIFICATIONS AND SYMBOLS

SOIL TYPE



Predominant type shown heavy

SAMPLE TYPE



TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS

(Major portion retained on No. 200 sieve)

Includes (1) clean gravels and sands described as fine, medium or coarse, depending on distribution of grain sizes and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as determined by laboratory tests or estimated from resistance to sampler penetration.

Penetration Resistance Blows/Foot**	Descriptive Term	Relative Density*
0 - 10	Loose	0 to 40%
10 - 30	Medium dense	40 to 70%
30 - 50	Dense	70 to 90%
Over 50	Very dense	90 to 100%

* From tests on undisturbed sand sample
** 140# hammer, 30-inch drop

Relative density is also used to describe condition of low plasticity ($P_L < 10$) fine grained soils such as sandy silts.

FINE GRAINED SOILS

(Major portion passing No. 200 sieve)

Includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests for soils with plasticity indices ≥ 10 .

Descriptive Term	Compressive Strength Tons/Sq. Ft.
Very soft	less than 0.25
Soft	0.25 to 0.50
Firm	0.50 to 1.00
Stiff	1.00 to 2.00
Very stiff	2.00 to 4.00
Hard	4.00 and higher

Note: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes and weakness or shrinkage cracks in the soil. The consistency ratings of such soils are based on penetrometer readings.

TERMS CHARACTERIZING SOIL STRUCTURE

Fissured	- containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical	Slickensided	- having inclined planes of weakness that are slick and glossy in appearance.
Sensitive	- pertaining to cohesive soils that are subject to appreciable loss of strength when remolded	Degree of slickenside development:	
Laminated	- composed of thin layers of varying color and texture	Slightly slickensided	- slickensides are present at intervals of 1-2 feet and soil does not easily break along these planes.
Interbedded	- composed of alternate layers of different soil types	Moderately slickensided	- slickensides are spaced at intervals of 1-2 feet and soil breaks easily along these planes.
Calcareous	- containing appreciable quantities of calcium carbonate	Extremely slickensided	- slickensides are spaced at intervals 4-12 inches, are continuous and interconnected. Soil breaks easily along the slickensides. Resulting size of broken pieces three to six inches.
Well graded	- having wide range in grain sizes and substantial amounts of all intermediate particle sizes	Intensely slickensided	- slickensides are spaced at intervals of less than four inches and are continuous in all directions. Soil breaks down along planes into nodules 0.25 - 2 inch in size.
Poorly graded	- predominately of one grain size, or having a range of sizes with some intermediate size missing		

E2-45

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-1
 DATE 5-21-87
 ELEV. 489.5 ft.
 PAGE 1 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED TO FT WASH BORED 0 TO 70 FT FREE WATER ENCOUNTERED AT FT WATER AT FT AFTER HOLE CAVED IN AT FT AFTER HOLE GROUTED 0 FT TO 70 FT ON 5-27-87	
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)						
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm			
													LL
			2.25										Very stiff dark gray CLAY (CH)
	5		2.00										Very stiff tan & dark gray CLAY (CH) w/iron nodules & gypsum crystals, slickensided -hard & tan below 8'
	10		4.5+										
	15		4.5+	26	78	24	54						
	20		4.5+										
	25		4.5+										slickensides
	30		4.5+										
	35		4.5+	25	81	24	57						
	40		4.5+										

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-1
 DATE 5-21-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							DRY AUGERED TO FT							
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	MOISTURE CONTENT %	ATTERBERG LIMITS			GRADATION (% PASSING)				PERMEABILITY 10 ⁻⁷ cm/sec	WASH BORED TO FT	FREE WATER ENCOUNTERED AT FT AFTER				
					LL	PL	PI	NO. 40	NO. 100	NO. 200	0.005 mm		HOLE CAVED IN AT FT TO	HOLE GROUTED FT ON				
													DESCRIPTION OF STRATUM					
	45	4.5+	20	81	27	54												
	50	4.5+																
	55	4.5+	19	76	25	51												
	60	4.5+																
	65	4.5+																
	70	4.5+																
	75																	
	80																	

Hard dark gray CLAYSTONE (CH)
 -below 40'
 w/scattered fossil fragments

Bottom @ 70'

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CR-2
 DATE 5-23-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA						PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED TO FT WASH BORED TO FT FREE WATER ENCOUNTERED AT FT WATER AT FT AFTER	HOLE CAVED IN AT FT AFTER HOLE GROUTED FT TO FT ON	DESCRIPTION OF STRATUM		
	DEPTH (feet)	SAMPLES	q _u (tsf) (N, blows/ft)	MOISTURE CONTENT %	ATTERBERG LIMITS			GRADATION (% PASSING)							
					LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100					NO. 200	0.005 mm
	45	4.5+	21	73	24	49							Hard dark gray CLAYSTONE (CH)		
	50	4.5+													
	55	4.5+													
	60	4.5+													
	65	4.5+	17	73	24	49								Bottom @ 65'	
	70														

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-3
 DATE 5-19-87
 ELEV. 479.2 ft.
 PAGE 1 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED TO FT WASH BORED 0 TO 80 FT FREE WATER ENCOUNTERED AT FT WATER AT FT AFTER HOLE CAVED IN AT FT AFTER HOLE GROUTED FT TO FT ON	
	DEPTH (feet)	SAMPLES	q _u (sf) (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)						
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm			
													LL
			2.25										Very stiff dark gray CLAY (CH) w/roots
	5		4.25	28	79	26	53						Hard tan CLAY (CH) scattered slickensides & fossil fragments
	10		4.00										
	15		4.5+										
	20		4.5+										
	25		4.5+										
	30		4.5+	30	97	31	66						
	35		4.5+										Hard dark gray CLAYSTONE (CH)
	40		4.5+	25	92	30	62						

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-3
 DATE 5-20-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							DRY AUGERED TO FT WASH BORED TO FT FREE WATER ENCOUNTERED AT FT WATER AT FT AFTER	HOLE CAVED IN AT FT AFTER HOLE GROUTED FT TO FT ON	DESCRIPTION OF STRATUM			
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	MOISTURE CONTENT %	ATTERBERG LIMITS			GRADATION (% PASSING)						PERMEABILITY 10 ⁻⁷ cm/sec		
					LL	PL	PI	NO. 40	NO. 100	NO. 200					0.005 mm	
																Liquid
	45	4.5+	24	92	29	63										
	50	4.5+														
	55	4.5+														
	60	4.5+														
	65	4.5+														
	70	4.5+														
	75	4.5+														
	80	4.5+														

Hard dark gray CLAYSTONE (CH)

Bottom @ 80'

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-4
 DATE 5-19-87
 ELEV. 489.7 ft.
 PAGE 1 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED TO FT WASH BORED 0 TO 70 FT FREE WATER ENCOUNTERED AT FT WATER AT FT AFTER HOLE CAVED IN AT FT AFTER HOLE GROUTED 0 FT TO 70 FT ON 5-19-87
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)					
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		
DESCRIPTION OF STRATUM												
			2.50									Very stiff dark gray CLAY (CH) w/roots & iron nodules
			2.50									
		5	4.5+									Hard tan & light gray CLAY (CH) w/scattered slickensides, calcareous nodules & gypsum crystals
		10	4.5+	29	74	27	47					
		15	4.5+									
		20	4.5+	29	69	26	43					
		25	4.5+									
		30	4.5+									
		35	4.5+	28	80	27	53					
		40	4.5+	25	90	26	64					Hard dark gray CLAYSTONE (CH)

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-4
 DATE 5-19-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA						DRY AUGERED TO FT			
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	MOISTURE CONTENT %	ATTERBERG LIMITS			GRADATION (% PASSING)			PERMEABILITY 10 ⁻⁷ cm/sec	WASH BORED TO FT	
					LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200		0.005 mm	FREE WATER ENCOUNTERED AT FT AFTER
													LL
DESCRIPTION OF STRATUM											HOLE GROUDED FT TO FT ON		
												Hard dark gray CLAYSTONE (CH)	
	45												
	50												
	55												
	60												
	65											fossil fragments	
	70											Bottom @ 70'	
	75												
	80												










q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-5
 DATE 5-18-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED TO FT WASH BORED TO FT FREE WATER ENCOUNTERED AT FT WATER AT FT AFTER	HOLE CAVED IN AT FT AFTER HOLE GROUTED FT TO FT ON
	DEPTH (feet)	SAMPLES	q _u (ksf) (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)						
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm			
												DESCRIPTION OF STRATUM	
			4.5+									Hard tan & light gray CLAY (CH)	
	45		4.5+	25	92	28	64					Hard dark gray CLAYSTONE (CH) -below 47'	
	50		4.5+	23	90	31	59						
	55		4.5+									-fissures @ 58'	
	60		4.5+										
	65		4.5+	18	78	27	51						
	70		4.5+										
	75		4.5+										
	80		4.5+									Bottom @ 80'	

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-6
 DATE 5-19-87
 ELEV. 491.4 ft.
 PAGE 1 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED 0 TO 40 FT WASH BORED 40 TO 70 FT FREE WATER ENCOUNTERED AT FT WATER AT FT AFTER HOLE CAVED IN AT FT AFTER HOLE GROUTED 0 FT TO 70 FT ON 5-20-87
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)					
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		
												DESCRIPTION OF STRATUM
			4.5+									Hard dark gray CLAY (CH)
			3.75									Very stiff light gray & tan CLAY (CH) w/jointing -hard w/calcareous nodules @ 8'
			4.5+	28	94	29	65					
			4.5+									
			4.5+	28	89	28	61					
			4.5+									
			4.5+	29	85	25	60					-w/gypsum crystals @ 33'
			4.5+									

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-6
 DATE 5-19-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							DRY AUGERED TO FT							
	DEPTH (feet)	SAMPLES	q _u , tsf (N, blows/ft)	MOISTURE CONTENT %	ATTERBERG LIMITS			GRADATION (% PASSING)				PERMEABILITY 10 ⁻⁷ cm/sec	WASH BORED TO FT	FREE WATER ENCOUNTERED AT FT AFTER				
					LL	PL	PI	NO. 40	NO. 100	NO. 200	0.005 mm		HOLE CAVED IN AT FT AFTER	HOLE GROUDED FT TO FT ON				
													DESCRIPTION OF STRATUM					
	45		4.5+															
	50		4.5+															
	55		4.5+	19	77	26	51											
	60		4.5+															
	65		4.5+															
	70		4.5+															
	75																	
	80																	

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-7
 DATE 5-21/22-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED TO FT		
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)					WASH BORED TO FT		
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		FREE WATER ENCOUNTERED AT FT		
												MOISTURE CONTENT %	LL	PL
											HOLE CAVED IN AT FT AFTER			
											HOLE GROUDED FT TO FT ON			
	DESCRIPTION OF STRATUM													
	45	4.5+									Hard dark gray CLAYSTONE (CH) w/slickensides -w/clay layers to 45'			
	50	4.5+									-w/gypsum crystals @ 53'-55'			
	55	4.5+	23	93	25	68								
	60	4.5+												
	65	4.5+												
	70	4.5+									Bottom @ 70'			
	75													
	80													

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSIONIVE STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-9
 DATE 5-18-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							DRY AUGERED TO FT									
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	MOISTURE CONTENT %	ATTERBERG LIMITS			GRADATION (% PASSING)				PERMEABILITY 10 ⁻⁷ cm/sec	WASH BORED TO FT	FREE WATER ENCOUNTERED AT FT AFTER						
					LIQUID LL	PLASTIC PL	PLASTICITY INDEX PI	NO. 40	NO. 100	NO. 200	0.005 mm		HOLE CAVED IN AT FT AFTER	HOLE GROUDED FT TO FT ON						
													DESCRIPTION OF STRATUM							
	45	4.5+																		
	50	4.5+	24	92	28	64														
	55	4.5+																		
	60	4.5+																		
	65	4.5+																		
	70	4.5+	20	65	26	39														
	75																			
	80																			

Hard dark gray CLAYSTONE (CH) fissures

Bottom @ 70'

q_u = POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-10
 DATE 5-21-87
 ELEV. 435.8 ft.
 PAGE 1 OF 1

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED 0 TO 18 FT WASH BORED 18 TO 40 FT FREE WATER ENCOUNTERED AT WATER AT FT AFTER FT HOLE CAVED IN AT FT AFTER HOLE GROUTED 0 FT TO 40 FT ON 5-22-87
	DEPTH (feet)	SAMPLES	q _u (tsf) (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)					
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		
	DESCRIPTION OF STRATUM											
4.0											Hard to stiff tan CLAY (CH) w/interbedded gravel	
5												
10												
15											Hard dark gray CLAYSTONE (CH) w/scattered fossil fragments	
20												
25												
30												
35												
40											Bottom @ 40'	

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-11
 DATE 5-20/21-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							DRY AUGERED TO FT		
	DEPTH (feet)	SAMPLES	q _u , lsf (N, blows/ft)	MOISTURE CONTENT %	ATTERBERG LIMITS			GRADATION (% PASSING)				PERMEABILITY 10 ⁻⁷ cm/sec	WASH BORED TO FT
					LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		FREE WATER ENCOUNTERED AT WATER AT FT AFTER
													LL
DESCRIPTION OF STRATUM													
													Hard tan & light gray CLAY (CH)
	45	4.5+											Hard dark gray CLAYSTONE (CH)
	50	4.5+	19	74	24	50							w/scattered fossil fragments
	55	4.5+											
	60	4.5+											
	65	4.5+											
	70	4.5+											
	75	4.5+											Bottom @ 75'

q_u = POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-13
 DATE 5-20-87
 ELEV. 433.4 ft.
 PAGE 1 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY · 10 ⁻⁷ cm/sec	DRY AUGERED 0 TO 30 FT		
	DEPTH (feet)	SAMPLES	q _u tsf (N. blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)					WASH BORED 30 TO 50 FT		
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		FREE WATER ENCOUNTERED AT		
												MOISTURE CONTENT %		
			LL	PL	PI				HOLE CAVED IN AT					
									HOLE GROUTED 0 FT TO 50 FT ON 5-20-87					
											DESCRIPTION OF STRATUM			
		4.5+										Hard gray CLAY (CH)		
	5	4.5+	24	86	25	61								
	10	4.5+												
	15	4.5+										Hard tan CLAY (CH) w/gypsum		
	20	2.5	28	73	24	49								
	25	4.5+	27	74	27	47								
	30	4.5+										Hard dark gray CLAYSTONE (CH)		
	35	4.5+												
	40	4.5+												

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

CB - 14 NOT DRILLED

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-16
 DATE 5-20-87
 ELEV. 440.4 ft.
 PAGE 1 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED 0 TO 20 FT WASH BORED 20 TO 50 FT FREE WATER ENCOUNTERED AT FT WATER AT FT AFTER HOLE CAVED IN AT FT AFTER HOLE GROUTED 0 FT TO 50 FT ON 5-21-87
	DEPTH (feet)	SAMPLES	q _u lsf (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)					
				LIQUID LL	PLASTIC PL	PLASTICITY INDEX PI	NO. 40	NO. 100	NO. 200	0.005 mm		
DESCRIPTION OF STRATUM												
			4.0									Hard dark gray CLAY (CH) w/roots & calcareous nodules
	5		2.0	24	69	21	48					Stiff to hard tan & light gray CLAY (CH) w/scattered slickensides & gypsum
	10		3.25									
	15		4.5+	27	71	28	43					
	20		4.5+									Hard dark gray CLAYSTONE (CH)
	25		4.5+	22	65	26	39					
	30		4.5+	22	63	28	35					
	35		4.5+									
	40		4.5+									

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-19
 DATE 5-22/23-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							DRY AUGERED TO FT		
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	MOISTURE CONTENT %	ATTERBERG LIMITS			GRADATION (% PASSING)				PERMEABILITY 10 ⁻⁷ cm/sec	WASH BORED TO FT
					LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		FREE WATER ENCOUNTERED AT FT AFTER
													LL
HOLE CAVED IN AT FT AFTER											HOLE GROUDED FT TO FT ON		
DESCRIPTION OF STRATUM													
	45	4.5+	20	83	28	55							Hard dark gray CLAYSTONE (CH)
	50	4.5+											
	55	4.5+											
	60	4.5+											Bottom @ 60'
	65												
	70												
	75												
	80												

q_u = POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-20
 DATE 5-15/16-87
 ELEV. _____
 PAGE 2 OF 3

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED TO FT		
	DEPTH (feet)	SAMPLES	q _u tsf (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)					WASH BORED TO FT		
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		FREE WATER ENCOUNTERED AT FT AFTER		
												LL	PL	PI
											HOLE CAVED IN AT FT AFTER			
											HOLE GROUTED FT TO FT ON			
	DESCRIPTION OF STRATUM													
	Hard dark gray CLAYSTONE (CH)													
	45	4.5+	22	78	25	53								
	50	4.5+												
	55	4.5+												
	60	4.5+												
	65	4.5+												
	70	4.5+	18	79	27	52								
	75	4.5+												
	80	4.5+												

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-23
 DATE 5-21-87
 ELEV. 447.6 ft.
 PAGE 1 OF 2

SOIL SYMBOL	FIELD DATA		LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED 0 TO 15 FT WASH BORED 15 TO 45 FT FREE WATER ENCOUNTERED AT WATER AT FT AFTER HOLE CAVED IN AT FT AFTER HOLE GROUTED 0 FT TO 45 FT ON 5-22-87	
	DEPTH (feet)	SAMPLES q _u , tsf (N, blows/ft)	MOISTURE CONTENT %	ATTERBERG LIMITS			GRADATION (% PASSING)					
				LIQUID LL	PLASTIC PL	PLASTICITY INDEX PI	NO. 40	NO. 100	NO. 200			0.005 mm
											"FILL"	
	5		20	72	22	50					Hard tan CLAY (CH) w/ferrous & calcareous nodules, slickensides & gypsum crystals	
	10		24	74	27	47						
	15		20	66	27	39					Hard dark gray CLAYSTONE (CH)	
	20		23	62	28	34						
	25											
	30											
	35											
	40											

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO.: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-24
 DATE 5-14-87
 ELEV. _____
 PAGE 2 OF 3

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							DRY AUGERED TO FT			
	DEPTH (feet)	SAMPLES	q _u 1st (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)				PERMEABILITY 10 ⁻⁷ cm/sec	WASH BORED TO FT	FREE WATER ENCOUNTERED AT FT	
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		HOLE CAVED IN AT FT AFTER		
												LL	PL	PI
											DESCRIPTION OF STRATUM			
											Hard tan & light gray CLAY (CH)			
											Hard dark gray CLAYSTONE (CH)			
	45	4.5+												
	50	4.5+	20	67	26	41								
	55	4.5+												
	60	4.5+												
	65	4.5+												
	70	4.5+												
	75	4.5+	19	75	26	49								
	80	4.5+												

-w/fractures @ 78'-80'

q_u = POCKET PENETROMETER UNCONFINED COMPRESSIVE STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO.: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-25
 DATE 5-13-87
 ELEV. 441.0 ft.
 PAGE 1 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA							PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED 0 TO 23 FT WASH BORED 23 TO 50 FT FREE WATER ENCOUNTERED AT _____ FT WATER AT _____ FT AFTER _____ HOLE CAVED IN AT _____ FT AFTER HOLE GROUTED 0 FT TO 50 FT ON 5-14
	DEPTH (feet)	SAMPLES	q _u 1st (N, blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)					
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200	0.005 mm		
DESCRIPTION OF STRATUM												
			4.5+									Hard tan & gray CLAY (CH) very stiff -w/slickensides, gypsum nodules & oxidation streaks @ 3'
	5		3.00									-hard @ 8'
			4.5+	23	74	28	46					
			4.5+									
	10		4.5+	21	70	26	44					
			4.5+									
	15		4.5+									
			4.5+									
	20		4.5+									
			4.5+									
	25		4.5+									Hard dark gray CLAYSTONE (CH)
			4.5+									
	30		4.5+	16	67	24	43					
			4.5+									
	35		4.5+									w/occasional fossils
			4.5+									
	40		4.5+	20	62	26	36					

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSION STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING

PROJECT NO.: 87-042
 PROJECT: Skyline Landfill
 Trinity Valley Reclamation, Inc.
 CLIENT: Waste Management of North America, Inc.
 Dallas, Texas

BORING NO. CB-25
 DATE 5-13-87
 ELEV. _____
 PAGE 2 OF 2

SOIL SYMBOL	FIELD DATA			LABORATORY DATA						PERMEABILITY 10 ⁻⁷ cm/sec	DRY AUGERED TO FT WASH BORED TO FT FREE WATER ENCOUNTERED AT FT WATER AT _____ FT AFTER _____ HOLE CAVED IN AT FT AFTER HOLE GROUTED FT TO FT ON	
	DEPTH (feet)	SAMPLES	q _u (psi) (N. blows/ft)	ATTERBERG LIMITS			GRADATION (% PASSING)					
				LIQUID	PLASTIC	PLASTICITY INDEX	NO. 40	NO. 100	NO. 200			0.005 mm
MOISTURE CONTENT %												
											DESCRIPTION OF STRATUM	
	45	4.5+									Hard dark gray CLAYSTONE (CH)	
	50	4.5+									Bottom @ 50'	
	55											
	60											
	65											
	70											
	75											
	80											

q_u = POCKET PENETROMETER UNCONFINED
 COMPRESSIVE STRENGTH
 N = STANDARD PENETRATION TEST N-VALUE

(V) = VERTICAL AXIS
 (H) = HORIZONTAL AXIS

LOG OF BORING NO. CB-28

WASTE MANAGEMENT OF TEXAS

SKYLINE LANDFILL EXPANSION

FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 423.8								
			Firm brown clay w/ roots and root holes (CH)								
5			Hard gray and tan clay w/ iron stained fissures	99.6	85	26					
10			(CH)								
15			Hard dark gray clay w/ occasional small shell fragments		71	27					
20											
25											
30											
35			(CH)								

COMPLETION DEPTH: 35.0'

DEPTH TO WATER: 412.7

DATE: 4-17-91

DATE: 5-13-91

LOG OF BORING NO. CB-29 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 405.5								
-5			Firm brown clay w/ roots 20% Recovery (CH)					○			
-10			Firm tan clay w/ occasional brown clay laminations and occasional small calcareous nodules 100% Recovery		70	22		○			
-15			100% Recovery					○			
-20			100% Recovery (CH)					○			
-25			Stiff tan and gray clay w/ occasional small calcareous nodules 40% Recovery					○			
-30			30% Recovery					○			
-35			-w/ occasional tight iron stained fissures 100% Recovery (CH)					○			

COMPLETION DEPTH: 35.0'

DEPTH TO WATER: COMPLETED AS PIEZOMETER

DATE: 4-17-91

DATE: 4-17-91

LOG OF BORING NO. CB-30 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.	UNIT DRY WT. LBS./CU. FT.
			ELEVATION: 430.9					0.5 1.0 1.5	
			Stiff tan and yellow clay					○	
-5-			-Hard below 5' w/ occasional small calcareous nodules					○	
-10-			-w/ iron stain fissure					○	
			(CH)						
-15-			Hard dark gray clay					○	
-20-								○	
-25-								○	
-30-								○	
-35-									

LOG OF BORING NO. CB-30 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
40												
45												
50			(CH)									

COMPLETION DEPTH: 50.0'

DEPTH TO WATER: DRY

DATE: 4-22-91

DATE: 5-13-91

LOG OF BORING NO. CB-31 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.	UNIT DRY WT. LBS./CU. FT.
			ELEVATION: 415.1					0.5 1.0 1.5	
			Stiff brown clay silty w/ organic (CH)					○	
-5			Stiff tan clay					○	
-10			-Hard below 10.0' w/ occasional iron stains					○	
-15			Hard dark gray clay					○	
-20								○	
-25								○	
-30								○	
-35			(CH)						

COMPLETION DEPTH: 35.0

DEPTH TO WATER: COMPLETED AS PIEZOMETER

DATE: 4-22-91

DATE: 4-22-91

LOG OF BORING NO. CB-32 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 438.3								
			Stiff brown clay (CH)								
-5-			Stiff tan clay (CH)		76	24	30				
-10-			Very stiff dark gray clay w/ iron stain at 11.0' (CH)								
-15-			Hard dark gray clay								
-20-											
-25-											
-30-											
-35-											

LOG OF BORING NO. CB-32 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
40												
45			(CH)									

COMPLETION DEPTH: 45.0'

DEPTH TO WATER: DRY

DATE: 4-22-91

DATE: 5-13-91

LOG OF BORING NO. CB-33

WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
40												
45			(CH)									

COMPLETION DEPTH: 45.0'

DEPTH TO WATER: DRY

DATE: 4-19-91

DATE: 5-13-91

LOG OF BORING NO. CB-33 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 432.0								
			Stiff brown clay (CH)								
-5			Very stiff tan and gray clay w/ selenite filled fissure								
-10			-w/ vertical iron stained fissure (CH)								
-15			Hard dark gray clay		65	23					
-20											
-25											
-30											
-35											

LOG OF BORING NO. CB-34 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 473.3								
			Very stiff light brown clay (CH)								
5			Very stiff tan and gray clay w/ iron stained fissures (CH)								
10			Hard gray clay, w/ iron stained fissures (CH)		74	27					
15			Hard dark gray clay								
20											
25											
30											
35											

LOG OF BORING NO. CB-34

WASTE MANAGEMENT OF TEXAS

SKYLINE LANDFILL EXPANSION

FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
40											
45											
50											
55											
60				99.6	72	26	14				
65											
70											

LOG OF BORING NO. CB-34 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.	
								0.5	1.0	1.5		
75												
80			(CH)									

COMPLETION DEPTH: 80.0'

DEPTH TO WATER: 456.4

DATE: 4-24-91

DATE: 5-13-91

LOG OF BORING NO. CB-35 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 434.9								
			Stiff brown clay w/ roots (CH)								
-5-			Hard tan clay w/ calcareous nodules		72	29	20				
-10-			-w/ gray clay and iron stained fissures		74	27	21				
-15-			Hard dark gray clay w/ iron stained fissures and weathered calcareous nodules (CH)								
-20-			Hard dark gray clay								
-25-											
-30-											
-35-											

COMPLETION DEPTH: 35.0'

DEPTH TO WATER: DRY

DATE: 4-22-91

DATE: 5-13-91

LOG OF BORING NO. CB-36 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 437.7								
			Stiff brown clay (CH)					○			
-5			Stiff tan and gray clay w/ calcareous nodules		71	23	30	○			
-10			-w/ iron stained and selenite filled fissure at 10.0' (CH)								
-15			Hard dark gray clay		63	22	19		○		
-20									○		
-25									○		
-30									○		
-35											

LOG OF BORING NO. CB-36

WASTE MANAGEMENT OF TEXAS

SKYLINE LANDFILL EXPANSION

FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION:								
40											
45			(CH)								

COMPLETION DEPTH: 45.0'

DEPTH TO WATER: 419.5

DATE: 4-23-91

DATE: 5-13-91

LOG OF BORING NO. CB-37 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 442.8								
			Stiff brown clay w/ roots (CH)								
-5			Very stiff tan and gray clay w/ occasional fine sand inclusions (CH)								
-10			Hard dark gray clay		64	26					
-15											
-20											
-25											
-30			-w/ thin claystone seam								
-35											

**LOG OF BORING NO. CB-37
WASTE MANAGEMENT OF TEXAS
SKYLINE LANDFILL EXPANSION
FERRIS, TEXAS**

TYPE OF BORING: _____

LOCATION: _____

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: _____								
40											
45											
50			(CH)								

COMPLETION DEPTH: 50.0'

DEPTH TO WATER: DRY

DATE: 4-26-91

DATE: 5-13-91

LOG OF BORING NO. CB-38 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			LIMIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 448.5								
			Stiff brown clay w/ roots (CH)								
5			Very stiff tan clay, w/ vertical iron stained and sand filled fissure (CH)								
10			Hard dark gray clay								
15					61	24					
20											
25											
30											
35											

LOG OF BORING NO. CB-38 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
40												
45												
50			(CH)									

COMPLETION DEPTH: 50.0' DEPTH TO WATER: DRY
 DATE: 4-24-91 DATE: 5-13-91

LOG OF BORING NO. CB-39 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.	UNIT DRY WT. LBS./CU. FT.
			ELEVATION: 493.8					0.5 1.0 1.5	
			Stiff tan clay					●	
-5			-hard tan and gray below 5.0' iron stained w/ calcareous nodules					●	
-10								●	
-15				99.6	66	27	27	●	
-20			-w/ decreasing iron staining					●	
-25			-w/ increasing iron stains					●	
-30			-w/ decreasing iron stains		72	25	26	●	
-35								●	

LOG OF BORING NO. CB-39 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								ELEVATION:	0.5	1.0	
40			-w/ increasing iron stains and vertical selenite filled fissure to 41.0'								
45			(CH)								
50			Hard dark gray clay								
55											
60											
65											
70											

LOG OF BORING NO. CB-39 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			LIMIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
75			$K_v = 4.0 \times 10^{-9}$ CM/SEC		63	25	18				
80											
85											
90											
95											
100			(CH)								

COMPLETION DEPTH: 100.0'

DEPTH TO WATER: COMPLETED AS PIEZOMETER

DATE: 4-22-91

DATE: 4-22-91

LOG OF BORING NO. CB-40 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 437.1								
			Firm brown clay w/ organic material (CH)								
-5-			Very stiff tan and gray clay								
-10-			-hard below 9.0' (CH)		74	26					
-15-			Hard dark gray clay		71	23					
-20-											
-25-											
-30-											
-35-											

LOG OF BORING NO. CB-40 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
40												
45			(CH)									

COMPLETION DEPTH: 45.0'

DEPTH TO WATER: COMPLETED AS PIEZOMETER

DATE: 4-24-91

DATE: 4-24-91

LOG OF BORING NO. CB-41 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 485.4								
			Stiff brown clay w/ roots (CH)								
-5			Very stiff tan and gray clay w/ iron stains								
-10											
-15			-w/ iron stains and selenite layers		79	25	23			102	
-20			-hard below 20.0'								
-25											
-30											
			(CH)								
-35			<u>Hard gray clay w/ iron stains</u>								

LOG OF BORING NO. CB-41 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
40			(CH)									
45			Hard dark gray clay									
50												
55												
60												
65												
70												

**LOG OF BORING NO. CB-41
WASTE MANAGEMENT OF TEXAS
SKYLINE LANDFILL EXPANSION
FERRIS, TEXAS**

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
75												
80												
85			(CH)									

COMPLETION DEPTH: 85.0'

DEPTH TO WATER: CAVED AT 6.5'

DATE: 4-25-91

DATE: 5-13-91

LOG OF BORING NO. CB-42 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 457.2								
			Stiff brown clay w/ roots (CH)								
5			Very stiff tan and gray clay w/ selenite filled fissures and iron stains		72	26	24				
10			-w/ 1/2" selenite filled fissure at 10.2'								
15			Hard gray clay w/ iron stains								
20					70	23	21				
25			-w/ high angle iron stained fissure								
30			Hard dark gray clay								
35											

LOG OF BORING NO. CB-42 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.	
								ELEVATION:	0.5	1.0		1.5
40												
45												
50												
55												
60												
65					56	27	34					
70			(CH)									

COMPLETION DEPTH: 70.0'

DEPTH TO WATER: GROUTED AT COMPLETION

DATE: 4-22-91

DATE: 4-22-91

LOG OF BORING NO. CB-43 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.	UNIT DRY WT. LBS./CU. FT.
			ELEVATION: 439.0					0.5 1.0 1.5	
			Stiff brown clay w/ roots (CH)					○	
-5			Very stiff tan and yellow clay w/ iron stains, calcareous nodules and selenite					○	
-10			-w/ dark gray clay and selenite filled fissures at 10.5' and 11.0' (CH)					○	
-15			Hard dark gray clay					○	
-20								○	
-25								○	
-30								○	
-35			(CH)					○	

COMPLETION DEPTH: 35.0

DEPTH TO WATER: DRY

DATE: 4-23-91

DATE: 5-13-91

LOG OF BORING NO. CB-44 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 501.0								
			Stiff brown clay w/ roots (CH)								
-5			Very stiff tan and gray clay								
-10			-hard below 10.0'								
-15			-w/ iron stains and selenite								
-20			-w/ vertical selenite filled fissure		74	24	26				98
-25			-w/ iron stains								
-30			-w/ selenite and iron stains								
-35			(CH)								

LOG OF BORING NO. CB-44 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
40			Hard dark gray clay w/ vertical iron stained fissure									
			-w/ iron stains to 45.0'									
45			(CH)									
			Hard dark gray clay									
50												
55												
60												
65												
70												

LOG OF BORING NO. CB-44 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION:								
75					61	24	22				
80											
85											
90											
95											
100											
105			(CH)								

COMPLETION DEPTH: 105.0'

DEPTH TO WATER: 465.0

DATE: 4-29-91

DATE: 5-13-91

LOG OF BORING NO. CB-45

WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 441.5								
			Firm brown clay (CH)								
5			Stiff tan and light gray clay w/ occasional small calcareous nodules (CH)								
10			Very stiff gray clay w/ vertical iron stained fissure (CH)								
15			Hard dark gray clay		74	24	20				
20											
25											
30											
35			(CH)								

COMPLETION DEPTH: 35.0'

DEPTH TO WATER: CAVED AT 4.0'

DATE: 4-19-91

DATE: 5-13-91

LOG OF BORING NO. CB-46

WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 472.4								
			Stiff brown clay w/ roots								
			Very stiff tan and gray clay								
-5-											
			-hard below 10.0'								
-10-											
-15-					73	25	27				
-20-			-vertical iron fissure to 27.0'								
-25-											
-30-			Hard dark gray clay								
-35-											

LOG OF BORING NO. CB-46 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
						70	24	22				
40												
45												
50												
55												
60												
65			(CH)									

COMPLETION DEPTH: 65.0'

DEPTH TO WATER: COMPLETED AS PIEZOMETER

DATE: 4-26-91

DATE: 4-26-91

LOG OF BORING NO. CB-47 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 464.3								
			Stiff brown clay w/ calcareous nodules (CH)								
-5			Hard tan and light gray clay - iron stained to 26.0' w/ calcareous nodules and selenite filled fissures								
-10											
-15											
-20											
-25											
			Hard dark gray clay (CH)								
-30											
-35											

LOG OF BORING NO. CB-47 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								ELEVATION:	0.5	1.0	
40											
45											
50											
55											
60			(CH)								

COMPLETION DEPTH: 60.0'

DEPTH TO WATER: 457.4

DATE: 4-27-91

DATE: 5-13-91

LOG OF BORING NO. CB-48 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 492.3								
			Firm brown clay w/ iron stains and calcareous nodules (CH)								
5			Very stiff tan and gray clay w/ occasional iron stains								
10			-w/ numerous iron stains to 11.0' (CH)	98.4	67	24	28				
15			Very stiff to hard light gray clay w/ vertical iron filled fissure and numerous iron stains								
20											
25			-light gray and gray								
30			-w/ selenite layer on 30° angle at 31.0'								
35											

**LOG OF BORING NO. CB-48
WASTE MANAGEMENT OF TEXAS
SKYLINE LANDFILL EXPANSION
FERRIS, TEXAS**

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
40			-w/ iron stains and selenite layer								
45			Hard dark gray clay w/ occasional iron stains								
45.0			-no iron stains below 45.0' $K_v = 6.8 \times 10^{-9}$ CM/SEC	99.7	65	19	20				
50											
55											
60											
65											
70											

LOG OF BORING NO. CB-48

WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
75												
80			(CH)									

COMPLETION DEPTH: 80.0'

DEPTH TO WATER: 482.9

DATE: 4-20-91

DATE: 5-13-91

LOG OF BORING NO. CB-49 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION: 493.7	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
			Stiff brown clay w/ roots and root holes (CH)									
5			Stiff light tan clay w/ iron stains and numerous calcareous nodules		44	20	22					105
10			-very stiff below 10.0' -w/ gravel									
15			-w/ iron stains to 37.0'									
20			-w/ limestone cemented gravel lense at 20.0' to 21.0' (CL)		82	24	29					
25			Very stiff tan and gray clay									
30			-hard below 30.0'									
35												

LOG OF BORING NO. CB-49

WASTE MANAGEMENT OF TEXAS

SKYLINE LANDFILL EXPANSION

FERRIS, TEXAS

TYPE OF BORING: _____

LOCATION: _____

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
			(CH)									
			Hard gray clay									
40			-w/ iron stains and selenite									
45			-w/ iron stains only									
			(CH)									
50			Hard dark gray clay									
55												
60												
65												
70												

**LOG OF BORING NO. CB-49
WASTE MANAGEMENT OF TEXAS
SKYLINE LANDFILL EXPANSION
FERRIS, TEXAS**

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION:								
75											
80			(CH)								

COMPLETION DEPTH: 80.0'

DEPTH TO WATER: COMPLETED AS PIEZOMETER

DATE: 5-2-91

DATE: 5-2-91

LOG OF BORING NO. CB-50

WASTE MANAGEMENT OF TEXAS

SKYLINE LANDFILL EXPANSION

FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 482.3								
			Stiff brown clay (CH)								
5			Stiff tan and gray clay w/ calcareous nodules and iron stains								
10											
15			-very stiff below 15.0'								
20				98.4	69	22	27				
25			-hard below 25.0' w/ multiple selenite filled fissures to 35.0'								
30											
35											

LOG OF BORING NO. CB-50 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
40			(CH)								
45			Hard dark gray clay w/ occasional iron stains style="text-align: right;">(CH)								
45			Hard dark gray clay		62	24	22				
50											
55											
60											
65			(CH)								

COMPLETION DEPTH: 65.0'

DEPTH TO WATER: 478.4

DATE: 5-1-91

DATE: 5-13-91

LOG OF BORING NO. CB-51 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.	UNIT DRY WT. LBS./CU. FT.
			ELEVATION: 492.1					0.5 1.0 1.5	
			Stiff brown clay (CH)					●	
-5			Stiff tan and gray clay w/ calcareous nodules					■	
-10			-very stiff below 10.0'					●	
-15								●	
-20			-w/ occasional iron stained fissures					●	
-25			-hard below 25.0' w/ iron stained and selenite filled fissures					●	
-30			-w/ high angle selenite filled fissure					●	
-35									

LOG OF BORING NO. CB-51 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
			-w/ iron stains to 58.0'									
40						75	25	28				
45												
50												
55												
			(CH)									
60			Hard dark gray clay									
65												
70												

LOG OF BORING NO. CB-52 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION: 475.3	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
			Stiff brown clay w/ roots (CH)									
-5			Stiff tan and gray clay w/ iron stains									
-10			-very stiff below 10.0'									
-15					81	21	27				97	
-20			-w/ selenite filled fissures									
-25			-w/ vertical selenite filled fissure									
-30			-hard below 30.0' (CH)									
-35			Hard gray clay w/ iron stains									

LOG OF BORING NO. CB-53 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 486.4								
			Firm brown clay (CH)								
5			Stiff light brown clay w/ calcareous nodules (CH)								
10			Very stiff tan and gray clay w/ a healed vertical iron stained fissure to 20.5'		73	19	33				
15											
20			-iron stained fissure filled w/ iron oxide from 20.5' to 35.5'								
25											
30											
35											

**LOG OF BORING NO. CB-53
WASTE MANAGEMENT OF TEXAS
SKYLINE LANDFILL EXPANSION
FERRIS, TEXAS**

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
40			-fissure healed and iron stained from 35.5' to 41.0' (CH)		73	19	28				
45											
50			Hard gray clay w/ iron stains to 66.0' (CH)		67	23	25				
55											
60											
65											
70			Hard dark gray clay (CH)								

COMPLETION DEPTH: 71.0'

DEPTH TO WATER: COMPLETED AS PIEZOMETER

DATE: 4-30-91

DATE: 4-30-91

LOG OF BORING NO. CB-54 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 468.9								
			Stiff brown clay w/ roots (CH)								
5			Stiff tan and gray clay w/ iron stains, selenite and weathered calcareous nodules								
10			-Hard below 10.0' w/ numerous iron stains								
15					79	25	27				97
20											
25			-w/ selenite filled fissure								
30			Hard dark gray clay w/ occasional iron stains								
35			-----								

**LOG OF BORING NO. CB-54
WASTE MANAGEMENT OF TEXAS
SKYLINE LANDFILL EXPANSION
FERRIS, TEXAS**

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
40			-w/ vertical iron stained fissures to 49.0'								
45											
50			(CH)								

COMPLETION DEPTH: 50.0'

DEPTH TO WATER: CAVED AT 4.0'

DATE: 4-26-91

DATE: 5-13-91

LOG OF BORING NO. CB-55
WASTE MANAGEMENT OF TEXAS
SKYLINE LANDFILL EXPANSION
FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 474.5								
5			Stiff brown clay w/ small calcareous nodules -very stiff at 5.0' (CH)								
10			Very stiff tan and gray clay iron stained w/ clay filled fissure (CH)								
15					87	33	33				
20			Very stiff gray clay w/ iron stains -hard w/ iron stains (CH)								
25											
30											
35			Hard dark gray clay w/ numerous iron stains and selenite filled fissures								

LOG OF BORING NO. CB-55

WASTE MANAGEMENT OF TEXAS

SKYLINE LANDFILL EXPANSION

FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
			-w/ fewer iron stains									
40			-w/ iron stained fissures									
45			-w/ iron stains									
50			(CH)									
			Hard dark gray clay									
55												
60			(CH)									

COMPLETION DEPTH: 60.0'

DEPTH TO WATER: COMPLETED AS PIEZOMETER

DATE: 4-29-91

DATE: 4-29-91

LOG OF BORING NO. CB-56 WASTE MANAGEMENT OF TEXAS SKYLINE LANDFILL EXPANSION FERRIS, TEXAS

TYPE OF BORING: Undisturbed LOCATION: See Plan Of Borings

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
								0.5	1.0	1.5	
			ELEVATION: 456.1								
			Firm brown clay w/ organic material (Fill)								
5			Very stiff tan and gray clay w/ weathered calcareous nodules and selenite (Fill)								
10			Hard tan and gray clay w/ iron stains (CH)		79	24	27				
15			Hard dark gray clay								
20					69	30	22				
25											
30											
35											

LOG OF BORING NO. CB-58

WASTE MANAGEMENT OF TEXAS

SKYLINE LANDFILL EXPANSION

FERRIS, TEXAS

TYPE OF BORING:

LOCATION:

DEPTH, FT.	SYMBOL	SAMPLES	SOIL DESCRIPTION	ELEVATION:	% PASSING NO. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	MOISTURE CONTENT %	SHEAR STRENGTH IN TONS/SQ. FT.			UNIT DRY WT. LBS./CU. FT.
									0.5	1.0	1.5	
40												
45			(CH)									

COMPLETION DEPTH: 45.0'

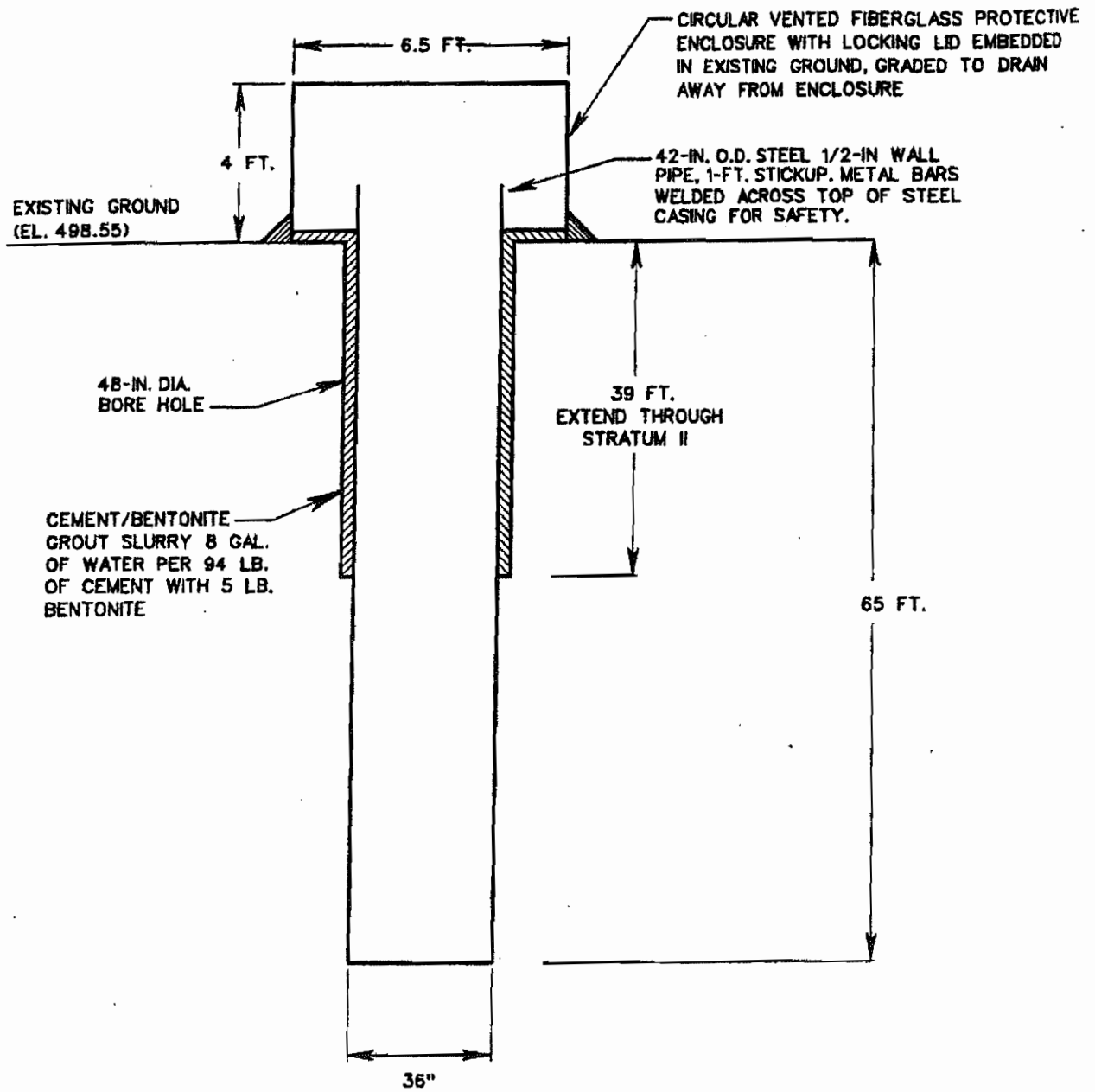
DEPTH TO WATER: DRY

DATE: 4-30-91

DATE: 5-13-91

LARGE DIAMETER BORING CONSTRUCTION DETAILS

DA 21-93 15:07



LD-1 LARGE DIAMETER TEST BORING CONSTRUCTION DETAIL

NOT TO SCALE

Steve Chandler
8/12/93



HDR Engineering, Inc.



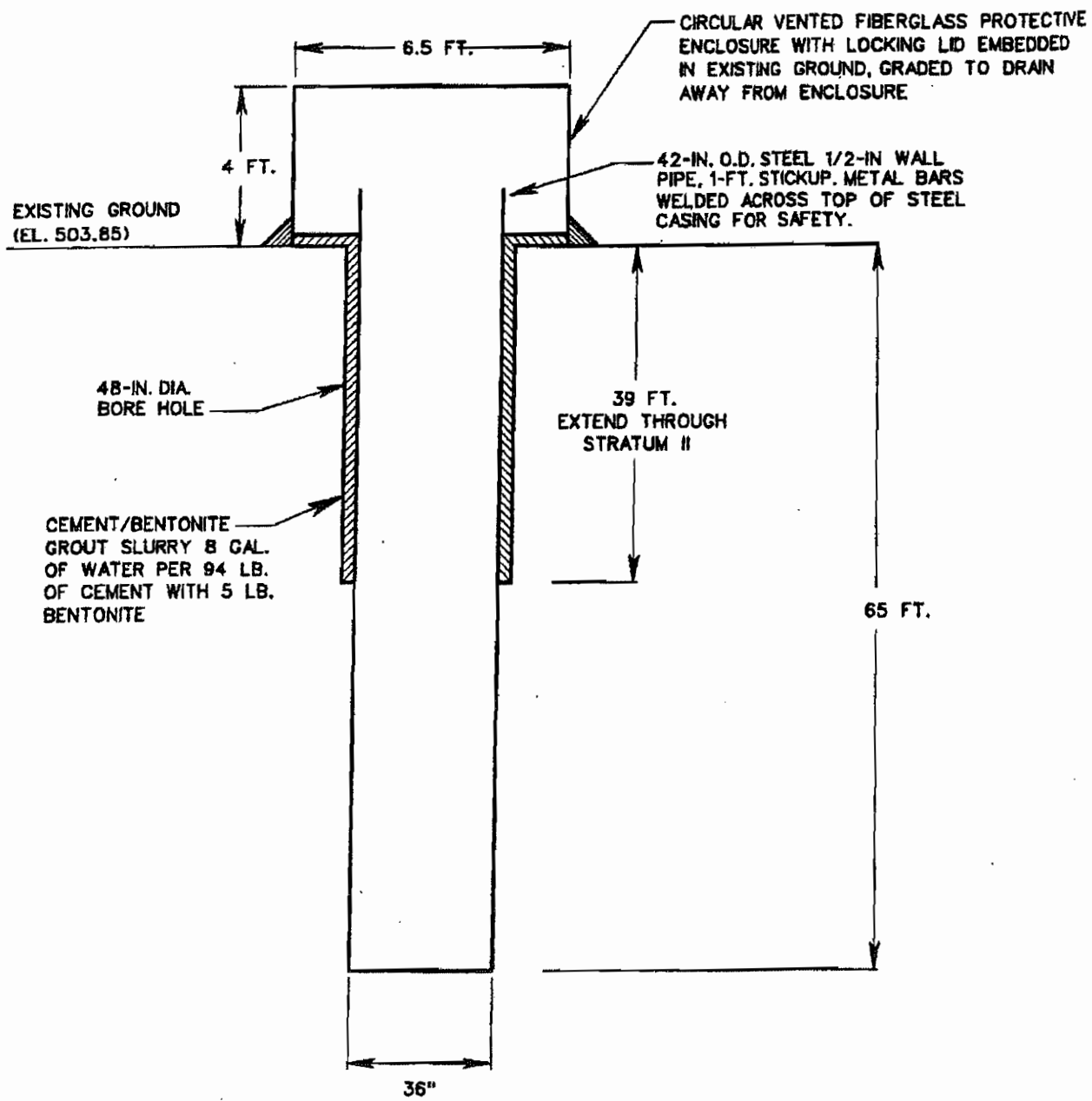
Waste Management of Texas, Inc.

Dallas, Texas

SKYLINE LANDFILL

LARGE DIAMETER BORING
CONSTRUCTION DETAIL
LD-1



Date	Project No.	Figure No.	Issue
AUG. 1993	00320-004-037	2	2

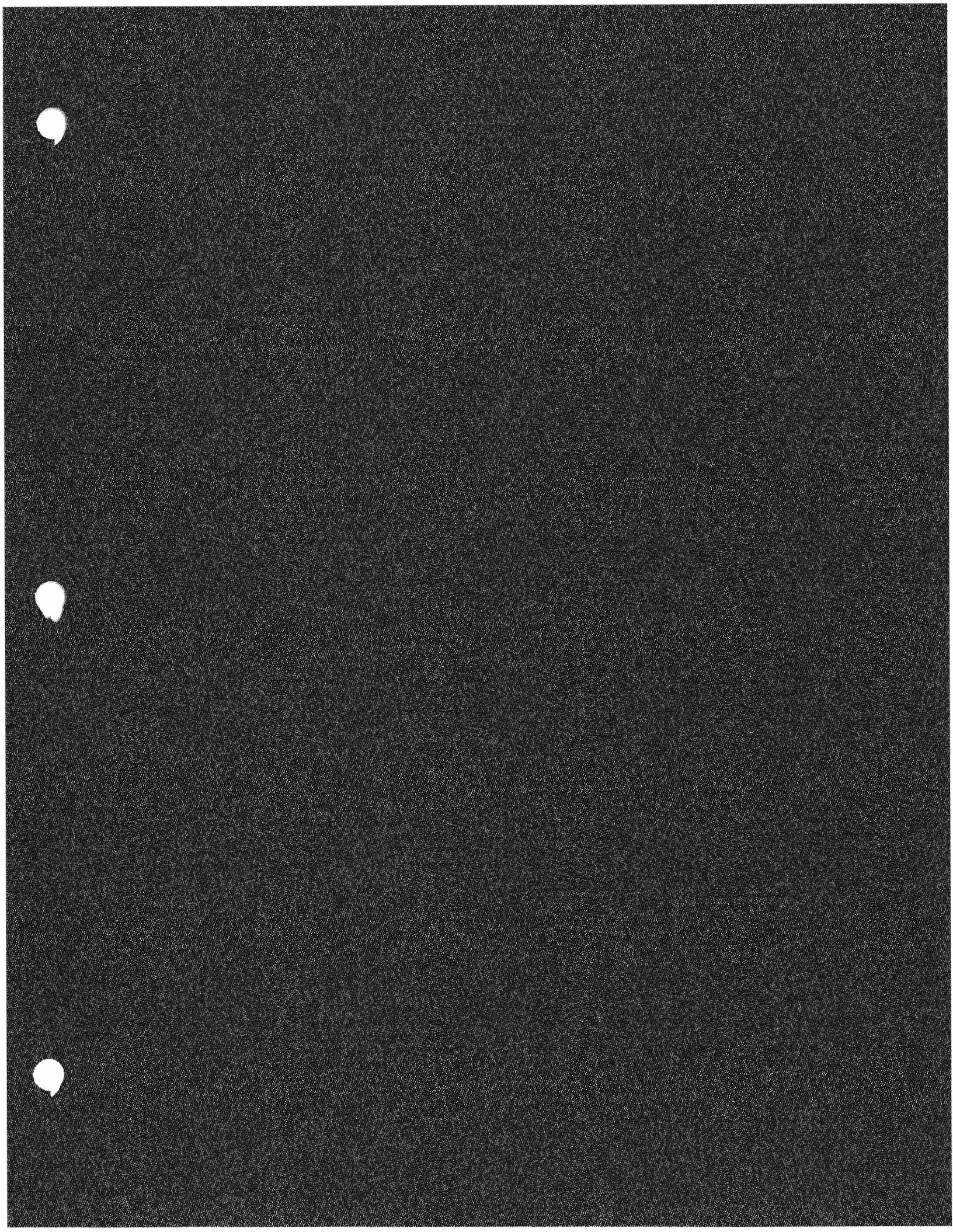


LD-2 LARGE DIAMETER TEST BORING CONSTRUCTION DETAIL

NOT TO SCALE




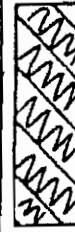
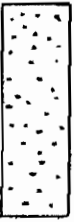


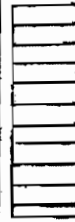
Jim R. Chandler
8/12/93

 HDR HDR Engineering, Inc.	SKYLINE LANDFILL	LARGE DIAMETER BORING CONSTRUCTION DETAIL LD-2		
	 Waste Management of Texas, Inc. Dallas, Texas	Date AUG. 1993	Project No. 00320-004-037	Figure No. 3



SOUTHWESTERN LABORATORIES BORINGS

**KEY TO SOIL SYMBOLS AND DESCRIPTIONS
USED ON LOGS OF BORINGS**

	Gravel		Silt		Rock		Limy
	Sand		Clay		Shale		Organic

COLOR

In color description of soil, the predominating color is stated first.

CONSISTENCY OF COHESIVE SOILS

<u>Classification</u>	<u>Compressive Strength, psf</u>
Very Soft	Less than - 500
Soft	500 - 1000
Plastic	1000 - 2000
Stiff	2000 - 4000
Very Stiff	4000 - 8000
Hard	More than - 8000

CONSISTENCY OF COHESIONLESS SOILS

<u>Classification</u>	<u>Standard Penetration, bpf</u>
Loose	Less than 10
Firm	10 - 30
Dense	More than 30

SOIL STRUCTURE

Jointed -	Cut by old shrinkage planes
Fractured -	Containing old cracks, frequently filled with sand, silt or clay of differing color
Interbedded -	Composed of alternate layers of different soil types
Limy -	Contains deposits of calcium carbonate

SUMMARY OF WATER LEVEL READINGS

<u>BORING NO.</u>	<u>SEEPAGE DURING DRILLING</u>	<u>WATER LEVEL BELOW GROUND SURFACE AFTER 1 DAY (FEET)</u>	<u>SHALE DEPTH (FEET)</u>	<u>BORING DEPTH (FEET)</u>
1	None	35	>40	40
2	None	32	>40	40
3	None	39.5	>40	40
4	None	32	30	35
5	None	None	9	15
6	39'	14	39	45
7	None	None	15	20
8	None	None	10	15
9	10'	8	9	15
10	37'	Caved at 4'	>40	40
11	10' and 30'	4	>40	40
#1	Drilled with water	Bailed to 70', water at 23' in 2 days	45	90
#2	Drilled with water	Bailed to 65', water at 92' in 1 day	43	100
#3	Drilled with water	Bailed to 55', water at 23' in 1 day	7	60
#4	Drilled with water	Bailed to 58', water at 50' after 4 hours	32	65

SOUTHWESTERN LABORATORIES

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO.: 1
 LOCATION: Ferris,
 Texas

DATE: 8/12/83 TYPE: Auger CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS / ft.	HAND PEN. PSI.	LEGEND:	WATER INFORMATION
					<input checked="" type="checkbox"/> SAMPLE <input checked="" type="checkbox"/> STANDARD PENETRATION <input checked="" type="checkbox"/> WATER	No seepage encountered during drilling. Water at 35' after 1 day.
					DESCRIPTION OF STRATUM U.S.C.	
					Dark brown clay CH	
					Brown clay $k=7.4 \times 10^{-10}$ cm/sec CH	
5					Tannish brown clay $k = 4.9 \times 10^{-10}$ cm/sec CH	
10					Tan and gray shaley clay CH $k = 5.9 \times 10^{-10}$ cm/sec	
11						
12						
13						
14						
15						
16						
17						
18						
19						
20					Tan and gray shaley clay CH $k = 5.9 \times 10^{-10}$ cm/sec	
21						
22						
23						
24						
25						
26						
27						
28						
29						
30					Tan and gray shaley clay CH $k = 5.9 \times 10^{-10}$ cm/sec	
31						
32						
33						
34						
35						
36						
37						
38						
39						
40					Bottom of hole at 40'	
45						
50						

SOUTHWESTERN LABORATORIES

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO.: 2
 LOCATION: Ferris,
 Texas

DATE: 8/12/83

TYPE: Auger

CASED TO:

GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS / ft.	HAND PEN IS.	LEGEND:	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	No seepage encountered during drilling. Water at 32' after 1 day.
					DESCRIPTION OF STRATUM	U.S.C.
5					Tannish brown clay	CH
10					Tan and gray shaley clay with calcareous seams	CH
15						
20						
25						
30						
35						
40					Tan and gray shaley clay with blue shale seams	
45						
50					Bottom of hole at 40'	

$k = 4.7 \times 10^{-10} \text{cm/sec}$

$k = 1.2 \times 10^{-10} \text{cm/sec}$

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO: 3
 LOCATION: Ferris,
 Texas

DATE: 8/12/83 TYPE: Auger CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION PENETRATION BLOWS/ft.	HAND PEN IS.	LEGEND:	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	No seepage encountered during drilling. Water at 39.5' after 1 day.
					DESCRIPTION OF STRATUM	U.S.C.
					Brown clay	CH
5					Tannish brown clay $k = 1.8 \times 10^{-9} \text{cm/sec}$	CH
10					Tan and gray shaley clay $k = 8.7 \times 10^{-10} \text{cm/sec}$	CH
15						
20						
25						
30						
35						
40					Bottom of hole at 40'	
45						
50						

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO.: 4
 LOCATION: Ferris,
 Texas

DATE: 8/12/83 TYPE: Auger CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS / ft.	HAND PEN IS.	LEGEND:	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	No seepage encountered during drilling. Water at 32' after 1 day.
					DESCRIPTION OF STRATUM	U.S.C.
5					Tannish brown clay	CH
10					Tan and gray shaley clay $k = 5.3 \times 10^{-10} \text{cm/sec}$	CH
15						
20						
25					Tan and gray shaley clay with blue shale seams $k = 3.6 \times 10^{-10} \text{cm/sec}$	CH
30					Dark gray shale	CH
35					Bottom of hole at 35'	
40						
45						
50						

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO: 5
 LOCATION: Ferris,
 Texas

DATE: 8/12/83

TYPE: Auger

CASED TO:

GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS / FT.	HAND PEN 1st.	LEGEND	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	No seepage encountered during drilling. No water in hole after 1 day.
					DESCRIPTION OF STRATUM	U.S.C.
5					Tannish brown clay $k = 2.5 \times 10^{-9} \text{cm/sec}$	CH
10					Dark gray shale	CH
15					Bottom of hole at 15'	
20						
25						
30						
35						
40						
45						
50						

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO.: 6
 LOCATION: Ferris,
 Texas

DATE: 8/12/83

TYPE: Auger

CASED TO:

GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS/ft.	HAND PEN IS.	LEGEND:	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	Seepage at 39' during drilling. Water at 14' after 1 day.
					DESCRIPTION OF STRATUM	U.S.C.
					Dark brown clay	CH
					Brown clay	
5					Tan sandy clay with calcareous deposits	CL
					$k = 7.6 \times 10^{-10} \text{cm/sec}$	
-10						
					Tan sandy clay with clayey sand	CL w/SC
-15					$k = 5.3 \times 10^{-8} \text{cm/sec}$	
-20						
					Tan and gray shaley clay	CH
-25						
-30						
-35						
-40					Dark gray shale	CH
-45						
-50					Bottom of hole at 45'	

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO.: 7
 LOCATION: Ferris,
 Texas

DATE: 8/12/83

TYPE: Auger

CASED TO:

GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS / ft.	HAND PEN / sf.	LEGEND:	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	No seepage encountered during drilling. No water in hole after 1 day.
					DESCRIPTION OF STRATUM	U.S.C.
5					Tannish brown clay (fill) k = 2.0 x 10 ⁻⁹ cm/sec	CH
10					Dark gray clay	CH
15					Tan and gray shaley clay k = 9.6 x 10 ⁻¹⁰ cm/sec	CH
20					Dark gray shale	CH
25					Bottom of hole at 20'	
30						
35						
40						
45						
50						

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO: 8
 LOCATION: Ferris,
 Texas

DATE: 8/12/83

TYPE: Auger

CASED TO:

GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS / ft.	HAND PEN ISF	LEGEND:	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	No seepage encountered during drilling. No water in hole after 1 day.
					DESCRIPTION OF STRATUM	U.S.C.
					Tannish brown clay	CH
5					Tan and gray shaley clay	CH
					Tannish brown shaley clay	CH
10					$k = 8.2 \times 10^{-11} \text{ cm/sec}$	
					Dark gray shale	CH
15					Bottom of hole at 15'	
20						
25						
30						
35						
40						
45						
50						

SOUTHWESTERN LABORATORIES

PROJECT PROPOSED SANITARY LANDFILL				BORING NO.: 9		
CLIENT: Waste Management, Inc.				LOCATION: Ferris, Texas		
DATE 8/12/83		TYPE: Auger		CASED TO: GROUND ELEVATION:		
DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS/ft.	HAND PEN 1st.	LEGEND	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	Seepage at 10' during drilling. Water at 8' after 1 day.
DESCRIPTION OF STRATUM					U.S.C.	
					Tan and gray clay $k = 6.4 \times 10^{-10} \text{cm/sec}$	CH
5					Tan and gray shaley clay with blue shale seams	CH
10					Dark gray shale	CH
15					Bottom of hole at 15'	
20						
25						
30						
35						
40						
45						
50						

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO.: 10
 LOCATION: Ferris,
 Texas

DATE: 8/12/83

TYPE: Auger

CASED TO:

GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS / ft	HAND PEN. 1st.	LEGEND	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	Seepage at 37', caved at 4' after 1 day.
					DESCRIPTION OF STRATUM	U.S.C.
5					Tannish brown clay $k = 4.3 \times 10^{-10} \text{cm/sec}$	CH
10						
15					Tan shaley clay	CH
20						
25						
30						
35					Tan and gray shaley clay $k = 4.4 \times 10^{-11} \text{cm/sec}$	CH
40					Bottom of hole at 40'	
45						
50						

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED SANITARY LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO: 11
 LOCATION: Ferris,
 Texas

DATE: 8/12/83 TYPE: Auger CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS/ft.	HAND PEN 1st	LEGEND: ■ SAMPLE X STANDARD PENETRATION ▼ WATER	WATER INFORMATION	
						DESCRIPTION OF STRATUM	U.S.C.
5						Brown clay	CH
10						Gray and tan clay $k = 2.1 \times 10^{-9}$ cm/sec	CH
15						Tan and gray shaley clay $k = 1.4 \times 10^{-10}$ cm/sec	CH
20						Tan shaley clay	CH
25						Tan shaley clay	CH
30							
35							
40						Bottom of hole at 40'	
45							
50							

Seepage at 10' and 30' during drilling.
 Water at 4' after 1 day.

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED LANDFILL
 CLIENT: Waste Management, Inc.

Page 1 of 2
 BORING NO.: #1
 LOCATION: Ferris,
 Texas

DATE: 10/16/78 TYPE: Core CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS / ft.	HAND PEN /sf	LEGEND:	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	
DESCRIPTION OF STRATUM						USC
					Brown clay with pebbles	CH
5					Tan clay with pebbles	CH
					Tan and gray clay with pebbles	CH $k=2.3 \times 10^{-9} \text{cm/sec}$
10					Tan and gray jointed clay	CH
15						$k=1.4 \times 10^{-9} \text{cm/sec}$
20						
25					Tan and gray jointed clay with some seams of pea gravel and calcareous material	CH
30					Tan and gray shaley clay with rust seams	CH
35						$k = 2.8 \times 10^{-9} \text{cm/sec}$
40						
45					Dark gray shale	Clay shale
50						

SOUTHWESTERN LABORATORIES

PROJECT: PROPOSED LANDFILL
 CLIENT: Waste Management, Inc.

BORING NO.: #1
 LOCATION: Ferris,
 Texas

DATE: 10/16/78 TYPE: Core CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS/ft.	HAND PEN. 1st.	LEGEND:	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	
DESCRIPTION OF STRATUM						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						

Dark gray shale

Bottom of hole at 90'

SOUTHWESTERN LABORATORIES

LOG OF BORING

PROJECT: PROPOSED LANDFILL
 CLIENT: Camp Dresser & McKee, Inc.

Page 1 of 2
 BORING NO.: 2
 LOCATION: Ferris,
 Texas

DATE: 10/17/78 TYPE: Core CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS/ft.	HAND PEN. (sf.)	LEGEND:	WATER INFORMATION	
					■ SAMPLE X STANDARD PENETRATION ▼ WATER		
					DESCRIPTION OF STRATUM	U.S.C.	
0 - 5					Dark brown clay with lime pebbles	CH	
5 - 10					Brown and gray clay with caliche	CH	
10 - 40					Tan and gray jointed clay with calcareous material	CH	
40 - 45					Tan and gray shaley clay with gypsum seams	CH	
45 - 50					Weathered gray shale with tan and gray clay layers	Clay shale	

SOUTHWESTERN LABORATORIES

PROJECT: PROPOSED LANDFILL
 CLIENT: Waste Management, Inc.

page 2 of 2
 BORING NO.: #2
 LOCATION: Ferris,
 Texas

DATE: 10/17/78 TYPE: Core CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS/ft.	HAND PEN. IN.	LEGEND:	WATER INFORMATION
					■ SAMPLE X STANDARD PENETRATION ▼ WATER	
DESCRIPTION OF STRATUM						
						Weathered gray shale with tan and gray clay layers Clay shale
55						Dark gray shale
60						
65						
70						
75						
80						
85						
90						
95						
100						
Bottom of hole at 100'						

SOUTHWESTERN LABORATORIES

LOG OF BORING

Page 1 of 2

PROJECT: PROPOSED LANDFILL
 CLIENT: Camp Dresser & McKee, Inc.

BORING NO.: 3
 LOCATION: Ferris,
 Texas

DATE: 10/18/78 TYPE: CORE CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS/FT.	HAND PEN. 1st.	LEGEND: ■ SAMPLE X STANDARD PENETRATION ▼ WATER	WATER INFORMATION	
						DESCRIPTION OF STRATUM	USC
						Dark brown clay	CH
						Brown clay with lime pebbles	CH
5						Brown and gray shaley clay	CH
						Weathered gray shale	CH
10							
						Dark gray shale	Clay shale
15							
20							
25							
30							
35							
40							
45							
50							

SOUTHWESTERN LABORATORIES

LOG OF BORING

Page 2 of 4

PROJECT: PROPOSED LANDFILL
 CLIENT: Camp Dresser & McKee, Inc.

BORING NO.: 3
 LOCATION: Ferris,
 Texas

DATE: 10/18/78 TYPE: Core CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS/ft.	HAND PEN. 1st.	LEGEND:		WATER INFORMATION	
					□	SAMPLE	×	STANDARD PENETRATION
					DESCRIPTION OF STRATUM	USC		
55					Dark gray shale	Clay shale		
60					Bottom of hole at 60'			
65								
70								
75								
80								
85								
90								
95								
100								

SOUTHWESTERN LABORATORIES

LOG OF BORING

Page 1 of 2

PROJECT: PROPOSED LANDFILL
 CLIENT: Camp Dresser & McKee, Inc.

BORING NO.: 4
 LOCATION: Ferris,
 Texas

DATE: 10/18/78 TYPE: Core CASED TO: GROUND ELEVATION:

PTI FEET	SYMBOL	SAMPLE	STANDARD PENETRATION BLOWS/ft.	HAND PEN. (sf.)	LEGEND: ■ SAMPLE X STANDARD PENETRATION ▼ WATER	WATER INFORMATION	
						DESCRIPTION OF STRATUM	USC
0						Brick, gravel and brown clay (fill)	CH
5						Brown and tan clay with pebbles	CH
0						Brown, tan and gray jointed clay with calcareous material	CH
15						Gray shaley clay with tan clay seams	CH
0						Dark gray shale	Clay shale
5							
30							
40							
15							
0							

SOUTHWESTERN LABORATORIES

PROJECT: PROPOSED LANDFILL
 CLIENT: Camp Dresser & McKee, Inc.

BORE HOLE NO.: 4
 LOCATION: Ferris,
 Texas

DATE: 10/18/78 TYPE: Core CASED TO: GROUND ELEVATION:

DEPTH IN FEET	SYMBOL	SAMPLE	STANDARD PENETRATION PENETRATION BLOWS/ft.	HAND PEN. 1st.	LEGEND:	WATER INFORMATION
					<input checked="" type="checkbox"/> SAMPLE <input checked="" type="checkbox"/> STANDARD PENETRATION <input checked="" type="checkbox"/> WATER	
					DESCRIPTION OF STRATUM	USC
55					Dark gray shale	Shale
65					Bottom of hole at 65'	

SOUTHWESTERN LABORATORIES

MONITORING WELL LOGS

LOG OF BORING MONITOR WELL MW-1

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

LOCATION: C-15
56+80

DEPTH, FT.

INCHES SAMPLE

SOIL DESCRIPTION

ELEVATION: Top Pipe 493.70
Ground 491.06

DEPTH, FT.	INCHES SAMPLE	SOIL DESCRIPTION	ELEVATION
		Firm, dark brown CLAY with calcareous nodules.	
5			
		7.0' Firm to stiff, tan and gray CLAY (Weathered Taylor) with calcareous nodules and iron stained joints.	(CH)
10		Fewer calcareous nodules below 10'.	
		More gray at 17'.	
15			
20			
25			
30			
35			

2/2/75 PS 26284.110

LOG OF BORING MONITOR WELL MW-1 (cont.)

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

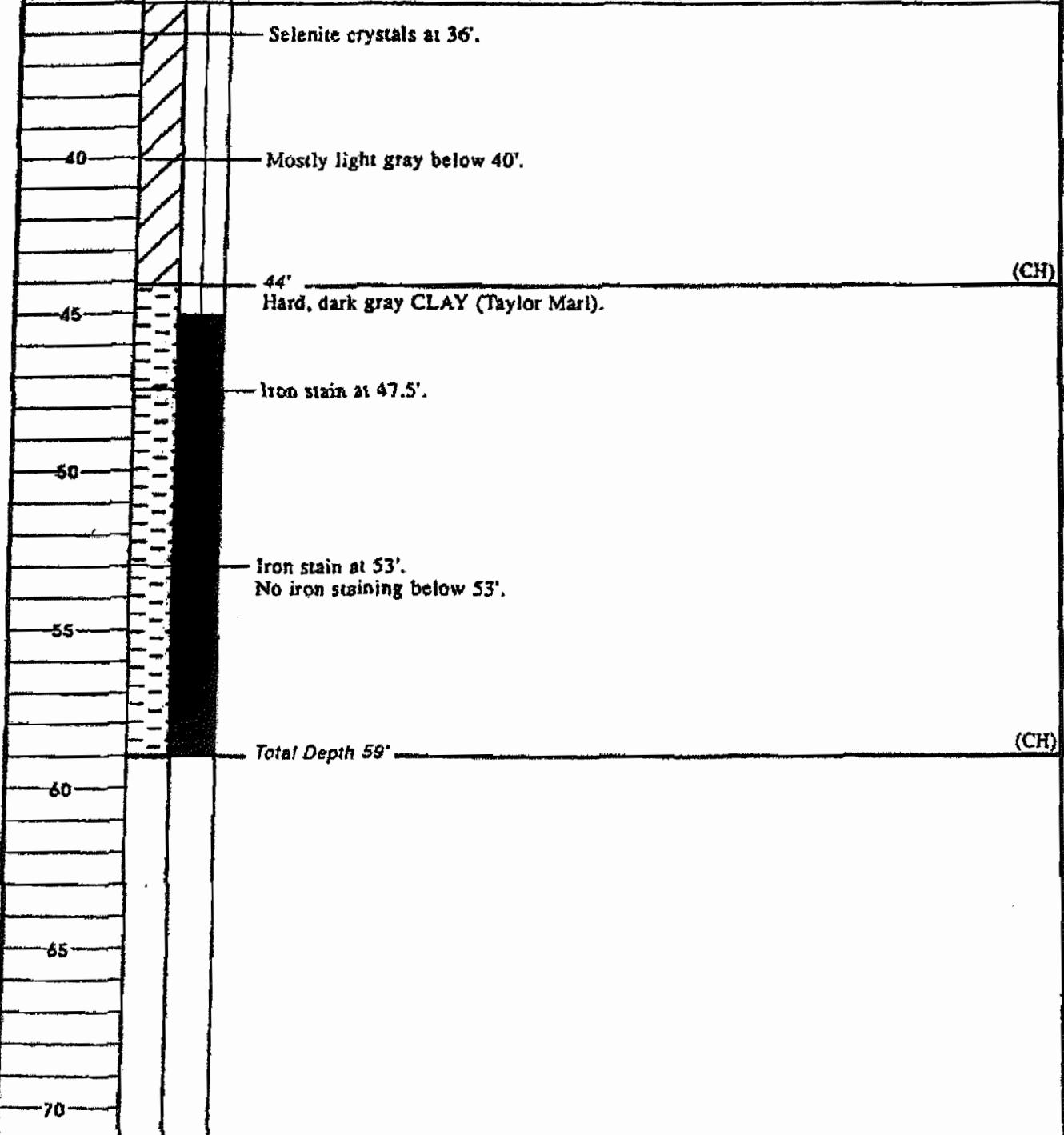
LOCATION:

DEPTH, FT.

SOIL SAMPLE

SOIL DESCRIPTION

ELEVATION:



7/27/95 26286.110

LOG OF BORING

Apex geoscience Inc.

ENVIRONMENTAL SAMPLING

Project Number: 307-052

Name: Skyline Landfill

Boring No: MW-2R

Location/Description: IH-45, Ferris, Texas

Date: 8/27/2007

SILTS & SANDS	CONSISTENCY	COLORS	MATERIALS	SAND TYPE	CHARACTERISTICS
VLo - Very Loose Lo - Loose MDe - Medium Dense De - Dense VDe - Very Dense	Vso - Very Soft So - Soft Mst - Medium Stiff St - Stiff Vst - Very Stiff H - Hard	Bk - Black, Bl - Blue Br - Brown, Dk - Dark G - Gray, Gr - Green Li - Light, R - Red Rdsh - Reddish Y - Yellow, W - White	Cl - Clay, Clayey Gr - Gravel Ls - Limestone Sa - Sand, Sandy SS - Sandstone Sh - Shale, Si - Silt, Silty Sis - Siltstone	F - Fine M - Medium Co - Coarse Si - Silty	Calc - Calcareous Lam - Laminated Lig - Lignite Nod - Nodules Org - Organic Sm - Seam, Sl - Slightly Slk - Slickensided

SAMPLE #	DEPTH	CONDITION OR CONSISTENCY	COLOR	MINOR MATERIALS OR ADJECTIVES	PREDOMINATE MATERIAL	CHARACTERISTICS OR MODIFICATIONS	MOISTURE DESC.	PID	LEVEL
	0	So	Br	Si	Cl	Compacted fill	Dry		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	5	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	10	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	15	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	20	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	25	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	30	Mst	Li Br	"	"	Calc	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	35	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		

LOG OF BORING Apex geoscience inc. **ENVIRONMENTAL SAMPLING**

Project Number: 307-052 Name: Skyline Landfill Boring No: MVV-3R

Location/Description: IH-45, Ferris, Texas Date: 8/27/2007

SILTS & SANDS	CONSISTENCY	COLORS	MATERIALS	SAND TYPE	CHARACTERISTICS
VLo- Very Loose Lo- Loose MDe - Medium Dense De - Dense VDe - Very Dense	Vso - Very Soft So - Soft Mst - Medium Stiff St - Stiff Vst - Very Stiff H - Hard	Bk - Black, Bl - Blue Br - Brown, Dk - Dark G - Gray, Gr - Green Li - Light, R - Red Rdsh - Reddish Y - Yellow, W - White	Cl - Clay, Clayey Gr - Gravel Ls - Limestone Sa - Sand, Sandy SS - Sandstone Sh - Shale, Sl - Silt, Silty SIS - Siltstone	F - Fine M - Medium Co - Coarse Sl - Silty	Calc - Calcareous Lam - Laminated Lig - Lignite Nod - Nodules Org - Organic Sm - Seam Sl - Slightly Slb - Slackensided

S A M P L E #	D E P T H F T	CONDITION OR CONSISTENCY	COLOR	MINOR MATERIALS OR ADJECTIVES	PREDOMINATE MATERIAL	CHARACTERISTICS OR MODIFICATIONS	M O I S T U R E	PID	L E L
							DESC.		
	0	Mst	Li Br	Si	Cl	Org Sclentic crystals	Dry		
		"	Br	"	"	"	"		
		"	"	"	"	Calc	"		
	5	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	Li Br	"	"	"	Moist		
		"	"	"	"	"	"		
	10	St	Dk G	"	"	Calc	Dry		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	15	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	20	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	25	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	30	Vst	Dk G	"	"	Fissile	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	35	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		

Project Number: 307-052		Name: Skyline Landfill		Boring No: MW-3R	
Location/Description: IH-45, Ferris, Texas				Date: 8/27/2007	
SILTS & SANDS	CONSISTENCY	COLORS	MATERIALS	SAND TYPE	CHARACTERISTICS
VLo- Very Loose Lo- Loose MDe - Medium Dense De - Dense VDe - Very Dense	Vso - Very Soft So - Soft Mst - Medium Stiff St - Stiff Vst - Very Stiff H - Hard	Bk - Black, Bl - Blue Br - Brown, Dk - Dark G - Gray, Gr - Green Li - Light, R - Red Rdish - Reddish Y - Yellow, W - White	Cl - Clay, Clayey Gr - Gravel Ls - Limestone Sa - Sand, Sandy SS - Sandstone Sh - Shale, Si - Silt, Silty SIS - Siltstone	F - Fine M - Medium Co - Coarse Si - Silty	Calc - Calcareous Lam - Laminated Lig - Lignite Nod - Nodules Org - Organic Sm - Seam, SI - Slightly Slk - Slit/skid

S A M P L E #	D E P T H F T	CONDITION OR CONSISTENCY	COLOR	MINOR MATERIALS OR ADJECTIVES	PREDOMINATE MATERIAL	CHARACTERISTICS OR MODIFICATIONS	M O I S T U R E D E S C.	P I D	L E L
	40	Vst	Dk, G	Si	Cl	Fissile	Dry		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	45	"	"	"	"	"	"		
		"	Bl	"	"	"	"		
		"	"	"	"	Iron stain @ 47'	"		
		"	Bl	"	"	"	"		
	50	"	"	"	"	"	"		
		Vst	G	Si	Cl	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	55	"	"	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
	60	H	Dk, G	"	"	"	"		
		"	"	"	"	"	"		
		"	"	"	"	"	"		
						TD - 63'			
	65								

COMPLETION RECORD

Type of Boring: <input checked="" type="checkbox"/> HSA <input type="checkbox"/> Other _____	Logged By: B. Collier	W.L. @ _____ Dry _____ Ft. On Completion; Cased to _____ 0 _____ Ft.
Screen From: _____ 41 _____ Ft. to _____ 81 _____ Ft.	Riser From _____ 0 _____ Ft. to _____ 41 _____ Ft.	Surface Completion <input type="checkbox"/> Flush <input type="checkbox"/> 2x2 Pad <input type="checkbox"/> 4x4 Pad <input checked="" type="checkbox"/> 6x6 Pad <input type="checkbox"/> Other _____
Sand _____ 38 _____ Ft. to _____ 63 _____ Ft.; Bentonite _____ 35 _____ Ft. to _____ 38 _____ Ft.; Grout _____ 2 _____ Ft. to _____ 35 _____ Ft.	TD @ _____ 63 _____ Ft.	

LOG OF BORING MONITOR WELL MW-4

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

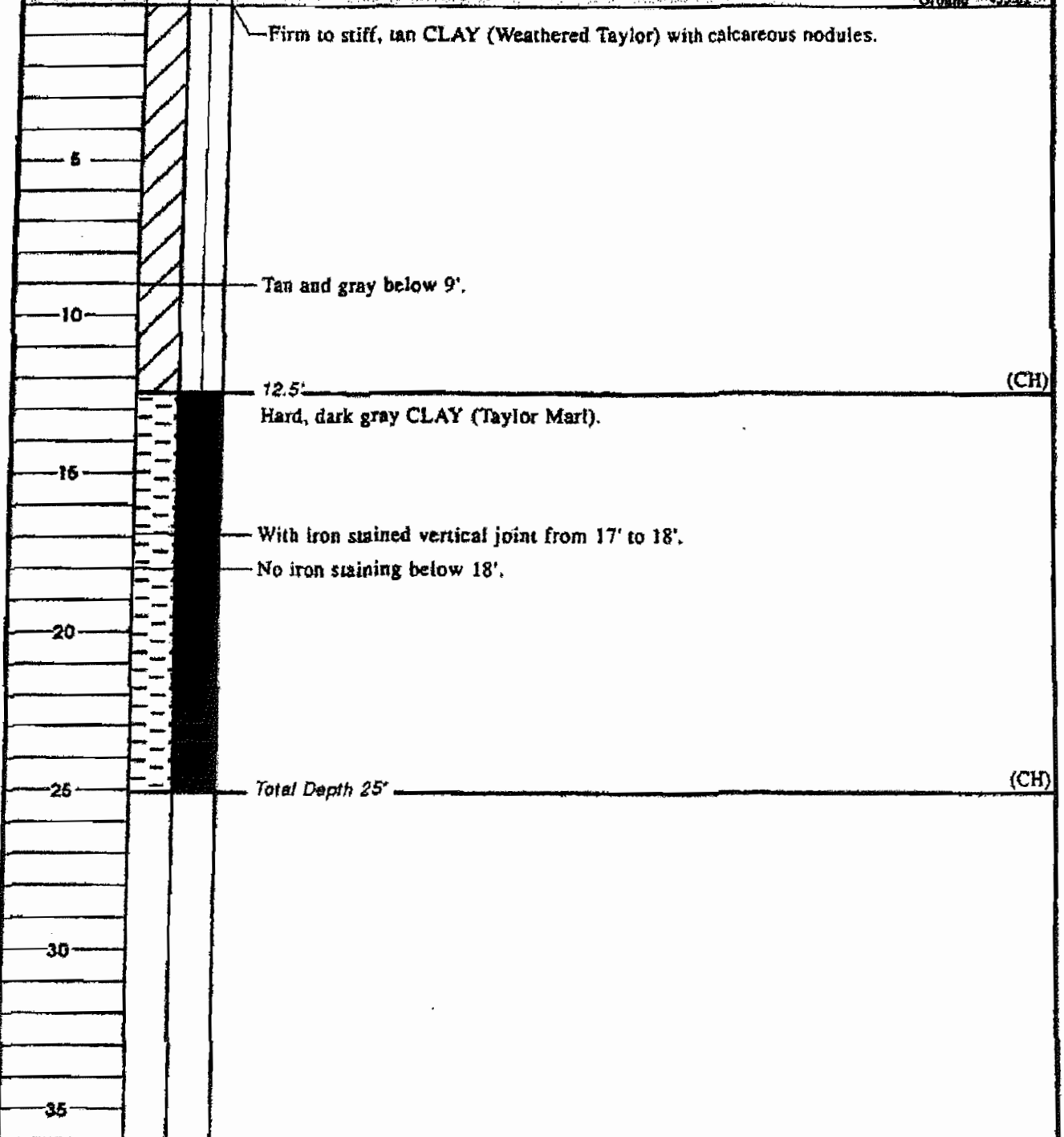
LOCATION: BHH-64
29+24

DEPTH, FT.

SOIL SAMPLE

SOIL DESCRIPTION

ELEVATION: Top Pipe 437.00
Ground 433.87



7/22/75 26264.110

LOG OF BORING MONITOR WELL MW-5

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

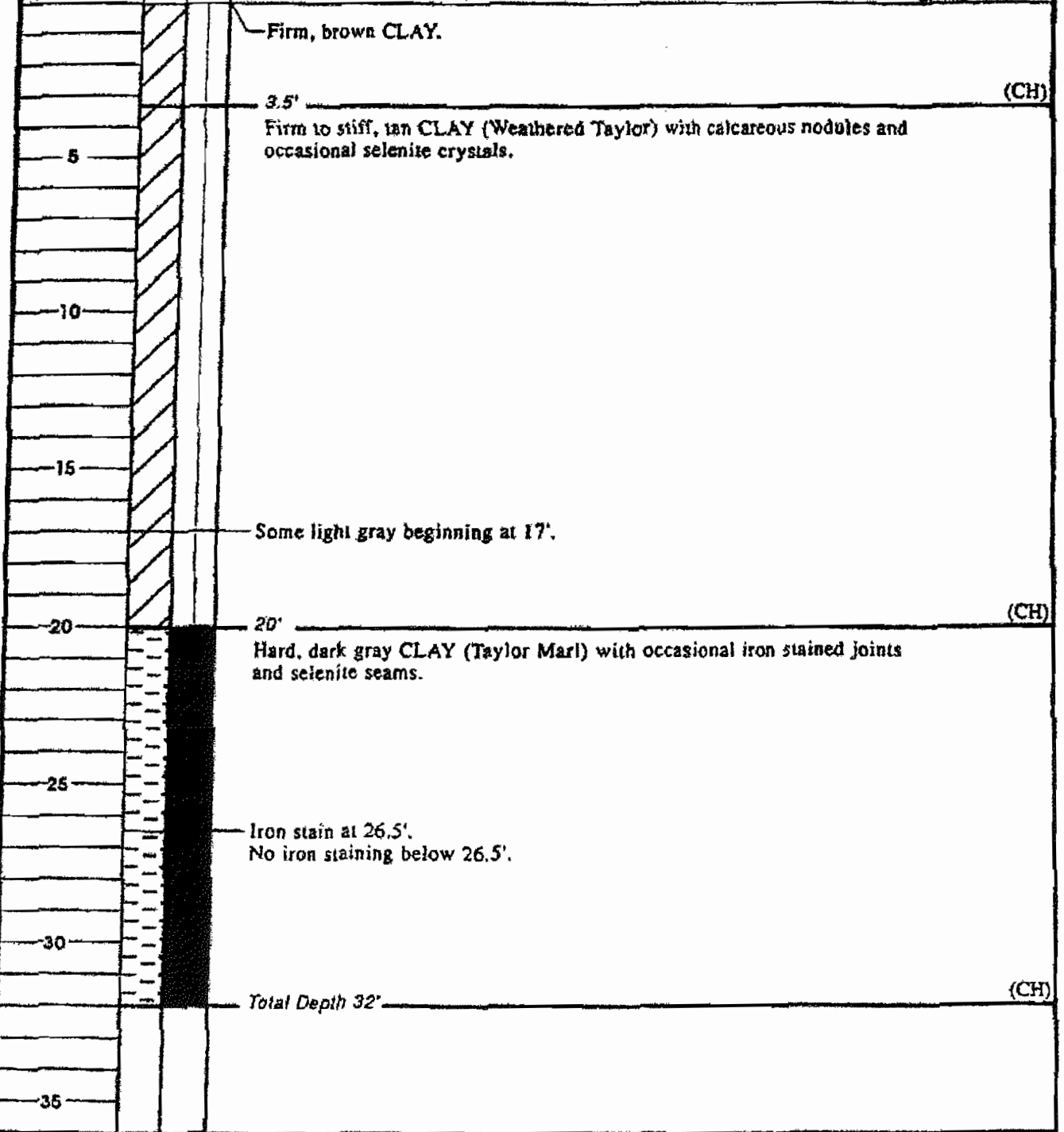
LOCATION: LLL-34
20+75

DEPTH, FT.

SYMBOL SAMPLE

SOIL DESCRIPTION

ELEVATION: Top Pipe 425.14
Ground 421.92



7/27/85 20584 110

LOG OF BORING MONITOR WELL MW-6

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

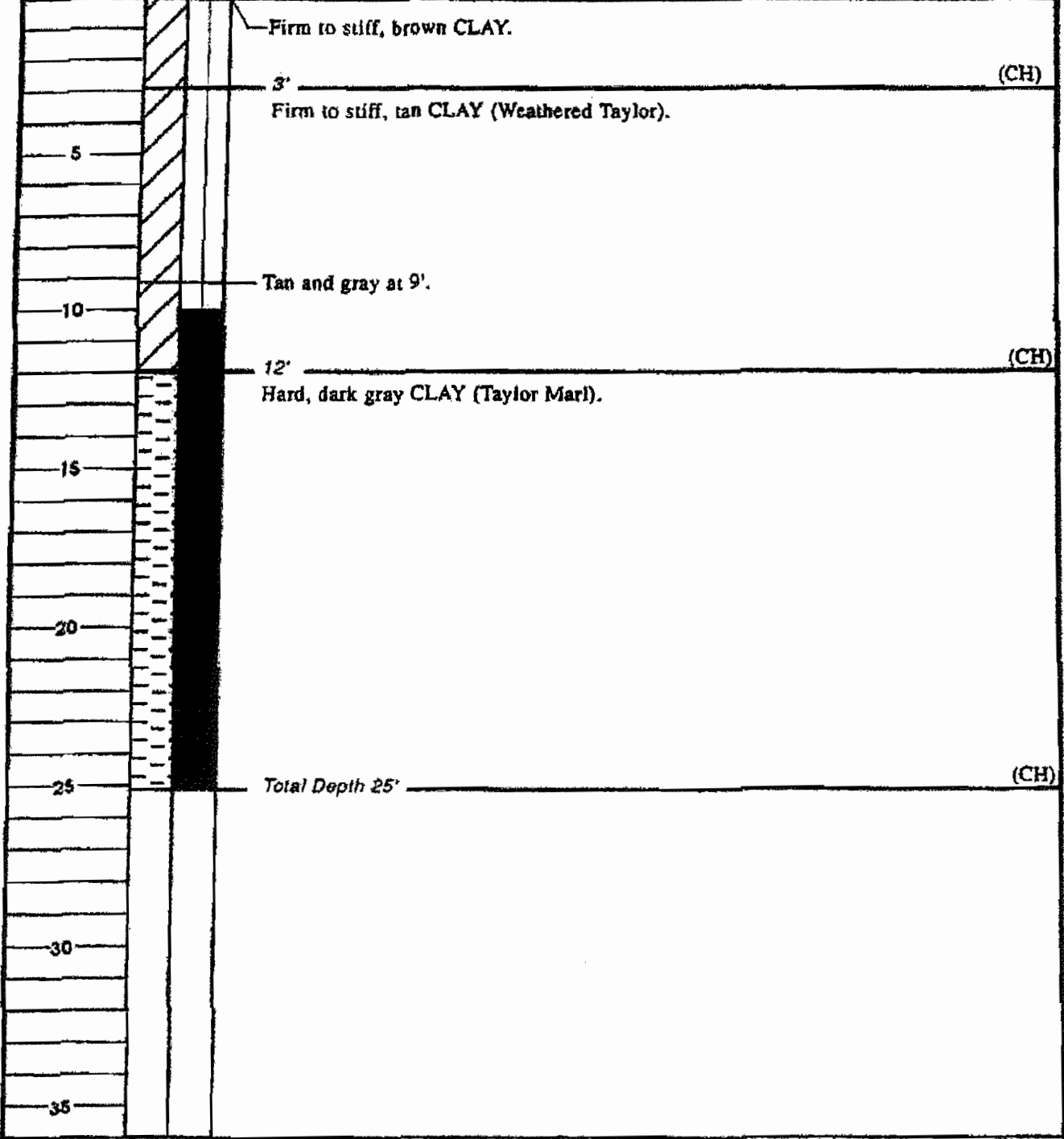
TYPE OF BORING: HSA

LOCATION: MMM+54
15+85

DEPTH: FT.

SOIL DESCRIPTION

ELEVATION: Top Pipe 419.96
Ground 416.81



7/27/95 24286.110

LOG OF BORING MONITOR WELL MW-7

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA		LOCATION: 111+53 14+64
DEPTH, FT.	SAMPLE	SOIL DESCRIPTION
		ELEVATION: Top Pipe 432.67 Ground 429.73
5		Firm, brown CLAY with occasional selenite crystals. Brown and tan below 4.5'. 3' ————— (CH) Firm to stiff, tan CLAY (Weathered Taylor) with occasional selenite seams.
10		(CH)
13		13' ————— (CH) Hard, dark gray CLAY (Taylor Marl). Iron stained joint at 13.5'. Iron stained joint from 16' to 16.5'. No iron staining below 16.5'.
15		
20		
25		Total Depth 25' ————— (CH)
30		
35		

3/27/95 2:20pm 110

LOG OF BORING MONITOR WELL MW-8

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

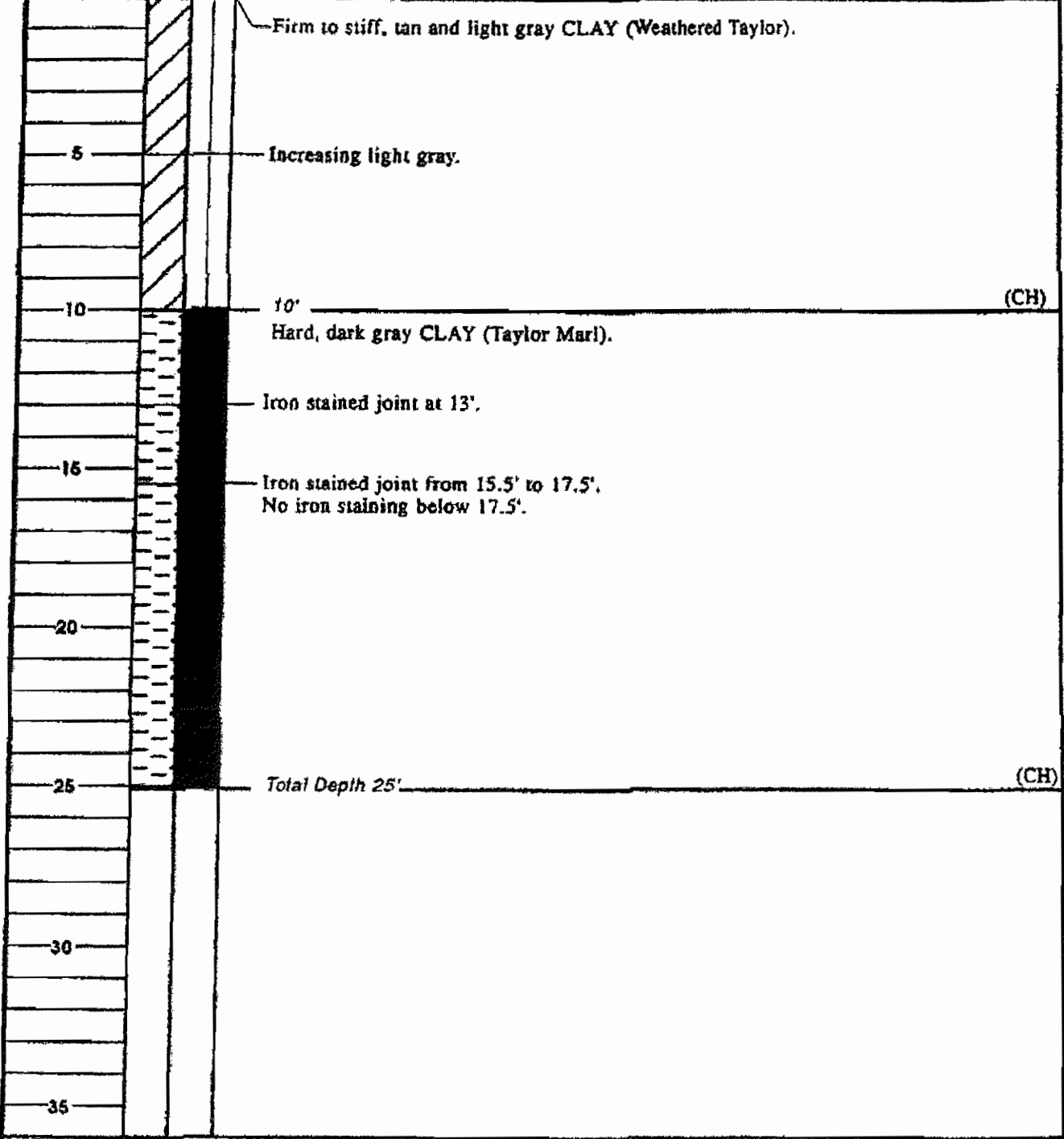
LOCATION: WWW+7a
18+12

DEPTH, FT.

SYMBOL SAMPLES

SOIL DESCRIPTION

ELEVATION: Top Pipe 447.06
Ground 444.06



11/27/95 09:38:110

LOG OF BORING MONITOR WELL MW-9

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

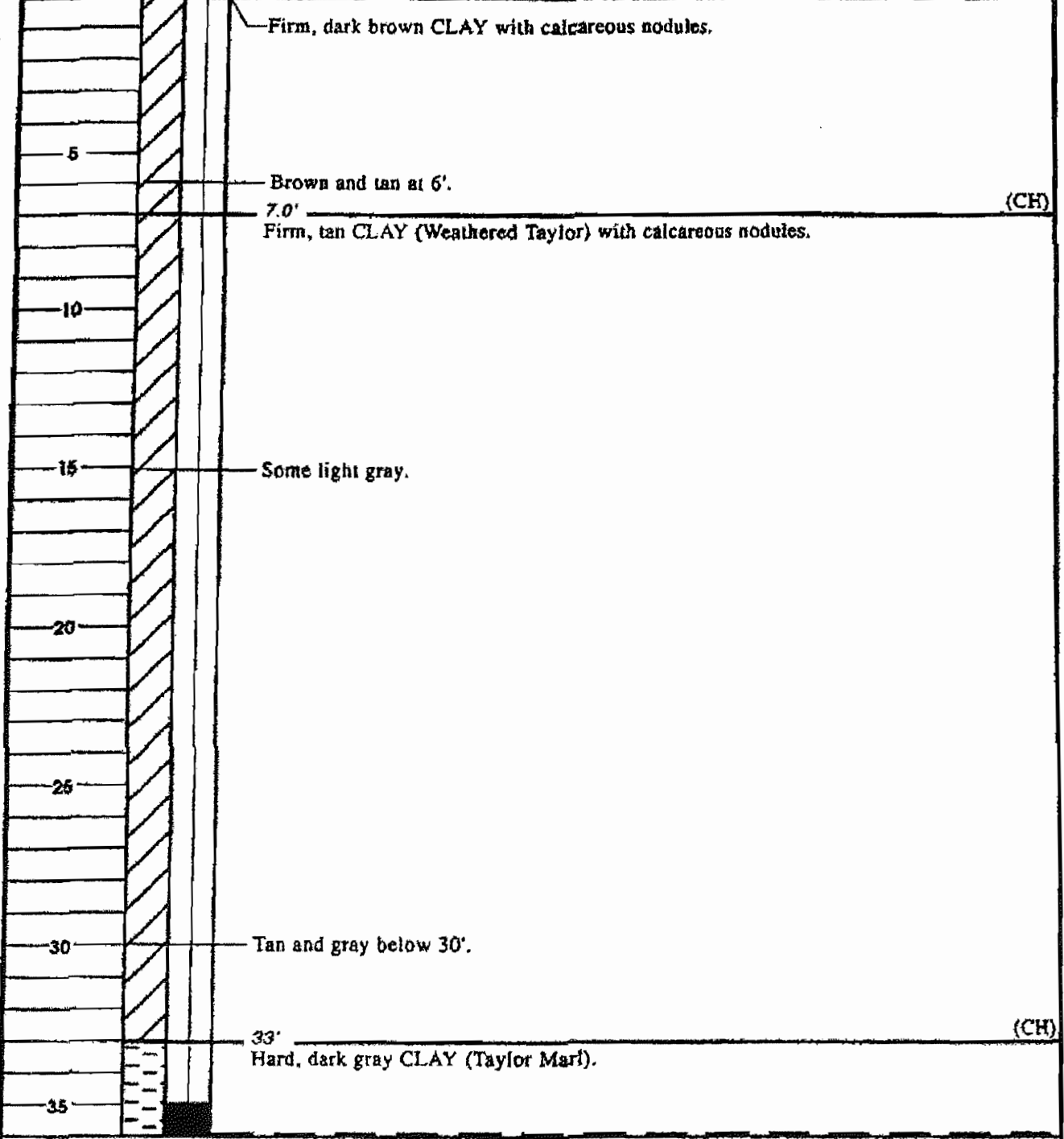
LOCATION: F-03
17+62

DEPTH, FT.

SOIL SAMPLE

SOIL DESCRIPTION

ELEVATION: Top Pipe 421.64
Ground 418.19



7/27/95 2428A.110

LOG OF BORING MONITOR WELL MW-9 (cont.)

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

LOCATION:

DEPTH, FT.

SOIL SAMPLES

SOIL DESCRIPTION

ELEVATION:

Hard, dark gray CLAY (Taylor Marl).

40

Total Depth 40'

(CH)

45

50

55

60

65

70

7/27/95 25296.110

LOG OF BORING MONITOR WELL MW-10

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

LOCATION: 1-20
15-48

DEPTH, FT.

WATER SAMPLES

SOIL DESCRIPTION

ELEVATION: Top Pipe 417.53
Ground 415.30

5		Firm, dark brown CLAY with numerous calcareous nodules.	
6.0'		Brown and tan.	(CH)
10		Firm to stiff, tan CLAY (Weathered Taylor) with numerous calcareous nodules, iron staining, and some selenite crystals.	
15			
17		Some light gray below 17'.	
20			
25			
30			
35			

7/77/MS 24204.110

LOG OF BORING MONITOR WELL MW-10 (cont.)

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

LOCATION:

DEPTH: FT.	SAMPLE	SOIL DESCRIPTION	ELEVATION:
39			(CH)
40		Hard, dark gray CLAY (Taylor Marl). Several vertical iron stained joints from 40.5' to 44'. No iron staining below 44'.	
45			
50		Total Depth 50'	(CH)
55			
60			
65			
70			

12/1/03 24566 110

LOG OF BORING MONITOR WELL MW-11

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

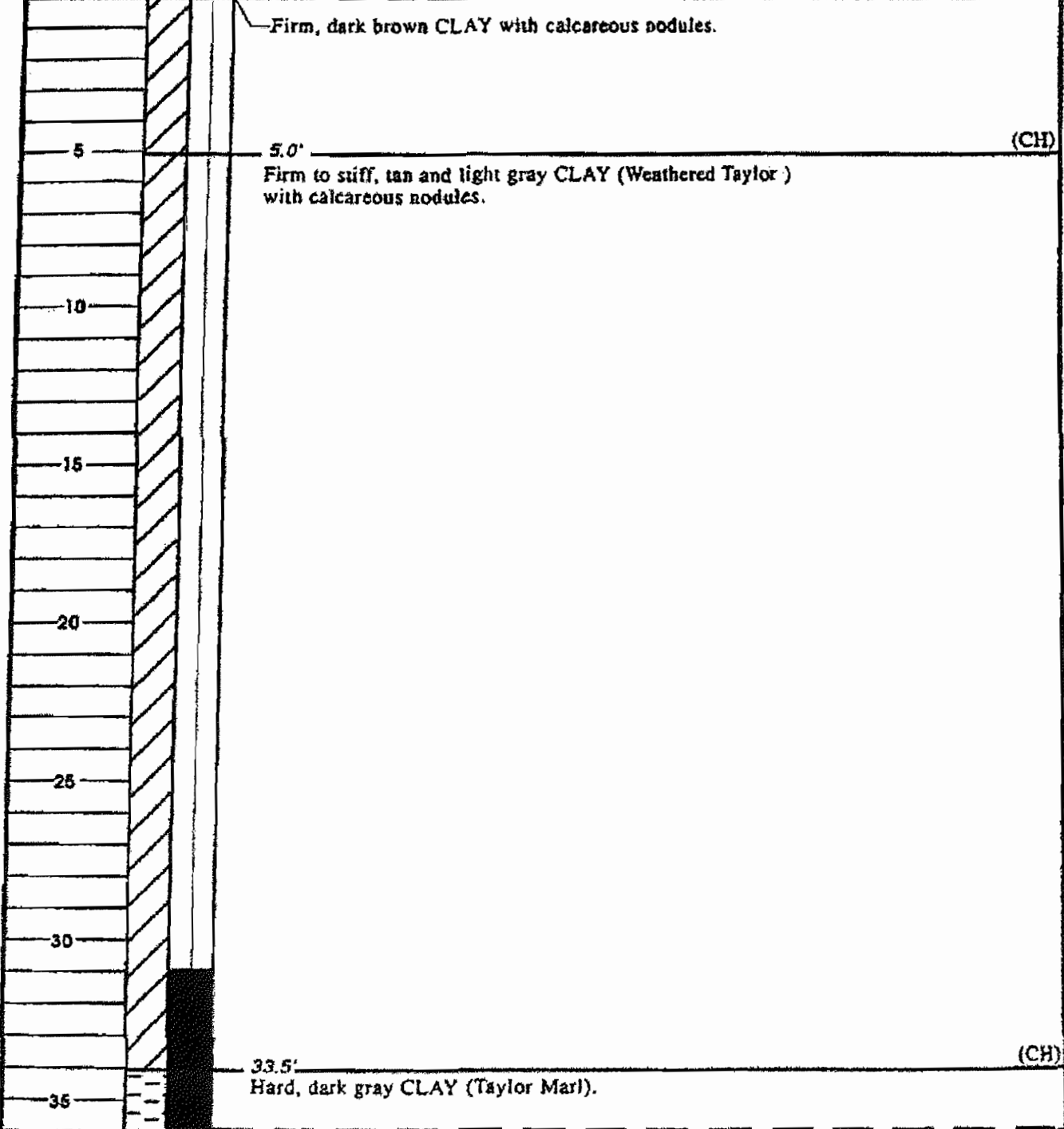
LOCATION: P-36
14-33

DEPTH, FT.

SYMBOL SAMPLE

SOIL DESCRIPTION

ELEVATION: Top Pipe 417.59
Ground 415.10



8/15/95 28266.110

LOG OF BORING MONITOR WELL MW-11 (cont.)

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

LOCATION:

DEPTH, FT.

PIVOT SAMPLES

SOIL DESCRIPTION

ELEVATION:

40				Hard, dark gray CLAY (Taylor Marl). Iron stained joint at 35' and 36'. No iron staining below 36'.	
45					
50					
55					
60					
65					
70					

Total Depth 40'

(CH)

8/18/95 20286.110

LOG OF BORING MONITOR WELL MW-12

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

LOCATION: X+90
15+48

DEPTH: FT.

SYMBOL SAMPLE

SOIL DESCRIPTION

ELEVATION: Top Pipe 420.95
Ground 417.83

5			Firm, dark brown CLAY.	
		5.0'		(CH)
			Firm, tan and light gray CLAY (Weathered Taylor).	
		8.0'		(CH)
			Hard dark gray CLAY (Taylor Marl) with occasional iron stained joints and selenite crystals.	
		10	No iron staining or selenite below 10'.	
		15		
		20		
			Total Depth 22'	(CH)
		25		
		30		
		35		

7/27/95 26286.130

LOG OF BORING MONITOR WELL MW-13

WASTE MANAGEMENT OF TEXAS
MSW Permit 42-C
Dallas & Ellis County, Texas

TYPE OF BORING: HSA

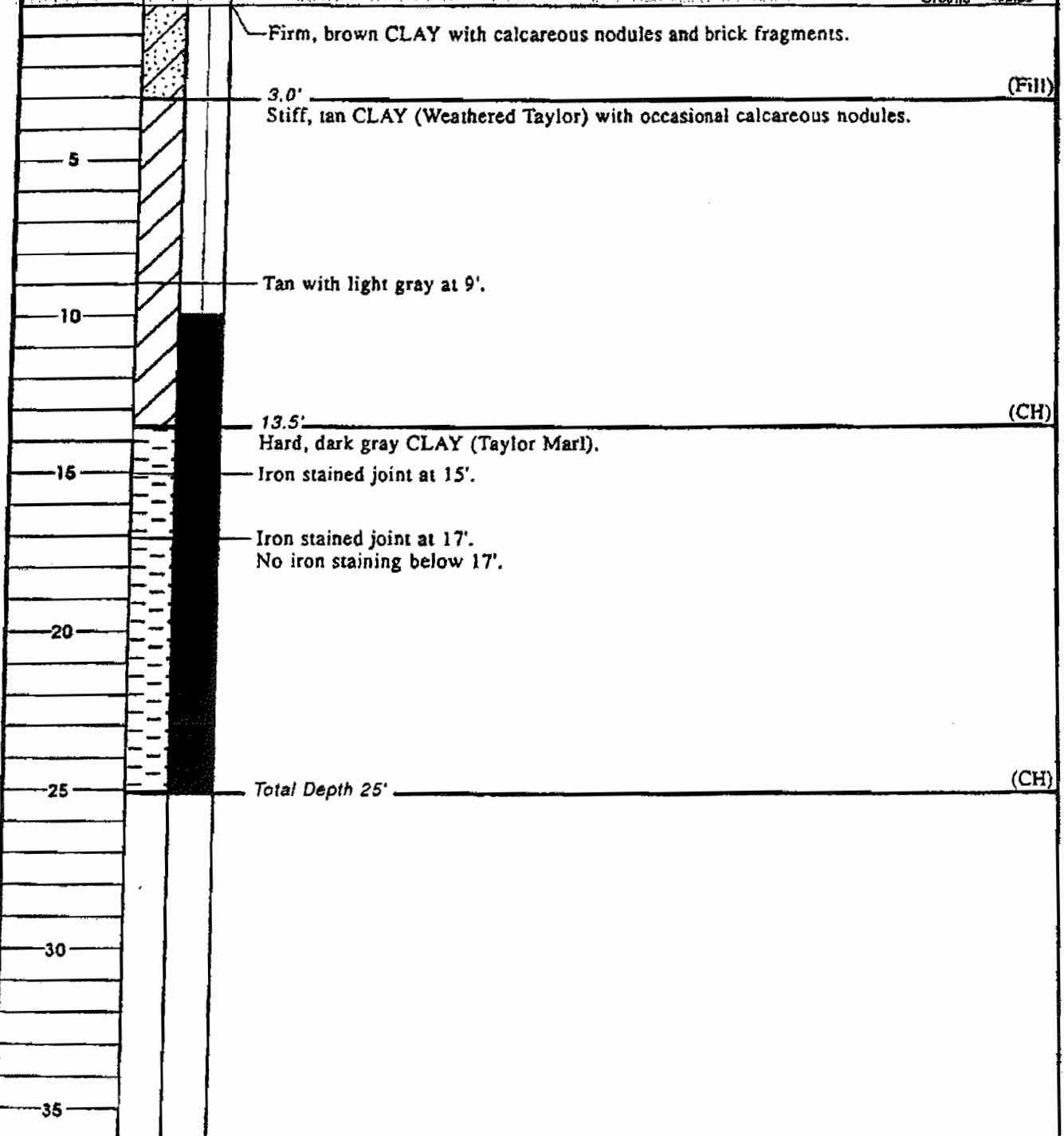
LOCATION: Z+77
23+47

DEPTH. FT.

SYMBOL SAMPLE

SOIL DESCRIPTION

ELEVATION: Top Pipe 435.22
Ground 432.23



7/21/95 20286.110

LOG OF BORING MONITORING WELL 14
WASTE MANAGEMENT OF TEXAS
MSW Permit 42A
Dallas & Ellis Counties, Texas

TYPE OF BORING: Auger / Undisturbed

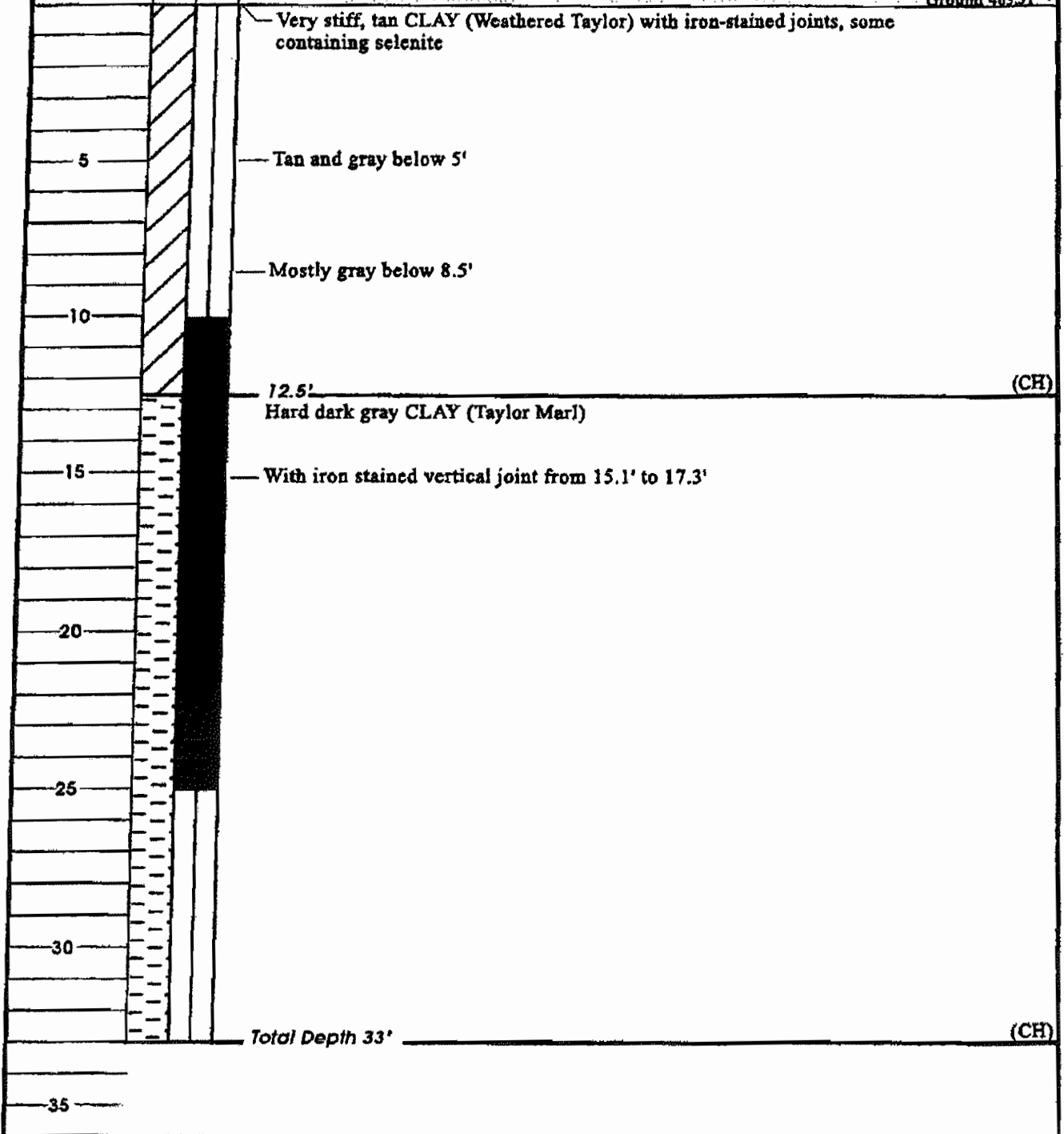
LOCATION: GG+11.66
 34+02.75

DEPTH, FT.

SMECT. SAMPLES

SOIL DESCRIPTION

ELEVATION: Top Pipe 466.71
 Ground 463.51



- Notes:
1. Water not encountered during drilling.
 2. Continuous core from 10' to 25'.
 3. Completed as monitor well 9/20/94

9/20/94 2:26:100

LOG OF BORING MONITORING WELL 15
WASTE MANAGEMENT OF TEXAS
MSW Permit 42A
Dallas & Ellis Counties, Texas

TYPE OF BORING: Auger / Undisturbed

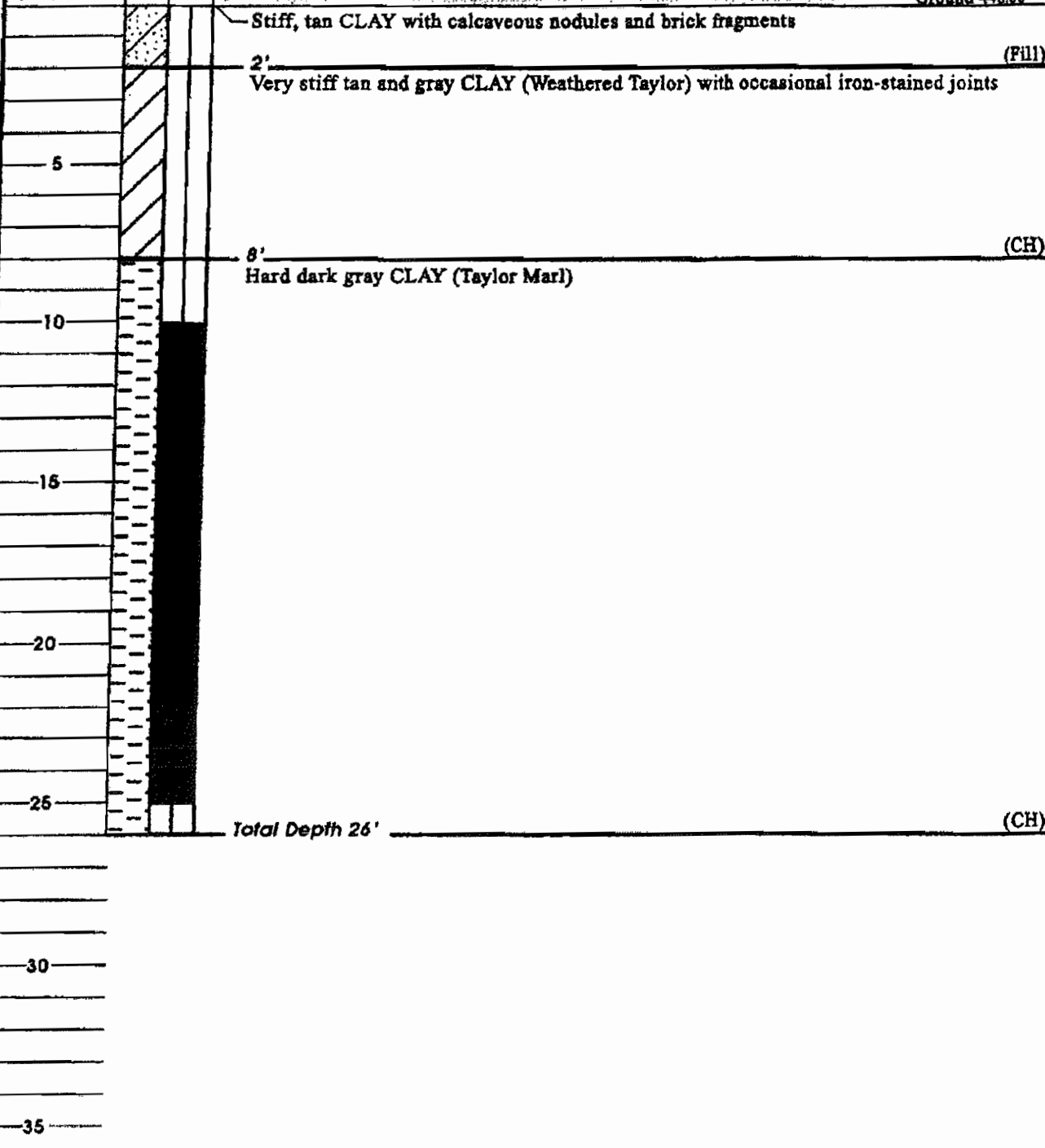
LOCATION: NN+02.91
37+02.75

DEPTH, FT.

SYMBOL SAMPLES

SOIL DESCRIPTION

ELEVATION: Top Pipe 452.20
Ground 448.66



Notes:

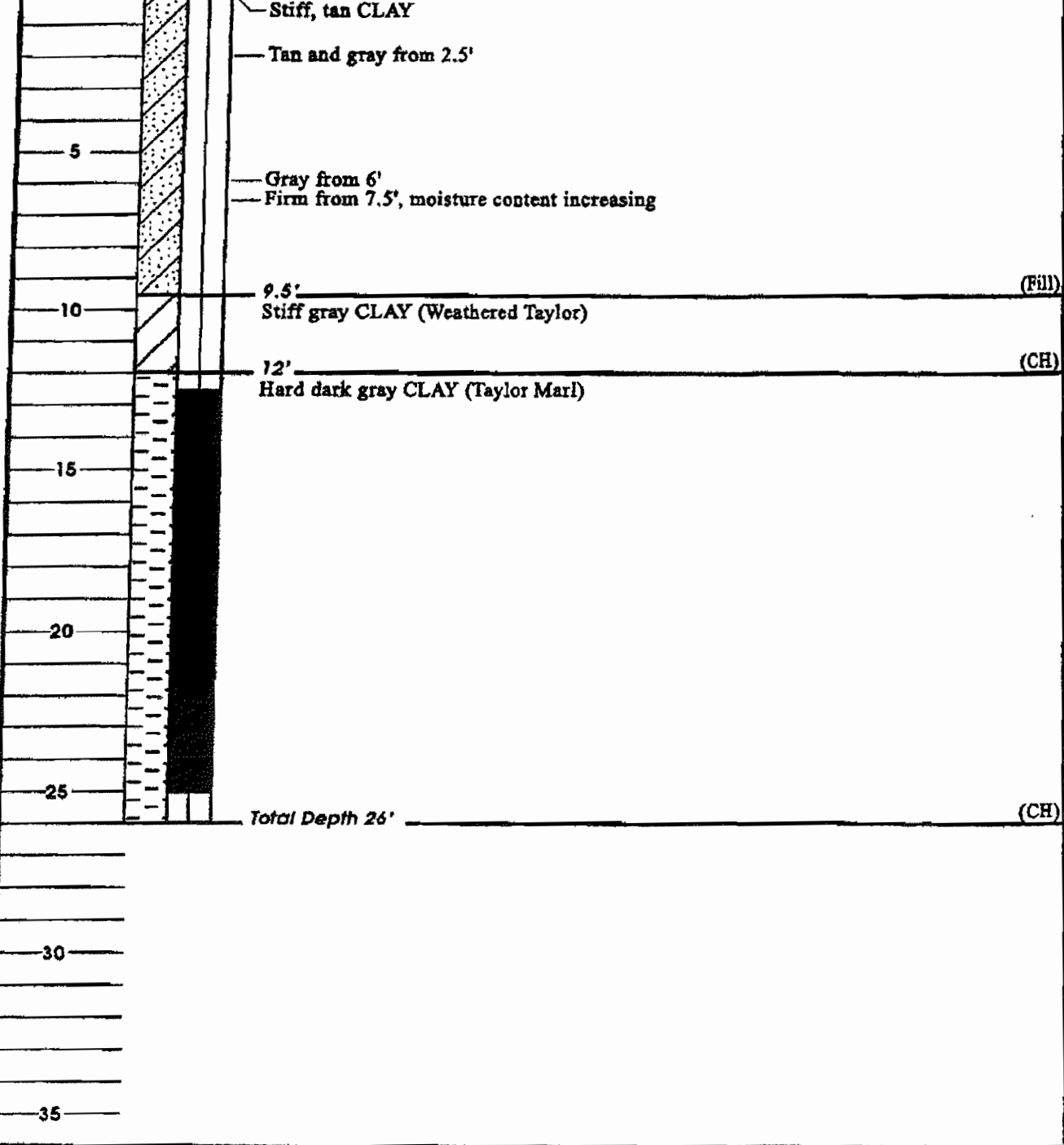
1. Water not encountered during drilling.
2. Continuous core from 10' to 25'.
3. Completed as monitor well 9/21/94

9/20/94 26286.100

LOG OF BORING MONITORING WELL 16
WASTE MANAGEMENT OF TEXAS
MSW Permit 42A
Dallas & Ellis Counties, Texas

TYPE OF BORING: Auger / Undisturbed LOCATION: 00+95.01
50+21.93

DEPTH. FT. ELEVATION: Top Pipe 449.56
Ground 446.36



- Notes:**
1. Water not encountered during drilling.
 2. Continuous core from 12.5' to 25'.
 3. Completed as monitor well 9/22/94

9/20/94 26286.100

LOG OF BORING MONITORING WELL 17
WASTE MANAGEMENT OF TEXAS
MSW Permit 42A
Dallas & Ellis Counties, Texas

TYPE OF BORING: Auger / Undisturbed

LOCATION: CC+46.77
 51+52.66

DEPTH, FT.

SRMCO SAMPLES

SOIL DESCRIPTION

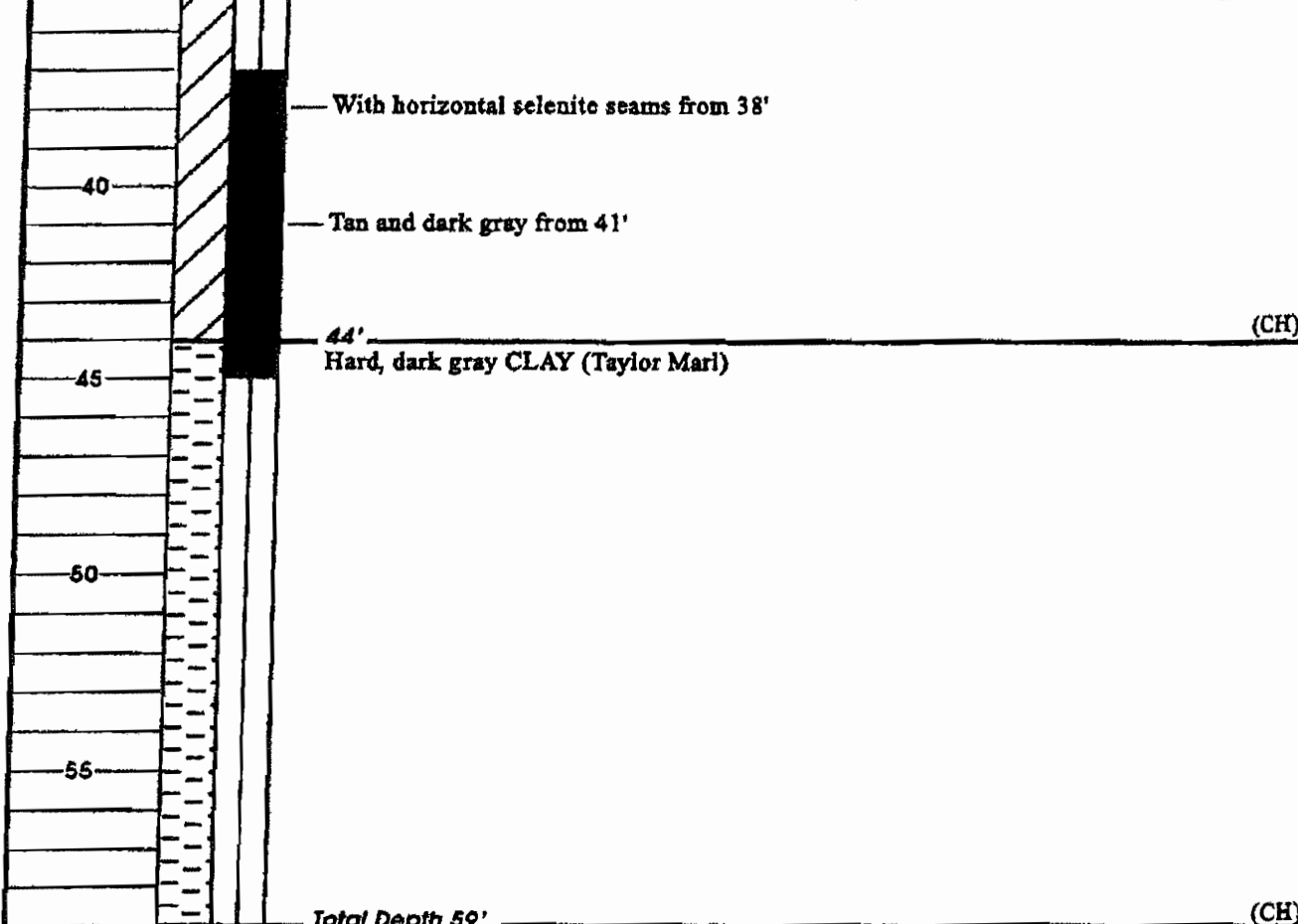
ELEVATION: Top Pipe 492.75
 Ground 489.85

5			Stiff, dark brown CLAY with light brown seams
		6'	(Fill) Stiff tan CLAY (Weathered Taylor) with calcareous nodules
10			
			Very stiff, gray and tan with occasional iron-stained joints with some selenite
15			
20			
25			
30			
35			

9/20/94 26286.100

LOG OF BORING MONITORING WELL 17 (cont.)
WASTE MANAGEMENT OF TEXAS
MSW Permit 42A
Dallas & Ellis Counties, Texas

TYPE OF BORING: Auger / Undisturbed	LOCATION: CC+46.77 51+52.66
DEPTH, FT.	ELEVATION: Top Pipe 492.75 Ground 489.85



- Notes:**
1. Free water encountered in selenite seam at 40'.
 2. Continuous core from 37' to 45'.
 3. Completed as monitor well 9/26/94

9/20/94 26286.100

LOG OF BORING MONITORING WELL 18
WASTE MANAGEMENT OF TEXAS
MSW Permit 42A
Dallas & Ellis Counties, Texas

TYPE OF BORING: Auger / Undisturbed

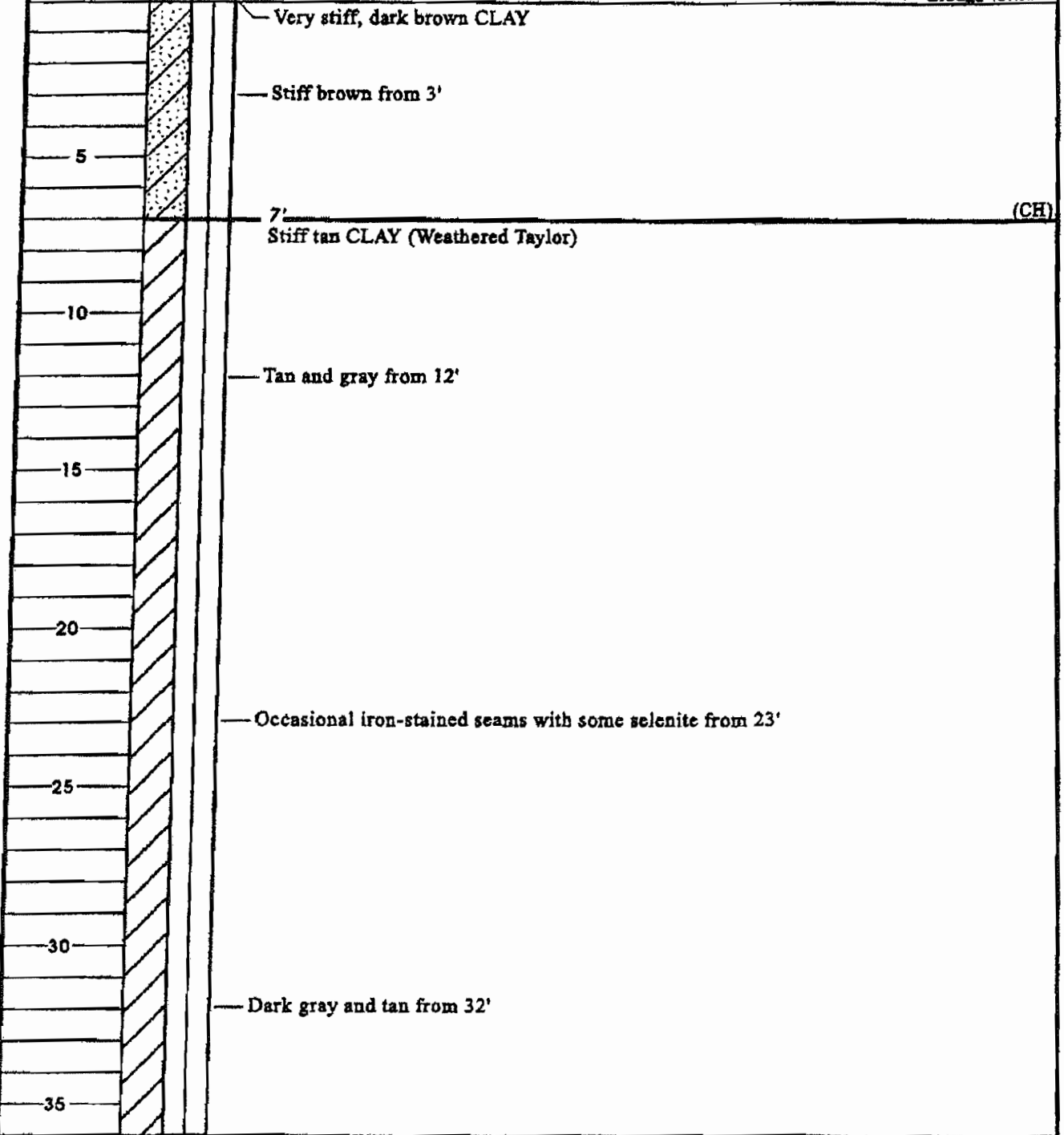
LOCATION: S+48.54
 56+82.65

DEPTH, FT.

SMBCL SAMPLES

SOIL DESCRIPTION

ELEVATION: Top Pipe 470.20
 Ground 467.00

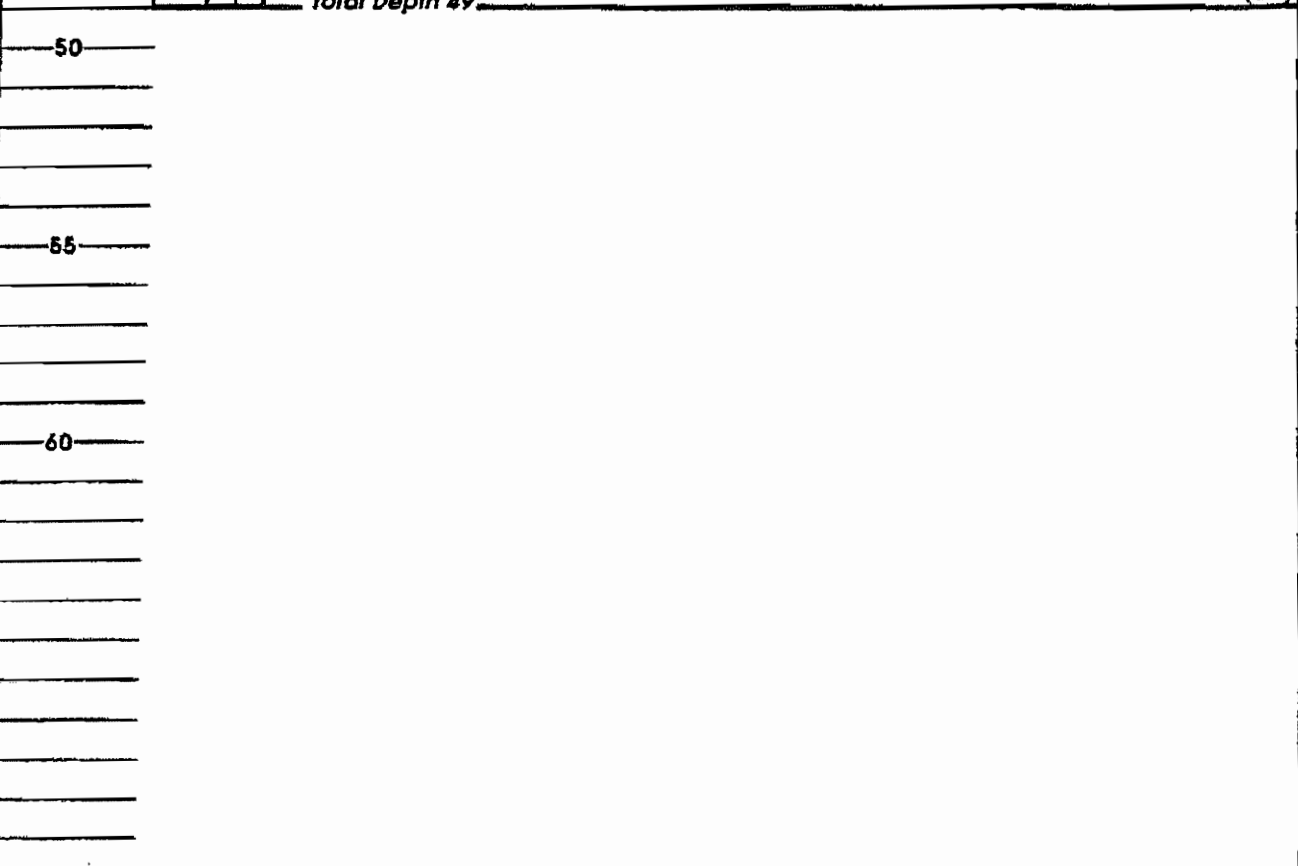
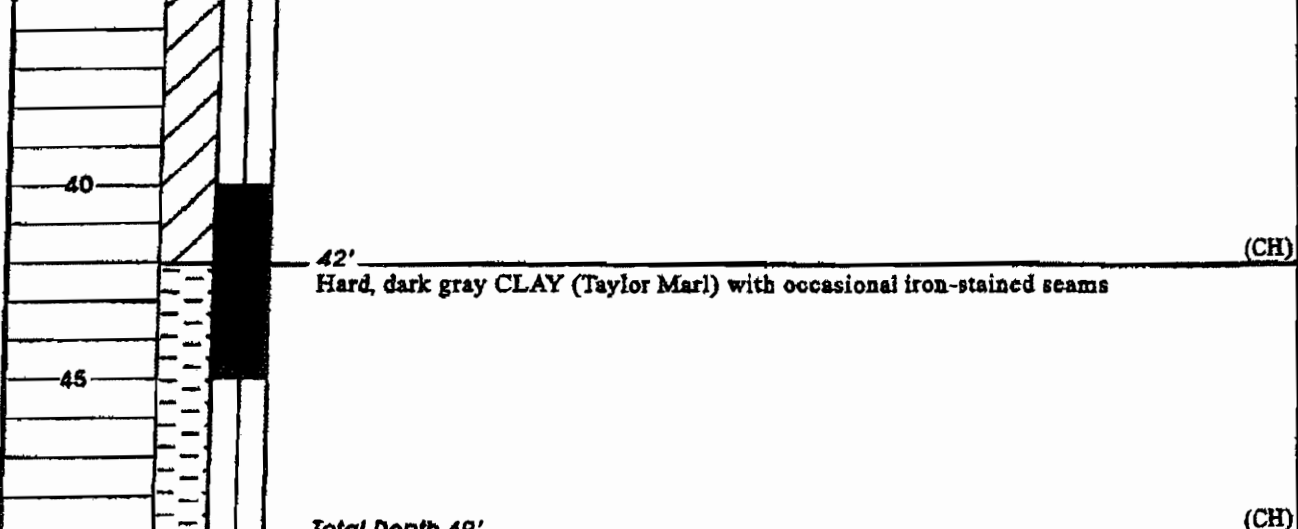


9/30/94 26286.100

LOG OF BORING MONITORING WELL 18 (cont.)

WASTE MANAGEMENT OF TEXAS
MSW Permit 42A
Dallas & Ellis Counties, Texas

TYPE OF BORING: Auger / Undisturbed	LOCATION: S+48.54 56+89.65
DEPTH, FT.	ELEVATION: Top Pipe 470.20 Ground 467.00



Notes:

1. Water not encountered during drilling.
2. Continuous core from 40' to 45'.
3. Completed as monitor well 9/26/94

9/26/94 2:02PM 100

LOG OF BORING MONITORING WELL 20
WASTE MANAGEMENT OF TEXAS
MSW Permit 42A
Dallas & Ellis Counties, Texas

TYPE OF BORING: Auger / Undisturbed

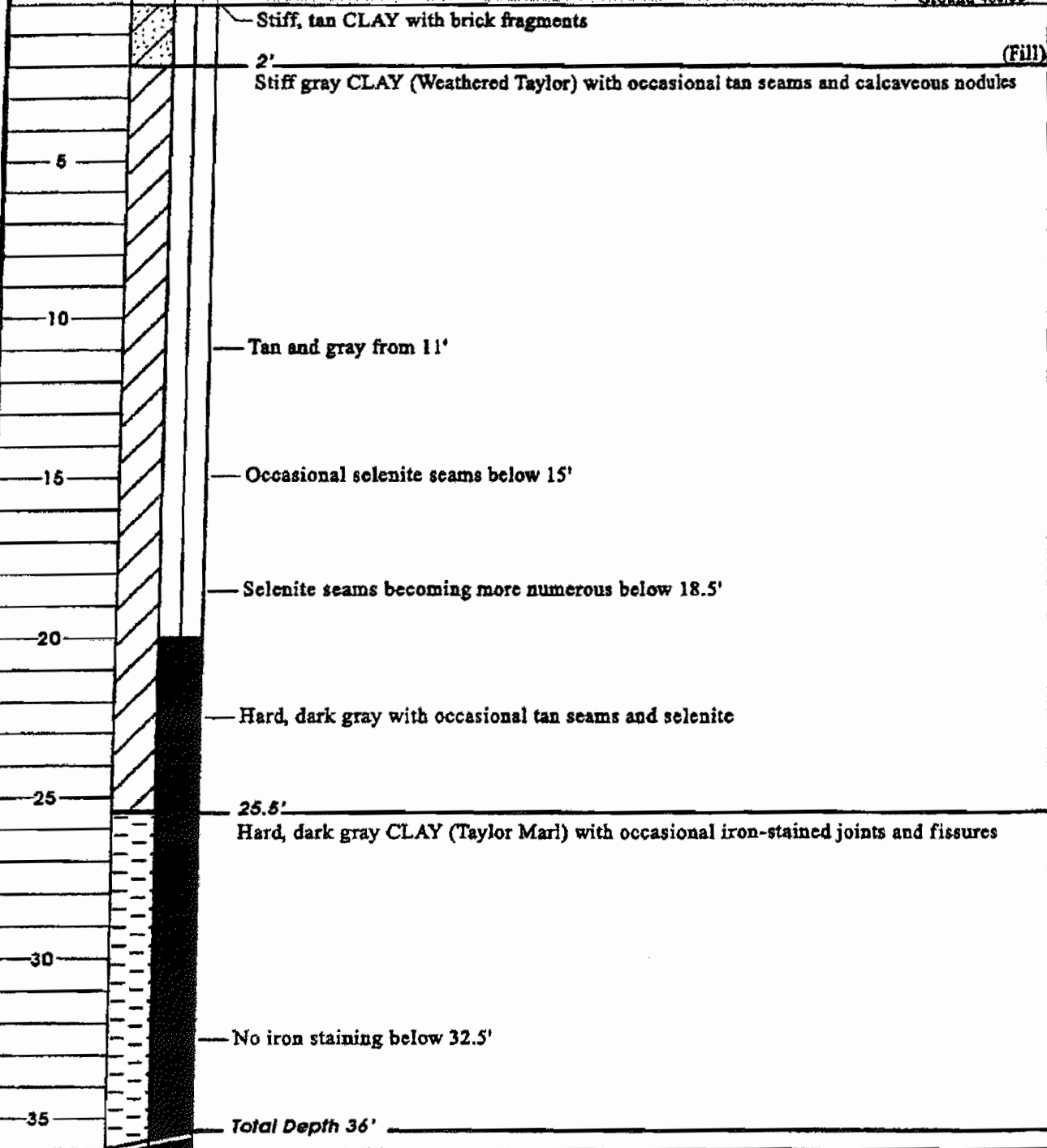
LOCATION: II+94.61
62+82.82

DEPTH, FT.

SYMBOL SAMPLES

SOIL DESCRIPTION

ELEVATION: Top Pipe 469.04
Ground 466.00




- Notes:**
1. Water not encountered during drilling.
 2. Continuous core from 20' to 37.5'.
 3. Completed as monitor well 9/27/94

9/30/94 2:02PM 100

Client: Waste Management of Texas		Project Number: 303-063		MW No. 20R			
Project: Waste Management of Texas				Sheet No. 1 of 1			
Boring Depth (ft.): 36.0		Elevation: 464.63	Driller: J. Markle	Starting Date: 10/20/03			
Datum/Notes: See Plan of Boring				Ending Date: 10/20/03			
Elev. (Feet)	Depth (Feet)	Lithology	Material Description	Well Detail	Comments	Samples	LEL Reading
			Stiff, tan, CLAY (CL), with brick fragments (fill)		Surface completion with locking cap & cover		
			Stiff, gray, CLAY (CL), weathered Taylor, with occasional tan seams and calcareous nodules		Bentonite seal & riser Riser with filter sand		
460	5						
455	10		-tan and gray from 11'				
450	15		-occasional selenite seams below 15'				
445	20		-Selenite seams becoming more numerous below 18.5'				
440	25		-hard, dark gray with occasional tan seams and selenite				
435	30		Hard, dark gray, CLAY (CL), Taylor Marl, with occasional iron-stained joints and fissures				
430	35		-no iron staining below 32.5'		0.010 inch slotted 2" PVC screen with filter sand		
			DRY				
			Boring terminated at 36'		Capped end of monitor well		
425							

Project:		Skyline Landfill Dallas and Ellis Counties, Texas				BORING LOG MW-21							
Project Number:		0809-1377				Sheet 1 of 1							
Depth, feet	Samples Symbol / USCS	Location: See MW Installation Map Surface El.: 412.2 Northing: 324124 Easting: 2252019	Hand Penetrometer, tsf	Penetration Blows / Foot	Recovery %	RQD	Moisture Content, %	Unit Dry Weight, pcf	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
MATERIAL DESCRIPTION													
0	A1	CLAY, dark brown, soft, moist											
5	A2	CLAY, light brown & tan, stiff, dry	5.5										
10	A3												
15	A4	CLAY, tan, very stiff, dry	17.0										
20	A5		22.0										
25	A6	SHALE (Unweathered), gray, very stiff, dry	25.0										
30													
35													
40													

BORING LOG NO WORD FIGURE 1377 SKYLINE LOGS.GPJ LANDTEC.GBT 12/3/09



 12-8-09
Thomas D. Baker

Completion Depth: 25 ft
Date: 10/20/09

Remarks: Dry at completion.
Top of Casing El.: 414.90'

LANDTEC

Soil and rock descriptions on this boring log are a compilation of data collected in both the field and the laboratory. The stratification lines represent the approximate boundary between soil types and the transition can be gradual.

Project: Skyline Landfill
Dallas and Ellis Counties, Texas

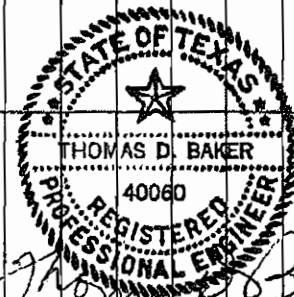
**BORING LOG
MW-22**

Project Number: 0809-1377

Sheet 1 of 1

Depth, feet	Samples	Symbol / USCS	Location: See MW Installation Map Surface El.: 429.5 Northing: 323585 Easting: 2253083	Hand Penetrometer, tsf	Penetration Blows / Foot	Recovery %	RQD	Moisture Content, %	Unit Dry Weight, pcf	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
MATERIAL DESCRIPTION														
0	A1	CLAY	CLAY, brown & tan, stiff, moist											
5	A2													
8.0			CLAY, brown & tan, stiff, dry to moist											
10	A3	CLAY												
15	A4													
20	A5	CLAY												
25	A6													
29.5			SHALE (Unweathered), gray, very stiff, dry											
30	A7	SHALE												
33.0	A8													

BORING LOG NO WORD FIGURE 1377 SKYLINE LOGS.GPJ LANDTEC.GDT 12/3/09


 THOMAS D. BAKER
 40060
 REGISTERED PROFESSIONAL ENGINEER
 12-8-09
Thomas D. Baker

Completion Depth: 33 ft
Date: 10/20/09

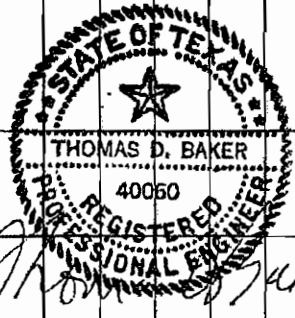
Remarks: Dry at completion.
Top of Casing El.: 432.26'

LANDTEC

Soil and rock descriptions on this boring log are a compilation of data collected in both the field and the laboratory. The stratification lines represent the approximate boundary between soil types and the transition can be gradual.

Depth, feet	Samples Symbol / USCS	Location: See MW Installation Map Surface El.: 416.7 Northing: 323908 Easting: 2254227	Hand Penetrometer, tsf	Penetration Blows / Foot	Recovery %	RQD	Moisture Content, %	Unit Dry Weight, pcf	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
MATERIAL DESCRIPTION													
0	A1	CLAY, brown, soft, moist											
5	A2												
10	A3												
15	A4												
20	A5												
25	A6												
30	A7												
32.0			SHALE (Unweathered), gray, very stiff, dry										
35.0	A8												
40													

BORING LOG NO WORD FIGURE 1377 SKYLINE LOGS.GPJ LANDTEC.GDT 12/3/09



Completion Depth: 35 ft
 Date: 10/20/09

Remarks: Seepage observed at 32 ft. during drilling.
 Top of Casing El.: 419.46'

Project: Skyline Landfill
Dallas and Ellis Counties, Texas


**BORING LOG
MW-24**

Project Number: 0809-1377

Sheet 1 of 1

Depth, feet	Samples	Symbol / USCS	Location: See MW Installation Map Surface El.: 421.6 Northing: 323900 Easting: 2255000	Hand Penetrometer, tsf	Penetration Blows / Foot	Recovery %	RQD	Moisture Content, %	Unit Dry Weight, pcf	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			MATERIAL DESCRIPTION											
		Diagonal hatching	CLAY, brown, soft, moist w/reddish brown sandstone (brick)	2.0										
5		Diagonal hatching	CLAY, brown & tan, soft, moist											
10		Diagonal hatching												
15		Diagonal hatching		17.0										
20		Vertical dashes	SHALE (Unweathered), gray, very stiff, dry	20.0										
25														
30														
35														
40														

BORING LOG NO WORD FIGURE 1377 SKYLINE LOGS.GPJ LANDTEC.GDT. 12/3/09



 THOMAS D. BAKER
 40060
 REGISTERED PROFESSIONAL ENGINEER
Thomas D. Baker

12-8-09

Completion Depth: 20 ft
Date: 11/9/09

Remarks: Seepage observed at 17 ft. during drilling.
Top of Casing El.: 424.62'



Soil and rock descriptions on this boring log are a compilation of data collected in both the field and the laboratory. The stratification lines represent the approximate boundary between soil types and the transition can be gradual.

Project: Skyline Landfill
Dallas and Ellis Counties, Texas

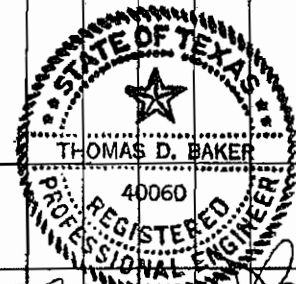
**BORING LOG
MW-25**

Project Number: 0809-1377

Sheet 1 of 1

Depth, feet	Samples Symbol / USCS	Location: See MW Installation Map Surface El.: 459.5 Northing: 322022 Easting: 2255727	Hand Penetrometer, tsf	Penetration Blows / Foot	Recovery %	RQD	Moisture Content, %	Unit Dry Weight, pcf	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
		MATERIAL DESCRIPTION											
	A1	CLAY, brown & tan, soft, moist (FILL)											
3.0													
5	A2	CLAY, shaly, brown & tan, soft, dry (POSSIBLE FILL)											
10	A3												
13.0													
15	A4	CLAY, tan, stiff, moist											
20	A5												
22.0													
25	A6	CLAY, gray & brown, shaly, stiff, moist											
30	A7												
32.0													
35.0	A8	SHALE (Unweathered), gray, very stiff, dry											
40													
Completion Depth: 35 ft Date: 10/20/09			Remarks: Dry at completion. Top of Casing El.: 462.33'										

BORING LOG NO WORD FIGURE 1377 SKYLINE LOGS GPJ LANDTEC.GDT 12/3/09



12-8-09

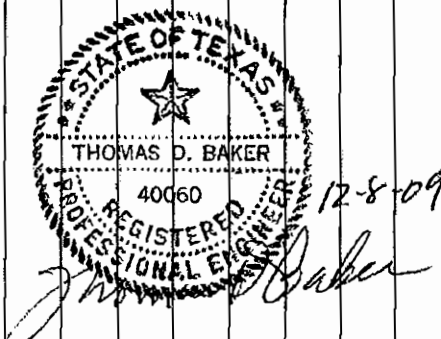
Thomas D. Baker

LANDTEC

Soil and rock descriptions on this boring log are a compilation of data collected in both the field and the laboratory. The stratification lines represent the approximate boundary between soil types and the transition can be gradual.

Depth, feet	Samples	Symbol / USCS	Location: See MW Installation Map Surface El.: 448.1 Northing: 321909 Easting: 2256556	Hand Penetrometer, tsf	Penetration Blows / Foot	Recovery %	RQD	Moisture Content, %	Unit Dry Weight, pcf	Liquid Limit	Plastic Limit	Plasticity Index	% Passing No. 200 Sieve	Unc. Compressive Strength, tsf
			MATERIAL DESCRIPTION											
	A1		CLAY, brown, stiff, moist											
5	A2			7.0										
			SHALY CLAY, gray & tan, very stiff											
10	A3			13.0										
			SHALY CLAY, gray, very stiff, dry w/gray shale layers											
15	A4			17.0										
			SHALE (Unweathered), gray, very stiff, dry											
20	A5			20.0										
25														
30														
35														
40														

BORING LOG NO WORD FIGURE 1377 SKYLINE LOGS.GPJ LANDTEC.GDT 12/3/09



Completion Depth: 20 ft
 Date: 9/29/09

Remarks: Dry at completion.
 Top of Casing El.: 451.06'

MONITORING WELL DATA SHEETS

Monitor Well Data Sheet

Permittee or Site Name: Skyline Landfill
 County: Dallas and Ellis Counties
 Date of Monitor Well Installation: 8/23/2007
 Monitor Well Latitude: 32° 32' 44.6" Longitude: 96° 40' 55.9"
 Monitor Well Groundwater Gradient Position:
 Upgradient _____ Downgradient _____

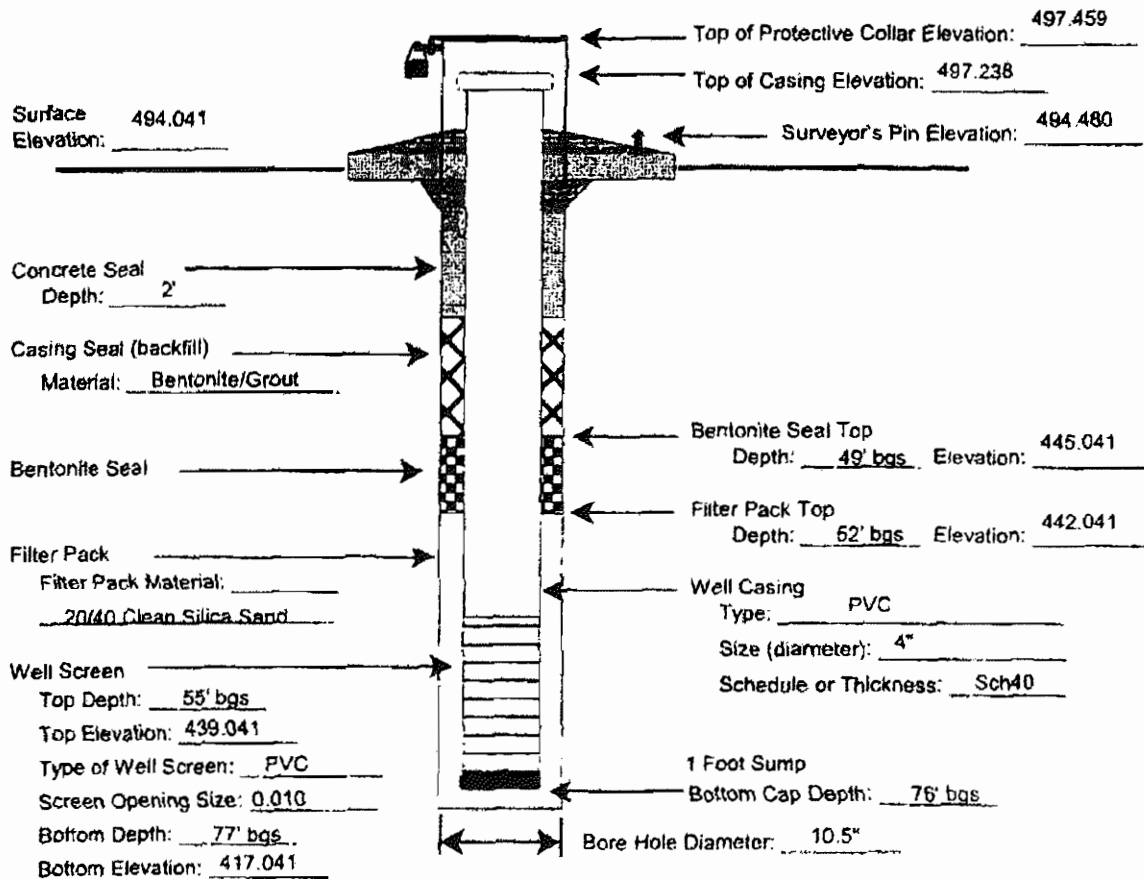
MSW Permit No.: 42
 Monitor Well I.D. No.: MW-2R
 Date of Monitor Well Development: 8/27/2008
 Monitor Well Driller Name: Buford Collier
 License No.: 50089M

NOTES:

- Report all depths from Surface Elevation and all Elevations relative to Mean Sea Level (MSL), to nearest hundredth of a foot.
- Diameter of boring should be at least 4 inches larger than diameter of well casing.
- Use flush screw joint casing only, 2-inch diameter or larger, with o-rings or PTFE tape in joints (4-inch diameter recommend).
- Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Timothy L. McDaniel, P.E., P.G.
 Before well development the water level was measured to be: 68.93'
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Upright
 Concrete Surface Pad (with steel reinforcement) Dimensions: 6' x 6' x 6"



Monitor Well Data Sheet

Permittee or Site Name: Skyline Landfill
 County: Dallas and Ellis Counties
 Date of Monitor Well Installation: 8/23/2007
 Monitor Well Latitude: 32° 32' 52.7" Longitude: 96° 41' 03.1"
 Monitor Well Groundwater Gradient Position:
 Upgradient _____ Downgradient _____

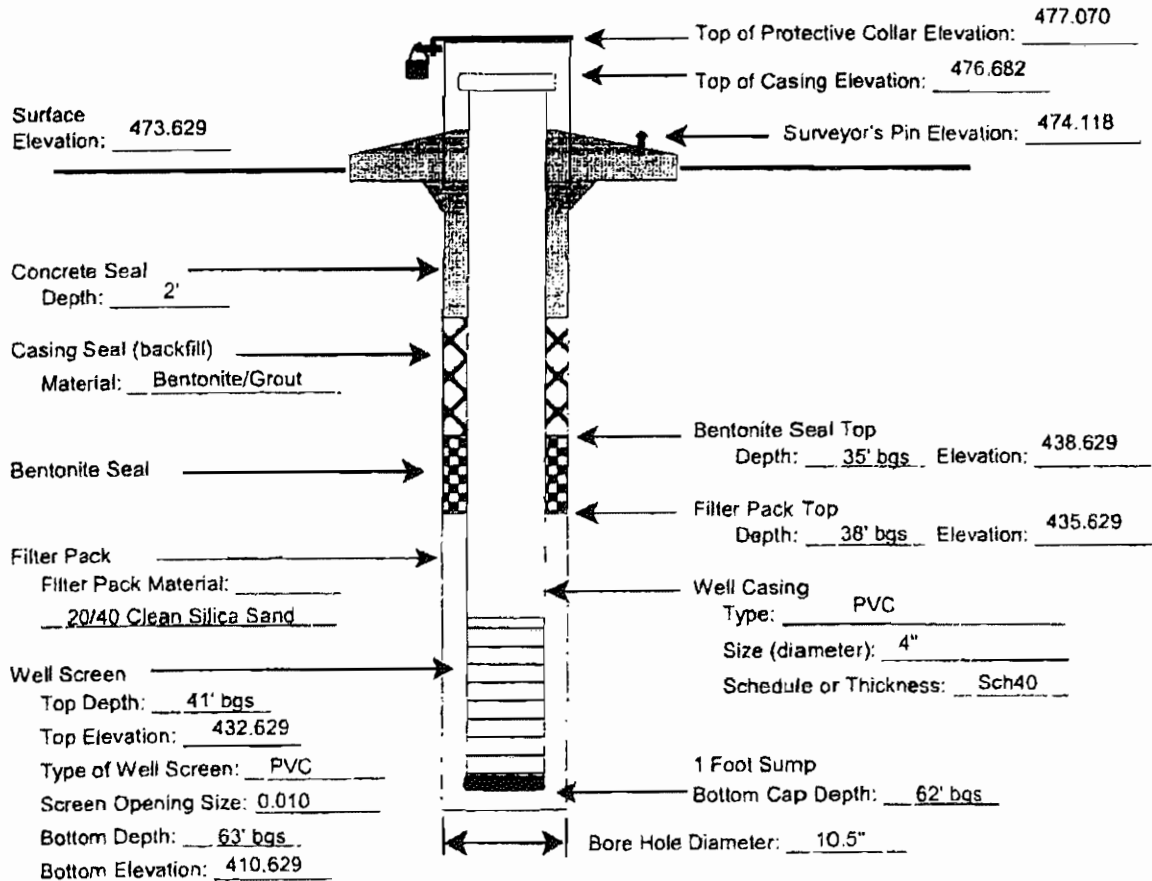
MSW Permit No.: 42
 Monitor Well I.D. No.: MW-3R
 Date of Monitor Well Development: 8/27/2008
 Monitor Well Driller Name: Buford Collier
 License No.: 50089M

NOTES:

- Report all depths from Surface Elevation and all Elevations relative to Mean Sea Level (MSL), to nearest hundredth of a foot.
- Diameter of boring should be at least 4 inches larger than diameter of well casing.
- Use flush screw joint casing only, 2-inch diameter or larger, with o-rings or PTFE tape in joints (4-inch diameter recommend).
- Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Timothy L. McDaniel, P.E., P.G.
 Before well development the water level was measured to be: Dry
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Upright
 Concrete Surface Pad (with steel reinforcement) Dimensions: 6' x 6' x 6"



A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE. 67 (3/1/89.B)

Permittee or Site Name: Skyline RDF

TDH Permit No.: 42-C

County: Dallas and Ellis Counties

Monitor Well I.D. No.: MW-4

Date of Monitor Well Installation: 5-12-95

Date of Monitor Well Development: *

Monitor Well: State Plane N: 322475.770 E: 2251184.034

Monitor Well Driller Name: William P. McGuire

Monitor Well Groundwater Gradient: Upgradient Downgradient Cross-Gradient

License No.: 2763M

NOTE:

- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.

Static Water Level Elevation (with respect to MSL) after Well Development: *

Name of Geologic Formation(s) in which Well is completed: Taylor Mat

Type of Locking Device: Padlock

Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.

Surface Pad Dimensions: 6' x 6' square

Face Elevation: 433.82

Top of Protective Collar Elevation: 437.24

Top of Casing Elevation: 437.00

Surveyor's Pin Elevation: 434.32

Concrete Seal
Depth: 2' bgs
Casing Seal (Backfill)
Material: cement-bentonite

Bentonite Seal
Filter Pack

Bentonite Seal Top
Depth: 3' bgs Elevation: 430.82

Filter Pack Top
Depth: 5' bgs Elevation: 428.82

Filter Pack Material: #20-#40 Sterilized Sand or Glass Beads

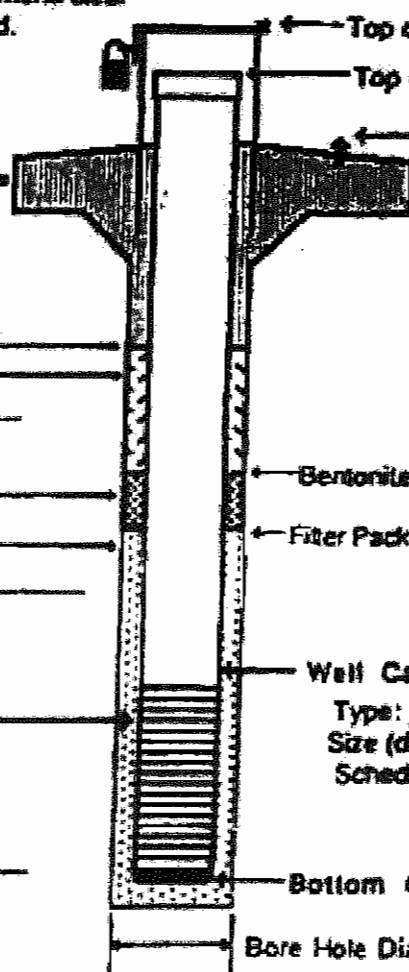
Well Casing
Type: PVC
Size (diameter): 4"
Schedule or Thickness: schedule 80

Well Screen
Top Depth: 7' bgs
Top Elevation: 426.82
Type of Well Screen: PVC

Screen Opening Size: 0.010"

Bottom Cap (Depth: 25" bgs)

Bore Hole Diameter: 10.5" min.



* No water in well through 7-25-95

A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE. 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF
County: Dallas and Ellis Counties
Date of Monitor Well Installation: 5-13-95
Monitor Well: State Plane N: 323325.174 E: 2251533.943
Monitor Well Groundwater
Gradient: Upgradient Downgradient Cross-Gradient

TDH Permit No.: 42-C
Monitor Well I.D. No.: MW-5
Date of Monitor Well
Development: *
Monitor Well Driller
Name: William P. McGuire
License No.: 2763M

NOTE:

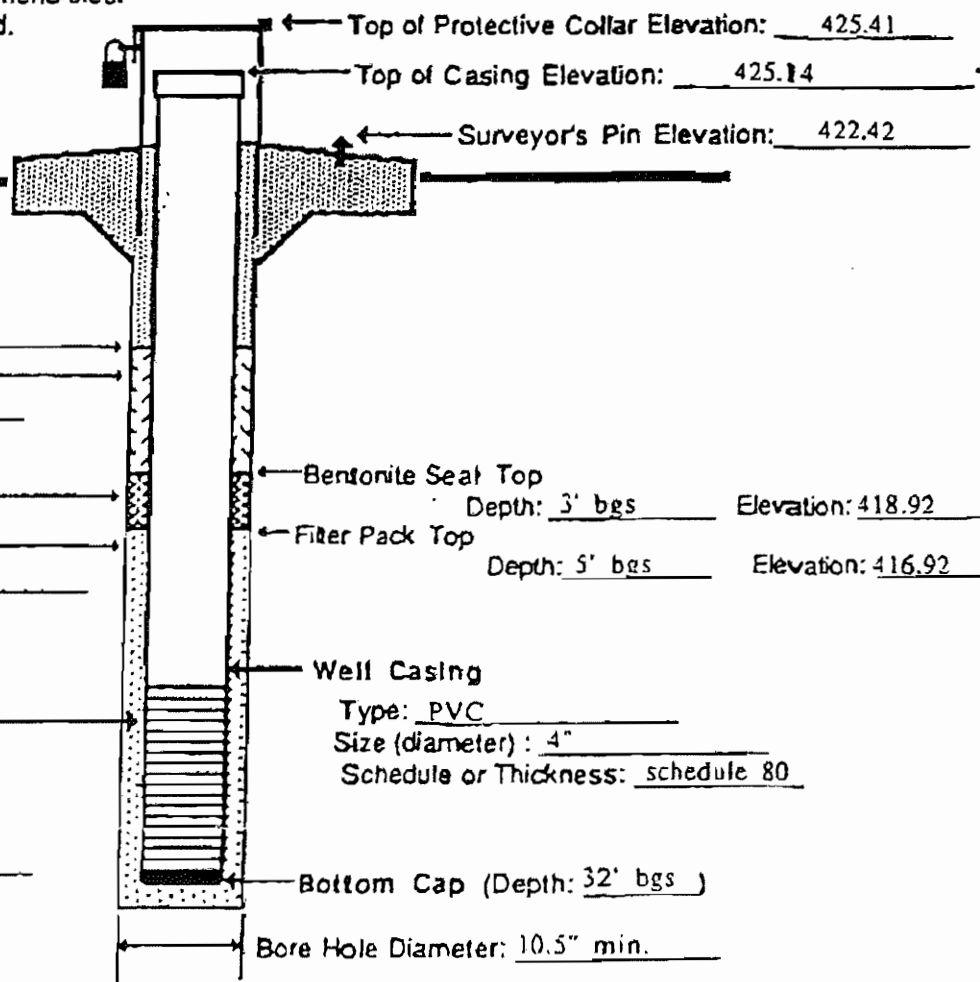
- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.
Static Water Level Elevation (with respect to MSL) after Well Development: *
Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.
Surface Pad Dimensions: 6' x 6' square

Surface Elevation: 421.92



Concrete Seal
Depth: 2' bgs
Casing Seal (Backfill)
Material: cement-bentonite

Bentonite Seal
Filter Pack
Bentonite Seal Top
Filter Pack Top
Depth: 3' bgs Elevation: 418.92
Depth: 5' bgs Elevation: 416.92

Filter Pack Material: #20-#40 Sterilized Sand or Glass Beads

Well Screen
Top Depth: 7' bgs
Top Elevation: 414.92
Type of Well Screen: PVC

Well Casing
Type: PVC
Size (diameter): 4"
Schedule or Thickness: schedule 80

Screen Opening Size: 0.010"

Bottom Cap (Depth: 32' bgs)
Bore Hole Diameter: 10.5" min.

* No water in well through 7-25-95.

A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE 67 (3/1/89-8)

Permittee or Site Name: Skyline RDF

TDH Permit No.: 42-C

County: Dallas and Ellis Counties

Monitor Well I.D. No.: MW-6

Date of Monitor Well Installation: 5-11-95

Date of Monitor Well

Monitor Well: State Plane N: 323815.262 E: 2251654.426

Development: *

Monitor Well Groundwater

Monitor Well Driller

Gradient: Upgradient Downgradient Cross-Gradient

Name: William P. McGuire

NOTE:

License No.: 2763M

(A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.

(B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.

(C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".

(D) Use Flash Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.

(E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.

Static Water Level Elevation (with respect to MSL) after Well Development: *

Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock

Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.

Surface Pad Dimensions:

6' x 6' square

Concrete

Elevation: 416.81

Top of Protective Collar Elevation: 420.21

Top of Casing Elevation: 419.96

Surveyor's Pin Elevation: 417.31

Concrete Seal

Depth: 2' bgs

Casing Seal (Backfill)

Material: cement-bentonite

Bentonite Seal Top

Depth: 3' bgs Elevation: 413.81

Filter Pack Top

Depth: 5' bgs Elevation: 411.81

Bentonite Seal

Filter Pack

Filter Pack Material: #20-#40

Sterilized Sand or Glass Beads

Well Casing

Type: PVC

Size (diameter): 4"

Schedule or Thickness: schedule 80

Well Screen

Top Depth: 7' bgs

Top Elevation: 409.81

Type of Well Screen: PVC

Screen Opening Size:

.010"

Bottom Cap (Depth: 25' bgs)

Bore Hole Diameter: 10.5" min.

* Trace of water in well at EL 394.81.

A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF
 County: Dallas and Ellis Counties
 Date of Monitor Well Installation: 5-10-95
 Monitor Well: State Plane N: 323936.083 E: 2252352.735
 Monitor Well Groundwater
 Gradient: Upgradient Downgradient Cross-Gradient

TDH Permit No.: 42-C
 Monitor Well I.D. No.: MW-7
 Date of Monitor Well
 Development: *
 Monitor Well Driller
 Name: William P. McGuire
 License No.: 2763M

NOTE:

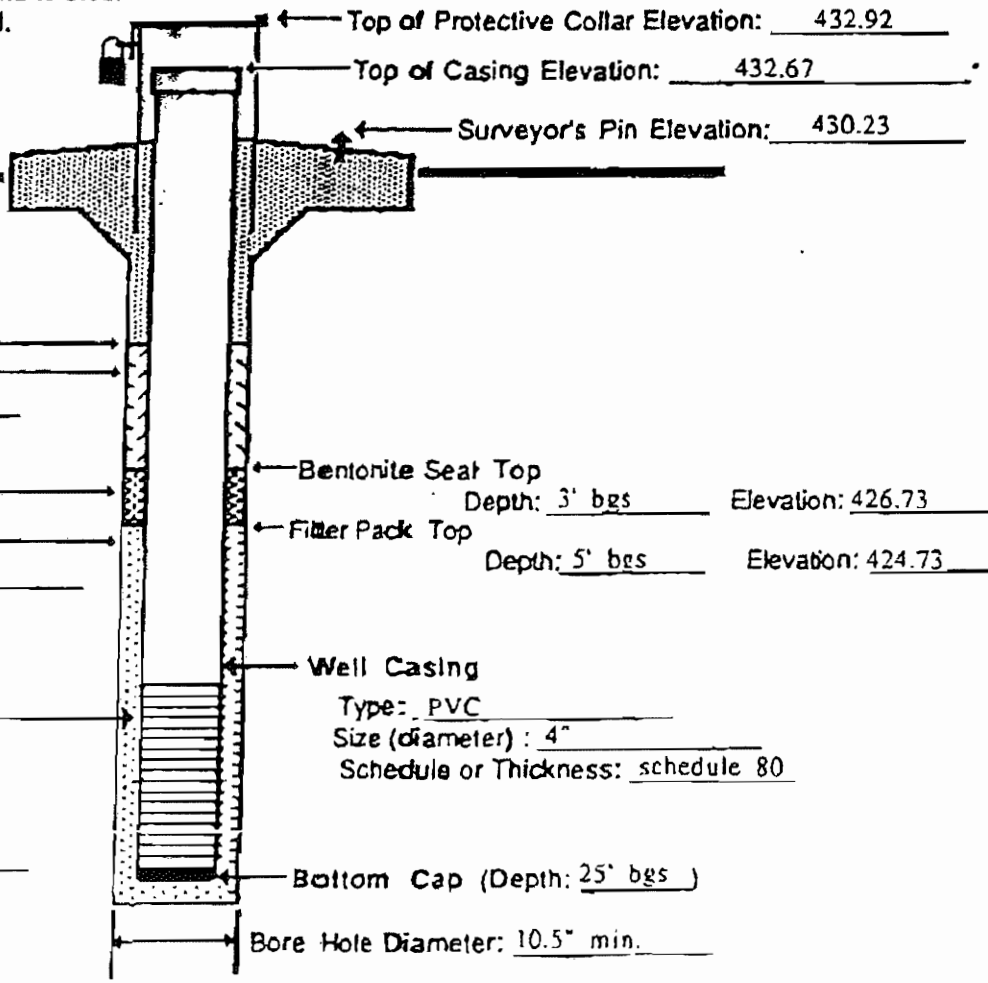
- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: *
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.
 Surface Pad Dimensions: 6' x 6' square

Face Elevation: 429.73



Concrete Seal
 Depth: 2' bgs
 Casing Seal (Backfill)
 Material: cement-bentonite

Bentonite Seal
 Filter Pack
 Filter Pack Material: #20-#40 Sterilized Sand or Glass Beads

Well Screen
 Top Depth: 7' bgs
 Top Elevation: 422.73
 Type of Well Screen: PVC
 Screen Opening Size: 0.010"

Bentonite Seal Top
 Depth: 3' bgs Elevation: 426.73
 Filter Pack Top
 Depth: 5' bgs Elevation: 424.73

Well Casing
 Type: PVC
 Size (diameter): 4"
 Schedule or Thickness: schedule 80

Bottom Cap (Depth: 25' bgs)
 Bore Hole Diameter: 10.5" min.

* No water in well through 7-25-95.

A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF

TDH Permit No.: 42-C

County: Dallas and Ellis Counties

Monitor Well I.D. No.: MW-8

Date of Monitor Well Installation: 5-12-95

Date of Monitor Well

Monitor Well: State Plane N: 323588.060 E: 2252673.702

Development: 7-25-95

Monitor Well Groundwater

Monitor Well Driller

Gradient: Upgradient Downgradient Cross-Gradient Name: William P. McGuire

License No.: 2763M

NOTE:

- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.

Static Water Level Elevation (with respect to MSL) after Well Development: 423.30

Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock

Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.

Surface Pad Dimensions: 6' x 6' square

Surface Elevation: 444.06

Top of Protective Collar Elevation: 447.30

Top of Casing Elevation: 447.06

Surveyor's Pin Elevation: 444.56

Concrete Seal
Depth: 2' bgs
Casing Seal (Backfill)
Material: cement-bentonite

Bentonite Seal
Filter Pack

Bentonite Seal Top
Depth: 3' bgs Elevation: 441.06

Filter Pack Top
Depth: 5' bgs Elevation: 439.06

Filter Pack Material: #20-#40 Sterilized Sand or Glass Beads

Well Casing
Type: PVC
Size (diameter): 4"
Schedule or Thickness: schedule 80

Well Screen
Top Depth: 7' bgs

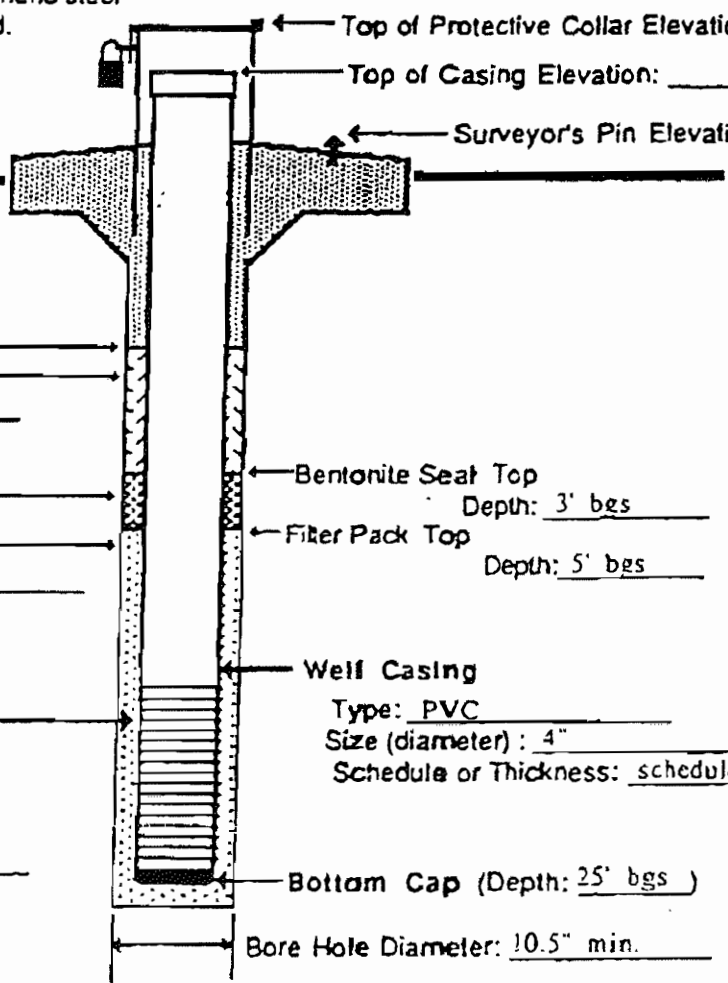
Top Elevation: 437.06

Type of Well Screen: PVC

Screen Opening Size: 0.010"

Bottom Cap (Depth: 25' bgs)

Bore Hole Diameter: 10.5" min.



A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE. 67 (3/1/89-8)

Permittee or Site Name: Skyline RDF

TDH Permit No.: 42-C

County: Dallas and Ellis Counties

Monitor Well I.D. No.: MW-9

Date of Monitor Well Installation: 5-16-95

Date of Monitor Well

Monitor Well: State Plane N: 323638.402 E: 2253503.174

Development: 7-25-95

Monitor Well Groundwater

Monitor Well Driller

Gradient: Upgradient Downgradient Cross-Gradient Name: William P. McGuire

License No.: 2763M

NOTE:

- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.

Static Water Level Elevation (with respect to MSL) after Well Development: 407.63

Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock

Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.

Surface Pad Dimensions:

6' x 6' square

Surface

Elevation: 418.19

Top of Protective Collar Elevation: 421.89

Top of Casing Elevation: 421.64

Surveyor's Pin Elevation: 418.69

Concrete Seal

Depth: 2' bgs

Casing Seal (Backfill)

Material: cement-bentonite

Bentonite Seal

Filter Pack

Filter Pack Material: #20-#40

Sterilized Sand or Glass Beads

Bentonite Seal Top
Depth: 11' bgs Elevation: 407.19

Filter Pack Top
Depth: 13' bgs Elevation: 405.19

Well Screen

Top Depth: 15' bgs

Top Elevation: 403.19

Type of Well Screen: PVC

Screen Opening Size:

0.010"

Well Casing

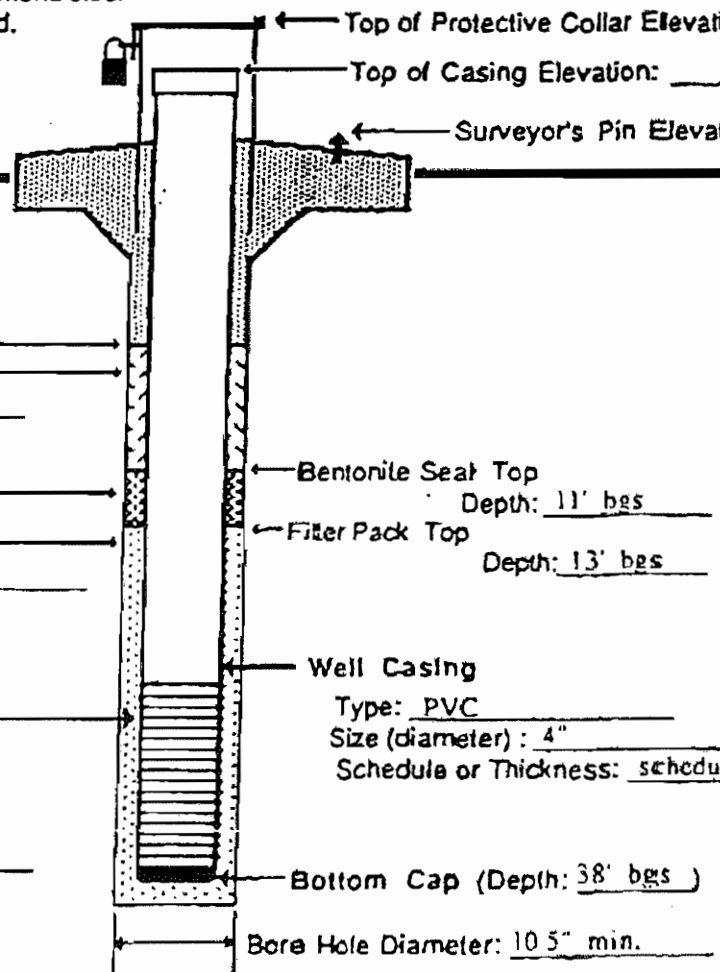
Type: PVC

Size (diameter): 4"

Schedule or Thickness: schedule 80

Bottom Cap (Depth: 38' bgs)

Bore Hole Diameter: 10.5" min.



A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE. 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF

TDH Permit No.: 42-C

County: Dallas and Ellis Counties

Monitor Well I.D. No.: MW-10

Date of Monitor Well Installation: 5-23-95

Date of Monitor Well

Monitor Well: State Plane N: 323852.491 E: 2253920.281

Development: 7-25-95

Monitor Well Groundwater

Monitor Well Driller

Gradient: Upgradient Downgradient Cross-Gradient

Name: William P. McGuire

License No.: 2763M

NOTE:

- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Finish Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.

Static Water Level Elevation (with respect to MSL) after Well Development: 410.15

Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock

Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.

Surface Pad Dimensions:

6' x 6' square

Surface Elevation: 415.30

Top of Protective Collar Elevation: 417.78

Top of Casing Elevation: 417.53

Surveyor's Pin Elevation: 415.80

Concrete Seal

Depth: 2' bgs

Casing Seal (Backfill)

Material: cement-bentonite

Bentonite Seal

Filler Pack

Filter Pack Material: #20-#40

Sterilized Sand or Glass Beads

Bentonite Seal Top
Depth: 21' bgs Elevation: 394.31

Filter Pack Top
Depth: 23.5' bgs Elevation: 391.80

Well Casing

Type: PVC

Size (diameter): 4"

Schedule or Thickness: schedule 80

Well Screen

Top Depth: 26' bgs

Top Elevation: 389.30

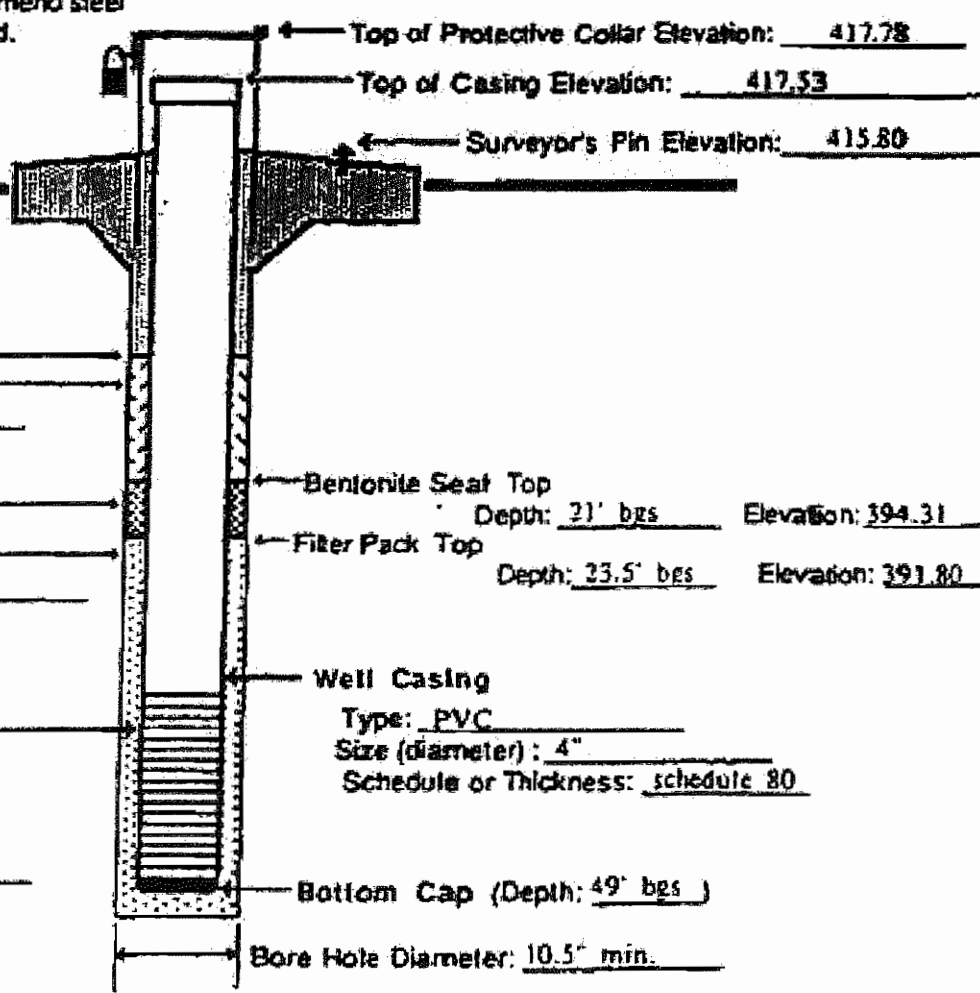
Type of Well Screen: PVC

Screen Opening Size:

0.010"

Bottom Cap (Depth: 49' bgs)

Bore Hole Diameter: 10.5" min.



A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE. 67 (5/1/89-2)

Permittee or Site Name: Skyline RDF

TDH Permit No.: 42-C

County: Dallas and Ellis Counties

Monitor Well I.D. No.: MW-11

Date of Monitor Well Installation: 5-17-95

Date of Monitor Well

Monitor Well: State Plane N: 323967.994 E: 2254536.066

Development: 7-25-95

Monitor Well Groundwater

Monitor Well Driller

Gradient: Upgradient Downgradient Cross-Gradient

Name: William F. McGuire

License No.: 2763M

NOTE:

- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.

Static Water Level Elevation (with respect to MSL) after Well Development: 411.45

Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock

Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.

Surface Pad Dimensions:

6' x 6' square

Face Elevation: 415.10

Top of Protective Collar Elevation: 417.82

Top of Casing Elevation: 417.59

Surveyor's Pin Elevation: 415.60

Concrete Seal

Depth: 2' bgs

Casing Seal (Backfill)

Material: cement-bentonite

Bentonite Seal

Filter Pack

Filter Pack Material: #20-#40

Sterilized Sand or Glass Beads

Bentonite Seal Top

Depth: 9.5' bgs Elevation: 405.60

Filter Pack Top

Depth: 11.5' bgs Elevation: 403.60

Well Casing

Type: PVC

Size (diameter): 4"

Schedule or Thickness: schedule 80

Well Screen

Top Depth: 14' bgs

Top Elevation: 401.10

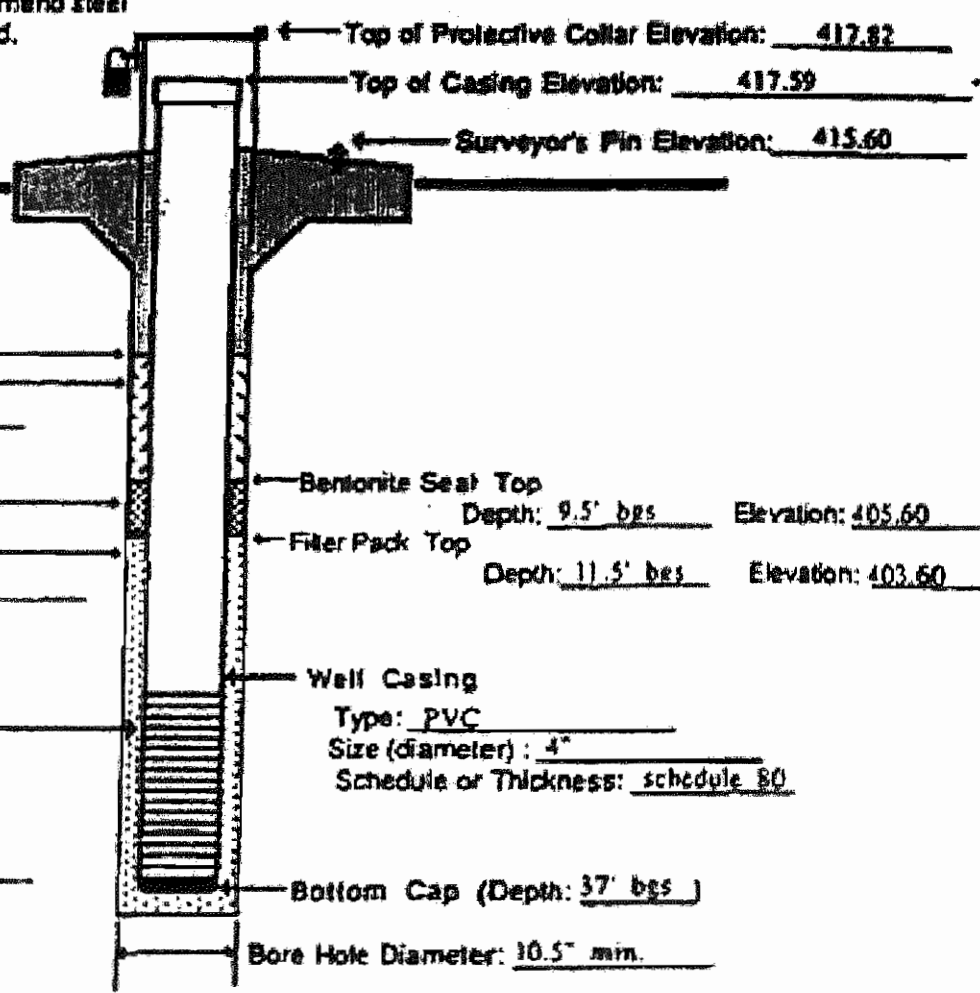
Type of Well Screen: PVC

Screen Opening Size:

0.010"

Bottom Cap (Depth: 37' bgs)

Bore Hole Diameter: 10.5" min.



A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF

TDH Permit No.: 42-C

County: Dallas and Ellis Counties

Monitor Well I.D. No.: MW-12

Date of Monitor Well Installation: 5-1-95

Date of Monitor Well

Monitor Well: State Plane N: 323852.621 E: 2255390.161

Development: 8-4-95

Monitor Well Groundwater

Monitor Well Driller

Gradient: Upgradient Downgradient Cross-Gradient Name: William P. McGuire

License No.: 2763M

NOTE:

- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.

Static Water Level Elevation (with respect to MSL) after Well Development: 398.22

Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock

Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.

Surface Pad Dimensions:

6' x 6' square

Surface

Elevation: 417.83

Top of Protective Collar Elevation: 421.37

Top of Casing Elevation: 420.95

Surveyor's Pin Elevation: 418.33

Concrete Seal

Depth: 2' bgs

Casing Seal (Backfill)

Material: cement-bentonite

Bentonite Seal

Filter Pack

Filter Pack Material: #20-#40

Sterilized Sand or Glass Beads

Bentonite Seal Top

Depth: 3' bgs

Elevation: 414.83

Filter Pack Top

Depth: 5' bgs

Elevation: 412.83

Well Casing

Type: PVC

Size (diameter): 4"

Schedule or Thickness: schedule 80

Well Screen

Top Depth: 7' bgs

Top Elevation: 410.83

Type of Well Screen: PVC

Screen Opening Size:

0.10"

Bottom Cap (Depth: 22' bgs)

Bore Hole Diameter: 10.5" min.

A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE. 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF

County: Dallas and Ellis Counties

Date of Monitor Well Installation: 5-15-95

Monitor Well: State Plane N: 323053.928 E: 2255577.483

Monitor Well Groundwater

Gradient: Upgradient Downgradient Cross-Gradient

TDH Permit No.: 42-C

Monitor Well I.D. No.: MW-13

Date of Monitor Well

Development: *

Monitor Well Driller

Name: William P. McGuire

License No.: 2763M

NOTE:

(A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.

(B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.

(C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".

(D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.

(E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.

Static Water Level Elevation (with respect to MSL) after Well Development: *

Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock

Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.

Surface Pad Dimensions:

6' x 6' square

Surface Elevation: 432.23

Top of Protective Collar Elevation: 435.46

Top of Casing Elevation: 435.22

Surveyor's Pin Elevation: 432.73

Concrete Seal

Depth: 2' bgs

Casing Seal (Backfill)

Material: cement-bentonite

Bentonite Seal

Filter Pack

Filter Pack Material: #20-#40

Sterilized Sand or Glass Beads

Bentonite Seal Top

Depth: 3' bgs Elevation: 429.23

Filter Pack Top

Depth: 5' bgs Elevation: 427.25

Well Casing

Type: PVC

Size (diameter): 4"

Schedule or Thickness: schedule 80

Well Screen

Top Depth: 7' bgs

Top Elevation: 425.23

Type of Well Screen: PVC

Screen Opening Size:

0.010"

Bottom Cap (Depth: 25' bgs)

Bore Hole Diameter: 10.5" min.

* No water in well through 7-25-95.

A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF
County: Dallas and Ellis Counties
Date of Monitor Well Installation: 9/20/94
Monitor Well: Latitude: 32°32.83' Longitude: 96°40.25'
Monitor Well Groundwater
Gradient: Upgradient Downgradient

TDH Permit No.: 42-A
Monitor Well I.D. No.: MW-14
Date of Monitor Well
Development: 10/28/94-12/09/94
Monitor Well Driller
Name: William P. McGuire
License No.: 2763M

NOTE:

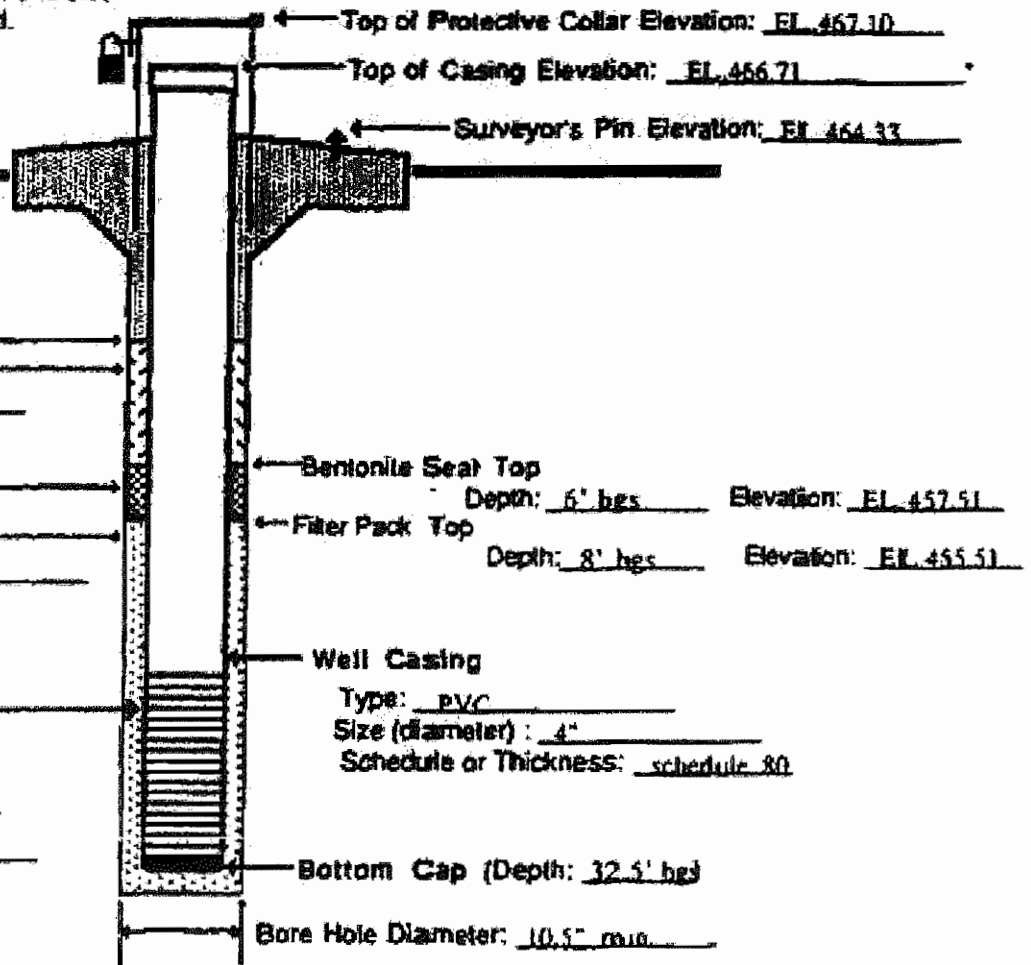
- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommended 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chadler, Jr., P.E.
Static Water Level Elevation (with respect to MSL) after Well Development: 454.04 ft
Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.
Surface Pad Dimensions: 6' x 6' square

Surface Elevation: EL 463.51



Concrete Seal
Depth: 2' hrs
Casing Seal (Backfill)
Material: cement-bentonite

Bentonite Seal
Filter Pack

Filter Pack Material: #20-#40 Sterilized Sand or Glass Beads

Well Screen
Top Depth: 10' hrs
Top Elevation: EL 453.51
Type of Well Screen: PVC
Screen Opening Size: 0.010"

Top of Protective Collar Elevation: EL 467.10
Top of Casing Elevation: EL 466.71
Surveyor's Pin Elevation: EL 464.33
Bentonite Seal Top
Depth: 6' hrs Elevation: EL 457.51
Filter Pack Top
Depth: 8' hrs Elevation: EL 455.51
Well Casing
Type: PVC
Size (diameter): 4"
Schedule or Thickness: schedule 80

Bottom Cap (Depth: 32.5' hrs)
Bore Hole Diameter: 10.5" min

A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF
 County: Dallas and Ellis Counties
 Date of Monitor Well Installation: 9/20/94
 Monitor Well: Latitude: 32°32.83' Longitude: 96°40.25'
 Monitor Well Groundwater
 Gradient: Upgradient Downgradient

TDH Permit No.: 42-A
 Monitor Well I.D. No.: MW-15
 Date of Monitor Well
 Development: 10/28/94-12/10/94
 Monitor Well Driller
 Name: William P. McGuire
 License No.: 2763M

NOTE:

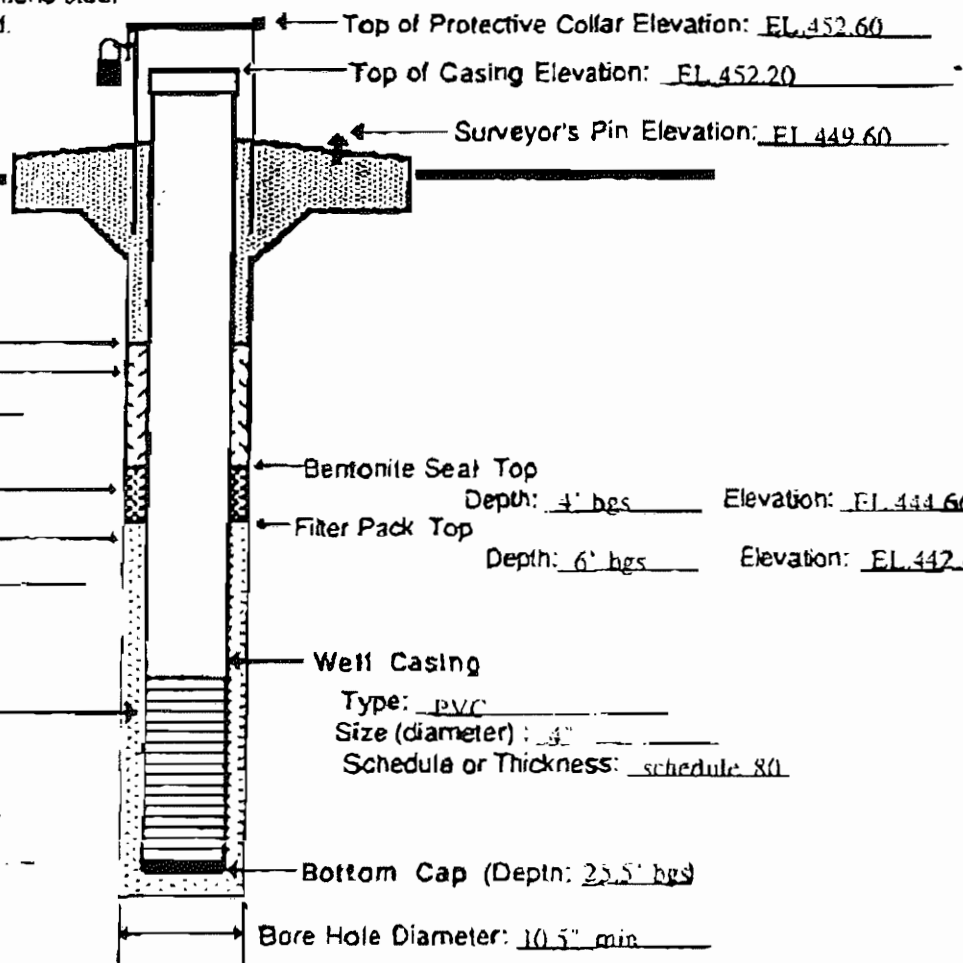
- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: No Water in Well
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.

Surface Pad Dimensions:
6' x 6' square
 Surface Elevation: EL 448.66



Concrete Seal
 Depth: 2' hrs
 Casing Seal (Backfill)
 Material: cement-bentonite

Bentonite Seal
 Filter Pack

Filter Pack Material: #20-#40 Sterilized Sand or Glass Beads

Well Screen
 Top Depth: 8' hrs
 Top Elevation: EL 440.66
 Type of Well Screen: PVC
 Screen Opening Size:
0.010"

Top of Protective Collar Elevation: EL 452.60
 Top of Casing Elevation: EL 452.20
 Surveyor's Pin Elevation: EL 449.60
 Bentonite Seal Top
 Depth: 4' hrs Elevation: EL 444.66
 Filter Pack Top
 Depth: 6' hrs Elevation: EL 442.66
 Well Casing
 Type: PVC
 Size (diameter): 4"
 Schedule or Thickness: schedule 80
 Bottom Cap (Depth: 25.5' hrs)
 Bore Hole Diameter: 10.5" min

A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE. 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF
County: Dallas and Ellis Counties
Date of Monitor Well Installation: 9/20/94
Monitor Well: Latitude: 32°32.83' Longitude: 96°40.25'
Monitor Well Groundwater
Gradient: Upgradient Downgradient

TDH Permit No.: 42-A
Monitor Well I.D. No.: MW-16
Date of Monitor Well
Development: 10/28/94-12/10/94
Monitor Well Driller
Name: William P. McGuire
License No.: 2763M

NOTE:

- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.
Static Water Level Elevation (with respect to MSL) after Well Development: 433.87 ft
Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.
Surface Pad Dimensions: 6' x 6' SQUARE

Surface Elevation: EL 446.36

Top of Protective Collar Elevation: EL 450.03
Top of Casing Elevation: EL 448.56
Surveyor's Pin Elevation: EL 447.11

Concrete Seal
Depth: 2' hrs
Casing Seal (Backfill)
Material: cement-bentonite

Bentonite Seal
Filter Pack

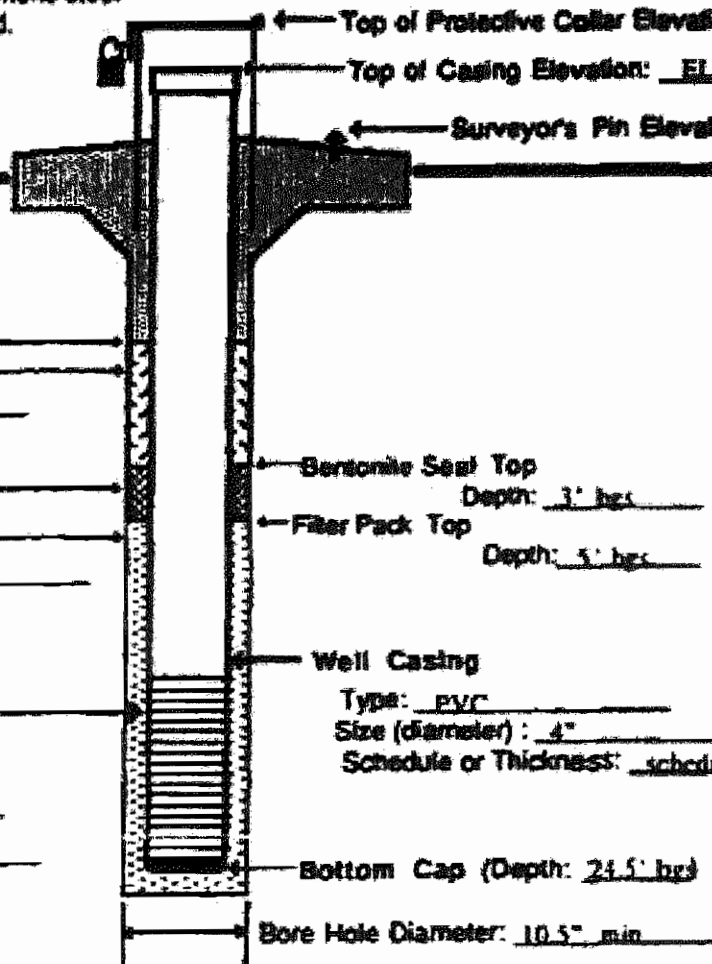
Filter Pack Material: #20-#40 Sterilized Sand or Glass Beads

Well Screen
Top Depth: 7' hrs
Top Elevation: EL 439.36
Type of Well Screen: PVC
Screen Opening Size: 0.010"

Bentonite Seal Top
Depth: 3' hrs Elevation: EL 443.36
Filter Pack Top
Depth: 5' hrs Elevation: EL 441.36

Well Casing
Type: PVC
Size (diameter): 4"
Schedule or Thickness: schedule 80

Bottom Cap (Depth: 24.5' hrs)
Bore Hole Diameter: 10.5" min



A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF
County: Dallas and Ellis Counties
Date of Monitor Well Installation: 9/20/94
Monitor Well: Latitude: 32°32.83' Longitude: 96°40.25'
Monitor Well Groundwater
Gradient: Upgradient Downgradient

TDM Permit No.: 42-A
Monitor Well I.D. No.: MW-17
Date of Monitor Well
Development: 10/28/94-12/09/94
Monitor Well Driller
Name: William P. McGuire
License No.: 2763M

NOTE:

- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flash Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.
Static Water Level Elevation (with respect to MSL) after Well Development: 455.36 ft
Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.
Surface Pad Dimensions:
6' x 6' square

Surface Elevation: EL 489.85

Top of Protective Collar Elevation: EL 493.21
Top of Casing Elevation: EL 492.75
Surveyor's Pin Elevation: EL 490.85

Concrete Seal
Depth: 2' hrs
Casing Seal (Backfill)
Material: cement-bentonite

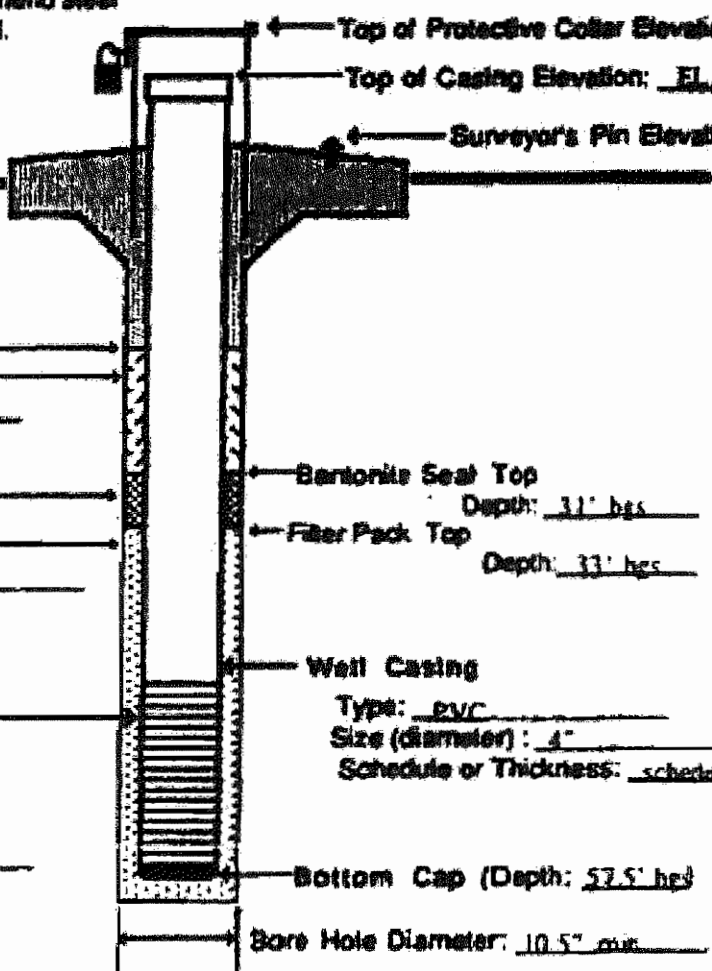
Bentonite Seal
Fitter Pack
Bentonite Seal Top
Depth: 31' hrs Elevation: EL 458.85
Fitter Pack Top
Depth: 33' hrs Elevation: EL 456.85

Fitter Pack Material: #20-#40 Sterilized Sand or Glass Beads

Well Screen
Top Depth: 35' hrs
Top Elevation: EL 454.85
Type of Well Screen: PVC
Screen Opening Size:
0.010"

Well Casing
Type: PVC
Size (diameter): 4"
Schedule or Thickness: schedule 80

Bottom Cap (Depth: 57.5' hrs)
Bore Hole Diameter: 10.5" min



A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE. 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF
 County: Dallas and Ellis Counties
 Date of Monitor Well Installation: 9/20/94
 Monitor Well: Latitude: 32°32.83' Longitude: 96°40.25'
 Monitor Well Groundwater
 Gradient: Upgradient Downgradient _____

TDH Permit No.: 42-A
 Monitor Well I.D. No.: MW-18
 Date of Monitor Well
 Development: 11/02/94-12/10/94
 Monitor Well Driller
 Name: William P. McGuire
 License No.: 2763M

NOTE:

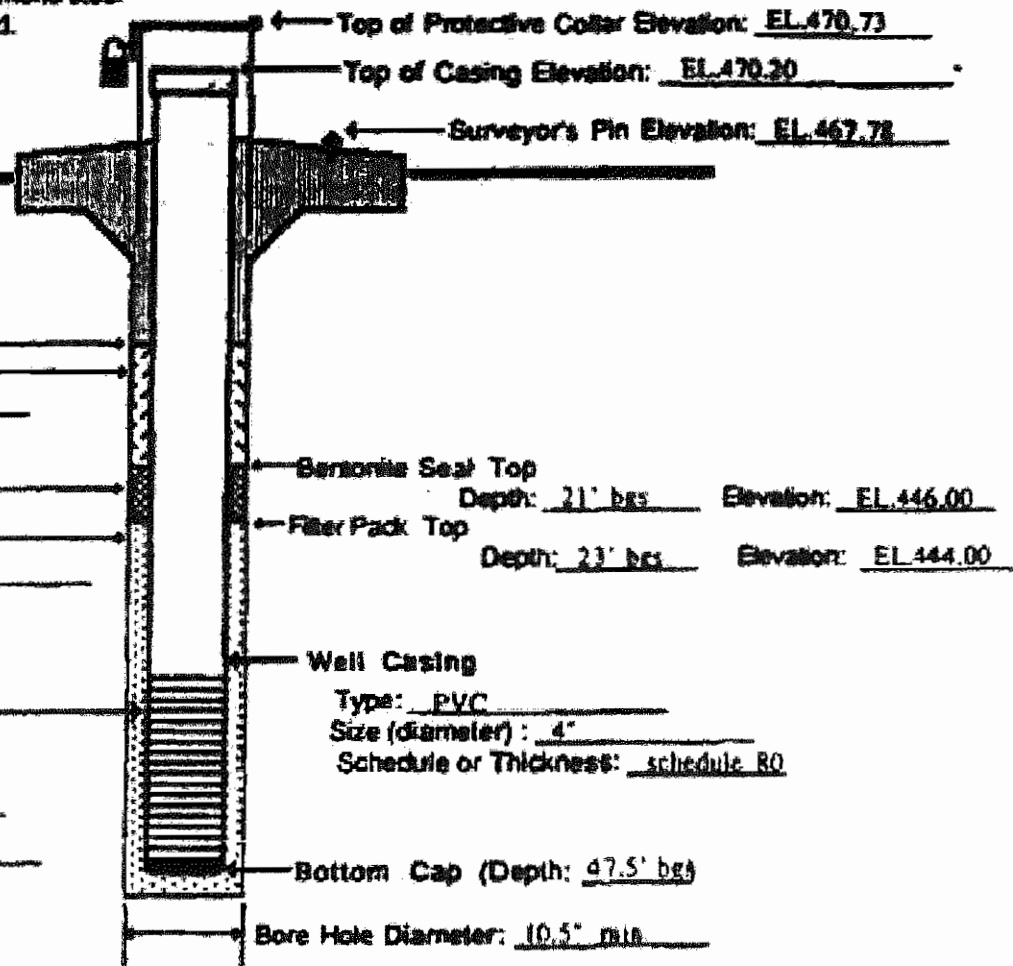
- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: 461.04 ft
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.
 Surface Pad Dimensions: 6' x 6' square

Surface Elevation: EL 467.00



Concrete Seal
 Depth: 2' bgs
 Casing Seal (Backfill)
 Material: cement-bentonite

Bentonite Seal
 Filter Pack

Filter Pack Material: #20-#40 Sterilized Sand or Glass Beads

Well Screen
 Top Depth: 25' bgs
 Top Elevation: EL 442.85
 Type of Well Screen: PVC
 Screen Opening Size: 0.010"

Top of Protective Collar Elevation: EL 470.73
 Top of Casing Elevation: EL 470.20
 Surveyor's Pin Elevation: EL 467.78
 Bentonite Seal Top
 Depth: 21' bgs Elevation: EL 446.00
 Filter Pack Top
 Depth: 23' bgs Elevation: EL 444.00
 Well Casing
 Type: PVC
 Size (diameter): 4"
 Schedule or Thickness: schedule 80
 Bottom Cap (Depth: 47.5' bgs)
 Bore Hole Diameter: 10.5" min.

A. Monitor Well Data Sheet

Texas Department of Health
Division of Solid Waste Management
SE. 67 (3/1/89-B)

Permittee or Site Name: Skyline RDF
 County: Dallas and Ellis Counties
 Date of Monitor Well Installation: 9/20/94
 Monitor Well: Latitude: 32°32.83' Longitude: 96°40.25'
 Monitor Well Groundwater
 Gradient: Upgradient Downgradient

TDH Permit No.: 42-A
 Monitor Well I.D. No.: MW-19
 Date of Monitor Well
 Development: 10/28/94-12/09/94
 Monitor Well Driller
 Name: William P. McGuire
 License No.: 2763M

NOTE:

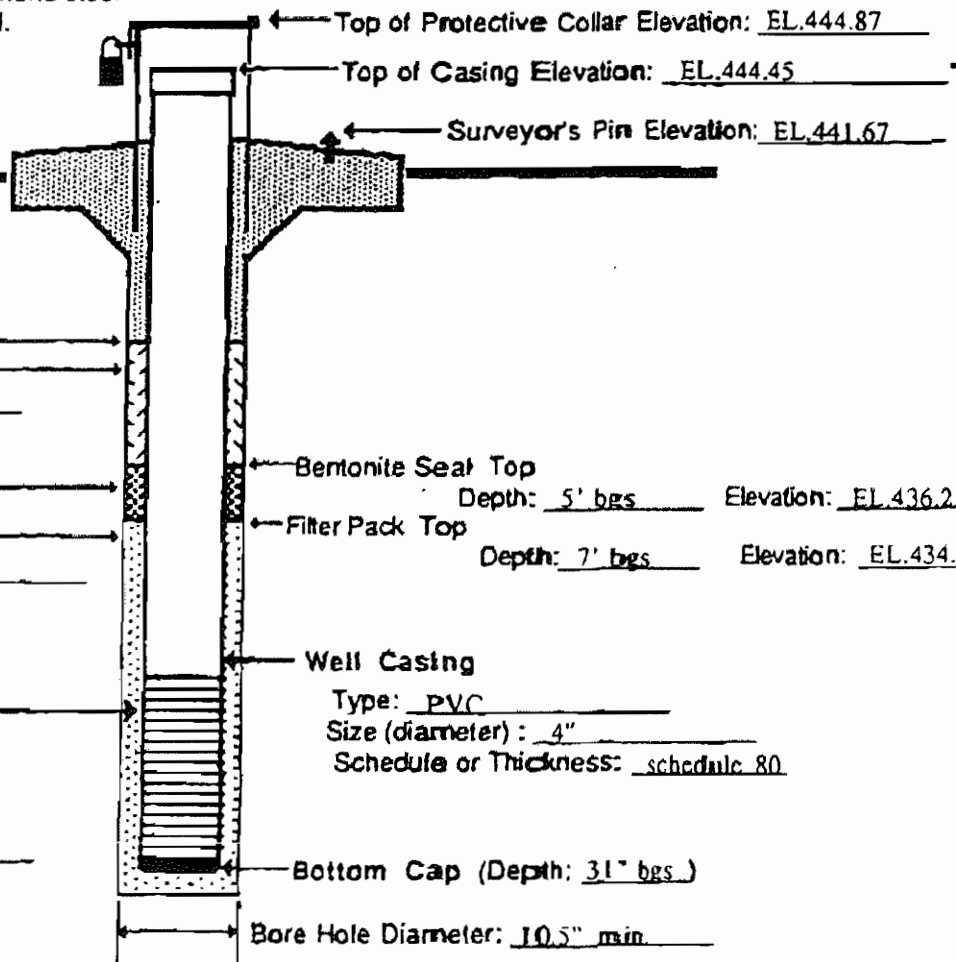
- (A) The information shown in the sketch below should be considered the minimum required for an installed ground-water monitor well.
- (B) Report All Depths from Surface Elevation and all Elevations relative to Mean Sea Level.
- (C) The minimum distance between the inside wall of the Bore Hole and the outside of the Well Casing shall be 3".
- (D) Use Flush Screw Joint Casing only, 2" diameter or larger. Recommend 4" diameter minimum & Teflon Taping Casing Joints.
- (E) Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist or Engineer Supervising Well Installation: Pierce L. Chandler, Jr. P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: 438.04 ft
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Tube

Concrete Surface Pad - Recommend steel reinforcement in the Surface Pad.
 Surface Pad Dimensions: 6' x 6' square

Surface Elevation: EL.441.25



Concrete Seal
 Depth: 2' bgs
 Casing Seal (Backfill)
 Material: cement-bentonite

Bentonite Seal
 Filter Pack

Filter Pack Material: #20-#40 Sterilized Sand or Glass Beads

Well Screen
 Top Depth: 8.5' bgs
 Top Elevation: EL.432.75
 Type of Well Screen: PVC
 Screen Opening Size: 0.010"

Well Casing
 Type: PVC
 Size (diameter): 4"
 Schedule or Thickness: schedule 80

Bottom Cap (Depth: 31" bgs.)

Bore Hole Diameter: 10.5" min.

Monitor Well Data Sheet

Permittee or Site Name: Skyline RDF
 County: Dallas and Ellis
 Date of Monitor Well Installation: 10/20/03
 Monitor Well Latitude: N32°32'28.3 Longitude: W96°40'04.7
 Monitor Well Groundwater Gradient Position:
 Upgradient Downgradient

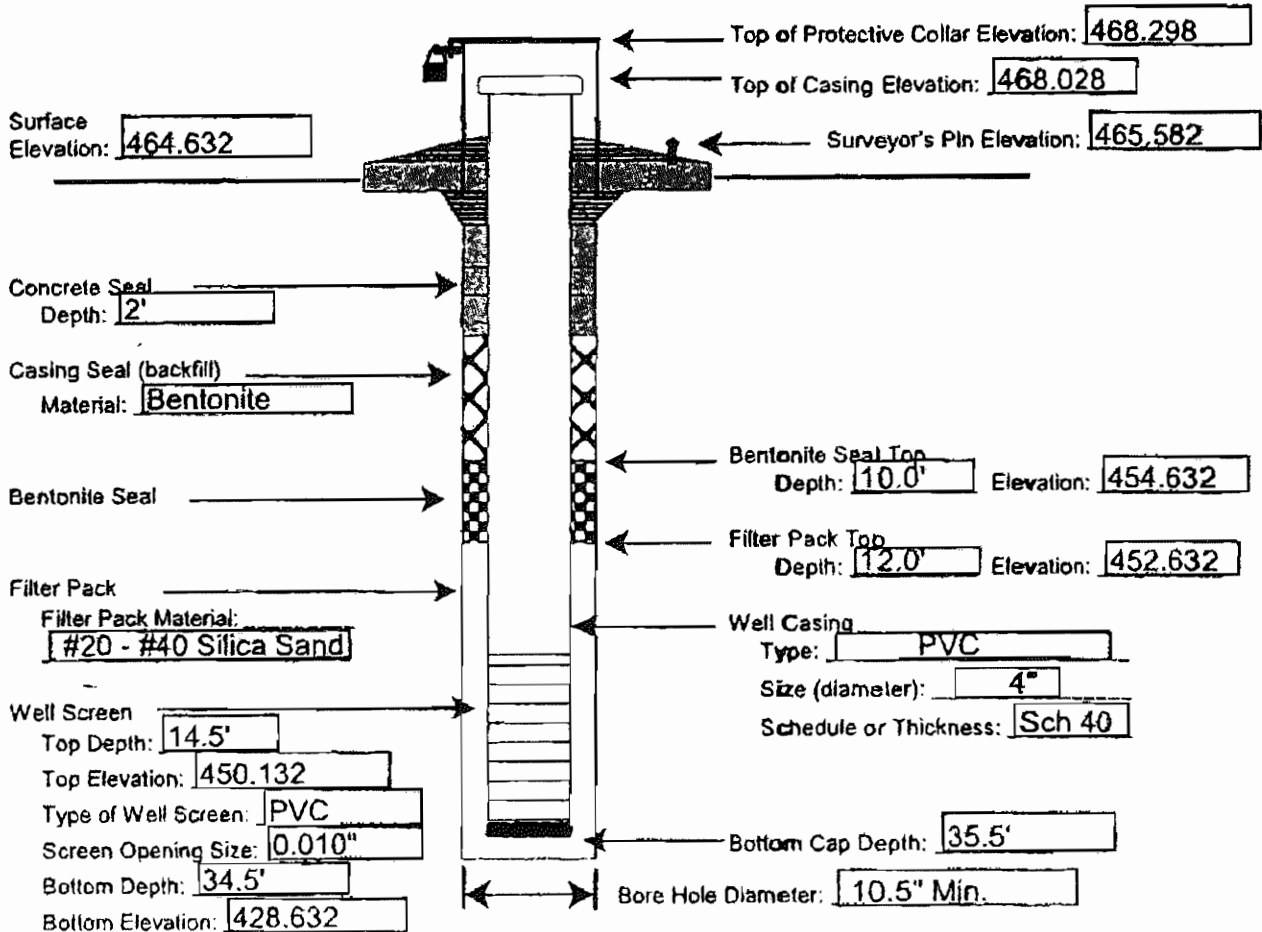
MSW Permit No.: 42C
 Monitor Well I.D. No.: MW-20R
 Date of Monitor Well Development: 10/27/03
 Monitor Well Driller Name: Jim Markle
 License No.: 54289-M

NOTES:

- Report all depths from Surface Elevation and all Elevations relative to Mean Sea Level (MSL), to nearest hundredth of a foot.
- Diameter of boring should be at least 4 inches larger than diameter of well casing.
- Use flush screw joint casing only, 2-inch diameter or larger, with o-rings or PTFE tape in joints (4-inch diameter recommend).
- Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Timothy L. McDaniel
 Static Water Level Elevation (with respect to MSL) after Well Development: Dry
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Tube
 Concrete Surface Pad (with steel reinforcement) Dimensions: 6' x 6' Square



Monitor Well Data Sheet

Permittee or Site Name: Skyline Landfill
 County: Dallas and Ellis Counties, Texas
 Date of Monitor Well Installation: 10/20/09
 Monitor Well Latitude: 32°33'18" Longitude: 96°40'55"
 Monitor Well Groundwater Gradient Position:
 Upgradient _____ Downgradient X

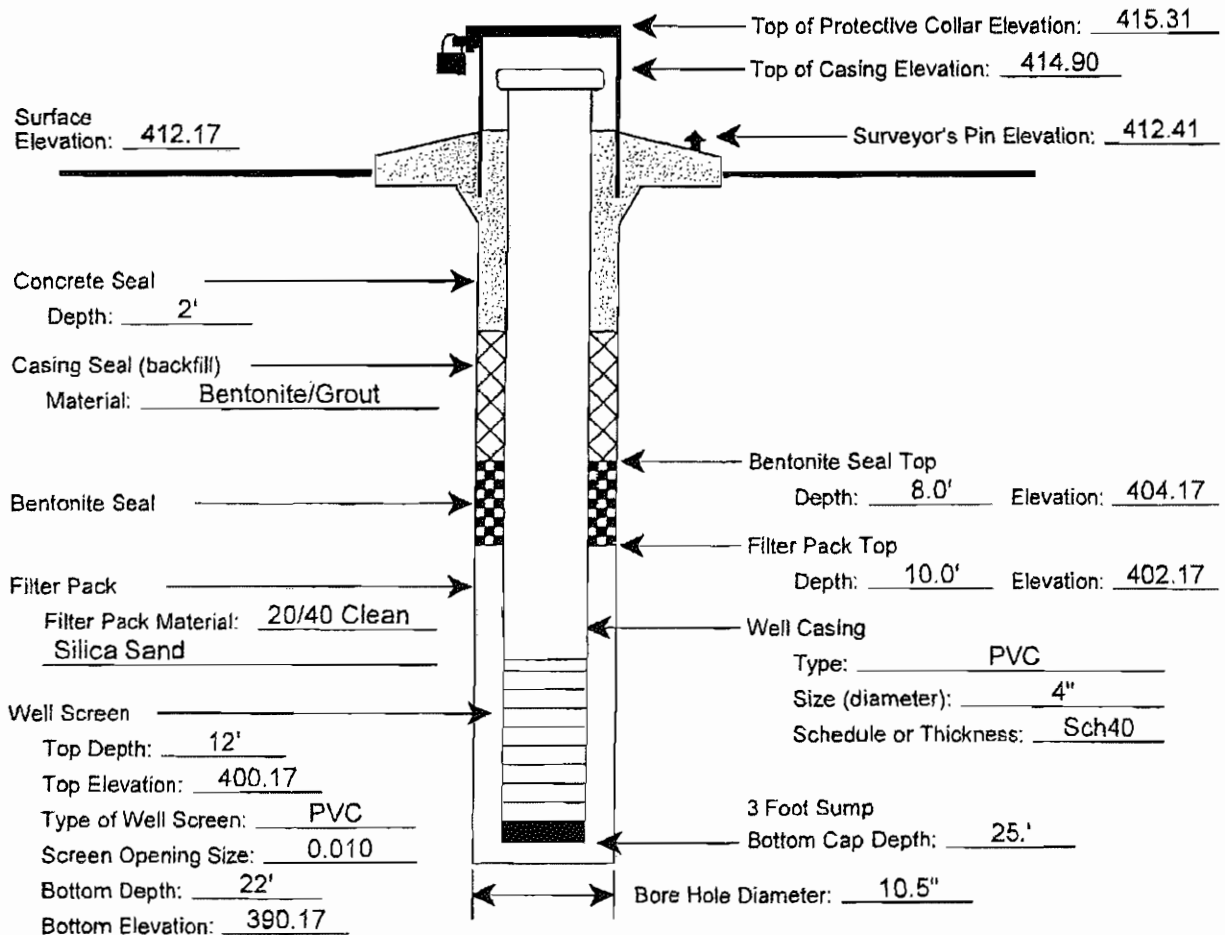
MSW Permit No.: 42-C
 Monitor Well I.D. No.: MW-21
 Date of Monitor Well Development: 11/11/09
 Monitor Well Driller Name: Thomas D. Baker
 License No.: 3016M

NOTES:

- Report all depths from Surface Elevation and all Elevations relative to Mean Sea Level (MSL), to nearest hundredth of a foot.
- Diameter of boring should be at least 4 inches larger than diameter of well casing.
- Use flush screw joint casing only, 2-inch diameter or larger, with o-rings or PTFE tape in joints (4-inch diameter recommend).
- Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Thomas D. Baker, P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: 389.65
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Upright
 Concrete Surface Pad (with steel reinforcement) Dimensions: 6' x 6' x 6"



Monitor Well Data Sheet

Permittee or Site Name: Skyline Landfill
 County: Dallas and Ellis Counties, Texas
 Date of Monitor Well Installation: 10/20/09
 Monitor Well Latitude: 32°33'12" Longitude: 96°40'43"
 Monitor Well Groundwater Gradient Position:
 Upgradient _____ Downgradient X

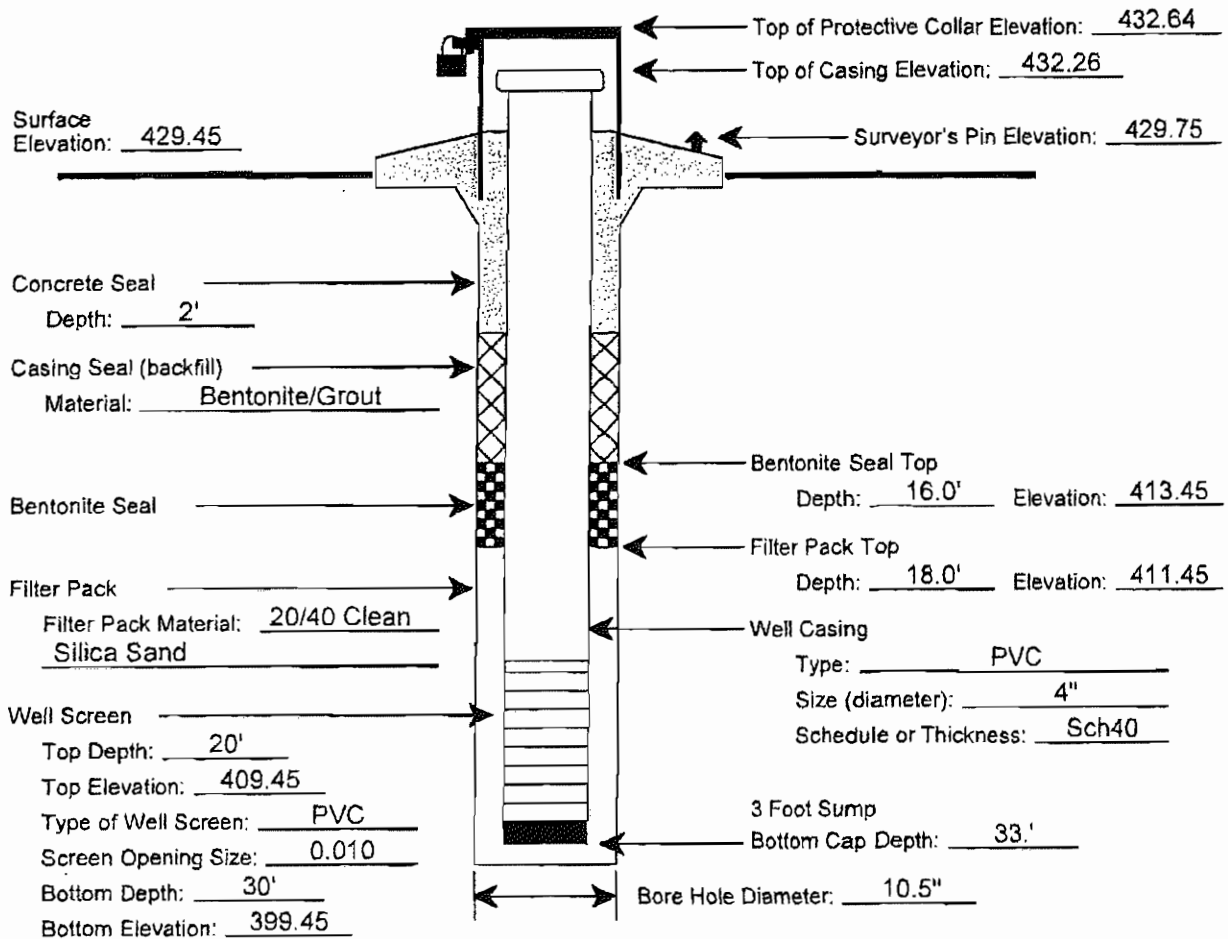
MSW Permit No.: 42-C
 Monitor Well I.D. No.: MW-22
 Date of Monitor Well Development: 11/11/09
 Monitor Well Driller Name: Thomas D. Baker
 License No.: 3016M

NOTES:

- Report all depths from Surface Elevation and all Elevations relative to Mean Sea Level (MSL), to nearest hundredth of a foot.
- Diameter of boring should be at least 4 inches larger than diameter of well casing.
- Use flush screw joint casing only, 2-inch diameter or larger, with o-rings or PTFE tape in joints (4-inch diameter recommend).
- Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Thomas D. Baker, P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: n/a
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Upright
 Concrete Surface Pad (with steel reinforcement) Dimensions: 6' x 6' x 6"



Monitor Well Data Sheet

Permittee or Site Name: Skyline Landfill
 County: Dallas and Ellis Counties, Texas
 Date of Monitor Well Installation: 10/20/09
 Monitor Well Latitude: 32°33'15" Longitude: 96°40'303"
 Monitor Well Groundwater Gradient Position:
 Upgradient Downgradient X

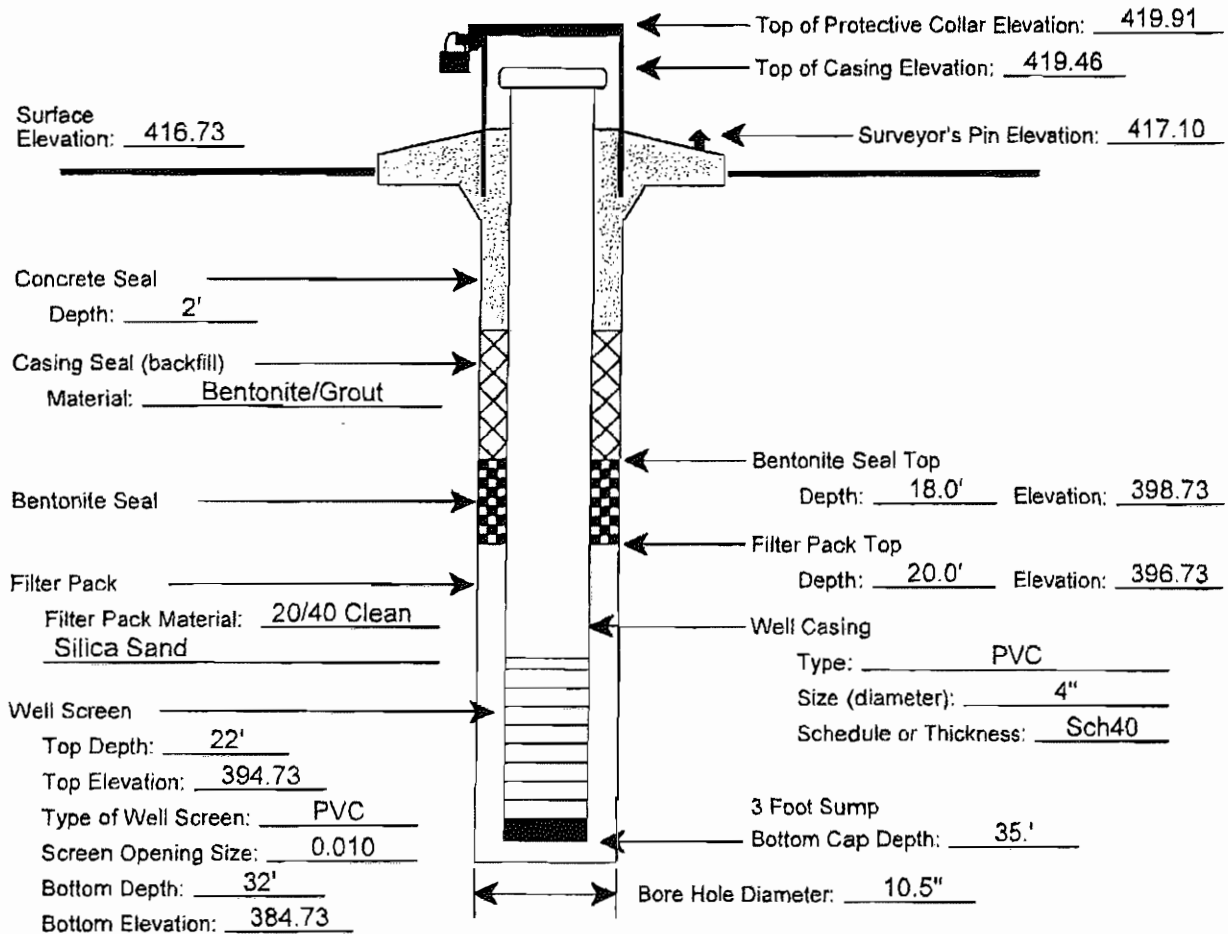
MSW Permit No.: 42-C
 Monitor Well I.D. No.: MW-23
 Date of Monitor Well Development: 11/12/09
 Monitor Well Driller Name: Thomas D. Baker
 License No.: 3016M

NOTES:

- Report all depths from Surface Elevation and all Elevations relative to Mean Sea Level (MSL), to nearest hundredth of a foot.
- Diameter of boring should be at least 4 inches larger than diameter of well casing.
- Use flush screw joint casing only, 2-inch diameter or larger, with o-rings or PTFE tape in joints (4-inch diameter recommend).
- Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Thomas D. Baker, P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: 400.00
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Upright
 Concrete Surface Pad (with steel reinforcement) Dimensions: 6' x 6' x 6"



Monitor Well Data Sheet

Permittee or Site Name: Skyline Landfill
 County: Dallas and Ellis Counties, Texas
 Date of Monitor Well Installation: 11/9/09
 Monitor Well Latitude: 32°33'15" Longitude: 96°40'21"
 Monitor Well Groundwater Gradient Position:
 Upgradient _____ Downgradient X

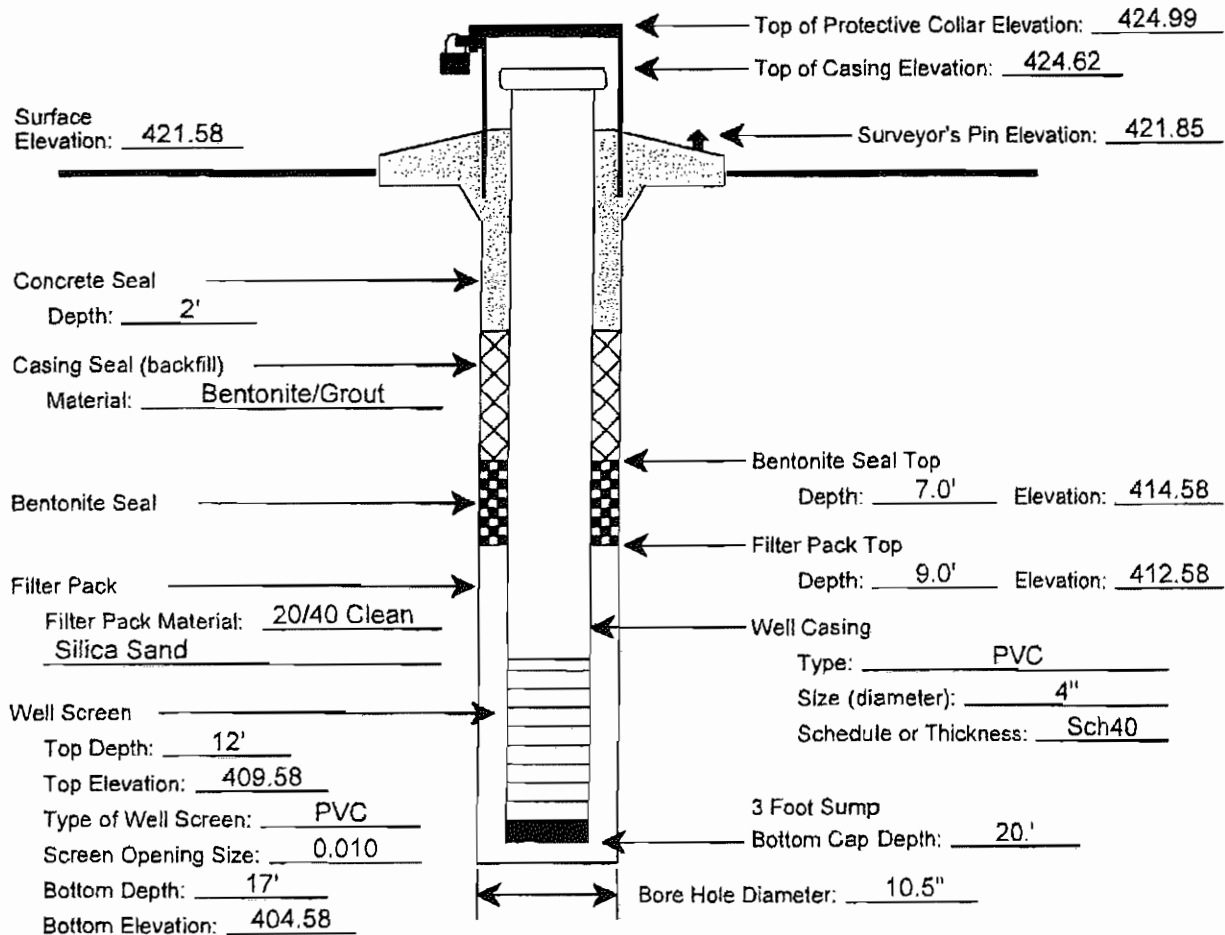
MSW Permit No.: 42-C
 Monitor Well I.D. No.: MW-24
 Date of Monitor Well Development: 11/12/09
 Monitor Well Driller Name: Thomas D. Baker
 License No.: 3016M

NOTES:

- Report all depths from Surface Elevation and all Elevations relative to Mean Sea Level (MSL), to nearest hundredth of a foot.
- Diameter of boring should be at least 4 inches larger than diameter of well casing.
- Use flush screw joint casing only, 2-inch diameter or larger, with o-rings or PTFE tape in joints (4-inch diameter recommend).
- Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Thomas D. Baker, P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: 415.44
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Upright
 Concrete Surface Pad (with steel reinforcement) Dimensions: 6' x 6' x 6"



Monitor Well Data Sheet

Permittee or Site Name: Skyline Landfill
 County: Dallas and Ellis Counties, Texas
 Date of Monitor Well Installation: 10/20/09
 Monitor Well Latitude: 32°32'57" Longitude: 96°40'12"
 Monitor Well Groundwater Gradient Position:
 Upgradient _____ Downgradient X

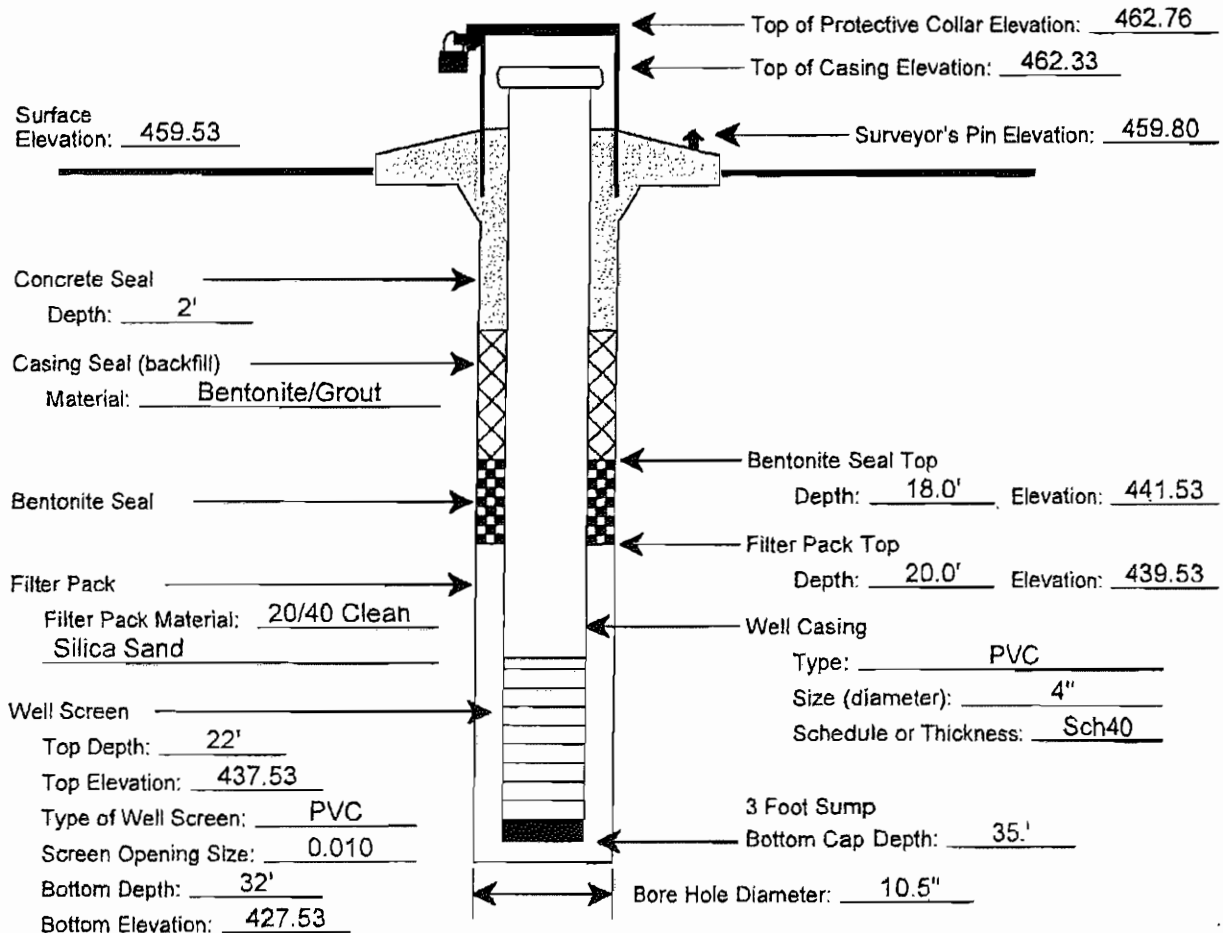
MSW Permit No.: 42
 Monitor Well I.D. No.: MW-25
 Date of Monitor Well Development: 11/11/09
 Monitor Well Driller Name: Thomas D. Baker
 License No.: 3016M

NOTES:

- Report all depths from Surface Elevation and all Elevations relative to Mean Sea Level (MSL), to nearest hundredth of a foot.
- Diameter of boring should be at least 4 inches larger than diameter of well casing.
- Use flush screw joint casing only, 2-inch diameter or larger, with o-rings or PTFE tape in joints (4-inch diameter recommend).
- Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Thomas D. Baker, P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: 437.33
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Upright
 Concrete Surface Pad (with steel reinforcement) Dimensions: 6' x 6' x 6"



Monitor Well Data Sheet

Permittee or Site Name: Skyline Landfill
 County: Dallas and Ellis Counties, Texas
 Date of Monitor Well Installation: 9/29/09
 Monitor Well Latitude: 32°32'55" Longitude: 96°40'2"
 Monitor Well Groundwater Gradient Position:
 Upgradient _____ Downgradient X

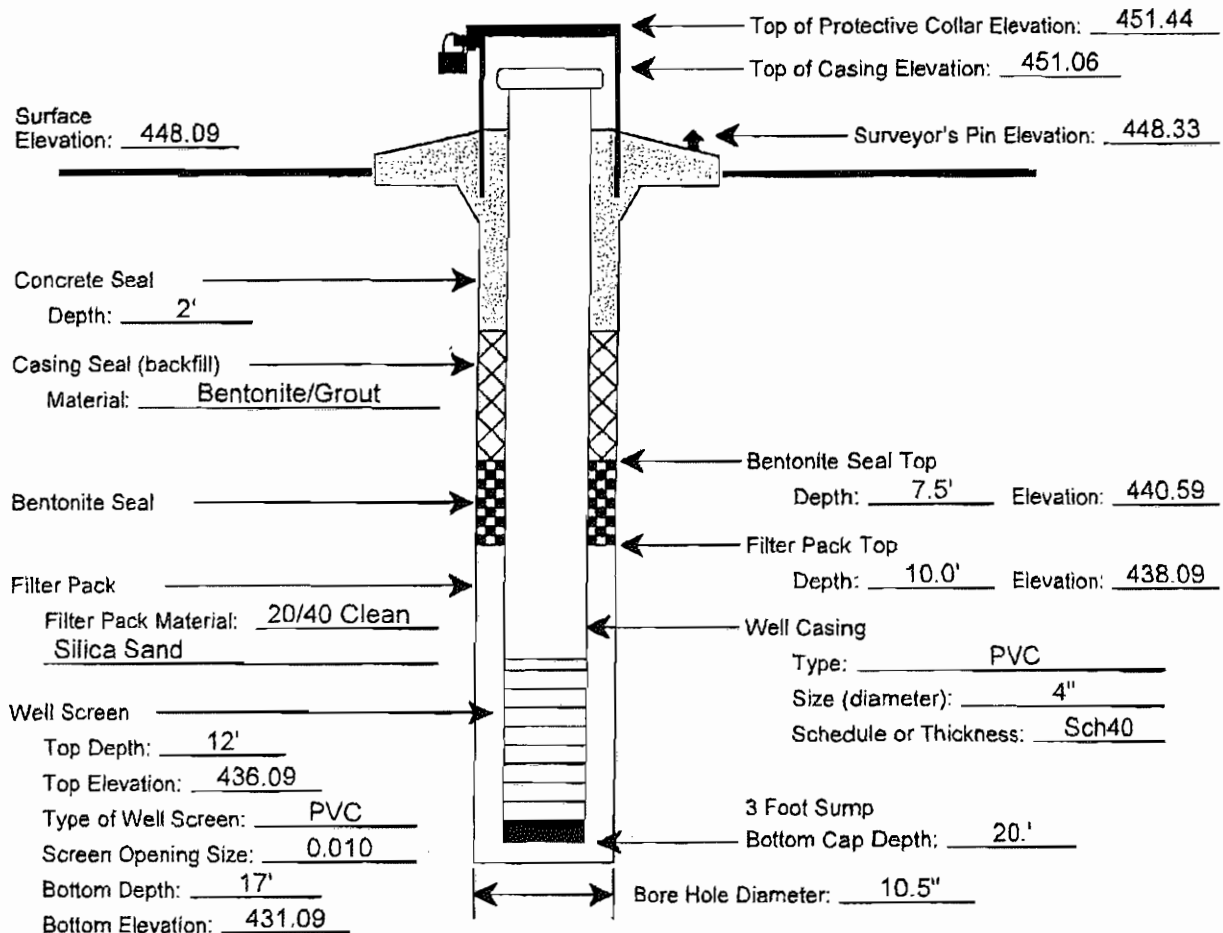
MSW Permit No.: 42-C
 Monitor Well I.D. No.: MW-26
 Date of Monitor Well Development: 11/12/09
 Monitor Well Driller Name: Thomas D. Baker
 License No.: 3016M

NOTES:

- Report all depths from Surface Elevation and all Elevations relative to Mean Sea Level (MSL), to nearest hundredth of a foot.
- Diameter of boring should be at least 4 inches larger than diameter of well casing.
- Use flush screw joint casing only, 2-inch diameter or larger, with o-rings or PTFE tape in joints (4-inch diameter recommend).
- Well development should continue until water is clear, and pH and conductivity are stable.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Thomas D. Baker, P.E.
 Static Water Level Elevation (with respect to MSL) after Well Development: 428.21
 Name of Geologic Formation(s) in which Well is completed: Taylor Marl

Type of Locking Device: Padlock Type of Casing Protection: 6" Steel Upright
 Concrete Surface Pad (with steel reinforcement) Dimensions: 6' x 6' x 6"



PIEZOMETER INSTALLATION REPORTS
P-1 THROUGH P-36

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
 CLIENT: Waste Management of North America
 Dallas, Texas
 LOCATION: Near Boring CB-23

WELL NO: P-1
 PROJECT NO: 87-042

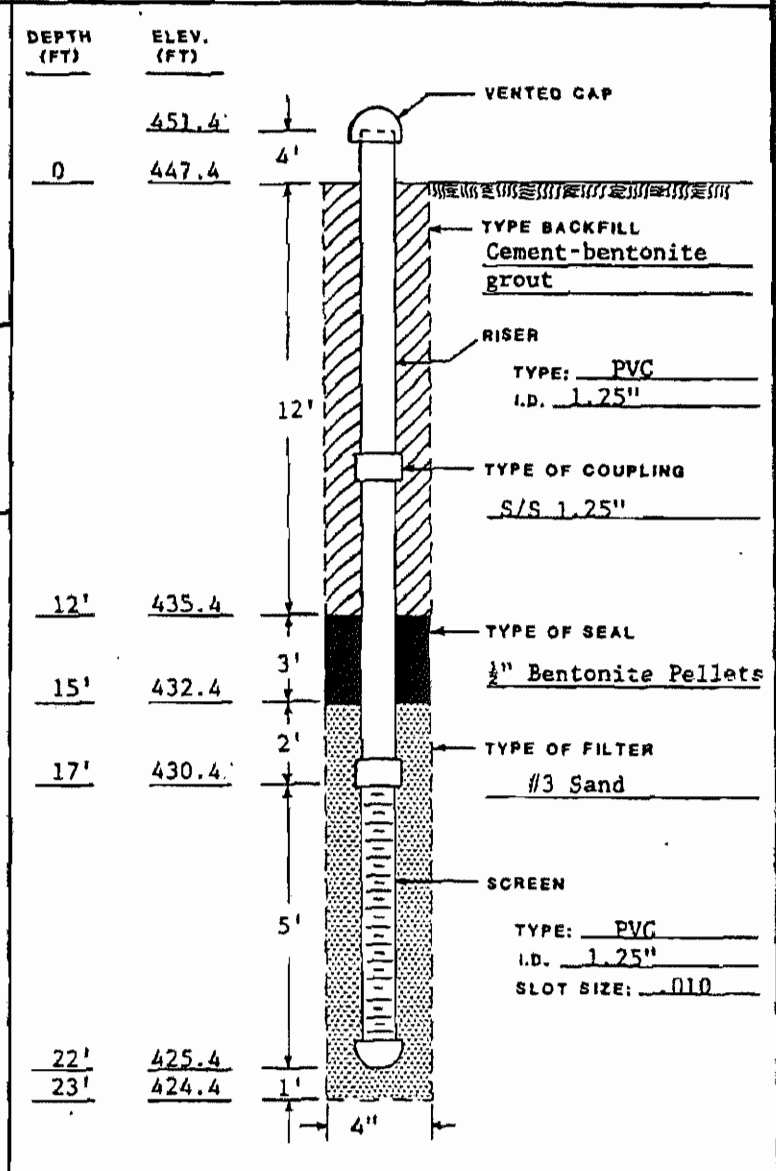
PIEZOMETER COMPLETION
 DATE: 5-27-87
 DRY AUGURED 0 TO 23 FT
 WASH BORED _____ TO _____ FT
 DRILLING FLUID none

PIEZOMETER DEVELOPMENT
 DATE: 5-28-87
 METHOD: Air

WATER LEVEL READINGS
 FREE WATER AT NA FT

DATE	DEPTH ^a	ELEVATION
5-28-87		Dry
6-02-87		Dry
7-01-87		Dry
10-16-87		Dry
11-5-87 ^b		Dry
3-10-88 ^b	1.4	446.0
5-27-88 ^b	16.7	430.7
11-7-90	17.4	430.0
11-16-90	17.9	429.5
12-18-90	19.2	428.2
1-9-91	18.8	428.6

a - Depth below ground surface
 b - Water level readings taken by WMNA.



REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
CLIENT: Waste Management of North America
 Dallas, Texas
LOCATION: Near Boring CB-23

WELL NO: P-2
PROJECT NO: 87-042

PIEZOMETER COMPLETION
DATE: 5-27-87
DRY AUGURED 0 **TO** 13.5 **FT**
WASH BORED _____ **TO** _____ **FT**
DRILLING FLUID none

PIEZOMETER DEVELOPMENT
DATE: 5-28-87
METHOD: Air

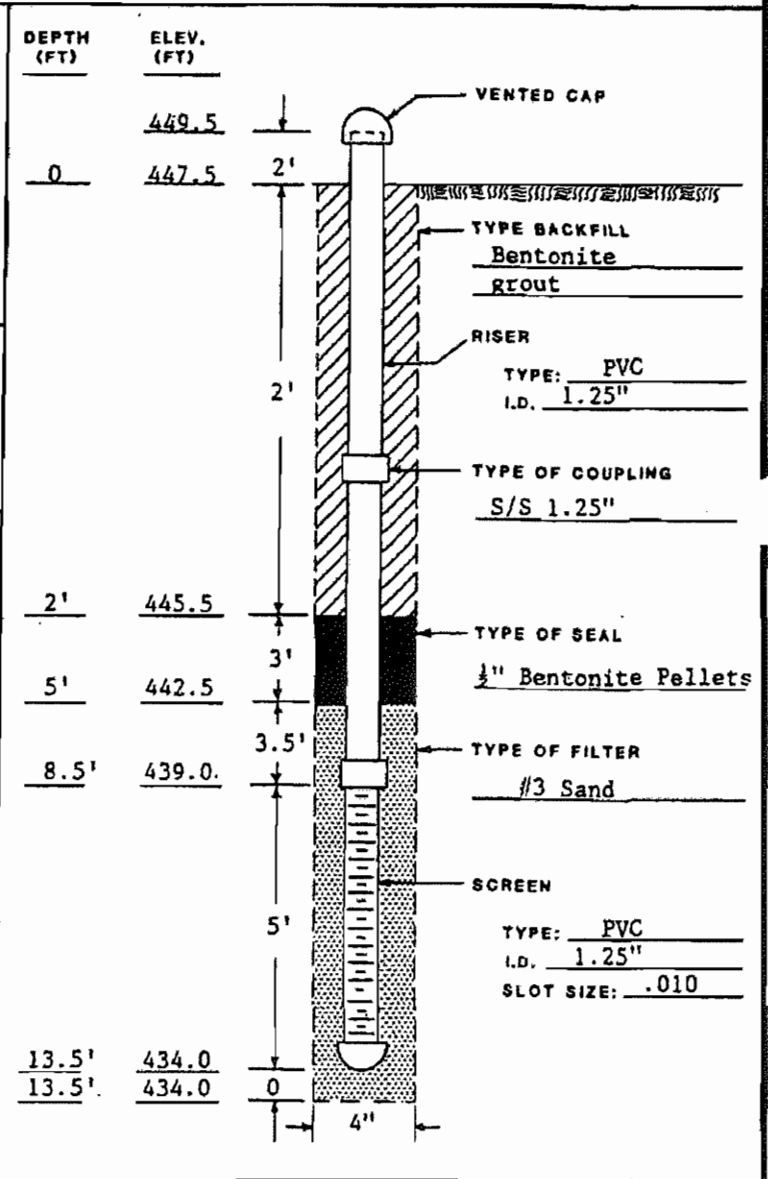
WATER LEVEL READINGS

FREE WATER AT NA FT

DATE	DEPTH ^a	ELEVATION
5-28-87		Dry
6-02-87		Dry
7-01-87		Dry
10-16-87		Dry
11-5-87 ^b		Dry
3-10-88 ^b		Dry
5-27-88 ^b		Dry
11-7-90		Dry
11-16-90		Dry
12-18-90		Dry
1-9-91		Dry

a - Depth below ground surface

b - Water level readings taken by WMNA.



REMARKS:

McBride, Parcliff and Associates, Inc.

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
CLIENT: Waste Management of North America
 Dallas, Texas
LOCATION: Near Boring CB-25

WELL NO: P-3
PROJECT NO: 87-042

PIEZOMETER COMPLETION
 DATE: 5-27-87
 DRY AUGURED 0 TO 25 FT
 WASH BORED _____ TO _____ FT
 DRILLING FLUID none

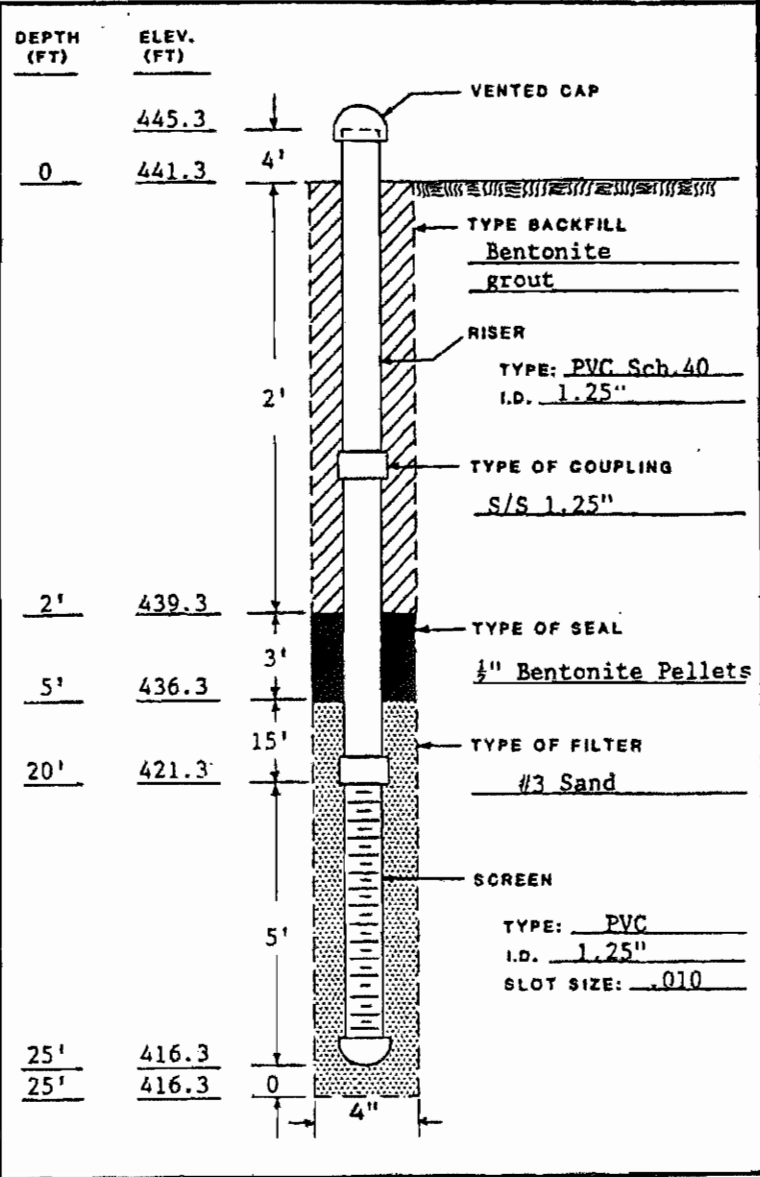
PIEZOMETER DEVELOPMENT
 DATE: 5-28-87
 METHOD: Air

WATER LEVEL READINGS

FREE WATER AT NA FT

DATE	DEPTH ^a	ELEVATION
5-28-87		Dry
6-02-87		Dry
7-01-87	22.8	418.5
10-16-87	22.0	419.3
11-5-87 ^b	21.5	419.8
3-10-88 ^b	14.8	426.5
5-11-88 ^b	12.9	428.4
11-7-90	18.6	422.7
11-16-90	24.3	417.0
12-18-90	22.8	418.5
1-9-91	5.9	435.4

a - Depth below ground surface
 b - Water level readings taken by WMNA.

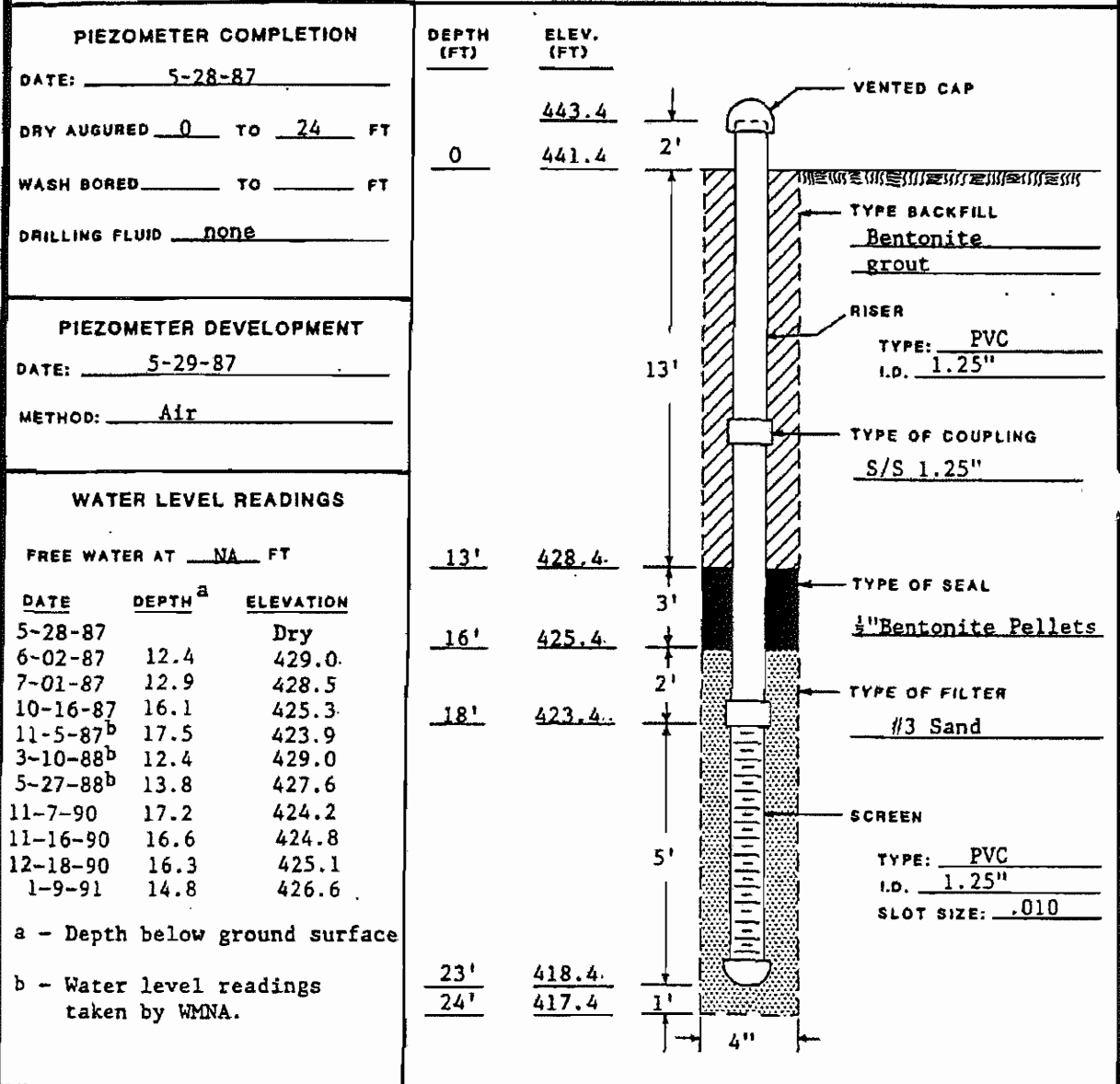


REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
CLIENT: Waste Management of North America
 Dallas, Texas
LOCATION: Near Boring GB-25

WELL NO: P-4
PROJECT NO: 87-042



PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
 CLIENT: Waste Management of North America
 Dallas, Texas
 LOCATION: Near Boring CB-6

WELL NO: P-5
 PROJECT NO: 87-042

PIEZOMETER COMPLETION
 DATE: 5-28-87
 DRY AUGURED 0 TO 38 FT
 WASH BORED 38 TO 53' FT
 DRILLING FLUID water

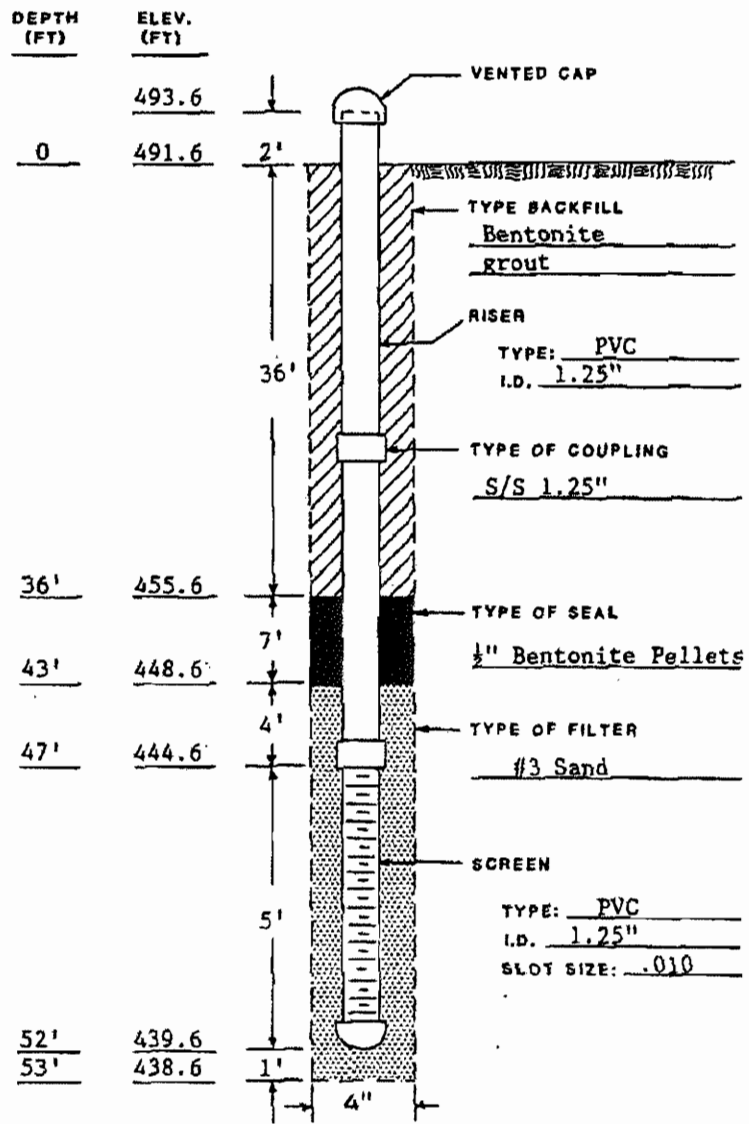
PIEZOMETER DEVELOPMENT
 DATE: 5-29-87
 METHOD: Air

WATER LEVEL READINGS

FREE WATER AT NA FT

DATE	DEPTH ^a	ELEVATION
7-01-87	46.2	445.4
10-16-87	46.2	445.4
11-5-87 ^b	47.6	444.0
3-10-88 ^b	33.7	457.9
5-27-88 ^b	32.4	459.2
11-7-90	48.6	443.0
11-16-90	46.1	445.5
12-18-90	41.2	450.4
1-9-91	40.3	451.3

a - Depth below ground surface
 b - Water level readings taken by WMNA.



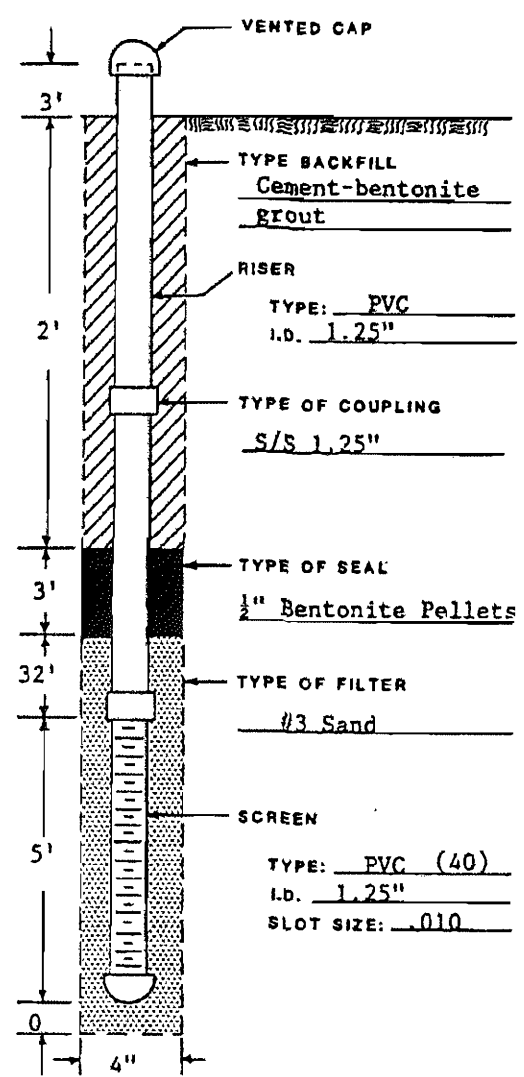
REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
CLIENT: Waste Management of North America
 Dallas, Texas
LOCATION: Near Boring CB-6

WELL NO: P-6
PROJECT NO: 87-042

	DEPTH (FT)	ELEV. (FT)	
PIEZOMETER COMPLETION			
DATE: <u>5-28-87</u>			
DRY AUGURED <u>0</u> TO <u>42'</u> FT		<u>495.2</u>	↓
WASH BORED _____ TO _____ FT	<u>0</u>	<u>492.2</u>	3'
DRILLING FLUID <u>none</u>			
PIEZOMETER DEVELOPMENT			
DATE: <u>5-29-87</u>			
METHOD: <u>Air</u>			
WATER LEVEL READINGS			
FREE WATER AT <u>NA</u> FT			
DATE	DEPTH^a	ELEVATION	
6-02-87	37.8	454.4	
7-01-87	34.3	457.9	
10-16-87	34.1	458.1	
11-5-87 ^b	34.5	457.7	
3-10-88 ^b	31.0	461.2	
5-27-88 ^b	32.4	459.8	
11-7-90	32.3	453.9	
11-16-90	37.9	454.3	
12-18-90	34.2	458.0	
1-9-91	33.7	458.5	
a - Depth below ground surface b - Water level readings taken by WMNA.			
	<u>42'</u>	<u>450.2</u>	
	<u>42'</u>	<u>450.2</u>	0



REMARKS:

PIEZOMETER INSTALLATION REPORT

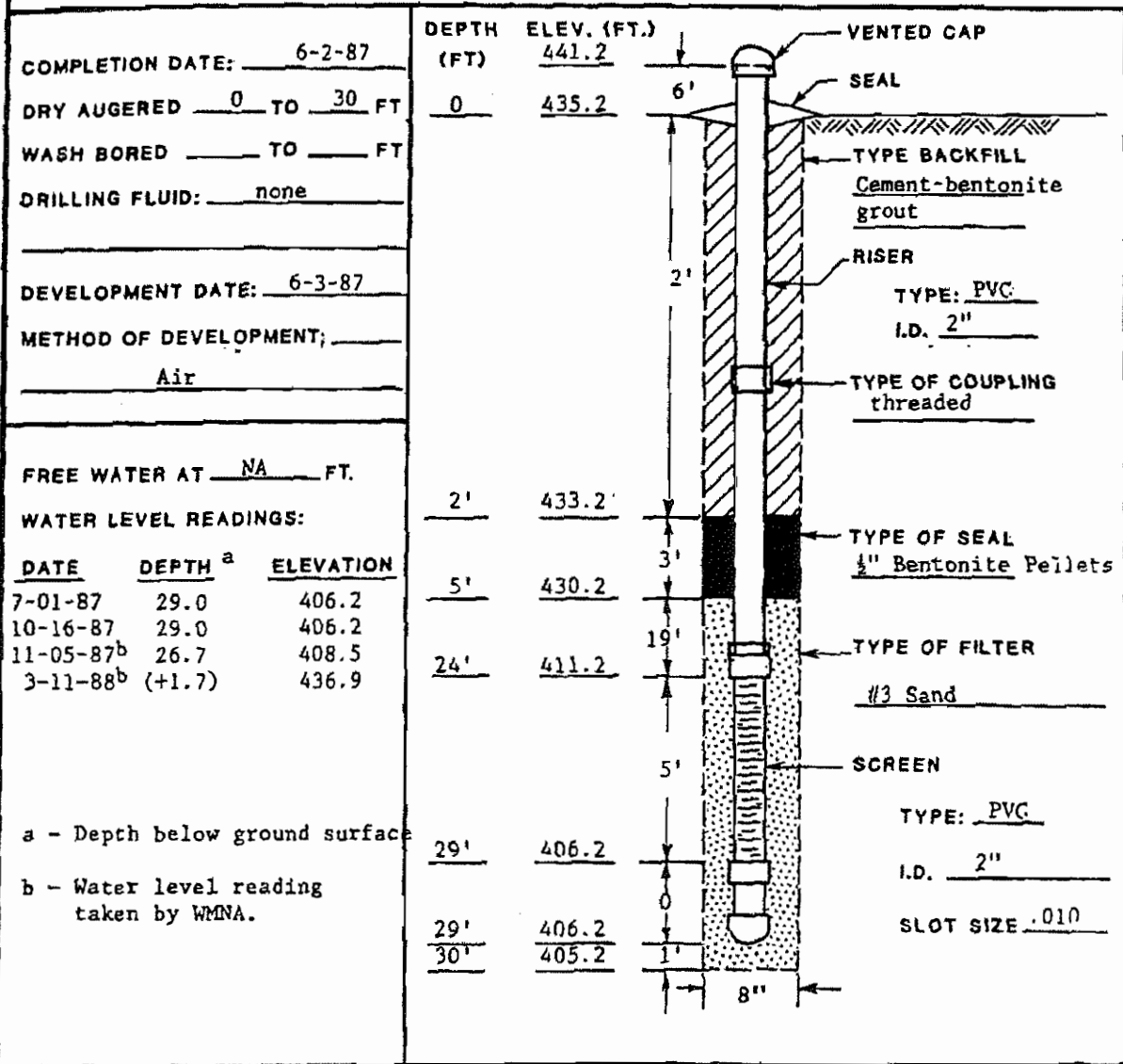
PROJECT: Skyline Landfill
Dallas & Ellis Counties, Texas

CLIENT: Waste Management of North America
Dallas, Texas

LOCATION: Near Boring CB-10

WELL NO: P-7

PROJECT NO: 87-042



PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
CLIENT: Waste Management of North America
 Dallas, Texas
LOCATION: Near Boring CB-12

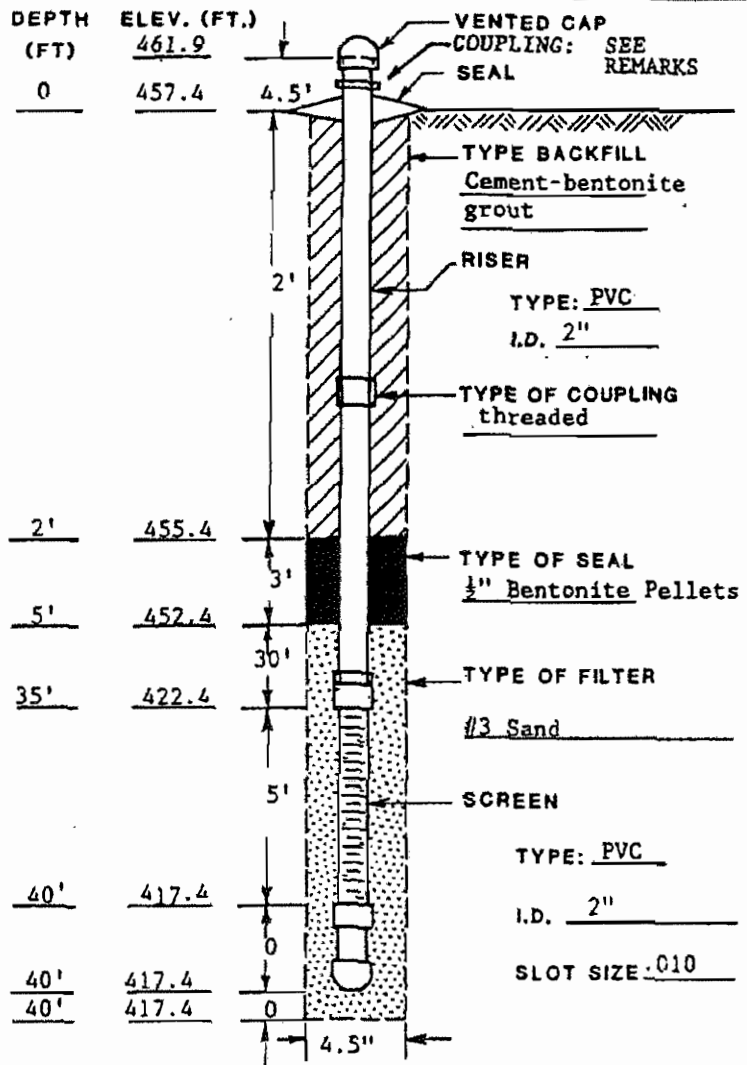
WELL NO: P-8
PROJECT NO: 87-042

COMPLETION DATE: 6-2-87
DRY AUGERED 0 **TO** 40 **FT**
WASH BORED _____ **TO** _____ **FT**
DRILLING FLUID: none
DEVELOPMENT DATE: 6-3-87
METHOD OF DEVELOPMENT: _____
Air

FREE WATER AT NA **FT.**
WATER LEVEL READINGS:

DATE	DEPTH ^a	ELEVATION
6-3-87	-	Dry
7-01-87	15.3	442.1
10-16-87	24.7	432.7
11-05-87 ^b	20.8	436.6
3-10-88 ^b	19.1	438.3
5-27-88 ^b	20.0	437.4
11-7-90	20.6	436.8
11-16-90	19.8	437.6
12-18-90	18.1	439.3
1-9-91	17.6	439.8

^a - Depth below ground surface
^b - Water level readings taken by WMNA.



REMARKS:
 WMNA water level readings were taken from a coupling located 3.2 feet from top of stick-up.

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
CLIENT: Waste Management of North America
 Dallas, Texas
LOCATION: Near Boring CB-12

WELL NO: P-9
PROJECT NO: 87-042

PIEZOMETER COMPLETION			DEPTH (FT)	ELEV. (FT)	
DATE: <u>9-30-87</u> DRY AUGURED <u>0</u> TO <u>40</u> FT WASH BORED _____ TO _____ FT DRILLING FLUID _____			<u>0</u>	<u>459.0</u>	
PIEZOMETER DEVELOPMENT					
DATE: <u>10-1-87</u> METHOD: <u>Air</u>					
WATER LEVEL READINGS					
FREE WATER AT <u>NA</u> FT					
DATE	DEPTH ^a	ELEVATION			
10-1-87	36.0	423.0	<u>27</u>	<u>432.0</u>	
10-16-87	36.0	423.0	<u>29</u>	<u>430.0</u>	
11-5-87 ^b	25.4	433.6			
3-10-88 ^b	17.9	441.1	<u>37</u>	<u>422.0</u>	
5-27-88 ^b	18.6	440.4			
11-7-90	32.4	426.6			
11-16-90	30.4	428.6			
12-18-90	19.6	439.4			
1-9-91	17.8	441.2			
a - Depth below ground surface			<u>39</u>	<u>420.0</u>	
b - Water level readings taken by WMNA.			<u>39</u>	<u>420.0</u>	

REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
CLIENT: Waste Management of North America
 Dallas, Texas
LOCATION: Near Boring CB-6

WELL NO: P-10
PROJECT NO: 87-042

PIEZOMETER COMPLETION
DATE: 9-30-87
DRY AUGURED 0 TO 41 FT
WASH BORED _____ TO _____ FT
DRILLING FLUID _____

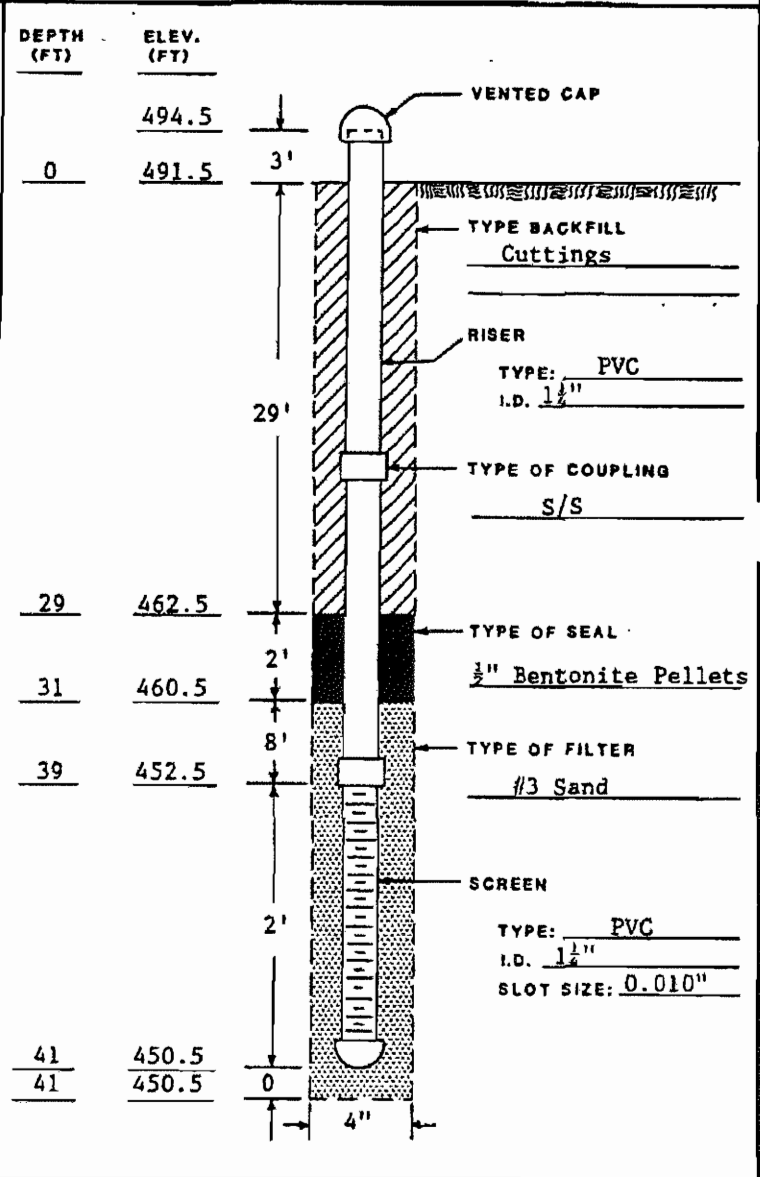
PIEZOMETER DEVELOPMENT
DATE: 10-1-87
METHOD: Air

WATER LEVEL READINGS

FREE WATER AT NA FT

DATE	DEPTH ^a	ELEVATION
10-1-87	-	Dry
10-16-87	32.7	458.8
11-5-87 ^b	32.7	458.8
3-10-88 ^b	30.4	461.1
5-27-88 ^b	32.1	459.4
11-7-90	37.8	453.7
11-16-90	36.7	454.8
12-18-90	33.8	457.7
1-9-91	33.2	458.3

a - Depth below ground surface
 b - Water level readings taken by MWNA.



REMARKS:

McBride-Ratcliff and Associates, Inc.

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas & Ellis Counties, Texas
CLIENT: Waste Management of North America
 Dallas, Texas
LOCATION: Near Boring CB-25

WELL NO: P-11
PROJECT NO: 87-042

	DEPTH (FT)	ELEV. (FT)																																									
PIEZOMETER COMPLETION DATE: <u>9-30-87</u> DRY AUGURED <u>0</u> TO <u>25</u> FT WASH BORED _____ TO _____ FT DRILLING FLUID _____																																											
PIEZOMETER DEVELOPMENT DATE: <u>10-1-87</u> METHOD: <u>Air</u>																																											
WATER LEVEL READINGS FREE WATER AT <u>NA</u> FT																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>DATE</th> <th>DEPTH^a</th> <th>ELEVATION</th> </tr> </thead> <tbody> <tr><td>10-1-87</td><td>-</td><td>Dry</td></tr> <tr><td>10-16-87</td><td>15.7</td><td>424.3</td></tr> <tr><td>11-5-87^b</td><td>12.7</td><td>427.3</td></tr> <tr><td>3-10-88^b</td><td>12.1</td><td>427.9</td></tr> <tr><td>5-27-88^b</td><td>13.4</td><td>426.6</td></tr> <tr><td>11-7-90</td><td>17.8</td><td>422.2</td></tr> <tr><td>11-16-90</td><td>16.1</td><td>423.9</td></tr> <tr><td>12-18-90</td><td>15.9</td><td>424.1</td></tr> <tr><td>1-9-91</td><td>14.4</td><td>425.6</td></tr> </tbody> </table>	DATE	DEPTH ^a	ELEVATION	10-1-87	-	Dry	10-16-87	15.7	424.3	11-5-87 ^b	12.7	427.3	3-10-88 ^b	12.1	427.9	5-27-88 ^b	13.4	426.6	11-7-90	17.8	422.2	11-16-90	16.1	423.9	12-18-90	15.9	424.1	1-9-91	14.4	425.6	<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td>8</td><td>432.0</td></tr> <tr><td>10</td><td>430.0</td></tr> <tr><td>18</td><td>422.0</td></tr> <tr><td>20</td><td>420.0</td></tr> <tr><td>20</td><td>420.0</td></tr> </tbody> </table>	8	432.0	10	430.0	18	422.0	20	420.0	20	420.0		
DATE	DEPTH ^a	ELEVATION																																									
10-1-87	-	Dry																																									
10-16-87	15.7	424.3																																									
11-5-87 ^b	12.7	427.3																																									
3-10-88 ^b	12.1	427.9																																									
5-27-88 ^b	13.4	426.6																																									
11-7-90	17.8	422.2																																									
11-16-90	16.1	423.9																																									
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1-9-91	14.4	425.6																																									
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10	430.0																																										
18	422.0																																										
20	420.0																																										
20	420.0																																										
a - Depth below ground surface b - Water level readings taken by WMNA.																																											

REMARKS: Caved to 20'.

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
 CLIENT: Waste Management of North America, Inc.
 Irving, Texas
 LOCATION: Near CB-10

WELL NO: P-12
 PROJECT NO: 90-0613

PIEZOMETER COMPLETION	DEPTH (FT)	ELEV. (FT)	
DATE: <u>11-7-90</u>			
DRY AUGURED _____ TO _____ FT		442.2	
Air Bored <u>0</u> TO <u>11</u> FT	0	439.0	3.2'
DRILLING FLUID <u>Air</u>			
PIEZOMETER DEVELOPMENT			
DATE: _____			
METHOD: _____			
WATER LEVEL READINGS			
FREE WATER AT <u>NE</u> FT	0	439.0	
DATE DEPTH ELEVATION			
11-7-90 *	5.0	434.0	5.0'
11-16-90 *			0.9'
12-18-90 *	5.9	433.1	
1-9-91 *			5.1'
NE - Free water not encountered while drilling the bore-hole	11.0	428.0	0.0'
* - Dry piezometer	11.0	428.0	0.0'

REMARKS:

MrBride-Ratcliff and Associates, Inc.

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
CLIENT: Waste Management of North America, Inc.
 Irving, Texas
LOCATION: Near CB-25

WELL NO: P-13
PROJECT NO: 90-0613

PIEZOMETER COMPLETION
 DATE: 11-14-90
 DRY AUGURED 0 TO 26 FT
 Air Bored 26 TO 35 FT
 DRILLING FLUID Air

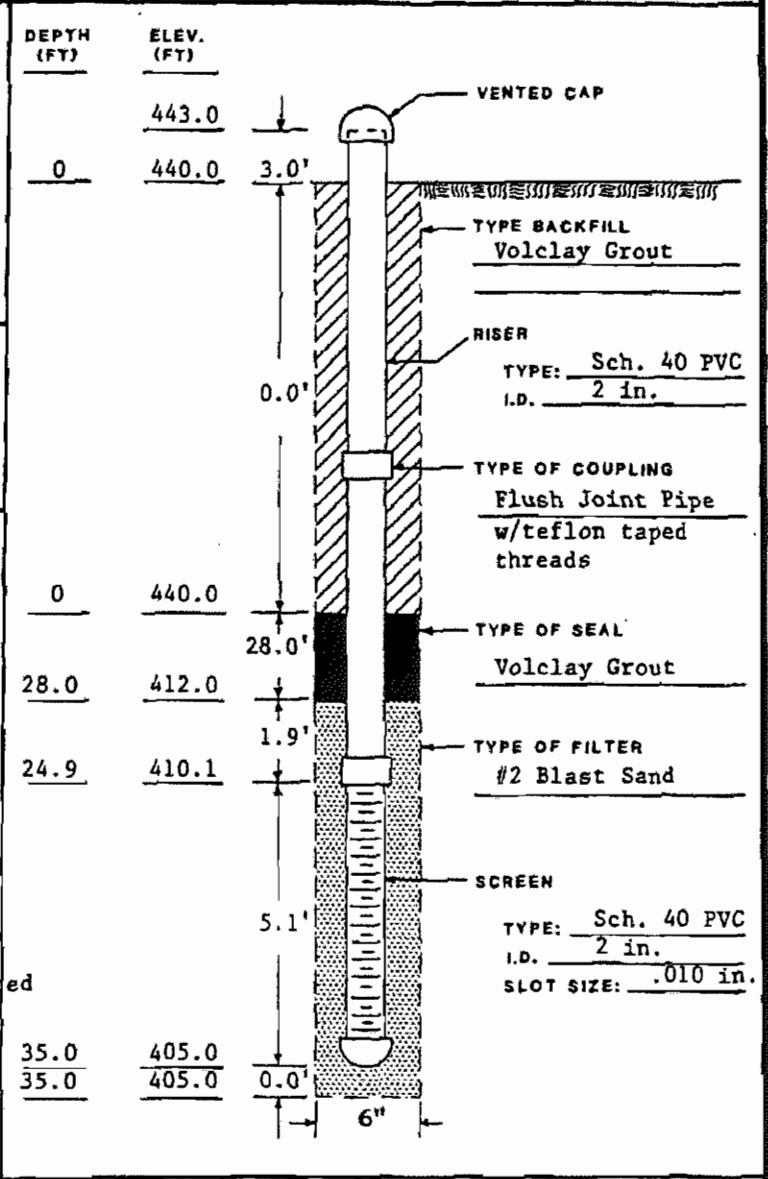
PIEZOMETER DEVELOPMENT
 DATE: _____
 METHOD: _____

WATER LEVEL READINGS

FREE WATER AT 18 FT

DATE	DEPTH	ELEVATION
11-14-90	*	
11-16-90	*	
12-18-90	*	
1-9-91	*	406.0

NE - Free water not encountered while drilling the borehole
 * - Dry piezometer

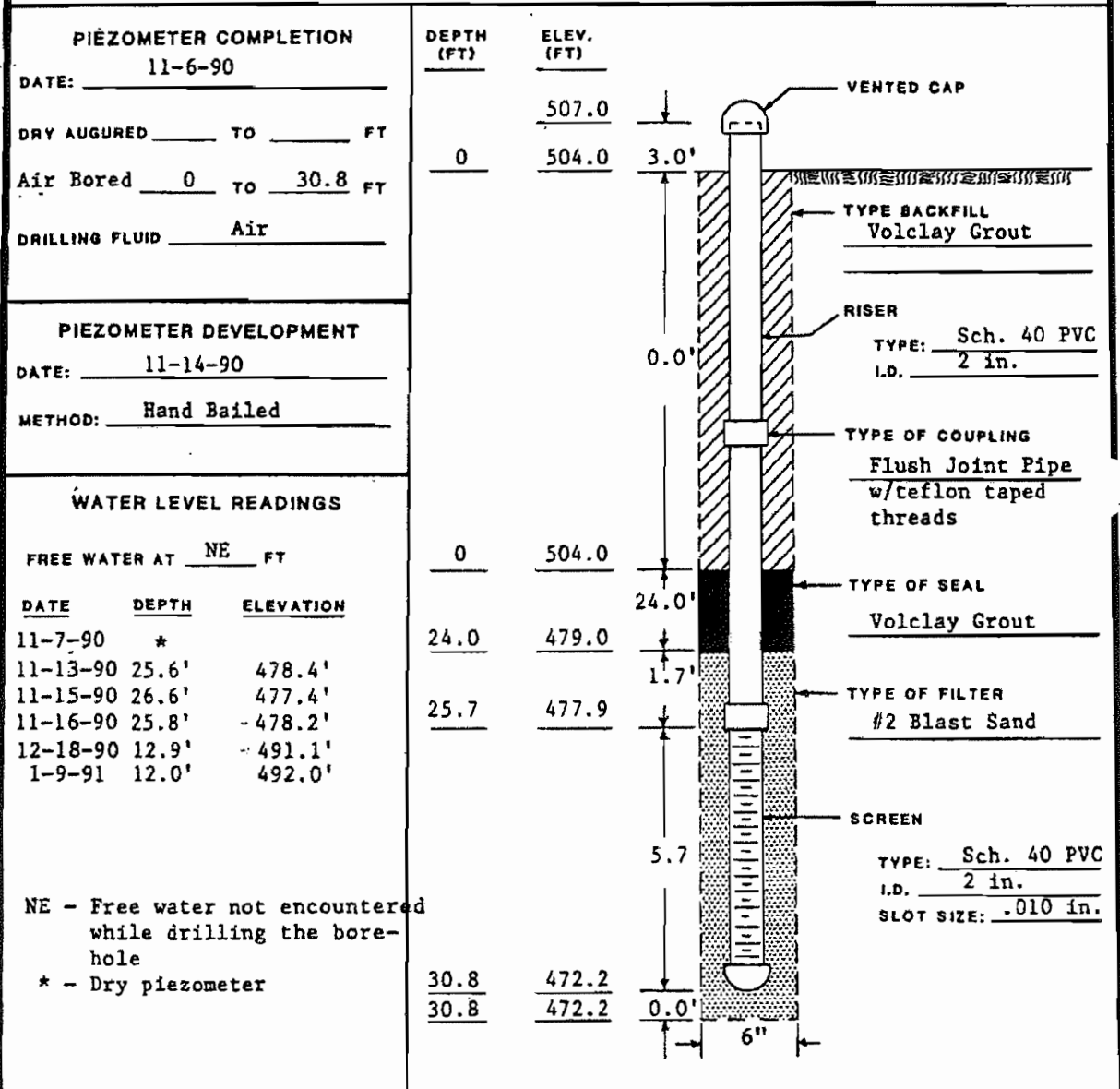


REMARKS: 6 in. Sch. 40 PVC surface casing was installed from elevation 440.0 to elevation 414.0 and grouted in place with a cement-bentonite grout.

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
CLIENT: Waste Management of North America, Inc.
 Irving, Texas
LOCATION: Near CB-21

WELL NO: P-14
PROJECT NO: 90-0613



REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
CLIENT: Waste Management of North America, Inc.
 Irving, Texas
LOCATION: Near CB-21

WELL NO: P-15
PROJECT NO: 90-0613

	DEPTH (FT)	ELEV. (FT)	
PIEZOMETER COMPLETION			
DATE: <u>11-6-90</u>			
DRY AUGURED _____ TO _____ FT		<u>507.0</u>	
Air Bored <u>0</u> TO <u>21.4</u> FT	<u>0</u>	<u>504.0</u>	
DRILLING FLUID <u>Air</u>			
PIEZOMETER DEVELOPMENT			
DATE: _____			
METHOD: _____			
WATER LEVEL READINGS			
FREE WATER AT <u>NE</u> FT	<u>0</u>	<u>504.0</u>	
DATE DEPTH ELEVATION			
11-7-90 *	<u>15.0</u>	<u>489.0</u>	
11-13-90 *			
11-15-90 *			
11-16-90 *	<u>16.3</u>	<u>487.7</u>	
12-18-90 *			
1-9-91 20.5 483.5			
NE - Free water not encountered while drilling the borehole	<u>21.4</u>	<u>482.6</u>	
* - Dry piezometer	<u>21.4</u>	<u>482.6</u>	

VENTED CAP

3.0'

TYPE BACKFILL
Volclay Grout

RISER
TYPE: Sch. 40 PVC
I.D. 2 in.

0.0'

TYPE OF COUPLING
Flush Joint Pipe
w/teflon taped thread

15.0'

TYPE OF SEAL
Volclay Grout

1.3'

TYPE OF FILTER
#2 Blast Sand

5.1'

SCREEN
TYPE: Sch. 40 PVC
I.D. 2 in.
SLOT SIZE: .010 in.

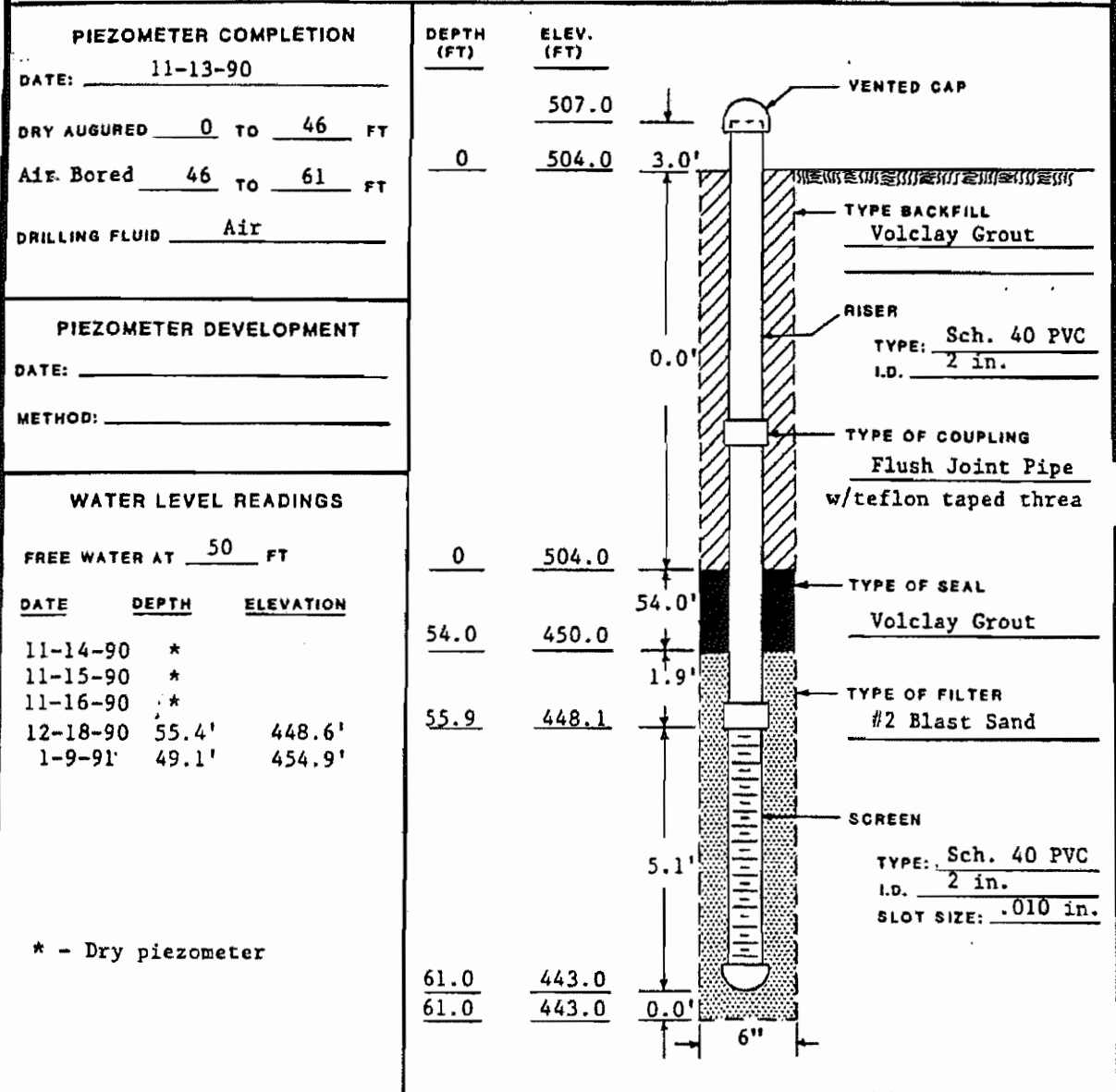
6"

REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
CLIENT: Waste Management of North America, Inc.
 Irving, Texas
LOCATION: Near CB-21

WELL NO: P-16
PROJECT NO: 90-0613



REMARKS: 6 in. Sch. 40 PVC surface casing was installed from elevation 504 to elevation 458 and grouted in place with a cement-bentonite grout.

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
CLIENT: Waste Management of North America, Inc.
 Irving, Texas
LOCATION: Between CB-3 and CB-4

WELL NO: P-17
PROJECT NO: 90-0613

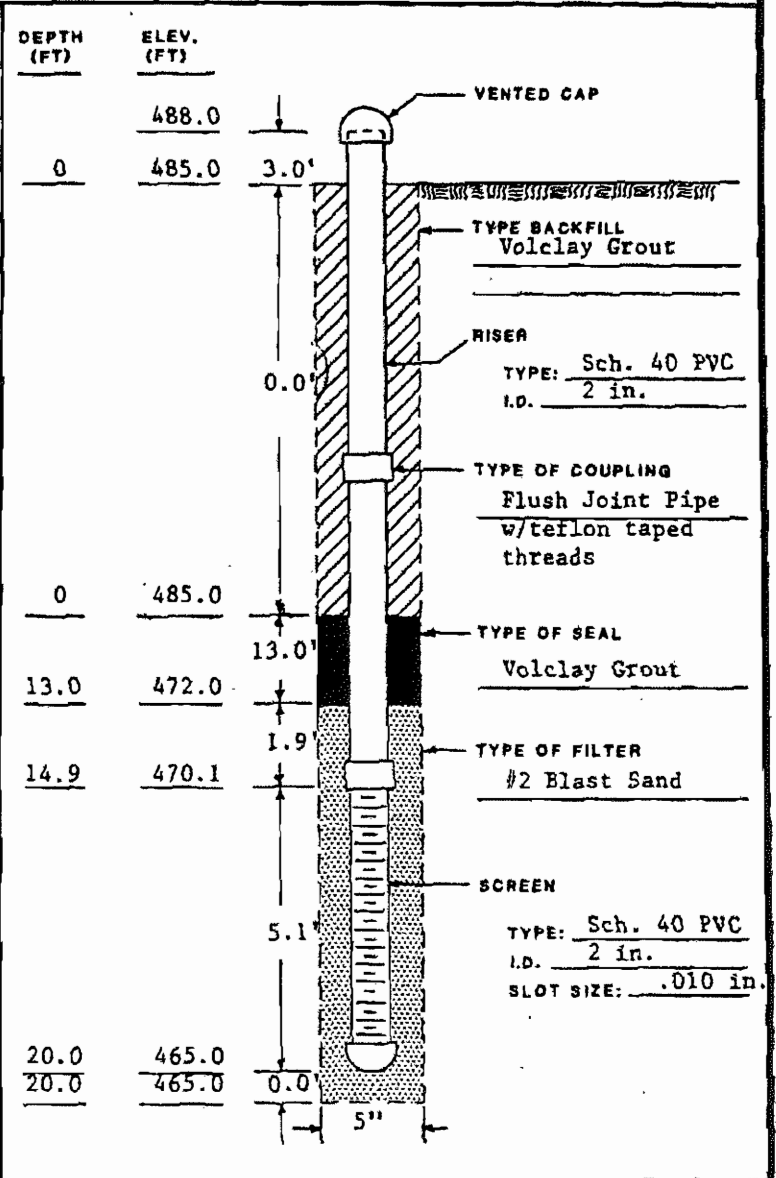
PIEZOMETER COMPLETION
DATE: 11-13-90
 DRY AUGURED 0 TO 20 FT
 WASH BORED _____ TO _____ FT
 DRILLING FLUID _____

PIEZOMETER DEVELOPMENT
DATE: 11-14-90
METHOD: Hand Bailed

WATER LEVEL READINGS

FREE WATER AT 18 FT

DATE	DEPTH	ELEVATION
11-16-90	18.5'	466.5'
12-18-90	7.5'	477.5'
1-9-91	7.7'	477.3'



REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
CLIENT: Waste Management of North America, Inc.
 Irving, Texas
LOCATION: Between CB-3 and CB-4

WELL NO: P-18
PROJECT NO: 90-0613

PIEZOMETER COMPLETION
 DATE: 11-13-90
 DRY AUGURED _____ TO _____ FT
 Air Bored 0 TO 35 FT
 DRILLING FLUID Air

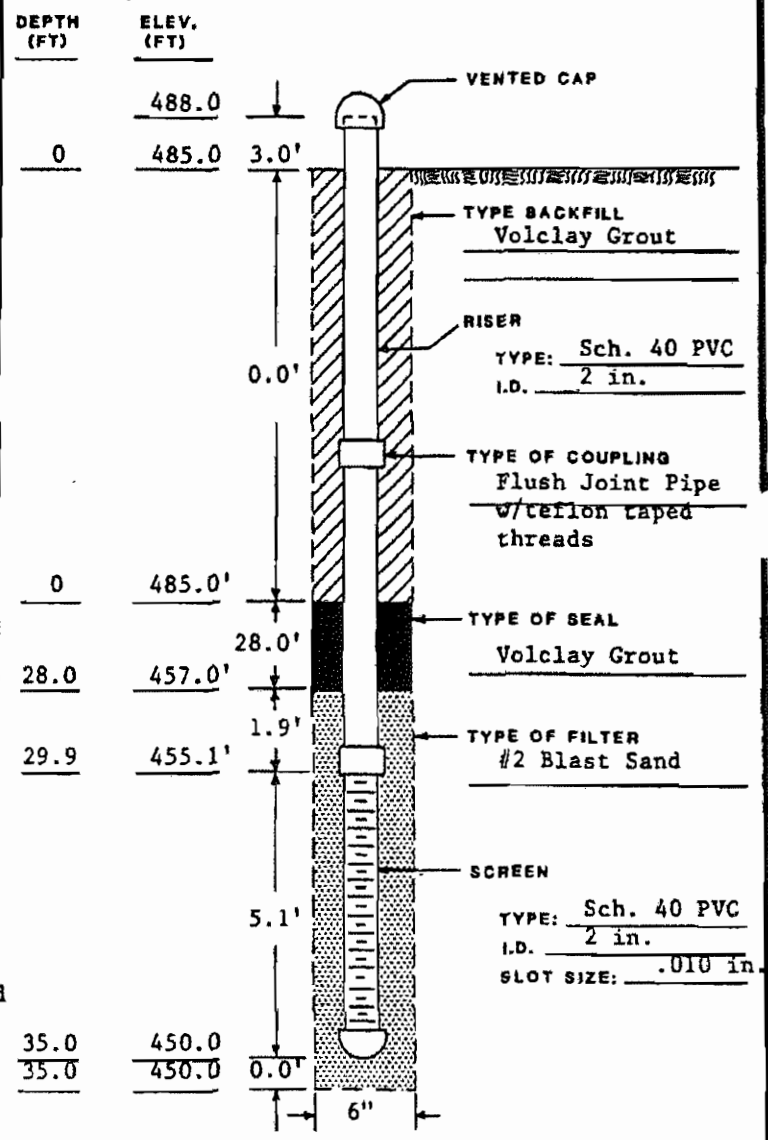
PIEZOMETER DEVELOPMENT
 DATE: _____
 METHOD: _____

WATER LEVEL READINGS

FREE WATER AT NE FT

DATE	DEPTH	ELEVATION
11-16-90	*	
12-18-90	19.8'	465.2'
1-9-91	14.3'	470.7'

NE - Free water not encountered while drilling the bore-hole
 * - Dry piezometer



REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
CLIENT: Waste Management of North America, Inc.
 Irving, Texas
LOCATION: Near CB-19

WELL NO: P-20
PROJECT NO: 90-0613

PIEZOMETER COMPLETION
DATE: 11-14-90
DRY AUGURED _____ **TO** _____ **FT**
Air Bored 0 **TO** 22 **FT**
DRILLING FLUID _____

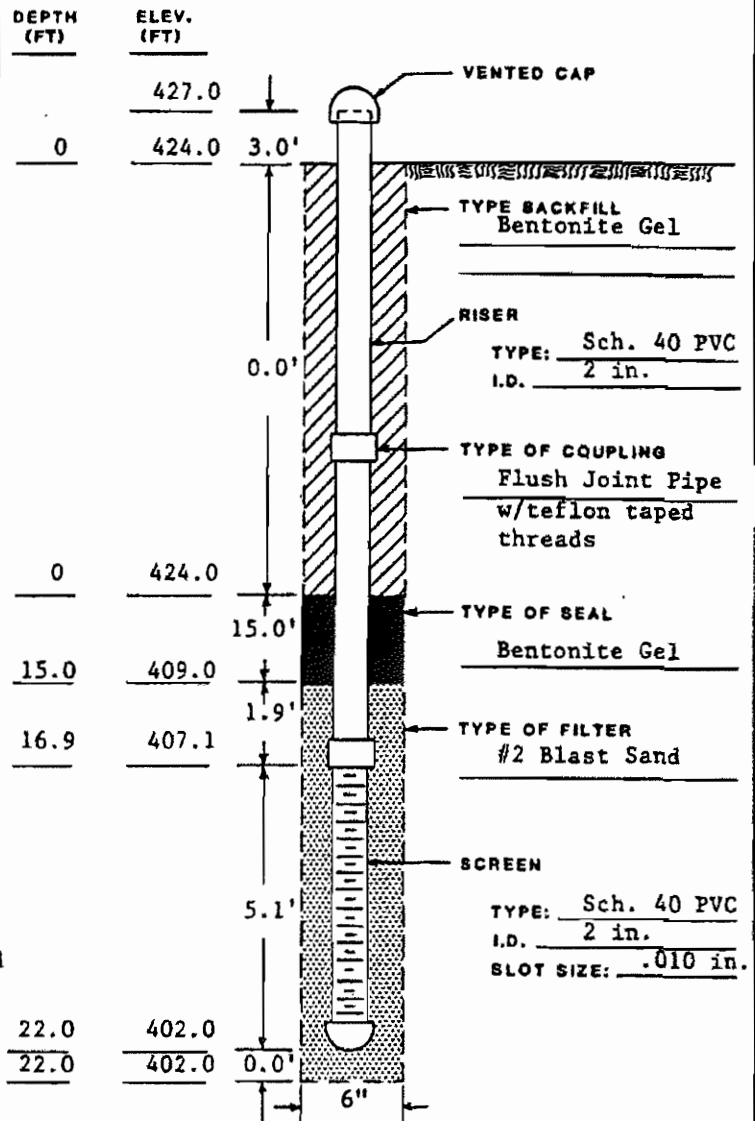
PIEZOMETER DEVELOPMENT
DATE: _____
METHOD: _____

WATER LEVEL READINGS

FREE WATER AT NE FT

DATE	DEPTH	ELEVATION
11-14-90	*	
11-15-90	*	
11-16-90	*	
12-18-90	20.8	403.2
1-9-91	19.1	404.9

NE - Free water not encountered while drilling the bore-hole
 * - Dry piezometer

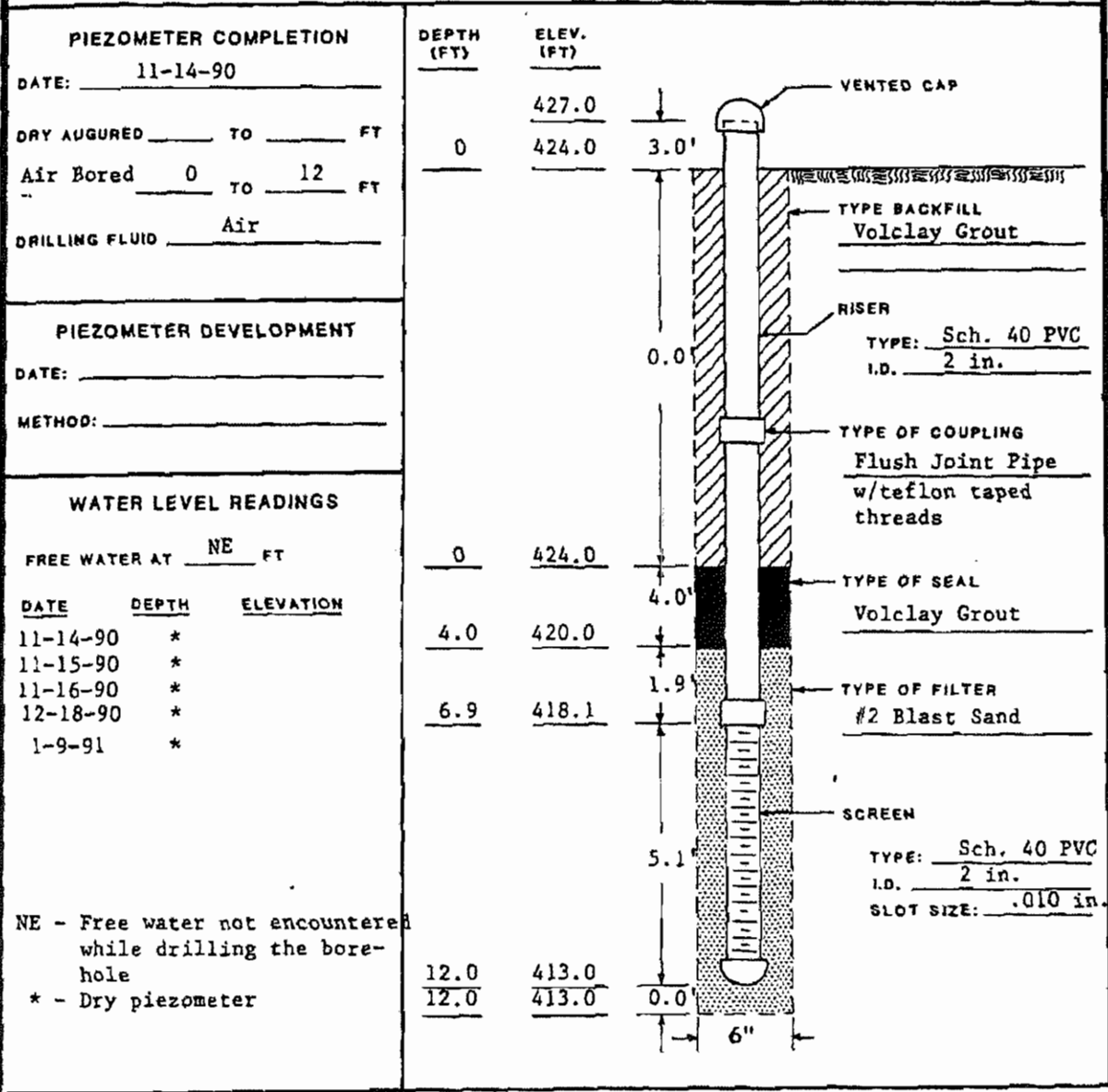


REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
CLIENT: Waste Management of North America, Inc.
 Irving, Texas
LOCATION: Near CB-19

WELL NO: P-21
PROJECT NO: 90-0613



REMARKS:

PIEZOMETER INSTALLATION REPORT

PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
CLIENT: Waste Management of North America, Inc.
 Irving, Texas
LOCATION: Near CB-19

WELL NO: P-22
PROJECT NO: 90-0613

PIEZOMETER COMPLETION
DATE: 11-16-90
DRY AUGURED 0 TO 28 FT
Air Bored 28 TO 43 FT
DRILLING FLUID Air

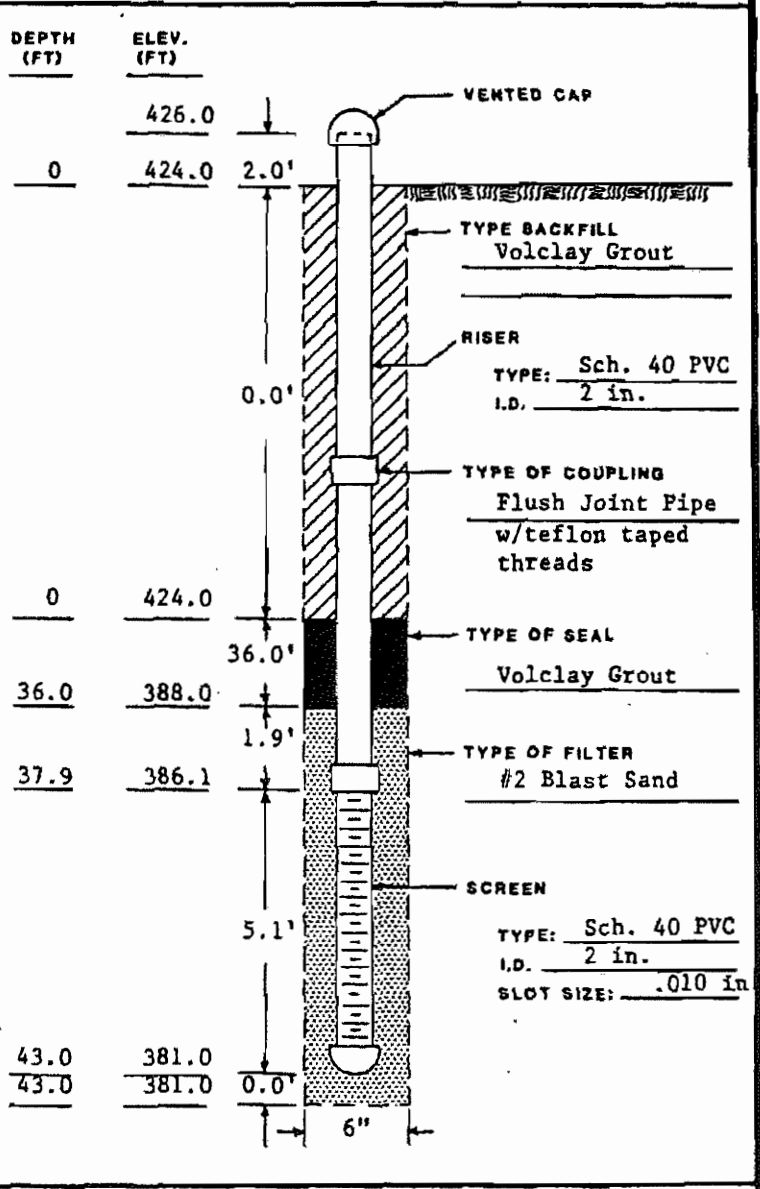
PIEZOMETER DEVELOPMENT
DATE: _____
METHOD: _____

WATER LEVEL READINGS

FREE WATER AT NE FT

DATE	DEPTH	ELEVATION
11-16-90	*	
12-18-90	34.9	389.1
1-9-91	28.0	396.0

NE - Free water not encountered while drilling the borehole
 * - Dry piezometer

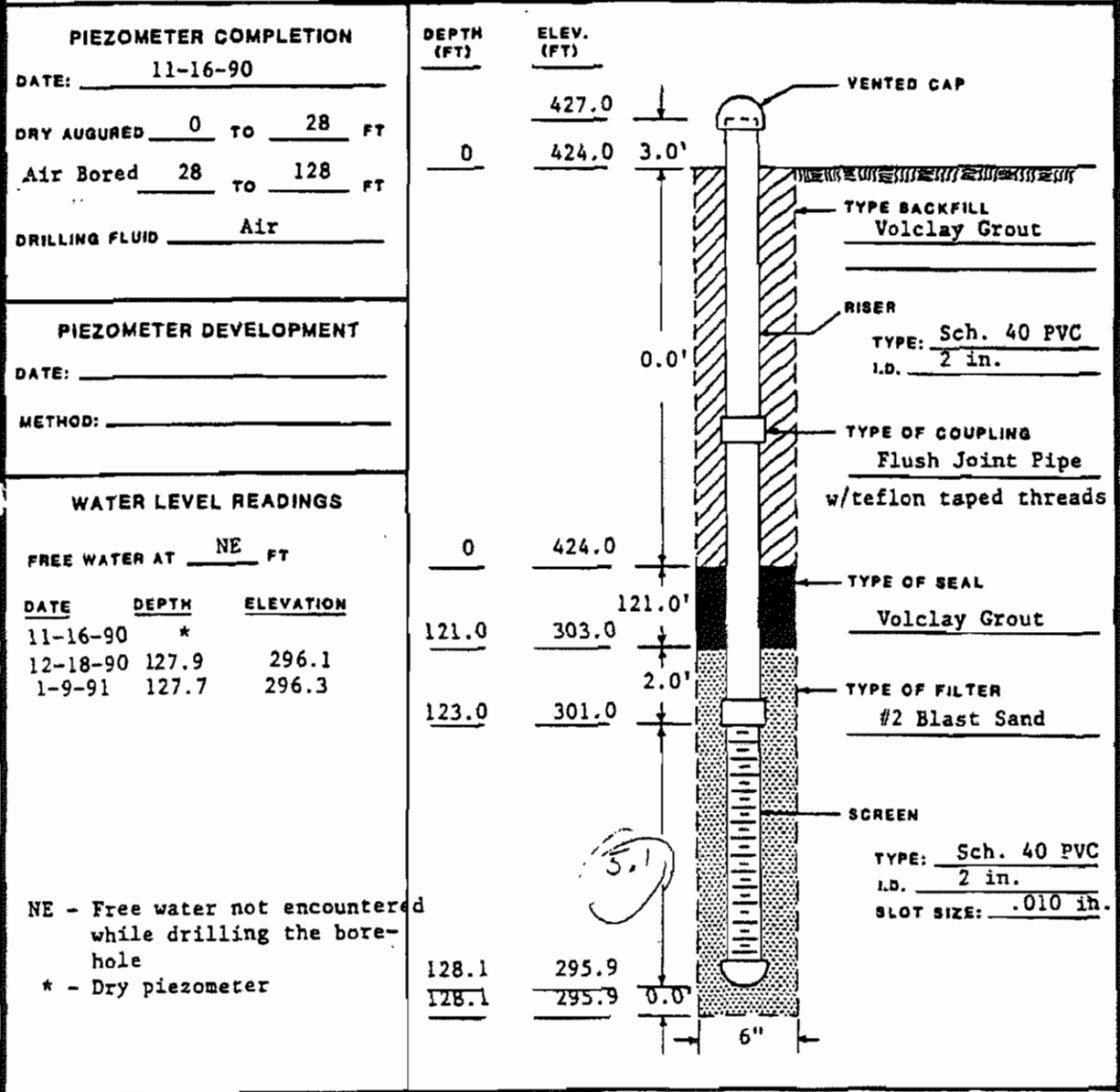


REMARKS: 6 in. Sch. 40 PVC surface casing was installed from elevation 424 to elevation 396 and grouted in place with a cement-bentonite grout.

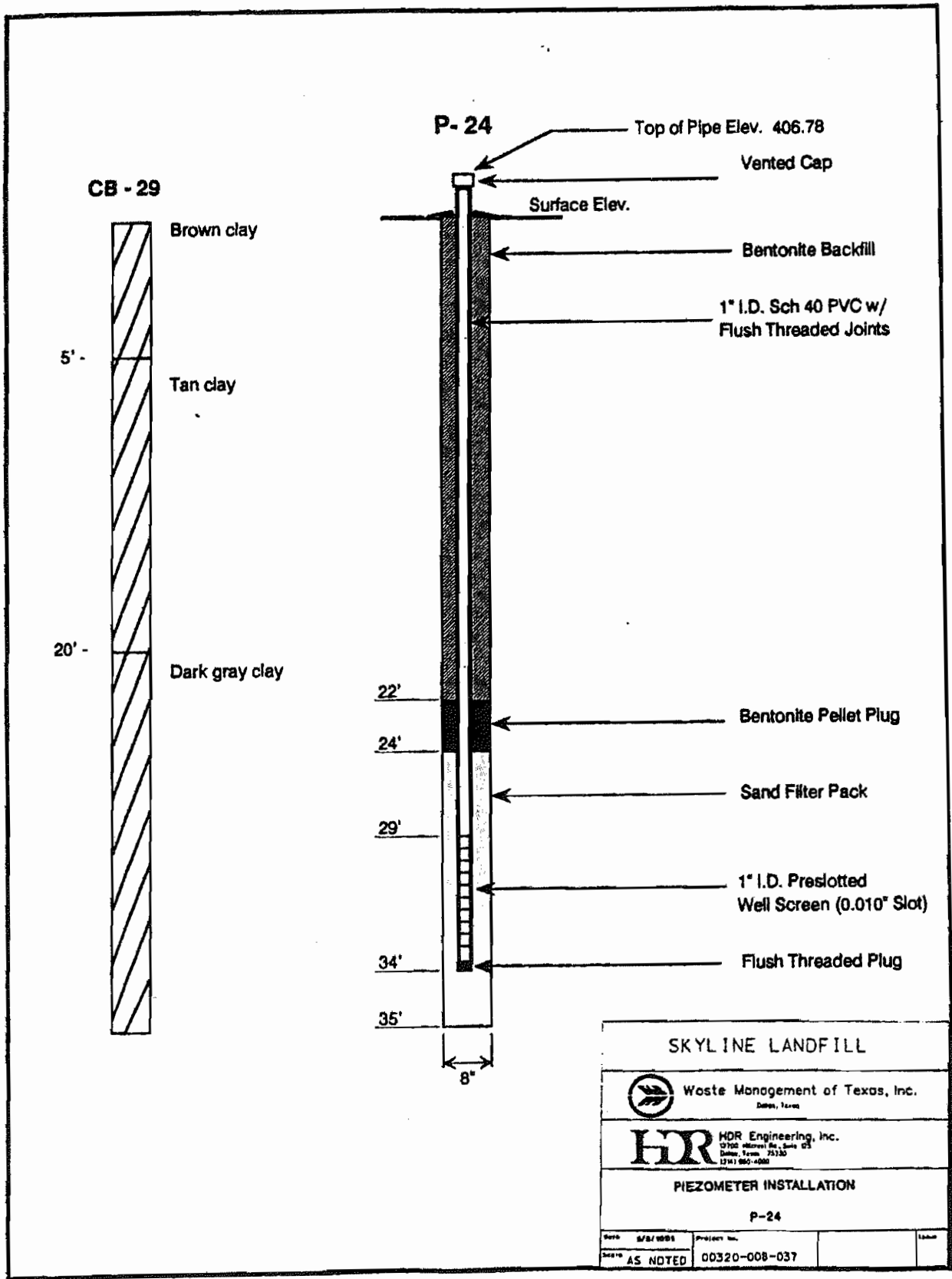
PIEZOMETER INSTALLATION REPORT



PROJECT: Skyline Landfill
 Dallas and Ellis Counties, Texas
 CLIENT: Waste Management of North America, Inc.
 Irving, Texas
 LOCATION: Near CB-19

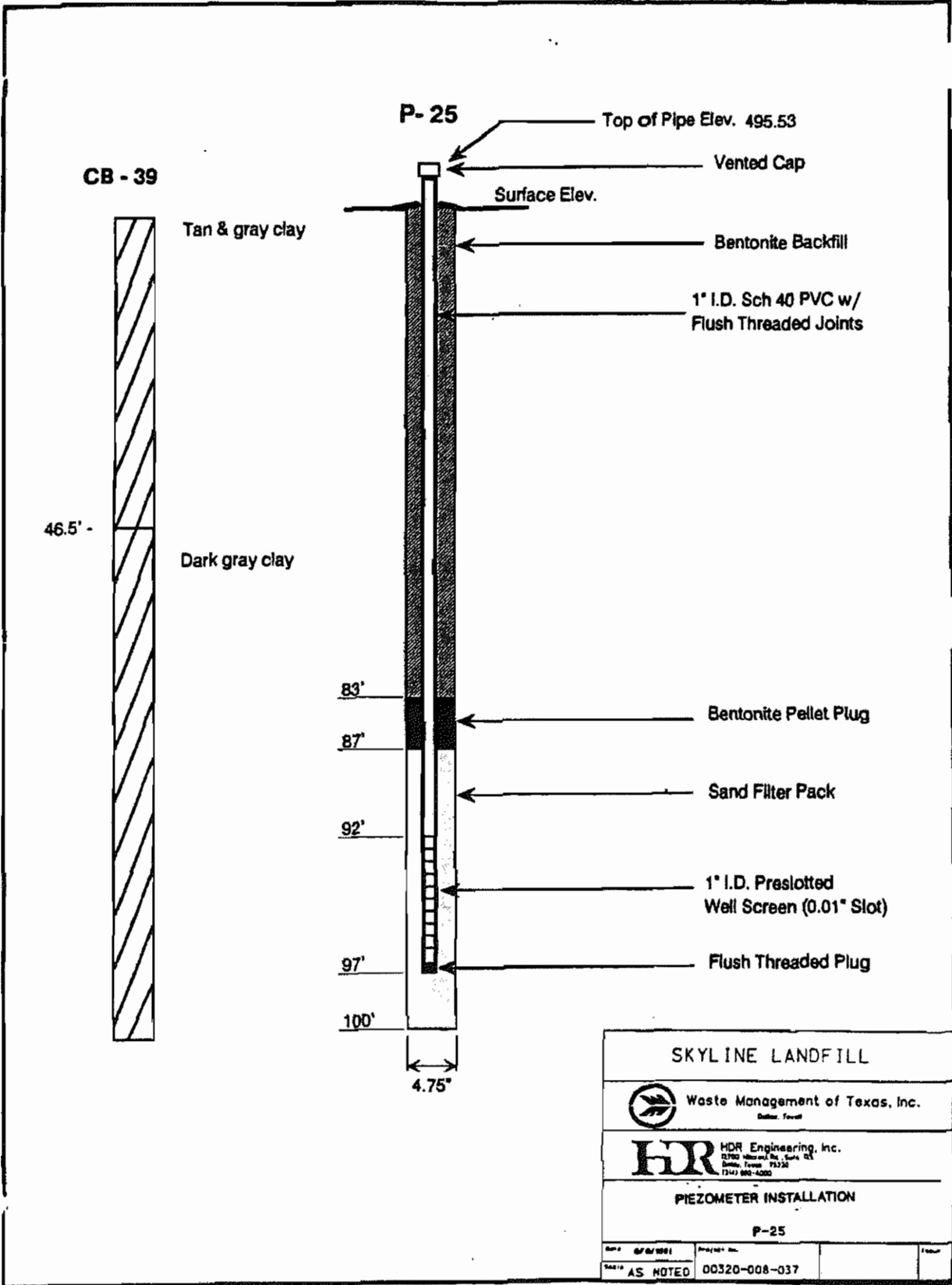
WELL NO: P-23
 PROJECT NO: 90-0613

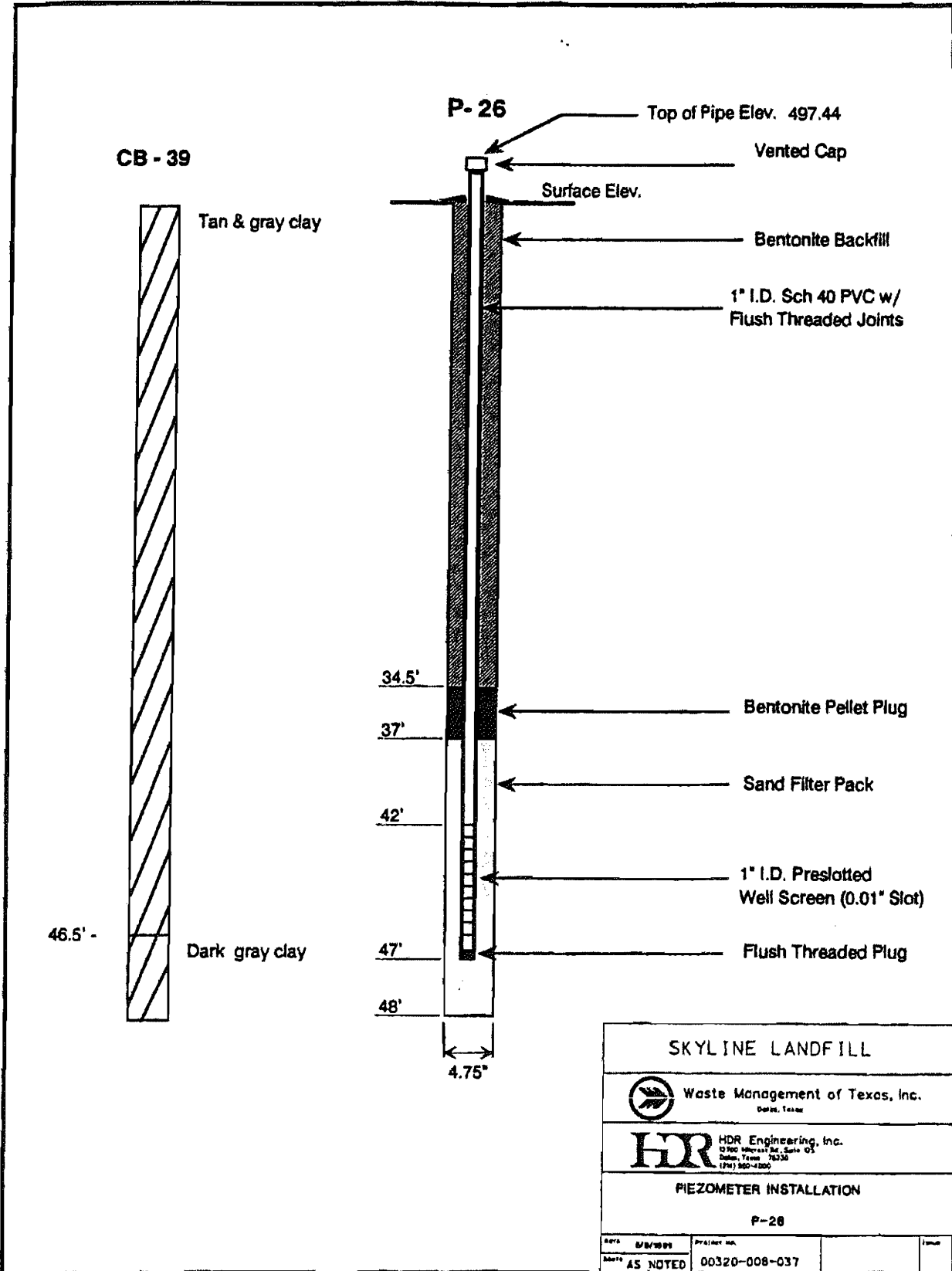


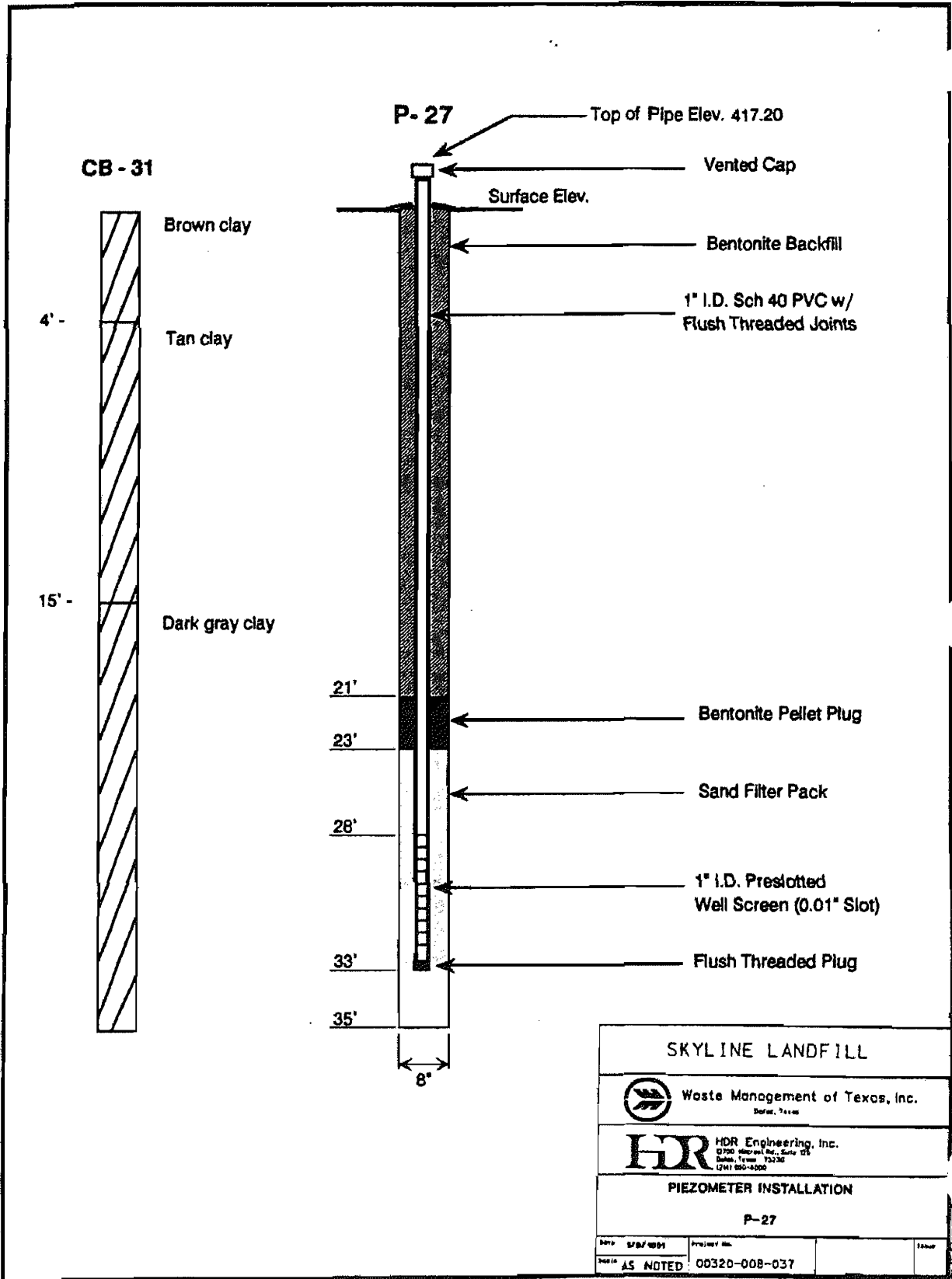
REMARKS: 6 in. Sch. 40 PVC surface casing was installed from elevation 424 to elevation 396 and grouted in place with a cement-bentonite grout.

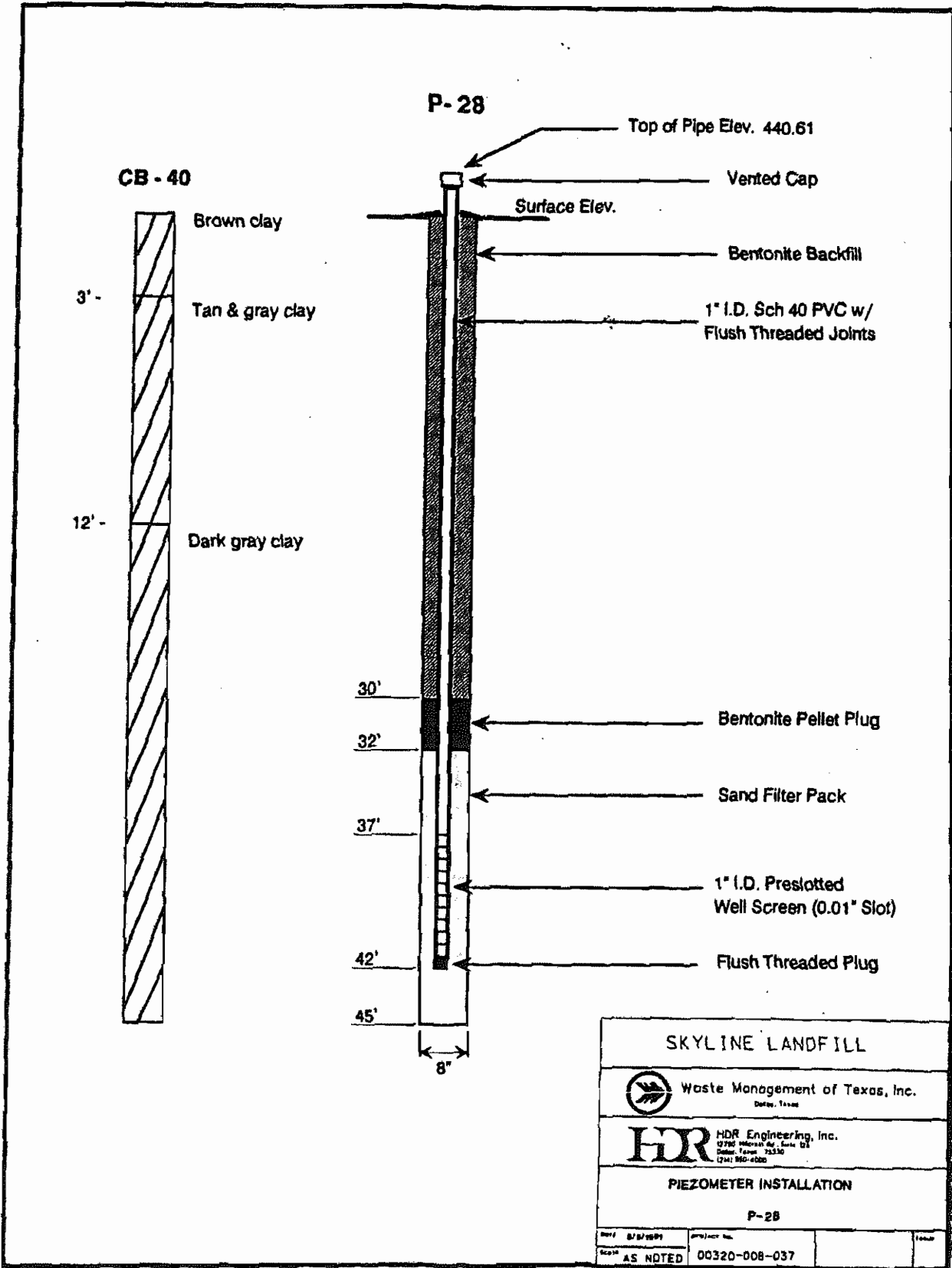


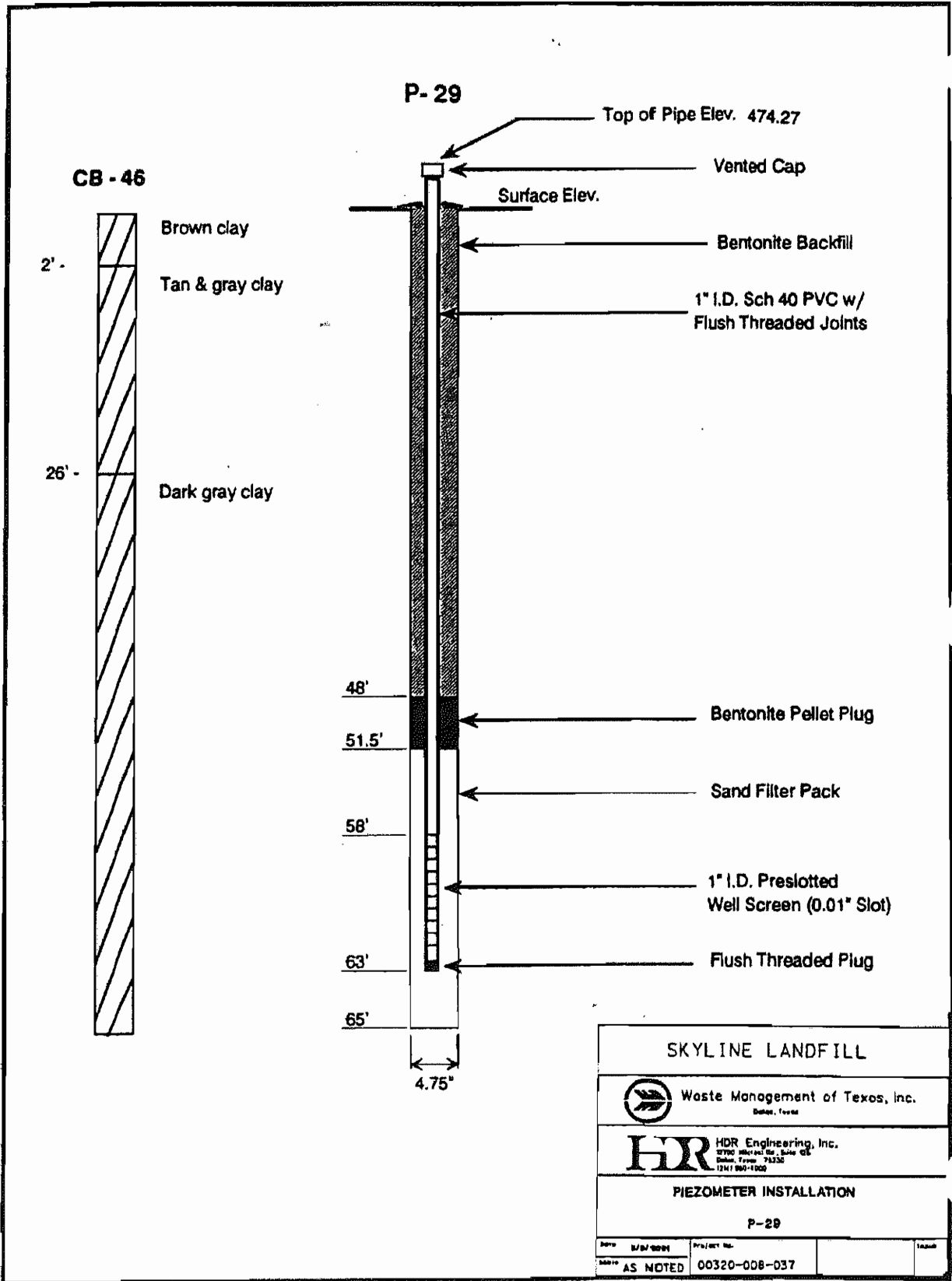
SKYLINE LANDFILL			
 Waste Management of Texas, Inc. <small>Dallas, Texas</small>			
 HDR Engineering, Inc. <small>12700 Hillwood Dr., Suite 025 Dallas, Texas 75230 2141 860-4000</small>			
PIEZOMETER INSTALLATION			
P-24			
Date	5/8/1998	Project No.	
Scale	AS NOTED	00320-008-037	

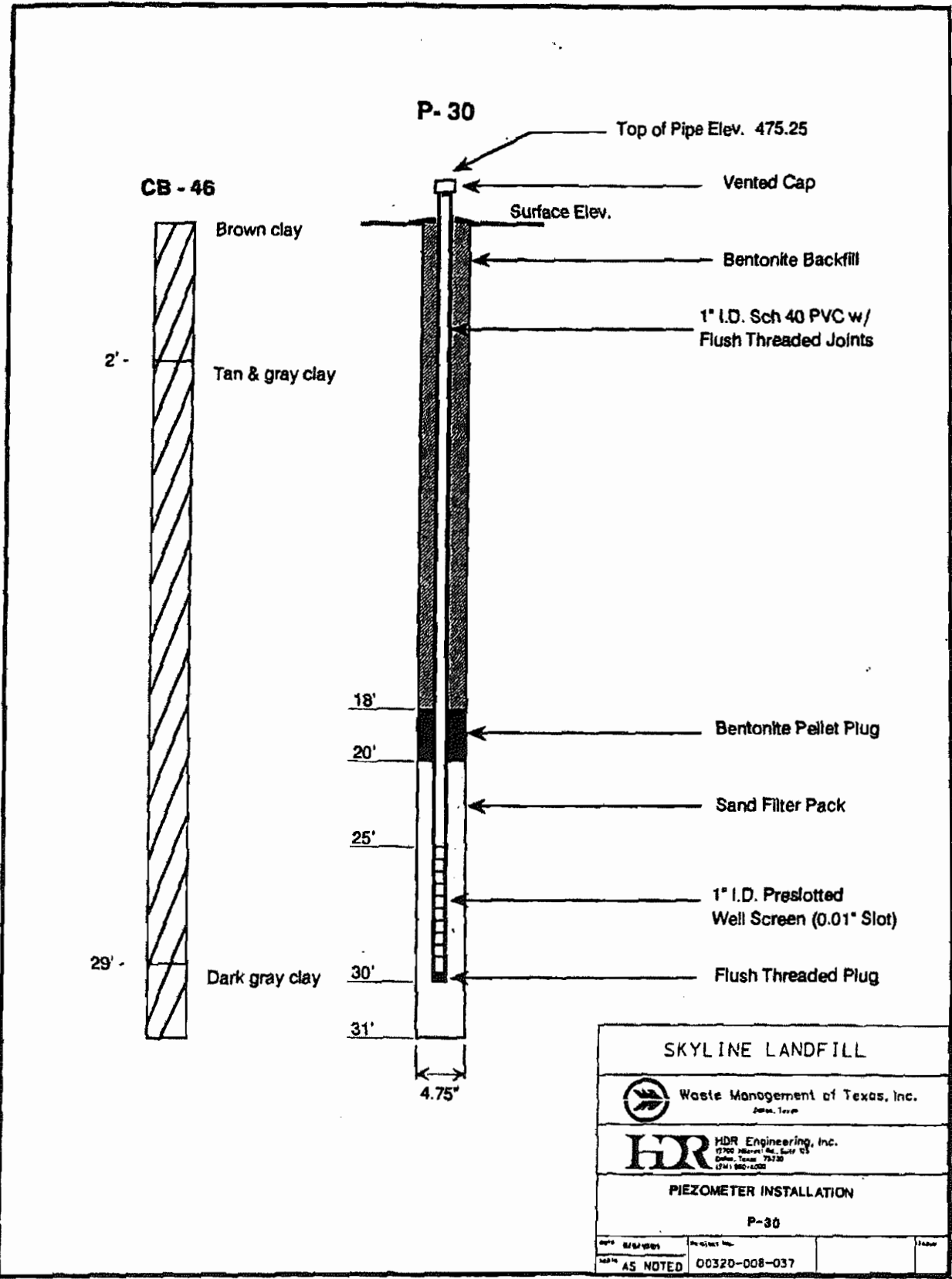






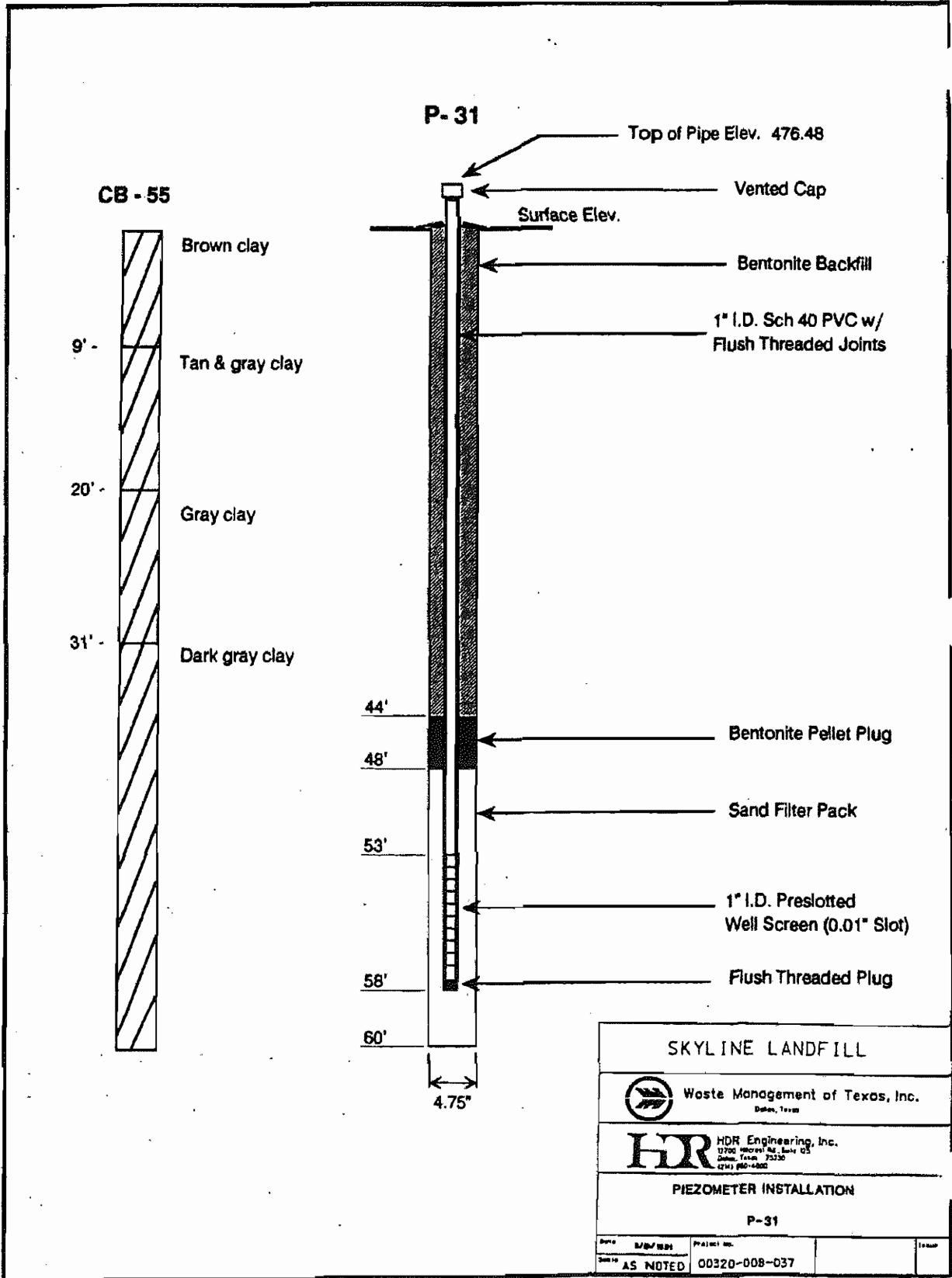


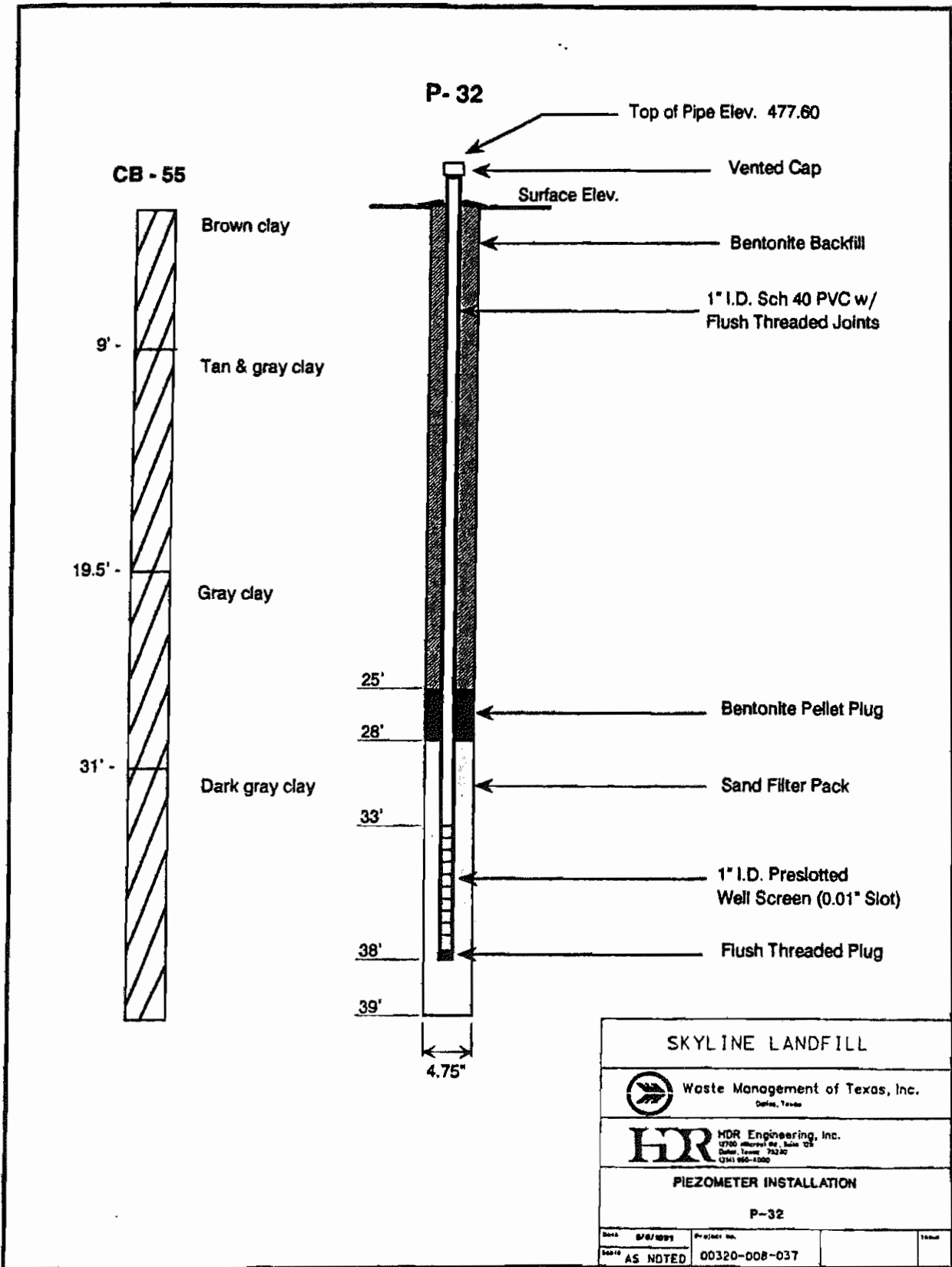


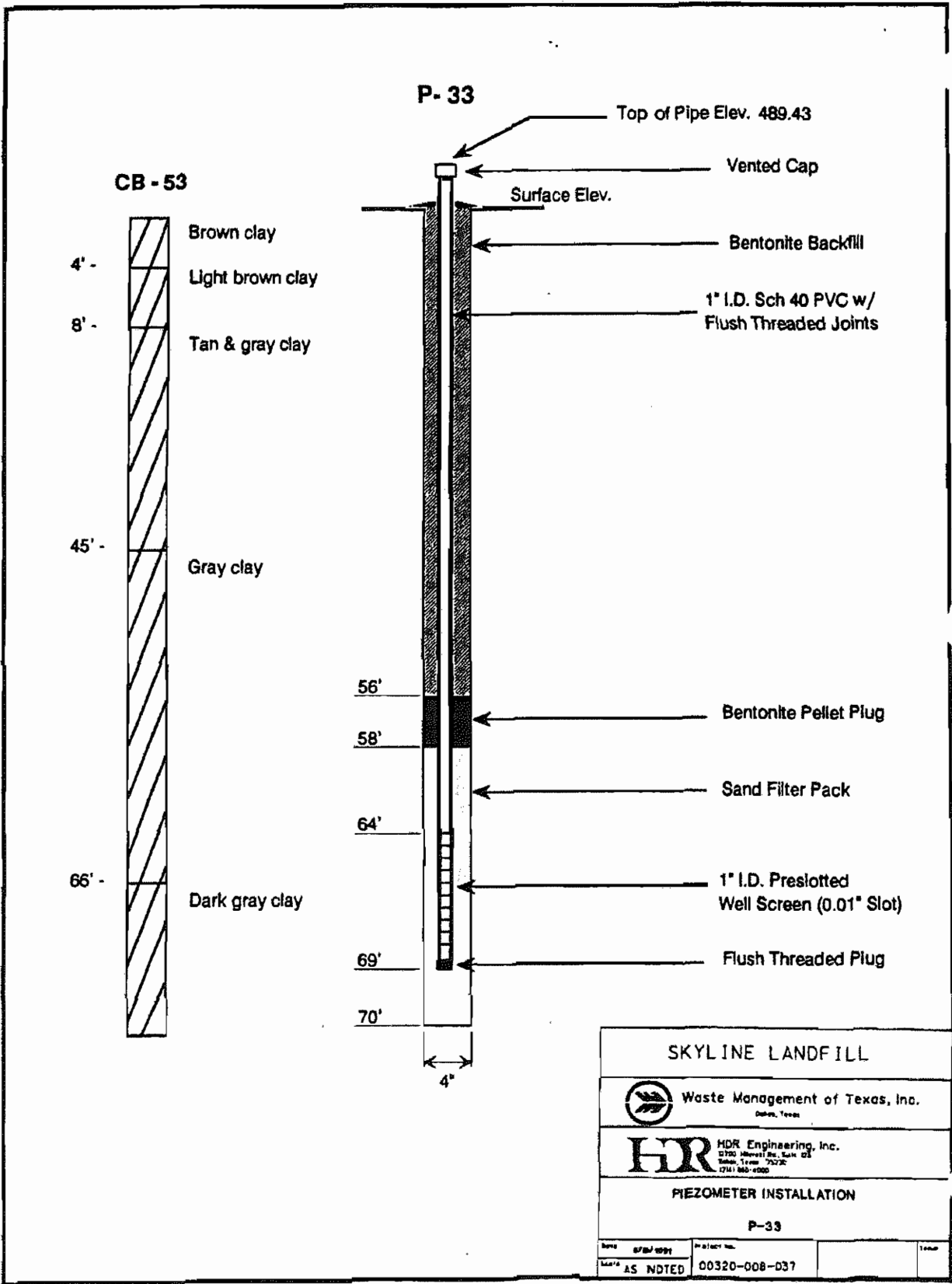




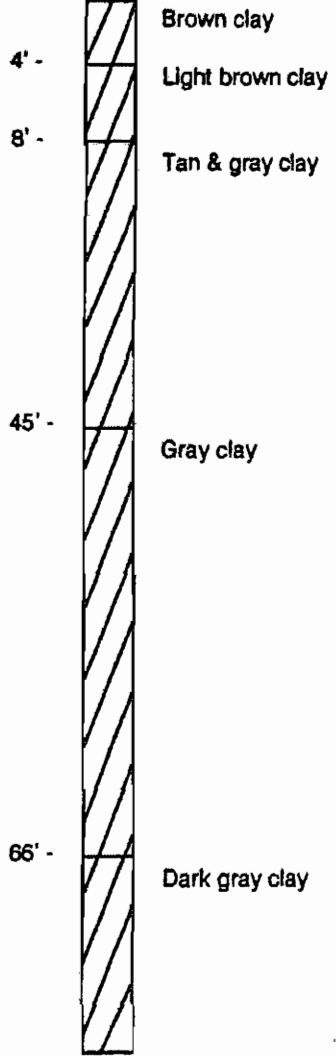
SKYLINE LANDFILL	
 Waste Management of Texas, Inc. <small>Dallas, Texas</small>	
 HDR HDR Engineering, Inc. <small>17700 Merit Rd., Suite 101 Dallas, Texas 75238 (214) 960-6000</small>	
PIEZOMETER INSTALLATION	
P-30	
DATE	PROJECT NO.
AS NOTED	00320-008-037



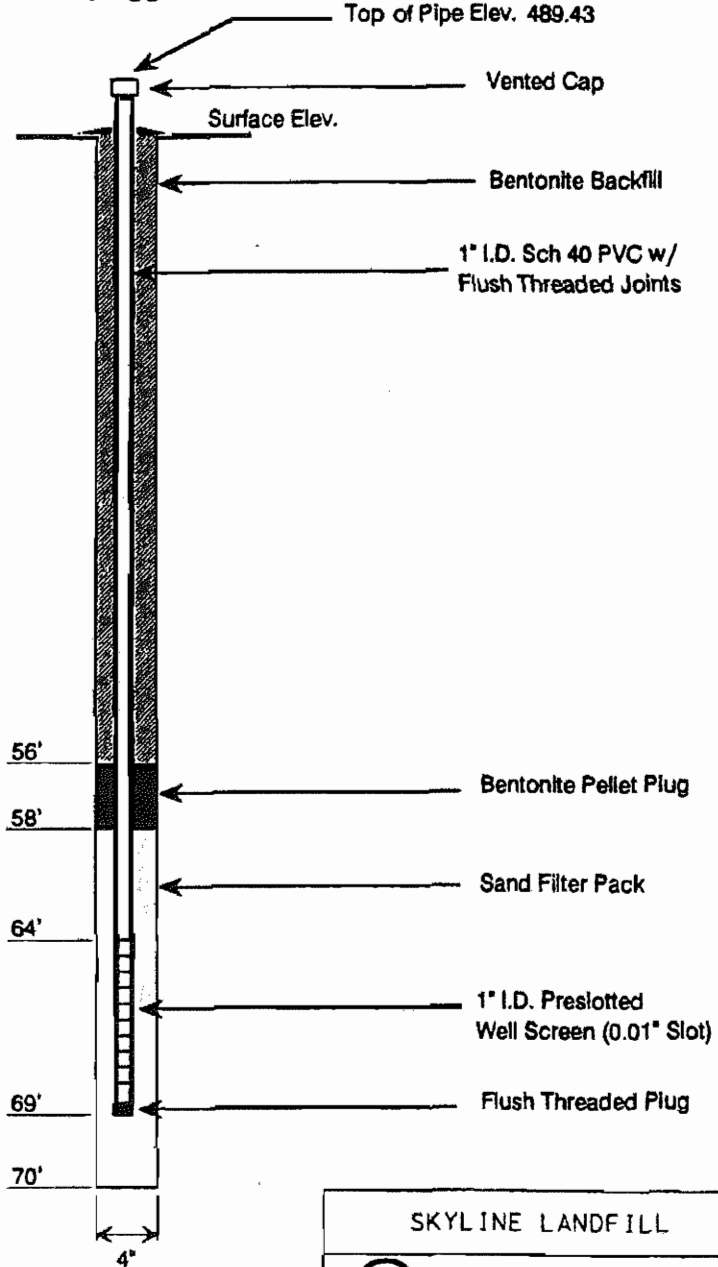






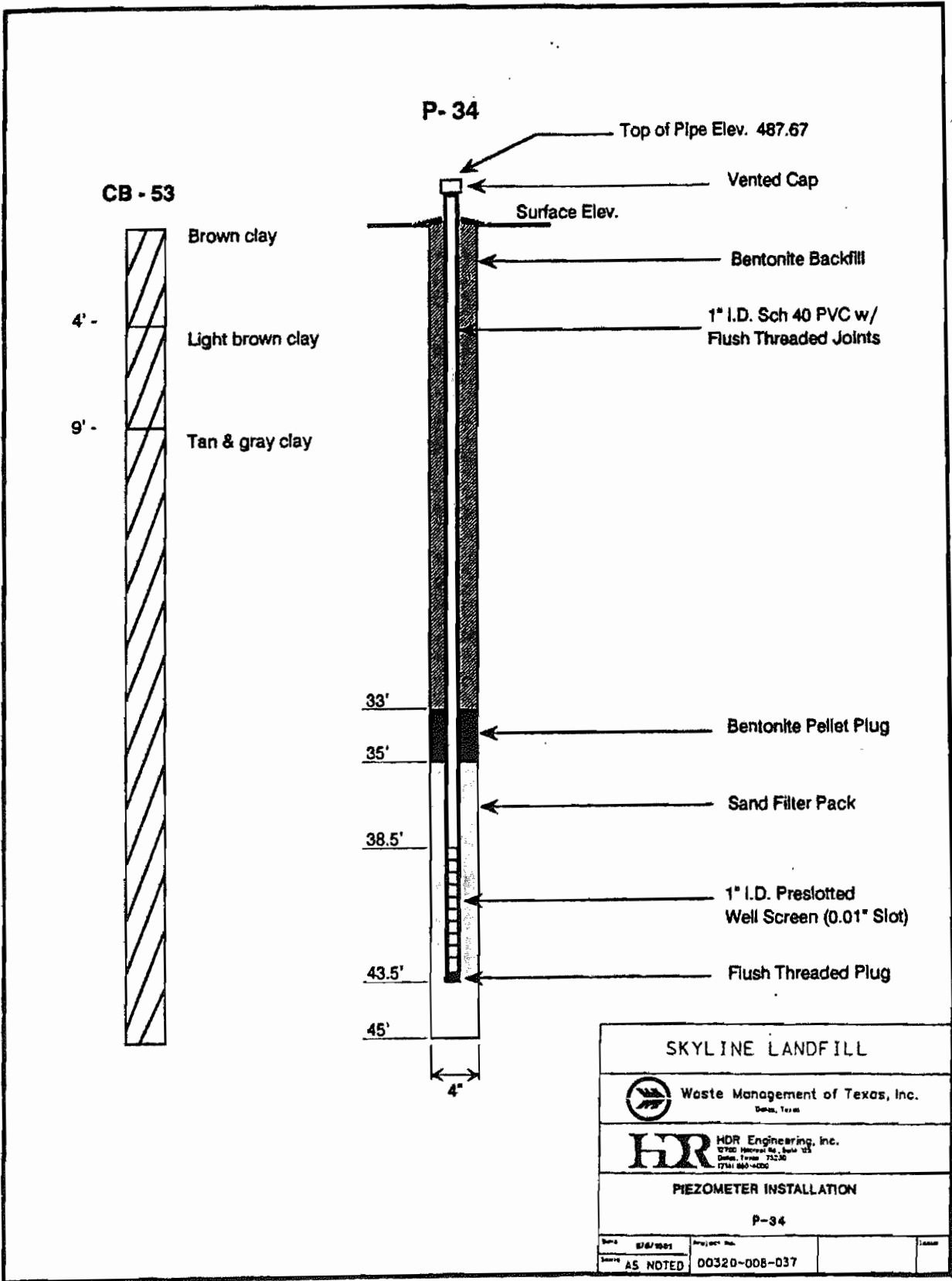
CB - 53



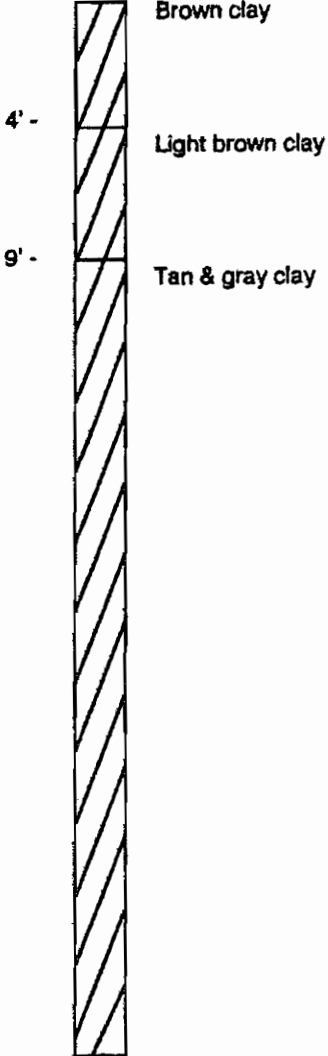
P- 33



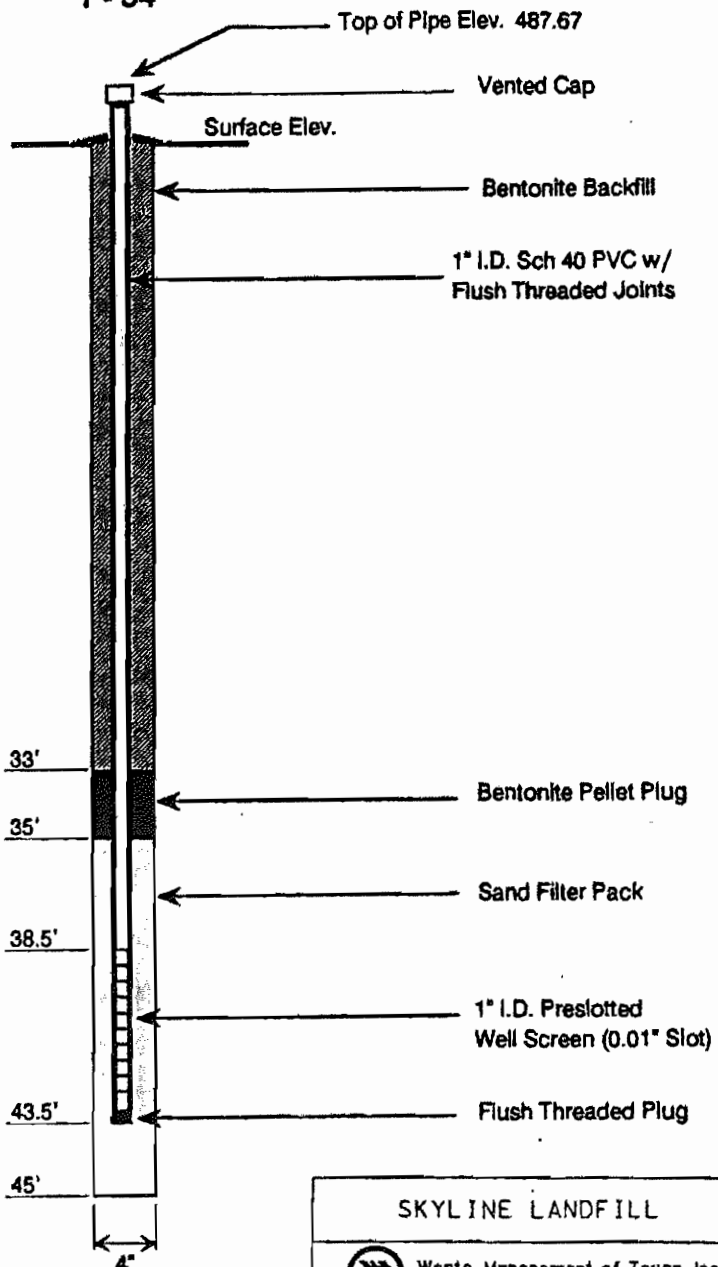
SKYLINE LANDFILL			
 Waste Management of Texas, Inc. <small>Dallas, Texas</small>			
 HDR HDR Engineering, Inc. <small>12750 Northwest Blvd., Suite 200 Dallas, Texas 75242 (214) 340-4000</small>			
PIEZOMETER INSTALLATION			
P-33			
DATE	BY	PROJECT NO.	ISSUED
AS NOTED		00320-008-037	





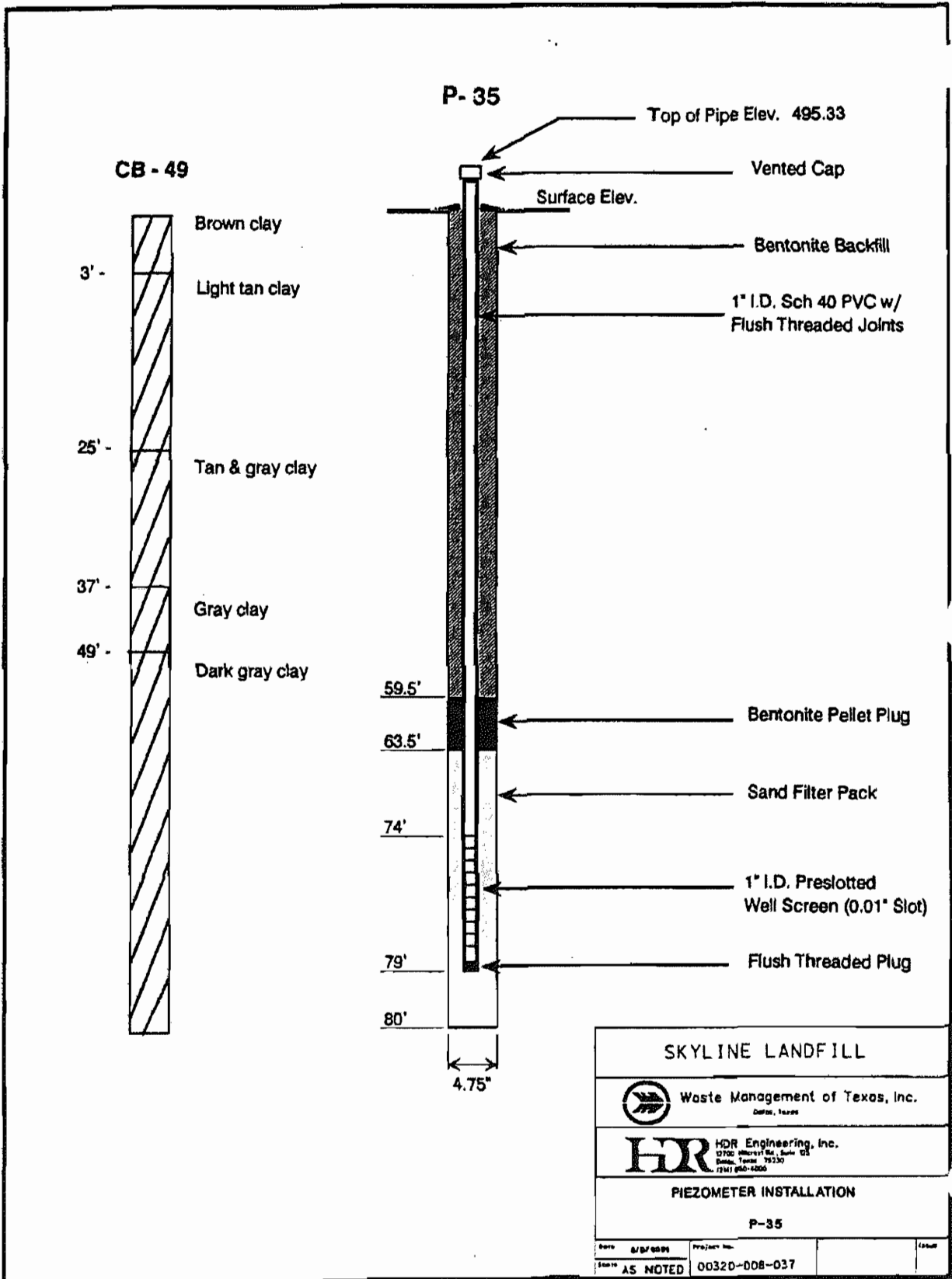
CB - 53




P- 34



SKYLINE LANDFILL	
 Waste Management of Texas, Inc. <small>Dallas, Texas</small>	
 HDR Engineering, Inc. <small>17700 Northwest Blvd., Suite 105 Dallas, Texas 75230 (714) 860-4000</small>	
PIEZOMETER INSTALLATION	
P-34	
<small>Date</small> 07/01/01	<small>Project No.</small>
<small>Drawn</small> AS NOTED	<small>00320-008-037</small>



SKYLINE LANDFILL			
 Waste Management of Texas, Inc. <small>Dallas, Texas</small>			
 HDR Engineering, Inc. <small>3700 Harvard St., Suite 205 Dallas, Texas 75230 (214) 650-6200</small>			
PIEZOMETER INSTALLATION			
P-35			
Date	8/27/00	Project No.	
Scale	AS NOTED	00320-008-037	

