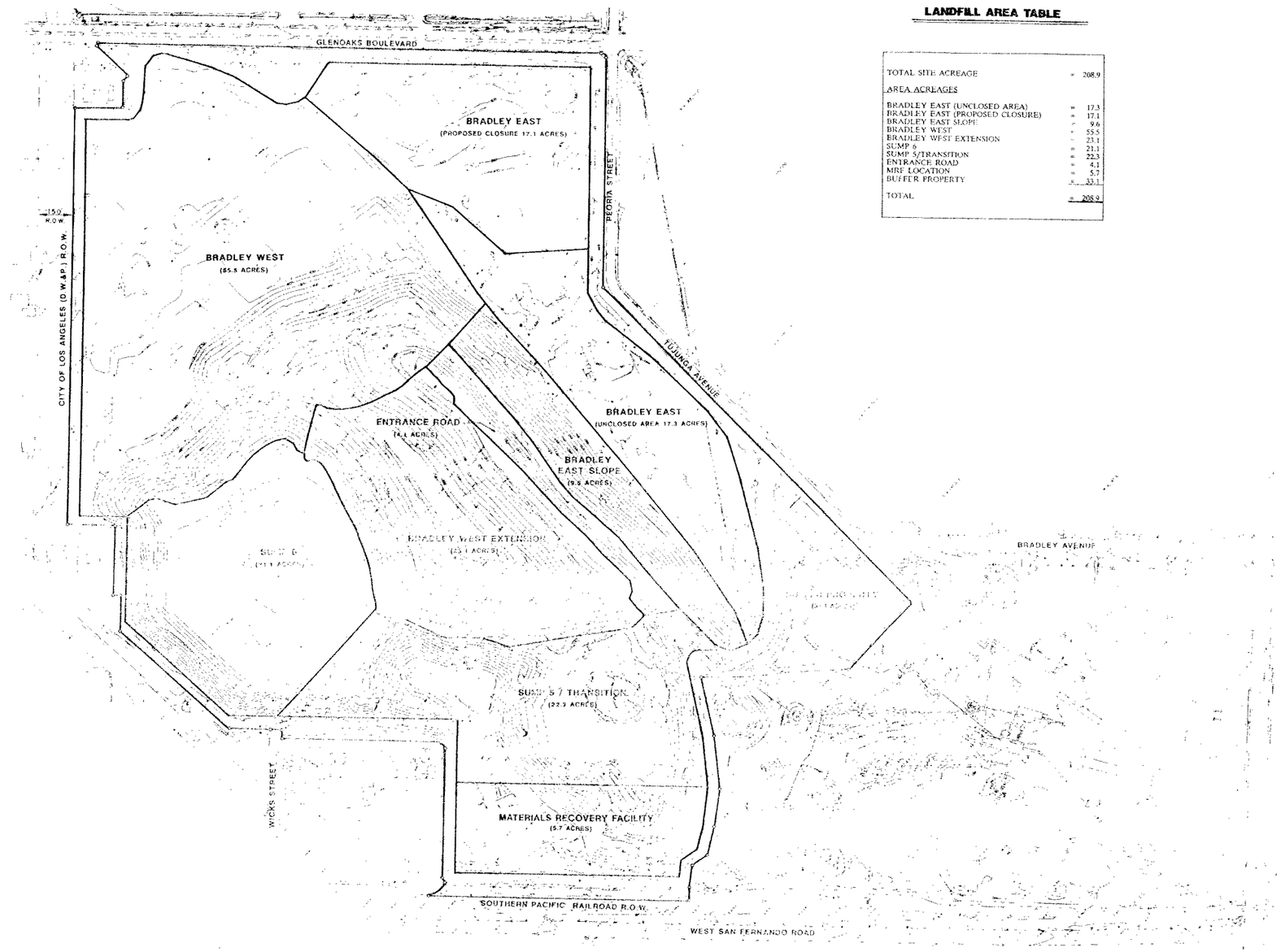
2166-0555 b

ATTACHMENT 6

Maps and Drilling Logs

CALMAT GRAVEL QUARRY
NEIGHBORING BUILDINGS
COMMERCIAL
GLENOAKS BOULEVARD
GAS PLANT
GAS FLARE
BRADLEY EAST
(70 acres)
BRADLEY WEST
(71 acres)
150' ROW
CITY OF LOS ANGELES (O'HARA) R.O.W.
RAW WOODWASTE
STORAGE PILES
WOOD CHIPPER
CONVEYOR SYSTEM
ELECTRICAL SYSTEM
WOOD CHIP
STORAGE PILES
AUTO SALVAGE YARD (FORMER LANDFILL)
EMPLOYEE PARKING LOT
TRUCK WASH PADS
MAINTENANCE PADS
TEMPORARY OPERATIONS
& MAINTENANCE OFFICES
NEIGHBORING
BUILDINGS
COMMERCIAL &
LIGHT INDUSTRIAL
SUMP 6
BRADLEY WEST EXTENTION
(68 acres)
BRADLEY EAST
EMPLOYEE PARKING LOT
SCALE HOUSE
FACILITIES
BRADLEY AVENUE
WASTE MANAGEMENT OF
SAN FERNANDO VALLEY
ADMINISTRATIVE &
TRUCKING FACILITY
SUMP 5
RESIDENCES
HICKS STREET
CALMAT GRAVEL & SAND PROCESSING PLANT
SOUTHERN PACIFIC TRANSPORTATION R.O.W.
WEST SAN FERNANDO ROAD
NEIGHBORING BUILDINGS
RESIDENTIAL, COMMERCIAL
200 0 200 400 FEET
LEGEND
APPROXIMATE PROPERTY LINE
PROPRIETARY NOTE
THIS DRAWING AND ALL INFORMATION CONTAINED HEREIN, INCLUDING BUT NOT LIMITED TO ANY AND ALL DESIGNS AND SPECIFICATIONS (ALL THE FOREGOING BEING HEREIN AFTER COLLECTIVELY REFERRED TO AS "DRAWINGS") ARE PROPERTY OF WASTE MANAGEMENT OF CALIFORNIA, INC. (WMC). THE DRAWINGS ARE NOT TO BE USED EXCEPT AS EXPRESSLY AUTHORIZED BY WMC. THE RECIPIENT OF THE DRAWINGS COVENANTS AND AGREES NOT TO REPRODUCE, FURTHER DISSEMINATE, OR IN ANY WAY DISCLOSE THE CONTENT OF DRAWINGS TO ANY THIRD PARTY WITHOUT FIRST HAVING OBTAINED WMC'S PRIOR WRITTEN CONSENT. RECIPIENT AGREES TO RETURN THE DRAWINGS AND ANY COPIES TO WMC IMMEDIATELY UPON WMC'S REQUEST.
REV DATE DESCRIPTION DR BY APP BY
DES BY
DRN BY
CHK BY
ENV BY
GRV BY
APP BY
PROJECT NO.
DATE
PROJECT TITLE BRADLEY LANDFILL
PLOT PLAN AND TOPOGRAPHY MAP
PREPARED BY
SEC DONOHUE
FOR
Waste Management of North America, Inc.
WESTERN REGION
IRVINE, CALIFORNIA 92718
Waste Management of North America, Inc.
WESTERN REGION DESIGN GROUP
IRVINE, CALIFORNIA 92718
SHEET OF
SHEET NO.
1-3



LANDFILL AREA TABLE

TOTAL SITE ACREAGE	=	208.9
AREA ACREAGES		
BRADLEY EAST (UNCLOSED AREA)	=	17.3
BRADLEY EAST (PROPOSED CLOSURE)	=	17.1
BRADLEY EAST SLOPE	=	9.6
BRADLEY WEST	=	55.5
BRADLEY WEST EXTENSION	=	23.1
SUMP 6	=	21.1
SUMP 5/TRANSITION	=	22.3
ENTRANCE ROAD	=	4.1
MRF LOCATION	=	5.7
BUFFER PROPERTY	=	33.1
TOTAL	=	208.9

200 0 200 400 FEET

LEGEND

EXISTING GRADE

SPOT ELEVATION

APPROXIMATE [illegible]

NOTES

1. Topography compiled by photogrammetric method for aerial photography dated January 16, 1991
2. Buffer property area represents land which will not be used for landfilling purposes

[illegible] INCLUDING BUT NOT LIMITED TO ALL AND ALL DESIGNS AND SPECIFICATIONS (ALL THE FOREGOING BEING HEREIN AFTER COLLECTIVELY REFERRED TO AS "DRAWINGS") ARE PROPERTY OF WASTE MANAGEMENT OF CALIFORNIA, INC. (WMC). THE DRAWINGS ARE NOT TO BE USED EXCEPT AS EXPRESSLY AUTHORIZED BY WMC. THE RECIPIENT OF THE DRAWINGS CONVENTS AND AGREES NOT TO REPRODUCE, FURTHER DISSEMINATE OR IN ANY WAY DISCLOSE THE CONTENT OF DRAWINGS TO ANY THIRD PARTY WITHOUT FIRST HAVING OBTAINED WMC'S PRIOR WRITTEN CONSENT. RECIPIENT AGREES TO RETURN THE DRAWINGS AND ANY COPIES TO WMC IMMEDIATELY UPON WMC'S REQUEST.

REV	DATE	DESCRIPTION	DR BY	APP BY

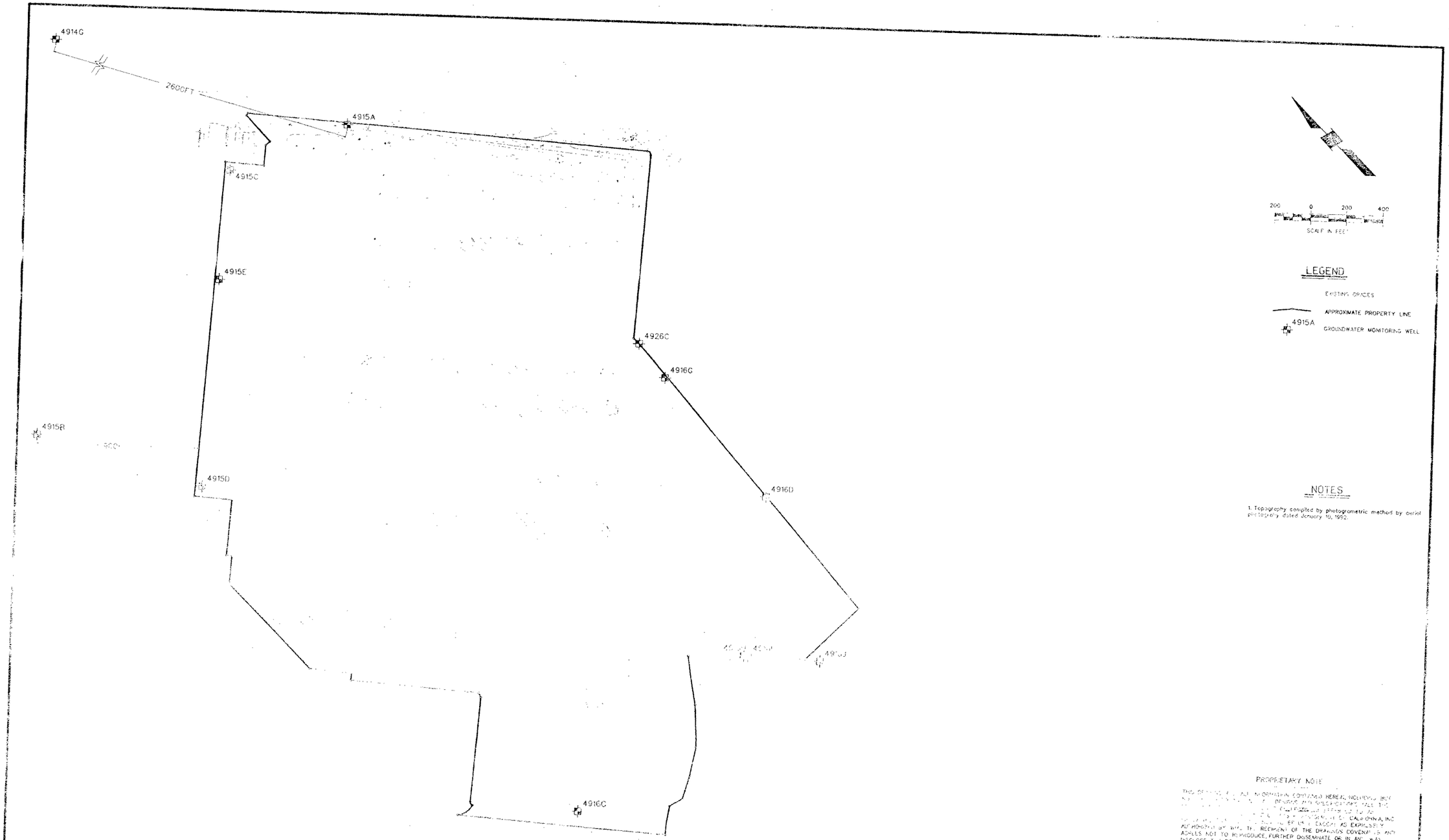
DES BY	FK		PROJECT NO. 814B1-257	DATE SEPTEMBER 1991
DRN BY	CW	CW	PROJECT TITLE	BRADLEY LANDFILL FINAL CLOSURE PLAN
CHK BY	MAM	MAM	SHEET TITLE	LANDFILL AREAS
ENV BY	MAM	MAM		
GRV BY				
APP BY				

Waste Management of North America, Inc.
WESTERN REGION DESIGN GROUP
IRVINE, CALIFORNIA 92715

SHEET 1 OF 1
SHEET NO. 1

FILE #

DETENCH POST INCORDER NO. H3411



LEGEND

EXISTING GRADES

APPROXIMATE PROPERTY LINE

4915A GROUNDWATER MONITORING WELL

NOTES

1. Topography compiled by photogrametric method by aerial photography dated January 10, 1992.

PROPRIETARY NOTE

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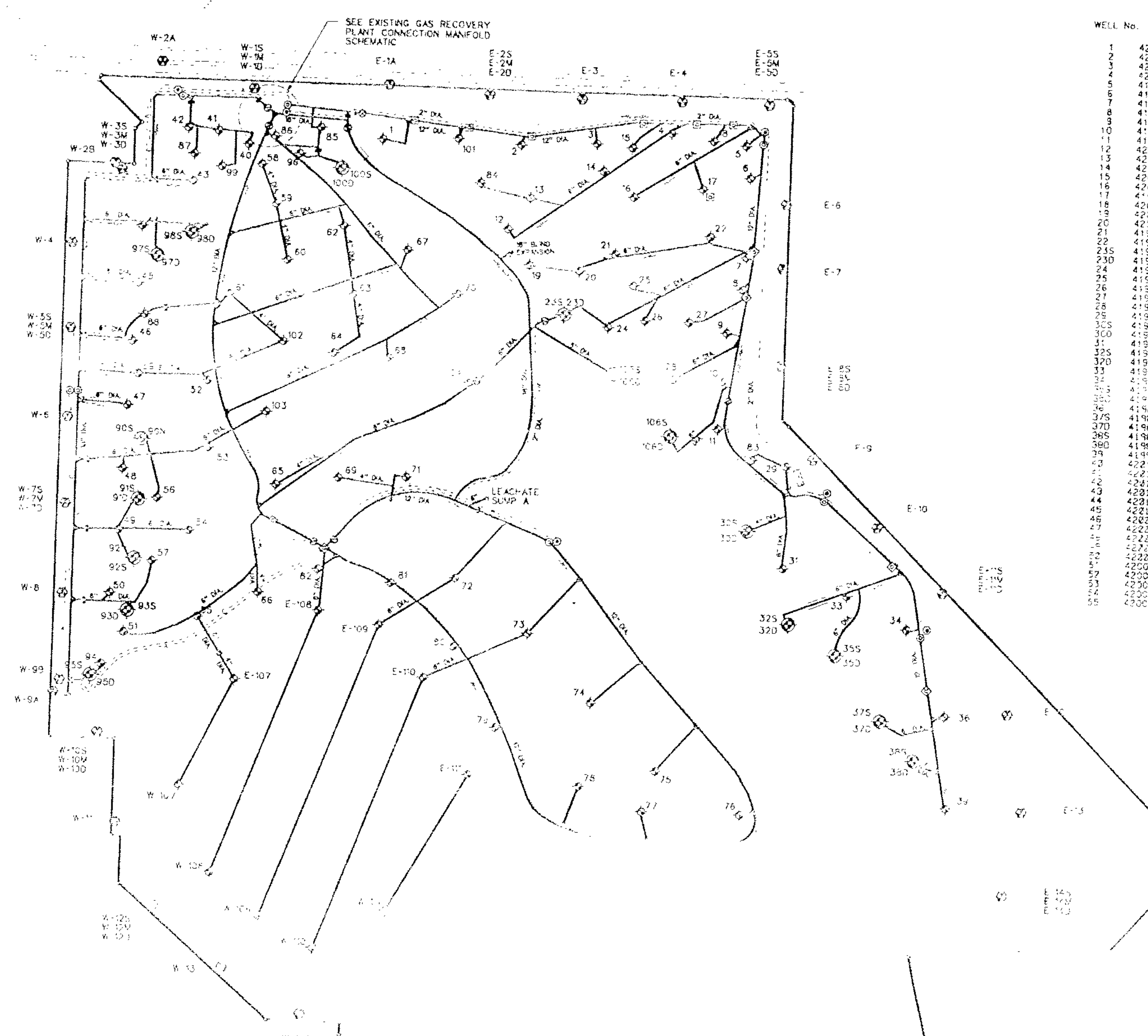
REV.	DATE			DRN. BY	APP. BY
DES. BY	FK		PROJECT NO: 81481463	DATE: APRIL 2, 1992	
DRN. BY	CDS		PROJECT TITLE: BRADLEY LANDFILL WELL LOCATION MAP		
CHK. BY	FK				
REV. BY	JT				
ORV. BY	CDS		SHEET TITLE: GROUNDWATER MONITORING WELL LOCATION MAP		
APP. BY	MAM				

Waste Management of North America, Inc.
WESTERN REGION DESIGN GROUP
IRVINE, CALIFORNIA 92715

SHEET 1 OF 2

SHEET NO. 1



BRADLEY LANDFILL GAS EXTRACTION WELL LOCATION COORDINATE LIST

WELL No.	NORTHING	EASTING	FLANGE ELEV.	GROUND ELEV.	LOW FLANGE ELEV	SURVEY DATE
1	4200799.39	4172506.60	928.70	924.70		6-17-91
2	4200459.16	4172802.92	939.81	935.01		3-29-91
3	4200283.11	4172972.73	933.40	928.70		3-29-91
4	4200129.62	4173162.25	930.03	925.53		3-29-91
5	4199924.93	4173297.92	928.30	933.30		9-25-91
6	4199843.03	4173229.83	929.56	924.16		3-29-91
7	4199676.99	4173034.76	929.95	924.75		3-29-91
8	4199614.99	4172950.04	930.60	925.00		6-17-91
9	4199556.17	4172811.30	931.34	927.34		9-25-91
10	4199457.99	4172686.76	932.94	925.94		9-25-91
11	4199364.74	4172564.72	936.67	930.67		9-25-91
12	4200302.70	4172573.77	951.70	946.60		6-17-91
13	4200319.20	4172697.15	936.30	933.00		6-17-91
14	4200206.40	4172922.61	932.90	928.10		6-17-91
15	4200189.10	4173041.36	935.30	931.30		9-25-91
16	4200076.55	4172927.92	936.60	933.60		9-25-91
17	4199931.19	4173100.05	932.65	928.25		3-29-91
18	4200011.15	4173237.45	930.79	925.79		3-29-91
19	4200172.52	4172536.11	954.39	949.39		3-29-91
20	4200042.09	4172632.35	935.43	930.73		3-29-91
21	4199994.14	4172752.01	932.91	928.71		3-29-91
22	4199807.74	4173003.30	933.39	925.89		9-25-91
23S	4199981.92	4172455.30	938.66	934.66		9-25-91
23D	4199981.41	4172494.50	938.69	934.59		9-25-91
24	4199849.00	4172562.23	931.58	927.18		3-29-91
25	4199882.07	4172717.40	941.82	936.82		3-29-91
26	4199777.08	4172860.77	941.69	933.69		9-25-91
27	4199658.98	4172753.68	933.00	928.00		6-17-91
28	4199560.27	4172382.35	934.40	930.00		6-17-91
29	4199121.79	4172626.48	914.02	911.10		7-19-90
30S	4199070.41	4172367.22	921.36	917.36		9-25-91
30D	4199069.76	4172365.29	921.41	917.41		9-25-91
31	4198903.29	4172378.37	924.81	914.00		7-19-90
32S	4198766.28	4172258.25	925.39	921.39		9-25-91
32D	4198766.10	4172259.18	925.44	921.44		9-25-91
33	4198690.67	4172454.41	914.51	910.50		7-19-90
34	4198476.15	4172229.26	929.12	924.12		3-29-91
35S	[illegible]	[illegible]	[illegible]	[illegible]		9-28-91
35D	[illegible]	4172298.95	[illegible]	[illegible]		9-25-91
36	4198194.55	4172364.93	918.84	924.42		7-19-90
37S	4198334.49	4172231.97	919.31	914.31		9-25-91
37D	4198335.24	4172232.79	919.36	914.31		9-25-91
38S	4198169.82	4172211.29	916.90	911.90		9-25-91
38D	4198171.26	4172211.94	916.83	911.90		9-25-91
39	[illegible]	4172169.91	916.04	912.20		7-19-90
40	4201125.98	[illegible]	[illegible]	[illegible]		3-29-91
41	4201225.90	[illegible]	[illegible]	[illegible]		3-29-91
42	4201282.27	4172124.46	939.67	934.17		3-29-91
43	4201153.78	4171989.41	948.76	940.56		3-29-91
44	4201172.76	4171771.34	943.35	938.02		3-29-91
45	4201285.62	4171627.38	952.13	944.13		3-29-91
46	4200948.69	4171475.98	940.52	936.52	938.47	3-29-91
47	[illegible]	4171313.92	[illegible]	932.49	938.99	3-29-91
48	[illegible]	[illegible]	929.62	924.52		[illegible]
49	[illegible]	[illegible]	[illegible]	[illegible]	919.72	[illegible]
50	4200435.74	4172632.21	916.55	[illegible]		[illegible]
51	4200316.48	4170769.37	910.33	905.33	905.78	3-29-91
52	4200677.65	4171548.25	937.28	924.29		4-5-91
53	4200528.70	4171385.65	925.78	920.26		4-5-91
54	4200389.57	4171151.99	[illegible]	[illegible]		3-29-91
55	4200179.47	4170967.24	893.00	885.00		9-25-91
56	4200536.21	4171159.91	933.30	928.00		6-17-91
57	4200408.42	4170999.58	932.10	924.50		6-17-91
*58	4201029.39	4172179.58	938.60	938.60		6-17-91
59	4200908.40	4172116.60	955.1	949.1		3-3-93
60	4200757.40	4172009.50	967.1	960.6		3-3-93
61	4200819.62	4171799.60	952.75	947.75		7-19-90
62	4200699.40	4172214.70	952.1	946.1		3-3-93
63	4200525.90	4172073.50	972.7	966.7		3-3-93
64	4200442.40	4171890.30	981.5	974.5		3-3-93
65	4200288.10	4171451.70	894.7	888.7		3-3-93
66	4200091.10	4171158.00	892.3	886.3		3-3-93
67	4200494.50	4172300.19	959.58	953.08		9-25-91
68	4200302.11	4172000.45	957.32	952.32		9-25-91
69	4200155.80	4171606.10	889.7	884.7		3-3-93
70	4200279.09	4172306.35	946.23	942.23		9-25-91
71	4199995.60	4171759.20	852.9	848.4		3-17-93
72	4199656.62	4171627.71	868.80	[illegible]		7-19-90
73	4199359.53	4171660.96	862.60	837.90		7-19-90
74	4199057.14	4171635.90	860.40	[illegible]		7-19-90
75	4198753.79	4171618.20	859.60	854.60		7-19-90
76	4198456.95	4171701.66	799.60	795.30		7-19-90
77	4198696.25	4171492.04	864.13	858.13		9-25-91
78	4198901.08	4171411.84	863.50	857.00		7-19-90
79	4199227.25	4171366.52	816.40	811.90		7-19-90
80	4199508.60	4171462.71	826.60	821.90		7-19-90
81	4199797.70	4171473.40	894.7	[illegible]		3-3-93
82	4200001.83	4171344.20	858.10	853.10		7-19-90
83	4199216.61	4172566.37	923.92	918.32		6-17-91
84	4200470.51	4172621.59	956.78	919.38		6-17-91
85	4200971.84	4172397.48	928.65	[illegible]		6-17-91
86	4201060.28	4172275.82	935.20	[illegible]		6-17-91
87	4201211.41	4172055.52	941.60	937.20		6-17-91
88	4200971.59	4171566.54	947.10	940.80		6-17-91
89	4200854.24	4171411.67	943.10	937.50		6-17-91
90N	4200702.74	4171265.05	945.50	933.50		6-17-91
90S	4200701.41	4171264.87	945.60	933.60		6-17-91
91S	4200577.20	[illegible]	933.60	927.30		6-17-91
91D	4200578.44	[illegible]	933.60	[illegible]		6-17-91
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
92S	4200454.24	4170967.15	933.40	[illegible]		[illegible]
93S	4200356.04	4170828.57	930.00	923.50		6-17-91
93D	4200355.97	4170829.18	930.20	922.90		6-17-91
94	4200298.64	4170645.45	918.80	911.80		6-17-91
95S	4200297.79	4170595.77	919.10	913.10		6-17-91
95D	4200297.89	4170594.28	919.10	913.10		6-17-91
96	4200962.89	4172298.54	[illegible]	928.30		[illegible]
97S	4201072.25	4171734.56	929.50	914.60		[illegible]
97D	4201072.21	4171733.47	950.00	944.70		[illegible]
98S	4201043.80	4171863.45	949.80	944.40		6-17-91
98D	4201044.47	4171862.45	949.90	944.40		6-17-91
99	4201118.52	4172086.35	947.40	942.30		6-17-91
100S	4200831.70	4172346.67	931.30	927.00		6-17-91
100D	4200831.30	[illegible]	[illegible]	928.20		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
102	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
103	4200471.20	[illegible]	947.35	[illegible]		[illegible]
104	4200056.91	[illegible]	904.52	899.00		[illegible]
105S	4199732.33	4172463.56	936.98	932.38		9-25-91
105D	4199732.27	4172462.91	936.98	932.38		9-25-91
106S	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
106D	4199460.50	[illegible]	938.67	932.67		[illegible]

*58 Elevation is the top of the capped well head at ground.

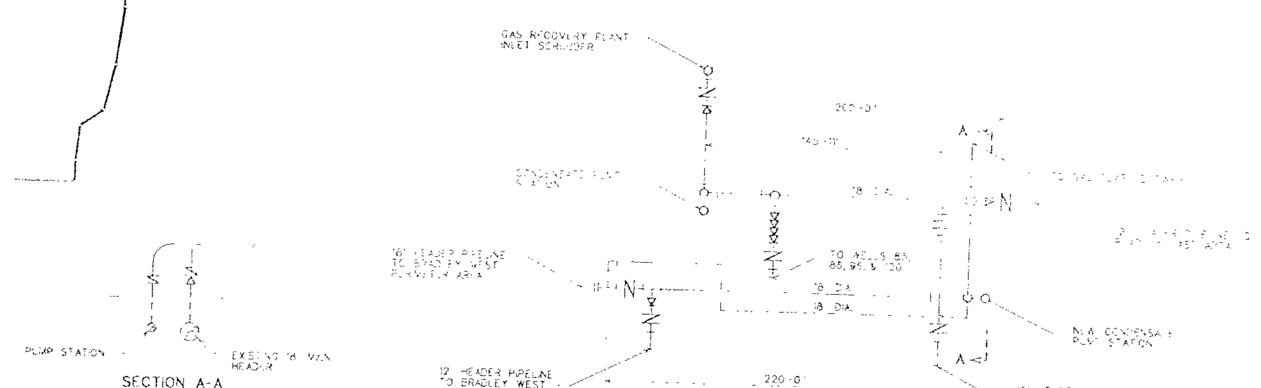
SUMP 3 GAS RECOVERY SYSTEM COORDINATE LIST

WELL No.	NORTHING	EASTING	ELEVATION	SURVEY DATE
W-107	[illegible]	[illegible]	[illegible]	12-10-1992
E-107	[illegible]	[illegible]	[illegible]	[illegible]
W-108	[illegible]	[illegible]	[illegible]	[illegible]
E-108	[illegible]	[illegible]	8?3.00	01-30-1992
W-109	[illegible]	[illegible]	[illegible]	[illegible]
E-109	[illegible]	4171348.99	[illegible]	01-30-1992
W-110	[illegible]	4170438.06	[illegible]	12-10-1992
E-110	[illegible]	[illegible]	[illegible]	01-30-1992
W-111	[illegible]	[illegible]	[illegible]	[illegible]
E-111	[illegible]	[illegible]	[illegible]	[illegible]

SCALE IN FEET

LEGEND

- PROPERTY BOUNDARY
- GAS EXTRACTION WELL
- DUAL GAS EXTRACTION WELL
- GAS MONITORING PROBE
- CONDENSATE PUMP STATION AND DRAIN LINE
- AIR LINE
- HEADER ACCESS RISER



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NO	REVISIONS	MADE	CHK	DATE
1	UPDATE TO INCLUDE 3/93 GAS EXTRACTION WELL REDRILLS			

The drawings, specifications and other documents prepared by the Engineer for this project are instruments of the Engineer's service for use solely with respect to this project and, unless otherwise provided, the Engineer shall be deemed the author of these documents and shall retain [illegible]

DRAWN / DESIGN / CHECKED / PE / APPRD / APPRD / APPRD — NAMES — DATE

VALLEY RECLAMATION CO.
BRADLEY LANDFILL
LOS ANGELES COUNTY
GAS COLLECTION SYSTEM

GAS COLLECTION SYSTEM

RUST ENVIRONMENT & INFRASTRUCTURE

PROJECT NUMBER — DATE
RUST DWG NUMBER — FILE NUMBER
CLIENT DWG NUMBER — SHEET NUMBER 1 OF 1

Attch. 67
2166-05556

BORING LOGS AND MONITORING WELL CONSTRUCTION DETAILS

SUMMARY OF BORING LOGS AND MONITORING WELL CONSTRUCTION DETAILS

The following pages contain the boring logs and well construction details for the wells included in the Bradley Landfill groundwater monitoring system. Data which is included is noted with an "X". Information which was unavailable at the time of this writing are noted.

Well	Log	Detail
4914G	X	Not Available
4915B	X	Not Available
4915A	X	Not Available
4916	X	Not Available
4916A	X	Not Available
4916D	X	Not Available
4916C	X	Not Available
4915C	X	X
4916F	X	X
4926C	X	X
4916G	X	X
4916H	X	X
4915D	X	X
4915D	X	X
4915E	X	X
4916J	X	X

MONITORING

WELL DATA

Bradley Avenue Sanitary Landfill - West

LAFCD No. 4914 G

Owner: VALLEY RECLAMATION CO.
Address of Owner: 3200 San Fernando Road, L.A.
Well Location: APP. 250' NW of NEC TRUESDALE ST. & GLENOAKS BLVD.

Drilled by: HOWARD PUMP, INC.
Drilling Method: MUD ROTARY — Type of Well: MONITORING
Drilling Commenced: JUNE 3, 1980 — Date Completed: JUNE 6, 1980

WELL CONSTRUCTION
Borehole Depth: 221 ft — Borehole Diameter: 8 3/4 in.
Conductor Casing: NONE
Well Casing: 4-IN. PVC
Perforations: 120-220
Gravel Pack: PEA GRAVEL
Well Seal: 0-70'

WELL TESTING
Static Water level: ft. — Pumping Water Level: ft.
Duration of Test: — Date of Test:
Discharge: gpm — Drawdown: ft.
Specific Capacity: gpm/ft. — Electrical Conductance: micro

REFERENCE ELEVATIONS
Ground Elevation: ~~1190~~ ft. — Top of Casing Elevation: 950 ft.
Description of Reference Point Elevations for Water Level Measurements:

Date: JUNE 1980 Elevation ft. Description: TOP OF BLACK PIPE

Date: Elevation ft. Description:

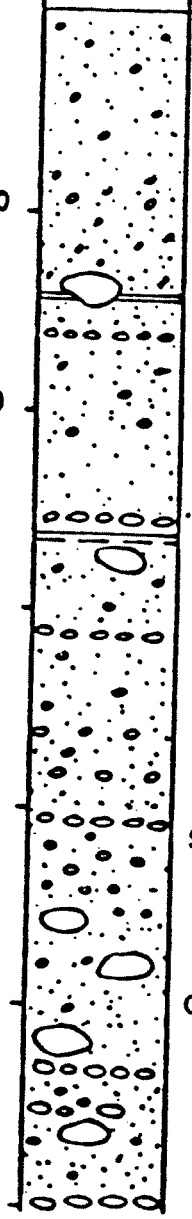
Date: Elevation ft. Description:

Remarks:
THIS IS THE NEW WELL 4914 G, DRILLED SINCE TO THE OLD WELL 4914 G
SEE WELL COMPLETION REPORT LCA JOB NO E[illegible]

FORM MW-1

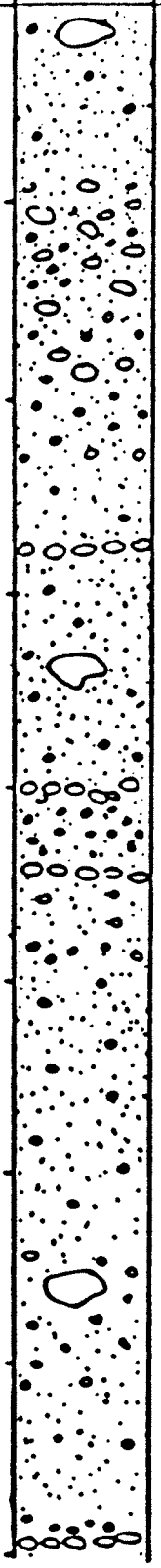
WELL LOG

OWNER: Valley Reclamation Co.
DRILLED BY: Howard Pump Inc.
WELL NO. 4914G
USGS NO.
LOCATION: approximately 250' northwest of the northeast corner of Truesdale Street and Glenoaks Boulevard
DRILLING METHOD: Rotary Wash
DATE COMPLETED: June 6, 1980
BOREHOLE DEPTH: 221'
BOREHOLE DIAMETER: 8-3/4"
CASING: 4" PVC
PERFORATIONS: 120' to 220'
STATIC WATER LEVEL: 153.88' below ground surface
DRAWDOWN:
YIELD:
SPECIFIC CAPACITY: GPM/FT
ELECTRICAL CONDUCTANCE: MICROMHOS
GROUND ELEVATION:
TOP OF CASING ELEVATION:

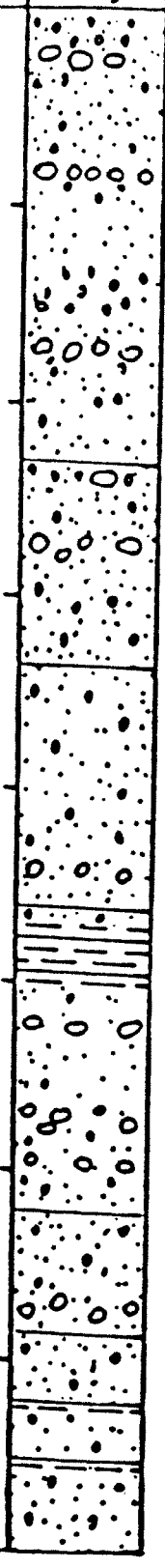
DEPTH	GRAPHIC LOG	DESCRIPTION OF MATERIALS
		GRAVELLY SAND - Tan, predominantly medium to coarse sand and gravel to ½" in diameter with occasional cobbles
		Increasing gravel
10		
		Boulder
		Streaks of Clay
		Increasing fine to coarse Sand
20		Cobble zone
		Cobble zone
		Streaks of Clay and Silt
30		Boulder
		Cobble zone
		Cobble Zone
40		Cobble Zone
		SANDY GRAVEL:- Tan, predominantly medium to coarse subangular gravel to 3/4" in diameter and fine to coarse Sand with occasional cobbles
		Boulder
		Boulder
50		GRAVELLY SAND - Tan, predominantly medium to coarse sand with fine to coarse well-rounded gravel
		Boulder
		Cobbles
		Cobbles
		Boulder
60		Cobbles

ARKS:

WELL LOG

Depth	Graphic log	Description of materials
		GRAVELLY SAND - Boulder
70		SANDY GRAVEL - Tan, predominantly medium to coarse rounded to well rounded gravel to ½" in diameter and medium to coarse Sand with numerous cobbles
80		Gravel to 1" in diameter, subangular to subrounded
		GRAVELLY SAND - Tan, predominantly medium to coarse Sand and fine subrounded to rounded gravel and occasional cobbles
90		Boulder
100		SANDY GRAVEL - Tan, predominantly fine to coarse subangular to angular gravel to 1" in diameter with medium to coarse Sand
		GRAVELLY SAND - Tan, predominantly medium to coarse Sand and fine to medium gravel with cobbles
110		Gravel lens
120		
		Increasing coarse subangular to subrounded gravel to 3/4"
130		Boulder
		Decreasing coarse gravel
140		SANDY GRAVEL - Tan, predominantly medium to coarse subangular to angular gravel and coarse Sand with cobbles

WELL LOG

Depth	Graphic log	Description of materials
		SANDY GRAVEL
		Cobbles
		Decreasing coarse gravel
		GRAVELLY SAND - Tan, predominantly medium to coarse Sand and fine gravel, cobbles, coarse gravel lens
150		
		Coarse gravel lens
		Cobbles
160		
		Streaks of Clay
		Coarse gravel lens, occasional cobbles
		Cobbles
170		
		Streaks of Clay
180		
		Cobbles
		Streaks of Clay
190		CLAYEY SILT - Orange-tan, slight amount of interbedded gravelly Sand
		GRAVELLY SAND - Tan, predominantly medium to coarse Sand and fine to medium subangular to moderately rounded gravel with cobbles
		Cobbles
200		Cobbles
		Streaks of Clay
		Cobbles
		Streaks of reddish-brown Clay
210		
		Streaks of bluish-grey clayey silt
		Streaks of bluish-grey clayey silt
220		

PLICATE
's Copy

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

Do not fill in

No. 192911

FX-4: CBI/Trade Secret

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill in
No. 127230

State Well No. _____

FX-4: CBI/Trade Secret

WELL LOG

DEPARTMENT OF WATER & POWER
OF
THE CITY OF LOS ANGELES

4916

Well Number or Name Consolidated Rock Products Co.

LOCATION 1200' NW of Tuxford St. 900' S of Bradley & Tujunga Ave. Intersection
800' NE of San Fernando Road 150' W Tujunga Ave.

WORK STARTED _____ WORK COMPLETED November, 1941 MAP No. _____

ft. of	in.	lb./ft. casing	ft in well
16" casing installed from 0 - 450'			
16" casing installed from 432 - 500'			

Type of perforator used _____

Perforated 155 ft. to 364 ft. holes per ft.
- 215 rounds 1' apart
- 4 cuts per round

Diameter of perforations _____ in., length _____ in.

Depth at which water was first found _____ ft.

Standing level before perforating _____ ft.

Standing level after perforating 145' ft.

Is your observation of any change in water level while drilling

Was not tested but pumped ±1500 G.P.M. according to plant

Date tested Sup't. No D.D. Mean. 19__

Water level when first started test C.T.F. ft.

Draw down from standing level _____ ft.

G. P. M. at beginning of test _____

G. P. M. at completion of test _____

Draw down at completion of test _____ ft.

If reducing strings of casing were cut off, state how cut _____

Depth from surface cut _____ ft.

Size of casing cut _____ in.

Lap in larger casing _____ ft.

Was adapter or cement used? _____

If casing was swedged or repaired, state depth, describe repairs and condition in which casing was left and probable future effect:

Is well straight top to bottom, if not, what is the variation?

Will there be any detrimental effect on pump, and if so, what?

Give any additional data which may be of future value:

Total depth of well _____ ft.

Formation: Mention size of water gravel— G.S. Elev. = 86

ft. to	ft.	
0	137	Gravel & boulders (dug pit)
137	200	Fine gravel
200	220	Tight boulders
220	255	Loose gravel & boulders
255	310	Tight boulders
310	364	Loose gravel & boulders
364	368	Clay
368	374	Gravel & clay
374	379	Clay
379	385	Dirty gravel
385	450	Clay
450	460	Gravel & clay
460	465	Clay
465	487	Clay & rock
487	500	Tight boulders

Capacity, 1500 G.P.M. - Equipped with 10" Layne-& Bowler Pump & Direct connected 200 H.P. Motor 250' pump

Approx. elevation 868.0' U.S.G.S. Datum

Above-log copied from Driller's record by A.R. Tomson - Apr. 15, 1942

G.W.J.

Date of Report April 15, 19 42

OF
THE CITY OF LOS ANGELES

4916

Well Number or Name Consolidated Rock Products Co. Well #512 (sheet 2)

TION

RK STARTED May 10, 1941 WORK COMPLETED MAP No.

ft. of in. lb/ft. casing left in well

rpe of perforator used

erforated ft. to ft. holes per ft.

meter of perforations in., length in.

pth at which water was first found ft.

level before perforating ft.

d level after perforating ft.

e your observation of any change in water level while drilling

e tested 19

er level when first started test ft.

w down from standing level ft.

. M. at beginning of test

. M. at completion of test

down at completion of test ft.

ducing strings of casing were cut off, state how cut

h from surface cut ft.

of casing cut in.

m larger casing ft.

adapter or cement used?

ing was swedged or repaired, state depth, describe repairs and

ion in which casing was left and probable future effect:

traight top to bottom, if not, what is the variation?

ve be any detrimental effect on pump, and if so, what?

ny additional data which may be of future value

Total depth of well - 600 (Planned depth) ft.

Formation: Mention size of water gravel

ft. to ft.

6-6-41 Pit dug to 103'

7-1-41 First water at 157'

7-2-41 Stopped digging at 159' (much water

Well will be finished by drilling by Saunders, Whittier, California to about 60

8-5-41 Started drilling

8-7-41 Drilled to 180'

8-8-41 Drilled to 200'

(End of observation)

Date of Report

WELL LOG

STATE WATER RIGHTS BOARD

Well Number or Name 4916A

ATION Sun Valley : ON & TUJUNGA (PL.O.) 700' S. OF & INT. TUJUNGA AND BRADLEY ST.

MAP No.

K STARTED October 20, 1953 WORK COMPLETED November 17, 1953

00 ft. of 20 in. 8 xx/ga. casing and left in well

of perforator used 4 inr.

rated 200 ft. to 350 ft. 10 holes per foot

370	398	10		
454	464	10		

ter of perforations 1/4 in., length 1-3/4 in.

at which water was first found 215 ft.

ng level before perforating 218 ft.

vel after perforating 218 ft.

observation of any change in water level while drilling

ested 19

level when first started test ft.

down from standing level ft.

M. at beginning of test

M. at completion of test

down at completion of test ft.

cing strings of casing were cut off, state how cut

from surface cut ft.

casing cut in.

larger casing ft.

apter or cement used?

g was swedged or repaired, state depth, describe repairs and n in which casing was left and probable future effect:

straight top to bottom, if not, what is the variation?

Practically

e any detrimental effect on pump, and if so, what?

r additional data which may be of future value:

Boulder plug to 497'

Total depth of well 500 ft.

Formation: Mention size of water gravel—

From (ft.)	To (ft.)	Description
0	4	Sand
4	11	Clay
11	32	Gravel and boulders
32	200	Sand, gravel and boulders
200	224	Gravel and boulders
224	328	Sand, gravel and boulders
328	352	Sand to 1" gravel
352	355	Sandy clay
355	363	Clay and gravel
363	368	Hard gravel
368	398	Silt, sand to 2" gravel
398	419	Clay
419	422	Clay, cemented gravel
422	436	Sand and clay
436	439	Sand to 1' gravel
439	446	Clay
446	454	Tight sand and gravel
454	474	Clay
474	487	Sand to 2" gravel (tight)
487	500	Layers clay and gravel

Date of Report November 20, 1960

Cable Tool #42 W. Peterson

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Do not fill
No. 12745C

FX-4: CBI/Trade Secret

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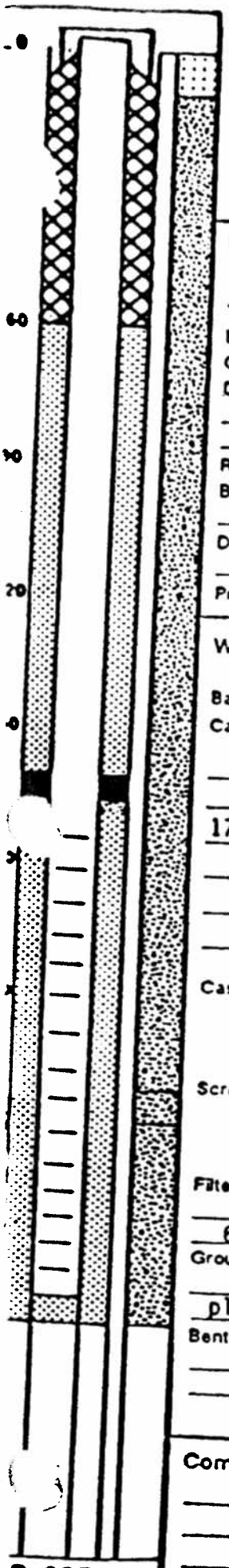
Owner's Copy

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
WATER WELL DRILLERS REPORT

Date Work
No. 058910
State Well No. 4916C

FX-4: CBI/Trade Secret



Well No. 4915C

Boring No. X-Ref: B-2

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords:

Elevation Ground Level

Top of Casing

Drilling Summary:

Total Depth 285

Borehole Diameter 9 7/8"

Casing Stick-up Height:

Driller Howard Pump, Inc.
Barstow, California 92311

Rig Howard Turner (D-1)

Bit(s) 9 7/8" Button Bit

Drilling Fluid 0-285 = clean water and Bentonite

Protective Casing Annodized Aluminum

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling Button Bit	9/26	0900	9/30	1200
Geophys. Logging:				
Casing: C1	10/3	1430	10/3	1500
S1	10/3	1400	10/3	1430
Filter Placement:	10/3	1500	10/3	1800
Cementing:	10/4	0900	10/4	0950
Development:	10/18	0800	10/19	1420

Well Design & Specifications

Basis: Geologic Log X Geophysical Log ___

Casing String (s): C = Casing S = Screen.

Depth	String(s)	Elevation
- 175	C1	-
175 - 280	S1	-
-		-
-		-
-		-

Casing: C1 4½" diameter Sch 40 pvc, flush threaded

C2

Screen: S1 4½ diameter Sch 40 pvc, flush threaded

S2

Filter Pack: 280-285; 170-280 Mont. Sand #3; 168-170 #40 Sand; 60-163 Monterey Sand #3

Grout Seal: 0-60', 5:1 Portland type I & II cement plus Aquagel Gold Seal (Bentonite)

Bentonite Seal: 163-168 Aquagel Gold Seal (Bentonite)

Well Development:

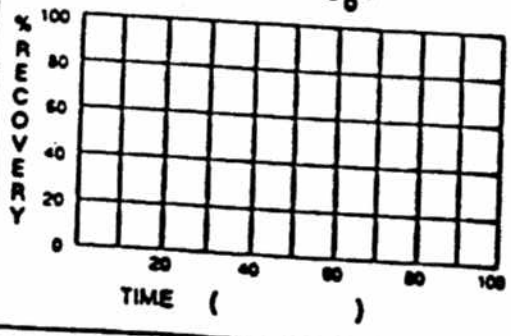
10/18 0800-0940 Bail
10/18 1000-1110 SWAB
10/18 1121-1154 Bail
10-19 1150-1420 Submersible Pump
Total gallons removed: 850 gallons

Stabilization Test Data:

Time	pH	Spec. Cond.	Temp (C)
1155	8.13	498	24.36
1239	8.10	503	22.44
1331	8.07	509	22.66
1400	8.04	512	23.37
1420	8.06	505	22.66

Recovery Data:

Q= S_o=



Comments: (1) All dates are 1988

SITE NAME Bradley Landfill

LOCATION Sun Valley, CA

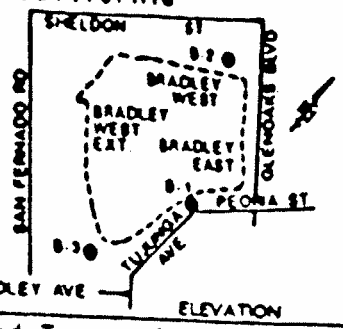
WC 01121

SUPERVISED BY Kurt Easthouse

DATE 10/25/88

SOIL BOREHOLE LOG

TE NAME AND LOCATION Bradley Landfill, Sun Valley, California



TUM MSL ELEVATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-2

SHEET 1 OF 8

					DRILLING START	DRILLING FINISH
WATER LEVEL						
TIME					TIME 0900	TIME 1200
DATE					DATE 9/26/88	DATE 9/30/88
CASING DEPTH						

LL RIG Howard Turner (D-1)

GLE vertical BEARING --

MPLE HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level open area in north corner of landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

(ELEVATION)	BLOWS/ 6 IN ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
			Light yellowish brown (2.5Y 6/4) SAND, trace fines; fine to coarse grained; angular quartz, feldspar, and lithic fragments (SP-SW)	B BB							
5		1	@5.5-10': Boulders								
0		2	Light yellowish brown (2.5Y 6/4) SAND, fine to coarse grained; angular lithic fragments (SW)								
			@15': angular to sub-angular quartz, feldspar, and lithic fragments								
5		3	@15-20': Boulders								
			@20': Light yellowish brown (2.5Y 6/4) to light brownish gray (2.5Y 6/2)								
0		4	@25': 5-10% fine gravel								
5		5	@30': 15% fine gravel; rare sub-rounded grains								
		6	@35': 5-10% fine gravel								
		7									

SL 00305

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-2

SHEET 2 OF 8

DRILLING START TIME DATE / FINISH TIME DATE

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

UM MSL ELEVATION

. RIG Howard Turner (D-1)

E vertical BEARING --

PLE HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level open area in north corner of landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

BLOWS/6" OR SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
		Light yellowish brown (2.5Y 6/4) to light brownish gray (2.5Y 6/2) SAND (SW) (continued)	B BB							
		@40': 40-45% fine gravel								
		@42-44': Boulders and cobbles								
		@45': 30% fine gravel								
		@46-48': Boulders and cobbles								
		@50': 25-30% fine gravel; angular to sub-angular quartz, feldspar and lithic fragments								
		@53-55': Boulders and cobbles								
		@55': dark grayish brown (2.5Y 4/2); 15% fine gravel; quartz, feldspar mica, and lithic fragments								
		@60': trace to 5% coarse gravel								
		@65': 5-10% fine gravel								
		@70': 40-45% fine to coarse gravel								
		@75': 35-40% fine to coarse gravel								

SL 00306

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-2

SHEET 3 OF 8

DRILLING START TIME DATE / FINISH TIME DATE

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

M MSL ELEVATION

RIG Howard Turner (D-1)

E vertical BEARING --

LE HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level open area in north corner of landfill

DRILLING CONTR Howard Pump, Inc.

Tony Villanueva

BLOWS/ 6 IN. OR SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
		dark grayish brown (2.5Y 4/2) SAND (SW) (continued)	B BB							
		@80': 20% fine gravel								
		@85': 45-50% fine gravel								
		@85-86.6': Boulder								
		@90': 15% fine gravel								
		@95': trace to 5% fines; 25-30% fine gravel								
		@100': dark grayish brown (2.5Y 4/2) to olive brown (2.5Y 4/4); 20% fine gravel								
		@105': 40% fine to coarse gravel								
		@110': 25% fine to coarse gravel								

SL 00307

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-2

SHEET 4 OF 8

DRILLING START TIME DATE / FINISH TIME DATE

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

MSL ELEVATION

RIG Howard Turner (D-1)

vertical BEARING --

E HAMMER TORQUE -- FT -LBS

SURFACE CONDITIONS Level open area in north corner of landfill

DRILLING CONTR Howard Pump, Inc.

Tony Villanueva

BLOWS/6 in OR SAMPLE (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
		dark grayish brown (2.5Y 4/2) to olive brown (2.5Y 4/4) SAND (SW) (continued)	B BB							
		@115': Light yellowish brown (2.5Y 6/4); trace fines; 15% fine gravel								
		@114-120': Boulders and cobbles								
		@120': 10-15% fine gravel								
		@125': 40-45% fine gravel								
		@125-130': Boulders and cobbles								
		@130': 10% fine gravel								
		@135': trace fines; 15-20% fine gravel								
		@135-139': Boulders and cobbles								
		@140': 15% fine gravel								
		@145': trace to 5% fines; 35% fine gravel								
		@150': 15 to 20% fine gravel								

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SL 00308

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SOIL BOREHOLE LOG

NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-2

SHEET 5 OF 8

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING: START TIME / DATE; FINISH TIME / DATE

DATUM MSL ELEVATION

RIG Howard Turner (D-1)

ANGLE vertical BEARING --

HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level open area in north corner of landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

BLOWS/6 in (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
0		Light yellowish brown (2.5Y 6/4) SAND (SW) (continued)	B BB							
5	31	@155': 5% fines; angular quartz, feldspar, and lithic fragments								
	32	@160': 45-50% fine to coarse gravel; angular to sub-angular grains								
		@160-165': Boulders								
	33	@165': trace fine gravel								
	34	@170': trace fines								
	35	@175': 5% fine gravel								
	36	@180': 15% fine gravel								
	37									

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SL 00309

SOIL BOREHOLE LOG

E NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-2

SHEET 6 OF 8

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING: START TIME / DATE; FINISH TIME / DATE

UM MSL ELEVATION

L RIG Howard Turner (D-1)

LE vertical BEARING --

PLE HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level open area in north corner of landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

ELEVATION	BLOWS/6 IN OR SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
90			Light olive brown (2.5Y 5/4) SAND fine to coarse grained; 20% fine gravel (SW)	B BB							
			@190': 20% fine gravel; angular quartz and lithic fragments								
			@195': 10% fine gravel								
0			@200': 5% fines; 5-10% fine gravel								
			@205': 15 to 20% fine gravel								
			@210': 25% fine gravel								
			@215': 30 to 35% fine gravel								
			@220': 15% fine gravel								
			@222': Boulders								
			@225': 15 to 20% fine gravel								

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SL 00310

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SOIL BOREHOLE LOG

NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-2

SHEET 8 OF 8

DRILLING START TIME DATE | FINISH TIME DATE

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

ELEVATION MSL

RIG Howard Turner (D-1)

BEARING vertical

HAMMER TORQUE -- FT-LBS

SURFACE CONDITIONS Level open area in north corner of landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

BLOWS/6 IN OR SAMPLE (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
		Light olive brown (2.5Y 5/4) SAND (SW) (continued)	B BB							
	S3	@265': Light brownish gray (2.5Y 6/2); 10% fine gravel								
	S4	@270': trace to 5% fine gravel								
	S5	@273': Boulders and cobbles								
		@275': 25-30% fine gravel								
	S6	@280': 5-10% fine gravel								
	S7	@285': 10% fine gravel								
		Total depth of exploratory boring: 285'								

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SL 00312

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Well No. 4916F

Boring No. X-Ref: B-3

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: _____

Elevation Ground Level _____

Top of Casing _____

Drilling Summary:

Total Depth 259

Borehole Diameter 9 7/8

Casing Stick-up Height: _____

Driller Howard Pump, Inc.
Barstow, CA 92311

Rig Howard Turner (D-1)

Bit(s) 9 7/8" Button Bit

Drilling Fluid 0-259 = clean water and Bentonite

Protective Casing Annodized Aluminum

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling Button Bit	10/10	1700	10/12	0841
Geophys. Logging:				
Casing:				
C1	10/12	1230	10/12	1300
S1	10/12	1210	10/12	1230
Filter Placement:	10/12	1320	10/12	1515
Cementing:	10/13	1200	10/13	1330
Development:	10/19	1630	10/20	1253

Well Design & Specifications

Basis: Geologic Log X Geophysical Log ___

Casing String (s): C = Casing S = Screen.

Depth	String(s)	Elevation
- 169	C1	-
169 - 254	S1	-
-		-
-		-
-		-

Casing: C1 4½" diameter Sch. 40 pvc flush threaded

C2 _____

Screen: S1 4½" diameter Sch. 40 pvc flush threaded

S2 _____

Filter Pack: 259-254; 163-254 Monterey Sand #3; 161-163 #40 Sand; 60-156 Monterey Sand #3

Grout Seal: 0-60', 5:1 Portland type I & II cement plus Aquagel Gold Seal (Bentonite)

Bentonite Seal: 156-161 Aquagel Gold Seal (Bentonite)

Well Development:

10/19 1630-1730 Bail
10/20 0745-0845 SWAB
10/20 0900-1000 Bail
10/20 1052-1253 Submersible Pump
Total gallons removed: 1380 gallon

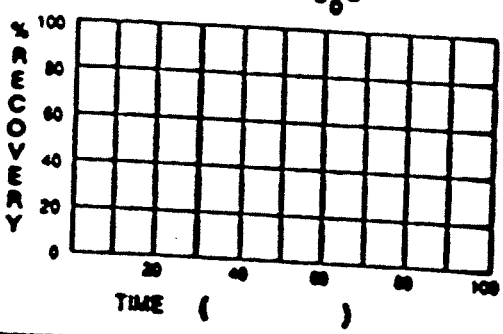
Stabilization Test Data:

All times 10/20/88

Time	pH	Spec. Cond.	Temp (C)
1114	8.55	520	19.74
1126	8.52	510	19.52
1137	8.49	499	19.58
1229	8.36	508	20.35
1243	8.36	506	20.07

Recovery Data:

Q= S_0=



Comments: (1) All dates are 1988

SITE NAME Bradley Landfill

LOCATION Sun Valley, CA

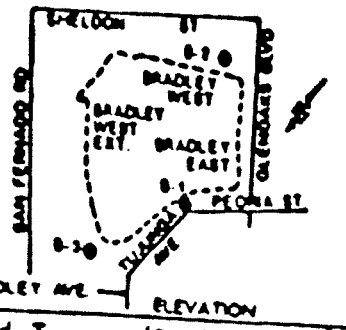
WC 01122

SUPERVISED BY Kurt Easthouse

DATE 10/25/88

BOREHOLE LOG

E NAME AND LOCATION Bradley Landfill, U- Valley, California



DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-3

SHEET 1 OF 7

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING

START	FINISH
TIME 1700	TIME 0841
DATE 10/10/88	DATE 10/12/88

ELEVATION ... MSL

L RIG Howard Turner (D-1)

LE vertical BEARING --

PLE HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level open area at southern position of landfill. Approximately 300' to the NE of Verdugo Fault.

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

BLOWS/6" OR SAMPLE RECOVERY	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT OR CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
		Olive brown (2.5Y 4/4) SILTY SAND, moderate plasticity fines; fine to coarse grained; angular quartz and lithic fragments (SM)	B BB							
		Light olive brown (2.5Y 5/4) SAND, 5% fines; fine to medium grained; 20% coarse grained; angular quartz and lithic fragments (SP-SW)								
		Light olive brown (2.5Y 5/4) SAND, 5% fines; fine to coarse grained; trace fine gravel; angular to sub-angular quartz and lithic fragments (SW)								
		@14.5': Cobbles								
		@15': Trace fines								
		@20': 10% fine gravel; sub-angular to sub-rounded grains								
		@25': Trace coarse gravel								
		@30': 45% fine gravel; 5% coarse gravel								
		@35': 10% fine gravel								

SL 00313

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

O LOCATION

DRILLING METHOD: Mud Rotary

BORING NO. B-3

SHEET 2 OF 7

SAMPLING METHOD: Bag (B)

DRILLING

	START	FINISH
TIME		
DATE		

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

MSL ELEVATION

Howard Turner (D-1)

rtical BEARING --

ER TORQUE -- FT -LBS

SURFACE CONDITIONS Level open area at southern portion of landfill. Approximately 300' to the NE of the Verdugo Fault

DRILLING CONTR Howard Pump. Inc.

Tony Villanueva

SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT OR CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC %	SPECIFIC GRAVITY	OTHER TESTS
	Light olive brown (2.5Y 5/4) SAND (SW) (continued)	B BB							
	@40': 25% fine gravel; angular to sub-angular								
	@45': 5-10% fine gravel								
	@50': 30% fine gravel								
	@55': 20% fine gravel; angular to sub-rounded								
	@60': 15% fine gravel; trace coarse gravel								
	Light olive brown (2.5Y 5/4) SAND to SILTY SAND; 5-12% fines; fine to coarse grained; 25% fine gravel; angular to sub-rounded quartz and lithic fragmants (SW-SM)								
	Light olive brown (2.5Y 5/4) SAND, trace fines; fine to coarse grained; 10% fine gravel; angular quartz and lithic fragments (SW)								
	@74': cobbles								

SL 00400

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

E AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-3

SHEET 5 OF 7

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING: START TIME / DATE; FINISH TIME / DATE

MSL ELEVATION

Howard Turner (D-1)

ertical BEARING --

LUMER TORQUE -- FT.-LBS

SURFACE CONDITIONS: Level open area at southern portion of landfill. Approximately 300' NE of the Verdugo Fault.

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

OIL SAMPLE (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	PI/LIFA PI/LIFB
		Light olive brown (2.5Y 5/4) SAND to SILTY SAND (SW-SM) (continued)	B BB							
		@150': angular to sub-angular grains								
		@155': trace coarse gravel								
		Light olive brown (2.5Y 5/4) SAND, 5% fines; fine to coarse grained; trace fine gravel; angular quartz and lithic fragments (SW)								
		@165': trace to 5% coarse gravel								
		@170': trace fines; 10% fine gravel								
		@172-177': boulders and cobbles								
		@175': 20% fine gravel								
		@180': trace fine gravel								
		@182-191': boulders and cobbles								
		@185': 15% fine gravel; angular to sub-rounded								

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SL 00397

DRILL LOG

NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-3

SHEET 7 OF 7

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING: START TIME / DATE; FINISH TIME / DATE

MSL ELEVATION

Howard Turner (D-1)

vertical BEARING --

HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS: Level open area at southern portion of landfill. Approximately 300' NE of the Verdugo Fault.

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

BLOWS/6" OR RUN LENGTH (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER
		Light olive brown (2.5Y 6/4) SAND to SILTY SAND (SW-SM) (continued)	B BB							
47		@230': 10-15% fine gravel; angular quartz and lithic fragments								
		@232-242': boulders and cobbles								
40		Grayish brown (2.5Y 5/2) to light olive brown (2.5Y 5/4) SAND, trace fines; fine to coarse grained; trace to 5% fine gravel; angular to sub-angular quartz and lithic fragments (SW)								
40		@240': 15% fine gravel								
50		@245': 20% fine gravel; angular to sub-rounded								
		@245-251': boulders and cobbles								
51		@250': 5% fines; trace fine gravel								
		@255': angular to sub-angular grains								
52										
50		@259': 15% fine gravel								
		Total depth of exploratory Boring: 259'								

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SL 00395

Well No. 4926C

Boring No. X-Ref: B-1

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords:

Elevation Ground Level

Top of Casing

Drilling Summary:

Total Depth 284.6

Borehole Diameter 9 7/8"

Casing Stick-up Height:

Driller Howard Pump, Inc. Barstow, California

Rig Howard Turner (D-1)

Bit(s) 9 7/8" Button Bit

Drilling Fluid 0-284.6 = clean water and Bentonite

Protective Casing Annodized Aluminum

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling Button Bit	9/13	1615	9/19	15:20
Geophys. Logging:				
Casing:				
C1	9/20	1430	9/20	1530
S1	9/20	1330	9/20	1430
Filter Placement:	9/20	1530	9/20	1900
Cementing:	9/21	1030	9/21	1230
Development:	10/20	1525	10/21	1245

Well Design & Specifications

Basis: Geologic Log X Geophysical Log ___

Casing String (s): C = Casing S = Screen.

Depth	String(s)	Elevation
- 185	C1	-
185 - 280	S1	-
-		-
-		-
-		-

Casing: C1 4½" diameter Sch. 40 PVC, Flush threaded

C2

Screen: S1 4½" diameter Sch. 40 PVC, Flush threaded

S2

Filter Pack: 280-284.6; 178.5-280 Mont. Sand #3; 176-178.5 no. 40 Sand; 60-171 Monterey Sand #3

Grout Seal: 0-60', 5:1 Portland type I & II cement plus Aquagel Gold Seal, (Bentonite)

Bentonite Seal: 171-176 Aquagel Gold Seal (Bentonite)

Well Development:

10/20 1525-1755 Bail

10/21 0700-0800 SWAB

10/21 0820-0933 Bail

10/21 0935-1245 Submersible Pump

Total gallons removed: 1570 gallon

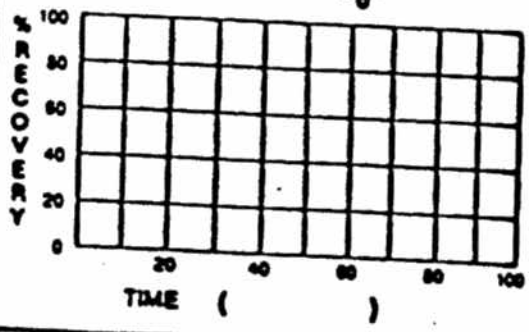
Stabilization Test Data:

All times 10/21/88

Time	pH	Spec. Cond	Temp (C)
1031	7.46	586	22.49
1052	7.29	480	25.41
1131	7.21	484	25.79
1146	7.19	503	25.52
1200	7.22	529	25.08

Recovery Data:

Q= S_o=



Comments: (1) All dates are 1988

SITE NAME Bradley Landfill

LOCATION Sun Valley, CA

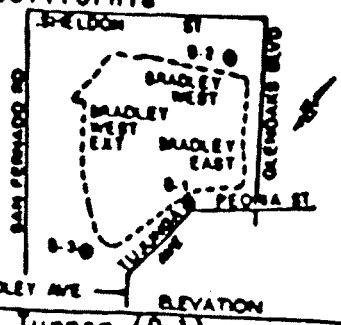
WC 01120

SUPERVISED BY Kurt Easthouse

DATE 10/25/88

SOIL BOREHOLE LOG

TE NAME AND LOCATION Bradley Landfill, Valley, California



TUM MSL ELEVATION

LL RIG Howard Turner (D-1)

OLE vertical BEARING --

MPLE HAMMER TORQUE -- FT.-LBS

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

BORING NO. B-1

SHEET 1 OF 8

DRILLING	
START	FINISH
TIME 1615	TIME 1520
DATE 9/13/88	DATE 9/19/88

SURFACE CONDITIONS Level access road south of Bradley East Landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

(ELEVATION)	BLOWS/ ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	PH
			Pale yellow (2.5Y 7/4) SAND; trace fines; fine to medium grained; 10% coarse grained; fine to coarse gravel; quartz and lithic fragments (SP-SW)	B BB							
			@7': Boulder								
			pale yellow (2.5Y 7/4) SAND; fine to medium grained; angular quartz, lithic and granitic fagments (SW)								
			olive yellow (2.5Y 6/6) SAND; fine to coarse grained; 5% cobbles; angular; quartz, lithics, granitic fragments (SP-SW)								
			@17': Boulder								
			@20': Light olive brown (2.5Y 5/6); 10% cobbles								
			@23': Boulders and cobbles								
			olive yellow (2.5Y 6/6) SAND; fine to coarse grained; 30% fine gravel; angular quartz and lithic fragments (SW)								
			@30': 5% fine gravel								
			@32.5': Boulder								
			@35': 20 to 25% fine gravel								

LOGGED BY Kurt Easthouse / Jeff Hawkins

DATE 10/25/88 CHK'D BY KE

SL 00292

SOIL BOREHOLE LOG

E AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-1

SHEET 2 OF 8

DRILLING START TIME DATE / FINISH TIME DATE

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DATUM MSL ELEVATION

DRILL RIG Howard Turner (D-1)

ANGLE vertical BEARING --

SAMPLE HAMMER TORQUE -- FT-LBS

SURFACE CONDITIONS Level access road south of Bradley East Landfill

DRILLING CONTR Howard Pump, Inc.

Tony Villanueva

ELEVATION	BLOWS/ 6 IN ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	PH/PASTE
10			Dark grayish brown (2.5Y 4/2) SAND, trace fines; fine to coarse grained; 35% fine gravel; angular quartz and lithic fragments (SW)	B BB							
			@40-50': Boulders								
			@45': grayish brown (2.5Y 5/2)								
0			Light brownish gray (2.5Y 6/2) SAND, trace fines; fine to coarse grained; trace fine gravel; angular quartz and lithic fragments (SP-SW)								
			@52-53': Boulder								
5			Light yellowish brown (2.5Y 6/4) SAND; fine to coarse grained; 50% fine gravel; angular quartz and lithic fragments (SW)								
			@60': 5-10% fine gravel								
			@65': trace fines; 15-20% fine gravel								
			@70': 15% fine gravel								
			@75': 5-10% fine gravel								

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SL 00293

SOIL BOREHOLE LOG

E NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-1

SHEET 3 OF 8

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING: START TIME / DATE; FINISH TIME / DATE

UM MSL ELEVATION

L RIG Howard Turner (D-1)

LE vertical BEARING --

PLE HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level access road south of Bradley East Landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

ELEVATION	BLOWS/6" (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	PH
			Light yellowish brown (2.5Y 6/4) SAND (SW) (continued)	B BB							
			@85': trace fine gravel								
			Light yellowish brown (2.5Y 6/4) SAND, fine to medium grained; 15% coarse grained; angular quartz and lithic fragments (SW-SP)								
			@95': 15 to 20% coarse grained								
			Light brownish gray (2.5Y 6/2) SAND, trace fines; fine to coarse grained; 5% fine gravel; angular quartz and lithic fragments (SW)								
			@105': 10% fine gravel								
			@106-112': Boulders								

SL 00294

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

TE NAME AND LOCATION

DRILLING METHOD: Mud Rotary

BORING NO. B-1

SAMPLING METHOD: Bag (B)

SHEET 4 OF 8

DRILLING

					START	FINISH
WATER LEVEL					TIME	TIME
TIME						
DATE					DATE	DATE
CASING DEPTH						

ATUM MSL ELEVATION

ILL RIG Howard Turner (d-1)

OLE vertical BEARING --

AMPLE HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level access road south of Bradley East Landfill

DRILLING CONTR Howard Pump, Inc.

Tony Villanueva

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	PH
15			Light brownish gray (2.5Y 6/2) SAND (SW) (continued)	B BB							
			@112-120': Boulders and cobbles								
			@115': 5% fine gravel								
			@120-130': Boulders and cobbles								
25			@125': 10 to 15% fine gravel; metamorphic, sedimentary and granitic lithic fragments								
30			Light yellowish brown (2.5Y 6/4) GRAVEL, trace fines; 50% fine to coarse sand; fine gravel; angular lithic fragments (GP)								
35			@130-135': Boulders								
40			Light yellowish brown (2.5Y 6/4) SAND, trace fines; fine to coarse grained; 5% fine gravel; angular quartz and lithic fragments (SW)								
			@140': medium to coarse grained; 30% fine grained; 5 to 10% fine gravel								
			@150': fine to coarse gravel...								

SL 00295

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

SITE NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag(B)

BORING NO. B-1

SHEET 5 OF 8

DRILLING START TIME DATE / FINISH TIME DATE

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DATUM MSL ELEVATION

DRILL RIG Howard Turner (D-1)

ANGLE vertical BEARING --

SURFACE CONDITIONS Level access road south of Bradley East landfill

SAMPLE HAMMER TORQUE FT-LBS

DRILLING CONTR Howard Pump, Inc.

Tony Villanueva

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN OR RANGE IN (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	% SOIL OR ROCK CORE	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
150			Light yellowish brown (2.5Y 6/4) SAND (SW) (continued)	B BB							
		31	@154-160': Boulders and cobbles								
160		32	Light brownish gray (2.5Y 6/2) SAND, medium to coarse grained; 20-30% fine grained; angular quartz and lithic fragments (SW-SP)								
			@160': fine to coarse grained								
165		33	@165': trace to 5% fines								
170		34	Light brownish gray (2.5Y 6/2) SAND, trace fines; fine to medium grained; trace coarse grained; quartz and lithic fragments (SP)								
175		35	@175': trace to 5% coarse grained								
		36	@180': 5% coarse grained								
			@184-185': Boulder								
		37	Light brownish gray (2.5Y 6/2) SAND, fine to coarse grained; trace fine gravel; angular quartz and lithic								

SL 00296

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

SITE NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-1

SHEET 6 OF 8

DRILLING START TIME / DATE — FINISH TIME / DATE

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DATUM MSL ELEVATION

DRILL RIG Howard Turner (D-1)

ANGLE vertical BEARING --

SAMPLE HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level access road south of Bradley East Landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

DEPTH IN FEET (ELEVATION)	BLOWS/6" OR RQD (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT OR CAB/%	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	PH/TA TESTS
190			Light brownish gray (2.5Y 6/2) SAND (SW) (continued)	B BB							
			@187': Boulders								
			@190': 15% fine gravel								
			@191': Boulders								
			@195': 10-15% fine gravel								
200			@200': 15-20% fine gravel								
205			@205': 20% fine gravel; angular to sub-angular fragments; rare sub-rourded fragments								
10			@210': 5-10% fine gravel								
			@215': 40-45% fine gravel								
15			olive yellow (2.5Y 6/6) SILTY SAND, low to moderate plasticity, fine to coarse grained; trace fine gravel (SM)								

SL 00282

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

TE NAME AND LOCATION

DRILLING METHOD: Mud Rotary

BORING NO. B-1

SAMPLING METHOD: Bag (B)

SHEET 7 OF 8

DRILLING

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

START: TIME / DATE

FINISH: TIME / DATE

TUM MSL ELEVATION

LL RIG Howard Turner (D-1)

GLE vertical BEARING --

MPLE HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level access road south of Bradley East Landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

ELEVATION	BLOWS/6" ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	OTHER TESTS
25			olive yellow (2.5Y 6/6) SILTY SAND (SM) (continued)	B BB							
			olive yellow (2.5Y 6/6) SAND to SILTY SAND, low plasticity; fine to coarse grained; lithic fragments (SP-SM)								
15			olive yellow (2.5Y 6/6) SAND to SILTY SAND, low plasticity; fine to coarse grained; trace to 5% fine gravel (SW-SM)								
			@237': Boulders and cobbles								
0			Light yellowish brown (2.5Y 6/4) SAND, trace fines; fine to coarse grained; trace fine grained; angular quartz and lithic fragments (SW)								
5			@245-250': Boulders and cobbles								
			@250': 30% fine gravel								
			@252-254': Boulders and cobbles								
			Light yellowish brown (2.5Y 6/4) SAND, trace to 5% fines; fine to coarse grained; quartz and lithic fragments (SW-SP)								
			@257-262': Boulders and cobbles								

SL 00297

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

SOIL BOREHOLE LOG

NAME AND LOCATION

DRILLING METHOD: Mud Rotary

SAMPLING METHOD: Bag (B)

BORING NO. B-1

SHEET 8 OF 8

DRILLING START TIME DATE / FINISH TIME DATE

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

ELEVATION MSL

Howard Turner (D-1)

vertical BEARING --

HAMMER TORQUE -- FT.-LBS

SURFACE CONDITIONS Level access road south of Bradley East landfill

DRILLING CONTR. Howard Pump, Inc.

Tony Villanueva

SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT OR CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	SPECIFIC GRAVITY	PINHOLE TESTS
		Light yellowish brown (2.5Y 6/4) SAND (SW-SP) (continued)	B							
		@265': trace fines	BB							
		Light olive brown (2.5Y 5/4) SAND, trace to 5% fines; fine to medium grained; trace coarse grained; angular quartz and lithic fragments (SP)								
		Light olive brown (2.5Y 5/4) SAND, trace fines; fine to medium grained; 10% coarse grained; angular quartz and lithic fragments (SW-SP)								
		@275-276': Boulders								
		@280': trace to 5% fines; 25% coarse grained								
		@284.6': trace fine gravel								
		Total depth of Exploratory Boring: 284.6'								

SL 00304

LOGGED BY Kurt Easthouse

DATE 10/25/88 CHK'D BY KE

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4928C-1

SHEET: 1 OF 13

DRILLING START: TIME 1230, DATE 06/29/90

DRILLING FINISH: TIME 0930, DATE 07/03/90

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DATUM: MSL ELEVATION: TBD

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
0.0			Light moderate brown, poorly-graded SILTY SAND w/ gravel (SM); 70% fine to medium sand; 25% silt; 5% fine gravel								
5.0											
10.0			Light olive brown well-graded SAND w/ gravel, trace silt, occ. cobble (SW); 90% fine to coarse sand; 8% fine to coarse gravel; 0-2% silt; 0-2% cobble (5" max); angular to surrounded lithic fragments	3s B.IN							
15.0											
20.0				2s B.IN							
25.0											

DRILLING CONTR: Layne Environmental Services

Homer Smallman

SL 9339 C

LOGGED BY: Eric Eastman

DATE: 8/20/90 CHKD BY: J.D.S.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Brodley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

BORING NO.: 4926C-1

SAMPLING METHOD: Bulk samples

SHEET: 2 OF 13

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DRILLING: START TIME 1230 DATE 06/29/90; FINISH TIME 0930 DATE 07/03/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill.

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
30.0			Light olive brown well-graded SAND w/ gravel, trace silt, occ. cobble (SW); 90% fine to coarse sand; 8% fine to coarse gravel; 0-2% silt; 0-2% cobble (5" max); angular to surounded lithic fragments. ● 47": cobbles and boulders								
35.0											
40.0											
45.0											
50.0											
55.0											

DRILLING CONTR: Layne Environmental Services

Hamer Smallhan

SL 9340 C

LOGGED BY: Eric Eastham

DATE: 8/28/90 CHKD BY: J.D.B.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 3 OF 13

DRILLING START: TIME 1230, DATE 06/29/90

DRILLING FINISH: TIME 0930, DATE 07/03/90

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill

DRILLING CONTR: Layne Environmental Services

Hammer Smallbore

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
60.0			Light olive brown well-graded SAND w/ gravel, trace silt, occ. cobble (SW); 90% fine to coarse sand; 8% fine to coarse gravel; 0-2% silt; 0-2% cobble (5" max); angular to surounded lithic fragments. ● 64'-66': cobbles (6" max)								
65.0											
70.0			Light gray, poorly-graded GRAVELLY SAND w/ cobbles (SP); 80% medium to coarse sand; 30% fine to coarse gravel; 10% cobbles (6" max); angular to subrounded lithic fragments								
75.0											
80.0											
85.0			Moderate brown, well-graded SAND w/ gravel and cobbles (SW); 80% fine to coarse sand; 10% fine to coarse gravel; 10% cobbles (6" max); angular to subrounded lithic fragments								

LOGGED BY: Eric Fordham

DATE: 6/29/90 CHKD BY: J.D.S.

SL 9341 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 4 OF 13

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DRILLING — START: TIME 1230, DATE 06/29/90; FINISH: TIME 0930, DATE 07/03/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BEARING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
90.0			Moderate brown, well-graded SAND w/ gravel and cobbles (SW); 80% fine to coarse sand; 10% fine to coarse gravel; 10% cobbles (6" max); angular to subrounded lithic fragments								
95.0											
100.0				30s Bulk							
105.0											
110.0				31s Bulk							
115.0											

DRILLING CONTR: Layne Environmental Services

Homer Smallman

SL 9342 C

LOGGED BY: Eric Fentman

DATE: 6/29/90 CHKD BY: J.D.S.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

BORING NO.: 4526C-1

SAMPLING METHOD: Bulk samples

SHEET: 5 OF 13

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DRILLING: START TIME 1230 DATE 06/29/90; FINISH TIME 0930 DATE 07/03/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
120.0			Moderate brown, well-graded SAND w/ gravel, occ. 64cobble (SW); 90% fine to coarse sand; 8-10% fine to coarse gravel; 0-2% cobbles (6" max); angular to subrounded lithic fragments. ● 147': boulder								
125.0											
130.0				13" B.W.							
135.0											
140.0				14" B.W.							
145.0											

TEST RESULTS

DRILLING CONTR: Layne Environmental Services

Hanner Smallbon

SL 9343 C

LOGGED BY: Eric Eccleson

DATE: 8/29/90 CHKD BY: J.D.S.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 6 OF 13

						DRILLING START	DRILLING FINISH
WATER LEVEL	277'					TIME 1230	TIME 0930
TIME	0740						
DATE	7/03/90					DATE 06/29/90	DATE 07/03/90
CASING DEPTH	300'						

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BEARING

SAMPLE HAMMER TYPE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill.

DRILLING CONTR: Layne Environmental Services

Hamer Smathers

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
150.0			Light gray, poorly-graded SANDY GRAVEL w/ occ. cobbles (GP); 60% coarse gravel; 35-40% medium to coarse sand; 0-5% cobbles (4" max)								
155.0											
			Moderate brown, well-graded SAND w/ gravel and cobbles (SW); 80% fine to coarse sand; 10% fine to coarse gravel; 10% cobbles (5" max); angular to subrounded lithic fragments. ● 164': cobbles (6" max). ● 175': cobbles (4" max)								
160.0				164 B.H.							
165.0											
170.0				175 B.H.							
175.0											

LOGGED BY: Eric Fordham

DATE: 8/20/90 CHKD BY: J.D.S.

SL 93447 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 7 OF 13

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DRILLING — START: TIME 1230, DATE 06/29/90; FINISH: TIME 0930, DATE 07/03/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill.

DRILLING CONTR: Layne Environmental Services — Homer Smathers

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
180.0			Light olive brown, poorly-graded GRAVELLY SAND w/ cobbles (SP); 60% medium to coarse sand; 30% fine to coarse gravel; 10% cobbles (8" max); angular to subrounded lithic fragments								
185.0											
190.0				30L Bulk							
195.0											
200.0				30L Bulk							
205.0											

LOGGED BY: Erin Fordham

DATE: 6/29/90 CHKD BY: J.D.S.

SL 9345 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 8 OF 13

DRILLING: START TIME 1230 DATE 06/29/90; FINISH TIME 0930 DATE 07/03/90

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill.

DRILLING CONTR: Layne Environmental Services — Hoover, Jonathan

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
210.0			Light olive brown, well-graded SAND w/ gravel, occ. cobbles (SW); 90% fine to coarse sand; 8-10% fine to coarse gravel; 0-2% cobbles (5" max)								
215.0											
220.0				22: B.1b							
225.0											
230.0				23: B.1b							
235.0											

LOGGED BY Eric Forsman

DATE 6/29/90 CHKD BY J.D.S.

SL 9346 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 9 OF 13

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DRILLING	START	FINISH
TIME	1230	0930
DATE	06/29/90	07/03/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill.

DRILLING CONTR: Layne Environmental Services

Homer Smallman

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
240.0			Light olive brown, well-graded SAND w/ gravel, occ. cobbles (SW); 90% fine to coarse sand; 8–10% fine to coarse gravel; 0–2% cobbles (5" max). ● 244': gravel and cobbles (8" max.)								
245.0											
250.0			Light olive brown, well-graded GRAVELLY SAND w/ cobbles (SW); 70% fine to coarse sand; 20% fine to coarse gravel; 10% cobbles (8" max.). ● 265'–270': gravel and cobbles (5" max.)	25s B.1b							
255.0											
260.0				26s B.1b							
265.0											

LOGGED BY: Eric Eastman

DATE: 8/20/90 CHKD BY: J.D.S.

SL 9347 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 10 of 13

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DRILLING	START	FINISH
TIME	1230	0930
DATE	06/29/90	07/03/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TOPOLE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
270.0			Lt brown, well-graded GRAV SAND w/cobbles (SW; 70% f/c sand; 20% f/c gravel; 10% cobbles (8" max.)								
275.0			Moderate brown, well-graded SAND w/ gravel, trace silt (SW); 90% fine to coarse sand; 5-10% fine to coarse gravel; 0-5% silt								
280.0			Light olive brown, poorly-graded SAND w/ gravel, occ. cobble (SP); 90% medium sand; 8-10% fine gravel, 0-2% cobble. @ 285': gravel & cobbles (5" max); @ 290': fine to medium sand	2Bx Bulk							
285.0											
290.0				2Bx Bulk							
295.0											

DRILLING CONTR: Layne Environmental Services

Hamer Smallman

SL 9348 C

LOGGED BY: Eric Freeman

DATE: 6/29/90

CHKD BY: J.D.S.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 11 of 13

DRILLING: START TIME 1230 DATE 06/29/90; FINISH TIME 0930 DATE 07/03/90

WATER LEVEL	277'			
TIME	0740			
DATE	7/03/90			
CASING DEPTH	300'			

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill.

DRILLING CONTR: Longs Environmental Services — Homer Smallman

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
300.0			Light olive brown, poorly-graded SAND w/ gravel, occ. cobble (SP); 90% medium sand; 8-10% fine gravel, 0-2% cobble (4" max.); angular to subrounded lithic fragments. ● 312': cobbles (5" max.)								
305.0											
310.0				31: Bulk							
315.0											
320.0				32: Bulk							
325.0											

LOGGED BY Eric Eastman DATE 6/29/90 CHKD BY J.D.S.

SL 9349 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 12 of 13

WATER LEVEL	277'				DRILLING START TIME	DRILLING FINISH TIME
TIME	0740				1230	0930
DATE	7/03/90				DATE 06/29/90	DATE 07/03/90
CASING DEPTH	300'					

DATUM: MSL ELEVATION:

DRILL RIG: AP-1000

ANGLE: Vertical BEARING:

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill

DRILLING CONTR: Layne Environmental Services

Hammer Smallman

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
330.0			Light olive brown, poorly-graded SAND w/ gravel, occ. cobble (SP); 90% medium sand; 8-10% fine gravel, 0-2% cobble (4" max.); angular to subrounded lithic fragments								
335.0											
340.0				SB4 B.11							
345.0											
350.0				SB4 B.11							
355.0											
			Moderate brown SANDY SILT, trace clay (ML); 70% silt, 28-30% sand, 0-2% clay [illegible]								

LOGGED BY: Eric Forshee

DATE: 8/20/90 CHKD BY: J.D.S.

SL 9350 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk samples

BORING NO.: 4926C-1

SHEET: 13 of 13

WATER LEVEL	277'				
TIME	0740				
DATE	7/03/90				
CASING DEPTH	300'				

DRILLING: START TIME 1230 DATE 06/29/90; FINISH TIME 0930 DATE 07/03/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved road at east side of landfill.

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
360.0			Moderate brown SANDY SILT, trace clay (ML); 70% silt; 28-30% sand; 0-2% clay; low plasticity								
			Lt brn, poorly-graded SAND w/ gravel (SP); 90% m/c sand; 10% f/c gravel	57: Bulk							
365.0			Total depth at 364'								
370.0											
375.0											
380.0											
385.0											

DRILLING CONTR: Layne Environmental Services

Hamer Smallbon

SL 9351 C

LOGGED BY: Eric Epothem

DATE: 6/29/90 CHKD BY: J.D.S.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk and Drive samples

BORING NO.: 4916F-1

SHEET: 1 of 12

					DRILLING START	DRILLING FINISH
WATER LEVEL	256'				TIME 1000	TIME 0416
TIME	1120					
DATE	6/26/90				DATE 06/25/90	DATE 06/26/90
CASING DEPTH	260'					

DATUM: MSL ELEVATION: TBD

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
0.0			Light olive brown SILTY SAND w/ gravel (SM); 75% fine to coarse sand; 10% fine gravel; 15% fines; angular to subrounded quartz and lithic fragments								
5.0											
10.0				1s 8.1ft							
15.0											
20.0			Light olive brown, well-graded SAND w/ gravel, occ. cobble (SW); 90% fine to coarse sand; 8 – 10% fine gravel; 0 – 2% cobbles (4" max)	2s 8.1ft							
25.0											

DRILLING CONTR: Layne Environmental Services — Hamer Southern

SL 9327 C

LOGGED BY: Eric Eastman

DATE: 8/25/90 CHKD BY: J.D.S.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

BORING NO.: 4916F-1

SAMPLING METHOD: Bulk and Drive samples

SHEET: 2 of 12

WATER LEVEL	256'			
TIME	1120			
DATE	8/28/90			
CASING DEPTH				

DRILLING — START: TIME 1000, DATE 08/25/90; FINISH: TIME 0416, DATE 08/26/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DRILLING CONTR: Layne Environmental Services — Hedger Southern

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
30.0			Light olive brown, well-graded SAND w/ gravel, occ. cobble (SW); 90% fine to coarse sand; 8 – 10% fine gravel; 0 – 2% cobbles (4" max)								
35.0											
40.0				Sp B.U.							
45.0											
50.0				Sp B.U.							
55.0											

LOGGED BY: Eric Fordham

DATE: 8/25/90 CHKD BY: J.D.S.

SL 9328 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk and Drive samples

BORING NO. 4916F-1

SHEET 3 OF 12

DRILLING: START TIME 1000 DATE 06/25/90; FINISH TIME 0416 DATE 06/26/90

WATER LEVEL	256'			
TIME	1120			
DATE	6/26/90			
CASING DEPTH				

DATUM MSL ELEVATION

DRILL RIG AP-1000

ANGLE Vertical BORING

SAMPLE HAMMER TORQUE N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DRILLING CONTR. Longs Environmental Services

Hammer Smallman

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
60.0			Light olive brown, well-graded SAND w/ gravel, occ. cobble (SW); 90% fine to coarse sand; 8 - 10% fine gravel; 0 - 2% cobbles (4" max)								
65.0											
70.0				3" Bulk							
			Light olive brown, well-graded GRAVELLY SAND w/ cobbles (SW); 30% fine to coarse gravel; 60% fine to coarse sand; 10% cobbles (5" max) ● 80': cobbles (8" max)								
75.0											
80.0				3" Bulk							
85.0			Moderate brown, well-graded SAND w/ gravel and cobbles (SW); 80% fine to coarse sand; 10% fine to coarse gravel; 10% cobbles (5" max.); angular to subangular lithic fragments								

LOGGED BY Eric Fordham DATE 6/25/90 CHKD BY J.D.S.

SL 9329 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk and Drive samples

BORING NO. 4916F-1

SHEET 4 OF 12

WATER LEVEL	256'			
TIME	1120			
DATE	6/26/90			
CASING DEPTH				

DRILLING: START TIME 1000 DATE 06/25/90; FINISH TIME 0416 DATE 06/26/90

DATUM MSL ELEVATION

DRILL RIG AP-1000

ANGLE Vertical BORING

SAMPLE HAMMER TORQUE N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DRILLING CONTR. Layne Environmental Services

Hammer Smathers

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
90.0			Moderate brown, well-graded SAND w/ gravel and cobbles (SW); 80% fine to coarse sand; 10% fine to coarse gravel; 10% cobbles (3" max.); angular to subangular lithic fragments ● 118': cobbles (6" max)								
95.0											
100.0				30s 8.1in							
105.0											
110.0				31s 8.1in							
115.0											

LOGGED BY Eric Fenton DATE 8/23/90 CHKD BY J.D.S.

SL 9330 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, Californ

DRILLING METHOD: D.T-well percussion hammer

BORING NO.: 4916F-1

SAMPLING METHOD: D.T and Drive Samples

SHEET: 5 of 12

WATER LEVEL	251			
TIME	1120			
DATE	6/26/90			
CASING DEPTH				

DRILLING	START	FINISH
TIME	1000	0416
DATE	6/25/90	6/26/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: n/a

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of longfill

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
120.0			Light olive brown, well-graded SAND w/gravel and cobbles (SW); 80% f/c sand; 10% f/c gravel; 10% cobbles (8" max).								
125.0											
130.0			13	13a D.T.							
135.0											
140.0			14 Light olive brown SAND w/trace gravel (SP); 98% f/m sand; 2% fine gravel	14a D.T.							
145.0											

DRILLING CONTR: Layne Environmental Services

Harper Southern

SL 9331 C

LOGGED BY: Eric Eastham

DATE: 6/26/90

CHKD BY: J.D.S.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

BORING NO.: 4916F-1

SAMPLING METHOD: Bulk and Drive samples

SHEET: 6 of 12

WATER LEVEL	256'			
TIME	1120			
DATE	8/28/90			
CASING DEPTH				

DRILLING — START: TIME 1000, DATE 06/25/90; FINISH: TIME 0416, DATE 06/26/90

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DRILLING CONTR: Layne Environmental Services — Hanner Smallman

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
150.0			Light olive brown, well-graded SAND w/ gravel and cobbles (SW); 85% fine to coarse sand; 10% fine to coarse gravel; 5% cobbles (5" max.); angular to subangular lithic fragments ● 165': cobbles (6" max)								
155.0											
160.0				30s Bulk							
165.0											
170.0				37s Bulk							
175.0											

LOGGED BY: Erin Fastham DATE: 8/25/90 CHKD BY: J.D.S.

SL 9332 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk and Drive samples

BORING NO. 4916F-1

SHEET 7 OF 12

DRILLING

	START	FINISH
TIME	1000	0416
DATE	06/25/90	06/26/90

WATER LEVEL	256'			
TIME	1120			
DATE	6/26/90			
CASING DEPTH				

DATUM MSL ELEVATION

DRILL RIG AP-1000

ANGLE Vertical BORING

SAMPLE HAMMER TORQUE N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DRILLING CONTR. Loans Environmental Services

HAMMER Smallbore

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
180.0			Light olive brown, well-graded SAND w/ gravel and cobbles (SW); 85% fine to coarse sand; 10% fine to coarse gravel; 5% cobbles (5" max.); angular to subangular lithic fragments								
185.0											
190.0				30lb P.Tn							
195.0											
200.0			Light olive brown, well-graded SAND w/ gravel, occ. cobble, trace silt (SW); 90% fine to coarse sand; 8-10% fine to coarse gravel; 0-2% cobbles (5" max)	30lb P.Tn							
205.0											

LOGGED BY Eric Eccleston

DATE 6/25/90

SL 9333 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk and Drive samples

BORING NO.: 4916F-1

SHEET: 8 OF 12

						DRILLING START	DRILLING FINISH
WATER LEVEL	256'					TIME 1000	TIME 0416
TIME	1120					DATE 06/25/90	DATE 06/26/90
DATE	6/28/90						
CASING DEPTH							

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DRILLING CONTR: Layne Environmental Services — Homer Smothers

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
210.0			Light olive brown, well graded SAND w/ gravel, occ. cobble, trace silt (SW); 90% fine to coarse sand, 8-10% fine to coarse gravel; 0-2% cobbles - max.). ● 227': cobbles (5" max) ● 231' & 235' to 243': cobbles (6" max)								
215.0											
220.0				2B3 Bulk							
225.0											
230.0				2B4 Bulk							
235.0											

LOGGED BY: Eric Fredman

DATE: 6/25/90 CHKD BY: J.D.S.

SL 9334 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk and Drive samples

BORING NO.: 4916F-1

SHEET: 9 of 12

WATER LEVEL	256'			
TIME	1120			
DATE	8/28/90			
CASING DEPTH				

DRILLING	START	FINISH
TIME	1000	0416
DATE	06/25/90	06/26/90

DATUM: MSL ELEVATION:

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DRILLING CONTR: Layne Environmental Services

Hamer Smathers

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
240.0			Light olive brown, well-graded SAND w/ gravel, occ. cobbles, trace silt (SW); 90% fine to coarse sand; 8-10% fine to coarse gravel; 0-2% cobbles (5" max.)								
245.0			Light olive brown, well graded GRAVELLY SAND w/ silt, occ. cobble (SW-SM); 65% fine to coarse sand, 25% fine to coarse gravel; 8 - 10% silt; 0 - 2% cobbles (6" max.)								
250.0											
255.0											
260.0			Light yellowish brown, well-graded GRAVELLY SAND, trace silt, occ. cobble (SW); 80% fine to coarse sand; 15 - 20% fine to coarse gravel; 0 - 3% cobbles (5" max.)								
265.0											

LOGGED BY: Eric Eccleston

DATE: 8/23/90. CHKD BY: J.D.S.

SI 9335 C

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

BORING NO.: 4916F-1

SAMPLING METHOD: Bulk and Drive samples

SHEET: 10 of 12

WATER LEVEL	256'			
TIME	1120			
DATE	6/26/90			
CASING DEPTH				

DRILLING	START	FINISH
TIME	1000	0416
DATE	06/25/90	06/26/90

DATUM: MSL ELEVATION:

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, ungraved pad at rim of quarry south of landfill.

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
270.0			Light yellowish brown, well-graded GRAVELLY SAND, trace silt, occ. cobble (SW); 80% fine to coarse sand; 15 - 20% fine to coarse gravel; 0 - 5% cobbles (5" max.)								
275.0											
280.0				2B4 Bulk							
285.0											
290.0			Light yellowish brown GRAVELLY SAND (SW); 85% fine to coarse sand; 15% fine gravel; angular to subangular quartz and lithic fragments	2B4 Bulk							
295.0											

DRILLING CONTR: Layne Environmental Services

Homer Smallman

SL 9336 C

LOGGED BY: Eric Eastman

DATE: 6/25/90

CHKD BY: J.D.S.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Bradley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk and Drive samples

BORING NO.: 4916F-1

SHEET: 11 OF 12

DRILLING — START: TIME 1000, DATE 06/25/90; FINISH: TIME 0416, DATE 06/26/90

WATER LEVEL	256'			
TIME	1120			
DATE	8/26/90			
CASING DEPTH				

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
300.0			Light yellowish brown GRAVELLY SAND (SW); 85% fine to coarse sand; 15% fine gravel; angular to subangular quartz and lithic fragments								
305.0											
			Moderate brown SANDY SILT w/ trace clay, trace gravel (ML); slightly plastic								
310.0	9			SS1 B.1b							Sieve
			Moderate brown, poorly-graded SAND, trace silt, trace gravel (SP); 95% med. to coarse sand; <5% silt; <5% fine gravel								
315.0											
320.0				SS2 B.1b							
325.0											

DRILLING CONTR: Layne Environmental Services

HAMMER: Breather

SL 9337 C

LOGGED BY: Eric Eastman

DATE: 8/25/90

CHKD BY: J.D.S.

Golder Associates Inc.

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: Brodley Landfill, Sun Valley, California

DRILLING METHOD: Dual-wall percussion hammer

SAMPLING METHOD: Bulk and Drive samples

BORING NO.: 4916F-1

SHEET: 12 OF 12

					DRILLING START	DRILLING FINISH
WATER LEVEL	256'				TIME 1000	TIME 0416
TIME	1120				DATE 06/25/90	DATE 06/26/90
DATE	6/29/90					
CASING DEPTH						

DATUM: MSL ELEVATION

DRILL RIG: AP-1000

ANGLE: Vertical BORING

SAMPLE HAMMER TORQUE: N/A

SURFACE CONDITIONS: Level, unpaved pad at rim of quarry south of landfill.

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
330.0			Moderate brown, well-graded SAND w/ silt, trace gravel (SW-SM); 90% fine to coarse sand; 10% silt								
335.0											
			Moderate brown SILTY SAND, trace clay (SM); 80% fine sand; 20% silt; low plasticity	Bulk							
340.0			Total Depth at 339'								
345.0											
350.0											
355.0											

DRILLING CONTR: Layne Environmental Services

HAMMER: Smathers

SL 9338 C

LOGGED BY: Eric Carlson

DATE: 6/25/90

CHKD BY: J.D.S.

TABLE 2-2

Cross References for Assigned Well Numbers

Borehole Number	Survey Point	Assigned Well Number
4915C-1	A	4915D
4915C-2	B	4915E
4916H-1	C	4916J

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Well Reverse Circulation with Percussion Hammer	BORING NO. 4915C-1
	SAMPLING METHOD:	SHEET 1 of 7
		DRILLING START / FINISH
	WATER LEVEL: 271.8	TIME 15:10 / TIME 16:39
	TIME: 07:00	
	DATE: 1/15/92	DATE 1/10/92 / DATE 1/14/92
DATUM: MSL ELEVATION: 864.4	CASING DEPTH: 327.5	
DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area	
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker	
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California	

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
0.0			SAND, BOULDERS AND COBBLES (AF)								
			SILTY SAND (AF): Moist								
5.0			GRAVELLY SAND (SW): Light olive gray (5Y 5/2), 80% very fine to coarse sand, 15% gravel and cobbles, 5% silt, slightly moist								
10.0											
15.0											
20.0			GRAVELLY SAND (SP): Light olive gray (5Y 5/2), 75% fine to coarse sand, 25% gravel and cobbles, cobble lith includes granite, granodiorite, diorite, quartzite and gneissic (biotite foliated) rocks								
25.0											
30.0			SAND (SP): Moderate yellowish brown (10YR 5/4), 85% medium to very coarse sand, 15% gravel and cobbles in thin interbeds throughout								
35.0											
40.0			@ 40': Increased gravel/cobble zones								
45.0											
50.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4915C-1	
	SAMPLING METHOD:					SHEET 2 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	271.8				TIME 15:10	TIME 16:39
	TIME	07:00					
	DATE	1/15/92				DATE 1/10/92	DATE 1/14/92
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH	327.5					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
50.0			GRAVEL AND COBBLES (GW): Large metamorphic (gniessic, dioritic) boulder								
			GRAVELLY SAND (SP): No silt or clay, 40% gravel, 60% coarse to very coarse sand								
55.0											
60.0			BOULDERS AND COBBLES (GW): Angular fragments of broken rock coming out								
65.0			GRAVEL AND COBBLES (GW): 40% cobbles, 40% gravel, 20% medium sand								
			SANDY GRAVEL (GP): Medium sand 15 to 20%, fines 10%, gravel 70%								
70.0			GRAVELLY SAND (SP): Light brown (5YR 6/4), fine to coarse sand 60%, 30 to 35% gravel, 5 to 10% fines								
			SAND (SP): Light brown (5YR 6/4), 80% medium to coarse sand, medium gravel 15%, approximately 5% fines								
75.0			GRAVELLY SAND (SP): Light to moderate brown (5YR 6/4 to 5YR 4/4), 25% gravel, 70% medium to coarse sand, 5% fines								
80.0											
85.0			@ 86': Decrease in amount of gravel to 15%, 75 to 80% medium grained sand, yellow brown, approximately 10% fines								
90.0			SANDY GRAVEL (GP): Light brown (5YR 6/4), medium to coarse sand (45%), 2" to 3" gravel 50%, minor fines 5%								
95.0			SAND (SP): Pale yellow brown (10YR 6/2), coarse sand 80%, 15 to 20% gravel, coarse sand								
			SANDY GRAVEL (GP): Yellow green, medium to coarse sand 40 to 45%, 1" to 3" gravel 50%, 5% fines								
100.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer	BORING NO. 4915C-1
	SAMPLING METHOD:	SHEET 3 of 7
		DRILLING START / FINISH
	WATER LEVEL 271.8	TIME 15:10 / TIME 16:39
	TIME 07:00	
	DATE 1/15/92	DATE 1/10/92 / DATE 1/14/92
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH 327.5	
DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area	
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker	
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California	

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
100.0			GRAVELLY SAND TO SANDY GRAVEL (SP to GP): Yellow brown (10YR 6/2) 50% gravel, 50% medium sand, minor fines								
105.0			@ 106': Decrease in gravel to 30%								
110.0			GRAVELLY SAND (SP): Moderate yellow brown (10YR 5/4), medium sand (75%), moderate gravel (20%) minor clay (5%)								
115.0			BOULDERS: 114' to 120' (Angular fragments only)								
120.0			SANDY GRAVEL (GP): Moderate yellowish brown (10YR 5/4)								
125.0			GRAVELLY SAND (SP): Moderate yellowish brown (10YR 5/4), 80% medium sand, 15% gravel, 5% fines								
			@ 128': Increase in gravel and coarse sand to 30% gravel								
130.0			@ 131': Moderate yellowish brown (10YR 5/4), 70% medium sand, 25% gravel, 5% fines								
135.0			@ 138': Decrease in gravel to 20%								
140.0			SANDY GRAVEL (GW): Dark yellow brown (10YR 4/2), 40% sand with 60% fine to coarse gravel, cobbles and scattered boulders								
145.0											
150.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4915C-1	
	SAMPLING METHOD:					SHEET 4 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	271.8				TIME 15:10	TIME 16:39
	TIME	07:00					
	DATE	1/15/92				DATE 1/10/92	DATE 1/14/92
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH	327.5					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
150.0			COBBLES: Up to 2" diameter, little or no sand								
155.0			SAND TO GRAVELLY SAND (SP): Moderate yellowish brown (10YR 5/4), 80 to 85% medium to coarse sand, 15 to 20% gravel, little or no fines, slightly moist								
160.0											
165.0			SAND (SP): Dark yellowish brown (10YR 4/2), 90% fine to medium sand, 10% coarse sand, gravel and cobbles @ 167': Moderate brown (5YR 4/4), 90% medium to coarse sand, 10% gravel, slightly moist								
170.0			COBBLES AND BOULDERS: GRAVELLY SAND (SP): Moderate brown (5YR 4/4), 40% gravel, cobbles, boulders, 60% sand								
175.0											
180.0											
185.0											
190.0			INTERBEDDED GRAVELLY SAND TO SANDY GRAVEL (SP to GP): Pale yellowish brown (10YR 6/2), fine to coarse sands with interbedded gravelly zones, dry								
195.0											
200.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4915C-1	
	SAMPLING METHOD:					SHEET 5 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	271.8				TIME 15:10	TIME 16:39
	TIME	07:00					
	DATE	1/15/92				DATE 1/10/92	DATE 1/14/92
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH	327.5					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
200.0			INTERBEDDED GRAVELLY SAND TO SANDY GRAVEL (SP to GP): Pale yellowish brown (10YR 6/2), dry								
205.0			SAND (SP): Moderate yellowish brown (10YR 5/4), 85% medium to coarse sand, 15% cobbles, slightly moist								
210.0			@ 210': Increase in coarse sand								
215.0											
220.0											
225.0											
			GRAVELLY SAND (SP): 40% gravel, 60% fine to coarse sand, dry								
230.0											
235.0											
240.0											
245.0											
			COBBLES AND BOULDERS: 247' to 249'								
250.0			SAND TO GRAVELLY SAND (SP): 80 to 90% fine to very coarse sand, 10 to 20% fine to coarse gravel and cobbles								

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL Sun Valley, California	**DRILLING METHOD:** Dual Wall Reverse Circulation with Percussion Hammer	**BORING NO.** 4915C-1
	SAMPLING METHOD:	**SHEET** 6 of 7
		DRILLING START / FINISH
	WATER LEVEL: 271.8	TIME START: 15:10 / TIME FINISH: 16:39
	TIME: 07:00	
	DATE: 1/15/92	DATE START: 1/10/92 / DATE FINISH: 1/14/92
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH: 327.5	
DRILL RIG: AP-1000	**SURFACE CONDITIONS:** Flat roughly graded area	
ANGLE: Vertical BEARING:	**LOGGED BY:** James V. Bunker	
SAMPLE HAMMER TORQUE:	**DRILLING CONTRACTOR:** Layne Environmental, Inc., Fontana, California	

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
250.0			SANDY GRAVEL (GP): Grayish green (10GY 5/2), 30% coarse sand, 70% fine to coarse gravel and cobbles with large boulder(s) at 252' to 254'								
255.0			GRAVELLY SAND (SW): Moderate yellowish brown (10YR 5/4), 80 to 90% fine to very coarse sand, 10 to 20% fine to coarse gravel and cobbles								
260.0											
265.0											
270.0											
275.0			GRAVELLY SAND (SP): Moderate yellowish brown (10YR 5/4), 15 to 20% fine to medium gravel, 80 to 85% medium to coarse sand								
280.0											
285.0			BOULDER/COBBLES (GP): at 281' to 283' merging to sandy cobbles at 283' to 289'								
290.0			GRAVELLY SAND (SP): Moderate yellowish brown (10YR 5/4), 20% gravel, 80% medium to very coarse sand with cobble bed from 294' to 296'								
295.0											
300.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer	BORING NO. 4915C-1
	SAMPLING METHOD:	SHEET 7 of 7
		DRILLING START / FINISH
	WATER LEVEL: 271.8	TIME 15:10 / TIME 16:39
	TIME: 07:00	
	DATE: 1/15/92	DATE 1/10/92 / DATE 1/14/92
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH: 327.5	
DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area	
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker	
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California	

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
300.0			GRAVELLY SAND (SP): Moderate yellowish brown (10YR 5/4), 10 to 20% fine to coarse gravel with occasional cobbles, 80 to 90% medium to coarse sand								
305.0											
310.0											
			BOULDERS/COBBLES								
315.0			GRAVELLY SAND (SP): Same as interval from 289' to 312'								
320.0											
325.0											
			TD at 327.5' at 16:39 1/14/92								
330.0											
335.0											
340.0											
345.0											
350.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4915C-2	
	SAMPLING METHOD:					SHEET 1 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	268.7				TIME 14:25	TIME 15:15
	TIME	07:30					
	DATE	12/13/91				DATE 12/9/91	DATE 12/13/91
DATUM: MSL ELEVATION: 923.9'	CASING DEPTH	295					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat Berm/Pad Built out on to Drainage Ditch
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
0.0			SAND (AF): Pale yellowish brown (10YR 6/2); 80% fine to very coarse sand, 10% silt, 10% gravel up to 1" diameter (large rock fragments), damp								
5.0											
10.0											
15.0			GRAVELLY SAND (SP): Pale yellowish brown (10YR 6/2; dry) to moderate yellowish brown (10YR 5/4; wet); 15 to 20% fine to coarse gravel with 5% cobbles up to 5" in diameter (gravels consist of granite, granodiorite, diorite, quartzite, and gneissic (biotite foliated) rock), 75% to 80% medium to very coarse sand, little or no fines, moist								
20.0											
25.0											
30.0			@ 30' to 40': Slight increase in gravel/cobbles to 25 to 30%								
35.0											
40.0			@ 37': 30 to 45% gravel and cobbles up to 3" to 4" in diameter, subrounded/fragmented; 55 to 70% fine to coarse sand, slightly moist								
45.0											
			@ 46' to 48' (GP): Abundant gravel and cobbles at 46' to 48' (GP)								
50.0			SAND (SP): Moderate yellowish brown (10YR 5/4); 10% gravel and cobbles, 90% medium to very coarse sand, little or no fines, moist								

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4915C-2	
	SAMPLING METHOD:					SHEET 2 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	268.7				TIME 14:25	TIME 15:15
	TIME	07:30					
	DATE	12/13/91				DATE 12/9/91	DATE 12/13/91
DATUM: MSL ELEVATION: 923.9'	CASING DEPTH	295					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat Berm/Pad Built out on to Drainage Ditch
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
50.0			SAND (SP): Moderate yellowish brown (10YR 5/4); 10% gravel and cobbles, 90% medium to very coarse sand, little or no fines, moist								
55.0			GRAVELLY SAND (SP): Moderate yellowish brown (10YR 5/4); 15 to 20% gravel/cobbles, 80 to 85% medium to very coarse sand, little or no fines, moist								
60.0			@ 60': Increase in gravel/cobbles (large diameter) up to 40%, slightly moist, slight increase in silt								
65.0											
70.0			@ 68': Dark yellowish brown (10YR 4/2); 30% fine to coarse gravel up to 2" in diameter, 70% medium to very coarse sand								
75.0											
80.0			SAND (SP): Dark yellowish brown (10YR 4/2); 90% medium to very coarse sand, <10% gravel, cobbles, silt and fine sand, damp								
85.0											
90.0			SANDY GRAVEL TO GRAVEL (GP): Dark yellowish brown (10YR 4/2); 60 to 100% fine to very coarse gravel with abundant cobbles (rounded/sub-rounded) and boulders (broken), 0 to 40% medium to very coarse sand, damp								
95.0			GRAVELLY SAND (SP): Dark yellowish brown (10YR 4/2); 20% fine to coarse gravel with cobbles/boulders (broken), 75 to 80% medium to coarse sand, 5% silt to fine sand, damp								
100.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer	BORING NO. 4915C-2
	SAMPLING METHOD:	SHEET 3 of 7
		DRILLING START / FINISH
	WATER LEVEL: 268.7	TIME 14:25 / TIME 15:15
	TIME: 07:30	
	DATE: 12/13/91	DATE 12/9/91 / DATE 12/13/91
DATUM: MSL ELEVATION: 923.9'	CASING DEPTH: 295	
DRILL RIG : AP-1000	SURFACE CONDITIONS: Flat Berm/Pad Built out on to Drainage Ditch	
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker	
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California	

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
100.0			See previous page for interval extending to 101'								
			SAND (SP): Dark yellowish brown (10YR 4/2); 5 to 10% gravel with occasional thin interbeds <6" thick of 15 to 20% gravel, 90 to 95% medium to very coarse sand, <5% fine sand, little or no fines, moist								
105.0											
110.0											
			LARGE BOULDER(S): 113' to 114.5'								
115.0			SAND (SP): Dark yellowish brown (10YR 4/2) same as 101' to 114.5'								
120.0			@ 121': Moist sand with occasional thin gravelly sand zones <6" thick with gravel content of up to 40%								
125.0											
130.0											
135.0											
			GRAVELLY SAND (SP): Adding water 140' to 150', sand content uncertain, moderate gravel content, possibly 40% gravel/60% sand								
140.0											
145.0											
150.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4915C-2	
	SAMPLING METHOD:					SHEET 4 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	268.7				TIME 14:25	TIME 15:15
	TIME	07:30					
	DATE	12/13/91				DATE 12/9/91	DATE 12/13/91
DATUM: MSL ELEVATION: 923.9'	CASING DEPTH	295					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat Berm/Pad Built out on to Drainage Ditch
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
150.0			GRAVELLY SAND (SP): Dark yellowish brown (5YR 3/4); wet); 10 to 30% gravel, 70 to 90% medium to coarse sand, little or no fines								
155.0											
160.0			@ 161': Increase to 5% silt and clay								
165.0											
170.0											
			COBBLES/BOULDERS: 171' to 177'								
175.0											
			GRAVELLY SAND/SANDY GRAVEL (SP/GP): Abundant gravel 40 to 70% with remaider medium to very coarse sand and cobbles								
180.0											
185.0											
			COBBLES/BOULDERS: Hard drilling at 186'								
190.0			@ 190': Continued hard drilling, 75 to 80% gravel, cobbles and boulders, 20 to 25% sandy matrix								
195.0			SANDY GRAVEL (GP): Moderate yellowish brown (10YR 5/4), 40 to 50% coarse to very coarse sand with 50 to 60% fine to coarse gravel and cobbles								
200.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4915C-2	
	SAMPLING METHOD:					SHEET 5 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	268.7				TIME 14:25	TIME 15:15
	TIME	07:30					
	DATE	12/13/91				DATE 12/9/91	DATE 12/13/91
DATUM: MSL ELEVATION: 923.9'	CASING DEPTH	295					

DRILL RIG : AP-1000 | SURFACE CONDITIONS: Flat Berm/Pad Built out on to Drainage Ditch

ANGLE: Vertical BEARING: | LOGGED BY: James V. Bunker

SAMPLE HAMMER TORQUE: | DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
200.0			GRAVELLY SAND (SP): Light olive (10Y 5/4); 20 to 30% fine to coarse gravel, scattered <5% cobbles, 70 to 80% fine to coarse sand, muddy returns indicating some silt/clay (5%)								
205.0											
			@ 209': Cobbly zone at 209'								
210.0			GRAVELLY SAND (SP): Same as 200' to 210' with occasional thin cobbly zones								
215.0			@ 215' to 215.6': Boulder(s)								
220.0			@ 221': <20% gravels, very little or no cobbles/boulders or fines								
225.0											
230.0			BOULDERS/COBBLES: Fragmented igneous and metamorphic rocks, very hard drilling								
235.0			SANDY GRAVEL (GW): White/gray/black, 30% coarse sand, 70% fine to very coarse gravel <5% cobbles, <5% fines								
			GRAVEL/COBBLES: White/gray/black, <10% sand, 90% fine to coarse gravel and cobbles up to 4" (rounded), bouldery zone at 239'								
240.0			SANDY GRAVEL (GW): Light brown (5YR 6/4); 40% fine to very coarse sand, 50% fine to very coarse gravel, 5% cobbles, 5% fines								
245.0			COBBLES/BOULDERS: 244' to 246'								
			SANDY GRAVEL (GW): White/black with brownish sandy matrix, 50% fine to coarse gravel, 10 to 20% cobbles (broken), 30 to 40% fine to coarse sand, boulders at 252' (hard drilling)								
250.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer						BORING NO. 4915C-2
	SAMPLING METHOD:						SHEET 6 of 7
							DRILLING START / FINISH
	WATER LEVEL	268.7					TIME 14:25 / TIME 15:15
	TIME	07:30					
	DATE	12/13/91					DATE 12/9/91 / DATE 12/13/91
DATUM: MSL ELEVATION: 923.9'	CASING DEPTH	295					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat Berm/Pad Built out on to Drainage Ditch
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
250.0			SANDY GRAVEL (GW): White/black with brownish sandy matrix, 50% fine to coarse gravel, 10 to 20% cobbles (broken), 30 to 40% fine to coarse sand, boulders at 252' (hard drilling)								
255.0			GRAVELLY SAND (SW): Pale brown (5YR 2/2) to light brown (5YR 5/6), 40% fine to coarse gravel, 55% fine to very coarse sand, 5% silt								
260.0											
265.0			@ 264': Coarse zone, hard drilling - boulders (broken fragments)								
270.0			GRAVELLY SAND (SW): Pale brown (5YR 2/2) to light brown (5YR 5/6), 40% fine to coarse gravel, 55% fine to very coarse sand, 5% silt, with occasional 6" hard bouldery zones with increasing gravel/cobble content								
275.0											
280.0											
285.0			GRAVEL/COBBLES (GW/GP):								
290.0			@ 290': Merging to sandy gravel (GP) @ 292': Continued hard zone, poorly sorted zone with average gravel diameters of 1", 80% gravel (sub-angular to sub-rounded) with 20% fine to coarse sand								
295.0			GRAVELLY SAND (SW): Grayish green (10GY 5/2) 80% fine to coarse sand, 15% gravel and cobbles up to 3", 5% fines, large boulder at 295.2'								
300.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer	BORING NO. 4915C-2
	SAMPLING METHOD:	SHEET 7 of 7
		DRILLING START / FINISH
	WATER LEVEL 268.7	TIME 14:25 / TIME 15:15
	TIME 07:30	
	DATE 12/13/91	DATE 12/9/91 / DATE 12/13/91
DATUM: MSL ELEVATION: 923.9'	CASING DEPTH 295	
DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat Berm/Pad Built out on to Drainage Ditch	
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker	
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California	

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
300.0			GRAVELLY SAND (SP): Grayish green (10GY 5/2); 75% fine to coarse sand, 15% gravel and cobbles up to 6", 3 to 5% fines								
305.0			GRAVELLY SAND (SW): Dark greenish gray (5G 4/1) 80% very fine to coarse sand, 10 to 15% gravel and cobbles, 5 to 10% fines (predominantly silt) mices - muddy appearing water indicates some clays								
310.0											
315.0											
			SAND (SW): Moderate yellowish brown (10YR 5/4); 80 to 85% very fine to very coarse sand, 5 to 10% gravel with occasional 1" to 2" gravel, 5% fines								
320.0											
325.0											
			TD at 328' at 15:15 12/13/91								
330.0											
335.0											
340.0											
345.0											
350.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4916H-1	
	SAMPLING METHOD:					SHEET 1 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	255.9				TIME 10:40	TIME 17:10
	TIME	06:45					
	DATE	12/18/91				DATE 12/16/91	DATE 12/17/91
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH	314					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
0.0			SANDY SILT (AF): Dark yellowish brown (10YR 4/2), 10% gravel-cobbles, 15% clay, 35% very fine to coarse sand, 35% silt, moist								
5.0			SANDY SILT (AF): Dark yellowish brown (10YR 4/2), 15 to 20% clay, 25 to 35% very fine to medium sand, 45 to 60% silt, moist								
10.0											
15.0			CLAYEY SILT (AF): Dark yellowish brown (10YR 4/2), 30% very fine to fine sand, 30% clay, 40% silt, wet, abundant mica, occasional wood fragments and grass								
20.0											
25.0											
30.0											
35.0			CLAY (AF): Moderate yellowish brown (10YR 5/4), 90% clay, wet, very plastic, 10% silt and fine sand, wet								
40.0			@ 40' to 50': Interbedded (intermixed in fill) clays and sandy silts as described above, wet								
45.0											
50.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4916H-1	
	SAMPLING METHOD:					SHEET 2 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	255.9				TIME 10:40	TIME 17:10
	TIME	06:45					
	DATE	12/18/91				DATE 12/16/91	DATE 12/17/91
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH	314					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
50.0			See previous page for interval extending to 55 feet								
55.0			CLAY (AF): Moderate brown (5YR 4/4), 10 to 20% silt, 80 to 90% clay, wet to saturated, very plastic (estimate saturated zone less than 1' thick)								
60.0			@ 60' to 70': Streaked gray to moderate brown (5YR 4/4), clays, little or no silt or sand, moist								
65.0											
70.0			CLAY (AF): Moderate brown (5YR 4/4), 10 to 20% interbedded silt layers with 80 to 90% clay, moist								
75.0											
80.0			SANDY GRAVEL (GP): Moderate yellowish brown (10YR 5/4), 30% coarse sand (10YR 4/4), 20% cobbles, 50% gravel								
85.0			GRAVELLY SAND (SP): Moderate yellowish brown (10YR 5/4), 40% fine to coarse gravel, 60% medium to very coarse sand, boulder(s) at 85', very moist								
90.0			SAND (SP): Moderate brown (5YR 4/4), 95% medium to very coarse sand (predominantly coarse sand 70%), 5% gravel, slightly moist								
95.0			GRAVELLY SAND (SP): Moderate brown (5YR 4/4), 20% gravel and cobbles up to 4" in diameter, 80% medium to very coarse sand, dry, with increasing gravel cobbles at 94 to 100' to 30%								
100.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer	BORING NO. 4916H-1
	SAMPLING METHOD:	SHEET 3 of 7
		DRILLING START / FINISH
	WATER LEVEL: 255.9	TIME 10:40 / TIME 17:10
	TIME: 06:45	
	DATE: 12/18/91	DATE 12/16/91 / DATE 12/17/91
	CASING DEPTH: 314	
DATUM: MSL ELEVATION: 864.4'		
DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area	
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker	
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California	

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
100.0			GRAVELLY SAND (SP): Same as previous with gravel cobbles, up to 30% to 40%, dry, boulder at 104.5' to 105'								
105.0			SAND (SP): 90% medium to coarse sand, with 10% gravel/cobbles, slightly moist								
110.0			GRAVELLY SAND (SP): Moderate brown (5YR 4/4), same as 92' to 100'								
115.0											
120.0			@ 121': Increasing moisture								
125.0			@ 126' to 130': Moist								
			@ 128' to 130': Abundant cobbles								
130.0			@ 130': Some cobbles								
135.0											
140.0			@ 141': Same as previous								
145.0											
150.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4916H-1	
	SAMPLING METHOD:					SHEET 4 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	255.9				TIME 10:40	TIME 17:10
	TIME	06:45					
	DATE	12/18/91				DATE 12/16/91	DATE 12/17/91
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH	314					

DRILL RIG: AP-1000	SURFACE CONDITIONS: Flat roughly graded area
ANGLE: Vertical BEARING:	LOGGED BY: James V. Bunker
SAMPLE HAMMER TORQUE:	DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
150.0			SAND TO GRAVELLY SAND (SP): Dark yellowish brown (10YR 2/2), varying gravel content 10 to 30%, 70 to 90% medium to coarse sand, moist to very moist								
155.0											
			SAND (SP): Moderate yellowish brown (10YR 5/4), 95% sand, coarse to very coarse, 5% gravel, very moist, (will partially stick together)								
160.0											
165.0											
170.0											
			GRAVELLY SAND (SP): Moderate yellowish brown (10YR 5/4) 70% medium to very coarse sand, 20% gravel, 10 % cobbles, slightly moist to moist								
175.0											
180.0											
			@ 182' to 186': Boulders and/or abundant cobbles								
185.0											
190.0											
			@ 194' GRAVELLY SAND (SP): Moderate yellowish brown (10YR 5/4), 60% coarse to very coarse sand, 30% fine to coarse gravel, 10% cobbles, interval extends to 205'								
195.0											
200.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION: BRADLEY LANDFILL, Sun Valley, California	DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer					BORING NO. 4916H-1	
	SAMPLING METHOD:					SHEET 5 of 7	
						DRILLING	
						START	FINISH
	WATER LEVEL	255.9				TIME 10:40	TIME 17:10
	TIME	06:45					
	DATE	12/18/91				DATE 12/16/91	DATE 12/17/91
DATUM: MSL ELEVATION: 864.4'	CASING DEPTH	314					

DRILL RIG: AP-1000 | SURFACE CONDITIONS: Flat roughly graded area

ANGLE: Vertical BEARING: | LOGGED BY: James V. Bunker

SAMPLE HAMMER TORQUE: | DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

DEPTH IN FEET	BLOWS/6 IN. ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
200.0			GRAVELLY SAND: Moderate yellowish brown (10YR 5/4), 60% coarse to very coarse sand, 30% fine to coarse gravel, 10% cobbles								
205.0			SAND TO GRAVELLY SAND (SW): Moderate yellowish brown (10YR 5/4), 70 to 90% fine to very coarse sand, 5 to 25% gravel, 5% cobbles								
210.0											
215.0			@ 214': Increased sand content to 80 to 90%								
220.0			@ 223' to 225': 5% silt/clay and increased fine sand								
225.0			225' to 225.5' Cobbles								
			SAND (SP): Moderate yellowish brown (10YR 5/4), 95% medium to coarse sand, 5% very coarse sand and fine to medium gravel with scattered cobbles in <2" thick beds, slightly moist								
230.0											
235.0											
240.0			SANDY GRAVEL (GP): Dark yellowish brown (10YR 4/2), 30 to 40% medium to coarse sand, 40 to 50% fine to coarse gravel, 10 to 30% cobbles and boulders								
245.0											
250.0											

SOIL BOREHOLE LOG

SITE NAME AND LOCATION:

BRADLEY LANDFILL
Sun Valley, California

DRILLING METHOD: Dual Wall Reverse Circulation with Percussion Hammer

SAMPLING METHOD:

BORING NO. 4916H-1

SHEET 6 of 7

					DRILLING START	DRILLING FINISH
WATER LEVEL	255.9				TIME 10:40	TIME 17:10
TIME	06:45					
DATE	12/18/91				DATE 12/16/91	DATE 12/17/91
CASING DEPTH	314					

SL ELEVATION: 864.4'

AP-1000

rtical BEARING:

AMMER TORQUE:

SURFACE CONDITIONS: Flat roughly graded area

LOGGED BY: James V. Bunker

DRILLING CONTRACTOR: Layne Environmental, Inc., Fontana, California

ON SAMPLER (RECOVERY)	SYMBOL	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	TEST RESULTS: WATER CONTENT %	LIQUID LIMIT %	PLASTIC LIMIT %	PLASTIC INDEX	OTHER TESTS
		SANDY GRAVEL (GP): Dark yellowish brown (10YR 4/2), 30 to 40% medium to coarse sand, 40% fine to coarse gravel, 20 to 35% cobbles and boulders								
		GRAVELLY SAND (SP): Dark yellowish brown (10YR 4/2), 30% gravel and cobbles, 10% silt and clay, 60% very fine to coarse sand								
		SANDY GRAVEL (GP): Dark yellowish brown (10YR 4/2), 40% very fine to very coarse sand, 20% cobbles, 40% fine to coarse gravel, boulder cobbles at 265', Abundant boulders/cobbles at 265' with clean sandy matrix @ 280' to 285': Interbedded gravelly sands and cobbles to sandy gravels and cobbles								
		GRAVELLY SAND (SP): Dark yellowish brown (10YR 4/2), 55% very fine to very coarse sand, 35% fine to coarse gravel, 5% cobbles, 5% silt/mica, @ 290' to 291': Boulder/cobble zone								

APPENDIX C

MONITOR WELL CONSTRUCTION SUMMARY FORMS AND GROUNDWATER MONITORING WELL DETAILS

Well No. 4915D

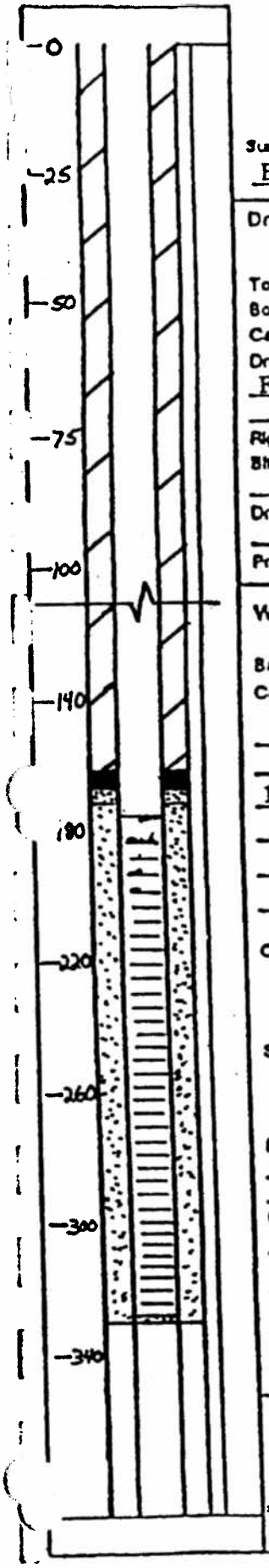
Boring No. X-Ref: 4915C-1

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: Northing: 4,200,260.8
Easting: 4,170,425.6

Elevation Ground Level 913.0

Top of Casing 915.86



Drilling Summary:

Total Depth 327.5
Borehole Diameter 9 5/8
Casing Stick-up Height: - 2'
Driller Layne Environmental, Inc.
Fontana, CA
Rig AP-1000
Bit(s) Crowd In
Drilling Fluid Air, Air With Water
Protective Casing 8" inch Annodized Aluminum

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling 0-60	1/10	15:10	1/10	16:40
60-153	1/11	07:35	1/11	14:26
153-260	1/13	07:30	1/13	15:50
260-327.5	1/14	07:53	1/14	16:40
Geophys. Logging:				
Casing:	1/15	08:00	1/15	08:50
Filter Placement:	1/15	08:50	1/15	14:00
Cementing:	1/15	14:30	1/15	18:00
Development:	1/16	15:10	1/16	15:43

Well Design & Specifications

Basis: Geologic Log X Geophysical Log ___
Casing String (s): C = Casing S = Screen.

Depth	String(s)	Elevation
0 - 175	C-1	913.0 - 738
175 - 325	S-1	738 - 588
-		-
-		-
-		-

Casing: C1 4" Schedule 80, flush thread PVC
C2

Screen: S1 4" Schedule 80, 0.020 slot, flush thread PVC
S2

Filter Pack: 169.8'-327.5'—#3 Lonestar Sand
166.9'-169.8'—#60 Silica Sand

Grout Seal: 2'-163.8'—Neat Cement with 4% Bentonite, 0'-2'—Concrete

Bentonite Seal: 163.8'-166.9'—Bentonite Pellets

Well Development: 1/16/92

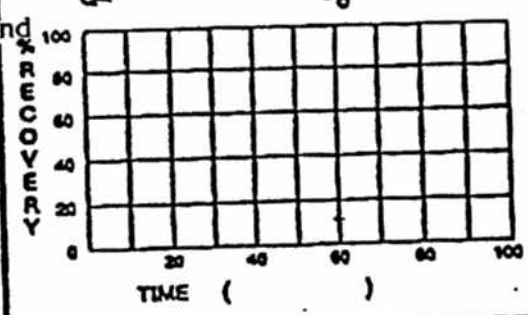
14:50-15:10—Mob to site
15:10-15:35—Swab well
15:35-16:15—Bail well
16:45-17:42—Pump well
17:42-18:30—Demob

Stabilization Test Data: 1/16/92

Time	pH	Spec. Cond.	Temp (C)
16:45	*	516	18
17:07	See	496	18
17:25	note	487	18
17:35	below	498	18
17:42		495	18

Recovery Data:

Q= S_o=



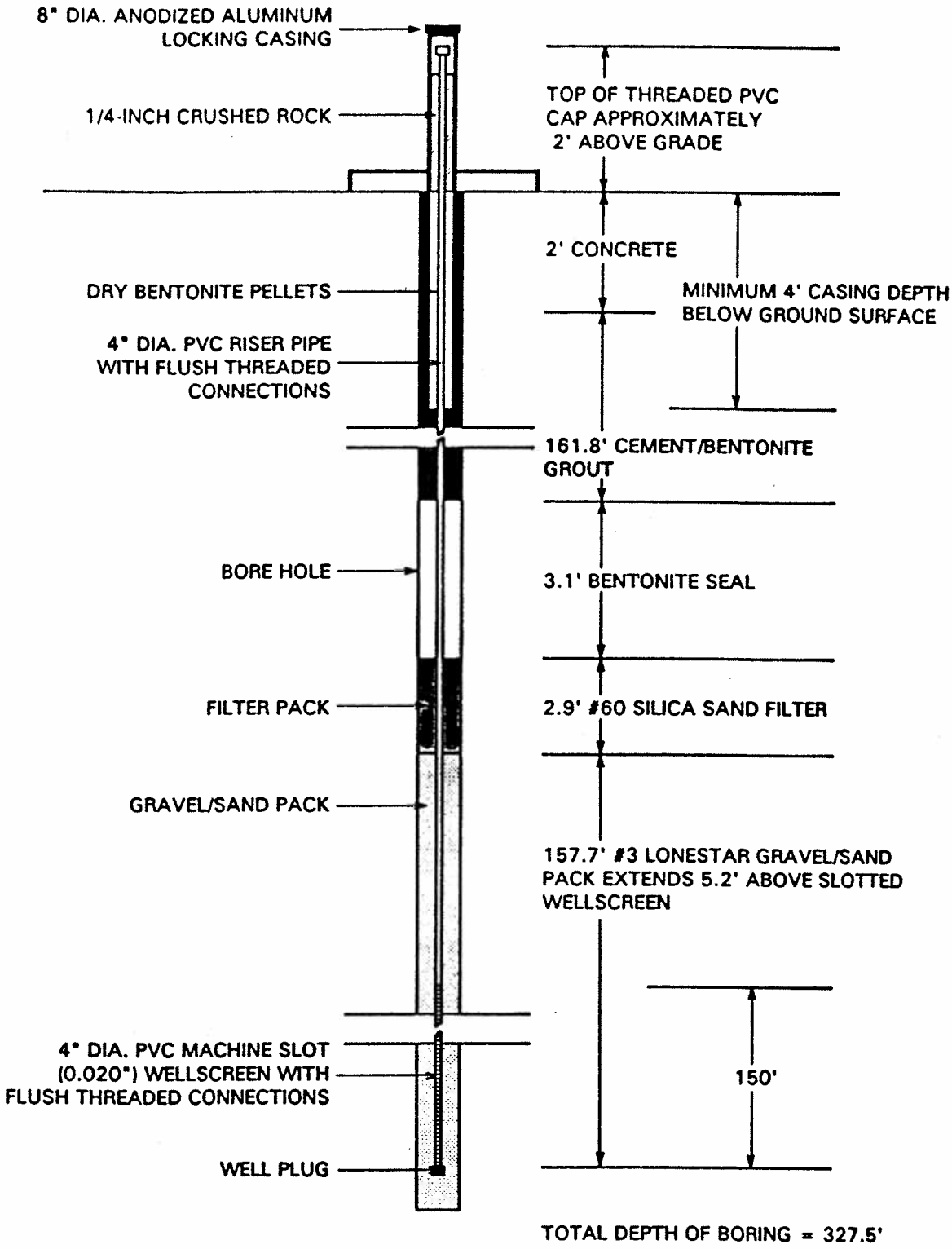
Comments: Set Annodized Aluminum Casing.
WMI will set pad.
Installed Hydrostar Pump on 1/17/92
* pH meter will not stabilize.

SITE NAME Bradley Landfill

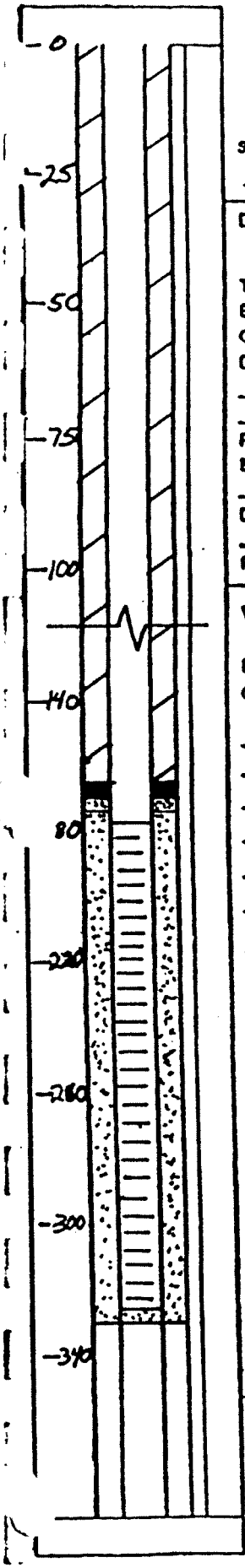
LOCATION Sun Valley, CA

SUPERVISED BY James V. Bunker

DATE 1/10/92 - 1/16/92



GROUNDWATER MONITORING WELL DETAILS
MONITORING WELL 4915 D



Well No. 4915E

Boring No. X-Ref: 4915C-2

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: Northing: 4,201,032.1
Easting: 4,171,282.5

Elevation Ground Level 923.9
Top of Casing ~~964.4~~ 926.9

Drilling Summary:

Total Depth 328
Borehole Diameter 9 5/8
Casing Stick-up Height: - 2'
Driller Layne Environmental, Inc.
Fontana, CA

Rig AP-1000
Bit(s) Crowd In

Drilling Fluid Air, Air With Water

Protective Casing 8" inch Annodized Aluminum

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling 0-80	12/9	14:25	12/9	16:45
80-190	12/10	07:40	12/10	15:30
190-245	12/11	07:45	12/11	14:35
245-295	12/12	07:45	12/12	17:30
295-328	12/13	08:40	12/13	15:15
Casing:	12/13	16:10	12/13	16:50
Filter Placement:	12/13	16:50	12/14	1:35
Cementing:	12/14	11:50	12/14	16:45
Development:	1/16	08:10	1/16	13:45

Well Design & Specifications

Basis: Geologic Log X Geophysical Log ___
Casing String (s): C = Casing S = Screen

Depth		String(s)	Elevation	
0	175	C-1	923.9	748.9
175	325	S-1	748.9	598.9

Casing: C1 4" Schedule 80, flush thread PVC
C2

Screen: S1 4" Schedule 80, 0.020 slotted, flush thread
S2

Filter Pack: 170.1'-328'—#3 Lonstar Sand
168.2'-170.1—#60 Silica Sand

Grout Seal: 2'-163.5'—Neat Cement with 4% Bentonite, 0'-2'—Concrete

Bentonite Seal: 163.5'-168.2'—Bentonite Pellets

Well Development: 1/16/91

07:00-08:00—Set up on well
08:00-09:10—Swab well
10:45-11:48—Bailed 1 well volume
12:34-13:45—Pumped 3 well volumes
13:45-14:50—Remove pump, move to 4915C-1

Stabilization Test Data: 1/16/92

Time	pH	Spec. Cond.	Temp (C)
12:13	*	610	18.0
13:28	See	631	18.0
13:35	note	625	18.0
13:40	below	627	18.25
13:45		626	18.0

Recovery Data:

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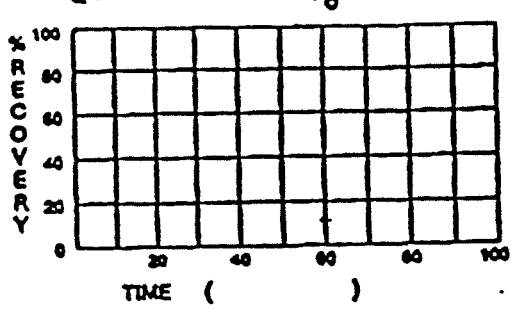


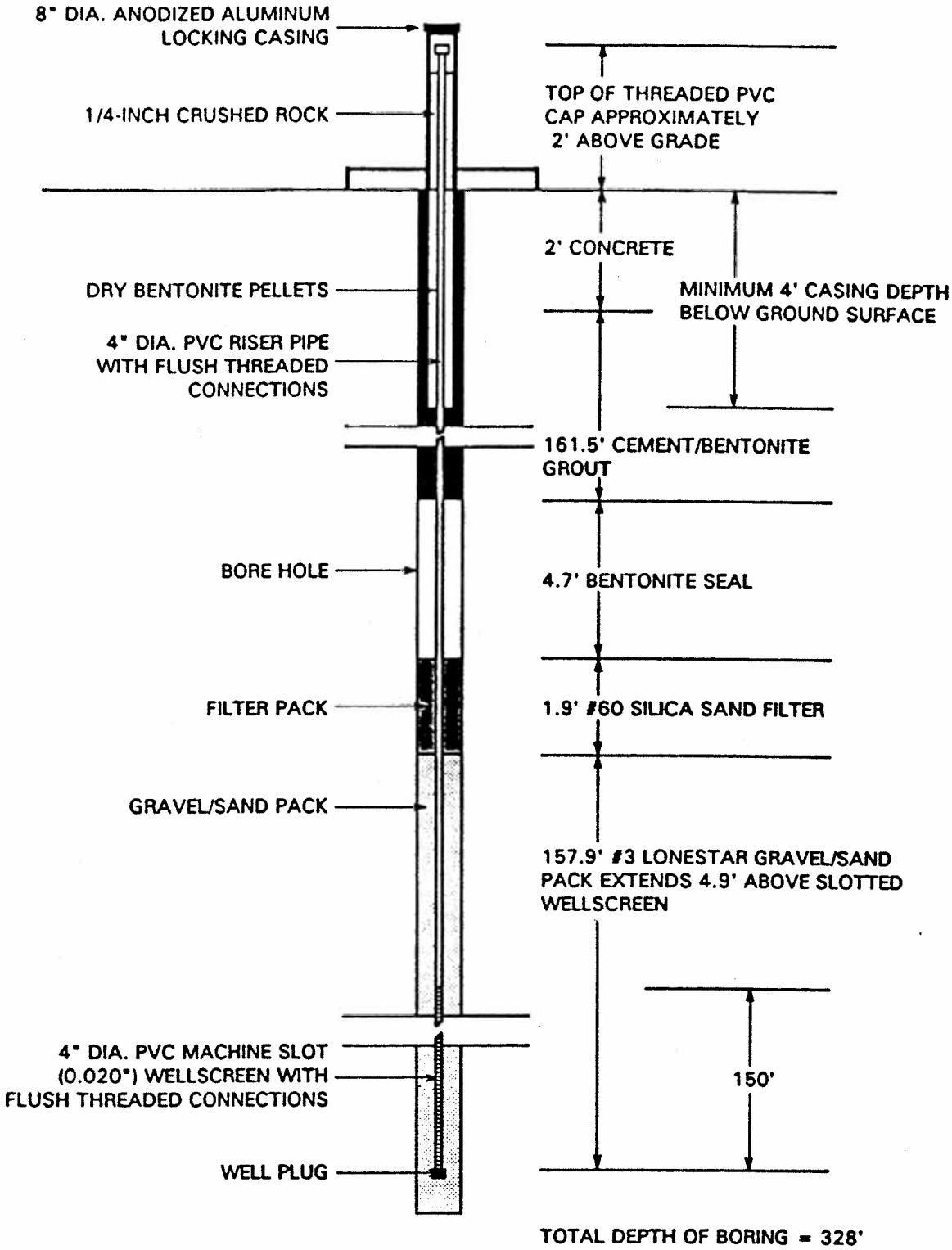
Comments: Set Annodized Aluminum Protective Casing.
WMI to build pad.
Hydrostar pump installed 1/17/92
* pH meter would not stabilize.

SITE NAME Bradley Landfill

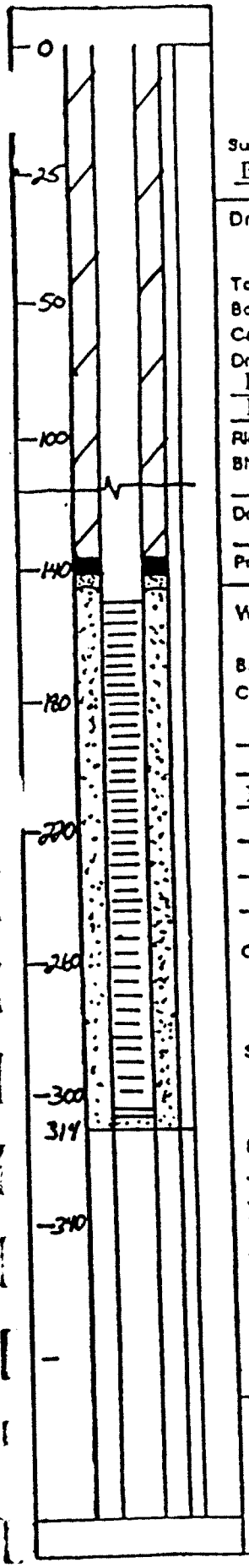
LOCATION Sun Valley, CA

SUPERVISED BY James V. Bunker

DATE 12/9/91 - 12/14-91 and 1/16/92



GROUNDWATER MONITORING WELL DETAILS
MONITORING WELL 4915 E



Well No. 4916J

Boring No. X-Ref: 4916H-1

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: Northing: 4,197,218.1
Easting: 4,172,248.6

Elevation Ground Level 864.4
Top of Casing 867.13

Drilling Summary:

Total Depth 314
Borehole Diameter 9 5/8
Casing Stick-up Height: ~2
Driller Layne Environmental, Inc.
Fontana, CA
Louie Monje
Rig AP-1000
Bit(s)
Drilling Fluid Air, Air With Water
Protective Casing 8" inch Annodized Aluminum

Construction Time Log:

Task	Start Date	Start Time	Finish Date	Finish Time
Drilling 0-185.5	12/16	10:40	12/16	17:00
185.5-314	12/17	06:48	12/16	17:10
Geophys. Logging:				
Casing:	12/18	07:50	12/18	08:42
Filter Placement:	12/18	08:42	12/18	14:48
Cementing:	12/19	07:30	12/19	09:00
Development:	1/7	08:00	1/7	15:00

Well Design & Specifications

Basis: Geologic Log X Geophysical Log ___
Casing String (s): C = Casing S = Screen.

Depth	String(s)	Elevation
0 - 150	C-1	864.4 - 714.4
150 - 310	S-1	714.4 - 554.4

Casing: C1 4" Schedule 80, flush thread PVC
C2

Screen: S1 4" Schedule 80, flush thread PVC with 0.02 slot
S2

Filter Pack: 144.6'-314'—#3 Lonestar Sand
141.2'-144.6'—#60 Silica Sand

Grout Seal: 2'-137'—Neat Portland Cement with 4% Bentonite
0'-2'— Concrete

Bentonite Seal: 137'-141.2'— Bentonite Pellets

Well Development: 1/ 7/92

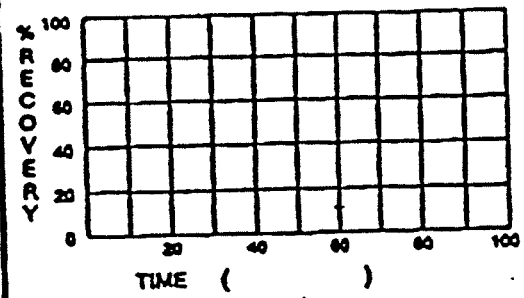
08:00-09:00—Set up on well
09:00-09:45—Swab well
09:45-11:10—Bailed 1 well volume
11:40-13:56—Pumping well
13:56-15:00—Remove pump demob

Stabilization Test Data: 1/7/92

Time	pH	Spec. Cond.	Temp (C)
13:02	7.50	648	14.5
13:16	7.63	652	14.5
13:40	7.71	665	14.5
13:42	7.66	649	14.5
13:56	7.69	650	14.5

Recovery Data:

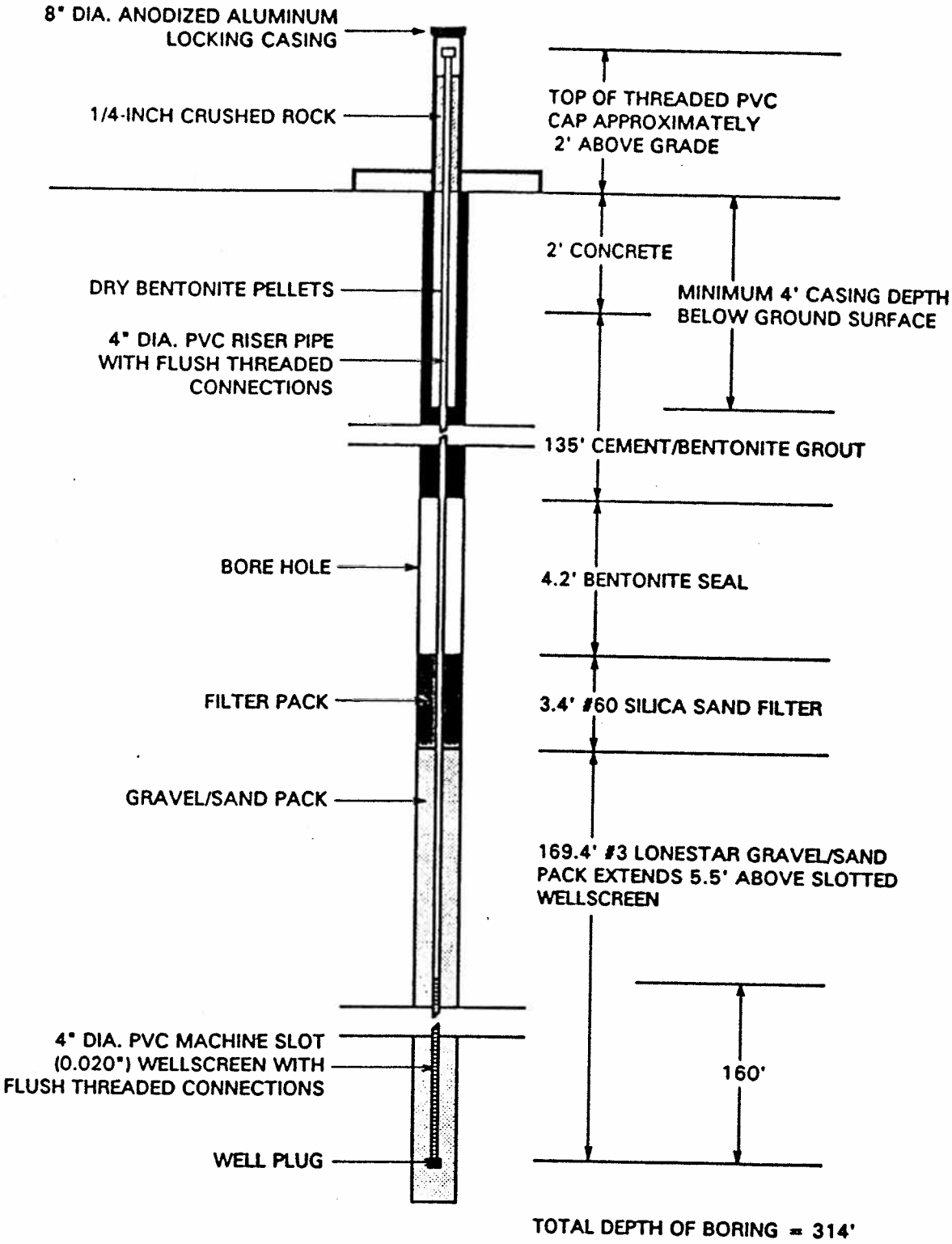
Q= S_o=



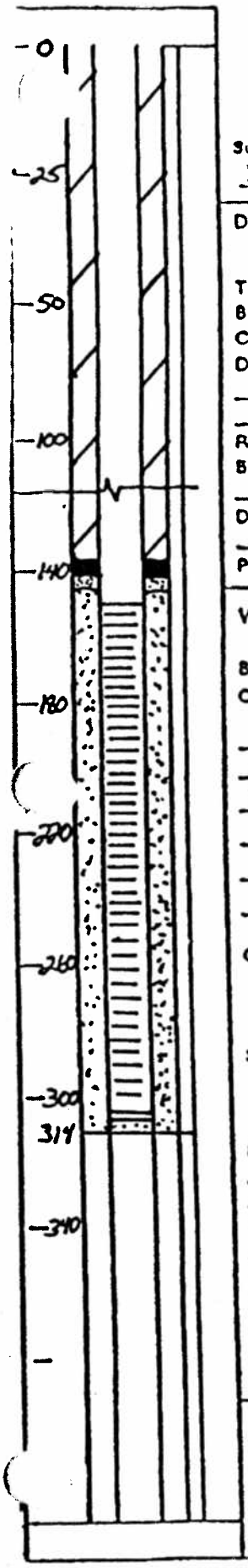
Comments: Set Annodized Aluminum Protective Casing.
WMI to build pad and place barracades around surface of wells.
Hydrostar Pump installed on 1/17/92

SITE NAME Bradley Landfill
LOCATION Sun Valley, CA

SUPERVISED BY James V. Bunker
DATE 12/16/91 - 12/19/91 and 1/7/92



GROUNDWATER MONITORING WELL DETAILS
MONITORING WELL 4916 J



Well No. 4916J

Boring No. X-Ref: 4916H-1

MONITOR WELL CONSTRUCTION SUMMARY

Survey Coords: Northing: 4,197,218.1
Easting: 4,172,248.6

Elevation Ground Level 864.4
Top of Casing 867.13

Drilling Summary:

Total Depth 314
Borehole Diameter 9 5/8
Casing Stick-up Height: ~2
Driller Layne Environmental, Inc.
Fontana, CA
Louie Monje
Rig AP-1000
Bit(s)

Drilling Fluid Air, Air With Water

Protective Casing 8" inch Annodized Aluminum

Construction Time Log:

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Cementing:	12/19	07:30	12/19	09:00
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Well Design & Specifications

Basis: Geologic Log X Geophysical Log ___
Casing String (s): C = Casing S = Screen.

Depth	String(s)	Elevation
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150 - 310	S-1	714.4 - 554.4

Casing: C1 4" Schedule 80, flush thread. PVC
C2

Screen: S1 4" Schedule 80, flush thread PVC with 0.02 slot
S2

Filter Pack: 144.6'-314'—#3 Lonestar Sand
141.2'-144.6'—#60 Silica Sand

Grout Seal: 2'-137'—Neat Portland Cement with 4% Bentonite
0'-2'— Concrete

Bentonite Seal: 137'-141.2'— Bentonite Pellets

Well Development: 1/ 7/92

08:00-09:00—Set up on well
09:00-09:45—Swab well
09:45-11:10—Bailed 1 well volume
11:40-13:56—Pumping well
13:56-15:00—Remove pump demob

Stabilization Test Data: 1/7/92

Time	pH	Spec. Cond.	Temp (C)
13:02	7.50	648	14.5
13:16	7.63	652	14.5
13:40	7.71	665	14.5
13:42	7.66	649	14.5
13:56	7.69	650	14.5

Recovery Data:

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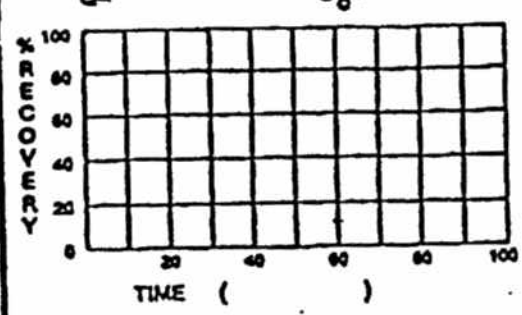

Comments: Set Annodized Aluminum Protective Casing.
WMI to build pad and place barracades around surface of wells.
Hydrostar Pump installed on 1/17/92

SITE NAME Bradley Landfill

LOCATION Sun Valley, CA

SUPERVISED BY James V. Bunker

DATE 12/16/91 - 12/19/91 and 1/7/92